LOCAL AUTHORITIES AND THE IMPLEMENTATION OF SUSTAINABLE DEVELOPMENT IN NAMIBIA

A DISSERTATION SUBMITTED IN FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

OF

THE UNIVERSITY OF NAMIBIA

FACULTY OF ECONOMICS AND MANAGEMENT SCIENCE

DEPARTMENT OF PUBLIC AND ADMINISTRATIVE STUDIES

BY

MARTIN ANDREAS WIENECKE

MARCH 2005

Supervisors: Prof. R.M. Mukwena
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ABSTRACT

Sustainable development has in the last three decades become a widely debated notion. Nevertheless the objective of achieving a state of sustainability has so far not been attained. The study examines reasons for this condition by investigating activities on the global, national and local levels, and examining various philosophies and approaches, to determine what constitutes sustainable development and sustainability.

In the first chapter, the research problem, the objectives of the study, the hypothesis and the methodology are described. Chapter 2 conceptualises the concept sustainable development by evaluating theoretical and philosophical perspectives, the meaning and understanding of the concept. A variety of philosophies and discussions are associated with the concept sustainability, such as autopoiesis, ethics, utilitarianism, eco-philosophies, and an empirical literature review.

Chapter 3 investigates the relationship between sustainable development and human settlements. Empirical and normative issues, as well as international agendas are explored as they incorporate various aspects which are related to the achievement of sustainable development. The role of local authorities in the implementation of sustainable development details the contributions of good governance and the generic administrative functions.

In Chapter 4 the hypothesis is tested. The latter is based on the premise that the concept sustainable development is not understood. The hypothesis is divided into four sub-hypotheses in order to examine the components necessary for the implementation of sustainable development, the generic administrative functions, good governance, and practical factors in the implementation such as local agendas 21 in Windhoek and Walvis Bay. In this way a more holistic picture of the objectives of sustainable development is obtained.

Chapter 5 describes a framework for the implementation of sustainable development. This includes normative as well as empirical issues, the role of local authorities, preconditions for the implementation of a conceptual framework, for example, political will, ethics, carrying capacity and dematerialisation. In addition three scenarios are presented to show different outcomes of such a transformation process from non-sustainability to sustainability.

The final chapter concludes with the findings of the study. They underline that local authorities in general and in Namibia in particular have not been able to implement sustainable development on the local level by means of a Local Agenda 21. This agenda lacks one of the main requirements of sustainability, namely a holistic approach. Instead, sectoral approaches and attempts to manage crises have become the hallmark of these initiatives. An ethic and the political will, to support genuine attempts to achieve sustainable development, is absent.

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Finally, my thanks go also to my family for allowing me to undertake this study.

Dedication

This study is dedicated to my late sister Hanna.

Declarations

This dissertation is a true reflection of the candidate's own research, and has not been submitted for a degree in any other institution of higher learning.

Tables

Figures

Abbreviations

ALAN	Association of Local Authorities of Namibia
BTP	Build Together Programme
CSD	Commission on Sustainable Development
CoW	City of Windhoek
CBOs	Community-based organizations
CSIR	Centre for Scientific and Industrial Research
DANCED	Danish Cooperation for Environment and Development
DEA	Directorate of Environmental Affairs
DRFN	Desert Research Foundation of Namibia
DFE	Design for environment
DWA	Department of Water Affairs
ECLA	Economic Commission for Latin America
EA	Environmental assessment
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EPM	Environmental planning and management
ESA	Department of Economic and Social Affairs
FAO	Food and Agricultural Organisation
GDP	Gross Domestic Product
GRN	Government of the Republic of Namibia
ICLEI	International Council for Local Environmental Initiatives
IDRC	International Development Research Centre
IISD	International Institute for Sustainable Development
ILEDS	Initiative for Local Environment and Development
FOEI	Friends of the Earth International
GMO	Genetically modified organism
LA21	Local Agenda 21
LED	Local Economic Development
MCR	Micro concrete roof tile
MDG	Millennium Development Goals
MET	Ministry of Environment and Tourism
MRLGH	Ministry of Regional and Local Government and Housing
NEPAD	New Partnership for Africa's Development
NDP	National Development Plan
NPA	National Plan of Action
NGO	Non-governmental organisation
NPC	National Planning Commission
ODI	Overseas Development Institute
OECD	Organisation for Economic Co-operation and Development
OPEC	Organization of the Petroleum Exporting Countries
SADC	Southern African Development Community
SDC	Sustainable Development Commission
SCP	Sustainable Cities Programme
SD	Sustainable development
SDFN	Shack Dwellers Association of Namibia
TDP	Tlholego Development Project
TI	Transparency International
UNCHS	United Nations Commission for Human Settlements
UNCED	United Nations Conference on Environment and Development

UNIDO	United Nations Industrial Development Organization
UNDP	United Nations Development Programme
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNEP	United Nations Environmental Programme
UTN	Urban Trust of Namibia
WASP	Water and Sanitation Policy
WASCOM	Wages and Salaries Commission
WCED	World Commission on Environment and Development
WCS	World Conservation Strategy
WELA	Windhoek Environmental Liaison Association
WSSD	World Summit on Sustainable Development
WSSCC	Water Supply And Sanitation Collaborative Council
WRI	World Resources Institute
WWF	World Wildlife Fund

CHAPTER 1 – INTRODUCTION

1. Background

Sustainability has most commonly been viewed in terms of environmental or natural resource availability. However, there are other dimensions to this notion, such as economic, social, institutional and technological aspects. Various scholars and authorities have contributed to the theoretical framework, definitions and explanations of the concepts sustainability and sustainable development. One of the most influential works was that of the Brundtland Commission. Their formulation of sustainable development became a catch-phrase for government and industry - the solution to all the world's environmental woes (The Earth Chronicles, 1995).

Sustainability emphasizes that future generations' options are not compromised which means that human society meets the needs of today's world inhabitants without depleting necessary resources. The concept of sustainable development extends to cover social, cultural, technological, economic and physical sustainability. No development can be considered truly sustainable unless it responds to all these factors. Hence a sustainable development strategy requires the achievement of several components in order to achieve its objective: a holistic approach to development which combines economic, ecological, and social components. Holism regards wholes as being greater than the sum of their parts. The effect of Western science and approaches has resulted in the specialization of all spheres of human society and therefore the fragmentation of all the aspects influencing the way of community life. These approaches are non-holistic and, as this study argues, not contributing to sustainability. A holistic approach requires an emphasis on the importance of the whole and the interdependence of its parts. It is concerned with

wholes rather than the analysis of or separation into parts (American Heritage Dictionary, 2003).

The weakness of the deliberations surrounding sustainability is the absence of existing examples of sustainable systems to explore the realities of sustainability. One aim of this study is to provide a clarification of what sustainability really is, by looking at existing sustainable systems. The latter can vary from small systems, for example, cells, to large systems such as human societies. These different examples contribute to the understanding of the meaning of the concept sustainability and to the answer of the issue of why the current global conditions are non-sustainable. In addition, two types of human settlements will be compared. On the one hand, modern settlements in the form of urban areas will be examined, and contrasted with traditional settlements to examine the interaction between humans and the natural environment. This will be linked with the conventional interpretation of sustainable development which regards the three components, social, economic and ecological, and the portrayal of sustainability as a holistic system.

Economic components relate to the utilisation of resources of a community or state, whether in the form of industrial production or on a subsistence level. Ecological aspects relate to all spheres of the natural environment and are defined as the study of how organisms interact with one another and with their physical and chemical environments which seeks to understand the interactions among organisms, populations, communities, ecosystems and the ecosphere (Miller 1996:93). This is in line with the perception of United Nations Centre for Human Settlements (UNCHS) view of sustainable development which acknowledges the symbiotic

relationship between the environment and development (UNCHS 1994:1), as proposed in Agenda 21.

The social component is concerned with the way of life (modern or traditional) of communities or societies, such as the issues of poverty and poverty alleviation. It also comprises culture such as habits, ideas, language, and behaviour of communities, including their ethics. Culture to a large degree determines how members of a society feel and think, it directs their actions and defines their outlook on life (Haralambos 1980:3). Therefore culture also shapes the ethics of a community or society. However this component has received little attention in the discussions of sustainable development, in general, and ethical theories, in particular which could influence the normative framework for sustainable development.

In order to promote sustainable development, a holistic approach is necessary which balances economic, ecological, and social development issues. These issues should be based on ethical considerations. Decision-makers need to show moral leadership in order to promote sustainable development. Morality is primarily a matter of norms guiding human conduct (Bennaars 1993:16). As Agenda 21 originally tried to point out ways away from the perceived unsustainable way of life in industrialised countries and poverty in developing countries, a new type of leadership would be required. Based on the preparations for the WSSD in Namibia which focused on environmental issues, it is evident that sustainable development is hardly understood or is misunderstood as “The green thing” (Khosla 2001a).

The implementation of sustainable development is the responsibility of national governments, with the assistance of international and national partners. Local authorities were tasked as the principal agent for change in the achievement of the objectives of Agenda 21 and the Habitat Agenda. The implementation necessitates far-reaching changes in the political, economic and social environments. As a holistic approach, it deviates radically from the current sector-based approach. To that end, a change in the way local authorities operate is needed in order to promote sustainable development on the local level. This has to be supported by policies and a philosophy, that address the needs of the future. Furthermore, leaders on all levels have to understand that the implementation of sustainable development is not a part-time job to be attended to occasionally. It requires far-reaching changes that affect the activities, behaviour and attitudes of all stakeholders at the local level.

2. The research problem

Notions such as sustainability, ethics or holism are abstract philosophical constructs that require an understanding of the meaning of the terms. In order to promote and implement any such concepts or ideas, it is necessary to have a firm grasp of the meanings and implications thereof. This is in fact, the most difficult component in the implementation of sustainable development. Therefore, evaluating the issues surrounding the implementation of sustainable development requires theoretical investigation of its sustainable development elements. Empirical indicators to support its practicability will also be required. This is important in order to introduce the necessary changes to reduce and eliminate unsustainable patterns of production and consumption (UNCED 1992:principle 8). Geis and Kutzmark (1995) describe the current situation: “...we are trying to solve new problems with outdated perceptions and planning”. Therefore, moral leadership and the will to implement

far-reaching changes in order to create an enabling environment in which these changes can be implemented on local level is required. To that end, agendas such as Agenda 21 attempt to provide guidelines and advocate changes towards sustainable development. The need was identified to change behaviour, to ensure sustainability not only in the industrialised world, but also in transitional societies. This necessitates far-reaching changes in the political, economic, social and the current ethical environment.

In Chapter 28, Agenda 21 provides for local authorities to formulate and implement “a local Agenda 21” (UNCED, 1992). This process became known as Local Agenda 21. Chapter 28 (paragraph 28.1) states that many of the problems and solutions addressed by Agenda 21 have their roots in local activities. Therefore the participation of local authorities is crucial in fulfilling the objectives (UNCED 1992). However, no concerted effort and explanation have been presented to local authorities and the Association of Local Authorities of Namibia (ALAN) on how to achieve the objectives set out. Local authorities in Namibia have so far had little exposure to the concept of sustainable development, especially with regard to initiatives such as Local Agendas 21. Due to the lack of understanding and support for awareness raising, the promotion of the concept sustainable development is suffering from lack of knowledge and therefore initiatives.

Namibia’s formulation of the National Development Plan II (NDP II) was based on the premises of sustainable development. Each sector chapter had to devise a sustainable mission statement to show its contribution to sustainable development in Namibia. The definitions for many sectors in NDP II followed the definition of the WCED (1987). Consequently most writings relating to sustainable development

have largely been concerned with a broad explanation of the concept sustainability. However, many writers (for instance Baker et al. 1997; Pearce et al. 1990, Middleton & O'Keefe 2001) have pointed out that the concept sustainable development is still too vague.

Without a solid understanding of the concept *sustainability*, the prevailing situation of using certain words or catch-phrases could result in confusion and deception, because the concept is tailored to fit particular circumstances and conditions which are not compatible with the objective of sustainability. This study seeks to address this shortcoming by evaluating the concept sustainability and its components in order to establish a framework that provides guiding principles to realise sustainable development. The functions and operations of local authorities in Namibia, and elsewhere, are evaluated to determine whether these institutions can reach the objective of sustainable development.

3. Aim of study

International agendas have placed a large responsibility on governments, in general, and local authorities in particular, to implement what is described as sustainable development. The importance of the implementation process is related to the human factor, because the idea of sustainable development is the result of human activity and human influences on the natural environment. The latter constitutes the basis of life. Hence, a holistic approach that includes one aspect which has been largely neglected: the human mind and its impact on the issue of sustainable development is followed to explain and answer the question of sustainability.

Carruthers and Chamberlain (2000:12) have pointed out that the understanding of the human mind increasingly needs interdisciplinary awareness and collaboration.

The same is true for the understanding of the concept sustainability and the influences of the human factor on the issue of implementing sustainable development. Therefore, this dissertation is not an administrative study, but includes perspectives from other disciplines. Contributions to sustainability are made in the field of philosophy by eco-philosophies, the mechanic and organic worldviews, the anthropocentric and ecocentric views, and deep ecology. Psychological aspects refer to the mind and attitudes which define human behaviour. Biology helps to explain sustainability through the philosophy of autopoiesis. Geography is concerned with the physical environment such as the atmosphere, lithosphere and hydrosphere, and also the living world or biosphere, economic development, and the natural environment (Waugh 1996:6).

Ecology plays an important role in explaining the interactions of living organisms with one another and with their nonliving environment of matter and energy, but also the study of the structure and functions of nature (Miller 1996:A45). Public administration influences policies and programmes relating to the implementation of sustainable development. This also affects local government administration, for example through legislation which determine power and functions of the lower tiers of government.

Local authorities are artificial human-made creations, i.e., urban areas. They are part of the nonsustainability paradigm. Examples of settlements which display distinct characteristics as they were adapted to local circumstances will be investigated, namely those of traditional communities who are being described as living in harmony with nature. The aim of the study is to find an answer to what constitutes Sustainable Development and to examine related philosophies and

guidelines, to assess how they are applied in Namibia. The comparison between modern and traditional settlements will draw attention to the claim that urban areas could implement sustainable development.

No study has so far combined the four components identified for this study, namely economy, ecology, social and ethical components, required for the implementation of sustainable development, particularly as it relates to local authorities in Namibia. Due to the absence of an academic study dealing with the issue of sustainable development within the context of local government in Namibia the study attempts to fill the gap. Therefore, the theoretical concerns and the practical implications will be analysed in order to determine the feasibility of sustainable development, the preconditions, and consequences of implementing it.

3.1 Broad objectives

As stated in the research problem, the apparent inability to define the concept sustainable development and therefore its implementation on local level requires a solution. The first broad objective is therefore to solve the problem of **defining sustainable development** by providing an answer by means of redefining the concept. This represents the answer to the second objective, namely whether **the implementation of sustainable development** by local authorities is possible. The third objective relates to the evaluation of **efforts by local authorities in Namibia** to implement what is termed sustainable development by them. The identification of factors influencing these efforts, the accompanying problems, deficiencies and inabilities are clarified. In addition, the role of international agendas, their associated endeavours and influences on the Namibian situation are reviewed. The fourth objective is to consider a **conceptual framework** which guides the achievement of

sustainable development. In order to attain these broad objectives, several specific objectives have to be considered.

3.2 Specific objectives

Based on the broad objectives, the several specific objectives will be addressed. To facilitate a definition of the concept sustainable development, **philosophies, principles, and theories** have to be examined in order to understand the concepts sustainable development and sustainability. This includes deliberations relating to holism, autopoiesis, utilitarianism, and ethics. The study also investigates the **components** (economic, ecological, social and ethical) for the implementation of sustainable developments at local level. Philosophies and theories relating to sustainable development have to be understood in order to gain an understanding of the principles, ideas and thinking concerning the concepts. Understanding is an educational process which is essential to achieve ethical behaviour, good attitudes and justifiable actions in order to implement sustainable development. A redefinition of the concept will be considered to include these aspects.

To assess whether sustainable development can be implemented the intentions of local authorities are compared with the requirements identified by the philosophies, principles, and theories. Examining the elements of **urban governance** in the implementation of sustainable development provides insights into the conventional understanding of the envisaged role of local authorities in the implementation of sustainable development. The quality of urban governance is the single most important factor for the eradication of poverty and for prosperous cities (UN-Habitat, 2002). It is aimed at increasing the capacity of local governments and other stakeholders to practice good urban governance. In this context empirical as well as

normative issues have to be taken into account in order to assess how far local authorities can implement sustainable development.

The evaluation of efforts by local authorities in Namibia focuses on Local Agendas 21. In this context it is necessary to investigate selected **Namibian policies, strategies and development plans** such as NDP II, and the decentralisation policy. These will be related to theoretical frameworks such as Agenda 21 or those provided in the Habitat Agenda. An analysis of the changes of the **generic administrative functions** required for the implementation of sustainable development by local authorities in Namibia is undertaken to determine their role in achieving the goal of sustainable development. Generic functions play a vital role in the transformation process from unsustainable to sustainable development. The role of the different functions has to be analysed to identify the changes required to attain sustainable development. This will also influence the issue of governance which is characterized by sustainability, decentralisation, equity, efficiency, transparency and accountability, civic engagement and citizenship, and security.

An examination of **practical examples** of implementing sustainable development, such as Local Agendas 21, ecovillages, green architecture, Arcosanti and SCP, describes various case studies which provide practical alternatives. Policies and documents relating to sustainable development and specific projects, such as Local Agendas 21, form the basis for implementation as they reflect the intentions of policy-makers. They are providing an insight of a government's intentions and commitments towards specific objectives, and how they are to be accomplished.

The fourth area of specific objectives concentrates on establishing a conceptual framework for the implementation of sustainable development which integrates the

four components (economic, ecological, social and ethical) that are required for the implementation of sustainable development in order to create a holistic framework in general and in particular the key features required for the implementation of sustainable development at local authority level.

4. Relevance of study

No study has so far investigated Namibia's local authorities and their role in the implementation of sustainable development, especially Local Agendas 21. The study investigates both the activities on the ground and the theoretical requirements for the implementation. Only a few local authorities in Namibia have so far started with an own Local Agenda 21. Their experiences thus far provide valuable inputs into the practicalities of sustainable development. These few examples are however insufficient for a comprehensive evaluation. Therefore international projects, policies and guidelines are consulted and analysed. They provide additional contributions and knowledge to assess the feasibility of reorienting a society towards the objectives of sustainable development.

In Namibia, the Ministry of Regional and Local Government and Housing (MRLGH) and the Association of Local Authorities in Namibia (ALAN) are the main actors in the promotion of sustainable development in as far as the Habitat Agenda is concerned. The MRLGH established a Directorate: Housing and Habitat Coordination which includes the National Habitat Committee. ALAN is attempting to promote issues of sustainability among its stakeholders.

The dissertation also contributes to the debate of post-development (see Chapter 2, section 2.2.2.2) by providing a framework to achieve a state of sustainability (see

Chapter 5). In addition an understanding of the concepts and requirements of sustainable development is provided through a synthesis of theoretical and empirical issues in order to evaluate the practicability of implementing and achieving sustainable development at local authority level in Namibia. Furthermore, the current vagueness of the concept sustainable development is addressed and alternatives will be formulated by developing a framework which supports the implementation of sustainable development.

5. Hypothesis

Due to the multitude of issues which have to be evaluated, such as philosophies, theories relating to sustainable development, generic functions and governance, components of sustainable development, policies, and Local Agendas 21, the main hypothesis is subdivided into four sub-hypotheses. The hypothesis states:

The holistic approach is not understood as being essential to Sustainability and the components necessary for the implementation of sustainable development are not integrated into a holistic whole in Namibian policies and the practices of local authorities.

The analysis of the hypothesis is divided into four sub-sections in order to test the main hypothesis. This is required in order to derive at conclusions which either confirm or deny the main hypothesis.

- Sub-Hypothesis 1: Components of sustainable development
  The four components (economic, ecological, social and ethical) and their principles required for the implementation of sustainable development are neither integrated into a holistic framework, nor reflected in Namibian government *policies.*
- Sub-Hypothesis 2: Generic administrative functions
  Generic functions of local authorities have not been brought in line with the principles of sustainable development.
- Sub-Hypothesis 3: Good governance
  Current *Governance* of local authorities does not reflect the objectives and principles of sustainable development.
- Sub-Hypothesis 4: Implementing sustainable development
  Practical examples of implementing sustainable development at local level, such as *Local Agendas 21*, do not embrace all four components required for the implementation of sustainable development.

The various elements which form the basis of the sub-hypotheses, will be considered to obtain a more complete picture of the influence they have on the issue tested in each sub-hypothesis and the main hypothesis. These elements consists of the four components to implement sustainable development in the theoretical context, i.e. social, economic, ecological, ethical, and generic administrative functions in the context of local authorities, and the components identified for good governance.

6. Scope of the study

Due to the lack of a clear understanding of what sustainability and sustainable development are, the study looks at possible models or cases which can be regarded as sustainable. In addition cases of non-sustainable communities are illustrated. These examples are supplemented by perspectives relating to philosophies, theories and principles explaining sustainability, and specific empirical issues in the field of human settlement development such as Local Agendas 21, policies and administrative functions. The theoretical and philosophical facets are concerned with holism, autopoiesis, ethical aspects, utilitarianism, eco-philosophies, and the human Mind. They will introduce different views, contrasting the conventional positions which provide inputs into the conceptual framework. In this way the meaning of what constitutes real sustainability will be investigated and an answer will be obtained on why sustainable development has not yet been achieved.

The implementation of sustainable development is investigated in terms of the provisions of the Habitat Agenda and Agenda 21 as they constitute two of the international agreements relating to human settlements. Strategies proposed in the

Habitat Agenda will receive attention, including the formation of partnerships, enhancement of capacities, supporting enabling approaches, strengthening participatory mechanisms, and monitoring progress made by using indicators and Best Practices. The empirical issues also include decentralisation which is regarded as forming part of the implementation process of sustainable development. Furthermore, practical examples such as eco-villages, Arcosanti, the Sustainable Cities Programme (SCP), and green architecture, are investigated. Other aspects include the achievements in implementing Local Agendas 21 in Namibia and internationally, as suggested in the Agenda 21, and the involvement of the partners in the process of implementation.

7. Limitations of study

The main investigation of the dissertation has to be limited to two local authorities in Namibia, namely the municipalities of Windhoek and Walvis Bay, and their activities with regard to the implementation of Local Agendas 21. So far only two local authorities in Namibia have embarked upon such an agenda. Another limitation was that these two Local Agendas 21 commenced only recently. Therefore limited information was available and a longitudinal analysis was not feasible. Examples from other countries have supplemented the discussion.

The available literature is dominated by material from developed countries and therefore, by Western thinking. However, empirical materials are available not only from the so-called developed world, but also from the developing world. That provides stimulating ideas on the implementation of sustainable development. These contributions are integrated in order to provide a more complete evaluation of

the various elements and strategies of implementing what is regarded as sustainable development.

8. Method of investigation

The methodology was based on the phenomenological perspective with regard to the empirical world which is committed to understanding social phenomena from the actor's own perspective (Taylor & Bogdan 1984:2). This is achieved through qualitative methods such as "the participant as observer, the observer as participant, and the complete observer" (Burgess 1984:80), in-depth unstructured interviewing or conversation, as well as case studies, field work, interpretative procedures, and field research (Burgess 1984:2). A case study can be based on field experiences involving observations, interviewing and the collection of documents.

An important part of the dissertation required a qualitative literature study, as theoretical principles and philosophies played an essential role in understanding and evaluating the concepts sustainable development and sustainability. Another aspect was the historical perspective of ethics, utilitarianism, and holism, and their contributions to the discussion of sustainable development. Furthermore, case studies which could not be visited as part of the empirical investigation, provided valuable written information.

Numerous conferences and workshops have been held at national and international level, such as the Africities conference in May 2000 and the National Housing Conference. Similarly, documents relating to issues of sustainable development, such as NDP II, have been formulated. However, actions relating to the implementation of sustainable development are very limited.

The activities and programmes of these stakeholders are analysed as part of this dissertation. Strategies proposed in the Habitat Agenda receive attention, including the formation of partnerships, enhancement of capacities, supporting enabling approaches, strengthening participatory mechanisms, and monitoring progress made by using indicators and Best Practices. These strategies form part of the evaluation of the implementation of Local Agendas 21 in Namibia.

8.1 Data collection

The methodology for this study had to take into account that in Namibia little practical data was and is available on sustainable development related issues in the field of human settlement development. A few efforts are currently in progress, but their successes cannot be determined at the moment. This has two implications with regard to the methodology. Firstly, many issues, including those relating to the implementation process and its consequences, had to be based on theoretical discussions and examples from outside Namibia. Secondly, it was an opportunity to devise a strategy on how sustainable development can be incorporated in these emerging projects or programmes and policies.

Statistics, tables and graphical material were available either from Namibian sources or from international organizations. This data was contained in books, documents, articles or Internet websites. Data collection in the form of questionnaires was not regarded as feasible, as only two local authorities have so far started with a Local Agenda 21. Therefore, too little data was available in Namibia from these sources. International data and data from other sectors has complemented the national records.

8.2 Techniques

Due to the fact that the concept sustainable development is unknown in Namibia, it was not practical to consider questionnaires. The lack of understanding of even relative simple issues such as land tenure in the various local authorities became evident, and confirmed the above position, during a nation-wide study in May / June 2004. The low response rate of about 10% was of no scientific value and in most cases was incomprehensible.

Research visits by the author to most of the local authorities in Namibia during the last ten years, provided enough insight into the capabilities of the local authorities with regard to an understanding of technical, administrative and policy issues. Therefore the use of questionnaires was not considered. Instead other techniques were employed.

8.2.1 Observation

The first data gathering method for the dissertation focused on the active participation in conferences, fora, and workshops, as an observer and/or participant. Here the possibility existed to act as an observer where "active participation is an integral feature of the researcher's conduct" (Black & Champion 1976:333). The research design in participant observation remains flexible throughout the research. Taylor and Bogdan (1984:16) state that although participant observers have a methodology to follow, the specifics of their approach evolve as they proceed. During meetings, conferences or workshops, notes were taken to have a record available which could be utilised for study at a later stage.

Depending on the group in which a researcher participates, the researcher will have to adapt to the existing situation. Gans (1992:54) describes three different situations of a participant observer. The first is the total participant, in which the field worker is completely involved in a social situation. The field worker becomes a researcher again and writes down what happened only after it is over. The second case is the researcher participant who participates in social situations but is personally only partially involved, thereby functions as a researcher.

The third case is the total researcher who observes without any personal involvement in the situation under study. The three situations Gans is describing were applied to this study. They can be illustrated by the following examples which formed part of the fieldwork and involved the various methods of investigation:

- the first will apply to the activities of the Habitat Committee,
- the second in the case of the two Local Agendas 21,
- the third during fieldwork and investigations outside Namibia.

8.2.2 Dialogue

Strauss *et al.* (quoted by Burgess 1982:108) maintain that researchers have to become members of the social setting they study to understand the position of the informants. Similarly, Cottle (quoted by Burgess 1982:109) argues that it is important for the researcher to become involved in the lives of those studied. According to Palmer (quoted by Burgess 1982:107): “[t]he conversations of human beings are an important part of the data of social research as well as an important part of social research technique”. Therefore, the researcher has to actively participate in conversations. Probing to determine the depth of knowledge is possible, but also to test whether information was received and understood. This

approach may also reveal what information is available and whether overriding concerns in a local authority might hamper the implementation of sustainable development which could be described as crisis management, for example, in cases of insolvency.

A very small number of Namibians are directly involved in LA21. Therefore not too many interviews could be conducted. A dialogue focusing on issues relating to the study was found to be adequate. The information received proved to be satisfactory. In addition to individual dialogue, group and plenary discussions also provided valuable information. It also enabled the author to become actively engaged in various discussions. Depending on the situation, notes were taken either during the dialogue or afterwards to record the most important aspects of the discussion. These records were used during the study.

8.2.3 Longitudinal studies

Longitudinal studies are important in that they provide an observer with data gathered by different researchers over a period of time. Therefore, this type of exercise can study changes occurring over time (Bailey 1987:35). Case studies which have been documented, can be visited and those who have participated in the project may be interviewed. Others have been extensively documented and their results present valuable insights in the implementation of sustainable development. Projects of interest include the Sustainable Cities Programme, efforts made in Curitiba (Brazil), and the Local Agenda 21 in Nakuru.

9. Sources

9.1 Target groups

The implementation of sustainable human settlement in Namibia, at the national level, has been limited to the formulation and execution of the decentralisation policy which is one component of sustainable development. It is therefore necessary to employ a variety of measures to obtain information relating to the implementation of sustainable development of human settlements and the existing knowledge thereof. This process therefore entailed direct involvement in activities of groups concerned with implementing sustainability, e.g., the meetings arranged by the City of Windhoek with regard to establishing a Local Agenda 21 in the city, or participating in the Namibian Habitat Committee. The exchange of information with various institutions was carried out with those involved or responsible for the implementation of Local Agendas 21 and Habitat Agenda.

9.1.1 Central Government and the National Habitat Committee

The state has numerous responsibilities such as for core activities, for example, the setting of major polices, provision of infrastructure, financial policies, and maintaining law and order (Picard, Liviga & Garrity 1994:114). The state is responsible for building a climate of cooperation and trust among the public, private, and non-for-profit sectors such as non-governmental organisations, through consultative mechanisms and transfer of ownership of previously state-controlled and managed activities.

The MRLGH established a Directorate of Housing and Habitat Coordination (see Republic of Namibia 1999a:54), with the National Habitat Committee fulfilling a monitoring function. To strengthen the National Habitat Committee, regional and

local Habitat Committees are to be established (Republic of Namibia 1999a:56). The meetings of the National Habitat Committee in Windhoek were regularly attended. This provided the basis for discussions and observations as an active member of the group. Furthermore, on central government level, various meetings, seminars, and workshops provided opportunities for observations and debate.

9.1.2 Local Authorities

Local Authorities and Regional Councils, in collaboration with the local communities and their agencies, are the main beneficiaries of sustainable development efforts. They are also supposed to be the implementers of the Habitat Agenda and the Agenda 21, through Local Agendas 21. These groups have a crucial role in this endeavour and, therefore, they need national and international support. Currently only the Windhoek and Walvis Bay municipalities are in the process of implementing a Local Agenda 21.

The Association of Local Authorities of Namibia (ALAN), as the umbrella organisation for local authorities in Namibia, was approached to obtain information on plans to promote Local Agendas 21 in Namibia and as part of a SADC initiative. Individuals involved in Local Agendas 21 in Windhoek and Walvis Bay provided documents and information as primary sources.

9.2 Primary sources

The research approach of the dissertation had to remain flexible, including the data collection process. Where available, knowledge regarding sustainable development was determined in the field, e.g., in the case of officials working for local authorities. This required dialogue with those involved or supposedly involved in sustainable

development in the human settlement field. Conversation is a crucial element of field research (Burgess 1982:107). These conversations can reveal how much education is needed to provide a basis for the implementation of sustainable development. Primary sources are an opportunity for participatory research, to question the origins of the production of knowledge, i.e., who has access to knowledge and whose interests and ends knowledge serves (Merriam 1991:56).

Primary sources are of importance to the empirical part of the study. A difference will be made between dialogues and observations on the one hand, and case studies or projects on the other hand. Primary sources include 1. those responsible to promote the implementation of the Habitat Agenda and Agenda 21, such as the Habitat Committee and 2. those directly involved in the execution of projects, i.e., individuals representing local authorities and UN-Habitat. In addition, individuals with specialised knowledge were approached to obtain answer to specific questions relating to the study.

9.3 Secondary sources

Due to the wide variety of aspects reflected on in the study, the use of secondary sources was of utmost importance. A wide range of sources was available on the concepts, philosophies and theories in the forms of books and articles which were obtained from libraries and the Internet. Furthermore, many reports and other written documentation relating to the dissertation were accessible.

At present very limited practical data and information on implementing sustainable development in human settlements in Namibia is available. It was therefore necessary to look for practical examples of implementing Agenda 21 and the Habitat

Agenda or projects relating to sustainable development aspects in other countries. Visits to other countries such as the RSA, Botswana, Kenya (Nakuru) and Cuba have provided relevant information, ideas and insights. Namibian projects or activities directly addressing the Agenda 21 and Habitat Agenda include the National Habitat Committee and the Local Agenda 21 initiative of the municipalities of Windhoek and Walvis Bay.

Smaller projects within Namibia were visited to assess their activities with respect to sustainability, for example NGOs such as *Grupo Sofonias* and the Namibia Clay House Project that are involved in housing projects. These projects are designed to fulfill certain aspects of sustainable development, for example, community participation, the use of local materials, technology transfer, and education. The Internet is crucial in providing the latest information and also documentation, for example, from various organisations which often is either not available in the printed media or once publicised is not longer up to date. Many documents, including speeches, articles, and promotional information are only available on the Internet. The promotion of the Internet in the dissemination process is also supported by UN-Habitat (UNCHS 1998a:112).

Documentation from various national and international conferences, workshops, and fora, became available during the course of the study either on the Internet or documents which were prepared for the specific meeting.

CHAPTER 2 - CONCEPTUALISING SUSTAINABLE DEVELOPMENT

1. Introduction

The debate surrounding sustainable development and sustainability has its origins in Western countries as a consequence of the industrialisation of their economies and the global spread of the capitalist system. This resulted in the emergence of philosophies and approaches in the West which denounced the non-sustainable nature of this developmental model. Therefore the problem of non-sustainability is a phenomenon created by the industrialised world. As a consequence, most alternative models have a Western origin. One example of the outcome of the global problem identification process during the 1980s and 1990s, e.g., the Brundtland Commission and UNCED, was the realisation that the way forward requires wide ranging changes in production and consumption patterns. One of the intentions revolves around local authorities and their role in implementing sustainable development in the form of Local Agendas 21 (see section 3.4).

The discussions surrounding sustainable development have to be understood in the light of international agreements, designed to solve developmental problems locally and globally. These problems were identified and deliberated at international level during numerous conferences to which the Namibian government was a signatory. Without these problems there would have been no need to change the current way of life in the industrial and non-industrial countries. Hence, the problems and needs of industrial as well as non-industrial countries have to be examined, as they provide the basis or reasoning for promoting sustainability, especially if a country such as Namibia, intends to follow the Western model of development. This includes the process of undertaking projects that are portrayed as Local Agendas 21. Therefore it

is necessary to clarify the notions and the related philosophies before practicalities are investigated.

By the end of the 20th century, globalisation had spread the capitalist system and its political connotations around the world. Namibia is also following this model which has been incorporated in its Vision 2030, despite the fact that only few countries, mainly in Asia, had succeeded in promoting industrialisation on a global scale. Africa is been portrayed as peripheral and underdeveloped in comparison with the industrialised countries in the North. NEPAD is the latest attempt[1] to rectify this situation and to promote accelerated growth and sustainable development; to eradicate poverty and to halt the marginalisation of Africa (Diescho 2002:13-14)[2].

The formulations of Vision 2030 and NEPAD have neither provided an explanation of what sustainable development entails nor has a philosophical shift been evident which points towards a new development approach that is not a replica of the Northern model of development. Criticisms of the latter by mainly Western proponents resulted in philosophies such as autopoiesis, holism, and eco-philosophies, but no equivalent in the African context has emerged. Therefore, traditional African and Asian societies provide insights into their relationships between communities and the natural environment, in order to identify sustainable and non-sustainable ways of life. The wide diversity of thought found in the North and the South, necessitates a look at a number of issues in order to comprehend the fundamentals of the concepts *sustainable development* and *sustainability* before the application by local authorities can be considered. The first step is to examine the meaning and understanding of abstract concepts as this has neither been accomplished in Namibia in general nor on local authority level in particular.

2. Theoretical and philosophical perspectives

2.1 Meaning and understanding

Many concepts[3] such as *development* or *sustainability* are *abstract*[4]*.* Dewey (1910) declared that

> *"… the abstract is the* theoretical, *or that not intimately associated with practical concerns. The abstract thinker (the man of pure science as he is sometimes called) deliberately abstracts from application in life; that is, he leaves practical uses out of account".*

To understand highly intellectual and multifaceted issues is not necessarily easy for the unacquainted. Sustainability and sustainable development have both been described as being vague concepts (Baker et al. 1997:5; Pearce et al. 1990:1). However, the issues surrounding the implementation of sustainable development are very practical in terms of the changes envisaged, i.e., instead of continuing the unsustainable practices, changes are required which aim at achieving sustainable behaviours, attitudes and practices with regard to production and consumption.

Promoting extensive changes requires critical thinking by decision makers. Cognitive capacities[5] are needed to formulate new policies, administrative processes and functions. The use and understanding of certain words or concepts is often influenced by fashions. An uncertain terminology between a speaker and a listener, especially in the case when they are coming from different backgrounds, language groups, or economic classes, can result in misunderstanding. As Middleton and O'Keefe (2001:17) observe: "[d]iscourse operates within linguistic structures, sets of meanings which are largely formed by the society in which it is held".

Modern societies are affected by various influences, including the use of languages or certain expressions. Knowing a language means knowing what words and

morphemes are in that particular language, and that means knowing what they "mean" (Fromkin & Rodman 1983:291). This knowledge is important, otherwise ambiguous meanings could arise, as illustrated by Lewis Carroll's Humpty Dumpty (quoted by Fromkin & Rodman 1983:163) who said to Alice: "When I use a word, it means just what I choose it to mean - neither more nor less. The question is, said Alice, whether you *can* make words mean so many different things".[6]

The use of words is complicated in multi-cultural societies, such as Namibia, in the translations of sentences and words that can have different meanings. This becomes even more problematical when abstract concepts are included, as the understanding thereof becomes ambiguous. Many words, concepts and terms do not exist in certain indigenous languages in Namibia. Translations are approximations seen from different language systems, but good translations which are internally structured and are logical, order the perceptions of reality based in different languages to the same end (Prah 1997:90). Over time, words and their meanings can change. A word's meaning may become broader or narrower, or its meaning shifts resulting in a new meaning (Fromkin & Rodman 1983:296).

Currently a situation has arisen, where particular words have become a global doctrine, namely sustainable development. As Sahtouris (1995) argues, sustainability is now widely talked about at conferences, in the media, among people in the street, but many do not have a clear idea of what it means. Dr Khosla provides an appropriate observation at the United Nations (Khosla, 2001a) illustrating the lack of understanding of the concept Sustainability:

> *"I have to tell you that this week in New York has been a total, and rather devastating, revelation for me. … Over the last several days, I have met people at all levels – in the UN, diplomats, well-informed people from different walks of life who for 20 years have been hearing – and using – the phrase sustainable development and have not yet*

> *understood it. I met programme officers, directors, even Assistant Secretary Generals of the UN, people with whom I was involved in rather intensive discussions in connection with a UNDP project and many of them simply equate sustainable development simply with environment. Certainly not all, but many still don't seem to get it. 'Many of these issues of sustainable development will have to wait until the countries can afford to deal with them'".*

Understanding can also be linked to the perception of an observer's ability to look at something. In human society, different views are expressed with regard to the need for sustainable development. Every view is right, but depends on its standpoint. "An observer's cognitive domain circumscribes ...all the descriptions which it can possibly make" (Maturana & Varela 1980:136). In other words: "[m]an can hardly recognize the devils of his own creation" (Albert Schweitzer quoted by Wines 2000:8)[7].

Therefore, to understand the concepts sustainability and sustainable development, it is necessary to explore several theories and philosophical directions which give an insight into the complexities of the concept. This is imperative as later the implementation of sustainable development in Namibia will be discussed. The concepts development and sustainability will be examined before examples and explanations of sustainability are discussed.

2.2 The concept Sustainable Development

2.2.1 Development theories and thoughts

A lot has been written about the concept development which saw considerable changes in meaning and interpretation in the last decades, from modernisation to dependency to sustainable development. Economic growth during the 1950s and 1960s provided the basis for the advancement of the belief that the Euro-centric capitalist system and its modernisation approach, presented the answer to the non-

developed world. Development was associated with growth and with concepts such as industrialisation, urbanisation, large-scale and capital-intensive technology from Western countries (Kotze 1997:8). Lerner (quoted by Mabogunje 1980:38) states that “[m]odernization is the process of social change in which development is the economic component. Modernization produces the societal environment in which raising output per head is effectively incorporated”. For effective incorporation producers and consumers have to understand and accept new rules to improve their behaviour and diffuse it throughout society. “This transformation in perceiving and achieving wealth-oriented behaviour entails nothing less than the ultimate reshaping and resharing of all social values, such as power, respect, rectitude, affection, well-being, skill and enlightenment” (Lerner quoted by Mabogunje 1980:38).

The “phenomenal growth and development records” of Asia, such as India and China at the end of the 20th century, are depicted as examples of the success of capitalism. The “model” of Western style development has been portrayed as the solution for the rest of the world, including Namibia. India’s “economy is humming like never before “ (Wehrfritz & Mazumdar 2004:26), but is not delivering its promises to a majority[8]. As a result, the main opposition party replaced the ruling party in May 2004. The disappearance of the East-West divide strengthened the impression that the capitalist system offered the only viable option. “I have always said that capitalism did not win in 1989. It was all that remained” (Gysi, 2002)[9].

2.2.2 Sustainability and development

2.2.2.1 Historical perspective of sustainable development

A succession of environmental disasters in the 1980s, such as nuclear waste leaks, flooded cities, and crop failures, resulted in strengthening the green movement in

industrial countries. “It occurred to even the most obstinate detractors of the ecology movement that Mother Nature was going to have it her way and it was wiser to cooperate than resist” (Wines 2000:26-27). One outcome was the appearance of the Green Parties in the political process in Europe. Other progressive activities related to the fields of philosophy and eco-philosophy (Wines 2000:27).

The harsher world economic climate of the 1980s led to the renaissance of neoclassical and neo-conservative thought and the decline of development studies (Kay 1989:11). However, towards the end of the decade, interest in four related fields emerged (Kotze 1997:11):

1. the integrated nature of the development process,
2. a tentative holistic approach to development thinking,
3. the significance of context for understanding development problems, and
4. the relationship between environment and development.

In 1987 the report by the World Commission on Environment and Development (WCED) started the contemporary public environmental agenda and resulted in the United Nations organising the Conference on Environment and development in Rio de Janeiro in 1992 (Middleton & O’Keefe 2001:38). In the following years several other UN conferences followed focusing on particular issues such as women, climate, housing and social issues. The influence of UNCED’s Agenda 21 became apparent in the documentation and resolutions afterwards.

The formulation of the concept *sustainable development* provided by the Brundtland Commission[10] represented the mainstream thinking in the late 1980s and early 1990s, as many organisations and agencies subscribed to one or more objectives (Baker, et al. 1997:5). The Namibian government has also adopted this definition in its policies and development plans (see Chapter 4). Baker et al. point out that the

popularity of the concept has given rise to ambiguity and lack of consistency in the use of the term. This has been regarded as severely diminishing its usefulness. The definition of sustainable development by the World Commission on Environment and Development (1987:43) reads as follows:

> *"Sustainable development is development that meets the needs of the present without compromising the needs of future generations to meet their own needs. It contains within it two key concepts:*
>
> - *the concept of needs, in particular the essential needs of the world's poor, to which overriding priority should be given, and*
> - *the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs".*

The report (WCED 1987:ix) had to propose long-term environmental strategies for achieving sustainable development by the year 2000 and beyond; to recommend how concerns for the environment may be translated into cooperation between developing and other countries; to consider how the international community can deal more effectively with environmental concerns; and to help define perceptions of long-term environmental issues and the appropriate efforts needed to deal successfully with the problems of protecting and enhancing the environment during the coming decades. The principal concern of the WCED was the worldwide resolution of what was primarily an issue for the capitalist world (Middleton & O'Keefe 2001:39).

According to Victor Munnik (2001:1), the Brundtland Commission's definition poses an immediate problem, namely that "the needs of the present are not being met. This is called poverty". Poverty has become worse since UNCED, so has pollution and environmental destruction. If current needs are not being met, what about the future? This is becoming a major political problem, as the failures of past policies turn out to be the responsibility of the political masters. The UN Secretary General

Kofi Annan argues: “[w]e have the means and the capacity to deal with our problems, if only we can find the political will” (Brainy Quote, 2002).

Pearce et al. (1990:ix) state that sustainable development is the fashionable buzzword in environmental conservation circles and in much of the world of international development. In the case of Namibia the correctness of this statement will become evident in Chapter 4. Jacobs (quoted by Baker et al. 1997:5) stressed that the lack of clarity in the definition allows anything to be claimed as ‘sustainable’[11]. In order to counteract this tendency, Brooks (quoted by Baker et al. 1997:5) argues, that a precise definition is required to specify a set of measurable criteria which would allow individuals and groups with widely differing values, political preferences or assumptions about human nature to agree on criteria that can be met in concrete development programmes.

Before the appearance of the Brundtland Commission’s report, sustainable development as an idea had already been espoused in the World Conservation Strategy (WCS)[12], produced by the International Union for the conservation of Nature, World Wildlife Fund (WWF) and the United Nations Environmental Programme (UNEP) in 1980 (Pearce et al. 1990:ix; Khosla 2001a). The document included the following explanation (Murcott, 1997):

> *“Sustainable development – maintenance of essential ecological processes and life support systems, the preservation of genetic diversity and the sustainable utilization of species and ecosystem”.*

According to Middleton and O’Keefe (2001:42), environmentalism suffers from a conceptual difficulty. It tends to be concerned with the rural environment except when it considers the effects of industry and transport. Albert Einstein (quoted by Middleton & O’Keefe 2001:42) remarked that “the environment is everything that

isn't me". The phrase 'natural environment' usually refers to everything not manufactured, a use which glides over the extent to which the world's landscapes have been modified by human activity especially in urban areas and their surroundings. The phrase also misses the extent to which these activities and the consequent changes in nature reflect changing modes of production – "contemporary nature is produced by capitalism" (Middleton & O'Keefe 2001:42). Many of the activities of the capitalist system were regarded as development. Therefore, this term will now be considered.

2.2.2.2 Development

Development is being described as a multi-dimensional concept. Development is a value word, implying change that is desirable (Pearce et al. 1990:2)[13]. The latter argue that the meaning depends on what social goals are being advocated by a development agency, government, analyst or adviser. The World Bank (1992:34) circumscribes the goal of development as improving the well-being of people. This includes essential components of economic development such as raising living standards, improving education, health, and the equality of opportunities. Added to this are political and civil rights. The Bank asserts that, economic growth is an essential means for enabling development, but in itself it is a highly imperfect proxy for progress. The primary role of economic forces in bringing about development of a society has often been taken as axiomatic, so that development and economic development became synonyms (Mabogunje 1980:35). To be modern meant to consume and produce goods and services associated with the industrial countries. The enhanced appetite for consumption of modern goods and services stimulated and created dissatisfaction with traditional conditions especially in rural areas (Mabogunje 1980:38). "Modernising" societies in the South have been unable to

feed and employ their populations in addition to the exacerbated income inequalities this change produced.

Changes in development thought and the doubts regarding the effectiveness of the modernisation approach's 'trickle down' strategies, led to the development of the reformist school. They assumed that development could not take place if the distribution of income was such that the few rich people earned the largest share of national income (Fair 1982:37). Emphasis was placed on "redistribution with growth" (Cherney et al quoted by Fair 1982:37), and the growth pole strategy to diffuse wealth and economic activities. Reformists emphasised self-reliance and self-help on the part of Third World countries in order to reduce poverty and dependence (Fair 1982:40).

During the 1980s this school of thought has advanced to what is now called post-development which “proclaims the need to move beyond development, to formulate alternatives to it” (Agostino 2004:32). The dominant neo-liberal development model has also failed to bring economic equity; to integrate economic and ecological concerns; to protect local cultures and communities; to establish a global, human security policy, to bring about human rights, peace and justice; and to provide depth of meaning. … The discourse of development theory must be abandoned, and new models must be formulated, informed by the traditions of indigenous peoples, spiritual values, and authentic regional cultures (Bjonnes, 2003). Haines and Wood (2004:16) point out that post-development calls for an open-ended agenda and a democratisation of debates, allowing multiple concerns and differing aspirations to be accommodated. The intention is to unmask development, to show its obsolescence, to propose a move beyond it by offering examples of those who have

already liberated themselves from that burden (Agostino 2004:40). Development in the context of sustainability requires a new meaning and understanding. One attempt to change the *status quo*, was the UNCED conference in Rio de Janeiro in 1992. Consensus was achieved, on paper, that the way out of the predicament of the current unsustainable way of life on Earth, was to implement the Agenda 21. Sustainable development as the solution requires as a first step an examination of the concept *sustainability*.

2.2.2.3 Sustainability

According to Spangenberg and Bonniot (1998:3),

> *"Sustainability per definition is a composite and thus ambitious policy target. It comprises environmental, economic and social criteria with equal importance neither environmental degradation nor violating human dignity by poverty or other threats, nor public or private bankruptcy can be acceptable elements of a sustainable society".*

Sustainable development has been linked to three components: **social**, **ecological** and **economic**. To advance sustainability, an emphasis has to be placed on a holistic approach (see 2.3), instead of promoting a fragmented sectoral development approach with an emphasis on one of the objectives. In order to explain and understand sustainability, one has to consider the one system known, that has proven to be sustainable, despite numerous wide-ranging changes over millions of years, that is Nature. Understanding can be gained on the micro-level (see 2.4) and on the macro-level. Nature provides numerous examples of sustainability, as the one holistic being on Earth which is, nevertheless, not perfect[14].

According to Sahtouris (1995): "Nature teaches us that order can be maintained through change even, when necessary, through disastrous change". The imperfections of Nature can be explained by looking at climate changes over million years. World climate has changed several times as a result of what is known as the

ice ages[15]. Ice ages[16] are only a few degrees colder than the average temperature, but for sensitive creatures they are extreme (Sahtouris, 1995). If global temperatures increase faster than the natural rise in temperatures, then humankind's activities are indeed affecting the global climate and life on earth. The spectre of Earth adapting to human-induced climate change and the uncertainty over how these effects spin out over the next decades is unsettling, as not all plants and animals will be able to make the seasonal shift (Foroohar & Guterl 2002:39).

The debate surrounding sustainability and sustainable development centres around one basic aspect – life on Earth[17]. For this to happen, life-support systems are indispensable. Organisms can consist of one cell, the basic unit of life, or contain numerous cells (Miller 1996:89)[18]. With regard to energy and the cycling of matter, an examination of energy flows and metabolistic processes provide an insight into sustainable development processes. The factor Energy and the importance of energy in sustainable processes can be found in the laws of energy[19]. With regard to the second factor Metabolism, Girardet (1996:23) and Miller (1996:258) argue that, it is necessary to promote circular metabolisms, where each output can be used as an input into the production system, in order to support sustainability. Therefore, nothing is wasted and resources are not overexploited. This is the opposite of modern, unsustainable societies' linear metabolism, characterised by its throw-away life style and an ever-increasing throughput of resources and output of wastes. Metabolism is the most basic (autopoietic) activity of all life (Sahtouris 1995). The process involves the recycling of the earth's crust into living matter and back into non-living matter that can be used again to create more living matter[20].

The physical dimension of sustainability refers to leaving the stability of the internal evolutionary processes of the ecosphere intact for an indefinite length of time (Spangenberg & Bonniot 1998:3). An economic system is environmentally sustainable only as long as the amount of resources utilised to generate wealth is permanently restricted to a quality and quantity that does not overexploit the sources of the ecosphere. If this does not occur, human economies would have to continue to draw from the stock of natural resources such as oil and fertile soil. From an energy point of view, the continuous use of low-entropy resources will exhaust them in future. The immense flows of resources through the global economies would continue to lead to an increase in entropy which results in unpredictable and irreversible environmental impacts.

“True sustainability requires the recognition that we cannot grow endlessly to meet our needs. We must, instead, develop within our ecological means, meeting the needs of the present and future equitably” (Byrne & Hoffman, 1996). Pearce et al. (1990:4) claim that much of the sustainable development literature has confused definitions of sustainable development with the conditions for achieving sustainability. The key necessary condition is *the constancy of the natural capital stock* or in other words, the requirement for non-negative change in the stock of natural resources and environmental quality. This means the environment should not be degraded further, but improvements would be welcomed.

Sustainability is not, as Mulder (1999) puts it, "[t]he narrow-minded vision of sustainable development, i.e., sustainable development as developing environmentally sound ways of production and consumption is still dominant in industrialised society". The processes required to achieve sustainability requires an

understanding by those responsible for the global destruction of resources (i.e., humans). The many viewpoints, theories, philosophies which emerged as a result of the debate, provide ideas, explanations and conceptual support. First the wide variety of definitions of sustainable development will be considered.

2.2.2.4 Definitions of sustainable development

The apparent simple and clear Brundtland definition has caused heated discussion among theoreticians and practitioners of environment and development (Kirkby et al. 1995:1-2). This can be illustrated by looking at the explanations and definitions of a wide variety of views provided by diverse authors[21].

UNEP (Okigbo 1996:131) criticises the definition of sustainable development by the Brundtland Commission as being ambiguous and confusing, because *sustainable development*, *sustainable growth* and *sustainable use*, have been used interchangeably, although they do not have the same meaning. Therefore, UNEP provided the following definitions:

- Sustainable growth is the improvement of the quality of human life while living within the carrying capacity of the supporting ecosystem.
- Sustainable economy is the product of sustainable development. It maintains its natural resource base and can continue to develop by adapting to changing circumstances through improvements in knowledge organisation, technical efficiency and wisdom.
- Sustainable living denotes the lifestyle of an individual who feels the obligation to care for nature and for every human individual, who acts accordingly.

Okigbo (1996:132) points out that the WCED definition does not indicate what sustainable development entails and raises an issue that the commission discussed but did not include or allude to in the definition. This is the problem of *transition* which takes into account the past, the present and the future. The question of transition is the most difficult challenge and implication of sustainable development. In this regard the issues surrounding the natural environment, such as quality,

productivity, diversity and resilience, are recognized. However, no stipulation has been provided as to how the necessary changes from a past of exploitative squandering of natural resources and the degradation of the environment to a sustainable future can be effected through the period of transition. This requires changes in attitudes, ethics, morality, culture and lifestyles against the driving forces of polarisation and momentum of the modernisation process (see Chapter 5).

Okigbo (1996:132) defines sustainable development as consisting of policies, strategies, plans, production systems, and technologies used in the execution of projects and programmes aimed at satisfying real human needs in perpetuity, while maintaining environmental quality, biodiversity, the resilience of the eco-system, management and rational utilization of resources at individual, institutional, community, national, regional, and global level.

Costanza (1996:8) affirms that many regard the concept sustainable development as useless because it cannot be adequately defined. Most discussions regarding sustainable development are misdirected because discussions attempt to cast the problem of defining sustainability as definitional, when in fact, it is a problem of prediction. Furthermore, the discussions fail to take into account the many time and space scales over which the concept must be applied. Constanza argues that it is easy to define sustainability: “[a] sustainable system is one that survives for some specified (finite) time. …Thus, what usually pass for *definitions* of sustainability are actually *predictions* of what set of conditions will actually lead to a sustainable system” (Costanza 1996:8). This means that change is part of the sustainable process.

In defining the term *sustainable development*, the UNCHS (1991a:273) states, that two aspects are brought together. The first is the *development* component which is concerned with ensuring that human activities today do not compromise the ability of future generations to meet their needs. *Sustainability* emphasises that future generations' options are not compromised which means that human society meets the needs of today's world inhabitants without depleting necessary resources. The concept of sustainable development extends to cover social, cultural, technological, economic and physical sustainability. No development can be considered truly sustainable unless it responds to all these factors.

The Nigerian Environmental Study/Action Team defined sustainable development in 1991 (Aina 1996:53) as a notion, a movement and an approach which has developed into a global wave of concerns, study, political mobilisation, and organisation around the twin issues of environmental protection and economic development. The approach embodies the notion and ideal of a development process that is equitable and socially responsive. Furthermore, it recognises the extensive nature of poverty, deprivation and inequality between and within nations, classes and communities. Sustainable development also advocates the view of the world as one ecosystem and that the economic development process should include ecological and environmental issues as an essential component.

Sustainable development is a situation in which the development vector does not decrease over time and where the elements to be included in the vector are open to ethical debate (Pearce et al. 1990:3). Furthermore, the time horizon for practical decision-making is indeterminate outside of agreement on intergenerational objectives. This means that the term development in the context of sustainability

needs to be revised, as a new approach is required in which the term does not primarily focus on economic aspects, and on only one species.

Robert Repetto (quoted by Pearce et al. 1990:4) defines sustainable development as “a development strategy that manages all assets, natural resources, and human resources, as well as financial and physical assets, for increasing long-term wealth and well-being. Sustainable development, as a goal *rejects policies and practices that support current living standards by depleting the productive base, including natural resources*, and that leaves future generations with poorer prospects and greater risks than our own”.

Already in 1979, Coomer wrote (quoted by Murcott, 1997) that: “[t]he sustainable society is one that lives within the self-perpetuating limits of its environment. That society … is not a ‘no growth’ society … It is rather, a society that recognizes the limits of growth … [and] looks for alternative ways of growing”. “Sustainable development is development that lasts” (World Bank 1992:34). The bank restricts the statement to the concern, that those who enjoy the fruits of *economic* development today, could make future generations worse off by environmental degradation and pollution.

According to Khosla (2001b), “[t]he simplest and, with a little public familiarity, the most effective way to arrive at a sustainable future is to take care of the two primary preconditions of sustainable development: 1. Meet the basic needs of all, and 2. Protect the environment”.

The drawing up of Agenda 21 and Habitat Agenda, were intended to provide principles and guidelines to achieve sustainability. They will be discussed at a later stage (see chapter 3). First, the two Agendas' underlying principle of sustainable development and the holistic approach[22], will be examined.

2.3 The holistic ontology

Towards the end of the 1960s, the philosopher-scientist Arthur Koestler proposed the term *holon*, to describe wholes within Nature, made of its own parts, yet itself part of a larger whole (Sahtouris, 1995). The term is derived from the Greek *holos* meaning "whole" and *on* meaning "part" or "particle" (Schactman, 1994)[23].

One of the most significant works on holism was written by General J.C. Smuts in 1927. Smuts (1929:271) describes the wholes forming holism as atom (matter), cell (life), mind and personality. "Wholes are composites and not simples" (Smuts 1927:104). Smuts explains that the whole is not something additional to the parts: it is the parts in a definite structural arrangement and with mutual activities that constitute the whole (Smuts 1927:106). Holism, according to Smuts, comprises all wholes in the universe. "It is thus both a concept and a factor: a concept as standing for all wholes, a factor because the wholes it denotes are the real factors in the universe" (Smuts 1927:120).

Holism is not only self-creative and its final structures are more holistic than its initial structures (Smuts 1929:89). Bews has stressed the necessity for the holistic viewpoint, as the world is a closely interwoven system of patterns (Wall 1994:98). "Nothing exists for itself alone; there are no isolated units, but only structured patterns and inter-relations, form the primordial electrons to the most developed

physical or moral or social complexes in the universe" (Bews quoted by Wall 1994:98). The holistic approach also reflects the organic order of life. Lewis Mumford described, already in 1938, the primacy of life and of autonomous but perpetually inter-related organisms as vehicles of life (Wall 1994:100). To maintain its life-shape, an organism must constantly alter it and renew itself by entering into active relations with the rest of the environment, a process explained by Maturana and Varela in their philosophy of autopoiesis (see 2.4). Mumford points out (quoted by Walls 1994:101) that the autonomy of the organism does not lead to isolation in either time or space, as every living creature is part of the general web of life.

In a holistic ontology human society and the natural environment are both stakeholders. The dependence on each other has to be emphasised. It is a mutual give and take. The over-exploitation of natural resources has already affected both the natural environment and human society, e.g. in the cases of deforestation and droughts. As Savroy (1991:61) puts it: "[t]here is only one ecosystem. As a whole in the holistic sense, it encompasses everything on our planet and in its surrounding atmosphere ...". This interdependence requires cooperation and collaboration. These activities call for an organisation in order to be effective. For collaboration to function, the following three aspects must be achieved:

1. Provide an environment for collaboration in the truest sense.
2. Allow the latent creativity and ability in people to come to bear on personal and organisational goals.
3. Deal with the whole as a whole organization and not as an agglomeration of departments each addressing aspects of the whole (Savroy 1991:388)[24].

A collaborative environment exists when individuals can work with one another rather than for or against one another. However, this civilisation has lost track of the fact that every living creature must get materials and energy from its environment to form itself and to keep it alive (Sahtouris, 1995). But what happens to the leftovers

of these supplies after the useful parts and energy have been used? The waste has to be returned to the environment (not to the dump as it happens in modern societies). This, concludes Sahtouris, is why no living creature can ever be entirely independent – it is a holon within a larger holon, depending on its environment which is its larger holon, for its very life.

The “[w]estern cult of the ego may been seen as an aberration that has alienated us from ourselves and from our environment” (Sterling 1990:85). Sterling quotes Berman, who suggests that, although humans are unable to return to animism, the holistic paradigm may enable humankind to bridge the lonely alienation of the subject/object dichotomy and achieve a form of participating consciousness with nature. Such thinking has been expressed in ecophilosophy and deep ecology (see 2.7). To understand the complex processes associated with sustainability, practical examples from Nature are beneficial. One practical example is found in micro-organisms which represent systems interacting with their environments in order to sustain themselves. This process is also called autopoiesis.

2.4 Autopoiesis

"The lesson which is being learnt from the theory of autopoiesis [...] is the lesson of holism" (Zeleny quoted by Kotze & Kotze 1993:19). However, holism can be regarded as being a response to the failures of the practiced Western bias in development approaches which has resulted in creating the unsustainable throw-away society. The latter are high-waste or high-throughput societies which attempt to sustain ever-increasing economic growth by increasing the throughput of matter and energy resources (Miller 1996:84). It entails that the function of each part of a holistic system has to be placed into the overall operational context.

The holistic ontology highlights the need for processes (or parts) to supplement each other and to integrate these processes to form a whole, thus reinforcing the developmental practices and achievements. The part-whole relationship found expression in the philosophy of autopoiesis[25] which provides a basis for understanding sustainability. It shows that sustainable development can only be achieved if all components are considered simultaneously and integrated into one holistic framework. A fragmented or “piece-meal” approach will not contribute to the achievement of sustainable development.

An autopoietic system is self-producing and self-maintaining. It must constantly change or renew itself in order to stay the same…” (Sahtouris, 1995). This self-maintaining process is explained by the functioning of an organism such as a cell. Cells are packages in which living matter housed itself, they contain and connect autopoietic systems by enclosing them in open boundaries – membranes of their own making to allow materials and energy to be exchanged with the environment (Sahtouris, 1995). Sahtouris compares Earth with a cell, “the whole Earth is a giant cell within whose boundary membrane other smaller cells multiply, die, and are recycled in such a way that the whole need not grow”. To exist, a system requires a living space. This space is required to sustain the system and its components. Any degradation of or damage to the living space can result in the cessation of activities of the system. The system must change or becomes extinct as its basis for existence and its sustainability is no longer granted.

Maturana and Varela (1980:xix and 138) describe a unit as an entity distinct from a background, the sole condition necessary for existence in a given domain. A unity is a simple unity that defines through its properties the space in which it exists and the

phenomenal domain which it may generate in its interactions with other unities. "The relations between components that define a composite unity (system) as a composite unity of a particular kind, constitute its organization" (Maturana & Varela 1980:xix). These relations determine the dynamics of interaction and transformations which it may undergo as such a unity constitutes the organisation of the system (Maturana & Varela 1980:137).

Autopoiesis brings together science and philosophy. Smuts (1927:93-94) argued that “the pursuit of the separate paths of science and philosophy will not bring us to our goal. Concepts must be made to converge. Concepts must be developed which will include the materials and the view-points of both science and philosophy”. This requires, *inter alia,* an ethical approach to advance the concept sustainable development.

2.5 Ethics

The component ethics[26], has received little attention in the discussions of sustainable development. Ethics[27] has also been referred to as moral philosophy (Oruka 1998:2). Ethics “stands for the study of morality in all its forms; it is primarily an academic exercise, an intellectual pursuit, a process of inquiry and reflection” (Bennaars 1993:15). Bennaars distinguishes between process and product. As a study of morality, ethics stands for a process of inquiry and reflection on moral issues, whereas the outcome or product of this process points to it as being synonymous with morality: a set of established norms guiding human conduct.

If the individual is mainly concerned with his or her own interest at the expense of others it is described as *egoism*. In other words, rather than emphasising diversity,

egoism accentuates self-promotion (Beauchamp 1991:68). This can be illustrated by quoting Berliner (1999) who states that an individual is not born in servitude. “He has a moral right to live his own life for his own sake. He has no duty to sacrifice it to the needs of others and certainly not to the ‘needs’ of the non-human”.

Egocentric ethics are rooted in the mechanistic science of the seventeenth century Europe (Merchant 1992:68). An egocentric ethic is grounded in the self (Merchant 1992:63)[28]. Merchant goes on to state that in its applied form, it involves the claim that what is good for the individual will benefit society. This ethic permits individuals and corporations, to extract and use natural resources to enhance their own lives and those of other members of society. Ethics extends not only to the philosophical issues, but also to ecology, economy and social spheres. Individual positions may only focus on one sphere, e.g., in the fields of business, religion or professions.

The British philosopher G.E. Moore was looking for a term or concept which is basic to all other ethical terms and to help show how all ethical terms and judgements could be explained on the basis of this given basic term. “Moore found such a basic term to be the term *good* “ (Oruka 1998:25). Promoting the *good* raises the question of whose *good* is to be promoted. It can be an individualistic position or it can be the position of a group. This aspect will be further discussion in the next section under the topic of utilitarianism with regard to the latter. In the ethical context, the standpoint of an individual can relate to his or her interest in relation to the overall good or the personal good.

According to Oruka (1998:124), human good can be divided into two categories: the material good and the moral good. The former is concerned with bread and butter

issues, whereas the latter comprises aspects, such as intellectualism and creativity. Oruka concludes (1998:124): “[s]o, the moral good embrasses [sic] what we need as beings with the mental capacity to create, as a contrast with having the capacity simply to consume”. Consumption is advanced by various groups, such as politicians and industrialists, who are also described as leaders in their respective fields. Their leadership role is supposed to be influenced by moral and ethical concerns to justify their actions.

Already in ancient Greece, Plato advocated a state which is ruled by the best (Berki 1977:49). Those who define and serve the interest of the state as a whole were called guardians (Berki 1977:51). The way of life Plato anticipated for the guardians, was not the same as for the labouring and commercial classes, guardians should not have personal wealth, “… none of them must possess any private property beyond the barest necessaries” (Berki 1977:52).

Plato (Sahtouris, 1995) wrote that a perfect society should be ruled by the most educated of citizens, people from all walks of life who lived simply, without personal possessions. In Plato’s vision, philosophy occupies the highest pedestal in the earthly life of man: “it is entrusted with the government of states which are thus revealed as the work of reason, and it provides also the one and only key to heaven” (Berki 1977:55). Philosophers should accept the burden of public life and become kings, or alternatively for kings to be imbued with the spirit of philosophy (Berki 1977:54). Aristotle’s teaching in the *Ethics* emphasize that the most satisfying kinds of pleasure would be found by the virtuous human being (Berki 1977:61). Virtue will be gained only after a process of education and habituation. The highest element in one’s self is intelligence (Berki 1977:63). Man, on the highest level of being, is

identical with his intelligence. Aristotle's conclusion is that the best life for man is the pursuit of philosophy, the contemplation of the eternal forms of being.

Similar to the Greek philosophers' endorsement of intellectuality and virtues as the highest level of being, Smuts concluded that the psychological factor, or the *Mind*, as he termed it, is "after the atom and the cell, the third great fundamental structure of Holism" (Smuts 1927:233). Based on these three structures is personality which is the latest and supreme whole which has arisen in the holistic series of Evolution (Smuts 1927:270). The study of personality can only be carried out in persons with an inner self. A class of persons unsuitable for a study include "public men, men of affairs, administrators, business men and others, whose whole mind seems to be absorbed by the practical interest of their work" (Smuts 1927:295). "They usually carry on the affairs of the world with great competence; but they are too much of the world" (Smuts 1927:296). Positive examples are poets, writers, thinkers, religious and social innovators, as they are often people with inner lives and interesting personalities (Smuts 1927:297).

According to Smuts (1927:271), through the study of personality, materials will be obtained for formulating the laws of personal evolution. Furthermore, the basis of a sound theory of Personality and a proper science of Personology, can be obtained which will form the crown of all the sciences and become the basis for a new Ethic and Metaphysic, and a truer spiritual outlook. Oruka (1998:91) laments that some individuals contend that Philosophy nowadays no longer has any role to play in scholarship. He continues: "[s]o it is enough that the highest degree in any discipline is labelled PhD (Doctor of Philosophy) but beyond that there is nothing to seek from philosophy in matters of knowledge".

Certain situations can result in ethical dilemmas. A dilemma is defined as a choice one has to make between two or more different alternatives each of which is undesirable (Oruka 1998:16). This does not mean that the choices are both undesirable. It may mean that both choices are desirable but they cannot both be satisfied. Moral consideration has to be given to the proposed actions, but one action will have to be neglected. An example in the context of this study is the choice between the responsibility of promoting sustainability or economic growth. Making a choice may require utilitarian considerations.

2.6 Utilitarianism

Utilitarianism deals with human conduct. It is defined as an ethical theory (Charvet 1995:2) that in turn defines morality in terms of the maximization of net expectable utility for all parties affected by a decision or action. The basic principle of utilitarianism is that "[a]ctions are right to the degree that they tend to promote the greatest good for the greatest number" (Mill quoted by Kay in utilitarian.org b). Kay (1997) explains, that consequentialist moral theories evaluating morality are teleological: they aim at some goal state and evaluate the morality of actions in terms of progress toward that state. Morality refers to 'doing the right thing', and implies action, behaviour and conduct (Bennaars 1993:28)[29]. Therefore, actions are considered as 'right' or 'moral' when one acts in accordance with certain principles, such as utility or justice. Utilitarianism (also referred to as Consequentialism[30]) defines morality in terms of the maximisation of net expectable utility for all parties affected by a decision or action. This is the opposite of ethical egoism, where the ethical egoist calculates what is favourable or not and then performs whatever action promising to be maximally self-promoting (Beauchamp 1991:74).

One primary concern of moral philosophy is the justification of the choices humans are making (Hartle & Kekes 1993:1). Utilitarians claim that choices are derived from the benefits actions can produce and that rational and moral actions aim to produce the greatest happiness for the greatest number of people[31], and not just for a few. These choices are guided by personal preferences. The nearest to this ideal, utility, would enjoin laws and social arrangements that place happiness or the interest of every individual in harmony with the interest of the whole (Hartle & Kekes 1993:19). Utilitarianism is reflecting on two different roles: 1. as a theory of personal morality, and 2. as a theory of public choice (Sen & Williams 1991:1)[32].

All systematic theories of ethics seek to understand human good, or the good life, and not just the issue of right and wrong action (Slote, 2000). What is good for a person is not necessarily morally good. Therefore, the distinction between moral good and obligation, on the one hand, and non-moral personal, human, or life goods, on the other, raises two further important problems for ethics. Firstly, the nature of human good and the good life are both not self-evident. “One of the main problems of ethics, then, is to determine what things are (basic) personal goods in addition to such obvious goods as pleasure and desire-satisfaction” (Slote, 2000). This problem raises the second issue which refers to the understanding of right and wrong by utilitarians which is derived from human good: the moral is what is instrumental to the greatest abundance of personal good(s). “Of course, we are still unclear about what constitutes ‘the greatest good’ " (Kay quoted by utilitarian.org, 2000b). However, could the international consensus on sustainable development be regarded as the greatest good to be achieved when it comes to development?

Mirrlees argues (1991:74-75), that a society of isomorphic, though not completely identical, individuals should not have equal utility. The equal treatment implicit in the utilitarian procedure does not guarantee equal outcomes, or even equally valued outcomes. The position, status, role and functions of an individual in human society provide numerous possibilities of unequal application of the principle, for example the difference in treating a senior official and the common man, or as the saying goes, all men are equal, but some are more equal than others. An example from Botswana illustrates this point. A former president said (quoted by New African September 2002:39); "**We do** for people [the San[33], who were evicted from their ancestral land] what **we think** is good for them" (*author's emphasis*).

Equality in a society has been described as utopian. This may be true in many societies. However, in the Southern African region, examples of traditional communities come close to this ideal. The San and Ovahimba were among those groups whose way of living was in balance with nature. Among a family group, equality was maintained to a large extent. Each member's well being depended on the group's well being. Sustainability was vital because the irresponsible exploitation of natural and human resources would result in hardship for all. Right and wrong behaviour influenced the function of the whole. Knowledge about environment and nature were among the most important assets.

One way to understand the world is naturalistically (Snare 1992:70). This means the world is seen as the totality of what is, consisting solely of the physical and psychological phenomena that are the object of the modern natural sciences (Larmore 1996:89). The world is described as matter in motion, including the thoughts and feelings. Naturalism has denied the possibility of moral knowledge.

Naturalists have argued that morality can involve only the expression of attitudes not the possessions of truths. The proponents are interested in the way things are and how humans think and act, but not how humans ought to do so. Snare (1992:73) cites Moore who disagrees with the naturalist position. The problem with naturalistic theories, according to Moore, is the *naturalistic fallacy.* It is possible in all naturalistic theories to derive an *ought* statement or value statement about what is good from an is or factual statement, because ought can be defined in terms of what *is* (Beauchamp 1991:102). Any naturalistic definition of any ethical or value term must be mistaken (Snare 1992:74). Hence, Moore called it not just a mistake, but a fallacy.

The question of consequences has been raised in connection with sustainable development, i.e. the current problems facing mankind due to the present unsustainable development that takes place. Hartle and Kekes argue (1993:1) that for most people today, no consideration carries greater weight than their own interests and desires. Therefore, morality demands a different direction, when the aspect of global suffering from the consequences of unsustainable development is coming into the picture. This helps to explain the normative value of sustainability, and provides an answer to the question of what is right and what is wrong.

Utilitarianism can also be linked to the norm *equity*, for example in the context of good governance*, (i.e. equity of access to decision-making processes and the basic necessities of urban life)* as advocated by UNCHS. The principle of equity is also included in the Habitat Agenda (article 27): “Equitable human settlements are those in which all people, without discrimination of any kind … have equal access to housing, infrastructure, health services, adequate food and water, education and

open spaces". The UNCHS's *Global Campaign for Good Urban Governance* vision of inclusive cities links urban governance to the welfare of the citizenry (UNCHS 2000b:8). Therefore, it can be argued that one of the outcomes of the campaign is to ensure that residents become happy citizens or taxpayers, i.e. the absence of suffering due to poverty is achieved[34].

Critique leveled against utilitarianism includes, that it is too difficult to apply, that not all the effects for all the individuals (either because of the large number of individuals involved, and / or because of the uncertainty) can be calculated. The principle of utility is a description of what makes something right or wrong. In order for something to fail, someone must give an example of something which is useful but obviously wrong. Another common criticism of utilitarianism is that it is impossible to apply, that happiness cannot be quantified or measured, that there is no way of calculating a trade-off between intensity and extent, or intensity and probability, or comparing happiness to suffering (Kay quoted by utilitarian.org, 2000b). The facets mentioned by Kay relate to psychological aspects of utilitarianism.

Psychological factors or mindsets are part and parcel of the holistic ontology (see section 3). A human not committed to the cause of achieving something utilitarian, will fail in addressing the issue of sustainability. The psychological side of humans is the most difficult one to transform, for example towards moral judgement. That also involves the field of philosophy. "A philosophy defines the fundamental assumptions and beliefs upon which actions are based. Without a philosophy we have no anchor, no direction, no sense of the meaning of life. If we judge a philosophy by its results it is apparent that our present empiricist philosophies are deficient" (Hill, 1981). One

possibility is to look at what eco-philosophies have to contribute with regard to alternative approaches and the deficiency of empiricist philosophies.

2.7 Eco-philosophies

Philosophy[35] is the careful thought about the fundamental nature of the world, the grounds for human knowledge, and the evaluation of human conduct (Dictionary of Philosophical Terms and Names, 2001). In the academic sense, Philosophy is regarded as one discipline amongst others, but a discipline which has a legitimate and historical right to intrude into others (Oruka 1998:92). Therefore, Philosophy investigates and discusses nature, human beings and society. “And in this investigation, the ultimate guiding principle is *Human Reason*” (Oruka 1998:92). “All of us are better off when contemplation of holy principles is at the center of our lives… There are new ideas on the world’s horizon, as different for the twentieth-century worldview as the twentieth century was different from the nineteenth century” (Williamson, 1997). These are calls for a more spiritual and moral development in the modern world.

Moore and Bruder (1990) have portrayed *philosophy* as the power of ideas. A variety of ideas are found in the considerations around eco-philosophies which attempt to answer, what Alfred North Whitehead states (Moore & Bruder 1990:19): “Philosophy asks the simple question, What is it all about?” Eco-philosophies also endeavour, like other philosophies, not to become what Ambrose Bierce (Moore & Bruder 1990:19) noted: “PHILOSOPHY, n. A route of many roads leading from nowhere to nothing”.

Kessler (1992:vii) points out, that most introductory readers of philosophy treat the subject as if it were entirely Anglo-European male phenomenon. Little or no attention is given to philosophies based on Hinduism, Buddhism, African[36], Native American or Latin American thought. Eco-philosophy however, has in some ways tried to include or incorporate some of the significant features of these non-Western beliefs. As a consequence the deficiencies of Western thought and approaches became evident.

2.7.1 Perspectives of Eco-philosophies

Waddington argued (Hill, 1981), that most modern philosophers have followed the wrong trail, instead of following the holistic and organistic philosophy, they followed the atomist, mathematical philosophy. One philosophical school of thought advocating the holistic approach, and which emerged in the sustainability debate, is eco-philosophy. This was a response to the ecological revolution and the questioning of the directions and goals of Western society which included the anthropocentric philosophical and religious orientations and values in the 1960s (Sessions 1995:x).

According to Hill, if one starts from the premise that philosophy is life-oriented and that its mission is the enhancement of life, then the tenets of Ecophilosophy include:

- *Commitment replaces objectivity because objectivity does not exist in nature. As the observer is inseparable from the observed, objectivity must be recognized as a myth. Furthermore, science can only tell us how things work and how to do things, not whether to do things or how to live. The latter requires a trans-objective approach, compassion and commitment.*
- *Commitment must be based on more than fact, it requires a spiritual component - a state of being in which we experience the world as if it were endowed with grace, as mysterious, transphysical. It encompasses awe, wonder, reverence, compassion and love. In this sense, spirituality is an instrument of the perfectibility of man. Man's essential quest is for meaning, and this is a spiritual quest, not an objective search for bits of information.*

- *Such a search must be comprehensive. In this connection, Eco-philosophy is perceived as integrative, hierarchical and normative – self-actualizing with regard to the individual and symbiotic with regard to the cosmos* (Hill, 1981).

The key concepts of the ecological worldview apply to the relation of human individuals to themselves and to each other and the environment (Sterling 1990:84). To support his point, Sterling (1990:85) points out that if word pairs are considered, such as subject/object, mind/body, spirit/matter, feminine/masculine, or synthesis/analysis, Western culture emphasises the latter half. “We are therefore a group of lopsided, detached, dis-integrated minds trying to impose an incomplete and crude mechanistic order in an essentially holistic complex natural order. Our astonishing psychological ability to segregate areas of life allows us to indulge in behaviour that other parts of ourselves may be saying is unethical” (Sterling 1990:85).

This is also reflected in the incorporation of philosophical principles from Asia, Africa, and the First Nations in America. A few examples will suffice to point out these influences and perspectives. Sahtouris (1995) stresses that nowadays there are very few relatively intact indigenous cultures (a Namibian example follows in section 3.1. In many of these cultures, nature is represented by the symbol of a circle: the unbroken sacred hoop of life. According to Sahtouris, in this worldview the basic laws of nature were formulated in accordance to what is now called sustainability, i.e., laws of balance, harmony, mutual sustenance, and of returning in equal measure for whatever was taken. This means, the world was understood as a single, interconnected and interdependent system[37].

Dr Greg Cajete, a Tewa Indian, explains the difference between the approach of Western science and indigenous science (Sahtouris, 1995). He observes that the

white man does science in a “low-context environment, isolating phenomena to study them outside their natural context. American Indians perform science in a “high-context environment”, studying phenomena within their natural context. Indigenous science is participatory, fostering dialogue between humans and the rest of nature. It is taught to all people, not as something learned in a few years at school, but it is a life-long task.

Eastern philosophies have influenced eco-philosophies in the West. Naess (1995:79) emphasises, that there is an intimate relationship between some forms of Buddhism and the deep ecology movement. Principles such as non-violence, non-injury, and reverence for life, provide for an understanding and appreciation for deep ecology. Within Buddhist teachings the concept of the cyclical pattern of birth, growth, maturation, decline, death, and rebirth is found (Palmer 1990:54). Buddhism propagates the rebirth and life after death, and maintains that in the continuous birth and rebirth of sentient beings in the whole of the universe, “each being is related to us ourselves, just as our own parents are related to us in this life. And just as our parents have been indispensable to our upbringing in our present lifespan, in another particular span of our life another sentient being has given us the spark of life” (The Assisi Declaration quoted by Palmer 1990:55). This has led to revering all life which means that insects and humans are on the same level because all beings are caught up on believing that what they are or have now is real or has a potential to be real.

Hinduism has no founder, no single religious body to judge orthodoxy, and no unified set of doctrines (Moore & Bruder 1990:584). The sanctity of life is ingrained in the Hindu religion (Dwivedi 1990:203). Only God has absolute sovereignty over all

creatures. Therefore, humans have no dominion over their own lives and that of non-human life. This means that no damage may be inflicted on other species without adequate justification. The Earth is not for humans alone, but for other creatures as well. Dwivedi (1990:207) underlines that the effectiveness of any religion in protecting the environment depends upon how much faith its believers have in its precepts and injunctions. Furthermore, it depends on how the precepts are transmitted and adapted in everyday social interactions.

One example of these principles was personified in the way of life of Mahatma Gandhi. Besides his stance on non-violence, he set an example of a simple life and tried to make the traditional values of Hinduism available to all (Moore & Bruder 1990:587). He also tried to instill a sense of self-respect in all human beings, including the lowest caste, the untouchables, whom he called the children of God. The ancient caste system, according to Gadgil and Malhotra (Dwivedi 1990:208), was based on a very old concept of sustainable development which disciplines society by partitioning the use of natural resources. Specific occupations had access to certain resources and created an ‘ecological space’ which reduced competition among various people for limited natural resources.

Another philosophy embraced by some eco-philosophers is Taoism which originated in China. Taoism is derived from Tao Tzu who during his lifetime, tried to remain unknown and nameless (Moore & Bruder 1990:565). He, like Socrates, thought that even the wisest of humans is still quite ignorant (Moore & Bruder 1990:564). To act on that ignorance under the pretense that this is knowledge, is folly. Humans cannot force change on the world without injuring themselves. Therefore, what is needed is not interference with the world, but humble understanding of the way it functions

which is the understanding of the Tao (Moore & Bruder 1990:565). Lao Tzu understood that all enduring change is brought about by weakness not by strength, by submission, not by intervention (Moore & Bruder 1990:567). The teachings of Tao are not only a description of the way biosystems work, but also is a prescription for human behaviour (Rolston 1990:68). The Taoist way is an ethic of minimal intervention, or action by inaction, in the belief that things will take care of themselves.

Many African belief systems still include so-called animistic tendencies which blur the distinction between Man and nature, between the living and the dead, between the divine and the human, between the natural and the supernatural (Mazrui 1986:135). Mbiti (1969:51-52) states, that many concepts associate God with natural objects and phenomena which forms part of the religious universe. Man lives in a religious universe, so that natural phenomena and objects are intimately associated with God (Mbiti 1969:48).

The reverence of Africans towards nature and natural places was a religious attitude and practice (Omari 1990:169). This reverence developed around religious thought and history of a particular social group. Forests, certain trees, animals and sources of water were preserved in the name of religion. There was always an interaction between the religious and secular world. Both were interwoven in the same entity – the community. One example is the rainmaker, whose role “in a tribal society, is to maintain an ecological balance between man and the environment. The Rainmaker is the moral conscience of the society in balancing justice and fairness. It is the checks and balances in tribal political systems” (Mbigi 1995:18). Traditional societies have therefore been described as living in harmony with nature.

Benneh (quoted by Okigbo 1996:132) presented an African concept of sustainability which constitutes an extension of the Brundtland definition. Sustainable development is not simply a question of managing resources in order to meet current needs and to ensure future availability. It is a strategy of resource management that regards the capital stock as a baton in a relay race handed down by the ancestors. It is therefore the duty of the current generation to ensure that the capital stock is transferred to future generations more or less intact and without much decline in value.

Africans did not anticipate changes in the future of their communities (Omari 1990:170). Forests and shrubs of their worshipping places were preserved for both present and future generations. The destruction of holy places would make the ancestors angry and misfortune might befall the community. Future generations would face misfortunes if resources God has entrusted to them, were misused or destroyed. Positive values towards the use of natural resources were inculcated from generation to generation by means of proverbs, stories, and songs. Religious ceremonies or rituals, e.g. rain making, strengthened natural resource values.

Anthony Kwame Appiah argues (quoted by Prah 1997:178), that if philosophers are to contribute, at the conceptual level, to the solution of Africa's real problems then they need to begin with a deep understanding of the traditional conceptual worlds the majority of their fellow nationals inhabit. This argument supports another important aspect, namely that of Indigenous Knowledge (IK) which internationally is gaining in importance and requires more attention if sustainable development is to be promoted.

In conclusion[38], the relationship between ecology and development is illustrated by a 19th Century Cree Indian Proverb (quoted by Food not Bombs, no date) conveyed the following observation:

> *"Only when the last tree has died,*
> *And the last river poisoned,*
> *And the last fish been caught,*
> *Will the white man realize that he cannot eat money".*

The relationship between humankind and nature is summarised by Middleton and O'Keefe (2001:59): "[e]nvironmental sustainability is about nature, but nature includes humanity". However, modern human societies have developed a mechanistic worldview which contradict the organic functioning of nature.

2.7.2 Mechanic and organic worldview

The mechanistic worldview emerged during the seventeenth century in Europe (Capra 1995:21; Merchant 1992:48) and was the result of the scientific revolution. Descartes, for example, portrayed nature as two separate and independent realms: mind and matter (Capra 1995:21). For Hobbes (Merchant 1992:54) the mind itself was a special kind of a machine – a calculating machine[39]. This stands in contrast with Smuts' organic view of nature and his theory of holism (Merchant 1992:59). Mechanism eliminated from the descriptions of nature concepts of spatial hierarchy, value, purpose, harmony, quality (Merchant 1992:56). The mechanistic view of nature is based on the western mathematical tradition which goes back to Plato and is still dominant today (Merchant 1992:57).

According to Hill, it is the empirically oriented positivist philosophy, particularly as developed in the Anglo-Saxon countries, that has provided the philosophical justification for the ruthless, exploitative, mechanistic paradigm that has wreaked so

much havoc on world ecosystems, on Third World nations, and on individuals who have attempted to mould their lives in the image of the machine. “It is this version of contemporary philosophy that Eco-philosophy stands against and to which it seeks to provide an alternative” (Hill, 1981).

The understanding of *development* is based primarily on Western thought, and is often characterised and regarded as a mechanical process. This mechanical worldview originated with the ancient Greeks, who decided that geometry was not a human invention, but the human mind’s recognition of nature’s true design (Sahtouris, 1995). She also argues that “modern science was founded by astronomers-physicists, their mechanical mathematical models of the cosmos were accepted as the basis of all science. ….We can scarcely guess how far the organic worldview might have been developed by now if biologists instead of physicists had played the leading role in science – if physicists had had to fit their discoveries into the model of an organic, live universe”.

The removal of animistic, organic assumptions about the cosmos constituted the death of nature which was the most far-reaching effect of the scientific revolution (Merchant 1992:48). Nature was considered as a system of dead, inert particles moved by external, rather than inherent forces. Therefore the mechanical framework could legitimate the manipulation of nature. The mechanical order was associated with a framework of values based on power which was fully compatible with the directions taken by commercial capitalism. The assumptions were also consistent with another feature of machines such as the possibility of controlling, manipulating and dominating nature (Merchant 1992:49; Capra 1995:23).

Most economists fail to recognise that the economy is just one aspect of a whole ecological and social fabric, as they tend to dissociate the economy from its fabric, in which it is embedded (Sessions 1995:23). This narrow, reductionist framework has resulted in an orientation of economic policies that is fundamentally erroneous. These policies pursue economic growth, understood as the increase of the GNP or as a quantitative measurement in terms of the maximisation of production. “The assumption is that all growth is good and that more growth is always better. It makes you wonder whether these economists have ever heard of cancer” (Sessions 1995:23).

The question is whether humankind can replicate the various natural processes? Aina (1996:55) distinguishes between popular environmental management, or the environmental management by indigenous people and communities, and orthodox environmental management which is the formal body of professionals and technical approaches and systems that currently dominate. In the USA the Biosphere II project provides an illustration of a failure of replicating Nature. Nature is not perfect, neither is the most complete human personality and the most perfect artistic creation as they are still full of imperfections – they are only approximation to the ideal wholeness (Smuts 1927:108).

In order for sustainability to become a success, nature has to be emulated, but “humans have not come close to building a working copy of the simplest single-cell creature as a whole. Our mechanics are limited in ways that nature’s organics are not” (Sahtouris, 1995). “Our body often carries out machine-like functions, but it is not a machine; it is a living organism. Our brain may seem to carry out computer-like functions, but it is not a computer; the brain, too, is a living organism” (Capra

1995:21-22). Merchant (1992:59) concludes that the mechanistic worldview continues today as the legitimating ideology of industrial capitalism and its ethic of dominating nature. The egocentric ethic is associated with this and the anthropocentric view.

2.7.3 Anthropocentric and ecocentric views

The Brundtland definition has a strong people-oriented stance which concentrates on the satisfaction of human needs (not human wants), rather than on the protection of the environment (Kirkby et al. 1995:2). Although no clear statement was included on what is meant by human needs, basic needs were incorporated, such as nutrition, health, and shelter (see WCED 1987:8 and 43). Kirkby et al. also argue that it is not clear how much more than survival is involved in “needs”. The concern with balancing the interests of present and future generations is an ethical issue.

In this regard the discussions surrounding sustainability have also been influenced by the debate about the environment and the environmental ethics. This involves the conflicting views on values, attitudes and practices in industrial and non-industrial societies. Miller compiled a series of questions which have to be answered with regard to worldviews and the environment: “As a powerful species, what should our role on Earth be? What obligations do we have to the human species? To other species? To future generations? How serious are the environmental problems we face?” (Miller 1996:711)

The scientific revolution overturned the age-old organic view of the world as a living organism and replaced it with the mechanistic clockwork image of the world as a machine (Sessions 1995:161). In Europe the medieval economy was based on

organic and renewable resources, such as wood, water, wind, and animal muscle (Merchant 1992:45). The emerging capitalist economy was based on non-renewable energy, coal, and the use of inorganic metals for example iron, copper, tin and mercury. The refining and processing depended on the depletion of forests. The new commercial and industrial enterprises changed the values associated with the organic view of nature. “The old worldview was incompatible with the new activities” (Merchant 1992:45).

Philosophers such as Francis Bacon and Rene Descartes supported the rise of the anthropocentric worldview during the scientific revolution. The latter is considered the “father” of modern western philosophy (Sessions 1995:161; Landon, no date). Bacon realised that the pursuit of knowledge would give humans power over nature and so enable them to improve their way of life (Reader’s Digest 1978:638; Baird, 2000a). Bacon replaced the traditional method of proving a hypothesis by reasoning, with the inductive or scientific method which required the accumulation of data based on observation or experiment. Descartes believed that scientific inquiry did not lead to certainty and science could not be distinguished from philosophy (Reader’s Digest 1978:639). Descartes used doubt as a tool or a weapon and instead of fighting doubt, he would use it to find certainty (Baird, 2000b). He developed the Cartesian Method which is based on three mental operations: intuition, deduction, and enumeration, as he believed, that the physical world could best be understood through reason and mathematics (Landon, no date).

In the nineteenth century, Malthus inadvertently triggered the environmental debate with his thesis, that unchecked human population growth is exponential and will outrun food production (Sessions 1995:163). Although his concerns were not

ecological, it influenced other philosophers such as Mill or Muir. Mill was aware of Malthus' position and "began to wonder whether humans were becoming too civilized" (Sessions 1995:164). Therefore, he proposed the steady state society to replace continued population and industrial growth. Muir's ecocentric philosophy was based on observations made in the natural environment. He awakened the American public to the need for protection of the wild and is regarded as the founder of the American conservation movement (Sessions 1995:166).

According to Miller (1996:711), during the past 50 years the planetary management worldview has established itself in industrialised countries. The human centered or anthropocentric worldview suggests that humans are the most important and dominant species and should manage the planet, mostly for their own benefit. The basic beliefs include (Miller 1996:712):

- *Humans are the planet's most important species and are in charge of the rest of nature*
- *There is always more, and it is all for humans*
- *All economic growth is good, more economic growth is better, and the potential for economic growth is limitless*
- *The success depends on how well humans can understand, control and manage the Earth's life-support systems for the benefit of humans*

Opposing the anthropocentric view are those advocating a life-centred (biocentric)[40] or earth-centred (ecocentric) view. These proponents believe, that the inherent or intrinsic value of all forms of life has to be recognized (Miller 1996:713). All species have an inherent right to live and flourish, as each species is regarded as a unique biological solution to the problem of survival. The view focuses on the preservation of species rather than individual members of species.

The ecocentric perspective views nature as a metaphor for unity, interdependence and a new moral order (Baker et al.1997:10). Ecocentrics advocate sustainable

development as emulating “nature’s way” as a way designed to assist society by allowing nature to set the parameters of economic behaviour. The anthropocentric position (see 2.7.3) views nature only in relation to what it can provide in the service of humankind (O’Riordan quoted by Baker et al. 1997:10). The eco-centric views generated a philosophical platform which became known as Deep Ecology[41]. It was embraced by many different points of view ranging from ecological issues to eco-feminism. Inspiration was also found in eco-centric religions and the way of life of primal people from around the world (Sessions 1995:ix; Miller 1996:714) [42].

In 1985 sociologist Bill Devall and philosopher George Sessions published a book, and writer Michael Tobias a collection of articles entitled *Deep Ecology*. These publications became known beyond the community of philosophers and established the framework for an array of ecological movements (Merchant 1992:86). The debate has led to various approaches concerning the relationship of ecology and sustainable development.

2.7.4 Deep and shallow ecology

Baker et al. (1997:9) present the ladder of sustainable development in advanced industrial countries, consisting of four approaches to sustainable development. At the bottom of the ladder is the *treadmill approach*, epitomized by the transnational corporations and the world of high finance (Baker et al. 1997:12). The natural environment is seen in terms of its utility to the economic system. Sustainable development becomes a synonym for sustainable economic growth. The treadmill economic component has the publicly stated goal of expanding industrial production as well as increasing consumption (Schnaiberg 1997:72). Its political component has a public confluence of interests among private capital, labour and government to

promote the expansion. In social terms, the belief is advanced that an improvement in public welfare is achieved primarily through economic growth. Therefore, the world capitalist system and its apologists claim that the treadmill is politically, economically and socially sustainable. Environmentalists and ecologists regard the treadmill as an unsustainable political-economic system (Schnaiberg 1997:73)[43].

The next step is the *weak sustainable development*, whose aim is to integrate capitalist growth with environmental concerns (Baker et al. 1997:13). Setting resource harvest rates at levels which are not higher than natural or managed regeneration rates, recognizes the finite resource base of nature. Also the use of the environment as a waste sink is based on the principle that waste disposal rates do not exceed the rate of natural or managed assimilation by the counterpart ecosystem. Proponents provide two dimensions of sustainability: 1. sustainable development in terms of traditional economic growth objective, and 2. sustainable use of resources and environment. The weak approach has influenced agencies such as the World Bank and the United Nations (Baker et al. 1997:14). This approach leaves the neo-classical paradigm intact, with all its limitations (Redclift quoted by Baker et al. 1997:14).

The third rung is the *strong sustainable development* approach which regards environmental protection as a precondition of economic development (Baker et al. 1997:15). Political and economic policies have to be geared to maintaining the productive capacity of environmental assets. This requires market regulation and state intervention and the involvement of local communities. The overall objective of economic growth remains.

The final step is the *ideal model* and offers a vision aimed at structural change in society, the economy and the political system (Baker et al. 1997:16). This ecologist approach is also associated with the deep ecology movement (see section 2.7.4), envisaging pure sustainable development whereby humankind puts as much into the ecosystem as it takes out. Growth is measured in qualitative terms, i.e. the quality of life rather than the standard of living. This position is concerned with the totality of life on earth rather than only with human life. Ecologists argue that the ideal model represents a new development paradigm (Baker et al. 1997:17).

Professor Arne Naess introduced the term deep ecology to describe the mission of ecophilosophy's exploration into the diversity of perspectives on human-Nature contexts and interrelationships, to foster deeper and more harmonious relationships between place, self, community and the natural world. The word "deep" in part referred to the level of questioning of our purposes and values, when arguing in environmental conflicts. The "deep" movement involves deep questioning, right down to fundamentals (Drengson, 1999). Naess (1995:71) analyses shallow and deep ecological approaches by pointing out differences with regard to issues of concern.

Deep ecology is regarded as a holistic worldview, emphasising the whole rather than the part (Capra 1995:20). One common trait in the discussions surrounding deep ecology is the questioning of the relationship between human communities and nature. As Berry (1995:9) puts it: "[t]hese questions ultimately arise because at the present time the human community has such an exaggerated, even pathological, fixation on its own comfort and convenience that it is willing to exhaust any and all of the earth's resources to satisfy its own cravings. The sense of reality

and of value is strictly directed toward the indulgences of a consumer economy". The views expressed are mainly trying to explain the situation in Western industrialised countries. The plundering of the planet's resources is perpetrated by the great industrial establishments that have dominated the entire planetary process for the past one hundred years, when modern science and technology took control (Berry 1995:10). "The scale of consumption we are induced to buy into, is mainly motivated by corporate greed, not by human needs" (Ausubel 1997:208)[44].

An example from Germany, where environmentalism has been close to a national obsession (Theil 2004:30), shows the insignificant status of the environment in the political and economic spheres. After a decade of economic stagnation and a high unemployment rate, the consensus on environmentalism is beginning to fray. "In fact, many citizens now wonder if environmentalism is a luxury the country can still afford" (Theil 2004:30)[45].

Eco-philosophy is very much an anathema not only in Namibia but also internationally. It is opposing the consensus on the conventional interpretation of sustainable development and calling for change in order to achieve a state of sustainability. According to Treanor (no date), eco-philosophy has brought back teleology, 'the knowledge of the ultimate purpose', into ethics. Now however, the ultimate purpose is not to go to heaven, but the survival of the human on this planet as ultimate purpose.

Despite these opposing views, consensus was found in the acceptance of some international documents, for example the Agenda 21 and the Habitat Agenda. The objectives of these agreements aimed at achieving something called sustainable

development. As a result, the commitments made in these pledges, with respect to sustainability, can now be considered in connection with the influence exerted by the human mind.

2.8 Sustainability and the Mind

Progressive activities in the green revolution are related to the fields of philosophy and eco-psychology. According to Roszak (quoted by Wines 2000:27), the environmental movement has to be expanded to include a psychological impact statement that can trace mental disturbances and even a larger scope of societal dysfunction, directly to people's loss of contact with the earth. The basis for eco-psychology is to help people see the magnitude of their alienation from the natural environment and guide them towards finding ways to bridge this gap, rather than pursue a self-indulgent search for answers within the dead-end zone of the ego (Wines 2000:28). Therefore, there is a close link between achieving sustainability and the implementation thereof, because the latter has to be accomplished by humans.

Humans have been described as dualistic beings, consisting of a physical body and a non-physical mind, or soul or spirit (Moore & Bruder 1990:467). A person's non-physical and physical components are interactive (Moore & Bruder 1990:468), hence influencing each other. The human mind determines the behaviour of individuals and groups of people with each other and their environments (social, political, and natural). Therefore, it is the most significant element in achieving an objective such as implementing Sustainable Development which requires change, understanding[46] and a concern for the totality of life. Attitudes, philosophies, values, and behaviour are all connected to psychological capacities or the Mind.

Smuts has already at the beginning of the 20th century pointed out that one of the structures of holism is the Mind. “Psychology treats mind in man and the higher animals as a factor or phenomenon by itself, and analyses it into various modes of activity, such as consciousness, attention, conception, feeling, emotion, will, etc.” (Smuts 1927:233). According to Smuts, the Mind is a form of Holism and therefore has a much wider setting and performs more fundamental functions in the order of the universe than appears from psychology. For psychology Mind is a distinct phenomenon to be studied by itself; but for the theory of Holism, it is but a phase of its universal process (Smuts 1927:237).

“Our mind is fundamental to who we are, and to the way we feel and function” (ABC Radio National, 2000a). Evolutionary psychologists assume that in order to understand the way the mind works, one has to go back 100,000 years to the time when human ancestors were hunter-gathers. Evolutionary psychology posits that evolution is responsible for human physiology and anatomy and also for certain behavioural characteristics (Krellenstein, 2001). Smuts (1927:233) already argued that, “Mind is in some respects as old as life, but life outran it in the race of Evolution”.

Evolutionary psychology is the combination of evolutionary biology and cognitive psychology (Dylan & Evans quoted by Evolution’s Voyage, 2000). According to Cosmides and Tooby (quoted by Evolution’s Voyage, 2000), evolutionary psychology is the science that seeks to explain through universal mechanisms of behaviour why humans act the way they do. Cosmides and Tooby attempted to rewind the clock back to the primate origins and to renew the search for human behaviour today equipped with the new knowledge from multi-disciplines. In this way

they try to “understand the relationship between biology and culture by understanding the architecture of our evolved psychology” (Cosmides & Tooby quoted by Evolution’s Voyage, 2000).

Smuts understood that the future becomes a potent influence on Mind, due to its dual activity of conception and conation, the Mind forms “purposes” which envisage future situations in experience and make the future an operative factor in the present (Smuts 1927:235). Free creative synthesis appears everywhere in mental functioning, for example in the regions of metaphysics, ethics, art and religion. Smuts argued (1927:238) that mind is not yet the master, but it is the key in the hands of the master, Personality. The mind is the supreme system of control, the organ of control, of knowledge and of values.

Steven Mithen (ABC Radio National, 2000b) points out that archaeologists have found during the last 30 years that many different hunter-gatherers lived in a wide variety of environments. Therefore, the past is much more complex, rich and diverse than what some of the evolution psychologists would allow for in their views. This diversity cannot be generalised and can still be observed nowadays in existing hunter-gatherer societies, according to Howard Morphy (ABC Radio National, 2000b). Harmon Holcomb, a philosopher of science at the University of Kentucky, skeptically examines the theories of evolutionary psychology and finds that for the most part, they are neither pseudoscience nor hard science, but protoscience, that is, science in the making (Miele, 1996).

3. Empirical literature review

In exploring sustainable ways of living, there are many examples of people, organisations, individuals, attempting or practising an appropriate lifestyle within a particular context. Most can be regarded as experiments or visionary ideas. But a few traditional societies still exist, that are considered as living sustainably, for example, the Ovahimba in Namibia. This provides insights into what the United Nations and many other organisations are trying to promote through their engagement of what they call sustainable development. However, the first examples illustrate failed societies, that, similar to the North and the elite in the South nowadays, disregard the importance of the availability of natural resources as the basis for life. Besides the traditional way of life, there are several attempts in the North, to create an alternative to the conventional “modern” settlements. They vary from ecovillages to green architecture and Arcosanti, to the various programmes initiated by the United Nations such as the SCP and the Local Agendas 21.

3.1 Pre-industrial and traditional societies

In the previous chapter selected traditional societies were portrayed as displaying a sustainable lifestyle. Similarly, pre-industrial societies and their particular settlements have been researched and described. Some additional examples of these societies will be included in this study to provide some insights into the relationship between communities and the natural environment, to demonstrate unsustainable behaviours and the impact on natural resources. Jared Diamond (2000) presents examples of interest with regard to pre-industrial societies which are also of interest to arid countries such as Namibia. According to Diamond, there is widespread belief that pre-industrial peoples lived in harmony with their natural environment. However, many collapsed. *Collapse* is defined as a local drastic

decrease in human population numbers and/or in political, economic, or social complexity. Most have survived or lived continuously until today.

Diamond (2000) describes one example of the isolated society on Easter Island and another found in the south west of the USA, who were not as isolated as the Easter Islanders. Easter Island lies about 3200 km away from South America and also the nearest populated Polynesian island and was inhabited at about A.D. 300. Originally the island was covered with tropical forest and many species of birds. Forests were cleared for agriculture and the trees were used as firewood and to build canoes for fishing. Once the forests were cleared, the birds disappeared, topsoil eroded, agricultural yields fell, firewood became scarce, canoes could not be built and consequently, fishing was impossible. Emigration did not become an option as canoes could not be built and resources (food and water) for long distance traveling were not available. As a result, the population died out due to cannibalism, starvation and warfare. The situation was aggravated by the fact that Easter Island has a low rainfall which limits the re-growth of vegetation, worsened by the cooler temperatures of high latitudes.

Around A.D. 500, people settled in villages in the southwestern part of today's USA. Thereafter populations exploded in numbers and spread over large areas (Diamond, 2000). In the Chaco Canyon area, the inhabitants constructed buildings out of stone which was atypical for the societies in this part of the world. Agriculture was practiced as alluvial ground water and soil renewal from the broad-sheet runoff was available in the canyon which originated from the upland areas, thereby permitting farming independent of local rainfall. Woodlands provided construction material and firewood. Again, the woodlands disappeared due to deforestation after construction

at Chaco Canyon used about 200,000 trees. The problems increased when the runoff in the canyon was diverted into channels for irrigation, as the concentration of the runoff in irrigation channels and the removal of vegetation continued. As a result, the cutting of deep trenches made irrigation without pumps impossible. Despite these difficulties, the population grew, as Chaco was a political and religious center, until droughts forced the inhabitants to emigrate.

Besides the pre-industrial societies, there are non-industrial, traditional societies, that are satisfying all descriptions of sustainability. One example are the Chukchi[47] people, that are the largest group of indigenous people on the Asian side of the North Pacific and at present, live in isolated and remote villages across a huge area that reaches from Bering Strait to the Kolyma River valley deep in inland Siberia. The area extends along both the Arctic and Pacific coasts of northeast Asia (Polar Connections, 2002). The population is divided into two main groups. One group traditionally depends on domesticated reindeer herds which provide transportation, meat, milk, and hides for clothing and shelter. Traditionally they subsist on hunting marine mammals and by fishing. The other group lives in settlements along the coast and has been much influenced by the Siberian Inuit[48].

In Namibia the vanishing culture of the San, and the still fairly intact culture of the Ovahimba were or are examples of sustainable societies. However, the influence of Westernisation is exerting pressure on these cultures. Hence, the question is how long can they be able to withstand these pressures. The San have experienced the negative impact of modernization and are facing the ruin of their culture. Through the promotion of tourism, the Ovahimba are being exposed to foreign influences. The access to the Kunene region is making it easier for outsiders to visit the area.

The semi-nomadic Ovahimba can at present still live in a sustainable way. Homesteads, or built human settlements, are constructed in various localities, to which the group periodically returns, due to the circular way of migration. These homesteads are built and repaired with locally available building materials, such as wood, clay and grass for thatching. Safeguards, regarding the livestock numbers, are exercised by natural phenomena, such as droughts which regularly bring the number of cattle to a sustainable level. Although a lot of water is available in Kunene, the problem is grazing. The San's nomadic lifestyle was not dependent on livestock, but relied totally on natural resources, their skills and accumulated knowledge.

3.2 Eco-villages

Attempts have been made to put human settlements on a "more" sustainable basis. In many countries eco-villages have been built to demonstrate new ideas. The Global Ecovillage Network (2002) describes Ecovillages as urban or rural communities of people, who strive to integrate a supportive social environment with a low-impact way of life. To achieve this, they integrate various aspects of ecological design, permaculture, ecological building, green production, alternative energy, and community building practices. There are many varieties of ecovillages, each with its own characteristics. Two examples are described, one from the North (an urban project) and one from the South (a rural project) to illustrate differences.

In Washington, DC, the Shaw Ecovillage's mission is to train youth to be effective leaders and catalysts for sustainable change in our urban neighbourhoods (Shaw Ecovillage, 2002a). Besides training, the Eco design corps trains high school students how they can create real and positive change in their neighborhoods.

Students use urban design and social research tools to analyze and propose solutions for their own community-based projects (Shaw Ecovillage, 2002b). Focus areas include: Community Pride and Identity, Clean Water, Air and Land, Public Space, Health and Wellness, and Transportation.

“A sustainable community is a place where people of all ages, races, ethnicities, genders and abilities can meet their own needs without compromising the needs of others both now and in the future” (Shaw Ecovillage, 2002a). Youth achieve meaningful change by addressing three critical issues in Washington, DC's urban neighbourhoods:

- Economy--creating an economy to support individuals of all income levels;
- Environment-- a natural and built environment that is healthy for all people and non-detrimental to the earth;
- Social--a society that supports the interests and needs of all residents.

One project which has been included in the Best Practices (UN-Habitat, 2002c), is Tlholego[49]. The latter works with leading professionals from Southern Africa and around the world and has facilitated many of South Africa's primary training programmes in Ecovillage Development, Sustainable Building Technologies and Permaculture Design. Furthermore, Tlholego promotes a local watershed management strategy for optimum sustainability, economic activities in education, ecotourism, and sustainable agriculture.

The Tlholego village settlement offers an opportunity to observe and learn about native flora and fauna, African Iron Age culture, and to experience first-hand a contemporary rural settlement which is emerging from a previously impoverished farm worker community. At the same time, an innovative model of sustainable living that includes permaculture food gardens, water harvesting, sanitation systems and

energy efficient buildings within a sustainable village settlement is promoted (TDP, 2001c)[50].

3.3 Arcosanti

Arcology is a concept of cities, developed by Paolo Soleri which embody the fusion of architecture with ecology. The arcology concept proposes a highly integrated and compact three-dimensional urban form that is the opposite of urban sprawl with its inherently wasteful consumption of land, energy, time and human resources. An arcology would need about 2% as much land as a typical city of similar population and it would eliminate cars from inside the city and reserves it for use outside the city. Walking would be the main form of transportation inside an arcology.

Today's typical city devotes up to sixty percent of its land for automobile functions. The miniaturisation of the city enables radical conservation of land, energy and resources. Arcology would rely as much as possible on the sun, the wind and other renewable energy so as to reduce pollution and dependence on fossil fuels. Arcology needs less energy per capita thus making recycling and the use of solar energy more feasible than in present cities (Cosanti Foundation, 2002).

The buildings are designed to make the most of the sun-filled desert climate. The plan means two things: First, unlike most of urban America, residents of Arcosanti[51] will not be cut off from the country; nature literally will be right out the back door[52]. Second, unlike most of urban America, there will be no bumper-to-bumper, full-metal-jacket auto combat here, as the only traffic through Arcosanti will be on two legs. "Everything -- work, shopping, entertainment, restaurants -- is to be within walking distance of everything else" (Monczunski, 1998).

Soleri believes cities are the key to what ails us and argues that environmental degradation and the resulting social problems all can be traced back to urban patterns that mandate waste (Monczunski, 1998). The current urbanisation forms are courting disaster especially as they spread throughout the undeveloped world. The “American Dream of a large house in the suburbs has been too successful, we've gotten too good at creating the good life -- a consumerist version of the good life that is as seductive as it is wastefull” (Soleri quoted by Monczunski, 1998). He goes on:

> *"We must realize that we are part of something bigger than ourselves and act in accord with that. We are cosmic stuff, and unless we are clear on that we are bound for problems. We must stop taking the small view of things. The larger view needn't be sacrificial. It can be a most incredible leap into something really very exciting."*

Arcosanti helps in understanding that humankind is in the midst of a transition into an urban form of global existence and that the kind of imaginative thinking which has to go into the design of this form has in many instances not even begun (Cox, 2002). The focus on the city brings together more disparate elements in the human enterprise and to see them in a coherent vision, more so than any other paradigm of thinking could provide. Soleri realises that neither technology nor politics nor religion alone can provide the framework of imagination for the future we all need (Cox, 2002).

3.4 Selected Local Agendas 21

A Local Agenda 21 is a long-term strategic program for achieving sustainability in the 21st century (Global, 1998). The content and form of each Local Agenda 21 is different, reflecting the needs, resources and aspirations of the particular community. Two African examples of Local Agendas 21 illustrate two different conditions under which they are implemented. The first is Nakuru, Kenya, where the

UNCHS and other international agencies were heavily involved. The second is Pretoria which also provided some information during the first workshop of the LA21 initiative in Windhoek.

Nakuru is located in the African Rift Valley and has been faced with a declining economy, crumbling infrastructure and a fast population growth rate. Water supply falls short of demand, resulting in many low-income residents using less than is considered sanitary. Water must be retrieved from long distances or purchased at considerable expense from local vendors (ICLEI, 2000). Particular environmental concerns are caused by the inter-relation between Lake Nakuru National Park and the residential and industrial expansion. This situation is aggravated by the fallen standards of urban services, requiring a new approach towards urban planning and management (UNCHS, 1997b).

To address these concerns, Nakuru undertook a Local Agenda 21 planning process with the local community and community-based organizations (CBOs) to develop water kiosks to supply safe, clean and inexpensive drinking water, first focusing on one low-income, underserviced area. With funding from the Incentive Grants Project, water kiosks were built. They will be operated by a local CBO, creating well-paying, long-term employment for several individuals, as well as building the capacity of the group to take on similar challenges in the future (ICLEI, 2000). Other objectives include to improve access by the poor to shelter, basic urban services, to reduce the burden of poverty of low-income communities, and to promote urban development policies and strategies for more sustainable urban development and management practices (Ng'ayu 1998:24)[53].

Consultative workshops were held to build consensus. The result of this work has been synthesised into an "Urban Pact", expressing a vision and concept concerning the desirable development of Nakuru Municipality, a prioritised list of inter-related action plans to implement this vision, and a decision-making structure (UNCHS, 1997b). Furthermore, action plans[54] were formulated to deal with institutional strengthening, training, planning support, rehabilitation, environmental protection, infrastructure improvement and employment creation[55].

During the public participation process in 1999 in Pretoria, a vision and mission for the environment were drafted as well as a list of objectives and priority projects. The priority projects were submitted for inclusion in the Greater Pretoria Metropolitan Council's 2000-2001 budget, and implementation of the approved projects will commence in July 2000. These projects include: an Environmental Resources Plan (ERP) which is based on LA21 principles, and sets out the guidelines for the sustainable use of Pretoria's environmental resources (ICLEI, 1995-2002). An Environmental Management Programme was developed for Pretoria (Pretoria City Council 1999:3). Two of Pretoria's main environmental problems include housing conditions and air pollution in low-income areas (ICLEI, 1995-2002). Tree planting for informal housing areas was planned to make an immediate visual difference to the environment and to improve the air quality.

Pretoria’s Council is exploring its options to ensure compliance and effective enforcement of environmental laws and policies (ICLEI, 1995-2002). One indicator of the performance of Pretoria is the plan to measure its "ecological footprint" on a regular basis to assess whether all the plans, policies, projects and educational initiatives[56] are making a tangible difference.

Coetzee, during the Local Agenda 21 Workshop in Windhoek on 5 June 1999, described the conditions at the local authority as similar to silos. Each department and activity was regarded as a stand-alone item. With the start of the Local Agenda 21, this *silosisation* was one of the problems which had to be removed in order to plan for the new approach. One outcome was the Pretoria Inner City Partnership to involve a wide variety of stakeholders to participate in planning and implementing a development strategy to achieve economic, environmental and social sustainability (Pretoria City Council, 1999:3)[57].

3.5 Sustainable Cities Programme (SCP)

The Sustainable Cities Programme (SCP) is a joint UN-HABITAT/UNEP facility for building capacities in urban environmental planning and management (UN-Habitat, 2002a). The Programme was the first major international support programme for LA 21-styled planning and promotes a broad-based, participatory process for the development of a sustainable urban environment, emphasising cross-sectoral coordination and decentralization of decision-making (ICLEI, no date)[58]. The SCP operates in 20 main demonstration projects and 25 replicating cities around the world[59].

The SCP promotes a development paradigm which shifts fundamentally from the traditional technology driven and resource focused development models, and builds on the following basic premises:

- *Sustainable cities are fundamental to social and economic development, they are engines of growth;*
- *Environmental degradation adversely affects economic efficiency and social equity, and hence obstructs the development contribution of cities;*
- *Environmental degradation is not inevitable; what is required is a proactive management approach built on an understanding of the complex interactions between development and the environment* (UNCHS, 1998c).

The process starts with an environmental profile[60] and the identification of priority issues. Key stakeholders from the private, public and community sectors are involved through a consultative process in the preparation of the profile and in identifying the priority issues facing the city (UNCHS, 1998c). After the City Consultation, negotiations on issue-specific strategies resume through Working Groups which are constituted from the stakeholders in respective issues which are the most active individuals who have shown interest in the discussion groups and form the core of the Working Groups (UNCHS, 1998c). Acting as cross-sectoral platforms for negotiation, these groups bring on board the relevant stakeholders who are affected by the issue, and who possess the required authority, expertise and information, and have the competence and capacity to contribute towards addressing the issues. The Working Groups are the primary vehicle of the process, and make cross-sectoral participatory planning and decision-making possible. They also negotiate the necessary strategies and the institutionalisation of the environmental planning and management (EPM) process[61].

Some examples show what has been achieved in the demonstration projects. In Tanzania, the Government prepared and adopted a National Programme for Sustainable Human Settlements Development which aims at:

> *"Creating sustainable development in urban centres which will improve living conditions in informal settlements, alleviate poverty, stimulate economic growth and employment and improve the urban environment"* (UNCHS, 2001a).

The project manager (UNCHS, 2001a) points out that five practices are typically lacking in traditional urban planning and management. SCPs address these practices differently:

1. SDP has shown that it is feasible to employ a bottom up planning approach to establish priority environmental issues, and prioritise as well as tackle them citywide using the environmental planning and management (EPM) process.

2. It has enabled a diverse range of stakeholders to come together so as to confront common environmental concerns[62].
3. SPC has acted as an effective medium for mobilizing resources to support project implementation, thus bridging the gap between planning and action.
4. The planning activities have significantly enhanced the image of Dar es Salaam City Council/Commission (DCC) as a lead partner in city development.
5. It has also generated substantial information on the environmental status of the city, thus laying the foundation for informed decision-making.

Another aspect was the establishment of a long-term institutional framework. In the course of implementation, the major policy issues addressed included the restructuring of the former Dar es Salaam City Council in February 2000, the reform of service delivery and the economic cost of service provision and who should bear the cost. Restructuring enabled the establishment of the planning and coordination department being a step forward in ensuring coordinated service delivery in the city of Dar es Salaam (UNCHS, 2001).

Another project was initiated in Lusaka. Like many other urban cities of Africa and the developing world, Lusaka is faced with environmental problems which include air and water pollution, insufficient water resources, ineffective solid waste management, undeveloped water borne sanitation systems, traffic congestion, open quarrying and limited urban planning capacities. The perennial outbreaks of diseases like cholera are constant reminders of the presence of some of these problems in Lusaka (Muwowo 2001:30).

In pursuit of the development objectives SLP is supporting measures aimed at poverty reduction in three communities of high poverty levels who reside mainly in low income settlements and the promotion of environmentally sustainable socio-economic development in the short, medium and long term in Lusaka. Water supply emerged as the first priority and solid waste as another priority issue. The latter became the main focus of the community based waste collection and disposal

initiative. After consulting the communities and the provision of training, market surveys were conducted in order for the trainees to assess their clientele, and the range of fees that the community members would be willing to pay. This information was used to prepare business plans. For the implementation, the local authority was expected to sign two contracts, one with the Residents Development Committee as the immediate overseers of the enterprises, and the other with the enterprises. The third contract has to be signed between enterprises and waste generators (Muwowo 2001:33).

The focus on certain key issues in the SCP does not fulfill the requirements of the holistic approach. By focusing on certain “convenient” problem areas, sustainability is not guaranteed. It is crisis management, as other important factors are not incorporated. This can be illustrated by what has become known as green architecture.

3.6 Green architecture

Local authorities comprise *inter alia* of natural (e.g., parks and open spaces) and built environments that represent man-made architecture. The built environment has been more a part of the problem than the solution (Wines 2000:32). Architecture and environment are inextricably linked and their relationship is complex and multi-faceted (Jones 1998:15). The building of shelter, according to Wines (2000:9), consumes one-sixth of the world’s fresh water supply, one-quarter of its wood harvest, and two-fifth of its fossil fuels and manufacturing materials. Many resources on earth are regarded as finite, therefore, cannot be replenished. This has stimulated the debate on renewable resources versus non-renewable resources, as this can *inter alia* affect economic issues such as production and consumption.

One of the most complex and problematic issues over the next century is how to construct a human habitat in harmony with nature (Wines, 2000:8). Even the most advanced designs are struggling with ways to integrate environmental technology, resource conservation, and aesthetic contents (Wines 2000:20). Sustainable architecture has to advance three purposes: (1.) to advance the purely selfish motive of survival by a cooperation with nature, (2.) to build shelter in concert with ecological principles as part of this objective, and (3.) “to address the deeper philosophical conflicts surrounding the issue of whether we really deserve the luxury of this existence, given our appalling track record of environmental abuse” (Wines 2000:20). The challenge is to reach the point where green architecture is indistinguishable from good architecture (Jones 1998:9). Certain traditional cultures believed that any hand-built dwelling must defer to nature’s need for reclamation. Consequently, it should be conceived from the outset as part of a seamless dematerialisation back into the environment when its sheltering functions are no longer required (Wines 2000:20).

Steve Horns, UNEP, declared during an UNCHS meeting in Nairobi (12 February 2001) that a sustainable building would have zero consumption of energy, water and materials, in order to ensure that no deterioration in quality of the ecosystem takes place. He regards this as idealistic and not achievable. However, traditional communities are practicing this, as shown above in the cases of the Chukchi and Ovahimba. The offices and residences of the Namibia Clay House Project in Otjiwarongo have originally utilised clay and cow dung for the construction of walls and roofs - a building method which required no energy inputs. According to Horns, it would be more realistic to promote green architecture and its lower energy costs, improved living and the working environment in green buildings which would

improve productivity, increase long-term asset value of buildings. Too much emphasis has been put on technical solutions, whilst the problems are related to processes, such as embodied energy in buildings and the fact that concrete is very energy intensive[63].

A green building serves the needs of the people who inhabit it which means it supports and nurtures their health, satisfaction, productivity, and spirit. It requires the careful application of the acknowledged strategies of sustainable architecture: non-toxic construction, the use of durable, natural, resource efficient materials, reliance on the sun for daylighting, thermal and electric power, and recycling of wastes into nutrients (ARC Design Group, 2000). The group further states, that:

> *"We recognize that the conversion of our culture to a sustainable basis involves a fundamental transformation of the human spirit. We must rediscover our interconnectedness and interdependence with something much larger than ourselves: the natural world (on the material plane) and the spiritual realm which transcends it".*

Green architecture considers a variety of aspects such as (Christensen, 1994): passive solar design, earth sheltered design, solar hot water, heating and cooling systems, photovoltaic systems, energy efficient appliances[64].

Ecomaterials is a word created by EcoSouth to define construction materials that are ecologically and economically viable (ECOsur, 2003a). In Cuba eco-materials have been developed after the demise of the Soviet Union. Due to the diminishing income from the sale of sugar to the former Soviet Union, Cuba began to develop its own building materials. Universities were involved in developing, for example, an alternative binder produced (ECOsur, 2003b). Village technologies were developed in Cuba to enable inhabitants to produce building components such as bricks, window and doorframes, roof tiles, and sewer pipes, all made from concrete. The

technologies used can be utilized in urban as well as in rural settlements to produce small quantities and are not capital intensive.

During the international conference *Ecomaterials And A Sustainable Habitat*, November 1998, some participants from Cuba were amazed by the fact that in Africa many houses were exclusively built from natural materials (observation by author). This is contrasting the reinforced concrete culture which was based on the architecture of the former Soviet Union.

In Otjiwarongo, the Namibia Clay House project is using clay (earth materials), micro concrete rooftiles, composting toilets, reusable items, e.g., bottles, harvested rainwater, and greywater irrigation in different parts of the projects. The use of clay requires careful planning of the construction process, as the building of walls can only be executed during the dry season, otherwise the walls will be damaged by rain. As a result, the blocks have to be prepared during the preceding season to be available once the construction starts. Due to the materials used, the interior climate is superior to conventional modern houses.

4. Conclusion

This chapter investigated the claims that the current perception and understanding of sustainable development are sustainable. These claims are part of a broad consensus which is based on the definition of the WCED and the weakened version formulated by the UNCED. Most definitions support an interpretation which suits the Western ontology and its interests as the dominant forces in global politics and economics. They have been incorporated in, for example, Agenda 21 and the Local

Agenda 21 programmes. Local authorities have been given the impossible task of implementing sustainable development at the local level (see Chapter 4).

This requires an understanding of the philosophies, principles and theories relating to the issues surrounding the concept of sustainable development. One outcome would be the integration of the four components needed for the implementation, namely economic, ecological, social and ethical issues. Rarely has an utilitarian position been advocated by those responsible for the decisions on future developments, in particular the political and business communities. However, the main focus of international discussions and efforts has been the environment and the protection of the global economy. Northern interests have so far dominated these two aspects. Therefore, the issue of sustainability has been distorted and biased to suit the interests of the North.

The WCED correctly stated that there is no blueprint for sustainable development. Economic, social systems and ecological conditions differ widely among countries and communities. Definitions are artificial creations of the scientific oriented world which requires that everything has to be put into a certain frame or a short sentence, as required by the mechanistic development thinking. They do not contribute to a clearer understanding of the various approaches.

The various approaches to sustainability can be summarised and illustrated as follows:

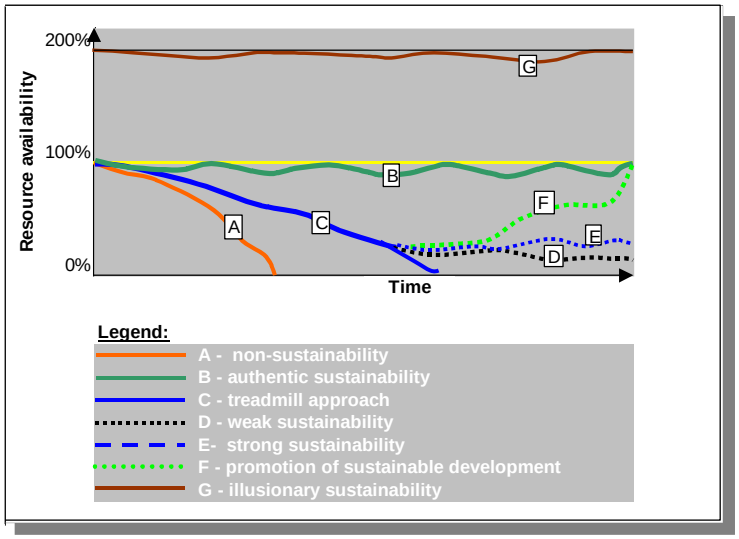


Figure 2.1 - Sustainability levels

Non-sustainabilit as a is illus rated by (A) which shows a s dy es until the basis for life or the existe ce is evelopment", or the *treadmill approach* (C), is steadily eroding t ent resource basis. he attempts by governments, indust o a sta e where the resource basis ends (D strong sustainability approach (D and E). A line wh ch implies a linear movement, but variations as a result of changes and the consequent adaptation of the systems to the new situation until it reaches full sustainability again. In the case of a natural catastrophe, a period of very rapid evolution occurred, as surviving species multiplied to the niches opened to them (Wilson 2002:99). This model is also called the *ideal model;* a statement which fails to appreciate that several traditional societies still live sustainable and that nature is the principal example of sustainability over millions of years. The top line (G) illustrates the impossible prospect of gaining more than the existing resources on Earth. Natural resources cannot be increased, as current resources on Earth are finite and could

only be imported from somewhere else. This is therefore *illusionary* for the time being, as this would require the import of resources from outside Earth.

What the practice of promoting sustainable development should achieve is shown in the green dotted line (F), i.e., the changes needed to restore resource availability over time to such an extent that sustainability is achieved. This approach requires a redefinition of the term sustainable development (see Chapter 5). To summarise what sustainability embraces, the following is a synopsis of important qualitative characteristics or building blocks for sustainability:

- **S**elf-creating, self-producing, self-maintaining processes
- **U**tilitarianism
- **B**io Diversity not homogenisation
- **T**otality of all holons
- **E**thics
- **N**on-materialism and Egalitarianism
- **I**ntergenerational equity
- **R**ealisation of resource limitations

The realities in Namibia and the guidelines provided by international conferences will be examined in the next chapter and will guide the subsequent analysis. Urban governance, of which good governance and the generic administrative functions of local authorities in Namibia and worldwide are a part, influences the efforts to achieve sustainable development and, therefore, provides a focus in the next chapter.

End notes:

[1] Others included: Lagos Plan of Action for the Economic Development of Africa; Africa's Priority Programme for Economic Recovery; the African Alternative Framework to Structural Adjustment Programme for Socio-Economic Recovery and Transformation; the African Charter for Popular Participation for Development; and the United Nations New Agenda for the Development of Africa (Diescho 2002:8-9).

[2] The aim was to attract US$64 billion every year for an unlimited period (Diescho 2002:47).

[3] A concept is any part of language which has an instrumental meaning (Principia Cybernetica Web, 1991).

[4] According to the American Heritage Dictionary (2003) "abstract" means: 1. something is regarded as non-physical: "an abstract concept". 2. Not applied or practical; theoretical. 3. Difficult to understand; abstruse: "abstract philosophical problems." 4. Thought of or stated without reference to a specific instance: "abstract words like truth and justice." 5. Impersonal, as in attitude or views. The term comes from the Latin abstractus which means to draw away.

[5] To synthesize information and to identify links and issues, cognitive capacity includes the following (Learnet, no date): to recognise, in a context of ambiguity patterns, trends or causes of events and develop explanations, to identify priorities and deal with them effectively, to develop proactive strategies that prevent or solve problems, to analyse problems from various angles and consider implications and solutions, to foresee obstacles and plan to reach business goals, and to translate analysis into sound recommendations.

[6] John Gay (1685-1732) also referred to the use of words: *I know you lawyers can, with ease, Twist words and meanings as you please; That language, by your skill made pliant, Will bend to favour any client* (quoted by Middleton & O'Keefe 2001:18).

[7] Sir Francis Bacon (Ecotopia, 1996) observed: "The human understanding, once it has adopted opinions, either because they were already accepted and believed, or because it likes them, draws everything else to support and agree with them. And though it may meet a greater number and weight of contrary instances, it will, with great and harmful prejudice, ignore or condemn or exclude them by introducing some distinction, in order that the authority of those earlier assumptions may remain intact and unharmed".

[8] However, the Communist Party of India has transformed the state of West Bengal into an economic overachiever by openeing markets and courting foreign investment (Wehrfritz & Mazumdar 2004:27). The chief minister is quoted by Wehrfritz and Mazumdar (2004:26): "We are determined to make our state so attractive for investors that West Bengal and Kolkata will soon become the preferred destination for them".

[9] At the beginning of the 21st century the dominant world view is similar to the one found about 50 years ago when the development was associated with modernisation. Experience has shown that the claims emanating from this approach are deceptive as global problems have increased and not decreased and that the notion of prosperity for all is just another fairy tale. The difference is that nowadays development is attached to the notion of sustainability or sustainable development.

[10] Chaired by the former Norwegian Environment Minister, Gro Harlem Brundtland, the report set the contemporary public environmental agenda. The background of the chair, according to Middleton and O'Keefe, underlines the fundamentally environmentalistic origins of the final report.

[11] The term sustainable comes from the Latin subtenir, meaning 'to hold up' or 'to support from below' (Martin quoted by Department of Energy, no date), or 'to supply with necessities or nourishment', 'to keep in existence', 'maintain' (American Heritage Dictionary, 2003). Martin underscores that a community must be supported from below, by its inhabitants, present and future. Certain places, where sustainability has the best chance of taking hold, are a combination of physical, cultural, spiritual characteristics, and inspire people to care for their community.

[12] Pearce et al. (1990:ix) point out that to social scientists the WCS was notable for its total neglect of the main social science discipline that should bear on issues of conservation, in particular economics. This defect was remedied in the Brundtland Report. Tisdell (1985:513) highlights the fact that the terms economics and ecology have a common Greek root, oikos, meaning house or habitat. Ecology comes from oikos and logos, meaning household and logical discourse (Ausubel 1997:203) or the study of (Miller 1996:93). Economists, as a profession, have paid little attention to the general theme

of sustainable development. The authors conclude that this reflects the general lack of interest in environmental issues. George Bernard Shaw said: “If all economists were laid end to end, they would not reach a conclusion” (Middleton & O’Keefe 2001:61). The authors argue that besides the differing and often irreconcilable approaches in economics, there has been a semantic difficulty: economists have been dogged by the assumption that their subject is a “science”.

[13] Pearce et al. define development as a vector of desirable social objectives or a list of attributes which society seeks to achieve or maximise. Examples include: increases in real income per capita; improvements in health and nutritional status; educational achievements; access to resources; a ‘fairer’ distribution of income; and increases in basic freedom. These aspects have also found its way into the debates surrounding sustainable development.

[14] Elisabet Sahtouris (1995) explains: “Nature is orderly without being perfect…. Nature’s most useful patterns are never outdated but are kept for endless reuse, and the overall scheme of evolution is very stable and resilient. But mechanical perfection would be death to nature as it would be to us as part of nature, for nature is a live, self-creating process forever making order from chaos, forever free to do something new – to reorganize itself when necessary, even if only to stay the same, to create new forms when old ones no longer work. Perfection would be the end of evolution, the end of freedom, the end of creativity”.

[15] They occur roughly every 200-250 million years (Waugh 1996:90). The reasons for these fluctuations have not yet been determined. However, it was about 18 000 years ago, when the last maximum advance within the last glacial occurred. Therefore, the current rise in world temperatures could be the result of the global warming-up process (a warm phase or interglacial), or the result of man-made interferences such as emissions.

[16] According to Professor Maasch (1997), earth is currently experiencing an ice age, despite the fact that a warm interval between two periods of glaciation is at present occurring. Between 52 and 57 million years ago the Earth was in a different state. The polar regions were temperate, trees grew in both the Arctic and the Antarctic, and alligators lived in areas at 78 degrees North.

[17] Life on Earth depends on three interconnected factors (Miller 1996:91-92): 1. the one-way flow of high-quality (usable) energy from the sun, 2.the cycling of matter, or nutrients, needed for life by organisms, and 3. gravity which keeps Earth’s atmosphere and cause the downward movement of matter cycles.

[18] Miller lists requirements for all forms of life (Miller 1996:89-90). This includes inter alia: having a highly organised internal structure and organisation; can capture and transform matter and energy from the environment to supply their needs for survival, growth and reproduction (i.e. metabolism); can maintain favourable internal conditions despite changes in the external environment (i.e. homeostasis) if not overwhelmed; perpetuate themselves through reproduction; and can adapt to changes in environmental conditions by inheritance of beneficial mutations (i.e. evolution).

[19] The first law of energy states that in all physical and chemical changes, energy is neither created nor destroyed, but it may be converted from one form to another (Miller 1996:82). This means, “we can’t get more energy out of a system than we put into it” (Miller 1996:83). The second law maintains, that when energy is changed from one form to another, some of the useful energy is always degraded to lower-quality, more dispersed, less useful energy. This means, according to the author, that we always end up with less usable energy than we started with. It also means that we can never recycle or reuse high-quality energy to perform useful work.

[20] Some natural processes or bio-cycles include the water, nitrogen, carbon, phosphorus, and sulfur cycles (Miller 1996:111-118).

[21] There is a wide range of definitions. A few examples may suffice to illustrate this point. The University of Reading (no date) has compiled a list of definitions on sustainable development. They include: O'Riorden (1985) commented on the difficulty of defining sustainability, describing its definition as an: 'Exploration into a tangled conceptual jungle where watchful eyes lurk at every bend'. Wilson (1992) states: 'The raging monster upon the land is population growth, in its presence, sustainability is but a fragile theoretical construct'. Daly (1991) argues that: Lack of a precise definition of the term 'sustainable development' is not all bad. It has allowed a considerable consensus to evolve in support of the idea that it is both morally and economically wrong to treat the world as a business in liquidation.

Holdgate (1993): Development is about realising resource potential. Sustainable development of renewable natural resources implies respecting limits to the development process, even though these limits are adjustable by technology. The sustainability of technology may be judged by whether it increases production, but retains it other [sic] environmental and other limits.
IUCN, UNEP, WWF (1991): Sustainable development, sustainable growth, and sustainable use have been used interchangeably, as if their meanings were the same. They are not. Sustainable growth is a contradiction in terms: nothing physical can grow indefinitely. Sustainable use, is only applicable to renewable resources. Sustainable development is used in this strategy to mean: improving the quality of human life whilst living within the carrying capacity of the ecosystems.
Earth Chronicles (1995) compiled a list of interpretations of sustainable development: "Sustainable development?" Prof David Inman; "It's a contradiction in terms. We can either have sustainability or we can have development" (Don Malcolm); "To me, sustainable development is an oxymoron. It's like military intelligence. The two don't go together" (Ernie Dyck).

[22] Holism is the theory that wholes are to be regarded as greater than the sum of their parts (Concise Oxford Dictionary, 1991).

[23] The key characteristic of a holon includes its individuality in order to maintain the set order in the tree structure, but it also submits to the demands of the whole tree structure. A universe of holons within holons represents a holarchy, one original whole that formed ever more complicated smaller wholes within itself. Holarchy is a term also coined by Koestler, by combining the Greek words holos and hierarchy which denotes a hierarchically organised structure of units or entities that are called holons (Funch, 1994).

[24] Savroy (1991:388) also stresses that the last point applies to government, because no government is structured in such a way that resources of any nation are soundly managed. "None, even at the highest level, can view the nation in its care holistically, and yet only treatment of the whole as the only reality will lead to long-term success. …Only in budgeting does the allocation of limited money force a certain degree of coordination and general discussion of priorities, but never true collaborative management of the nation's wealth and resources" (Savroy 1991:388).

[25] Autopoiesis is a neologism introduced in 1971 by Maturana and Varela to designate the organisation of a minimal living system (Varela 1992:5). The term combines the Greek terms auto (self) and poiesis (creation, production). Autopoiesis provides a basis for the exploration of different components and their relationships as part of the organisation of the living. The functioning of the various parts of an organism, such as cells, is used to explain sustainability on the micro scale. Holism and autopoiesis both refer to parts which constitute the whole. Autopoiesis provides an understanding of sustainability on the micro scale and provides clues to be considered on the macro scale, if sustainability is contemplated. "

[26] The Internet Encyclopedia of Philosophy (2001) explains that the field of ethics, also called moral philosophy, involves systematizing, defending, and recommending concepts of right and wrong behaviour. Spalding (2000) describes ethics as social rules that govern conduct, implementation of morality and etiquette.

[27] The term ethic is derived from the Greek noun ethos, meaning the customs and conventions of a given community (Bennaars 1993:15), or 'character' and means 1. a set of principles of right conduct; a theory or a system of moral values.. 2. The study of the general nature of morals and of the specific moral choices to be made by a person, and 3. The rules or standards governing the conduct of a person or the members of a profession (American Heritage Dictionary, 2003).

[28] Merchant provides some assumptions with regard to mechanism and society (1992:68-69): Matter is made up of individual parts. Atoms are the real components of nature and individual humans are the real components of society. The whole is equal to the sum of the individual parts. Society is the sum of its individual agents. Change occurs by the rearrangement of parts. Individuals in society associate and disassociate in corporate bodies or business ventures. Mechanistic science posited a world of spirit separate from that of matter. Mind is separate from and superior to body. Human society and culture are separate from and superior to nonhuman nature. Mechanistic science gives primacy to the individual parts that make up a corporeal body. Egocentric ethics give primacy to the individual humans that make up the social whole.

[29] The main concerns of this philosophy revolve around the concept of happiness and the issues of right or wrong: "The classical utilitarian regards an action as right if it produces as much or more of an

increase in happiness of all affected by it than any alternative action, and wrong if it does not" (Peter Singer quoted by utilitarian.org, 2000a). "An action conforms to the principle of utility if and only if its performance will be more productive of pleasure or happiness, or more preventive of pain or unhappiness, than any alternative" (The Penguin Dictionary of Philosophy quoted by utilitarian.org, 2000a). "By Utilitarianism is here meant the ethical theory, that the conduct which, under any given circumstances, is objectively right, is that which will produce the greatest amount of happiness on the whole; that is, taking into account all whose happiness is affected by the conduct" (Henry Sidgwick quoted by utilitarian.org, 2000a).

[30] According to the Penguin Dictionary of Philosophy (quoted by utilitarian.org, 2000a), since "the 1960s, many writers have used consequentialism instead of utilitarianism for the view that the rightness of an action entirely depends on the value of its consequences. Many writers now restrict the word utilitarianism to denote certain kinds of consequentialism, especially Bentham's and Mill's. Currently there is terminological diversity, and the varieties of utilitarianism mentioned elsewhere are varieties of consequentialism".

[31] The "Greatest Happiness Principle" of utilitarianism holds that, "actions are right in proportion as they tend to promote happiness, wrong as they tend to produce the reverse of happiness" (Mill, 1863).

[32] This is expressed as follows: "Utilitarians support equality by the equal consideration of interests - they reject any arbitrary distinctions as to who is worthy of concern and who isn't. This means that we reject egoism, racism, sexism, speciesism, and other forms of unfair discrimination. It does not mean that we deny that there are differences between individuals or between groups of individuals (some individuals are cleverer, taller, stronger, more emotional etc than others), just that there is no logically compelling reason for assuming that a difference in ability justifies any difference in the consideration we give to their interests" (utilitarian.org, 2000a).

[33] According to Haacke (2002:11-12), the name *San* is derived from the verb *saa* (gather, forage) and *–n* the person-number-gender marker for the third person common plural. It is a compound which is an artificial coinage and is not originally known in any indigenous language. Nevertheless, the name *San* is widely used in Southern Africa, for example, by the Working Group of Indigenous Minorities in Southern Africa (WIMSA). In Botswana the term *Basarwa* is also used.

[34] Utilitarianism, at least in some of its principal forms, is dedicated to the reduction of suffering (Hinman, 2001). Hinman further states that utilitarianism begins with one of the most important moral insights of modern times and couples it with a powerful metaphor which underlies our moral life.

[35] The word philosophy is derived from the Greek words philos (love) and sophia (wisdom). The greeks thought of any person who sought knowledge in any area as a philosopher (Moore & Bruder 1990:2). Etymologically philosophy means the love of wisdom (Kessler 1992:5). The author defines the term as follows: "Philosophy is the rational attempt to formulate, understand, and answer fundamental questions" (1992:7). Fundamental means basic and has to do with what is primary and essential (Kessler 1992:8). Alexander of Aphrodisias (quoted by Kessler 1992:1) described philosophers as "those who are eager to learn because they wonder at things are lovers of wisdom".

[36] Prof. Sogolo has examined the issues surrounding traditional and modern African Philosophy in his book *Foundations of African Philosophy*.

[37] Sahtouris (1995) provides an example: "Sarah James, a Gwich'in Indian from the northernmost inhabited village in Alaska made the trip to Rio de Janeiro for the Earth Summit in 1992. She described her caribou culture before contact with the white man as rich – rich with family, warm homes and clothing, plentiful food, much time for ceremony, music, dance and story telling, much reason for celebration. When the white man came to them, he saw only people living in 40 degrees below zero weather, with only caribou to provide food, clothing and skin huts. He called them 'savages'. …Such a life style was truly rewarding as long as its natural simplicity was an integral part of a spiritually rich culture".

[38] The Nobel Laureate Albert Szent Gyorgi (quoted by Hill, 1981) told of the following experience: "In my hunt for the secret of life, I started my research in histology. Unsatisfied by the information that cellular morphology could give me about life, I turned to physiology. Finding physiology too complex, I took up pharmacology. Still finding the situation too complicated, I turned to bacteriology. But bacteria were even too complex, so I descended to the molecular level, studying chemistry and physical chemistry. After twenty years work, I was led to conclude that to understand life we have to

descend to the electronic level, and to the world of wave mechanics. But electrons are just electrons and have no life at all. Evidently on the way I lost life; it had run out between my fingers."

[39] The mechanistic philosophy was based on machines (Merchant 1992:54) which are: 1. made up of parts, 2. give particulate information about the world, 3. are based on order and regularity, 4. operate in a limited, precisely defined domain of the total context, and 5. give us power over nature.

[40] Instead of concentrating on species, another group expands on the biocentric view. Humans' primary role should be limited to those actions that do not degrade or destroy Earth's life support systems (Miller 1996:713). This view supports a holistic worldview which recognizes that all species interact in complex and poorly understood ways. This forms part of the natural processes and interrelations in the ecosphere. As Aldo Leopold (quoted by Miller 1996:713) argued: "All ethics rest upon a single premises: that the individual is a member of a community of interdependent parts". Ken King has provided a Declaration of Interdependence. He explains that "Eco-philosophy tries to be not just one more kind of specialized knowledge which happens to be about our environment, or is somehow aimed at the Earth. It looks for a deeper wisdom corresponding to an attitude of reverence for all physical creation" (King, 2000).

[41] Deep Ecology has been influenced by religions on a society's understanding and treatment of resources. Arne Naess (1995:79) for example, regards some forms of Buddhism, Taoism, Christianity and Baha'i, as potential religious and philosophical homes. The Greek and Judeo-Christian traditions were criticised, whose anthropocentric position during the last three hundred years has strengthened the scientific and industrial revolution. Before the scientific revolution, the goals of science were wisdom, understanding of the natural order, and living in harmony with that order (Capra 1995:23).

[42] According to Sessions (1995:160) the West had several historical opportunities to leave the path of ecological destructive anthropocentrism and return to ecocentrism. For example, White (quoted by Sessions 1995:160) states that, Francis of Assisi tried to depose man from his monarchy over creation and set up a democracy of all God's creatures, but he failed. A second opportunity was provided by Spinoza, who developed a non-anthropocentric philosophical system designed to head off the Cartesian / Baconian drive for power over nature (Sessions 1995:162). Earth wisdom principles were articulated by various Western philosophers, ranging from Francis of Assisi, to Baruch Spinoza, Aldo Leopold, John Muir, Rachel Carson, Gary Snyder, George Sessions, and Arne Naess (Miller 1996:714; Sessions 1995; Merchant 1992). Snyder pursued a vision, in which he integrated Zen Buddhism, American Indian practices, ecological thinking and wilderness values (Turner 1995:41).

[43] Appeals have been made, that the industrial development in poorer countries should not follow the destructive path taken by industrial nations (Middleton & O'Keefe 2001:57). The authors claim, that admirable rhetoric is rarely lacking, but it is scarcely surprising that politics and capital are unengagingly mimetic, one of the other. "Both operate in closed, short-termist cycles. Politicians are trapped in what they see as the need to satisfy a curiously blind electorate and will do nothing, for fear of the next election which might alienate their main support. Capital, business, is trapped in the need to deliver returns on investment calculable over even shorter periods than those allowed to politicians" (Middleton & O'Keefe 2001:58).

[44] The position of industry is illustrated by the managing director of an oil multi-national (Cazalet quoted by Baker et al. 1997:12-13): "as far as industry is concerned, the primary aim must be to ensure that the environmental regulations do not lace them at a disadvantage with their international competitors and ... that their costs do not render the project concerned uneconomic".

[45] Political battles are raging over the economic costs of green policies. One example is the recommendation to end subsidies to the promotion of wind power, because emissions trading would be a less costly way to reduce pollution and the "environment is less and less part of the Zeitgeist" (Theil 2004:31). The same could be said of many other affluent countries, where the health of the natural environment and the costs of ensuring that the needs of the present are not compromising the needs of future generations to meet their own needs, are increasingly ignored. The willingness to acknowledge the wrongs of the past and to change as a consequence thereof is becoming progressively more remote.

[46] An understanding has to be gained of how the ability to act in the environment in a sustainable manner is intimately dependent on the ability to act in a sustainable manner with respect to one's own internal psychological environment. "Indeed it s argued that unless experiential understanding of one's psychological environment consciously embodies analogous cyclic patterns and processes, it is

unlikely that social behaviours with respect to the environment will themselves be sustainable – however strong the declarations of intent or the initial commitment to sustainable patterns of action" (Judge, 2002). This means that humans have to carry the responsibility for the future of the whole planet.

[47] A visit by Dr Spencer Wells, to the Chukchi in mid-winter, presented insights into the sustainable way of life of these nomadic people (shown on National Geographic Channel, 24 December 2002). The reindeer herds provide nearly all the needs of the herders and their families, and determine the speed of moving from one place to another in their pursuit of looking for forage. The shelter is built out of wooden sticks and reindeer hides. The sleeping quarters consist of a tent within a tent which does not require any heating, even in winter when temperatures can reach minus 60°C.

[48] "The terms Inuit Indians, the Inuit Indians, Inuit tribe and Eskimo are not the correct names for these kind and gentle people. Inuit simply means 'The People' in Inuktitut, the language of the Inuit and Inuit is the name they wish to be known by. Inuit - their rightful name, replaces 'Eskimo' a term based on a Algonkian word meaning 'eaters of raw flesh' " (Houston North Gallery, no date).

[49] "Tlholego", is a Setswana word meaning: 'creation from nature' (TDP, 2001).

[50] In 1994, the founding residents of Tlholego began practical training in sustainable building technologies. A series of experimental buildings were constructed which included traditional 2000-year-old Tswana designs using earth and thatch as well as buildings constructed from large earth-filled bags with fired-brick dome roofs. Locally available and recycled materials were used for foundations, walls, floors and roofs (TDP, 2001b). The Tlholego Building System (TBS), a sustainable housing system, was developed in the process.

[51] Arcosanti which derives its name from the Italian word for "before things," is an urban laboratory, a crucible to test Soleri's ideas (Monczunski, 1998).

[52] "In nature, as an organism evolves it increases in complexity, and it also becomes a more compact or miniaturized system. The city too is an organism, one that should follow the same process of complexification and miniaturization to become a more lively container for the social, cultural, and spiritual evolution of [humankind]" (Soleri quoted by Cosanti Foundation, 2002).

[53] The Localising Agenda 21 Programme aims at achieving the following objectives: To support the development and implementation of broad-based environmental action plans focusing on context-specific aspects of municipal planning and management, incorporating incipient and ongoing settlement improvement initiatives. To enhance the capability of local authorities to integrate these action plans into strategic urban development plans and, stimulating inter-sectoral synergy, drawing attention to cross-cutting issues. To achieve tangible results and visible impact for low-income communities in the selected pilot towns, leading to more sustainable and equitable urban development. To achieve this, for each pilot city the programme strategy involves a series of key steps: Awareness building and strategy development through conducting broad-based consultation workshops to reach consensus on priority areas for action; Human resources development and institutional strengthening based on the past experience of all programme partners; Improving planning and management practice through the development of tools to support the implementation of pilot action plans; Promoting policy dialogue and change through dissemination and exchange between towns facing similar problems (UNCHS, 1997a).

[54] The proposed action plans were positioned within realistic time and resources frameworks. For each of them specific collaborative partnerships were made between the Municipal Council, community groups and the business sector. The various actions are reinforced by follow-up projects through collaboration with multilateral, bilateral or private donors and investors (UNCHS, 1997b). In order to promote integrated planning and management, the action plans are supported by a Core Team, representing all municipal departments, reporting to the Council's Management Team. Proposals are then submitted to an Advisory Committee before being considered for approval by the full Municipal Council. Continuous links with the residents are formalised through Zonal Development Committees.

[55] These include: Creation of a Town Planning Unit to reinforce the Council's capability for integrated planning; Promotion of Information Management for integrative planning purposes; Geological survey in south-western part of the town affected by unstable soils and volcanic activity; Underground survey for future water supply in north-eastern expansion area; Resolving space use conflicts by re-planning the Bus Station; Re-vitalising of the Council's rental housing stock; Implementing alternative options for community assisted removal of solid waste; Greening projects in the town, such as tree

nurseries in Council's primary schools; Councillor's Workshops on training for Elected Leadership and field-testing for training of Civic Leaders as Environmental Guardians; and Rationalisation of Municipal revenues and pricing of services (UNCHS, 1997b).

[56] An Inner City Enviro Centre is being developed as a non-profit organization to provide an environmental education focal-point for the Greater Pretoria region and to utilise the Centre as a direct channel for public participation in all environmental projects, such as state of environment reporting and monitoring. The latter is a legislatory requirement for local governments in South Africa.

[57] This involved the formulation of a vision for the Inner City. Concerns for the implementation included the public spaces, health, culture, transportation, environmental aspects, such as the Apies river which runs through the city centre. The partnership was registered as a Section 21 Company, to ensure that all funds raised are used to promote the ideas of the company and serves the inner city (Pretoria City Council 1999:23).

[58] "A Sustainable City is a city where achievements in social, economic, and physical development are made to last. A Sustainable City has a lasting supply of the natural resources on which its development depends (using them only at a level of sustainable yield). A Sustainable City maintains a lasting security from environmental hazards which may threaten development achievements" (UNCHS, 1998b).

[59] The aim is to promote: Sharing environment-development information and expertise; Understanding and accepting environment-development interaction; Building environmental planning and management capacities; Promoting systemwide decision-making; Stakeholder based development prioritisation, strategy and action planning; Managing environmental resources and risks for achieving sustainable development; Leveraging resources for lasting change; and Building inter-agency partnerships, facilitating global exchange of experiences and know-how (UN-Habitat, 2002a).

[60] The Environmental Profile has two purposes: 1. to provide base line data and information on activity sectors, the environment setting and management arrangements, and 2. to highlight the interactions prevailing between development and the environment and between the different activity sectors - interactions which are triggered through the competing uses of natural resources or which manifest themselves via the primary and secondary effects of environmental hazards resulting from sectoral activities.

[61] The SCP process is regarded as being institutionalised, when it is understood, widely accepted and routinely applied to decision-making in environmental and urban management and planning. "Changes in management approaches and processes, and their economic and social returns and positive effects can be felt only when they are firmly rooted and routinely practiced, and this is achieved through a consistent internalisation and mainstreaming of the process activities and approaches within the existing institutional framework" (UNCHS, 1998c).

[62] The city consultations identified the following priority areas: Improving solid waste management; Upgrading unserviced settlements; Servicing city expansion; Managing surface waters and liquid waste; Air quality management and urban transportation; Managing open spaces, recreational areas, hazard lands, green belts and urban agricultural potential; Managing the economy and integrating petty trading; Co-ordinating city centre renewal, and Managing coastal resources.

[63] According to Williamson (no date) the construction industry is culpable for a huge volume of material wastage, energy use and environmental damage. "This is due partly to inertia, lack of awareness and the profit motive. As an individual i [sic] cannot change the global situation, but i [sic] will do all I can in my sphere of influence. Construction materials should where possible be from sustainable resources and be produced in an energy efficient way. All buildings should be designed to create a minimal environmental impact. Lifetime costs and recyclability are equally as important as the initial building budget" (Williamson, no date).

[64] Furthermore there are building materials, e.g., wooden components, flyash concrete, non-toxic termite control, earth materials, insulation, paints, finishes and adhesives, straw bale construction. In addition to these aspects such as solid waste is considered which includes home recycling, composting systems, construction waste recycling, and sanitation such as composting toilets, greywater irrigation, harvested rainwater, and water budget.

CHAPTER 3 - SUSTAINABLE DEVELOPMENT AND HUMAN SETTLEMENTS

1. Introduction

The theoretical issues discussed in the previous chapter, provide ideas, views, criticism, and inputs into alternative approaches to the declared non-sustainable way of the Western economic and political systems. Before these suggestions can be analysed and applied to Local Agendas 21 in the following chapter with regard to achieving of sustainable development in Namibia, the proposals of international institutions, practices of governments and local authorities will be examined. They provide alternatives to the conventional development processes. Furthermore, certain case studies are appraised to determine how they have implemented principles and ideas expressed by theoretical framework and philosophical discussions. This chapter considers the practices and empirical aspects in addition to normative aspects proclaimed which shows the non-static nature of "development".

Human settlements have been identified as the main location for social, economic and centres of material wealth. The focus of the Istanbul conference in 1996 was on cities and metropolitan areas, especially in the so-called developing world. The consumer societies in the North on the one hand and the polarisation between rich and poor strata in the South, were both partners in the deliberations as they were previously in Rio de Janeiro. But as it will be shown in this chapter, the progress made so far is very limited. Despite the adoption of agendas and protocols, Western based development has not moved closer to sustainability. Changes have occurred, but they merely protect the status quo. This has been confirmed by the outcome of the WSSD in Johannesburg in 2002 where development became focussed on five areas identified by the UN Secretary General.

Local authorities in Namibia are supposed to play a role in the implementation of international agendas. Before their contributions and non-contributions can be examined, the international framework is scrutinised to obtain the guiding principles and to ascertain the role local authorities have to play especially with regard to Local Agendas 21. This includes an analysis of the generic administrative functions as they determine the functioning of local authorities. As too few practical examples relating to sustainable development efforts are available in Namibia, it is necessary to look for activities from around the world to illustrate how human settlements are changing, or not changing, in the name of sustainable development. Furthermore, issues referring to indigenous peoples and their settlements are evaluated.

2. Empirical and normative issues

2.1 Empirical issues

Empirical issues are concerned with the realities on the ground, the needs and demands which have to be taken into account as part of urban governance. This also includes the local and international economy, the environment, poverty, and service delivery. The good intentions of, for example, the Habitat Agenda, are negated by the current reality. Olufemi (2002:7) quotes some statistics: about 1.4 billion people live without access to clean and safe drinking water, 7 million die each year of water related diseases, 70 million women and children suffer from severe indoor pollution from cooking fires, 600 million urban residents live in poor quality housing without water, sanitation and drainage. “If urban management has to focus on the most important urban issues the question is who determines what these issues are?” (van Dijk, 2000).

The World Bank identifies the following as the key issues which urban managers

have to deal with: governance and municipal finance, competitiveness of cities and enhanced capacity to attract private sector investment and promote employment, and capacity to deliver public services in an efficient manner, including environmental managerial capacity (van Dijk, 2000). An integrated approach of urban management indeed needs to deal with all these issues in relation to each other. Urban management becomes more and more complicated, also because it becomes more and more a multi-actor event. Inhabitants, entrepreneurs, organizations of inhabitants or entrepreneurs, environmental activists and project developers all want to play a role.

2.2 Normative issues

Normative issues are usually the most difficult to exercise as they are dependent on variables which cannot always be controlled. They are also influenced by various values, norms and beliefs. In Chapter 2, consideration was given to sustainable psychology, egoism, egocentrism and utilitarianism. They provide contributions to the understanding and the principles of the concepts sustainable development and sustainability. The philosophical thoughts have to be understood and incorporated in the policies, strategies, and values of local authorities. This is however not always an easy task when discussing the responsibilities of local authorities.

Normative issues can become problematic issues. During the consultations on decentralisation in Nairobi on the 13th February 2001, the idea of formulating a World Charter of Local Self-Government was debated. The charter would include principles of good governance and would aim at setting out the rights and responsibilities of local government. This includes the provision of guidance on the decentralisation of powers and duties, and to help in the institutionalisation and

strengthening of local political processes (UNCHS 2000c:3)[1].

To be truly normative, a debate on the principles of good urban governance must be grounded in three potential sources of universal norms: international legal instruments; commitments made by governments at major United Nations conferences; and operational experience in cities. The proposed process of a normative debate may culminate in the adoption of a "Declaration on the Norms of Good Urban Governance" (UN-Habitat, 2002b). Hence, understanding it will qualitatively enhance the analysis of good governance focusing on sustainability and human settlements.

3. Sustainability and human settlements

On the international level, numerous attempts were made to incorporate a wide range of issues into the discussion about sustainable development. Several conferences incorporated issues relating to human settlements, such as housing, infrastructure, decentralisation and good governance. Meaning has to be given to the concept of sustainable development and to the context in which people live. According to Kotze and Kotze (1997:67), context can be seen as a holistic concept with interrelated dimensions[2].

Among the efforts to implement sustainable development are Local Agendas 21. The meaning of the latter (see Chapter 2, section 3.4) refers to long-term strategies which focus on the needs, resources and aspirations of the particular community in an urban context. “If Nature poses any obstacles to this aim, it is believed that these obstacles can be overcome through technological solutions, improved management and greater efficiencies – the tools of the industrial production line. While lip-service

is paid to recognising the dependence of humans on the eco-system, the model is still one of dependence on an external entity to achieve an aim and not the model of interdependence most of us enjoy with, for instance, our vital organs, and which is the basis of the strong version of sustainable development" (du Plessis, 2004). This interdependence is found in the relationship between humans and Nature or the local ecology in traditional societies (see Chapter 2, section 3.1). Therefore du Plessis argues (2004), that the "ecological paradigm" requires a shift of the definition of development from the successful domination of nature and forcing it to follow ideas of order that ignore its inherent systemic properties, "to mimicking nature, working according to ecological principles – embracing nature, not conquering it". Local Agendas 21 do not incorporate aspects of indigenous people and their potential contributions to sustainable development, as propagated by international agendas (see section 3.1).

Several international conferences have laid the groundwork in the discussion and promotion of what is described as sustainable development. First, two major contributors to the debate of sustainable development are examined, namely the World Commission on Environment and Development (WCED) and United Nations Conference on Environment and Development (UNCED). Their contributions to the debate about sustainable development and the role local authorities have to play provide the foundation for further deliberations.

3.1 WCED and UNCED

In the beginning of the 1980s, certain efforts led to the creation of institutions which would have an important impact on the emergence of the concept sustainability. One was the formation of the Brundtland Commission by the United Nations, and

the other was the establishment of the World Resource Institute (WRI), to support US concerns. “The environment had suddenly become politics” (Middleton & O’Keefe 2001:2). Middleton and O’Keefe (2001:2-3) point out that the WCED concentrated on the issue of sustainability, but the concept was deliberately ill-defined to prevent unnecessary and destructive objections. The United Nations Conference in Rio de Janeiro (UNCED) in 1992 was convened to examine the world’s progress in the issues raised by the Brundtland report and to provide comprehensive guidelines for the promotion of sustainable human settlements.

According to Middleton and O’Keefe (2001:40), the Brundtland report has mediated the discussion of poverty through environmental problems, by reducing, what capitalist powers saw as a political and economic threat posed by confronting poverty directly, “to a less easily defined and apparent less contentious field”. Middleton and O’Keefe go on by stating that “[t]his was not enough, the US and its allies set about the complete emasculation of the Conference’s agenda, almost wrecking it in advance. Those powerful men had woken up to the dangers of environmentalism and set about neutralising it” (Middleton & O’Keefe 2001:40). One result was the adoption of the aspirational, but toothless, Agenda 21, as the capitalist powers had bought off a sleight of hand by largely removing not only poverty from the Rio agenda, but even removing people from it. The agreements reached dealt with phenomena of nature, or in other words, agreements about things and not about people.

“Two thoughts carry this agenda: the rich consume too much which is how they place pressure on the environment, and the poor fall back on natural resources to meet their needs which is how they degrade the environment” (Munnik 2001:1).

According to Munnik, the solutions offered to the rich nations were changes in production (recycling and clean technology) and in lifestyle (spiritual values replacing consumerism), for the poor, the solutions centred on population control (not popular or successful) and dealing with poverty (see 2.6).

The environmentalistic origins of the Brundtland Commission's report were strongly based on the political career of the chair, as Norwegian Environment Minister, and the fact that women were the most prominent movers in the environmental movement (Middleton & O'Keefe 2001:38). The challenges of the WCED were articulated as: population and human resources; food security; species and ecosystems; energy; industry; and the urban challenge. With regard to the latter, the Commission maintained that few city governments in the developing world have the power, resources, and trained personnel to provide their rapidly growing populations with the land, services and facilities needed for an adequate human life (WCED 1987:16-17). Governments will need to develop settlement strategies to guide the process of urbanisation, taking the pressure off the largest urban centres and building up smaller towns and cities by integrating the rural hinterland (WCED 1987:17). Furthermore, the WCED proposed ideas which were later taken up by institutions such as the UNCED and the Habitat Agenda, namely the decentralisation of funds, political power, and personnel to local authorities.

In Chapter 9 of *Our Common Future,* the WCED elaborated on the urban challenge. The latter half of the 20th century is described as the century of the urban revolution. Few governments in the developing worlds have the power, resources and trained staff to provide the growing population with land, services and facilities needed for an adequate human life (WCED 1987:238). Uncontrolled urban expansion leads to

the loss of productive agricultural land (WCED 1987:240-241). “Large cities by definition are centralized, manmade environments that depend on food, water, energy, and other goods from outside. Smaller cities, by contrast, can be the heart of community-based development and provide services to the surrounding countryside” (Global Tomorrow Coalition quoted by WCED 1987:243).

The Commission regards cities in the industrial world as having the potential to recover from de-industrialisation as a result of the exodus of population and economic activities (WCED 1987:243). Developing countries are not in the same position. The urban challenge lies in developing countries not the developed world. The WCED underlines (WCED 1987:247) that urban development cannot be based on standardised models, imported or indigenous, as development possibilities are particular to each city. To become key agents of development, city governments need to enhance political, institutional, and financial capacity, in particular access to more wealth generated in the city (WCED 1987:248). The major proposals of the Brundtland Commission were: reviving growth; changing the quality of growth; meeting essential needs for jobs, food, energy, water and sanitation; ensuring a sustainable level of population; conserving and enhancing the resources base; reorienting technology and managing risks; and merging environment and economics in decision-making (Kirkby et al. 1995:10). Despite the environmental background of the chair, no paradigm shift was advocated by considering the metaphorical “harmony with nature” as found in functional traditional communities.

The WCED only touched on traditional societies under the heading “Equity and the common interest” and the connection with sustainability. The Commission states that traditional social systems recognised some aspects of interdependence and

enforced community control over agricultural practices and traditional rights relating to water, forests and land (WCED 1987:47). UNCED recognises in Chapter 26 the role of indigenous people. “They have developed over many generations a holistic traditional scientific knowledge of their lands, natural resources and environment” (UNCED 1992:section 26.1). However, the activities of indigenous people are limited to “their land”. In paragraph 26.5, UNCED specifies that the United Nations, governments and other international development and finance organisations should provide technical and financial assistance for capacity building programmes to support the sustainable self-development of indigenous people. This includes research into achieving better understanding of indigenous people’s knowledge and management experiences related to the environment and increasing the efficiency of their resource management systems by promoting suitable technological innovations. The application of this knowledge is however not applied in urban areas or the implementation of Local Agendas 21.

Agenda 21 is divided into four sections: Social and economic development, resource management, strengthening participation of major groups, and means of implementation (UNCED, 1992; Kirkby, O'Keefe & Timberlake 1995:12)[3]. Two chapters are of particular interest to this study, namely Chapters 7 (Promoting sustainable human settlement development) and 28 (Local authorities’ initiatives in support of Agenda 21). The first paragraph of Chapter 7 mentions aspects relating to settlements in industrial countries, such as the consumption patterns of cities which severely stress the global ecosystem. Settlements in developing countries need more raw materials, energy, and economic development simply to overcome basic economic and social needs. The fourth paragraph states that the overall human settlement objective is to improve the social, economic and environmental

quality of human settlements and the living and working environments of all people, in particular the urban and rural poor.

The Commission on Sustainable Development (CSD 1994:§5) points out that the chapter's programmes advocate an enabling approach through cooperation with public, private and community partners. An emphasis is placed on broad-based participation and on an intersectoral and integrated approach to human settlement management and development. As human settlements deal with national and international issues such as poverty alleviation, unemployment, population growth and consumption patterns at the source, they are increasingly the focus of attention. "This places chapter 7 in a central place in the implementation of Agenda 21" (CSD 1994:§7).

Chapter 28 is one of the shortest chapters in Agenda 21, with only seven paragraphs and five activities, but it has one of the most far-reaching objectives and implications for the implementation of sustainable development on local level. UNCED (1992:§28.1) states that many of the problems and solutions addressed by Agenda 21, have their roots in local activities, the participation and cooperation of local authorities will be a determining factor in fulfilling its objectives. UNCED (1992:§28.2) proposed that by 1996, most local authorities in each country should have undertaken a consultative process with their populations and achieved a consensus on a Local Agenda 21 for the community. The consultations would increase household awareness of sustainable development issues (UNCED 1992:§28.3). Local authorities have to assess their programmes, policies, laws and regulations to achieve Agenda 21 objectives. Objectives have to be modified, based on the local programmes adopted.

“The major issues raised with regard to human settlements in the Agenda 21 are the problems of overconsumption which leads to wastage of natural resources” (Rai, 1997). UNCED focused world attention on the subject sustainable development. But the official debates revealed little willingness on the part of the world’s governments and multilateral agencies to address the transformative changes the global dilemma demands (Korten, 1993). The anthropocentric view of UNCED is reflected in Principle 1 of the Rio Declaration: “Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature” (UNCED, 1992). This indicates the weak approach to sustainable development (see 2.7.4). This is further supported by Principle 2 which emphasises that states have the sovereign right to exploit their own resources pursuant to their own environmental and development policies. This is only limited by the responsibility to ensure, that activities within their jurisdiction or control do not cause damage to the environment of other States or areas beyond the limits of national jurisdiction. The objective of Principle 2 is contradicted by the global pollution of water and air, for example, with regard to the ozone layer.

In chapter two, the globalisation of international capitalism is encouraged:

“The international economy should provide a supportive international climate for achieving environment and development goals by:

> *a) Promoting sustainable development through trade liberalization;*
> *b) Making Trade and environment mutually supportive;*
> *c) Providing adequate financial resources to developing countries and dealing with international debt;*
> *d) Encouraging macroeconomic policies conducive to environment and development”* (UNCED, 1992:§2.3).

The implicit order of priority in chapter two was trade, development, and environment (Korten, 1993). Similar to the Rio Declaration, chapter 2 provides for the support of an international climate for the promotion of sustainable development

through trade liberalisation (UNCED 1992:§2.3). By equating development with growth, Agenda 21 ignores the basic truth by World Bank economist Herman Daly that sustainable growth on a finite planet is an impossible theorem (Korten, 1993). To achieve sustainability, the theorem supports more of the same policies that have made the global economy unsustainable. In other words, the doctor whose medicine has produced deadly side effects in his patient now tells the patient that the answer is a larger dose of the same medicine.

A major concern of UNCED was poverty. “Globalisation offers the poor, particular those in the supposedly ‘developing’ countries, ‘nothing but the perpetuation of the differential rate of exploitation’ “ (Meszaros quoted by Middleton & O’Keefe 1995:24). Middleton and O’Keefe further explain, that using the word *liberal* to describe this process clearly emerges as an “expression of power on the part of the rulers’, and we are irresistibly reminded on the early twentieth-century argot in which the verb to ‘liberate’ meant to ‘steal’ “. To suggest that by the process of “development”, most or even a substantial portion of the 80% of the people of the world controlling 20% of its resources can enjoy the cultural and consumerist fruits of a well-managed, advanced and just capitalism is plainly absurd. “Yet the problem is precisely that the poor are unable to consume enough” (Middleton & O’Keefe 2001:24).

The 1992 issue of the World Development Report proposed a reduction of poverty by means of environmental improvement (Middleton & O’Keefe 2001:41; World Bank 1992:3 and 30). Publications like these, have succeeded in spreading the false image that sustainable development is primarily about environmental / green issues. Kirkby et al. (1995:10) argue that the unholy alliance between Northern Money,

Northern self-interest and soft green concerns, has ensured that Rio 1992 is predominantly about the unimpaired growth of the North. The real concerns of the North, i.e., trade, economy and foreign policy, wormed their way into the environmental and development agenda constructed by Brundtland (Kirkby et al. 1995:11). Kirkby et al. compare the Brundtland report with the outcome of UNCED to point out the lack of relationship between the two, especially when one is explicitly a follow-up to the other:

Brundtland	**UNCED**
• A threatened future • Sustainable development • International economy • Population and human resources • Food security • Energy • Industry • Urbanisation • The commons • Conflict – environment and development • Proposals for institutional and legal change	• Conventions on climate change • Forests • Biodiversity, biotechnology, land resources • Hazardous wastes • Toxic chemicals • Freshwater • Action or sustainable development into the 21st century • Environmental awareness • Poverty and environment • Finance • Agenda 21 – cross sectoral issues • The Earth Charter

Table 3.1 Outcome of Brundtland Commission and UNCED

There are more poor people today than in 1992, poorer soils, fewer trees. The total amount of money gone into Agenda 21 is pretty close to zero and not the agreed $125 billion per year (Khosla, 2001a). Ten years after UNCED, another major summit was organized in Johannesburg to assess the progress made in the implementation of the Agenda 21.

3.2 World Summit on Sustainable Development

3.2.1 The 2002 WSSD

The situation in Johannesburg was similar to the Rio+5 conference in 1997, where the chair stated that since the five years after Rio, it is apparent that despite the commitments and the accompanying publicity, the basic concept of sustainable

development is not yet well understood (Strong, 1997). Furthermore, the world community has not made the fundamental transition to a development path that will provide the human community with a sustainable and secure future, as environmental deterioration continues and the forces which drive it, persist.

> *"When the United Nations General Assembly authorized holding the World Summit on Sustainable Development,* ***it was hardly a secret****— or even a point in dispute—* ***that progress in implementing sustainable development has been extremely disappointing*** *since the 1992 Earth Summit, with poverty deepening and environmental degradation worsening. What the world wanted, the General Assembly said, was not a new philosophical or political debate but rather, a summit of actions and results"* (United Nations, 2002b, author's emphasis)[4].

On the WSSD agenda were the following issues: water and sanitation, energy, agricultural productivity and food security, biodiversity and ecosystem management, and health (ENN, 2002; Annan, 2002). The responses to the results of the WSSD differed widely. Dr Chris Brown, Namibia Nature Foundation (The Namibian 28 November 2002:10), is quoted as saying that, world events such as the WSSD give people a feeling that they are going to change the world and "[i]t is not possible, because governments work slowly and own interests take precedence over global interests". The officials from the United Nations and the organisers claimed success, whereas the non-government sector expressed disappointment. Prof. Cliff Hague (CAP News, September 2002) explained that the "United Nations work by consensus, and thus formal agreements are inevitably pitched below the aspirations of many"[5].

Andrew Simms (2002) puts it as follows: "[t]oday, the global economy is like a multinational audited by Andersen, guided by nonsense statistics". Venezuela's President, speaking for the Group of 77 poorer countries said that the Summit had not lived up to expectations. He also said that the United Nations must change the format of the summits radically, as there was no debate. It seemed more like a

dialogue of the deaf (United Nations, Department of Public Information, 2002; Crealiguria, 2002). The speaker objected that most heads of state and governments had no influence on the Plan of Implementation (Kelsey, 2002). ENN also criticised the summit amongst others[6]:

> *"All will be wrapped under the rubric of sustainable development - or, roughly, how to manage global economic growth without environmental loss. A decade ago, the leaders also had far-reaching plans. They agreed to treaties to combat climate change and to protect plants and animals, the rich said they would help the poor develop, and they all adopted a huge blueprint to guide themselves through it. But there are few today who would argue that the promises of Rio have been met"* (ENN, 2002).

"One U.S. official described the whole event [UNCED] as a 'circus'. It was not meant as a compliment" (ENN, 2002). Kirkby et al. (1995:12) also criticised the outcome of the conference as a start in developing a programme for sustainable development, though the dilution of the WCED's high ideals has been a setback. "*Realpolitik* rules and justice is the advantage of the stronger" (Kirkby et al. 1995:12-13). However, the world became aware of the political economic nature of the debate and the need for coordinated action at the international level.

Many of the discussed global problems are either encountered in Namibia or Namibia contributes to these problems, because the same non-sustainable practices are followed as in the North as a result of the prevailing attitudes which do not differ greatly from the Western model. This reflects the inter-connectedness between international influences and local conditions which can be compared with each other. There are, however, contradictions in positions and views between the claims made in official documents and information presented by third parties. One WSSD document claims that **hunger and income poverty** are declining in all regions:

> *"In the 1990s, the poverty rate in developing countries, based on an income threshold of $1 per day, declined from 29 per cent of the population to 23 per cent. If that rate of decline could be maintained, the poverty rate in 2015 would be just about half of the*

> *1990 rate, in accordance with the United Nations Millennium Declaration goal. The total number of people living in poverty declined slightly in the 1990s from about 1.3 billion to 1.2 billion"* (United Nations, 2002c).

The most glaring economic trend to emerge in the past 30 years is the growing gap between rich and poor (WRI, no date b). Disparities have widened at the international level, despite a boom in much of the developing world. Poverty has been reduced over the past 50 years. Within the developing countries, about one third of the population lives on less than US$1 a day. Based on this measure, the percentage of the world's population living in poverty declined slightly between 1987 and 1993 (from 30.1 percent to 29.4 percent), the absolute number of people living in poverty increased from 1.2 billion to 1.3 billion people. Although poverty has been declared as one of the key threats to sustainable development in Namibia, the national assessment for the WSSD is only touching on the reduction of poverty and inequality (Republic of Namibia, et al. 2002:32-33), but does not elaborate on the issue. Vision 2030 also does not elaborate on this aspect (see also section 5.1)[7].

One of the major factors in global non-sustainability is the issue of **climate change**. During 1997, more than 160 nations met in Kyoto, Japan, to negotiate binding limitations on greenhouse gases for the developed nations, as envisaged in the objectives of the Framework Convention on Climate Change of 1992 (EIA, 2002). The outcome of the meeting was the Kyoto Protocol, in which the developed nations agreed to limit their greenhouse gas emissions, relative to the levels emitted in 1990. Major polluters such as China, Brazil or India were however excluded as were most of the so-called developing world, e.g., Namibia.

According to the WRI (1999) global **carbon emission** projections, even with the implementation of the Kyoto Protocol, emission levels in 2010 are still expected to

be more than 30 percent higher than 1990 levels, largely due to increases from rapidly growing developing countries that are not bound by emission limitations under the Kyoto Protocol. Doubts have been expressed on whether the likelihood and practicality of reaching the country targets established by the Kyoto Protocol, will be reached. Thus far, very few industrialised countries have taken the concrete domestic actions necessary to reach the 2008-2012 target emission levels (WRI, 2002b)[8].

The implementation plan delivers nothing on energy supply for the two billion people worldwide who have no access to modern **energy** services; has no targets or timetables of any kind for the uptake of renewable energy[9]; delivers nothing on reducing the massive subsidies to the fossil fuel industry which continue to prop up its dominance of the global energy mix; and merely reiterates agreements made over the past several years (WWF, 2002). Consumption of all types of energy is growing and low-income countries depend on biomass energy, but it is a health threat for billions as smoke from biomass cooking has severe health effects on children and women, fossil fuel consumption and CO_2 emissions continue to grow (United Nations, 2002c).

One contributor to air pollution is the rise in the global number of **vehicles** in the last 50 years, as shown by the WRI (no date a). In Namibia a similar trend is evident. Vehicle numbers in October 2002 stood at 177,841 (Roads Authority, 2002), in 1990 the total was 120,170 (Dierks, 1991), an increase of 67.57% within about twelve years. In this way, Namibia is contributing to the local and global air pollution problem. Miller and Naughton comment (2004:40): “[e]ngineers and policymakers would love a silver-bullet technology that reduces both carbon emissions and air

pollution. Hydrogen cars, which would burn no fossil fuels and emit only water, aren't expected to compete in the market for 20 years, if then".

Another major contributor to global environmental problems is the disappearance of forests. The World's **forests** continue to decline, but sustainable management of forests is spreading (United Nations, 2002c). This seems to be in line with explanations such as Sagoff (quoted by Partridge, 2000):"[t]imber prices stood at an all-time low in 1991... [The] eastern United States, which loggers and farmers in the 18th and 19th centuries had nearly denuded of trees, has become reforested during this century.... India now plants four trees for every one it commercially harvests"[10]. Based on a study by the World Resource Institute (WRI, 2000a), the decline of frontier forests over the last 8000 years looks as follows:

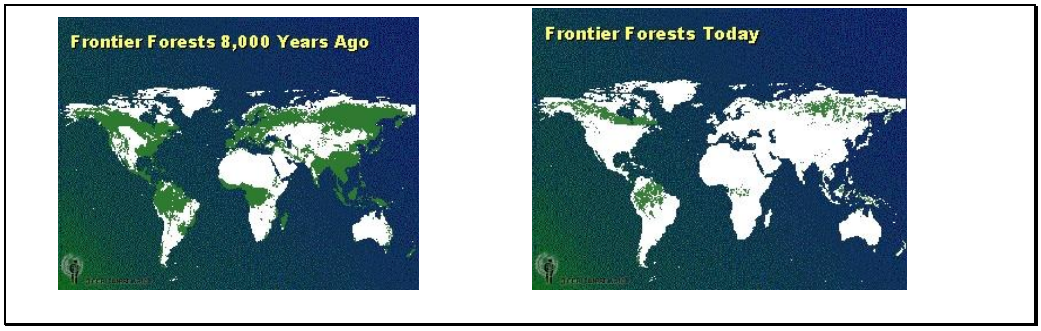


Figure 3.1 Frontier forests

This WRI study found that almost half of the Earth's original forest cover is gone, and that only 20 percent of the original cover remains as frontier forests. The latter include forests that are large enough to sustain large populations of indigenous species even when faced with natural disasters such as fire and storms.

In Namibia the deforestation has been documented by NASA in a satellite picture (see DRFN & SIDA, 1992:4). In 1860 the central parts of the northern regions, had a 60 kilometer wide forest belt (DRFN & SIDA 1992:38). Nowadays nothing is left.

Until the middle of the 1990s, people near the Angolan border hired vehicles to cut wood in Angola until the locals prohibited this practice (Wienecke 1995:211). Desertification is also having an impact on the local environment, such as lower rainfall, and contributes to the migration of inhabitants to centres in the south of the country.

Nearly half of the world's people will experience **water** shortages by 2025 (United Nations, 2002c). Water, like all matter, "is neither created nor destroyed: there is just as much water now as there was 10,000 years ago" (Sagoff quoted by Partridge, 2000). The water problem can be explained by taking into account that between 1900 and 1995, withdrawals increased by a factor of more than six which is greater than twice the rate of population growth (WMO quoted by WRI, 2000b). The report further points out, that many experts, governments, and international organizations around the world are predicting that water availability will be one of the major challenges facing human society in the 21st century and that the lack of water will be one of the key factors limiting development.

The 21st century which is the beginning of the urban millennium, is also being labelled as the "century of water" (Sen, 2002). There is a growing collective concern for water security in this century, in particular in Africa, the Middle East and Central Asia, where the situation is most precarious. Rapid urbanisation, growing populations and development are overwhelming traditional water management practices. The water supply situation in the major centers in Namibia will be dealt with in section 3.4.1 and Chapter 4, section 3.1.2.

The World Resources Institute (WRI, 2002a) states that **waste** flows to the environment keep growing and 50-75 percent of annual resource inputs to industrial economies are returned to the environment as wastes within a year. Therefore, the WSSD called for the prevention and minimisation of waste and the maximisation of reuse, recycling and the use of environmentally friendly alternative materials, with the participation of government authorities and all stakeholders (United Nations, 2002d). In Namibia some local authorities have started recycling projects, for example Windhoek and Walvis Bay. Only very few activities have dealt with the reuse of waste and the production of alternative materials (see Chapter 2).

According to the United Nations, among the **key outcomes** of the WSSD were[11]:

- The Summit reaffirmed sustainable development as a central element of the international agenda and gave new impetus to global action to fight poverty and protect the environment.
- The understanding of sustainable development was broadened and strengthened as a result of the Summit, particularly the important linkages between poverty, the environment and the use of natural resources.
- Governments agreed to and reaffirmed a wide range of concrete commitments and targets for action to achieve more effective implementation of sustainable development objectives (United Nations, 2002a)[12].

The WWF (2002) commented that the WSSD will go down in history as a missed opportunity to deliver energy to the two billion people on this planet with no access to energy services, and as a failure to kickstart the renewable energy revolution that is required to protect the climate (see also 2.4). Commitments to sustainable development made in the past by many governments have shown that they do not have a shred of credibility. During the WSSD, the lack of agreement on implementation issues show that the promotion and implementation of the Agenda 21 is still very uncertain.

Before the start of the WSSD, indigenous peoples drafted their own declaration in Kimberley and decided to come to the WSSD with one simple statement: "[w]e re-affirm the vital role of indigenous peoples in sustainable development" (Volcovici, 2002). However, this statement was pulled out of the draft of the current political declaration in Johannesburg. Thereafter indigenous peoples represented at the WSSD talked to individual government delegations and successfully reinserted the statement in the Johannesburg Declaration on Sustainable Development.

3.2.2 Namibian contributions to the WSSD

In 1990, Namibia became one of the first countries worldwide to incorporate an environmental and sustainable development clause within its National Constitution (Articles 95(l)). This clause was complimented by enabling its citizens to raise issues of environmental concern via the Office of the Ombudsman (Article 91 (c)). In 1992, through Namibia's Green Plan, a national common vision for sustainable development was created (MET, 2002; Republic of Namibia, et al. 2002:3). The Green Plan led to Namibia's 12 Point Plan for Integrated and Sustainable Environmental Management, a short strategic implementation document which was tabled and adopted by Parliament in 1993. The National Development Plan (NDP II) incorporates environmental and sustainable development issues and options. The document states that:

> *"NDP II **attempts** to incorporate the most important issues relating to environment and sustainability into most of its objectives and strategies, however, the link between environment and development still requires more emphasis and must be acknowledged as a pivotal management objective – one that can play an important role in poverty reduction, sustaining economic growth and improving human well being"* (Republic of Namibia, et al. 2002:4, author's emphasis).

Namibia's contribution was summarised under the slogan 'Namibians Acting and Striving with Vision for a Sustainable Future' (Shigwedha, 2002). The key issues addressed were poverty eradication, improved sanitation, land reform, land

degradation and employment creation. A national assessment report was compiled by members of Namibia's WSSD preparatory committee, who were drawn from the Desert Research Foundation of Namibia which acting as the secretariat, the Ministry of Environment and Tourism as the lead agency, and Namibia Non-governmental Organisations. The result was the document entitled *Namibia's National Assessment for the World Summit on Sustainable Development 2002* (Republic of Namibia, UNDP & Capacity 21, 2002) which was to provide an assessment of Namibia's progress since UNCED.

The Assessment starts with the declaration that at UNCED governments adopted the concept of sustainable development, as described by the Brundtland Commission. Only a segment is quoted as proof: "development that meets the needs of the present without limiting the ability of future generations to meet their own needs" (Republic of Namibia, et al. 2002:1). The assessment report is a reflection of the consolidated views of a broad cross-section of Namibian society, including government and civil society. This report provides insights into the thinking and understanding of sustainable development and its implementation.

The first chapter of the Namibian assessment for the WSSD introduces the national strategies for sustainable development. Regarding the adequacy and clarity of sustainable development management objectives, the report points out that ecological sustainability is included as a priority issue within the objectives of national development. It is also claimed that NDP II attempts to incorporate the most important issues relating to environment and sustainability into most of its objectives and strategies. However, the link between environment and development still requires more emphasis and must be acknowledged as a pivotal management

objective (Republic of Namibia, et al. 2002:4). Another point is that government Ministries and departments have not yet developed specific criteria for rigorously monitoring progress towards meeting sustainable development objectives.

With regard to institutional capacities, Namibia has a large civil service with inadequate human capacity within central, regional and local government (Republic of Namibia, et al. 2002:5). A high reliance on foreign experts and consultants is experienced, who sometimes lack sufficient knowledge about the country (Republic of Namibia, et al. 2002:5). The strength of the strategic leadership in the field of sustainable development is in its early stages of development. In this regard, the report points out that after UNCED the Directorate of Environmental Affairs was created, charged with placing the outcomes of UNCED and the aims of Agenda 21 on the Namibian political agenda (Republic of Namibia, et al. 2002:9). Efforts to keep politicians and the public informed of the links between environmental issues and socio-economic development, are yet to feature sufficiently high on the political agenda. “Many good policies and plans have been developed in Namibia over the past ten years, including those on agriculture, water, forestry, wildlife, marine resources, education, health, energy, poverty” (Republic of Namibia, et al. 2002:10).

The implementation of many of these policies has been slow, due to limited technical capacity. The biggest constraint to educating the public adequately regarding Agenda 21 has been the post-independence education challenges (Republic of Namibia, et al. 2002:29). Education in this context means environmental education. A new school subject was introduced in some schools: Natural Economy (Republic of Namibia, et al. 2002:30). It includes issues such as the earth’s natural resources and the vital role they play in determining local and

national economies; the positive and negative social, economic and environmental impacts that are associated with economic development; how national economies and human health can suffer as a result of some of these negative impacts; and the management options that can be adopted to limit these impacts and help to achieve sustainable development.

The Namibian assessment for the WSSD is characterised by the total absence of urban issues, despite the international importance attached to urbanisation. Urban areas and the issues affecting them are not mentioned or touched upon. Emphasis on environmental matters in the assessment is the result of the composition of the drafting committee, i.e., mainly environmentalists, who lead the proceedings and compiled the report. Consequently, the Namibian assessment is a very one-sided presentation. During the WSSD, disappointingly little attention was focused in the media and by the governments on the urban development aspects of sustainable development (CAP News, September 2002). Future trends are not sustainable unless there are major changes in how urbanisation is managed. One attempt took place in 1996, resulting in the formulation of the Habitat Agenda.

3.3 Habitat Agenda

In 1996, another major UN conference took place in Istanbul focusing on the sustainable development of human settlements[13]. The Habitat Agenda (UNCHS, 1998a), is based on Agenda 21 and focuses on the sustainable development of cities and urban settlements. Human settlements were defined by Rai (1997) as:

"The fabric of human settlements consists of physical elements and services to which these elements provide the material support."

The physical components, according to Rai (1997), comprises of shelter, such as the superstructures erected by humans for security, privacy, and protection from the

elements. Within a community, infrastructure, complex networks were established to deliver services, goods, energy, and information. Services include those required by a community for the fulfilment of its functions as a social body, and incorporate education, health, culture, welfare, recreation and nutrition.

The vision of the Habitat Agenda include: Equitable human settlements, Eradication of poverty, Sustainable development, Equality of life for all people, Family as the basic unit of society, People's rights, Partnerships, Solidarity, Safeguarding the interest of the present and future generations, and Human Health and quality of life (Olufemi 2002:7). UNCED proposed one idea on how to implement sustainable development on local level, namely the provision for Local Agendas 21. "Local authorities construct, operate and maintain economic, social and environmental infrastructure, oversee planning processes, establish local environmental policies and regulations, and assist in implementing national and subnational environmental policies. As the level of governance closest to the people, they play a vital role in educating, mobilizing and responding to the public to promote sustainable development" (ICLEI/IDRC, 1996, UNCED 1992:§28.1). These local agendas can help a local government and its community to develop a locally appropriate means of managing change towards a desired future which includes reconciling the apparent competing pressures for economic development, environmental protection, and a more equitable society. The goal of 'Managing for the Future' is to achieve sustainability (Global, 1998).

Indigenous peoples and their involvement in the implementation of sustainable development in the context of the Habitat Agenda, is primarily connected to vulnerable groups. Among the exceptions is paragraph 14 which refers to the needs

and participation of indigenous people in shelter and urban development policies. Paragraph 43r states that the historical, cultural and natural heritage of indigenous people should be protected and maintained. The most extensive section with indigenous people is paragraph 122 (actions as part of social development). No connection between indigenous groups and Local Agendas 21 is made.

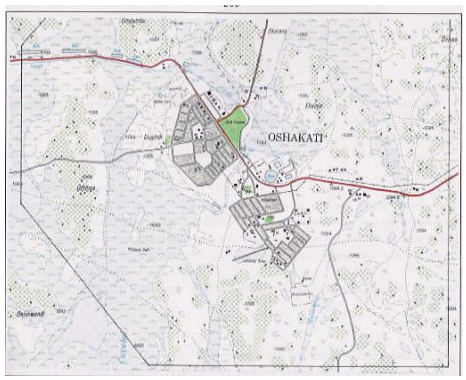
3.4 Urbanisation and the ecological footprint

3.4.1 Urbanisation

The history of early cities[14], for example in Mesopotamia, has shown that they often depleted their hinterlands, draining their fertility without replenishing it. They also exhausted the forests, watersheds and farmland that had enabled their existence (Giradet 1996:11). It is the burgeoning cities' huge appetite for the world's resources and the vast quantities of wastes they discard, that causes concerns about the long-term viability. It has become a relationship between the largely parasitic cities and their host environment (Giradet 1996:13).

In 1950, most of the world's workforce worked in agriculture, by 1990, most worked in the service industry in urban areas (UNCHS 1996:13). UNCHS (2000a) estimates that by the year 2008 more than half of the world's population is expected to be living in urban areas and by 2030, more than three fifths of the world's population will be living in cities. Today, the fastest urbanising region in the world is Africa, with an urban population that is expanding at double the rate for the world as a whole (Tibaijuka, 2002), 5 percent per year (WRI, no date c). This means that the combined population of African cities will double in the next 14 to 18 years, as 200 million additional people, mostly from the countryside, take up residence in cities. Africa will become an urban continent within one more generation, when fifty percent

of all Africans will live in urban areas. “For Africa, the main developmental challenge over the next two decades will be to manage the successful urbanization of the continent” (Tibaijuka, 2002). In Namibia, one example of urban growth in an area surrounded by semi-traditional structures is Oshakati[15]. The settlement started as a small administrative centre and became the administrative and business center in the north-central regions.



Oshakati in 1976 (Source: Surveyor General) Oshakati in 2000 (Urban Dynamics)

Figure 3.2 Growth of Oshakati

Many have described urbanisation as a positive process in terms of the concentration of services, employment opportunities, or educational facilities. According to Tibaijuka (2002), “urbanization per se is a good thing and invariably occurs with economic progress and structural transformation. People move to cities in search for better opportunities. They move not because they will be better off, but because they expect to be better off”. She further states that:

> *“Cities are generators of national development, which invariably starts with migration. The well-functioning city will absorb excess rural labour into new better paying city-based occupations to become a more efficient producer and consumer, both locally and globally. Trade and competitiveness flourish in and around cities”.*

As a result of urban sprawl, urbanisation is responsible for the destruction of the natural habitat which is supposed to provide the necessary resources for the urban population and their activities. One example is the water supply for Windhoek which is tapping into resources hundreds of kilometers away from the capital, i.e., the

Karstveld which is about 400 km away (Krugmann, 2000b)[16]. Another example is the Oshakati – Ondangwa nexus which is provided with water originating in Angola.

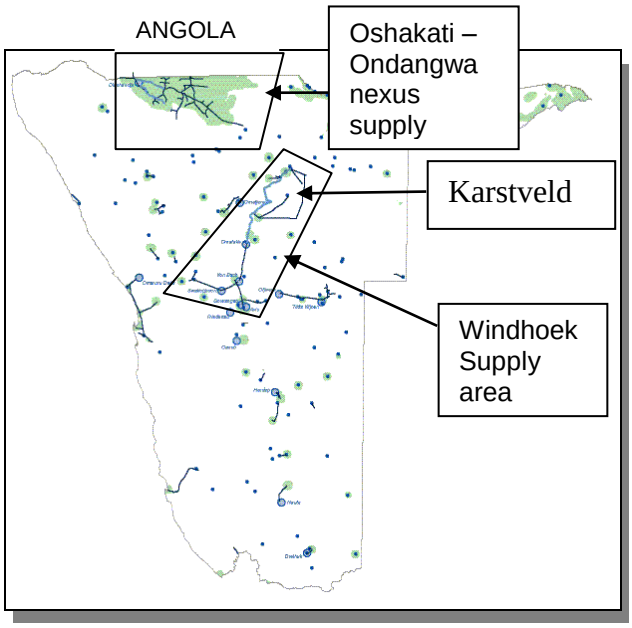


Figure 3.3 Water supplies in Namibia (adapted from DEA, 2002)

The largest concentration and growth of people and economic activities in Namibia is taking place in the Oshakati – Ondangwa nexus. Many government offices, such as courts, revenue offices, a branch of the Bank of Namibia, were established in this area. The nexus is located in an ecologically sensitive region, the Cuvelai delta which consists of seasonal watercourses or *oshana*. The *oshana* influences socio-economic and ecological conditions due to its renewable and non-renewable resources found in the delta.

3.4.2 Renewable and non-renewable resources

The issue of renewable and non-renewable resources is an important aspect in the discussions surrounding development and environment. Okigbo (1996:126) suggests, that non-renewable resources should be conserved and wisely utilised to extend the time of their availability, i.e., to stretch these resources. Renewable

resources can be regenerated, but they too have to be conserved and carefully utilised. Okigbo provides the example of soil which is renewable, but if it is managed in such a way that the rates of losses and degradation exceed the rate of soil formation, the result is lack of renewability and sustainability. Trees are also theoretically renewable resources, but it can take twenty years for a tree to mature. If this consideration is disregarded, deforestation will occur. Julian Simon (quoted by Daly, 1992) dismisses the idea of infinite resources: "[o]ur energy supply is non-finite, and oil is an important example ... the number of oil wells that will eventually produce oil, and in what quantities, is not known or measurable at present and probably never will be, and hence is not meaningfully finite"[17].

In 1993, it was estimated that Namibia has an annual yield from groundwater resources of 300 million m^3 per annum and 200 million m^3 from dams (NPC 1993:120; DEA, 2001). The problems with water in the Namibian context were illustrated by the following: Climate scenarios developed in 1996 suggest that, in addition to becoming increasingly hotter, most of the SADC region is likely to become drier and will experience shorter, less reliable rainy seasons during forthcoming decades. One scenario, based on a regional study conducted by Hulme et al. in 1996, suggests that average warming of approximately 1.7°C, decreased rainfall by between 2.5-7.5%, increased rainfall variability of between 5 and 15% and increases in potential evapotranspiration of between 4 and 16% for most of Namibia by the 2050s decade (Republic of Namibia, et al. 2002:26).

Namibia is not the only country with limited water resources, it is becoming a world wide concern. Global water resources are estimated to be 35 million km^3, of which 68.7% are ice caps, glaciers and permanent snow. The water problem in African

cities is described by Ray (2000:1+4): “[s]everal of the larger cities on the continent (Johannesburg, Dakar and Nairobi, for example), have outgrown the capacity of local sources and are forced to carry water from a distance of 200 to 600 kilometres”. Abidjan, Lusaka and Addis Ababa are drawing deeper and deeper, often over-abstracting the ground aquifers which has several implications, particularly regarding environmental sustainability.

The situation is clearly unsustainable as in most cities the water sector continues to be driven primarily by supply-side forces. Another factor is that many African cities are losing more than half of their treated water to leakage, wastage and illegal connections. According to Catley-Carlson (2000), the four deadly sins of current water management regimes are:

> *1. The pretence that the current system will — eventually — meet the needs of all users. Most water systems are centralised and depend on public investment and central government transfers of resources.*
> *2. Ignoring Demand Management. Cities can stop a good deal of the current wastage of water due to over-consumption and leakage. This could go a long way towards meeting the needs of the unserved.*
> *3. Failure to involve the society in addressing the problems of the informal community. CBOs and NGOs and the private sector may well be crucial ingredients for success.*
> *4. Failure to solve the central government-local government jurisdictional issue. Where central governments do not allow municipal authorities to tax or borrow — and yet they are held responsible for services — it is a recipe for non-delivery.*

Closely related to water provision is often sanitation, especially in the case of waterborne sewer system. One myth is the assumption that the only good sanitation system for urban areas is water-borne sewerage (WSSCC, 1996). This capital intensive technology was developed in countries where water was not a limited resource. It also occurred during a time when industrial growth allowed major public investments in this sector. These centralised wastewater systems require large quantities of water, their construction and maintenance is astronomically expensive (Earthcare Education’s Network, 1998). Flush toilets are convenient and aesthetically pleasing, but hardly the ideal for most communities. According to the

Earthcare Education's Network, "The 'flush and forget' mentality leads to a remarkable obliviousness to ecological processes and the effect of our wastes on the environment". In most cities flush toilets are only available for the rich, but most cities do not have enough water to provide such an unsustainable service. In Namibia waterborne sewerage is promoted throughout the country and only few attempts are available to look at alternatives.

"Given current technologies, levels of consumption, and socioeconomic organization, has ingenuity made today's population sustainable? The answer to this question is clearly no, by a simple standard" (Daily & Ehrlich, 1992). Daily and Ehrlich argue that the current population is being maintained only through the exhaustion and dispersion of a one-time inheritance of natural capital, including topsoil, groundwater, and biodiversity. The rapid depletion of these essential resources, coupled with a worldwide degradation of land and atmospheric quality, indicate that the human enterprise has not only exceeded its current social carrying capacity, but it is actually reducing future potential biophysical carrying capacities by depleting essential natural capital stocks. This led to attempts to calculate the ecological footprint of modern societies.

3.4.3 Ecological footprint

Urbanisation is directly responsible for the changes in the living environment, as the expansion of urban areas takes over agricultural land and natural habitats. Urban sprawl and the use of resources in these areas, makes urban areas unsustainable. The Canadian economist Rees developed the concept "ecological footprint of cities" which he defined as the land required to feed them, to supply them with timber products and to reabsorb the CO_2 emissions by areas covered with growing

vegetation (Giradet 1996:24). Urban areas are extractive, because they use resources coming from other regions, countries or continents, in order to satisfy the demand of burgeoning cities.

One aspect influencing the debate is population. The population question has become an environment and development question that has to be addressed (Aina 1996:61). The population explosion in the South has been contrasted with the consumerism in the North, i.e., the huge consumption of resources. The ecological footprint of a person living in the North is much larger than that of a person living in the South. It is acknowledged that pressures on the environment exist, due to the overuse of natural resources. The North is characterised by the huge consumerism and vast amounts of resources needed to feed the process which results in the exploitation of resources all over the planet. One of the major problems is the consequence of polluting water, land and air, i.e., waste which illustrates its non-sustainability.

Daily and Ehrlich (1992), stress that demographic statistics give a misleading impression of the population problem because of the vast regional differences in impact. Less developed nations contain almost four fifths of the world's population and are growing very rapidly, high per capita rates of consumption and the large-scale use of environmentally damaging technologies greatly magnify the impact of industrialized countries.

> *"Carrying capacity refers to the number of individuals who can be supported in a given area within natural resource limits, and without degrading the natural social, cultural and economic environment for present and future generations. The carrying capacity for any given area is not fixed. It can be altered by improved technology, but mostly it is changed for the worse by pressures which accompany a population increase. As the environment is degraded, carrying capacity actually shrinks, leaving the environment no longer able to support even the number of people who could formerly have lived in*

> *the area on a sustainable basis. No population can live beyond the environment's carrying capacity for very long"* (Carrying Capacity Network, 2002).

"Ecologists define carrying capacity as the maximal population size of a given species that an area can support without reducing its ability to support the same species in the future (Daily & Ehrlich, 1992)[18]. Specifically, it is "a measure of the amount of renewable resources in the environment in units of the number of organisms these resources can support" (Roughgarden quoted by Daily & Ehrlich, 1992). Studies about nature's capacity to support human life go back many centuries. Some focus more on energy requirements, others on non-renewable resources, and others again on photosynthetic potentials. But all are based on the same principle: tracing resource and energy flows through the human economy (Wackernagel, et al., 1997).

A common fallacy is to equate existing and seemingly open or "unused" spaces with the kind of resources and ecologically productive land needed to support human life under modern conditions. In fact, the criterion for determining whether a region is overpopulated is not land area, but carrying capacity. Human life depends on healthy ecosystems which supply life-sustaining resources and absorb wastes (IISD, 1995). However, current growth and consumption patterns are placing increasing stress on ecosystems resulting in environmental degradation, biodiversity loss, deforestation, and the breakdown of social and economic systems. The foregoing are a few of the signs which indicate that ecosystems are stressed.

IISD (1995) stresses that ecosystems threatened by overharvesting and/or are overwhelmed by more wastes than they can absorb, lose resilience (the ability to absorb shocks and disturbances) and may suddenly break down and/or settle into a different system with less resilience. There are thresholds at which the levels of

stress will lead to the disruption of the particular system. One concept used to understand these critical limits and thresholds is carrying capacity. It assumes that there are a finite number of people who can be supported without degrading the natural environment and social, economic and cultural systems and, as such, "is an indirect measure of the maximum level of stress that the ecosystem can maintain" (Barbier, Burgess & Folke quoted by IISD, 1995).

The conception of “carrying capacity” has been refined in the model of ecological footprints. The Ecological Footprint measures how much ecological capacity we occupy. Some regions claim more ecological capacity than exists within their boundaries. This means that they run a regional ecological deficit (Wackernagel, et al. 2002; Wackernagel, et al. 1997). The world average Ecological Footprint is 5.6 global acres [2.3 hectares]. But, there is only an average of 4.7 global acres [1.9 hectares] of biologically productive land and sea area for each person which excludes the space needed by other species (Wackernagel, et al. 2002).

The ecological footprint represents the average amount of productive land and shallow sea appropriated by each person in bits and pieces from around the world for food, water, housing, energy, transport, commerce, and waste absorption (Wilson 2002:23). This means that in developing nations about 2.5 acres are needed, in the USA 24 acres and globally 5.2 acres per person. Wilson stresses that if each person currently alive would attain the US level of consumption, it would require four more Earths (Wilson 2002:150), or three planets to attain the standard of Great Britain (BBC, 2002)[19].

Wackernagel et al. (1997) argue that in 1992, the world was challenged to lessen its impact on the Earth. “Five years later, we live in a riskier world with more people, more consumption, more waste and more poverty, but with less biodiversity, less forest area, less available fresh water, less soil, and less stratospheric ozone layer. We all know that we are further away from sustainability”. Wackernagel et al. maintain: “[i]f we cannot measure, we cannot manage”. To make sustainability a reality, it is necessary to know the current position, and how far one needs to go and to obtain a measuring rod in order to track progress.

Since UNCED, these essential tools for governance, business management and grassroots organising have made substantial headway. The result is the calculation of the ecological footprint of a single individual to a whole city or country. Various uses of nature are competing for available space. Land used for wheat production cannot be used for roads, forests or grazing, and vice versa. These mutually exclusive uses of nature are all added up to assess the total ecological footprint. Six main categories of ecologically productive areas were identified: arable land, pasture, forest, sea space, built-up land and fossil energy (Wackernagel, et al., 1997). According to Wackernagel, et al. (2002) the following examples (in ha) have been calculated:

Country	***deficit / remainder***
Namibia	3.6
USA	-1.6
RSA	-4.4
Sweden	0.6
Japan	-4.1
Australia	7
Botswana	2.4
Ethiopia	-0.3
India	-0.1
Kenya	0
China PR	-0.5
Gabon	26.6
Belgium & Luxemburg	-5.6
Kuwait	-7.4

Table 3.2 Ecological footprints

Namibia's high figure detracts from the fact that the country is the driest country south of the Sahara. Arable land is limited as a result of poor soil types, which also reduces pastures. Forests are only found in the north, where large scale deforestation is experienced (see section 3.2.1). Sea space is considerable, due to the international 200 mile zone along the coast. Built-up land is not a major topic due to the relative low national population density and the fact that many urban inhabitants live in informal or semi-formal settlements. Fossil energy is primarily utilised in the transport sector, i.e., cars, locomotives and trucks. These factors classify Namibia as a remainder.

Given the interaction of ecological, economic, and social factors, the disruption of ecosystems will have economic and social consequences (IISD, 1995). Fundamental changes in the economic and social subsystems will also lead to changes in the ecosystem. However, there is a general lack of knowledge regarding ecosystem functioning and ecological limits to economic and social activity (carrying capacity) and this has led to a greater acceptance of the precautionary principle and its use to guide policy and action. In the context of sustainability, Wackernagel, et al. (1997) stress that:

> *"Sustainability requires decent and equitable living within the means of nature. Not living within our ecological means will lead to the destruction of humanity's only home. Having insufficient natural resources, not living decently and equitably will cause conflict and degrade our social fabric"*[20].

The result is poverty whose elimination is regarded as one major aspect in the achievement of sustainability. This is applicable to urban as well as rural areas.

3.5 Poverty

The United Nations pointed out that sustainable development can only be achieved if poverty is reduced (see UNCED 1992:chapter 3; UNCHS 1997:§28; ESA, 2002).

The question of defining or assessing poverty has been an old academic issue. The Overseas Development Institute (ODI) comments (quoted by Middleton & O'Keefe 2001:140) that, "measuring poverty is not the same as understanding why it occurs. Interventions need to tackle causes not symptoms".

> *"It is the oddest of all questions in development theory, since it is not about poverty as those who are poor may see it, but about bourgeois capitalism's ability to recognize it. Poverty is usually circumscribed from a Western point of view, i.e., money. Defining absolute poverty by that well-known and widely used criterion of those living at, or below, US$1.00 a day has become suspect because of the number of communities which live without acute want, but also without using much, if any, cash"* (Middleton & O'Keefe 2001:140).

The World Bank (1992:7) argues that rapid population growth can exacerbate the mutually reinforcing effects of poverty and environmental damage. In these cases, the poor are both victims and agents of environmental damage, when for example, poor families have to meet urgent short-term needs by "mining" natural capital through excessive cutting of trees for firewood and failure to replace soil nutrients. Middleton and O'Keefe (2001:40) criticise the UNCED and the World Development Report 1992, where the victim becomes the problem and therefore they regard this description as blaming the poor for their own predicament. This is an elision comparable with that in the UNCED itself – people in the capitalist world may consume too much, but those in poor countries are destroying their environment and, "by derivation, ours in their eagerness to develop".

Poverty is one of the major issues at present and in future. Urban centres have become a major focus due to the rapid increase of poverty as a result of the influx of people to the urban areas. Poverty is mainly defined in relation to the availability of money as the capitalist system's main economic element[21]. This means that those who have been brought into this system have lost the means of living sustainably.

The materialism which is indispensable in the capitalist world, results in many of the global problems which were the concern of UNCED and also the WSSD.

> *"To arrive at Johannesburg thinking that lack of money is the primary problem and that more of it will solve it would be to consign the process to failure before it starts. Making development more sustainable certainly needs more money. But it also needs much more than simply money. It needs fundamental changes in the global economy, as well as in the domestic economies of nations. The agenda, unfortunately, is set by the rich and powerful. That is why the issues discussed at most international conferences are their issues"* (Khosla, 2001a).

Poverty[22] has different dimensions, the most common being consumption-poor (Republic of Namibia 2001:558). The Government of the Republic of Namibia classifies a household as being 'relatively poor' if it devotes over 60% of its expenditure to food, and as being 'extremely poor' if such expenditure exceeds 80%. Using this definition, 38% of Namibian households were relatively poor and 9% were extremely poor.

By just taking hunger into account, an indication is gained that a particular group is no longer living sustainably due to the lack of certain resources, in this case food[23]. However, poverty can also be defined in non-materialistic terms. In chapter 2, the discussions surrounding ethics, eco-philosophies are examples of intellectual or spiritual poverty. This type of poverty has an impact on achieving or not achieving sustainability. This can be linked to Maslow's hierarchy of needs, where the final need is described as self-actualisation or self-realisation (Maslow 1970:22). From a utilitarian perspective, this need requires certain ethical attitudes and behaviour in order to advance sustainability and the end to poverty.

The Millennium Declaration Resolution adopted by the General Assembly in 2000 states in paragraph 11 (United Nations General Assembly, 2000) that the United Nations are committed to making the right to development a reality for everyone and

to freeing the entire human race from want. In the next paragraph it says (United Nations General Assembly, 2000): “[w]e resolve therefore to create an environment – at the national and global levels alike – which is conducive to development and to the elimination of poverty”. The aim is (paragraph 19) to halve, by the year 2015, the proportion of the world’s people whose income is less than one dollar a day and the proportion of people who suffer from hunger and to halve the proportion of people who are unable to reach or to afford safe drinking water[24].

Three out of eight goals are concerned with health issues which would, if successful, contribute to an even greater growth in population figures. With regard to environmental sustainability[25], the goals include to integrate the principles of sustainable development into country policies and programmes; reverse loss of environmental resources; reduce by half the proportion of people without sustainable access to safe drinking water; and achieve significant improvement in lives of at least 100 million slum dwellers, by 2020 (United Nations, no date)[26].

Poverty is the result of non-sustainable “development”. The talks of eliminating or reducing poverty have so far failed and will fail in future as demand and supply with regard to the access to resources is not guaranteed. Due to the fact that natural resources are not available to many of those classified as poor, the move towards earning money is endeavoured. However, this requires employment which is often not found. As the poor are no longer self-sufficient and become dependent on money and an unsustainable Western economy, dependencies are created instead of self-reliance[27]. Therefore the gap between rich and poor has continued to grow and will grow unless and until sustainability is achieved.

When poverty is viewed in connection with industrialisation, globalisation and the North's requirements for production and consumption, the view will not be the recipe for alleviating poverty. By relying on the North as the engine of growth in the South, the result will be an ever-growing gap between the rich and the poor. The capitalist system has so far neither provided any mechanism to redistribute wealth or resources nor a solution to reduce poverty, because the system is not utilitarian as the short-term profit making motive eliminates a concern for those not integrated into it and even less for intergenerational equity. Poverty is the result of non-sustainability which is the result of an imbalance between access to resources and the consumption of these resources, poverty will increase in future and will not decrease as envisaged by Agenda 21 and other international declarations. This means that another issue raised by the Brundtland Commission, intergenerational equity, will be severely affected by this.

3.6 Intergenerational equity

The WCED acknowledged that traditional social systems recognised some aspects of the interdependence between resources and human interference. They enforced community control over agricultural practices and traditional rights relating to water, forests, and land. "This enforcement of the 'common interest' did not necessarily impede growth and expansion though it may have limited the acceptance and diffusion of technical innovations" (WCED 1987:47). This statement refers to the apparent fruits of developments in the North, but also the absence of community control over locally available resources as a result of global economic interests. This is acknowledged in the following (WCED 1987:47): "[t]he enforcement of common interest often suffers because areas of political jurisdiction and areas of impact do not coincide". Later the Commission (WCED 1987:48) states that the ability of

national governments to control its national economy is reduced by growing international economic interactions.

The commission proposed certain legal principles for environmental protection and sustainable development which included inter-generational equity saying that: "[s]tates shall conserve and use the environment and natural resources for the benefit of present and future generation" (WCED 1987:348)[28]. In paragraph 7, *Sustainable development and assistance*, the WCED (1987:349) maintains that states shall ensure that conservation is treated as an integral part of the planning and implementation of development activities. Furthermore, they should provide assistance to other states, especially developing countries, to support environmental protection and sustainable development. No mention is made of the destructive consequences of the global capitalist system. On the contrary, the developing world is blamed for not protecting the environment and for not promoting sustainable development.

A key issue for UNCED was the implementation of sustainable development, including concern for future generations. This can be viewed as an attempt to create a utilitarian perspective. A number of the instruments adopted at UNCED take into account the interests of future generations, including Principle 3 of the Rio Declaration (Redgwell, 2002). However, there was no elaboration at UNCED of the consequences of recognition of the needs of future generations. According to Sands (quoted by Redgwell, 2002), "the principle appears to have been accepted as an article of faith, drawing on pre-existing language in earlier treaty and soft-law developments". Only the comparatively modest Commission on Sustainable Development (CSD) was established as the principal focus for international follow-

up to UNCED. “More far-reaching, earlier proposals such as establishing an Environmental Security Council or reconstituting the Assembly’s Fourth Committee as an Environmental Committee were ... put aside” (International Law Association quoted by Redgwell, 2002).

According to Keles (1997), the term "common heritage of mankind" is frequently used in International Environmental Law, because sustainability itself is another name for intergenerational equity. The Maltese were instrumental in the evolution of the common heritage of mankind doctrine by suggesting that a procedural guarantee of the role of guardian of future generations should be included in the Rio Declaration. A result emerging from UNCED and Agenda 21 was the creation of the CSD, but without the powers to negotiate or intervene on behalf of future generations which are so integral to the institutional proposals just mentioned (Redgwell, 2002)[29].

Pearce et al. (1990:10) discuss the issue of natural capital stock and its relationship to inter-generational equity. A constant physical capital stock can only be applied to renewable resources, as it has little relevance to exhaustible resources since any positive rate of use reduces this stock. A constant or rising natural capital stock is likely to serve as a goal of intra-generational fairness, i.e., justice to the socially disadvantaged within any country and between countries at any given point in time (Pearce et al. 1990:11). The clearest evidence for this exists for countries whose economies are directly dependent on natural resources.

“The principle of intergenerational equity dictates that all generations have an equal place in relation to the natural system and there is no basis for preferring the present

generation over future ones in their use of the planet" (Keles, 1997). He goes on to state that "Sustainability requires that the Earth and its resources be regarded not only as a consumption opportunity, but as a "planetary trust," passed on to us by our ancestors to be enjoyed and passed on to our descendants for their use. Such an understanding conveys both rights and responsibilities. The common heritage of mankind cannot be protected for the purpose of "nature as a museum" because this approach is not compatible with the changing needs of humanity". This involves a partnership not only between those who are living, but also between those who are dead and those who are to be born (Edmund Burke quoted by Keles, 1997).

4. Local Authorities' role in the implementation of Sustainable Development

4.1 Applying good governance

The concept *governance* evolved out of the traditional public administration concept of governing (Cloete 1999:8). Governance is defined by the UNDP (UNCHS 2000b:7) as: "[t]he exercise of political, economic and administrative authority in the management of a country's affairs at all levels. It comprises the mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences". Good governance is a prerequisite for poverty eradication (UNCHS 2000b: 5) and is characterised by sustainability, decentralisation, equity, efficiency, transparency and accountability, civic engagement and citizenship, and security.

Governance transcends concepts such as *government* and *leadership* (Hyden, 1998). It points in the direction of acknowledging relations of authority that are not necessarily formal, nor just concentrated to the state (Lofchie quoted by Hyden, 1998). Governance is not merely governing a certain local authority area, but is

characterised by a set of issues such as sustainability, decentralisation, equity, efficiency, transparency and accountability, civic engagement and citizenship, and security. Besides the normative aspects of sustainable development, the empirical aspects of implementing sustainability have to be addressed. The United Nations (2000) regard the process of preparing local, national and global action plans as an example of good governance at the global level as the process helped to focus and organise the deliberation of many groups from all levels of society on the common task of planning the future of cities.

According to UN-Habitat (2002b), the concept of governance is complex and controversial. Common points of departure include: first, governance is not government. Governance as a concept recognises that power exists inside and outside the formal authority and institutions of government. Many definitions of governance include three principal groups of actors: government, the private sector and civil society. Second, governance emphasises 'process', where decisions are made based on complex relationships between many actors with different priorities. It is the reconciliation of these competing priorities that is at the heart of the concept of governance. UN-HABITAT (2002b) has provided the following definition of urban *governance*[30]:

> *"Urban governance is the sum of the many ways individuals and institutions, public and private, plan and manage the common affairs of the city. It is a continuing process through which conflicting or diverse interests may be accommodated and cooperative action can be taken. It includes formal institutions as well as informal arrangements and the social capital of citizens".*

Governance is broader than government (United Nations, 2000). It concerns not only public administration, regional and municipal institutions, but also the activities of other political and social groups. Governance is the sum of the many ways individuals, groups or public or private institutions manage their common affairs. The

UNCHS has embarked on a campaign, *The Global Campaign for Good Urban Governance* which is designed to promote accountable and transparent urban governance, responding to and benefiting all sectors of society, particularly the urban poor, and which strives to eradicate all forms of exclusion. This is part of the campaign of achieving sustainable human settlements and incorporates two issues of governance, namely normative issues, such as ethics, and leadership, and empirical issues relating to environmental, administrative and economic aspects as already discussed under section 2 in this chapter.

4.2 Good governance principles

Governance does not focus exclusively on administrative processes, procedures, and functions, within a local authority. The implementation of sustainable development requires not only leadership, but also good governance. Good governance also requires forward looking leadership and illustrates what the leaders should do. This includes: “[p]articipatory, accountable and efficient governance harnesses the activities of the state and its citizens to the objectives of sustainable social and economic development” (DAC quoted by Schneider 1999:5). This is a requirement for the reduction of poverty which is one of the objectives of sustainable development, as stated in the Habitat Agenda and Local Agenda 21 campaigns.

By adding the adjective *good*, a normative debate begins to define desired standard of practice of urban governance. Adding such a value judgment to ‘governance’ increase the controversy exponentially. Different people, organisations, governments and city authorities will define ‘good governance’ according to their own experience and interest (UNCHS 2000b:7; UN-Habitat, 2002b). Good governance requires the accountability by public officials, both elected political

leaders and civil servants (United Nations, 2000). Their public functions must serve the community at large which include the allocation of funds, providing for the safety and security of citizens, and the equitable pursuit of economic wellbeing for society. Good governance also requires transparency in public procedures, processes, investment decisions, contracts and appointments.

The promotional effort emanates from UN-Habitat's experiences that have shown that inclusive strategic planning and decision-making processes are the key to good governance and sustainable cities. Good Governance includes numerous aspects such as the inclusion of formal as well as informal arrangements, and the social capital of citizens (UNCHS 2000b:8). The norms and objectives of good governance which are to be promoted and put into practice by decision-makers include (UNCHS 2000b:15-18):

Norms	**Objectives**
Sustainability	○ Balanced social, economic and environmental priorities ○ Stakeholder involvement
Subsidiary	○ Local autonomy and accountability
Equity	○ Resource allocation ○ Empowerment
Efficiency	○ Management and service delivery ○ Efficient investment in infrastructure
Transparency and accountability	○ Transparent and accountable decision-making processes ○ Access to information ○ High standards of ethics and professional conduct
Civic engagement and citizenship	○ Leadership for public participation and stakeholder involvement and responsibility ○ Building democratic culture ○ Enablement
Security	○ Environmental management ○ Disaster preparedness ○ Personal safety, crime control and prevention ○ Security of tenure and livelihood

Table 3.3 Norms and objectives of good governance

UN-Habitat's own understanding of good urban governance is based on its operational experience and the Habitat Agenda. UN-Habitat's operational experience confirms that it is not just money, or technology, or even expertise, but

also good governance that means the difference between a well-managed and inclusive city and one that is poorly managed and exclusive.

Good urban governance advances access to the necessities of life, e.g., adequate shelter, safe water, sanitation, a clean environment, health, nutrition, employment, public safety and mobility. It also provides a platform for citizens to use their talents in order to improve their social and economic conditions. “Urban governance is the sum of the many ways individuals and institutions, public and private, plan and manage the common affairs of the city” (UNCHS 2000b:8). The latter is also applicable to the national level which is supporting and influencing affairs at the local level. The norms and objectives have to be reflected in the administration of urban areas. As part of the administration the generic functions are now considered.

4.3 Generic administrative functions

In order to implement decisions taken by the leadership, for example, by a local council, the administrative body follows certain functions to achieve the objectives approved. These pronouncements could include a concern for sustainable development and to take the necessary steps to achieve this objective. “Administration consists of specific mutually inclusive generic functions which are directed to particular activities for the realisation of functional goals” (Adlem & Hattingh 1986:67). Administration thus, refers to the operational activities of a local authority to realise certain functional goals. Six activity areas that constitute the totality of generic functions were identified. The areas make-up the following functions: policy, finance, personnel, organisation, procedures, and control (Botes 1982:88-89). The subsequent summary of the generic functions provides an overview of the *status quo* which will be analysed during the testing of the

hypothesis (see Chapter 4) in the case of Namibian local authorities. Furthermore, the testing will assess how sustainable development is implemented and what role the leadership plays in the achievement of this objective.

4.3.1 Policies

Local Councils are the *policy-making* bodies within a local authority. Therefore they play the leadership role on the local level and have also to provide the guidance to the administrative and operational units of the local authority which have to implement the decisions made by the Council. No public activity can be attempted without determining an objective and a proper policy (Botes 1982:110). Policy-making is initiated on different levels: political, executive, administrative and operational (Botes 1982:110-111). According to Lerner (quoted by Hanekom 1987:13) policy-making refers to actions and processes that precede a policy statement. Policy-making entails issues being identified, researched and analysed, information processed and interpreted, positions formulated, articulated and debated, and lessons of experience utilised to improve the quality of government (Heymans 1996:29). Once a Council decides on making sustainable development one of its goals and to implement a Local Agenda 21, a policy has to be formulated.

4.3.2 Procedures

In the performance of all tasks, *procedures* are applied which establish the steps to be executed. If changes are envisaged, certain procedures have to be modified. This means, that in the case of promoting sustainable development, procedures have to be devised to provide for the input of the populace in the policy formulating process. Procedural codes have to be formulated to ensure uniformity in the execution of tasks; they are essential in staff training; existing procedures form the

basis for the revision of codes (such as the building code); procedural codes also reflect the organisational structure of a department; the codes protect the interest of the public and the officials; and procedures ensure orderly and coordinated action (Brynard 1987:10-11). Codes and procedures are of importance in applying measures during the implementation of sustainable development, as they can define the steps to be taken of moving towards achieving this goal.

4.3.3 Finances

Finances are needed by all “modern” local authorities to fund their activities, pay for services, personnel, equipment, and project activities. The sources of municipal revenues are generally limited to area-based sources, such as land and property taxes, entertainment taxes, user charges for municipal services (UNDP 2001:39), and by borrowing money from different sources such as central government and financial institutions. Without a sound financial base no local authority can become sustainable. The apparent lack of funds is often cited as a major obstacle in development. However, Oosthuizen (1996:60) maintains that the “failure of development efforts in Africa cannot necessarily be ascribed to a scarcity of resources but rather to the inability to manage these resources strategically”.

4.3.4 Personnel

Personnel play a crucial role in any administration and the execution of the various tasks. Therefore, employees require relevant qualifications and understanding of their work, especially if changes are introduced. This applies to all levels, from the unskilled worker to the heads of departments. Employees require the necessary ethics in order to support the principles of sustainable development. Implementing sustainable development, cooperation between municipal departments and also with

the public is also required. Another requirement, within a local authority but also from the partners' side, is to identify "people who have well understood and subscribed to the process, and are strategically placed and prepared to nurture and promote it consistently. These are 'change agents' and propellers of the process" (UNCHS/UNEP 1998:17). To become sustainable, personnel has to be educated and trained to enable them to understand the financial implications of change, e.g., changing from unsustainable technologies to more sustainable ones.

4.3.5 Control

Control measures (external and internal) are instituted to ensure that policies, procedures, and objectives have been achieved or that the process is still on the right track. One authority can exercise external control over another authority, such as a line ministry which may control finances, policies, legislative issues or taxation. Internal control refers to measures imposed by the local authority on itself, for example control by functionaries over subordinates and their activities (Bain quoted by Brynard 1987:41). During the implementation of sustainable development, it is not only the local authority that is involved in this process. The public and the private sector have to support the objectives, as they are both beneficiaries and contributors towards the achievement of this goal.

4.3.6 Organisation

The *organisation* of a local authority has to incorporate organisational arrangements such as coordination, communication, function allocation, and delegation. These arrangements play a vital role in the execution of tasks and policies. "Organization implies measures relating to interacting relations and conduct of individuals or groups of individuals in an institution" (Botes 1982:113). The implementation of

sustainable development requires a close collaboration with all stakeholders, as changes are continuously experienced. This process also requires continuous learning by all involved (learning by doing) which has to be conducted in such a manner that the implementation is not wasting resources, creating conflict between participants, but is effective and efficient. These intentions were also among the objectives to promote Local Agendas 21.

4.4 Local Agendas 21

The UNCED conference in 1992 included one idea on how to implement sustainable development on local level, namely the provision for Local Agendas 21. Amongst the objectives were the following: by 1996 most local authorities in each country should have undertaken a consultative process with their populations and achieved consensus on a Local Agenda 21 for the community. The local leaders were expected to take the lead in the implementation of sustainable development which also would have indicated good governance (see 4.2). Local Agendas 21 were considered to be the combination of leadership and good governance in order to implement sustainable development. This has been a total failure in Namibia, where only recently two local authorities attempted a Local Agenda 21.

The idea of formulating local strategies for sustainable development was not new. In 1990, the World Congress of Local Governments founded the International Council for Local Environmental Initiatives or ICLEI (UNCHS 1996:409). This agency has worked with local authorities seeking to resolve environmental problems. A 1998 collection of reports on the progress of Local Agendas 21 in several north European states suggest that it has been inhibited by a lack of agreement about the meaning of *sustainable development* (Middleton & O'Keefe 2001:40).

ICLEI has compiled a second Local Agenda 21 survey for the WSSD based on contributions made from 113 countries. They found that:

- *6,416 local authorities in 113 countries have either made a formal commitment to Local Agenda 21 or are actively undertaking the process.*
- *National campaigns are underway in 18 countries accounting for 2,640 processes.*
- *Formal stakeholder groups exist in 73% of municipalities with Local Agenda 21 processes.*
- *In 59% of responding municipalities the Local Agenda 21 process has been integrated into the municipal system.*
- *Water resource management is the common priority issue for municipalities in all world regions and regardless of economic situation.*
- *Local authorities in all regions and regardless of economic situation list lack of both financial support and national government political commitment as key obstacles to greater success* (Department of Economic and Social Affairs 2002:3).

For the assessment, a Local Agenda 21 was defined as: “a participatory, multi-stakeholder process to achieve the goals of Agenda 21 at the local level through the preparation and implementation of a long-term, strategic plan that addresses priority local sustainable development concerns” (Department of Economic and Social Affairs 2002:6). The various stages (vision statement, local action plan, sustainable development policy, and monitoring report) of a Local Agenda 21 were adopted in 1998 and 1999 (Department of Economic and Social Affairs 2002:13). This fell short of the 1996 target set by Agenda 21. With regard to the focus of Local Agenda 21 processes, the results identified environmentally focused processes as most common with 46% of local governments using this approach. In the second position with 36% are those taking a more comprehensive "sustainable development" approach incorporating economic, social, and environmental needs. 34% of local governments in developing countries claimed that economic development was the primary focus of their Local Agenda 21 planning process, while it was the focus of only 10% of municipalities in developed countries (Department of Economic and Social Affairs 2002:16). The report states that in Namibia five local authorities were regarded as being involved in Local Agendas 21. However, this study could only identify that two municipalities had definite projects in this regard (see Chapter 4).

Regarding the integration of Local Agenda 21 into the municipal system, 41% of the respondents stated that the process operates parallel to the municipal system and 59% had the process integrated (Department of Economic and Social Affairs 2002:18). Those respondents indicating their Local Agenda 21 process was integrated into the municipal system took the following approaches to do so: 71% had a process in place to keep elected council members informed of the issues and initiatives. One or more staff had training in sustainable development planning (67%), 55% had a process in place to keep all departments involved in the Local Agenda 21 or Sustainable Development issues and initiatives, 55% also stated that the process supports a city-wide project(s), and 54% responded that a process is in place to keep all departments informed of the Local Agenda 21 or Sustainable Development issues or initiatives.

Some of the major obstacles in the implementation encountered include financial and national support, as well as the lack of adequate information and expertise (Department of Economic and Social Affairs 2002:18). Authorities were asked to indicate policy areas in which they had the ability to make positive changes independent of other levels of government. The answers indicated that globally, municipalities did not feel that they had strong possibilities for effecting change in any policy sector area. The survey concludes that this lack of empowerment is a fundamental obstacle to the effectiveness of Local Agenda 21 processes (Department of Economic and Social Affairs 2002:20-21). Within this framework, a majority of municipalities rated environmental policy as the sector in which they could enact the most change independently. Economic policy was the area over which they indicated having the least control which helps to explain the large emphasis on environmental planning in many municipalities.

A Local Agenda 21 is a long-term strategic program for achieving sustainability in the 21st century (Global, 1998). The content and form of each Local Agenda 21 is different, reflecting the needs, resources and aspirations of the particular community. These agendas can help a local government and its community to develop a locally appropriate means of managing change towards a desired future which includes reconciling the apparent competing pressures for economic development, environmental protection, and a more equitable society. The goal of 'Managing for the Future' is to achieve sustainability (Global, 1998).

Action plans to balance the development processes are needed, containing short, medium and long term strategies, incorporating specific targets for each goal which is based on problems identified. The interdependence requires cooperation and collaboration as explained by holism. These activities call for an organisation in order to be effective. Three aspects have to be achieved:

- *Provide an environment for collaboration in the truest sense.*
- *Allow the latent creativity and ability in people to come to bear on personal and organisational goals.*
- *Deal with the whole as a whole organization and not as an agglomeration of departments each addressing aspects of the whole* (Savroy 1991:388).

Savroy (1991:388) also stresses that the last point applies to government in particular. He believes, that no government currently is structured to manage the resources of any nation soundly.

> *"None, even at the highest level, can view the nation in its care holistically, and yet only treatment of the whole as the only reality will lead to long-term success. …Only in budgeting does the allocation of limited money, force a certain degree of coordination and general discussion of priorities, but never true collaborative management of the nation's wealth and resources"* (Savroy 1991:388)[31].

With regard to Local Agendas 21 there are many elements which have to be considered in the achievement of sustainable development, for example services, the stakeholders involved and natural resources. ICLEI/IDRC (1996) defines sustainable development on local level as the development that delivers basic

environmental, social, and economic services to all, without threatening the viability of the ecological and community systems upon which these services depend. Sustainable development can only be achieved where all three processes overlap. As pointed out earlier, ethical considerations have to be added as a salient feature of these processes to succeed which are currently avoided or neglected on local and international level. The above statement by ICLEI/IDRC can be applied to functional traditional communities and their holistic way of life. Turan (1983:151) argues that, for example, vernacular architecture shows adaptability and practicality whereas the modern prodigal attitude towards environmental design shows short-sighted or narrowly defined economic priorities. “The frequent misuse of technology, the waste of economic means, and concurrently, the gradual destruction of the environment is minimized if not totally eliminated in examples of vernacular architecture” (Turan 1983:151). This again is an illustration of the sustainability of indigenous knowledge.

4.5 Measuring sustainability

Unsustainable development is usually ascribed to the deteriorating natural environment, pollution and poverty. However, the decay of human societies, as illustrated by the increase in poverty, especially in the case of women, the widening gap between rich and poor, the rise in crime and corruption, the breakdown of the family, the loss of traditional values and norms, are all playing a role in the deterioration of the human way of life. Although the problems are well known, little success in alleviating these problems has been achieved.

In order to achieve sustainability, it is necessary to have some kind of control over the implementation processes to ensure that progress has been made. The United

Nations has developed indicators for this purpose[32]. Indicators[33] can provide crucial guidance for decision-making in a variety of ways and they can translate physical and social science knowledge into manageable units of information that can facilitate the decision- making process (United Nations 1995:2). Furthermore, they can help to measure and calibrate progress towards sustainable development goals. They can provide an early warning, sounding the alarm in time to prevent economic, social and environmental damage, besides being important tools to communicate ideas, thoughts and values.

In support of the implementation process of the Habitat Agenda, urban indicators were designed for reporting on progress made (UN-Habitat, 2002d). The data collection that forms part of a network was created with the following components: Global Urban Observatories (GUO), Regional Urban Observatories (RUO), National Urban Observatories (NUO), and Local Urban Observatories (LUO). Together with the Urban Indicators Programme, the Best Practices and Local Leadership Programme forms the Global Urban Observatory (UNCHS, 1999). The Global Urban Observatory (GUO) is a mechanism to monitor global progress in implementing the Habitat Agenda and to monitor and evaluate global urban conditions and trends (UN-Habitat, 2002e). It addresses the need to improve the worldwide base of urban knowledge by helping governments, local authorities and organisations of the civil society develop and apply policy-oriented urban indicators, statistics and other urban information. Urban Observatories are governmental agencies, research centers or educational institutions that are designated as the "workshops" to develop monitoring tools and use them for policy-making through consultative processes.

In Namibia, government Ministries and departments have not yet developed specific criteria (MET, 2002; Republic of Namibia, et al. 2002:4) for rigorously monitoring progress towards meeting sustainable development objectives. Irregular monitoring, missing data and inadequate indicators make it extremely difficult to assess the impacts of policies and programmes. However, some isolated efforts to monitor and evaluate progress towards sustainable development are being made. They are:

- A midterm evaluation of the NDP, to ascertain whether the objectives and targets for each sector are being implemented.
- UNDP publishes an annual National Human Development report for Namibia. These reports analyse the relevant indicators of human development and document specific development challenges, threats and opportunities.
- The DEA's INFOCOM programme which is facilitating the production of thematic State of Environment Reports (SoERs) and the development of a comprehensive set of indicators to help monitor changes in the Namibian environment.
- Many national programmes, for example, Community-based Natural Resource Management (CBNRM), Namibia's Programme to Combat Desertification (NAPCOD), the Biodiversity Programme, undergo periodic reviews and are regularly evaluated against their objectives.

The MET has suggested a total of 99 indicators in five out of the seven state of the environment reports completed so far (Klintenberg quoted by Zeidler at al., 2001). Klintenberg goes on:

> *"Namibia's acceptance of indicators being a tool capable of rendering the status of complex systems has been one of the SoE reports' most prominent achievements. The reporting process has also led to a relatively standard approach being adopted for developing environmental indicators".*

It was concluded that the number of indicators was too high and should be decreased to not more than 30. In the end 25 indicators were considered. Klintenberg asks whether these 25 indicators "are the answer to environmental monitoring in Namibia. The answer, unfortunately, is 'No'. There is still a long way to go before Namibia will have a functional core set of indicators that generate relevant information about the State of the Environment (SoE) in the country"[34].

Indicators provide some information on certain aspects, but they do not measure sustainability. The philosophical, ethical aspects, and the values systems connected to sustainability cannot be measured. Measurements and indicators are part of the mechanistic approach as promoted by the "modern" world. Wilson and Ramphele (1989:14) refer to Stephen Jay Gould's 1981 study, in which he showed that the greatest danger facing all scientists is to reduce complex phenomena, such as intelligence, to single numbers. The same is true with regard to sustainability which forces the question: is sustainability measurable? Indicators may provide some information, but they definitely cannot measure sustainability when philosophical and psychological positions are examined.

5. Local authorities and Sustainable Development in Namibia

5.1 NDP II

The National Development Plan II (NDP II) has no comprehensive definition or explanation of the term sustainable development. Furthermore, no practical model was presented to accentuate the concept's forward evolution. Throughout the deliberations the concept of sustainable development was only explained during the first inter-cluster workshop such as the Infrastructure and Institutions Cluster Workshop which took place on 6 June 2000. Thereafter the concept did not enter the discussions, except in the preparation of some documents. For example, among the national development strategies, the following is found under the heading *Ensuring that Development is Sustainable*:

> *"During the 1995/96 and 1996/97 financial years, the resources devoted to development expenditure were only increased by 4% as against the NDP 1 projection of 6% in real terms. Considering the 8% inflation (CPI) which prevailed during NDP1 period, development resources decreased in real terms"* (Republic of Namibia 2002:48).

The NDP II has sustainable development at its heart (Brown quoted in The Namibian 28 November 2002:10). The reason for this view is the fact that the

Danish government, through DANCED (Danish Cooperation for Environment and Development), assisted the NPC in preparing the NDP II[35]. However, the optimistic view by Brown is contradicted in the foreword, where the real reason is mentioned: "[t]he Second National Development Plan (NDP 2) is part of a longer-term development perspective (Vision 2030) for Namibia" (Republic of Namibia 2001:xii).

The overall aim of Vision 2030 is to transform Namibia from a developing, lower-middle income to a developed, high-income country by the year 2030" (Republic of Namibia 2001:xii). In other words, Namibia is to follow the Northern model of development despite explanations to the contrary, e.g., by promoting industrialisation. NDP II (Republic of Namibia 2001:305) affirms that the industrial sector is a key component of the nation's long-term development strategy, because it has the greatest potential for the creation of jobs. Furthermore, "[i]t also has the brightest prospects for augmenting the country's total gross domestic product". Hence, the programme of industrial development is to be expanded and diversified.

The State of the Environment Report on industrialisation concludes that the development of the manufacturing industry in Namibia is at an early stage with most processing done in the foods and beverage sector (MET, 1999). The report also found that the size of the sector, the types of industry and the types of products produced in Namibia do not contribute significantly to environmental concerns. "The industry is also highly concentrated which will make future management of environmental issues once the Environmental Management and the Pollution Control and Waste Management Bills are promulgated, easy to implement" (MET, 1999).

Several workshops were organised to facilitate multi-stakeholder involvement in the strategic analysis of and debate about progress towards sustainable development in the country, and b) promotes the development of a common vision with due consideration to the national development objectives, at overall national level as well as within thematic sectors, or clusters (see Annexure 2), e.g., natural resources, social resources, industrial, and infrastructure and institutions (Republic of Namibia, 1999b). In addition to the above, the following set of 12 fundamental but inter-linked issues have been identified as posing significant threats to sustainable development in Namibia (see Annexure 2)[36] in addition to several cross-cutting issues[37].

A few examples will illustrate how the NDP II is attempting to achieve sustainable development. Poverty in Namibia is concentrated among female-headed households (Republic of Namibia 2001:559). Others include most subsistence farmers and many of the poor who are receiving a state pension. It is also pointed out, that poverty is closely associated with environmental degradation. Poverty could directly contribute to the over-utilisation of the natural resource base (grazing, arable land, trees, fish and water). The NDP II concludes that in the absence of education, skills, credit or employment, poor households rely heavily on their natural environment for livelihood. In order to reduce poverty and unequal income distribution, the sector poverty reduction aims at fostering more equitable and efficient delivery of public services, to accelerate equitable and sustainable agricultural expansion, to accelerate options for non-agricultural economic empowerment and to provide a safety net for vulnerable groups. The targets for the year 2006 are: to reduce the proportion of poor households by 5% and the Namibian poverty index by 10% (Republic of Namibia 2001:564).

Regional and Local Government's contribution to sustainable development is the delivery of services to the satisfaction of all communities and to facilitate the establishment of an effective regional and local government system (Republic of Namibia 2001:515). This consists of the creation of an enabling, regulatory and legal environment, the proclamation of towns and villages, the improvement of the delivery capacity of all authorities, and to enhance and maximize citizen and stakeholder involvement and participation[38].

NDP II attempts to incorporate sustainable development principles that are still based on sectoral policies and programmes. Some government policies will illustrate these arguments further. This view is supported by the following statement:

> *"Many of the environmental initiatives undertaken since UNCED can be attributed to the vision and leadership of politicians, officials, supportive NGOs and individuals. Namibia has yet to achieve a critical mass of people from all sectors of society who share and pursue a common vision towards sustainable development"* (Republic of Namibia, et al. 2002:11; MET, 2002).

So far several policies have been formulated which provide some insights into the approach of policy-makers with regard to the promotion of sustainable development.

5.2 Selected government policies and actions

Namibia has included "sustainable development" into its constitution, developed a Green Plan, operationalised this in Namibia's 12-point plan for integrated and sustainable environmental management, implemented the plan through a portfolio of a national programme and has built sustainable development into the heart of its national development processes (MET, 2002). The document furthermore states that: "[t]he Sustainable Development objectives and philosophy have been mainstreamed within the NDP2 process and document which placed sustainable development at the heart of national development. This is considered to be the most

effective approach and perhaps a model for others". However, Namibia does not have a National Strategy for Sustainable Development (NSSD) in the sense that many other countries do (MET, 2002). Instead several diverse policies and plans were formulated. This incoherent approach illustrates that a holistic approach, as required for sustainable development is not part of the mindset of the current government.

Changes in policy making, decision making, decentralisation and local empowerment since UNCED are described in *Namibia's National Assessment for the World Summit on Sustainable Development 2002* (Republic of Namibia et al. 2002:10-11). It is claimed that the organisation that was established to help promote sustainable development and integrated environmental management has been in existence for almost 10 years (Republic of Namibia et al. 2002:11; MET 2002). The organisation (a separate Environmental Agency outside of government) should have a flexible management regime that allows it to forge strategic partnerships with line ministries, support organisations, the private sector, within the country, the region and internationally, and to provide the institution with the authority to facilitate integrated holistic approaches in support of sustainable development[39].

The result of the Rio Summit, according to Brown, was the *Namibia Green Plan* (The Namibian, 28 November 2002:10).

> *"Namibia's Green Plan has guided the formulation of environmental policies, plans and legislation since independence and currently forms the basis for the second National Development Plan, NDP2. Special attention has been given to ensure that NDP2 promotes sustainable development and that all proposed activities are screened for environmental sustainability"* (DEA, 2000b).

The Green Plan starts off with the observation, that Namibia's economy is almost totally reliant on natural resources, both renewable and non-renewable (Brown

1992:v). The next chapter considers three elements that are essential for life, anima species, humans and vegetation. These are: clean air, water and land (Brown 1992:1). This is explained as follows: “[t]he health of individuals, society and the economy are inextricably linked to the health of the environment. A healthy environment provides the opportunity of realizing full developmental potential of a region and country”. The Plan advises to protect and restore water, keeping toxins out of the environment, and cutting back on wastes. In order to sustain the renewable resources action is required in the following areas: water management, environmental sustainability in agriculture, fisheries, forestry, wildlife, tourism, mining, trade and industry, land, poverty, the role of donor agencies, and education.

The protection of special spaces and species is recommended by setting aside as protected space at least 10% of each vegetation type and a representative selection of special features (Brown 1992:104). A network of protected areas is a vital component in the national strategy to conserve biotic, archaeological and scenic diversity. The three major biomes in Namibia are the woodlands, savanna and the desert. The document point out that proclamation of land as parks is no guarantee that effective protection will ensue (Brown 1992:109). Protection can only be achieved when the biodiversity and landscapes are perceived as valuable resources. This will only happen when communities derive benefits from these parks.

Under the heading of *Global Environmental Security*, the Green Plan mentions six factors that account for the majority of the world’s environmental problems (Brown 1992:144). Four are the result of excesses, and two because of paucity. Over-population, excessive use of fossil fuels and deforestation, pollution and global

warming are those areas in which humans have indulged with little foresight of the consequences. Depletion of the upper layers of the atmosphere and failure to educate the majority of the world's population about understanding and caring about the environment are two glaring examples of human shortcomings.

The Green Plan concludes that besides the protection of air, water, land, natural resources, the desert, and special spaces and species, social requirements have to be addressed such as poverty, human population growth, education (including environmental awareness), primary health care, high level of public participation, and the improvement of capacities for training, research and technological development (Brown 1992:172-173). Furthermore, environmental requirements include the development of a national water conservation strategy, a policy and legislation on sustainable agriculture, a policy and strategy for the resettlement of people, legislation on sustainable fisheries, extension of protected areas, and the development of a programme, policy and legislation for the handling of toxic and hazardous waste (Brown 1992:173). The following cross-cutting issues are advocated: the need for land-use planning, natural resource accounting, quality of life accounting (social accounting), and the improvements in cooperation, coordination and support between the various stakeholders (Brown 1992:173-174).

A *strategy and an action plan on biodiversity* have been formulated (DEA, no date, ca. 2000). This document is the product of three years of participatory planning and drafting and is the first of its kind in Namibia. The importance is based on the fact that much of Namibia's economy and most of its people depend directly on the natural resource base and diverse ecosystems, from arid rangelands, to wetlands and rivers, to cold, productive seas. The document concludes, that there is an

intricate link between environmental sustainability and biological diversity. Therefore, biodiversity conservation and sustainable use need to be carefully planned, to help achieve sustainable national development.

Another characteristic of Namibia is the fact that the country has two deserts. The National Programme to Combat Desertification, known as Napcod, is a partnership between various ministries and a consortium of two NGOs, the Desert Research Foundation of Namibia (DRFN) and Namibia's Economic Policy Research Unit (NEPRU). Napcod aims to improve the ability of rural communities to manage their land and natural resources more sustainably and reduce vulnerability to land degradation and climatic variability (DEA, 2000b)[40].

NDP II declares that the government "is committed to the facilitation to achieve sustainable provision of safe drinking water to the whole population and to the livestock" (Republic of Namibia 2001:211). Border rivers provide most of the water used in the country. Scarcity of water has the potential to constrain the development of virtually all sectors including major developments in industry such as mines and factories, development in the health sector, and the provision of potable water for domestic consumption. Scarcity must however, be considered in the context of both aridity as a normal phenomenon in Namibia and of severe droughts (Republic of Namibia 2001:511).

The government formulated the *Water and Sanitation Policy* (WASP) in 1993. The NDP II points out the overall policies of WASP:

- Essential water supply and sanitation services should become available to all Namibians, and should be accessible at a cost that is affordable to the country as a whole.

- This equitable improvement of services should be achieved by combined efforts of the Government and the beneficiaries, based on community involvement, community participation and the acceptance of a mutual responsibility.
- Communities should have the right, with due regard for environmental needs and the resources available, to determine which solutions and service levels are acceptable to them. Beneficiaries should contribute towards the cost of the services at increasing rates for those standards of living that exceed the levels required to provide basic needs.
- Environmentally sustainable development and utilisation of the water resources of the country should be pursued in addressing the various needs (Republic of Namibia 2001:212-213).

Blackie and Tarr (1999) note the proposal in the forthcoming *Environmental Management Act* (EMA) to establish a Sustainable Development Commission (SDC) which will be headed by an Environmental Commissioner. The Commissioner will oversee full implementation of the Environmental Assessment Policy. The appointment of an Environmental Commissioner was delayed for a number of reasons which included failure to gain consensus on the role of and institutional home for the commissioner (Republic of Namibia 2001:600). It has been decided that the Environmental Commissioner will reside in the Directorate of Environmental Affairs (DEA) of the MET and will provide a secretariat to the proposed Sustainable Development Commission. The idea of the SDC has been negotiated for the past seven years (Dr P. Tarr, personal communication, 18 December 2002).

The SDC will consist of nine government representatives from various government ministries, two private sector representatives, one trade union representative, one town or regional planner, three NGO representatives and two members on the basis of expertise (Blackie & Tarr, 1999). The purpose of the SDC is to promote integration of different government policies and objectives and evaluate proposals at the strategic and project level. The functions of the SDC include the review and the provision of guidance to government policy formation to ensure principles of sustainable development are incorporated early in the policy formulation process.

These principles include public participation, inter-generational equity, sustainable use of natural resources and public access to information.

Blackie and Tarr refer to the wide range of stakeholders that will be represented on the SDC. It is hoped that it will be effective through encouraging a culture of participation in government (Blackie & Tarr, 1999). In spite of the SDC's lack of enforcement powers, its recommendations are likely to be considered seriously by line ministries since they will always be made public. Should a line ministry choose to ignore the SDC's guidance the ministry may be called upon by the public to explain its reasons for this. The Commission is to be headed by a Commissioner, who will have the power to put a stop to or reject projects which are deemed to be environmentally unsustainable (Mansfeld, 2003). Even ministers cannot go ahead with a project, if the Commissioner halts a project.

The *Namibia National Habitat Committee* was established to prepare for the Habitat II conference in Istanbul in 1995 which resulted in the formulation of the National Plan of Action (NPA). The Government in March 1996 adopted the NPA. A review was completed in March 1999 and another in 2003. The NPAs primarily discuss the status quo of activities by the stakeholders, the achievements and future plans. The 1999 version was necessary to bring the plan in line with the Habitat Agenda principles. The mission of the Habitat Committee includes the coordination, monitoring and review of the activities of all stakeholders in order to achieve adequate shelter for all and the development of sustainable human settlements in accordance with the Habitat Agenda. The committee is also responsible for the future revision of the NPA, the organisation of the annual World, Habitat Day, and exchange of information between the members (Republic of Namibia 1999a:6). After

a restructuring of the Ministry of Regional and Local Government and Housing (MRLGH), a Directorate of Housing, Habitat and Technical Services Coordination was created in 1999, under which the Habitat Committee falls.

Decentralisation is but one element in the Habitat Agenda and Agenda 21. The Namibian *decentralisation policy* aims at drastically increasing the bureaucracies of each region by moving government personnel to the 13 regions. The idea is to transfer political, administrative, legislative, financial and planning authority from the centre to regional and local authorities (Republic of Namibia 2001:722). However, many ministries do not have the human resources to do this. In fact, it means that each function has to be multiplied by 13 which would increase the labour costs[41]. The NDP II claims, that decentralisation is cost-effective because participatory democracy allows people to manage their own resources, and the more direct relationship between revenue, expenditure and services will ensure less wastage, more responsibility and better opportunities for cost recovery (Republic of Namibia 2001:723). The approaches of regional councils and local authorities will provide more arguments on their strategies to development.

5.3 Local and regional authorities

5.3.1 Regional development plans

The Regional Councils Act (Act No. 22 of 1992:§28) provides the following functions to the Councils: to undertake duties and functions of the National Planning Commission and any other law relating to planning, the planning of the development of the region for which it has been established[42]. Regional development plans were devised as part of the formulation of NDP II. The result was a regional development plan for each region and regional development perspectives. All regions had to

formulate a vision statement. A few examples are presented in Annexure 2. Most of the Regional Councils' vision statements contain the problem of poverty reduction, followed by sustainable utilisation of natural resources and education. Third is the improvement of physical infrastructure, improvement in living standards, and reducing crime. Employment issues and health are the fourth important issue. The fifth most important concern relates to gender issues. Only the Khomas region included AIDS in its vision statement. The Oshikoto aims at achieving economic independence by 2010. The Ohangwena region wants to establish more urban areas as one of the major concerns. The only reference to sustainable development is found relating to natural resources / environment.

Another factor is the inability of many Government Ministries which often do not have the manpower and finances to pay for 13 offices in all regions. The first two Delimitation Commissions did not consider a smaller number of regions in order to limit the bureaucracies and save taxpayers monies[43]. Similar to the historical example of Nigeria, Namibia could have started with a much smaller number of regions. After ensuring that enough skilled and qualified manpower, capacity, financial resources, and other requirements are available, the number could, over time, be increased. The regional development plans would then also be more effective as a smaller number of regions would mean less red tape.

5.3.2 Local Agendas 21 in Namibia

Namibia does not have a national local Agenda 21 campaign or strategy. Few documents have been produced in Namibia by those municipalities involved in a Local Agenda 21. The Association of Local Authorities in Namibia (ALAN) has never been involved with matters concerning Agenda 21 or the Habitat Agenda before or

during conferences and workshops (ALAN staff members, 2003). Consequently, no documents on these issues and sustainable development are available. Furthermore, there are no plans by ALAN to initiate workshops or information meetings to raise awareness on the issues of sustainable development. Only the local authorities of Windhoek and Walvis Bay have started Local Agenda 21 processes. As a result, only limited information and documentation is available.

5.3.2.1 Windhoek:

In 1998 the City of Windhoek (CoW) had its first stakeholders meeting to form Local Agenda 21 committees to represent all residents. The Windhoek Local Agenda 21 Forum was established with the mission to promote sustainable development and to identify environmental problems. Interested parties were invited to submit “Terms of Reference as well as the focus areas according to priority for consideration at the next meeting” (City of Windhoek, 1998). In July 1998, submissions were received from Earthlife Namibia, Prof. J. Kirchner, Goreangab Action Committee, and the Northern Smallholders Resident Association.

Earthlife Namibia (1998) proposed a formal structure between Council and the public. A Steering Committee consisting of Council members and members of the public should be formed. Sub-committees could be formed to address specific issues. Regular meetings between the steering committee and the sub-committees were encouraged[44].

Kirchner (1998) suggested that a Local Agenda 21 Forum should be concerned with (1.) natural resources, and (2.) other issues affecting the human environment. In order to foster sustainable development, the main natural resources to be

considered should include: the atmosphere, energy, water, and habitat. He added that since natural resources are threatened by misuse which results in pollution and exhaustion or destruction, the tasks of the Forum should be to identify problems, propose solutions, assist in or support remedial action, contribute to development planning, and help to inform and educate the general public about environment conservation. The Forum should not be seen and function as a complaints office, and it must not become a community pressure group nor an instrument of the Municipality to promote unpopular measures. It should be independent, have a broad community base, and incorporate available expertise.

The Goreangab Action Committee (1998) focused on sensitive urban open spaces as well as recreational areas. These include the three dams and major watercourses and their surroundings. Clear objectives should be formulated for the use of all the environmentally sensitive areas and their environs through participatory means. Comments should be provided to Management Committee on any land-use applications for the use of land which may affect an environmentally sensitive area. Funding could be provided through the Management Committee for specific environmental projects, such as feasibility studies and management plans. On-going management plans for environmentally sensitive areas should be facilitated and coordinated through participative means, and environmental problems affecting the City have to be investigated and reported.

The Northern Smallholders Resident Association proposed the following objectives: to ensure that all future development in Windhoek is sustainable and environmentally sensitive, to ensure adherence to all Namibian laws, policies and

regulations, and to ensure that decisions with environmental implications are made in consultations with all affected parties.

The Deputy City Secretary (1998) noticed that most participants of the meeting in June 1998 have “concentrated mostly on identifying problems and to highlight problem areas and those responsible without attempting to solicit the **main causes or factors** that are contributing to problems of major environmental distruction [sic] and earth abusement [sic]” (author’s emphasis). The Deputy suggested the following activities of the Forum: identify problems and problem areas, identify causes/factors contributing to these problems, mobilize/sensitize the broader community on all environmental, social, cultural and economical issues, foster total community participation/involvement in various projects, educate and train the general public about environmental conservation, provide alternatives and solutions to identified problems, identify and involve all stakeholders/role players, develop projects with an emphasis to eradicate poverty and creation of job opportunities, and to promote sustainable usage of natural resources with minimum damages.

The Windhoek Environmental Liaison Association (WELA) which is the channel of communication between citizens of Windhoek and the City of Windhoek Council, consists of environmental groups, informal housing groups, councillors, city planners, artists, hawkers and *shebeen* associations (Gold et al. 2001:37). Activities involve environmental projects, sanitation issues in informal settlements, and discussions surrounding waste management and recycling are addressed. WELA is a forum to identify issues, to discuss, make recommendations, and take decisions on issues of environmental (natural, built, and social economic environment) concerns (Watson, 2002). Furthermore, the forum promotes sustainable

development in Windhoek, common objectives on environmental issues amongst its members, and partnership in this respect with the municipality. It also obtains and disseminates relevant information to all members and the public at large.

The City of Windhoek does not have international support for the implementation of its Local Agenda 21, unlike Nakuru or Walvis Bay. Windhoek set up a subsection in the planning department, solely for environmental matters (Gold, et al. 2001:15). Gold et al. point out that the section is a separate division, isolated from mainstream development activities. Furthermore, the section is separate from the sustainable development division in the planning department which deals with town planning and the development of low income areas.

The Environment Division of the City of Windhoek deals with the following: the impact of human activities on the natural environment; waste management; policies and guidelines for sound environmental management and to facilitate Best Practices. Furthermore, broad public participation and community education is encouraged. The protection of core areas of the environment, air, water, and land also receive attention (e-mail correspondence with Kozonguizi, April 11, 2002). The municipality has after its last restructuring, established a Sustainable Development Division which is part of the Planning, Urbanization and Environment Department and deals with forward planning and design, and research and statistics. The division is not connected to the Environment Division which deals with the LA 21.

The public's vision is a unified satisfied community in a safe and clean city which respects its natural and built environment and diversity of its inhabitants, and allows every resident a decent standard of living (Watson, 2002)[45]. The city's commitment

aims at making Windhoek a vibrant economic and technological centre of excellence in Africa in order to enhance the quality of life of all people through rendering of affordable, effective services, infrastructure, optimal and sustainable use of resources, technology and sound financial management (Watson, 2002). Another aim is to create competitive development opportunities, while applying sound environmental management principles, for example, attracting new industries such as the textile industry. The promotion of user-friendly culture, the encouragement of public participation, the encouragement of tourism, and the promotion of a crime-free and safe environment, are also considered.

5.3.2.2 Walvis Bay:

According to its Mission Statement, the aim of the Walvis Bay Municipality (WBM) is to: "continuously broaden the scope and improve the quality of municipal services rendered to all our customers with due regard for the environment" (Municipality of Walvis Bay 2002:3). During 2001 the Walvis Bay Local Agenda 21 was started. It is a three year project funded by WBM and the Danish government (Municipality of Walvis Bay 2002:4). It aims at making real progress towards the sustainable environmental management of the Walvis Bay area along the lines of Local Agenda 21 principles[46]. The document points out that a Local Agenda 21 is the local expression of Agenda 21, the global action plan for sustainable development for this century adopted at the United Nations Conference on Environment and Development in 1992. The LA21 principles include[47]:

- A Long-Term Sustainable Development View
- A Global Perspective
- Equity and Justice
- A Holistic Cross-Sectoral Approach
- A Multi-Participatory Approach (Municipality of Walvis Bay 2002:7-8).

As part of the vision, eight sectors were identified and incorporated in the *Integrated Environmental Policy.* They are the Walvis Bay Coastal Area, Urbanisation, Water resources, Energy, Air, Fauna and Flora, Land and Soil, Environmental Education (Municipality of Walvis Bay 2002:10-11). Furthermore, ten priority issues emerged for the environmental management in the town, such as minimising the consumption of water, improving Walvis Bay's air quality, or conserving threatened species and their habitats[48]. The experience of and the lessons learned from the implementation of the Environmental Management System will serve as an input for the medium-term phase of implementation of the Integrated Environmental Policy (2004-2007). In this period, the implementation will occur by making use of tools developed, in line with sectoral approaches. Departments, delivery units and line functions of the municipality will develop detailed sectoral strategies and action plans to address these sectors and the key issues that fall within or cut across them (Municipality of Walvis Bay 2002:13).

6. Conclusion

Sustainable development in Namibia's policies, the NDP II and the Local Agendas 21, is treated as an environmental concern. It shows the one-sidedness of approaching sustainable development as the "green thing", and misses the wider aspects of the concept. The proposal of Vision 2030 to promote policies to enable the country to achieve a high-income status is counterproductive to achieving sustainability. The way of life of the elite is depicting the same un-sustainable practices as those of the Northern countries. Only environmental organisations and those policies emanating from the MET show a concern for the principles of sustainability, but they are limited to environmental factors.

No provision is made for radical change of un-sustainable practices, especially in urban areas. In rural areas, poverty is presented as the factor influencing the degradation of the natural environment. The NDP II and the policies discussed, attempt to do business as usual, with a touch of environmental interest. The same result was manifested in the outcome of the WSSD – no major changes to the unsustainable global situation can be expected. This has also been shown by the examples from Namibia.

As stated in NDP II attempts are made to incorporate the most important issues relating to environment and sustainability into most of the objectives and strategies. The most absurd claim is the challenge of ensuring that development and industrialisation are sustainable. These issues are called “priorities” to provide decision-makers the opportunity to disregard other important issues such as considering changing from nonsustainable activities to sustainability.

Local Agendas 21 in Windhoek and Walvis Bay are limited efforts, focusing on a few issues, and not on a change away from unsustainable developments. The generic functions provide inputs into the administration of a local authority, but have to be changed in order to support efforts regarding the implementation of what is called sustainable development. The Western way-of-life provides the model for most initiatives, although UNCED regarded the Western way, in principle, as unsustainable. As pointed out earlier, despite Chapter 26 in Agenda 21, possible contributions by traditional or indigenous people, do not form part of the implementation process of Local Agendas 21. This will be examined and demonstrated in more detail in the next chapter.

Annexure 1

Changes in policy making, decision making, decentralisation and local empowerment since UNCED (GRN et al. 2002:12-13; MET 2002) include:

Changes that have occurred	**Impacts on stakeholders**
Improvements in policy making over the past 10 years: ▪ Multistakeholder consultation has become the norm; and ▪ There has been a steady move towards developing policies within a broader sustainable development framework rather than following the traditional sectoral approach. Several new policies that adequately reflect sustainable development objectives have been formulated: ▪ *Environmental Management Bill,* ▪ *Pollution and Waste Management Bill;* ▪ *Community Based Natural Resource Management Policy;* ▪ *The most recent marine fisheries management policies;* ▪ *Mineral Policy;* ▪ *National Drought Policy and Strategy* and, ▪ *Energy Policy White Paper.*	Stakeholders from public and private sector institutions, as well as concerned individuals, are generally invited to participate in the policy-making process. This is a positive development for Namibia as it exposes stakeholders to issues outside their sectoral (or personal) focus and encourages those engaged in policy formulation, to consider outside input.
In the absence of a NSSD, decision making at the project or implementation level is often inconsistent with the strategic decisions taken at the policy (and legislation) levels. However, a much more systematic decision making process is developing at political and technical levels, with Vision 2030 expected to provide a useful framework in the future. The adoption and widespread use of sustainable development tools such as EA have improved decision making at plan, programme and project levels, whilst the emerging SoER programme will help Namibia to track the impacts of key decisions. ▪ The country's budget deficit (on average 3.7% of GDP for the period 1995-2000) has become cause for concern as it has begun to endanger the stability of the Namibian economy.	▪ Public sector stakeholders are still in the process of making the transition between sectoral planning and more holistic planning and decision making. ▪ The transformation of state-run departments into state-owned parastatals has caused some concern amongst public and private-sector stakeholders particularly as expectations have not always been met and goals and objectives were sometimes not clear. ▪ The more inclusive decision-making process has improved opportunities for public sector stakeholders, and members of the public to participate in decision making to a far greater extent

▪ Public investment during the past 10 years has followed a downward trend (declining from 16% of total government expenditure in the early 1990s to approximately 14% by 1999).	
▪ Decentralisation was adopted as a policy by the GRN in 1997. Key constraints include inadequate human and material capacity in the Regional Council offices and insufficient financial resources. ▪ The systematic proclamation of towns has improved opportunities for local-level decision making. ▪ The emergence of conservancies and other community-based natural resource management initiatives (e.g. the CBNRM programme and the water point committee programme) begun to restore decision-making powers to grass-roots levels. ▪ There is growing autonomy amongst Local Authorities (municipalities) in most of the larger towns and local Agenda 21 programmes have been established through the Windhoek and Walvis Bay municipalities. The EA planning tool, although inconsistently implemented, has helped to promote a culture of public consultation and participation in decision making at the national and local level.	▪ Local NGOs have strengthened and several make a positive contribution to sustainable development (e.g. the NNF, NANGOF, NACOBTA, the DRFN); ▪ Regional development and coordination committees have been established in most regions. ▪ Rural communities that have formed conservasies have more opportunities to participate in decision making.

Annexure 2

The NDP II clusters and their vision statements are (Republic of Namibia, 2000):

Natural resources	Agriculture, Water, Fisheries, Forestry, Wildlife and Tourism.	To contribute to national development through the promotion of sustainable use of renewable natural resources and the promotion of sustainable livelihoods.
Trade and industry	Mining, Energy and Trade & Industry	To contribute to national sustainable development through economic growth that is diversified, is equitable across regions and people, while minimizing negative environmental and social impacts.
Social	Health, Social Welfare, Labor and Education	To strengthen the human resources of Namibia by stemming the rising AIDs epidemic, countering violence and substance abuse, and reducing the burden of poverty through, (wherever possible) the implementation of community based approaches. In so doing, counter the increased degradation of natural resources arising from poverty, lack of information and lack of decision-making power
Infrastruc-ture	Communication, Transport, Housing and Local Government	To contribute to national sustainable development through the coordinated provision of appropriate infrastructure that is equitably distributed across regions and people, enhances social well being, contributes to economic growth and is environmentally friendly, and through the development of efficient and effective democratic national, regional and local institutions in partnership with relevant stakeholders.

Table 3.4 NDP II clusters

The 14 key threats to sustainable development in Namibia identified during the consultative process for the preparation of NDP II are (Republic of Namibia et al. 2002:19; MET, 2002):

1. Namibia's high dependence on natural resources	7. Increasing competition with neighbouring countries for shared natural resources
2. Population growth and settlement patterns	8. The loss of biodiversity
3. Human health and the HIV/AIDS epidemic	9. Governance issues
4. Poverty and inequality	10. Global atmospheric change
5. Land issues, particularly equitable access to land and natural resources, including desertification	11. Threats to human resources
6. The challenge of ensuring that development and industrialisation are sustainable	12. Increasing water stress
	13. Improving access to existing knowledge and filling knowledge gaps
	14. The need for a stable macroeconomic Environment and stimulating private Entrepreneurship

Table 3.5 Key threats to sustainable development in Namibia

Endnotes:

[1] The deliberations presented a wide range of contradicting opinions on the merits of such a charter. The People's Republic of China and the U.S.A. teamed up to condemn the idea, whereas European countries supported the proposals. The Chinese delegation stated that such a charter would be against its constitution. Furthermore, they opined that the charter is not an issue for the UNCHS to discuss. The USA regarded the charter as the anti-thesis of decentralisation, as the flexibility of decentralisation would stop when the debate on the World Charter begins. Norway and the Council of Europe supported the World Charter and pointed out that a European Charter already exists and even helped Eastern European countries in their development (personal notes). Therefore, Poland supported the formulation of the charter and the proposal of establishing an open-ended committee for that purpose. The African and Namibian positions were not available during the deliberations.

[2] The most important dimension is an ecology of ideas, referring to the way in which people observe the world around them and the way in which they learn how to observe the world around them. A second dimension of context refers to the self-generating relations among people that define and maintain the character of a family or community. The authors maintain that, these relations may be referred to as the structure of the community or family.

[3] Chapter 7 contains eighty paragraphs and over 100 activities under eight programme areas.

[4] The United Nations Secretary General confirms the above during a speech: "progress since then has been slower than anticipated. The state of the world's environment is still fragile. Conservation measures are far from satisfactory. At discussions on global finance and the economy, the environment is still treated as an unwelcome guest. High-consumption life-styles continue to tax the earth's natural life-support systems. Research and development remains woefully under-funded, and neglects the problems of the poor. Developed countries in particular have not gone far enough in fulfilling the promises they made in Rio – either to protect their own environments or to help the developing world defeat poverty" (Annan, 2002).

[5] Professor Jane Kelsey (2002) opined: "Having recently attended the Ministry of Foreign Affairs and Trade (MFAT) briefing on the WSSD in Johannesburg, I was appalled at how sanitised it was. The briefings glossed over the strong challenges presented inside and outside the Summit to the idea that sustainable development requires even more globalisation. ... There was nothing progressive about the process or the outcome. The people for whom sustainable development is a matter of life and death – poor and small island countries, indigenous nations, peasant farmers, local communities– were marginalised throughout the summit. …. Sustainable development became code for corporations assuming more control over resources, not less. At a time when corporate corruption dominates the headlines and self-regulation is visibly failing internationally".

[6] Friends of the Earth International (FOEI) have compiled some comments on the outcome of the WSSD. They state that after nine days of talks, the final text of the Programme of Implementation was analysed and precisely two new and specific targets were found: "Establishment of marine protected networks … including representative networks by 2012 (para 1). To halve by 2015 the proportion of people who … do not have access to basic sanitation (para 7), and 31c) – which is really half a target, but we prefer to be generous in our praise. And that's it. In every other case, existing commitments are simply reaffirmed, watered down, or trashed altogether" (FOEI, 2002).

Ricardo Navarro commented: "The Earth Summit should have been about protecting the environment and fighting poverty and social destruction. Instead it has been hijacked by free market ideology, by a backward-looking, insular and ignorant US administration and its friends in Japan, Canada, Australia and OPEC, by a timid and confused European Union, and by the global corporations that help keep reactionary politicians in limousines. So, after nine days of waffle and posturing and horse-trading we have only two significant new targets to protect the environment and fight poverty and deprivation" (FOEI, 2002).

According to Daniel Mittler, the Earth Summit Coordinator, "This is a betrayal of the millions of people around the world who looked to this Summit for real action, and particularly of poor people and vulnerable communities in the South. It is an indictment of the world leaders who came to this Summit and posed for photographs but lacked the vision and commitment to face the scale of the world's problems. A world where the economy runs beyond the capacity of political institutions to regulate and control it is in a deep crisis, and can never be fully secure or at peace. Nothing could

make us more determined to fight on for the radical environmental action the world needs. See you all in Mexico!" (FOEI, 2002).

[7] The current Gini coefficient for Namibia is 0.67 (Republic of Namibia 2001:558). This figure is based on the 1993/94 National Household Income and Expenditure Survey (NHIES). In 2004 the latest NHIES commenced, but the results were not avialable by the end of this study. Therefore no comparison is at present possible.

[8] The WRI also points out, that emissions of the major greenhouse gases in the United States, the world's leading emitter, are already about 11 percent higher than 1990 levels.

[9] Namibia generates hydro energy at Ruacana, but most of the energy is imported form the RSA, where coal is used in the generation. Therefore Namibia contributes to the pollution of the South African environment.

[10] However Partridge (2000) underscores that "Sagoff cites the Indian forestry practice in terms of numbers of trees, not biomass: i.e., the weight of a harvested tree against the weight of four seedlings. If my neighbor were caught cutting down and hauling away the ancient oak tree on my front lawn, I would not be compensated with four acorns. Moreover, every tree cut and hauled away carries with it the nutrients which, in a natural forest, are recycled through the death and decay of the old trees. Still more drain on the 'natural capital'. Forest industry advertisements to the contrary notwithstanding, industrial forestry is not sustainable".

[11] However, it is acknowledges that: "As an implementation-focused Summit, Johannesburg did not produce a particularly dramatic outcome - there were no agreements that will lead to new treaties and many of the agreed targets were derived from a panoply of assorted lower profile meetings. But some important new targets were established, such as: to halve the proportion of people without access to basic sanitation by 2015; to use and produce chemicals by 2020 in ways that do not lead to significant adverse effects on human health and the environment; to maintain or restore depleted fish stocks to levels that can produce the maximum sustainable yield on an urgent basis and where possible by 2015; and to achieve by 2010 a significant reduction in the current rate of loss of biological diversity" (United Nations, 2002b).

[12] The plan of implementation states: "Improve access to reliable, affordable, economically viable, socially acceptable and environmentally sound energy services and resources, taking into account national specificities and circumstances, through various means, such as enhanced rural electrification and decentralized energy systems, increased use of renewables, cleaner liquid and gaseous fuels and enhanced energy efficiency, by intensifying regional and international cooperation in support of national efforts, including through capacity-building, financial and technological assistance and innovative financing mechanisms, including at the micro and meso levels, recognizing the specific factors for providing access to the poor" (United Nations, 2002d).

[13] "[The] Human settlements [concept] is not synonymous with housing but rather it is the physical articulation of the social, economic, political activities of the people. Human settlements [sic] includes housing, shelter, services and infrastructure. The main objective for human settlements is to improve quality of life" (Rai, 1997).

[14] The phenomenon urbanisation started when agriculture began. Until 10,000 BC all people lived in impermanent camps, where they were hunters and gathers, they harvested but did not sow (Giradet 1996:38). The Neolithic revolution turned nomads into farmers which settled in permanent villages. The oldest urban areas, such as Jericho and Cathal Huyuk, found in the Middle East, appeared about 8,000 years ago.

[15] The origin of Oshakati goes back to the 1960s, after the Odendaal Commission's recommendation that a hospital should be built at a new settlement called Okatana. The hospital was completed in 1966 (Hangula 1993:20). It was decided in a meeting in 1964 that the new settlement should be renamed to become Oshakati. Other public institutions followed, such as an office for the Department of Water Affairs, a post office, the police, a school, and a radio station.

[16] Plans are considered to extend the supply to the Okavango river. These, however, are finite and in the medium- to long-term future there is still going to be a crisis in the water demand in Windhoek, particularly with the high rate of urbanisation (Gold & Muller 2001:11).

[17] The disputes between neo-Malthusians and their opponents can be illustrated by the predictions the two sides have made (von Alten, 2000). The first prediction was formulated by the Global 2000 Report to the President: "If present trends continue, the world in 2000 will be more crowded, more

polluted, less stable ecologically, and more vulnerable to disruption than the world we live in now (1980). Serious stresses involving population, resources, and environment are clearly visible ahead. Despite greater material output, the world's people will be poorer in many ways than they are today." The second prediction was written by Simon and Herman Kahn: "If present trends continue, the world in 2000 will be less crowded (though more populated), less polluted, more stable ecologically, and less vulnerable to resource-supply disruption than the world we live in now (1984). Stresses involving population, resources and environment will be less in the future than now... The World's people will be richer in most ways than they are today... The outlook for food and other necessities of life will be better.. life for most people on earth will be less precarious economically than it is now."

[18] "Carrying capacity is a function of characteristics of both the area and the organism. A larger or richer area will, ceteris paribus, have a higher carrying capacity. Similarly, a given area will be able to support a larger population of a species with relatively low energetic requirements (e.g., lizards) than one at the same trophic level with high energetic requirements (e.g., birds of the same individual body mass as the lizards). The carrying capacity of an area with constant size and richness would be expected to change only as fast as organisms evolve different resource requirements. Though the concept is clear, carrying capacity is usually difficult to estimate" (Daily & Ehrlich, 1992).

[19] "Each organism uses resources from the ecosystem to exist. We express this essential requirement as an area of the planet that annually supplies these requirements each year and define this as the organism's ecological footprint. For humans, we can record the consumption data and convert it into an area that supplies these ecosystem resources that are annually appropriated by each person. This is an example of a "systems analysis" that is very helpful for us to understand the connections between our behavior and our dependency on the ecosystem. Our ecological footprint helps appreciate what we get for free from ecosystem services" (University of Texas, 2002).

[20] Wackernagel, et al. (1997) continue: "Therefore we need to know whether people's quality of life improves over time. Even more urgently, we need to start monitoring whether we are living within our ecological means or at what rate humanity is depleting the biosphere. We must ask: "How much nature does humanity, our country or our household use to sustain itself?"

[21] Another issue is that poverty is also used to classify non-industrial societies as poor, for example societies with a strong traditional non-Western basis. Often this aspect is neglected as the definitions and indicators used by Westernised institutions conveniently do not pay attention to this factor. There are many living in squatter camps in Namibia who have a regular and relative large income and a subsidy for housing. As they stay in an informal area they are regarded as poor. Similar traditional societies such as the Ovahimba, are described as underdeveloped as they do not display any Western features in their lifestyle or because their income is less than US$1 per month, although they are one of the remaining sustainable societies (see 6.1). This definition indicates the Western bias.

[22] Not one comprehensive definition of poverty has been achieved. Wilson and Ramphele (1989:14) describe the phenomenon as follows: "Poverty is like illness. It shows itself in different ways in different historical situations, and it has diverse causes". To arrive at one definition only does not always make sense. The need to define everything is a reflection of the prevailing mechanistic worldview. Stephen Jay Gould showed that the greatest danger facing all scientists is to reduce complex phenomena to single numbers (Wilson & Ramphele 1989:14).

[23] John Iliffe (quoted by Wilson & Ramphele 1989:15-16) stated that two levels of want have existed in Africa for several centuries. The first includes the largest number of Africans, who have been obliged to struggle continuously to preserve themselves and their dependants from physical want. They are called poor. The second level includes those who have permanently or temporarily failed in that struggle and have fallen into physical want. They are the very poor or destitute. The French distinguished between pavre and indigent. Both knew hunger, but the indigent were never free of it. Iliffe points out that this distinction existed in some of the pre-colonial languages.

[24] By the year 2015, all 189 United Nations Member States have pledged to meet the following goals: Eradicate extreme poverty and hunger, Achieve universal primary education, Promote gender equality and empower women, Reduce child mortality, Improve maternal health, Combat HIV/AIDS, malaria and other diseases, Ensure environmental sustainability, and Develop a global partnership for development (United Nations, no date).

[25] The principles of environmental sustainability are elaborated in the four indicators which comprise of the following: Proportion of land area covered by forest, Land area protected to maintain biological

diversity, GDP per unit of energy use (as proxy for energy efficiency), Carbon dioxide emissions (per capita) [Plus two figures of global atmospheric pollution: ozone depletion and the accumulation of global warming gases] (United Nations General Assembly, 2001).

[26] The key proposals in the Millennium Report of the Secretary-General incorporate under the heading *A Sustainable Future*, the following challenges: The Environmental Agenda urges governments to adopt a new ethic of conservation and stewardship; and as first steps accomplish the following: 1. Climate Change: adopt and ratify the Kyoto Protocol, so that it can enter into force by 2002, and as a step towards reducing emission of greenhouse gases; 2. Green Accounting: to consider incorporating the United Nations system of "green accounting" into national accounts, in order to integrate environmental issues into mainstream economic policy; 3. Ecosystem Assessment: provide financial support for, and become actively engaged in, the Millennium Ecosystem Assessment; and 4. the Earth Summit +10 to prepare the ground for the adoption of concrete and meaningful actions in 2002.

[27] "In order to reduce poverty and inequality, sectoral policies need to address the main structural defects in both city and countryside, including: urban and rural landlessness and insecurity of tenure; unfair terms of trade between urban and rural areas; and insufficiency of income, partly resulting from lack of diversification of jobs in rural areas" (Tibaijuka, 2002).

[28] "Each generation has, in particular, the responsibility to ensure that in any national or international forum where it is likely that a decision taken affecting the interests of future generations, access be given to an authorized person appointed as 'guardian' of future generations to appear and make submissions on their behalf" (Kindall quoted by Redgwell, 2002).

[29] UNIDO relegates the issue of intergenerational equity to the social sphere: "the issue of intra-generational equity cannot be excluded from a comprehensive notion of sustainable development, because doing so would destroy the symmetry of the equity-argument on which the term 'sustainable' is built. Hence, intra-generational equity -- covering the whole gamut of social issues in development, such as regional and gender distribution -- is rightly considered as an integral part of sustainable development" (UNIDO, 2000).

[30] Another definition by UN-Habitat (2002b) is the following: "Urban governance is inextricably linked to the welfare of the citizenry. Good urban governance must enable women and men to access the benefits of urban citizenship. Good urban governance, based on the principle of urban citizenship, affirms that no man, woman or child can be denied access to the necessities of urban life, including adequate shelter, security of tenure, safe water, sanitation, a clean environment, health, education and nutrition, employment and public safety and mobility. Through good urban governance, citizens are provided with the platform which will allow them to use their talents to the full to improve their social and economic conditions".

[31] A collaborative environment exists when individuals can work with one another rather than for or against one another.

[32] Since UNCED in 1992, the United Nations have developed indicators for both the Agenda 21 and the Habitat Agenda to monitor the progress made and to provide inputs into the decision-making process. The indicators for sustainable development were divided into the following categories: social, economic, environmental, and institutional to be used at the national level (United Nations, 1995). The themes for the different groups of indicators are: Equity, Health, Education, Housing, Security, Population, Atmosphere, Land, Oceans, Seas and Coasts, Freshwater, Biodiversity, Economic Structure, Consumption and Production Patterns, Institutional Framework, and Institutional Capacity.

[33] The difference between measurements and indicators are that a measurement is fixed, e.g., one metre or one litre, whereas indicators are variables which can change over time. Both concepts involve the calculation of certain data needed which is based on mathematics. "Mathematics itself is not a science; it is the art of making complicated and beautifully balanced patterns from very simple basic symbols and rules for combining them. … In pure mathematics, the symbols have no real-world meaning – no one has ever found a 2 or a+ or a> in nature" (Sahtouris, 1995). But scientists have found real-world meaning to these symbols.

[34] The Namibian Long-Term Ecological Research (Na-LTER) forms part of the International Long-Term Ecological Research network (ILTER) with the head office at Gobabeb (Henschel quoted by Zeidler, et al., 2001). Na-LTER constitutes of 16 organisations, working under the umbrella of the National Biodiversity Programme. The Environmental Long-Term Observatories of Southern Africa

(ELTOSA) constitutes a discussion forum between Botswana, Mozambique, Namibia, South Africa, Tanzania, and Zambia.

[35] According to the Permanent Secretary: "The DANCED Project is working with the Ministry of Environment and Tourism and the National Planning Commission Secretariat. It is organising for [sic] informed discussions and debate among sector planners and key government officials and other stakeholders on the present issues and threats to sustainable development and on how these issues could be taken into account in sector planning in particular, and in the consolidation of the NDP in general" (Republic of Namibia, 1999b).

[36] They are: i) economic growth and industrialisation – impacts on and constraints imposed by the ecology; ii) poverty and inequality – disparities between the rich and poor; iii) water – a limited resource for human use and economic growth; iv) land – low human carrying capacity and inappropriate distribution, tenure and use; v) biodiversity – an endangered foundation of human life and livelihoods; vi) population growth and settlement patterns – more people sharing a limited resource pie; vii) human resources – a lack of human capital for socio-economic advancement; viii) governance – the need for changing institutional approaches to resource management and for safeguarding human rights, democracy, peace and security; ix) economic policy and management – the need for a stable macroeconomic environment to unleash private initiative and entrepreneurship; x) regionally and globally shared natural resources – the risk of increasing competition for regional resource access and the adverse local impacts of global environment change; xi) knowledge for sustainable development – the need for harnessing existing knowledge and generating new knowledge; and xii) culture, communication, attitudes and lifestyles – the need to develop a shared vision and values for sustainable development (Krugmann, 2001; Krugmann, 2000a).
With regard to point xi), Krugmann (2001) states: "Knowledge is essential for SD. A great deal of relevant knowledge already exists, but there is a risk that existing knowledge is not accessible, shared widely or managed well and hence does not optimally contribute to SD. It is important, however, to recognise that there are distinct systems of knowledge which must be handled differently to contribute to SD". At least three knowledge systems can be distinguished: knowledge in the public domain; intellectual property in the private sector; and local 'informal' knowledge (often called indigenous knowledge) at the local community level. Each one of them must be harnessed in a distinct fashion for Namibia to move toward sustainable development.

[37] They are: Poverty Reduction; Income Distribution; Environment and Sustainable Resource Management; Gender and Development; Government Services & Public Administration Improvement; Information and Communication Technology; Research, Science and Technology; Labour and Employment; Development Partnership with Civil Societies Organisations, Community Based Organisations and Non-Governmental Organisations; Decentralization; Divestiture and Private Equity Participation in Public Enterprises; Regional Economic Integration; Development of the Private Sector; Public Sector Management; Parliament and Consolidation of Democracy (Republic of Namibia, 2001).

[38] Performance indicators inter alia include (Republic of Namibia 2001:517): Budget for town planning schemes, budgets drawn up and approved, Number of new planners meeting demand in town and regional planning, Regional Councils use guide plans for development and land use planning, Number of Traditional Authority offices supported, and Number of best practices in LED initiatives communicated in co-operation with ALAN.

[39] To strengthen coordination mechanisms, the following is proposed: As suggested in NDP II and Vision 2030, decision makers with sustainable development objectives in mind need to take a long term view of development planning and ensure that this planning is implemented in an integrated, multisectoral manner; and PPP for improved efficiency regarding service provision and resource management. The Government has placed high importance on the development of such smart partnerships, which then allows government to focus on its core functions of planning, policy development, monitoring, regulation and control. Community organisations should be empowered to coordinate support agencies as part of a "needs-driven" development process, and an enabling and incentives-based environment must be created for this to work efficiently. NGO's need to coordinate closely with each other. Local Agenda 21 programmes must be encouraged; and service providers and programmes must network and collaborate so that especially rural communities, receive "one-stop" services in a more integrated way (Republic of Namibia et al., 2002:18; MET (2002).

[40] Namibia is sub-Saharan Africa's driest country. According to Lange (1997), water is the single most important constraint to development. Consequently, water management policy is a critical component of Namibia's development strategy. Rainfall is not only low, but extremely variable over much of the country and droughts are a common occurrence. In addition, Namibia's high temperatures result in high rates of evaporation of rainfall. It is estimated that only 1% of annual rainfall contributes to groundwater recharge and only 2% is retained in reservoirs (DWA quoted by Lange, 1997). Water is supplied from three natural sources: groundwater, perennial surface water, and ephemeral surface water, but these sources vary in terms of location, renewability, quality, and reliability.

[41] The division of Namibia into the 13 regions is a financial burden for the Namibian taxpayers, who have to pay for the thirteen bureaucracies. The small economy and the low population figures do not provide a viable option for the existence of 13 bureaucracies. Namibia is the country with a very high ratio of population to number of regions, i.e., 1,8 million people and 13 regions. The neighbouring South Africa has a population of more than 42 million, but only 9 provinces. Germany with a population of 80 million has 16 Bundesländer. The USA with 280 million residents has 50 states. The United Kingdom does not have a regional government in place. If the economic strength would be taken into account, this would be even more negative.

[42] This includes the physical, social and economic characteristics of such region, the distribution, increase and movement and the urbanization of the population in such region; the natural and other resources and the economic development potential of such region; the existing and the planned infrastructure, such as water, electricity, communication networks and transport systems.

[43] This was pointed out during the first two Namibian delimitation commissions in 1990 and 1998 (see Wienecke, 1990; Wienecke 1998).

[44] The organisation proposed, as part of their terms of references inter alia the following issues: "Promote sustainable development in an integrated and holistic way, ecologically friendly, socially fair, economically feasible, to benefit present and future generations. In communication with the broad public identify and tackle environmental, social, cultural and economic problems in our area. Fulfil [sic] the right to development so as to equitably met development and environmental needs of present and future generations. Develop projects with an emphasis to more sustainable use of available resources, use of renewable energies and use of technologies that area adapted to environmental needs as well as to relevant cultural conditions. Alter unsustainable patterns of production and consumption to ensure the eradication of poverty and to end the abuse of the Earth".

[45] The public concerns include: the provision of good sanitary and hygienic conditions and street lighting to discourage criminal activities, mobility requires a holistic approach that improves the attractiveness of forms of transport other than the private car, such as walking, cycling, bus and taxi facilities, deforestation may be combated by promoting alternative energy sources such as electricity and charcoal, education to promote clean living standards should be taught to the youth and adults should set examples, communities should be encouraged to take ownership of their environment and especially public areas in the various neighbourhoods, and the appearance of the city should not be taken for granted. Projects should be assessed in terms of their impact on the visual quality of life.

[46] One of the aims of LA 21 in Walvis Bay is to promote sustainable livelihoods. There is a need for fresh produce for projects running at the Walvis Bay Multi-Purpose Centre (WBMPC) at Kuisebmond. To that end, a vegetable garden at the centre was started (The Namibian, 28 June 2002). The Municipality plans to provide seeds and expertise from its horticulture section, while the Youth Forum and members of a counselling group for HIV positive people will tend the garden. The vegetables will be available for the soup kitchen for AIDS orphans and other vulnerable children and members of the counselling group at the centre. The rest will be sold to the community.

[47] The following themes are considered as part of the Local Agenda 21: Capacity Development in Environmental Management; Walvis Bay Nature Reserve Management Plan; Promoting Water Savings; Paper reuse and recycling; Raising Environmental Awareness with the Green Corner; The Green Garden; Environmental Education in Schools; Municipal Bicycles; Recreation and Conservation in the Coastal Plains and Dune Belt; Recycling.

[48] The others are: Managing Walvis Bay's Ramsar Wetland Site, Reducing Marine Pollution, Understanding and Solving Ground Pollution Issues, Managing Off-Road Driving and other Recreational Activities, Improving Sanitation Facilities for Shackdwellers, Educating Residents, about Walvis Bay's Environment and its Ecosystems (Municipality of Walvis Bay 2002:11-12).

CHAPTER 4 - TESTING THE HYPOTHESIS

1. Introduction

The theoretical basis of this study was presented in Chapter 2. In Chapter 3 empirical aspects of implementing sustainable development nationally and internationally were examined. This chapter tests the hypothesis by means of four sub-hypotheses. The main hypothesis has been divided into four sub-hypotheses in order to examine specific components which relate to sustainable development.

The testing of the hypothesis has to demonstrate whether 1. Namibian policies promote a holistic approach, or whether they are merely endorsing a fragmented course of action, and 2. whether the four components constituting sustainable development, as identified in the study, are reflected in policies and the implementation of Local Agendas 21.

2. Sub-hypotheses

2.1 Sub-Hypothesis 1 – Namibian policies

The four components (economic, ecological, social and ethical) for the implementation of sustainable development and their principles are neither integrated into a holistic framework, nor reflected in the Namibian government's *policies.*

Available Namibian policies which could influence the implementation of sustainable development efforts, range from the Green Plan to decentralisation and to the National Development Plan (NDP II) which is considered to be the guiding document for development efforts, for a period of five years.

The sub-hypothesis is tested by examining certain key national policies which are relevant to this study, to illustrate their support for international goals and the objectives of sustainable development efforts. Furthermore, the influence of international endeavours on national policies will be considered in order to assess

the interaction between the two levels.

Information was gathered during meetings (e.g., of the National Habitat Committee, during the preparations of NDP II) by taking notes of the proceedings to have a record available, active participation and observations made at national (and international conferences (e.g., UNCHS and UN-Habitat) by participating in the drawing up of chapters, sections or drafting resolutions. Furthermore, the examination of secondary documents (e.g., NDP II and the Green Plan) and pronouncements made internationally provide a comparison between international and national courses of action. One-on-one interviews were conducted with specialists to obtain in-depth information. In cases where no specialist opinion was required for the evaluation of a particular section or theme, available primary and secondary resources were consulted.

2.2 Sub-Hypothesis 2 – Generic functions

Generic functions **of local authorities have not been brought in line with the principles of sustainable development.**

In order for local authorities to implement new policies and strategies, the overall administrative framework has to be transformed to enable the organisation to support the changes envisaged. Discussions with officials, interviews and documents provide insights into whether amendments with regard to the generic administrative functions have been put into practice or are expected as part of the implementation process of Local Agendas 21. In addition documentation in the form of speeches or presentations were obtained from the MRLGH.

Available documentation offered relevant information on projects and policies, such as WELA which was supplemented by written communication and oral information

received from officials with specialised knowledge. The collected data and information was examined according to the various generic functions to evaluate each generic function with regard to its contribution to the implementation of sustainable development. Data was also obtained from the Auditor General's office in the form of reports which provided insight into the financial situation of local authorities.

2.3 Sub-Hypothesis 3 - Governance

Current *Governance* of local authorities does not reflect the objectives and principles of sustainable development.

Sustainable development is linked to the aspects of governance, good governance in particular. In this regard normative as well as empirical issues have to be considered, for example, governance at central, regional and local level is characterised by sustainability, decentralisation, equity, efficiency, transparency and accountability, security, civic engagement and citizenship.

One-on-one interviews with officials and documents provided by them, presented information on whether good governance is playing a part in the implementation of Local Agendas 21. Attendance of meetings organised by the Windhoek Municipality enabled observations on the concerns expressed by community members and the type of information disseminated by municipal representatives.

2.4 Sub-Hypothesis 4 – Implementing Local Agendas 21

Practical examples of implementing sustainable development on local level, such as *Local Agendas 21*, do not embrace all four components required for the implementation of sustainable development.

Dialogues with municipal officials were conducted to obtain details on policies and activities under way that relate to Local Agendas 21. Participation in workshops, meetings and conferences provided insights into the processes and opinions of

organisers and participants. Observations were recorded during these gatherings on national and international level. Documents were acquired, when available, from those involved in the implementation of projects or programmes to obtain information from Namibia and international examples. Newspaper articles complemented certain issues discussed.

In order to evaluate how Namibian policies are influenced by international agreements and protocols, linkages and interfaces between Namibia and international agencies are evaluated to determine whether the four components identified in the study are embraced internationally in order to explain the Namibian position, as expressed in official documents. The latter reflects the stance of government.

Visits to Nakuru and the UNCHS/UN-Habitat sessions in Nairobi, Kenya, presented opportunities to discuss and visit projects in progress which are considered as forming part of the implementation of sustainable development. Interviews with officials involved in the Nakuru project and observations made during the visit offered first hand understanding of the local efforts.

3. Testing the Sub-Hypotheses

3.1 Testing Sub-Hypothesis 1: National policies and sustainable development

3.1.1 Economic issues

Local authorities cannot operate in isolation. Central government policies and international agreements may influence policies and activities on local level. Hence, the multi-faceted character of institutional relations requires a multi and inter-

sectoral approach in terms of policy implementation. National Development Plans are regarded as a major instrument of governments to indicate the course of action a government intends to take over a short period of time, usually five years. Therefore it is a supportive document to assess the issue of implementing sustainable development. NDP II documentation has indicated that the link between environment and development requires more emphasis and must be acknowledged as a pivotal management objective in order to play an important role in poverty reduction, sustaining economic growth and improving human well being (see chapter 3).

The NPC clustered the various sectors by combining them as follows in order to formulate four Cluster Sector Vision statements: 1. Natural resources (agriculture, water, fisheries, forestry, wildlife and tourism); 2. Trade and Industry (mining, energy, trade and industry); 3. Social (health, social welfare, labour, and education); and 4. Infrastructure (communication, transport, housing, and local government). Three of the four vision statements referred to sustainable development. Only the social cluster did not incorporate the term[1].

The NDP II concentrates on economic development and the related aspects. It starts with an overall review of the international and domestic economy (NPC 2000c, chapter 1 and 2). In chapter 3 the national development objectives are described:

- to reduce poverty,
- to create employment,
- to promote economic empowerment,
- to stimulate and sustain economic growth,
- to reduce inequalities in income distribution,
- to promote gender equality and equity,
- to enhance environmental and ecological sustainability, and
- to combat the further spread of HIV/AIDS (NPC no date:50).

There is an overlap of certain objectives which contain economic as well as social issues. The predominance of economic factors is obvious which is reinforced by the Vision of NDP II: “Sustainable and equitable improvement in the quality of life of all the people in Namibia” (NPC 2000c:3-7; NPC no date:50). The last document also states that this “long-term vision will partly be addressed through the implementation of NDP2 National Development Objectives” (NPC no date:51). This statement is confusing as NDPs are medium term and not long-term policies. Furthermore, it is stated that NDP II is partly addressing the long-term vision. As pointed out elsewhere, sustainability is a long-term concept that cannot be reduced to a short or medium term solution. If the objectives are divided into the components of sustainable development according to the conventional interpretation, the following picture emerges:

ECONOMIC	**SOCIAL**	**SOCIO-ECONOMIC**	**ENVIRONMENT**
to create employment	to promote gender equality and equity	to reduce poverty	to enhance environmental and ecological sustainability
to promote economic empowerment	to combat the further spread of HIV/AIDS	to reduce inequalities in income distribution	
to stimulate and sustain economic growth			

Table 4.1 NDP II objectives (source NPC no date:51-52)

Among the explanations of the different objectives the following is presented: “[t]o promote economic prosperity through high and sustainable economic growth and development” (NPC no date:51). This clearly indicates that the relationships between economic growth and sustainability are not understood at all by the NPC and Cabinet that approved the NDP. The misapprehension of sustainability is also included in the objective to reduce poverty. The NPC (no date:51) asserts that during the NDP II period a new pattern of Namibian growth is needed. This refers to a pattern that holds the promise for simultaneously and directly reducing poverty

while at the same time accelerating economic growth. Furthermore, it is claimed that in the long-term investments made in human resources and infrastructure development will promote economic growth and prosperity.

During the third preparatory workshop for NDP II it was pointed out that sustainable development is not understood by many (personal notes, 6 June 2000). Therefore one of the consultants introduced the meeting to the concept “sustainable development” by referring to the definition of the Brundtland Commission as the basis for NDP II. He also pointed out that short-term development thinking should be avoided. Instead the big picture needs to be considered with regard to the different environments, such as social, institutional, ecological, financial and economic. However, during the proceedings of the workshop, no further discussion on sustainable development and its implications were conducted (personal observations). The emphasis of the subsequent discussions related to issues in the various sectors.

These preparatory workshops were the last time the concept sustainable development was considered in discussions and in a few background papers. It has been observed that during the final workshops the issue of sustainable development was mentioned only once. During the final deliberations which took place between 28 February and 2 March 2001, a question referred to the need for a national definition of the term (personal observation), as only certain sectors had included it in their mission statements. The Permanent Secretary of the National Planning Commission explained, that a national definition of the concept is not necessary, as each sector has incorporated its own definition.

Local Agendas 21 were touched upon in the preparatory workshop as an important urban development aspect, but the proposal was not incorporated as a national issue of importance in the NDP II. A housing sector issues and options background paper pointed out that “an understanding of the concepts sustainable development and the associated concept holistic development, their meanings and implications have to be promoted through education for sustainable development which will involve decision-makers, professionals and communities. This has to be placed in the context of continuous or life long education” (NPC 2000b:7). The paper points out, under the heading “*Issues and options to be addressed in NDP II*”, that only a few Local Agendas 21 were so far initiated in Namibia, for example, in Windhoek. “This has been, so far, a very insignificant endeavour” (NPC 2000b:8).

The National Plan of Action (Republic of Namibia 1999b:70) summarised a number of issues which have to receive attention in order to promote more sustainable development of housing and human settlements such as capacity building for the implementation of the Habitat Agenda and Local Agendas 21. These examples show that despite attempts to raise the issue of sustainable development in general and Local Agendas 21 in particular, no effort was made to support the idea on a higher level of government. This also demonstrates that an understanding of the concept sustainable development and the related issues is not widespread, as was experienced during the various preparatory NDP II workshops.

At an intercluster workshop on 9 June 2000, the Permanent Secretary of the NDP pointed out that a major shortcoming of the first NDP was that no cross sectoral topics were included (personal notes, 9 June 2000). He also referred to the depletion of non-renewable resources, the fragile environment found in Namibia and

the difficult climatic conditions. A short term advantage is unsustainable, whereas long-term advantages have to consider the costs to the economy. Sustainable development has to incorporate an economic perspective.

NDP II reflects the focus of Namibia's national economic concerns in its support for Vision 2030 which aims at transforming the country from a developing, lower-middle income to a developed, high-income country. Sherbourne, who highlights the fact, that since independence the average incomes in Namibia rose by barely 1% a year, illustrates how unrealistic this vision is. "At this rate we will still be a lower-middle income country by 2030 and it will take Namibia another 150 years before it can be classified as a developed or high-income country by international standards" (Sherbourne 2004:4). Other goals of this vision are even more idealistic, such as the statement that manufacturing and services are to constitute about 80% of Namibia's GDP. Exports of processed goods should be not less than 70% of total exports (Republic of Namibia 2004:39).

The economic emphasis of government policies is therefore obvious: the promotion of the industrial sector is seen as crucial. This objective is indicative of the lack of understanding on the highest level of government of what the term sustainable implies. The present state of non-sustainability is the outcome of the dominating Western based economic and political systems. However, the Namibian government and its agencies, such as the National Planning Commission, do not acknowledge this. A continuation of unsustainable policies can only result in failure.

Middleton and O'Keefe (2001:57) point out, that industrial development in poor countries should not follow the destructive path taken by industrial nations.

However, Middleton and O'Keefe add: "[a]dmirable rhetoric is rarely lacking, but it is scarcely surprising that politics and capital are unengagingly mimetic, one of the other. Both operate in closed, short-termist cycles" (Middleton & O'Keefe 2001:58). Politicians are trapped in what they see as the need to satisfy a curiously blind electorate and are doing nothing, for fear of the next election which might alienate their support. Capital is trapped in the need to deliver returns on investment calculable over even shorter periods than those allowed to politicians. Both NDP II and Vision 2030 have confirmed this perception. For purposes of ensuring that development is sustainable in terms of the NDP II, the focus is on government expenditure and the decrease of development resources in real terms (Republic of Namibia 2001:xiii).

The interpretation contained in government policies that sustainable development comprises economic, social and ecological components, in addition to the formulation of the development objectives of the various sectors in NDP II, is confirmation that a non-holistic approach is pursued. During an ecological sanitation conference in Windhoek a government employee stressed that Ministries do not communicate with each other, departments within Ministries do not share information, and even neighbours in the same department do not know what the other is doing (personal notes 10 June 2004). This begs the question: how can such an anti-holistic set-up promote sustainability which requires a holistic approach. This is also the reason for pursuing the same fragmented Western philosophy of isolating elements, i.e., parts of a holon, and basing an assessment on these isolated parts. This view percolates through to the lower levels of government such as local authorities.

The National Habitat Committee's *Country Report for Istanbul +5* focuses on two economic issues, namely SMEs (small and medium sized enterprises) and PPP (public private partnerships) in order to stimulate employment opportunities (National Habitat Committee 2000:26-29). These two issues are vital as they relate to human settlements and sustainable development of populations in Namibia (National Habitat Committee 2000:26). Recommendations in the report include encouraging female participation, involving banks and financial institutions to support the SME sector. With regard to Private Public Partnerships, deregulation policies to enhance private sector participation, collaboration in land provision and housing for the middle and upper income groups, and an increase in the patronage by government and the private sector in training and education, for example, vocational training and science and technology are amongst the suggestions made (National Habitat Committee 2000:28). The suggestions do not represent a deviation from the conventional economic approach.

The National Assessment for the WSSD does not deliberate on economic issues, except those relating to the community based natural resource management policy, that aim to create enterprises and income generating opportunities in rural areas (Republic of Namibia et al. 2002:15). Furthermore, some elements are mentioned which can play a role in economic activities. They include pollution control and waste management, water resource management, fisheries, the drought policy and strategy. One critical issue referred to in the document is the challenge to ensure that development and industrialisation are sustainable. However, this issue has not been elaborated. The assessment bases the definition of sustainable development on the Brundtland / UNCED formulation, i.e., "development that meets the needs of

the present without limiting the ability of future generations to meet their own needs" (Republic of Namibia, et al. 2002:1).

Namibia's Green Plan does not directly address economic issues. It describes some economic aspects such as sustainable water management, environmental sustainability in agriculture, sustainable fisheries, sustainability in the forestry sector, sustainable management of wildlife, sustainable tourism industry, mining and sustainable development, the role of trade and industry in sustainable economic growth and sustainable development, education and sustainable development, and poverty – a major threat to sustainable development.

The Green Plan also claims that the trade and industry sector aims to achieve both efficient economic performance and ecological sustainability (Brown 1992:80). Further assertions include that the enforcement of stringent environmental regulations of product standards can restrict market access and that standards should neither be discriminatory nor a disguised barrier to trade (Brown 1992:82). The document also asserts: "[t]echnology is both the source of assaults on the ecosystem and the potential solution to improvement in environmental quality". The green plan advises that environmental policies should deal with the root causes of environmental degradation whilst taking care that environmental measures do not result in unnecessary restrictions to trade (Brown 1992:83).

Unsustainable practices are not addressed by the NDP II. As Krugmann (2000a) points out, strong economic growth which is one of Namibia's four national development objectives, poses a threat to sustainable development because it may lead to an over-exploitation of the country's limited and fragile renewable natural

resource base. Over-exploitation is reflected in processes such as land degradation, water over-consumption, erosion of biodiversity, and fish stock depletion. The risk of resource over-exploitation is high in Namibia because of the country's overall economic activities being concentrated in the natural resources (primary) sector. Any further economic growth puts immediate extra pressure on the country's limited and fragile natural resource base.

One of the most contradictory statements in the Green Plan is found in the section dealing with mining. Sustainable development of Namibia in general and of the mining industry in particular, has to recognise that high priority must be afforded to environmental protection and management (Brown 1992:77). Furthermore, environmental accountability at the highest management and policy-making level has to be established. Clarke (2002:182) argues that the intertidal coastal zone has been devastated by the practice of "using compressed air to blast away silt and, *en passant*, sea life, in search of diamonds".

On land, the cavities and barren landscapes created by mining in Namibia (diamonds and uranium for instance) are not targeted for rehabilitation. Costs for shallow open cast coal mining in South Africa were R100,000 per hectare in 2002 (Clarke 2002:227). It seems impossible to expect, especially in the case of open cast mining operations operating in a fragile natural environment such as the Namib, once they have ended and the big holes have been filled up and covered with soil, that Nature will be re-established as if nothing has happened. "After all, nature had had millions of years to experiment with a balance of plants and animals that was suited to the soils and climate" (Clarke 2002:211). Ecological problems created by humans cannot be solved that easy.

3.1.2 Ecological issues

Secondary sources indicate that policies addressing sustainable development emphasize environmental issues as long as they do not interfere with human priorities. This is in line with international views and attitudes[2]. According to the NDP II, environment and natural resource management are cross-cutting issues that directly affect the lives of all Namibians. “The quality of life and long-term economic growth and development depend on maintaining clean air, clean water, productive land, and a healthy and diverse natural resource base. Long-term growth and development also depend on ensuring that renewable natural resources are used sustainably, i.e., that they are not used now in a way that compromises the ability of future generations to make use of these resources” (Republic of Namibia 2001:595). The environmental sector strategies are based on the following proposals:

- To promote the creation of the conditions necessary for present and future generations to gain optimal benefit from the equitable and sustainable utilisation of Namibia’s renewable natural resources,
- To promote the protection of biotic diversity, the maintenance of essential ecological life-support systems, and the establishment of sound environmental management systems (Republic of Namibia 2001:603-604).

NDP II also refers to the limited resources in Namibia:

> *“Namibia's arid and fragile environment poses limitations to economic growth. Sustained growth and development can lead to the unsustainable use of natural resources, either through over-utilisation or inappropriate utilisation. To prevent such a situation, the Government will strive for sustainable economic growth and development by putting in place a policy and legislative framework for sustainable and equitable use of natural resources and a sound environmental management. Environmental and sustainability issues will be taken into consideration at key planning levels - policy, sector development, regional planning, programmes and projects”* (NPC no date: 56; NPC 2000c:3-12).

One example is water. NDP II recognises that “[t]here is increasing competition over the shared natural resources. The competition arises from scarcity of water because all of the country's perennial rivers originate in neighbouring countries” (NPC no date:57). Namibia suffers from reduced water quality and quantity as a result of

economic activities of neighbouring countries. Besides external factors there are internal aspects such as cost recovery. The NPC states:

> *"Pricing of consumptive use of natural resources (e.g., water and energy) will, where economically feasible and socially acceptable, aim to recover the full financial cost of supplying such resources, and to reflect their scarcity value so as to promote more efficient resource use. To that end, institutional arrangements will be pursued to promote integrated and co-ordinated approaches to sustainable development"* (NPC no date: 56; NPC 2000c:3-12).

The payment for services is being challenged by a group of destitute residents in Windhoek who are trying to compel the State to provide free water and sanitation. The local authority, the MRLGH, the government and Namwater, are amongst the defendants[3]. The Deputy Minister of the MRLGH confirmed the challenge and the involvement of the Ministry (30 June 2004, personal communication).

NDP II is narrowly concentrating on economic development, i.e., one holon. The other components receive attention but are connected to the main goal: economic growth. Therefore it can be concluded that NDP II is neither holistic nor supporting sustainability in any way. Declarations made, for example, with regard to the environment, are typically vague and reflective of the international position and platitudes. One example is the strategy to promote environmentally sustainable mining activities (NPC 2000c:20-18; NPC no date:336).

One outcome of the Namibia Green Plan is the formulation of the Environmental Management Bill. In an interview, an official pointed out that the Bill has been under preparation for about seven years. The proposed establishment of a Sustainable Development Commission, and in particular the position of the Environmental Commissioner is worthwhile attempt. The Commissioner would have the power to override a particular decision made by a Minister regarding an envisaged project to go ahead (Mansfeld, 2003). This means that Ministers do no longer yield the power

to take decisions on the allocation of licenses needed by certain projects such as mining, construction of dams and harbours, and those in agriculture on government land. Namibia's Environmental Assessment Policy mentions 54 activities that will require an environmental assessment or EA (Republic of Namibia, 1995). Currently an Environmental Impact Assessment (EIA) is required for these projects, although the DEA may approve or disapprove. In the latter case, the Minister can reject the advice given out of hand and approve the project. No political office bearer in Namibia is prepared to lose his/her dominating powers. One could argue that this is the reason why the Bill has been delayed for seven years. It is about power, not about sustainability.

Therefore, the initiation of new ideas, projects or policies requires a thorough understanding of the issues involved. A survey regarding attitudes and opinions pertaining to environmental assessments executed by the Department of Environmental Affairs in 1997 shows that those involved in funding EAs are well informed. Examples include company executives, consultants, NGOs and donor agencies (Tarr 1997:18), but also government agencies, local authorities, and parastatals (National Habitat Committee 2000:24). However, the Committee points out, that there is still reluctance to adopt EAs within the private sector. Available data indicates that traditional leaders, government and local authority officials are not much involved, not to mention their low awareness about the EA. Educationists and journalists are relatively ignorant of EAs and of the initiatives in this regard (Tarr 1997:18). Tarr argues that a similar survey conducted a decade earlier would have shown that almost no-one would have heard of EA. Awareness is likely to be higher in future as the initiative becomes better known.

Local Authorities are not part of the DEA's jurisdiction, and do not have to comply with the regulations. However, they may initiate an EA for large projects. During an interview, Mansfeld (2003) confirmed that the DEA is prepared to assist any local authority in evaluating such a proposal, if requested. An exception is made for projects that have national impact and therefore require an EA. These include those involved in water intensive industries, major pipelines, effluent plants, bulk distribution facilities, and waste disposal sites.

The *National Plan of Action* (National Habitat Committee 2002:25) points out that the City of Windhoek's Local Agenda 21 programme experiences, *inter alia*, relatively poor participation by local communities in environmental issues, poor adherence to environmental management plans, and confusion on the required level of EIAs on new urban development projects. Funding for the implementation of EIAs on urban development is available, although only on to a limited extent.

EAs have a limited impact and support in Namibia, although the requirements of international donors do exert to a certain degree pressure before granting funds (National Habitat Committee 2000:24). Both, the country report (National Habitat Committee 2000:25) and the national plan of action (National Habitat Committee 2002:25) point to the need for a national capacity for the management and implementation of EAs, and the lack of competition in the field of environmental assessment studies, respectively. Therefore environmental planning within the government, investments in environmental education and awareness, and the establishment of a framework for private sector environmental responsibility are suggested (National Habitat Committee 2000:25). The implications are that the environment could be sacrificed for economic interests.

The National Habitat Committee's documentation also refers to aspects of environmental management and mentions that one of the crucial issues in Namibia is water management. At present no apex branch of the government has been made responsible for this task (National Habitat Committee 2000:21). National Habitat Committee's meetings and deliberations have over the years, since its creation in 1996, not strongly been influenced by considerations surrounding the natural environment (personal observations as participant).

The contributions to the WSSD show a clear environmental focus. The absence of urban issues, with the exception of a reference in the headline to the impact of urbanisation (Republic of Namibia et al. 2002:32), reflects the one-sidedness of the document. Ecological and environmental aspects elaborated in the document, include solving Namibia's land issues by choosing the most viable land–use options; encouraging ecologically sound land distribution and resettlement; and developing and maintaining economically and ecologically sound systems of tenure over all natural resources and combating desertification. In addition, there is a need to further improve coordinated planning and implementation of actions amongst different stakeholder institutions, particularly with regard to land-use planning and natural resource management.

Another issue is water demand management and the reduction of the water stress (Republic of Namibia et al. 2002:33-34). Management of human, agricultural and industrial water demand is required as water is Namibia's most limiting resource. As such, it has received considerable attention, both in terms of infrastructure development and supply management. Among the activities carried out are recycling, separation into potable and "grey" water, pricing structures, devolving

responsibility for water points to rural water committees, research on water use in different sectors, compiling water accounts, encouraging water-saving devices, and carrying out necessary water awareness campaigns.

During the start of the Local Agenda 21 workshop, Windhoek, in 1999, the proposal to abolish waterborne sewer systems was deliberated. One City Councillor pointed out that this system “was so nice” and therefore should be retained (personal notes, 1999). The critical relationship between availability of water in Namibia in general and in Windhoek in particular, and the use of this resource was clearly not accepted. The parasitic and unsustainable use of water by Windhoek’s urban area was not and is not a major concern by residents and officials, except during times of drought (see Figure 3.7 in Chapter 3). Sustainable usage would mean that only the amount of water available in the Windhoek area is utilised, not from far-away sources. Water levels have been reported as falling on farms in the Karstveld as water is extracted and channelled to Windhoek. Trees are dying, as their roots cannot reach the groundwater anymore. No concern for the environment has been raised in this regard! “No permanent change in lifestyle is required of people using water” (Jacobson, et al. 1995:55). However, not only the Windhoek municipality, but also the government and all other local authorities in Namibia, sometimes with the help of donors such as the EU, are promoting waterborne sewer systems as the solution (Otavi, Karibib, and Karasburg), thereby totally disregarding the limitations of water as a result of the climatic conditions. This reflects the double standards that are applied when human needs take over as a policy priority.

In 2002 the municipality embarked upon the construction of dry sanitation systems due to the very high costs of establishing a waterborne system in ultra-low income

areas, for example, Okahandja Park (personal observations and communication with consultants, 2001). The projects aimed at reducing the infrastructure costs, not to save water.

3.1.3 Social issues

The NDP II articulates the following social sectors: population, health and sanitation; education, training and culture; developmental social welfare services; and youth and sports development as part of the reproductive health programme. Namibia's country policy on population seeks *inter alia* to:

- Alleviate poverty;
- Promote sustainable development; and improve the health and welfare of the people by reducing incidence of morbidity and mortality;
- Ensure a balanced development of rural and urban population in order to curb excessive urbanisation;
- Ensure proper utilisation of resources of the environment; achieve the integration of the country's population factors in development planning (Republic of Namibia 2001:376)[4].

Reducing poverty and the reduction of inequalities in income distribution in Namibia is directly linked to economic growth. "The government will strive to sustain higher economic growth with the aim of reducing income inequalities, in particular to increase the income of lower income households. The government will ensure equality of opportunities for the nation so as to promote the welfare of the people" (NPC no date:52).

The population issue is also affected by the occurrence of health problems, such as HIV/AIDS and malaria. The direct and indirect costs of HIV/Aids are estimated to have totalled N$8.5 billion by the end of 2001 (Republic of Namibia 2001:378). Since 1996 HIV/Aids has become the main cause of hospital death and in 1999 accounted for 23% of all reported deaths. Another major health problem is Malaria,

as it is rated as the second main cause of illness among children under the age of five years and is the main cause of illness among adults. A concern is the spread of malaria into areas which were not affected in the past, especially the Omaheke region.

With regard to the education sector, the NDP II states that the sector aims to provide equitable access to education, arts and culture opportunities (Republic of Namibia 2001:423). Furthermore, all learners should receive appropriate support which enables learners to achieve knowledge, skills, values and competencies in promoting self-development. Other aspects include responsible citizenship, further learning, ability to contribute to sustainable development, and productive and meaningful life. Life-long learning should ensure that adequate, appropriate and relevant information resources are available to learners throughout the country (Republic of Namibia 2001:424). To support these efforts, physical facilities, teacher support and the coordination and management of the vocational educational and training system have to be considered. The National Assessment for the WSSD refers to the aspect of environmental education in Namibia, pointing out that efforts are starting to emerge as a result of cooperation between Ministries, NGOs and donor agents (Republic of Namibia, et al. 2002:29). According to the document, a course on natural Economy was introduced for certain school grades (Republic of Namibia, et al. 2002:30). No references are found in the documents issued by the National Habitat Committee.

With regard to social issues, the Green Plan refers to the disparities between rich and poor in Namibia (Brown 1992:3). It points out that the concerns and attitudes of these two groups towards the environment are as different as their incomes. For the

poor the environment supplies essential renewable resources that meet their basic requirements for food, shelter, medicine, fuel, agricultural implements and fencing. The rich live a life that is buffered from any environmental realities as they can buy what they need, even if it is not produced in Namibia. The Plan argues that they are perhaps less sensitive to changes in the environment, or they are involved at an intellectual, armchair level. Another aspect touched by the document is that decision-makers inevitably have concerns and perspectives that differ from the poor majority. The danger exists that development initiatives may simply placate the consciences of the rich and not benefit the poor.

A social issue which also affects other concerns, is human population pressure. The Green Plan stresses that the low population density in the country creates a false impression with respect to this problem that besets national aspirations for development (Brown 1992:2). As Namibia is the driest country in Africa south of the Sahara, its aridity is coupled with relatively low primary and secondary production potentials. The low population density reflects the *low human* carrying capacity of the country. Therefore, with a population doubling in about 23 years, Namibia is faced with just as severe a threat from overpopulation as the majority of underdeveloped nations, especially in the northern regions. Rapid urbanisation is not a solution, but a growing problem related to non-sustainable development.

Laker refutes the myth that Africa is not overpopulated as the continent had only 8.6 per cent of the world's population on an area that constitutes 23 per cent of the landmass (quoted by Clarke 2002:199). These statistics do not take into account the poor soil quality and therefore the low human-carrying capacity. No less than 25 per cent of Africa is "non-used" wasteland such as the Sahara. This represents half of all

the non-used wasteland in the world. Furthermore, many of the higher rainfall areas are mountainous and unfit for crop production. According to van der Merwe (1983:section 9), in Namibia 30.6 percent of soils are suitable for agricultural purposes, whereas another 1.2 per cent have a moderate-low potential. This illustrates Laker's point that overpopulation cannot be determined by simple statistics.

3.1.4 Ethical concerns

Sustainability and sustainable development are normative concepts and are based on an ethical premise of inter and intra-temporary distributional justice (Heidiger, 2001). Diverse initial scientific stages and ethical views lead to varying interpretations and definitions. Barbier (quoted by Heidiger, 2001) describes sustainable development as a normative principle with the objective to maximise across a set of environmental, social and economic system goals through an adaptive process of evaluating trade-offs which take into account that individual preferences, social norms, ecological conditions change over time, and vary in different locations.

A few attempts have been made in Namibia to include ethical issues. One example is the establishment of an Efficiency and Charter Unit in the Prime Minister's Office in June 1997, as the custodian of the Public Service Charter (Republic of Namibia 2001:774), and to produce a Public Service Charter (Republic of Namibia 2001:648).

> *"A Service Charter is a simple public document, developed in consultation with staff and customers that continually grows with an organisation. It sets out the standards of service customers can expect. A Charter is a strong performance measurement and accountability tool as it focuses on customer service outcomes" (Australian Public Service Commission, 2002).*

Although local authorities are the lowest level of government, the Charter does not apply to these authorities. A few local authorities have included vague statements in their official visions proclaiming something akin to an ethical standard, such as “Render affordable, effective services and infrastructure to our customers” and also “Promote a user-friendly culture” (City of Windhoek, no date).

The Wages and Salaries Commission (WASCOM) in 1995 noted that the civil service did not provide the public with quality services (Ausiku 2002:2). WASCOM recommended *inter alia* that government should formulate a code of ethics to streamline the conduct and discipline of the public service (Ausiku 2002:1). The Namibian Public Service Charter has the following nine principles (Ausiku 2002:19) which could be also be applied to local authorities:

- Standards
- Information
- Courtesy and helpfulness
- Consultation and choice
- Accountability
- Openness
- Non-discrimination
- Quality of service
- Value for money

Ausiku’s study shows that the process of developing the charter is very slow (Ausiku 2002:51). Among the obstacles are the lack of monitoring the programme and the lack of commitment to implement the programme (Ausiku 2002:52). Each ministry is supposed to establish a team to formulate and implement a charter. As a result there is no consistency (Ausiku 2002:36). The findings provide another example illustrating the inefficiencies of implementing a new policy. If the national government struggles to implement one “small” policy, how can a government, national or local, implement the much more complex policy of sustainable development which requires a holistic perspective and actions?

Diescho (2000:31) points out that:

> *"At the time of independence in March 1990, there existed no well defined and effective anti-corruption and pro-good governance ethics in Namibia. What existed were three logics: to eliminate colonialism by any means necessary; to survive in the climate of dramatic and unexpected changes on the part of those who benefited from the old order; and to ensure that one's access to political power meant the end of material poverty and the struggle based on sacrifice. What is at play in Namibia today is a refrain of what has been the story of post-independence Africa where the abuse of political office for personal gain is more the norm than the exception, and civil society has neither the wherewithal nor the grammar to do something effectively about it".*

Diescho further states that "neither colonialism nor the struggle for political independence, as we have known it prepared a post-independence Namibia to be an egalitarian society where good governance rather than persons, is important" (Diescho 2000:33). The histories of oppression and liberation struggle also do not serve as yardsticks for a culture of ethics and good governance (Diescho 2000:34)[5].

At present Namibia's national and local governments do not have an utilitarian position that directs efforts towards change, i.e., from unsustainable development to sustainable development. Neither the National Assessment for the WSSD, Namibia's Green Plan, the National Habitat Committee, local authority vision statements, nor the NDP II, refer to any ethical proposition which could be interpreted as promoting a change from the current unsustainable way of economic development. This can be explained by Namibia's position which is characterised by the "blind faith" in the capitalist system, although this has so far failed to deliver its promises of wealth and prosperity for all. Instead the non-sustainable activities will be continued, thereby increasing problems such as poverty or environmental destruction. These have an influence on the question of intergenerational equity. Intergenerational aspects in Namibia are occasionally mentioned in documents as

part of the statement that development has to meet the needs of the present without limiting the ability of future generations to meet their own needs.

With the exception of some limited environmental projects and concerns, the unsustainable Western based lifestyle is not compromised. During the intercluster preparatory workshop for NDP II, one working group proposed to establish a national institute for sustainable development. This idea however, never found its way into the NDP II (personal notes, 9 June 2000).

3.1.5 Summary

Three of the four components (social, economic and environmental) are, to a certain extent reflected in Namibian policies on central or local level, but they are not integrated into a holistic framework. The statements relating to economic and environmental issues are often contradictory, for example when the exploitation of non-renewable resources is promoted and the consequent destruction of the environment are described as promoting sustainable development. An ethical framework to achieve sustainability does not exist as part of the developmental policy set-up. The Namibian policy environment relies on the fragmented international approach to development. It is moulded according to and embedded in the global economic system which determines the national priorities. The approaches are still sectoral, i.e., emphasising parts of a holarchy or certain holons. Therefore, they do not address the whole. This has been illustrated by the issue of water usage and supplies for Windhoek and waterborne sewer technology in the driest country south of the Sahara.

The continuous reference to sustainable development and the inclusion of items

relating to sustainability in official documents does not indicate an understanding and compliance by politicians, decision-makers or the public at large. Consultants draft many, if not most, of the government documents. They know what to put into official documents, as this is an international requirement. Therefore ownership of the policies by the relevant government bodies can be doubted if the number of "failed" policies and strategies are considered.

NDP II is not, despite its claims, a national strategy on sustainable development in Namibia. This is an indication of the non-holistic mindset of Namibian leadership. The lack of integration which is the result of not understanding the basic principles of sustainability and holism, and the eventual goal of becoming a high-income country, defeats the purpose of sustainability by protecting the status quo. "Too often governments perform like a team of blinkered horses all pulling in different directions, but you are forbidden by the system to remove the blinkers and get them pulling together" (Savory 2001:17). Policies in the fields of environment and ecology, and some of the activities relating to the latter, refer to some elements of the holistic approach. However they are usually limited to one part of a whole. This indicates, that the holistic nature of sustainability is not understood.

3.2 Testing Sub-Hypothesis 2: generic functions on local level

In order to achieve sustainable development, local authorities have to adjust and change generic functions to bring them into line with the economic, social, environmental and ethical requirements. If this is not accomplished, the promotion of sustainability remains illusionary. In other words everything would remain the same. The impact of "sustainable development" activities can be illustrated by examples from the two Local Agendas 21 and other activities on local and national level.

3.2.1 Policy

The objectives that a government pursues in society, the approach to issues, the intentions, plans, strategies and action plans, constitute the policy or policies of that government. The process consists of the formulation, implementation and review of the public policy. "It constitutes a functional perspective on the process of government" (Cloete 1999:15). According to Cloete, a major policy headache for any government is the policy focus which it should adopt, i.e., the prioritisation of societal issues.

> *"Policy-making is usually conceived as a neutral process which has to be protected from political influence, at least of a factional or self-interested kind. In reality, it is anything but neutral, because decision-making and resource-allocation always involve choices in favour of particular groups and priorities"* (UNCHS, 1997c).

Walvis Bay environmental policy (see also chapter 3) has a short-term and a mid-term phase of implementation. Until the middle of 2004, the policy was implemented through the currently ongoing work of the project (Municipality of Walvis Bay 2002:12) which includes[6]: (1.) the development of a detailed sectoral strategy for the Walvis Bay Coastal Area; (2.) LA 21 projects to be initiated, designed and implemented by the municipality in close partnership with residents and their associations in the effort to highlight the Priority Issues for environmental management; (3.) The Environmental Fund to commence operations in the 2003/2004 Budget Year, drawing on tariff revenues in order to provide funding for environmental management activities and initiatives, learnt from the implementation of the LA21 projects above; and (4.) an Environmental Management System to be implemented in the third year of the project for the entire municipality.

In 1999, Windhoek's municipality envisaged the formulation of a sustainable development policy to be implemented through Local Agenda 21 (National Habitat

Committee 2002:25). Communicating with three officials from the departments of sustainable development and environment showed that not one had knowledge of such a policy (personal communications 4 June 2004). According to Kozonguizi, a sustainable development policy is currently being drafted which will be much broader than stated in the Plan of Action (personal communication 7 June 2004). Due to the fact that Council has not approved the policy, no further details could be made available. The preparation of the draft policy document is so far a one-man show (personal notes National Habitat Committee meeting 16 June 2004).

3.2.2 Finance

No modern local authority can operate and function without finances. A solid financial position is regarded as being essential to ensure financial sustainability. According to Cloete (1983:116), similar to an individual, who requires money to stay alive, a local authority is dependent on money for its operations. Municipal councillors and officials have to consider financial implications of their actions on a continuous basis. The budget can be regarded as a policy instrument, as “it is the actual embodiment of a policy and the implicit policy goals” (Marais & Mynhardt 1986:133). The budget is a policy document which indicates to what extent the elected members of council implement the mandate given by the electorate. Policy-making is closely associated with the determination of priorities. This however, requires that Council members and personnel understand the principles and elements of a new initiative or policy, such as a Local Agenda 21 and the concept sustainable development.

Kozonguizi (2003) in an interview pointed out that the Windhoek Council, through the annual budget, funds the environmental office which is among other activities,

responsible for the implementation of the Local Agenda 21. Council does not provide any funding to Windhoek Environmental Liaison Association (WELA) or Local Agenda 21 projects. The members of the group provide their own funding, as Council does not want to dominate the activities carried out by WELA. Therefore, no funding for WELA projects is provided through the Council's annual budget. The very limited financial support provided by Council to the implementation of the LA 21, indicates that the implementation of a LA 21 is not a priority at all. The international support in Walvis Bay provided means that the Councils budget is supplemented by the financial support coming from overseas. The Danish Government, through DANIDA, is funding the three-year project to the tune of N$15 million (The Namibian 6 March 2002). Based on the argument by Marais and Mynhardt (1986), it could be argued that the low importance of the LA 21 is the result of the lack of interest by the public and Council. This questions the responsibility of Council to educate the electorate and to initiate pro-active policies which are formulated through public involvement and education.

During a media briefing, the Minister of the MRLGH announced that a series of induction workshops for local authority Councils has been organised to enable them to run their administrations efficiently. The Minister stated that the lack of financial management resulted in the improper utilisation of funds and corruption (Kaapanda, 2004). This has created dissatisfaction among community members.

Among the serious problems experienced by local authorities in Namibia are the arrears situation, poor budgeting and financial management, lack of financial statements (only four local authorities produce them), limited funding for capital improvement projects, and absence of costing of services provided, contribute to the

uncertain financial situation (/Goagoseb, 2003). The lack of proper records of plots and owners, the shortage of formal surveyed and serviced plots, the lack of houses and housing finance, limit the resources for additional income. This is worsened by the non-payment due to unemployment, low pensions for the elders, and absenteeism of the owners. The non-charging of property taxes and rentals are part of administrative shortcomings and insufficient oversight of Councils.

To achieve a condition of sustainability, local authorities are supposed to become financially self-sufficient. However, many local authorities in Namibia experience difficulties in collecting these payments. The Auditor General regularly reports on this problem. In Omaruru, the number of consumer debtors is continuously increasing compared to previous years (Auditor General 2002a:2). In the case of Oshakati the debt collection period for consumer debts increased from 170 days in 2000 financial year to 288 days in the next year (Auditor General 2002d:2). In Karasburg the increase in irrecoverable debts is a matter of concern as this situation threatens the cash flow of the municipality (Auditor General 2002b:2). The services debtor's reconciliation in Windhoek was only completed eight months after year-end, indicating a lack of control and supervision (Auditor General 2001:2)[7].

The trade accounts provide information on the financial situation of local authorities. A few examples will suffice to show the net profit/(loss) on the costs of sales (Auditor General 2001:6, Auditor General 2002a:4, Auditor General 2002b:4, Auditor General 2002c:4, Auditor General 2002d:5, Auditor General 2002e:4):

Local authority	Year under review	Previous year	Year under review	Previous year
	Water		Electricity	
Windhoek	-24.30%	-25.40%	36.10%	32.00%
Omaruru	-55.07%	-50.75%	42.89%	53.49%
Karasburg	0.19%	-4.80%	8.33%	28.00%
Swakopmund	29.60%	29.60%	24.00%	33.60%
Oshakati	-31.00%	-24.20%	n.a.	n.a.
Mariental	1.50%	-6.30%	55.70%	63.80%

Table 4.2 Trade accounts of selected local authorities

Several local authorities are subjected to non-payment by government institutions. In Mariental outstanding government accounts amounted to N$ 1 092 470 or 35% of the total, compared to the N$ 942 201 (also 35%) in the previous year (Auditor General 2002e:8). At the end of June 2000, the Government of Namibia owed the municipality of Windhoek N$71 278 497 (Auditor General 2001:11). The Auditor General states that accounting and internal controls are satisfactory in Omaruru (Auditor General 2002a:9), Oshakati (Auditor General 2002d:9), and Karasburg (Auditor General 2002b:10), but proper segregation of duties is not possible due to the small number of staff employed. Larger local authorities do not have this problem.

The Minister of Regional and Local Government and Housing announced that the MRLGH will no longer subsidise local authorities recurrent budgets (Kaapanda, 2004). Local governments have the responsibility to raise their revenues through rates and taxes and the sale of water and electricity to finance their recurrent expenditure. The MRLGH will financially support developmental projects which create employment opportunities and contribute to economic development of local authorities.

These few examples show the difficulties local authorities experience due to the usage of inappropriate technologies and systems that originated in the North and are applied in different environments in the South. Maintenance of these technologies is expensive and requires a qualified workforce which is not always available. The examples also show the connection between various generic functions and how they overlap, i.e., personnel, control, finance, organisation, and procedures.

If these difficulties are not resolved, no local authority can become financially sustainable. Should tariffs be increased to cover the losses, many poor residents would be unable to pay, as they already have difficulties to pay the municipal accounts. This is worsened in cases where a high unemployment rate exists and local authorities are in no position to recover the costs for services. In these instances poverty is affecting the financial position of councils.

3.2.3 Human Resources

Implementing policies and related changes always requires leadership and champions capable of guiding the process. According to Agenda 21, governments are the main stakeholders nationally and internationally. However, local governments were given the responsibility to implement Local Agendas 21. That requires individuals and groups, who are able to promote change. In Walvis Bay, DANIDA has provided a technical adviser for the Local Agenda 21 project. The Namibia Economist (1 March 2002) reported that several consultants for some major components had arrived in the town the previous week and already started with their work. Windhoek's environment office supports the Local Agenda 21. The office has two staff members. WELA utilizes its own members to carry out projects[8].

The environmental division has a close working relationship with the infrastructure department of the municipality (Kozonguizi, 2003).

The agents of change have to cooperate in what the Habitat Agenda describes as partnerships which represent a shift from the previous emphasis on participation to partnerships (UNDP 2001:6). Windhoek has an *ad hoc* working relationship with the municipalities of Nakuru in Kenya and Bremen in Germany. In South Africa Windhoek has twined with Durban, Potchefstroom, and Cape Town (Kozonguizi, 2003).

Existing problems of local authorities include lack of adequate staff with skills in administration, lack of or unclear job descriptions and performance monitoring, lack of skills assessments and HR development plans, and the need for councillor training (/Goagoseb, 2003). The Deputy Minister of Regional and Local Government and Housing stated that while councils themselves were to blame for many irregularities, in many instances poorly qualified administrative staff were compounding the problem. “If local authorities are to function properly we need the right people in the right place. Employees who are not recruited on merit are going to become a thing of the past” (quoted in The Namibian 4 June 2004:3).

According to Chaibva and Muchengetwa (2002), the main agencies involved in training of local governments include ICLEI (Local Agenda 21, EIA, and indicators), UN Habitat (Sustainable Cities Programme, and waste management), USAID (Climate protection, and energy efficiency), CIDA, SIDA, and DANIDA). The following training methods are utilised: face-to-face training through workshops and short courses on local government premises and training institutions. In Namibia,

distance training is currently not used as a training method on local sustainability. Chaibva and Muchengetwa also found that local government does not provide a budget for sustainable development training in Namibia. This has been confirmed in this study. So far, some training has been provided and funded by ICLEI, GTZ, and other donors which cannot be described as promoting a holistic approach. With regard to sustainability training for local government requirements for the future the following subjects were identified:

- *Local Agenda 21, in general, is considered to be of high priority for training*
- *Awareness raising on issues of sustainability*
- *Energy management, air/climate protection*
- *Water resources management* (Chaibva & Muchengetwa, 2002).

The UNCHS provided some training to councillors in 1998 under the themes: the *Councillor as Enabler,* bearing in mind the issues of the Build Together Programme and the reception areas for the homeless; the *Councillor as Financier*, focusing on budgeting, functions of regional and local councils, the issues of corruption and financial auditing and reporting; the *Councillor as Power-broker;* the *Councillor as Leader;* and *the Councillor as decision-maker* (UN-Habitat / MRLGH 1998). This may be regarded as basic training which has not focused on the issue of sustainable development. Therefore to promote the idea of sustainable development among regional and local authorities, personnel as well as councillors have to receive education and tutoring related to the concept and the implementation of the concept. However, this is not on the cards anywhere in Namibia.

3.2.4 Organisation

The implementation of the Local Agenda 21 in Windhoek runs parallel to the municipal system. WELA is the Local Agenda 21 implementing agency which is supported by the Environment Division.

> *"WELA is an independent association partnering the City of Windhoek and seeking to respond positively to the call by the United Nations that such partnerships should be set up to advance global awareness and positive action to combat environmental threats and to improve the living environment of all citizens. … WELA offers a channel for individuals to have an impact of the way our city develops. It creates the opportunity for individuals to influence planning and the setting of priorities by bringing organised groups and individuals into more direct contact with City officers and Councillors in a structured way*" (WELA, no date a).

WELA has the opportunity to draft submissions to the City Council. The submissions are channeled through the Department of Planning, Urbanisation and Environment which co-ordinates the partnership from the local authority's side. The Environment Division participated in the preparation of a management plan with the Goreangab Action Committee (WELA, 2002a). WELA has formed a secretariat with an elected executive comprising a chair, vice-chair, secretary and treasurer (WELA, no date b). Furthermore, a constitution has been written and adopted.

In Walvis Bay, once the LA21 project commenced, the project was to be spearheaded by the newly-formed Environmental Management Section (EMS) within the Department of Water, Waste and Environmental Management (WWE) which involves the whole WBM in its activities (Municipality of Walvis Bay 2002:4). Responsibilities to the Environment, involving the various stakeholders, are explained in the paper. The National government is responsible for the legislation and the policies directed at managing the environment.

At the beginning of March 2002, the first phase of the project was almost done. It consisted of the monitoring of project components and the arrival of several consultants (Namibia Economist March 1). The following phase will include the completion of the environmental policy. According to the Environmental Manager a project document exists, but can only be distributed with the approval of the project

management group; "…the process can take ages" (Uushona, e-mail communication, 3 April 2002).

"At present no public documentation is available. The project progress reports are not for the public but for internal and donors assessments" (e-mail communication with Uushona, 12 February 2003). The only public documents available are a pamphlet, describing the Walvis Bay project and the Environmental Policy. The pamphlet states that the project is spearheaded by the Municipality's Environmental Management Section, and support is provided by the Danish government, through DANCED (Municipality of Walvis Bay, 2001). The project aims at achieving a workable balance between protecting the environment and promoting economic and social development. Main areas are the formulation of an environmental policy, studying the coastal area, setting up funds to ensure that the environment is protected, and working with local citizens, institutions (schools and community groups) and businesses, on small environmental projects to create awareness to that end.

Overall, local authorities in Namibia are characterised by poor strategic and business planning, lack of clear policies and procedures, lack of by-law enforcement, poor coordination of projects and initiatives, lack of proper reporting and analyses, and the irregular and ineffective Council meetings (/Goagoseb, 2003). This situation is not contributing to sustainability, if Cloete's meaning of the term is applied. Sustainability, according to the Cloete (1999:13), can refer to institutional and functional durability of public policy programmes. This not only requires sufficient finances to provide the services needed, but also refers to the overall capacity of the organisation to deliver such services and adapt to changing

circumstances over an extended period of time, maintaining or improving the service concerned.

With one exception, Windhoek's Councillors were not involved in Local Agenda 21 issues. There exists a gap between Council and WELA which is a non-decision-making body (Watson, 22 January 2003). Council approves activities by WELA as long as they do not affect the authority of Council. The departments within the municipality operate on the silosisation principle, as it was called in Pretoria (personal notes, Johnny Coetzee, Local Agenda 21 workshop, Windhoek, 1999) - each one on its own.

3.2.5 Procedures

New procedures only relate to the implementation of the LA21 projects. In Walvis Bay certain procedures have been laid down by the donor agency in consultation with the local authority. This is usually done through a Project Procedures Manual drawn up by consultants. In Windhoek procedures laid down by the Council determine the involvement of the environment division, the activities of this office and the WELA. No changes to procedures were made which could be interpreted as supporting sustainable development (communications with Kozonguizi and Uushona, 2003).

3.2.6 Control

Control over the activities of WELA is exerted by its members. The Windhoek City Council is involved only in the approval or disapproval of activities proposed by WELA. Involvement of Council or staff members is extremely limited. Only one councillor out of 15 has so far regularly attended WELA meetings according to

available records and Kozonguizi (2003). Council has to approve initiative by WELA, for example, the privatisation of the Goreangab recreational area. The approval of projects by Council can be a control mechanism by the municipality to ensure that nothing is done to change the status of non-sustainable development which is based on the Western model. The focus on environmental projects makes a good impression and provides show projects which do not impact on the status quo of the institution and the authority of the local authority.

Control with regard to vehicles, facilities and equipment is inadequate. They are often old, broken and poorly maintained (/Goagoseb, 2003). Furthermore, poor records of stock, equipment and the fleet exist in addition to serious water leakages, illegal connections, broken water meters, and the poor quality of water, cause problems in delivery of the services. Old and broken networks affect electricity supplies. The shortage of prepaid meters and the serious shortages of proper sewerage facilities and the resulting health hazard, are additional concerns. Blockages and leaks, poor waste management, and illegal dumping also contribute to the negative situation. In total this situation contributes to additional costs and has implications for the financial situation of a local authority and its sustainability (see 3.2.2).

3.2.7 Summary

Windhoek's Local Agenda 21 is a "nice to have initiative". It lacks commitment by Council, involvement of Council members and officials of the local authority, and the general public which are supposed be the beneficiaries. This clearly shows that the policy making body, the Council, does not have an understanding of the concept, principles and philosophy surrounding the issue of sustainable development.

In Walvis Bay external support provides a different dimension to the implementation of sustainable development, compared to Windhoek. However, the focus on the environment is an indication that this project is not fulfilling the requirements of real sustainable development. The Local Agenda 21 initiatives in Namibia have so far failed to bring about meaningful change. Certain symptoms are receiving attention, but not the causes. The same unsustainable practices, technologies and attitudes are still prevailing. No learning from mistakes of the past with regard to unsustainable practices, no new approaches to move away from these unsustainable aspects is evident. This indicates that no understanding of the causes of non-sustainability is apparent in Windhoek and Walvis Bay, and Namibia as a whole.

3.3 Testing Sub-Hypothesis 3: Good governance and local authorities

3.3.1 Sustainability

In Namibia the absence of debate and concerns over sustainability at local and national level shows that a philosophical basis does not exist. The repeated use of words such as *sustainable development* in documents and speeches are no evidence for the understanding of the holistic nature and implications thereof of the concept. Examples are the preparations of NDP II, conferences and workshops, for example, on national housing in Windhoek in 2000, ALAN's annual congresses, and the activities of the National Habitat Committee (personal observations as participant). Therefore nothing that could be regarded, even as remotely sustainable, has been achieved so far.

In their study, Chaibva and Muchengetwa (2002) found that most of the projects and programmes in the countries reviewed, are donor-funded and in some cases donor-

driven, as the two Namibian examples have shown. Chaibva and Muchengetwa point out that, although the challenges of local governments differ from country to country, budgetary constraints seem common. In addition lack of financial and skilled human resources feature in all countries as the main threats to local sustainable development programmes in local governments. All countries are involved to various degrees in sustainable development. Only South Africa and Namibia are very much involved, whereas the rest are not much involved.

3.3.2 Decentralisation

The purpose of the Decentralisation Policy and the subsequent Decentralisation Enabling Act will be to decentralize functions and power currently vested at central government to the Regional and Local Authorities (NPC, 2000a). Sustainable economic development will be enhanced with the implementation of the Decentralisation Policy. “Decentralisation is part of a democratic process of governance. This should be reflected in the credibility and the efficiency of programmes for economic development, poverty reduction, employment opportunities, general upliftment, social services and in the promotion of sustainable development” (Tötemeyer 2000:45).

Walvis Bay and Windhoek are two of the three major local authorities in Namibia. They have capacities that the other smaller local authorities do not have. Therefore the new responsibilities transferred by the decentralisation policy have resulted in only minor changes in the overall municipal framework such as the collection of license fees for vehicles.

3.3.3 Equity and Efficiency

Disparities still persist throughout Namibia. On national level, as stated in NDP II, policies are envisaged to reduce inequalities in income distribution and to promote gender equality and equity. However there are no signs that this will be achieved in the near future. The expansion of the political and economic elite through laws and regulations cannot produce an equal and efficient society.

The Atlas of Namibia (Mendelson, et al. 2002:188-189) shows that the Gini coefficient for those regions with a large percentage of communal communities has a lower level of inequity than those regions with a high degree of capitalist development. This is an indication that communal or traditional communities are more equal than those which have been affected by modernisation, for example, those living in urban areas. The inefficiencies of the Western style of “development” result in what is termed poverty. The latter is worsened by a large population and limited access to resources. Therefore emulating a Western type development will increase the disparities and not decrease them. Vision 2030 (see section 3.1.1) and other government policies will not be able to change this situation, especially not at the local level.

3.3.4 Transparency and accountability

Transparency and accountability involves decision-makers and all stakeholders. “Transparency and accountability are essential in allowing stakeholders to have insight into local government operations and to assess which sectors of society are benefiting from decisions and actions” (UNCHS 2000b:6). Universal access to and the free flow of information are regarded as fundamental to transparency and accountability. According to the UNCHS, laws and public policies should be applied

in a transparent and predictable manner. Furthermore, public officials should adhere to high standards of professional personal integrity. The latter has been compromised, for example, when the municipality of Swakopmund placed an advert to claim that the mayor, councillors and community of Swakopmund congratulates the ruling party's presidential candidate to his election. The advert was an official advertisement which used municipal funds for party political purposes. This can be interpreted as unethical and a misuse of public money.

In Namibia the Auditor General is playing a role in looking at the financial side of local authorities. Regular elections provide an opportunity to select political parties instead of individuals. Conferences, workshops and meetings have provided opportunities to interested individuals and groups to make contributions to certain national or local policies (see also 3.3.6). There are however limits.

No local authority in Namibia provides a possibility to involve residents in budgeting as in Porto Allegre, where participatory budgeting has been developed since 1989 (Center on Budget and Policy Priorities, 2003). It has been a major instrument in the democratisation of municipal budgets which the city formulated with the direct participation of the public in setting priorities for public investment. The process breaks radically with the practice of elaborating the municipal budget inside official meetings as it incorporates a public decision making process for management of a particular local area. This was made possible after the 1988 elections were won by the Popular Front, an alliance of left-wing parties.

The first commitment of the new government was to democratise the State with the active participation of the population. To transform this ideal into practice, the

municipal government created a new system for formulation of the budget, the Participatory Budget. The city was divided into 16 zones which were demarcated into internal divisions, called micro regions. Since 1991 the participatory budget has been a story of increasing mobilization of communities in all regions and became a nationally and internationally renowned study of best practice in public administration. Therefore, equity, efficiency, transparency and accountability, security, civic engagement and citizenship, seems to be found in the city's governance practices.

Transparency and accountability can only be achieved if a majority of the population is interested and involved in local issues. The UNCHS notion of free flow of information and the application of laws and public policies in a transparent and predictable manner is a very idealistic concept. Referring to the proposed induction training for local authority councillors, the Minister responsible for local government said that work ethic and good management behaviour will be inculcated in the councillors in order to become productive, accountable and answerable to the needs and aspirations of their communities (Kaapanda, 2004). The question is whether these ideals can be learned or whether they form part of each individual's personality which can hardly be changed.

3.3.5 Security

In Walvis Bay, the mayor is quoted as saying, that the local authority is concerned about the escalating crime at the harbour town (The Namibian July 8, 2002). As part of its contribution the City of Windhoek is preparing to establish its own municipal police force. Windhoek experiences an average of 75 crime cases each day and some 27457 crimes were committed in 2000 (The Namibian August 8, 2002). The

municipal department responsible for security is not participating in the LA21 process (Kozonguizi, 2003).

However, internationally Namibia is regarded as having a low crime rate (Namibweb, 2003). Security remains a major concern of residents in all rural and urban areas. Therefore, the accomplishments in light of the current situation are not satisfactory. The Minister of Finance (Ministry of Finance, 2003) states that the country is facing a problem with regard to crime and the fear of victimisation by crime. This drives away legitimate businesses and damages the nation's reputation. If the term security is broadened to include, for example, food security with regard to a growing population or environmental aspects as a result of climatic conditions, the country displays a very unpredictable future. Dependencies on imports, fluctuations of rainfall, and the low carrying capacity of the Namibian soils, prove that security is very uncertain.

3.3.6 Civic engagement and citizenship

Policy making in Namibia is often characterised by the holding of public meetings and workshops. During Windhoek's Local Agenda 21 workshop (5 June 1999), the Chair remarked that only a very small number of interested parties and individuals came to attend. This has not changed. City of Windhoek is regularly holding community meetings in all parts of the city. However, Local Agenda 21 issues have not been addressed in these gatherings (personal observation, 2003). The focus is on individual concerns expressed by residents such as taxes, and storm water problems.

The limited participation by the public and the Windhoek Council shows that the

requirement of civic engagement has not been forthcoming. Furthermore, the few projects underway in Windhoek, indicate the low level of dynamism the process has so far created. Ownership of the LA 21 process by the residents and Council is totally absent. WELA's objectives include the following:

- Create a competent full-time secretariat
- Expand the membership of WELA
- Provide support and guidance to members of WELA in the common endeavours
- Enable members to contribute meaningfully
- Co-ordinate activities and objectives of the membership
- Enable members to contribute positively and knowledgably to a Windhoek Local Agenda 21
- Prepare for and hold a Conference to obtain city-wide awareness and support for a Windhoek Local Agenda 21
- Draft a citizen's charter which will encapsulate agreements and establish a standard against which further decision-making can be evaluated (WELA, no date b).

Voluntary involvement includes those organisations and individuals taking part in the various activities. In the case of Windhoek this is limited to a few. Decision-making is limited to issues that may be carried out with the blessing of Council. Windhoek's LA21 achievements in 2002 included the establishment of WELA, upgrading of bulk sewer in previously disadvantaged areas, upgrading of the Goreangab reclamation works and the establishment of the Goreangab Action Committee (National Habitat Committee 2002:25; personal communication Kozonguizi, 4 June 2004).

Numerous institutions, organisations and individuals in Walvis Bay were approached to be represented on a committee and to provide inputs into the process. The following sectors were involved: Municipal departments, schools, kindergartens, fishing industry, tourism industry, the port, NGOs, citizens, and business (Local Dialogue 21, 2002). The involvement of stakeholders was considered during the project preparation (Botes & Manning 2002:6).

The wider communities get little information on LA 21 in Walvis Bay and Windhoek. The projects operate in isolated settings as only a small percentage of stakeholders and residents are involved. Furthermore, only occasional newspaper reports are published in the case of Walvis Bay, whereas no reports have been found in the case of Windhoek.

3.3.7 Summary

Governance of local authorities has not changed much since independence. It is very much business as usual. Governance practices in the two local authorities which have a Local Agenda 21, have not been affected or changed as a result of LA 21 processes. The global campaign of good urban governance and the normative framework by UNCHS/UN-Habitat had so far neither an impact on the functioning of local authorities nor the understanding thereof. Local Agenda 21 initiatives in Namibia are of fairly recent origin and, therefore, have not yet brought about major changes which could indicate an approach towards sustainability. Another aspect influencing this aspect is very limited understanding of the concepts sustainable development and sustainability by Council members, municipal personnel, and the public in general. To regard the efforts underway in Namibia as being part of good governance would be an exaggeration.

3.4 Testing Sub-Hypothesis 4: Interfaces and linkages in the implementation of Local Agendas 21

3.4.1 Ecophilosophy and sustainable development

Examples from Namibia and international agendas or programmes show that ecophilosophy is not on the policy agenda of the day. Concerns for the natural environment are superficial and anthropocentric. Some countries and local

authorities have addressed certain selected issues and problems, but failed to create a holistic framework. There are still many systemic factors which need to be considered, for example, philosophical and ethical requirements. Despite the rhetoric regarding sustainable development and attempts to define anything as sustainable, the world has not become a better place. Problems are increasing as a result of maintaining the status quo, especially in the economic sphere. The theory surrounding the conventional interpretation of sustainable development and practice show that a dysfunctional relationship between theory and practise exists. The major reason is that the connection between Nature and humans has been lost in the pursuit of materialistic values and the associated greed. Functional traditional communities are evidence for a holistic way of life not found in modern societies.

In the political realm, in Namibia and elsewhere, most “government structures divide every aspect of our lives into portfolios, and nowhere can you discuss the whole as one” (Savroy 1991:16). Savroy continues: “[w]hen one cannot even debate the whole and the interconnectedness of all that governments take upon themselves to do, how can one ever solve the problems that are created by compartmentalized thinking and actions?” Ancient Greek philosophers endorsed intellectuality and virtues as the highest level of being. This is also appropriate in the “act locally, think globally” context. Global problems have a local beginning. However the support for a sustainable approach is lacking in the modern world. To promote a state different from the current non-sustainable one requires leaders akin to a philosopher king.

In Namibia, as well as on the international level, the reasons for the state of non-sustainability are avoided, as they do not fit in the current consensus. In the so-called poor countries the growth of the human population is exaggerating problems

as demands exceed supplies with regard to food, employment, or basic services. Few governments are able to keep up with these trends. Therefore the problems grow continuously. In the rich part of the world, consumption, materialism and the associated exploitation of resources in other parts of the globe, contributes *inter alia* to environmental degradation, and the increasing gap between rich and poor. As a result the Millennium Development Goals are likely to fail.

A few isolated success stories in certain sectors are like a drop on a hot stone. They are not solutions because they do not fulfill the holistic requirements required for sustainability. The promotion of international illusions such as sustainable cities, housing for all, or health for all, reflects the attempts of indoctrination by dominant interests in the West or influenced by these, to show the apparent advances of the Western economic and political systems. The last fifty years have shown that all the development approaches, from modernisation to globalisation, have not yielded the expected results. The new consensus with regard to sustainable development is an improved notion for crisis management. This consensus also provides a basis to resist fundamental change[9].

Without an explicit ethical framework in place, it is easy for certain groups to impose their principles without opposition. Ethical conflicts would lame consensus politics. It would bring back fanaticism which the liberalism thought to have eliminated during the last two centuries. Therefore everyone remains silent on ethics. The international systems have succeeded in brain washing the minds of decision-makers and their followers, to standardise or monotonise economic, social and political goals, to maintain an oxymoronic definition which suits the narrow-minded and anthropocentric views of the powers of the day. This explains why the current

consensus can be maintained and why a paradigm shift towards sustainability is at present impossible not only in Namibia, but also globally.

3.4.2 International agendas

One hundred and ninety-one United Nations Member States have pledged to meet the Millennium Development Goals by the year 2015. How realistic are they? Some of these internationally defined goals can have a direct or indirect impact on activities on local level related to sustainable development, such as environmental concerns, access to safe water, improvements with regard to slum dwellers, exports and financial aspects of global trade, and the impact of HIV/AIDS. Several of the remaining goals have to be undertaken by national governments, whereas, for example, trade issues are global issues.

An analysis was performed on national, regional and global level to investigate the status of national implementation of Agenda 21 focusing on a selected number of countries and issues. With regard to decision making (Chapters 8 and 40 of Agenda 21), only 10% of the countries in Africa have created a national institution and formulated a strategy (United Nations 2002f:10). This may include a national coordinating body on sustainable development such as a National Commission/Council on Sustainable Development (NCSD) or the equivalent of a coordinating body which involves the participation of major groups in a NCSD. A National Agenda 21 is a national strategy for sustainable development. Instead of such a strategy the other plans, for example, a national conservation strategy or environmental action plan may be considered. Finally, on the local level, Local Agendas 21 are to be adopted. Governments should promulgate national legislation with respect to EIAs and develop a national indicators programme.

With the exception of the Green Plan, Namibia has no national strategy. Furthermore, no coordinating body exists. The proposed Sustainable Development Commission has not been realised and there are no indications when this could happen. The NPC is in no position to claim to function as a NCSD. The United Nations (2002f:60) state that Namibia has not yet ratified the following three international agreements: biosafety protocol, Kyoto protocol, indigenous peoples agreement which has only been signed by 8% of the members of the UN. The latter show the indifference of governments to indigenous people. The graph illustrates the linkages between the various local, national and international levels.

On international level the agenda is formulated, on which national strategies such as national development plans and strategies are to be based. The local level should then devise the action plans for the implementation of the agendas falling within their areas of jurisdiction. These linkages also confirm the view that sustainable development cannot be carried out in isolation. Namibia is a signatory to Agenda 21 and the Habitat Agenda. NDP II does not feature any reference to LA21s. Therefore no concern and support on national level has so far been expressed.

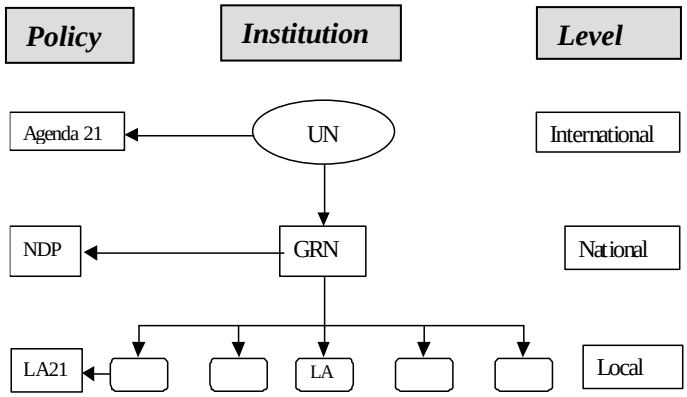


Figure 4.1 Linkages between international and local levels

Namibia's LA21 projects display very few elements contained in the MDG. They are therefore ineffective instruments in the achievement of the overall goals, if other

institutional levels do not support them. A local authority is incapable of achieving a state of sustainability, as it is part of a larger whole. This relates to the holistic principles which have to be taken into account in any attempt to promote sustainable development. A dysfunctional holon cannot contribute to a sustainable whole.

The position of the UN, its agencies and the international community conforms to the interpretation of the weak approach to sustainable development. If historical occurrences are used as a guide, they show that national interests take precedents over international concerns, as in the case of environmental sustainability. The conventional understanding of sustainable development supports a fragmented and piece-meal approach which defies the holistic principles. Sustainable development is therefore unable to fulfill its general objective of creating a better world. The term is an oxymoron and therefore cannot be employed to promote sustainability. Sustainable development and sustainability are two conflicting terms, with no common ground. To regard the weak approach to sustainable development as a solution to the world's problems is highly idealistic, as this position does not deviate from the current non-sustainable status quo.

International conferences and meetings organised by the UN are attended by Namibian delegations. Representatives of the government have signed treaties, for example, the Kyoto Protocol and agendas such as Agenda 21 or the Habitat Agenda. The stated commitments have hardly been implemented as the WSSD has shown. Whenever political and/or economic conditions interfere with the requirements of national or international interests, the established interests of the elite in politics and business take priority. This explains the tendency towards the weak approach to sustainable development which can be described as a "don't rock

the boat" approach. As a consequence a few of the symptoms of non-sustainability are addressed but not the causes. The outcome includes unattainable intentions such as good governance and popular involvement as part of the promotion of illusionary goals, for example, equity and equality. The widening gap between the rich and the poor is growing, not shrinking.

In order to show progress made, any success is lifted to the position of a Best Practice. Only few of these practices can be and will be replicated, as conditions in each urban area or country differ from the originating one. However, the realities on the ground demonstrate that very little progress has been made and that commitments made by the international community are merely intentions and not implementation guidelines for action.

The reason for this situation is the capacity of the international capitalist system to manipulate political areas of interest and to disseminate the impression that by following its rules and principles, wealth will be created for all by the economy and current problems will eventually be solved. The development in communications technology has contributed to this situation, as information can nowadays be transmitted in an instance. Similarly, money can be moved in a very short time from one corner of the world to another. It is a reflection of the modernisation approach fifty years ago which, in the end, was discarded as it failed to live up to its expectations. The sustainability of an exploitive system such as the capitalist economy has to be questioned, as it displays similarities with pyramid schemes which have to grow in order to remain operational. However, sooner or later they crash, as growth is always limited. "Sustainable" and limitless growth does not and cannot exist. It is a political deception.

Political changes have also had an impact on the international and local political landscape. The change of Namibia's ruling party from a "socialist" rhetoric to capitalist interests, is an indication of the frailty and unreliability of political positions which are dominated by the interests of the ruling political and business elites in addition to the demands of international interests. Therefore on international level (and nationally) it is an anathema to declare the capitalist system as part of the problem and one of the major causes of non-sustainability, not part of the solution.

International agendas are often steered by dominant political interest groups. These political groupings contribute to the promotion of non-sustainability. Savory explains this as follows:

> *"In democratic government politicians, to survive, must be followers rather than leaders, except in time of war. As a consequence they are constantly trimming their sails to every breeze that blows with the result that few if any democratic nations are on any long-term planned course. … None of the various government systems humans have so far devised has enabled us to deal with the complexity of nature"* (Savory 1991:13).

Globalisation is influencing conditions in the political and economic fields, as Namibia is a primary commodity export country supplying overseas markets and buying products manufactured elsewhere. Among the examples are fish in Walvis Bay and the textile industry in Windhoek. Some countries in Asia have been portrayed as models for developing without natural resources by emphasising human resource development. However, the import of commodities and materials from all over the globe is adding to the non-sustainability of the extractive economic system.

Several writers have pointed out that the South should not emulate the path of development in the North. This has however fallen on deaf ears, as illustrated by

Namibia's Vision 2030 or NEPAD. The tendency is clearly to pursue economic policies which entice colonialism in the form of capitalism. This colonialism is not restricted to the economic spheres only, it also impacts on cultures and the mind. The factors which shape non-sustainability, are ignored. They comprise inter alia industrialisation, commercial agriculture, urbanisation and human overpopulation.

On the international political and economic level, just like in Namibia, there is an apparent lack of interest into investigating alternatives to the current status quo. The conventional view on sustainable development is treated as a dogma, unchangeable and static. Protecting the status quo is therefore one of the major obstacles in promoting the goal of sustainability. The egoistic nature of Western type development and the associated psychological factors that contribute to the state of non-sustainability, have not received much attention. The champions of alternative thought such as eco-philosophy, ecological footprints, or utilitarian approaches have expressed concerns and options. They are disregarded during international gatherings such as the WSSD where the narrow-minded Western approach is elevated as the solution for all the world's problems. Furthermore, the focus of the capitalist system precludes a global holistic approach as the basis for sustainability. Holistic conditions are only found in certain small human communities which have developed a sustainable way of life over centuries. They are living a way of life which is mainly determined by natural processes of checks and balances between humans and Nature.

The resistance to change is the consequence of psychological and philosophical factors. In chapter 36 of the Agenda 21 attention is given to the suggestion that education, awareness raising and training contribute to the achievement of

sustainable development through a process by which humans and societies can achieve their fullest potential. The suggestions are inadequate without a supporting philosophical basis. The latter is lacking on all national and international levels. A single anthropocentric focus has so far contributed to the non-sustainable global conditions and has achieved very little with respect to educating, raising awareness and training Westernised societies to enable them to change. They are therefore the weakest link in sustainability.

An understanding of sustainability requires an understanding of non-sustainability. The platitudes, regarding the implementation and understanding of the concepts sustainable development and sustainability, uttered on national and international levels ad infinitum, are more and more becoming analogous to the Orwellian world, where defeat is victory, lies are truth, war is peace, freedom is slavery and ignorance is strength. George Orwell invented the word doublespeak (Herman, 2003). In the current parlance, non-sustainability is sustainability, or the destruction of natural resources creates wealth. Until this absurdity is recognised as one of the major psychological obstacles in changing from non-sustainability to sustainability, there is little chance of achieving sustainability. The vaguely defined international consensus and the goal of sustainable development are of no help in the promotion of a better (sustainable) future. Faber's example of China shows the non-sustainable future in progress, supported and encouraged by the West as progress. With all the knowledge available nowadays and the existence of alternative thoughts, the simple truth is that ignorance, about what constitutes non-sustainability is no excuse for continuing with non-sustainability.

The Bretton Woods Institutions and the United Nations are under pressure to provide evidence that they are succeeding in their efforts which are based on the international agendas. Furthermore, the United Nations uses the figures to demonstrate apparent progress in the goal of halving global poverty by 2015 (Pogge, 2003). Other goals, such as the Sustainable Cities Programme, can only be regarded as ludicrous. How can the unsustainable mega cities ever become sustainable when the problems increase instead of decrease? In addition the international agendas include unrealistic objectives such as equality, egalitarian societies or intergenerational equity. History shows that few egalitarian societies existed, for example the San in Southern Africa who were regarded as one of the most egalitarian societies on earth, before they came into contact with the destructive forces of modernisation or Westernisation. Even the Ovahimba are not displaying egalitarian ideals, as wealth in their culture is measured in terms of the number of cattle a household possess. Therefore the more cattle a family possess the richer they are and the higher their status in the community. Modernisation is creating unequal societies, i.e., rich and poor strata. The belief expressed at international gatherings that modernisation will solve the world problem through economic growth is deceitful. Similar to Orwellian doublespeak “lies are truth”, this unrealistic position confirms the saying, that if a lie is told often enough, everybody believes it is the truth.

Problems created by standardisation can also be illustrated by the example of providing infrastructure as part of the urban development. Both municipalities, Windhoek and Walvis Bay, use first world standards in the servicing of land, i.e., waterborne sewage systems, water networks and an electricity grid. The costs, especially for the lower income groups which constitute the majority of the local

residents, are increasing to such an extent that the land is becoming unaffordable as the incomes of households are below the required minimum for repayment. Nevertheless, the provision of these services is claimed to be part of promoting sustainable urban development as it is conforming to the dominant view that these services promote a higher standard of living. What is neglected is the fact that the endorsement of these high living standards, as experienced in the affluent countries and by the well-off strata of society, is not sustainable.

In order to achieve a state of sustainability, a new holistic paradigm has to be adopted in Namibia, but also internationally. An enabling intellectual environment has to support these efforts. A framework to guide this objective is essential, otherwise sustainable development remains what it is today: only two nice and meaningless words. In order to provide a solution to the question of what constitutes sustainable development and sustainability, a clarification of the concept is required. An oxymoron cannot be implemented and the current attempts to achieve a state of sustainability have been futile. One of the findings of this dissertation relates to the need to redefine *Sustainable Development* in order to reflect an approach towards achieving Sustainability. The redefinition has to be based on the vision of achieving a state of sustainability.

3.4.3 National policies

A government is responsible for the overall policy framework and legislation of a country. A policy framework for long-term national development, also called Vision 2030, was formulated. This vision is becoming part of policy development in Namibia. The document states that five year NDPs consist of short-term plans and therefore a long-term vision is needed towards which each NDP should be working

(Republic of Namibia 2004:15). The aim is to transform the country from a developing lower-middle income to a developed high-income country by the year 2030. This is at present unrealistic, due to the lack of qualified human and natural resources in addition to markets which are necessary to develop a capitalist system. The basic principle or cornerstone on which Vision 2030 is based is the concept sustainable development (Republic of Namibia 2004:14). The document goes on:

> *"The philosophy and principles of sustainable development cut across all sectors. Indeed, sustainable development is achieved only where sustainability in all sectors of endeavour is attained – social, economic and ecological".*

The only explanation or definition of the concept sustainable development given is: "development that meets the needs of the present without limiting the ability of future generations to meet their own needs" (Republic of Namibia 2004:15). No detailed discussion is presented which indicates that the interpretation is merely a copy of what was presented by the Brundtland Commission. This is another indicator of the shallowness of the government's rhetoric as its lacks an intellectual and ideological foundation. Later an explanation of the concept is offered. Starting with a repetition of the Brundtland definition, the document claims that sustainable development encourages people to take responsibility for their own development and promotes development activities that address the actual needs of the people (Republic of Namibia 2004:175). In addition, it is argued that sustainable development calls for partnerships between government, business, communities and international bodies; human and institutional capacity building; democracy and human rights; environmental protection; and gender equality. The document then echoes the international view supporting the weak approach, that in order to pursue sustainable development strategies should not only limit environmental damage but should also promote social and economic development. These references are nothing new as

they do not promote a change from the state of unsustainbility which gave rise to the concerns expressed by the Brundtland Commission or Agenda 21.

Following the capitalist ideology, as shown by this study, cannot prepare the conditions necessary for the achievement of sustainable development. To include a few paragraphs in the Namibian constitution and preparing a national green plan or an Environmental Assessment Policy which is not enforced, are not major contributors to sustainable development. The uncritical reiteration of the same ineffectual notions are indicative that the conditions and processes which have led to the current unsustainable state are not understood or recognised at all. Therefore the statement “Namibia’s Ideal Vision for 2030 is one that fully embraces the idea of sustainable development” has to be considered as a misapprehension.

In addition, the dependency on certain natural resources, such as fish, or the dependency on foreign investors, for example, textile factories, creates dependencies on external sources. Sustainable development requires reliance on internal, locally available resources that are renewable in order to maintain a state of availability, not of decline. The latter includes potentially renewable resources such as fish which is in Namibian waters and globally nearing over-exploitation. In the case of Walvis Bay, the management of the marine resources is the responsibility of the national government, not the local authority. National policies are usually influenced by the fetish of the capitalist market, in this case the export of fish. This resource is moving towards a situation of over-harvesting. This in turn created local economic problems for the fishing industry and its labour force, such as low quotas, limited seasonal employment opportunities, and lower profitability. It proves the non-sustainability of depending on a few resources.

Vision 2030 describes under the heading of *sustainable development* not only the definition and explanation of the concept, but also the 14 key threats to sustainable development in Namibia. Among the issues are: population growth and settlement patterns, increasing water stress, poorly planned development and inappropriate industrialisation, the loss of biodiversity, poor governance, unhealthy competition with neighbouring countries for shared natural resources, underdevelopment of human resources, limited research for development, unstable macroeconomic environment, and the adverse impacts of global atmospheric change (Republic of Namibia 2004:176-177). The section is concluded by its sub-vision:

> *"Namibia develops a significantly more equitable distribution of social wellbeing, through the sustainable utilization of natural resources in a mixed economy, characteristic of higher income countries, primarily through stronger growth and poverty-reduction"* (Republic of Namibia 2004:177).

This illustrates that development policies with regard to implementing sustainable development in Namibia are not innovative. They are shortsightened and dominated by unsustainable economic and political positions. In other words, they are more of the same. A paradigm shift, as required for the attainment of sustainability, is nowhere to be found. A few attempts have been made which are exceptions to the rule.

The public sector's role is to act as a facilitator and creator of an enabling environment for the promotion and implementation of sustainable development without accentuating the need for radical change from the present unsustainable Westernised way of life towards one of sustainability. In Namibia the emphasis is placed on creating a conducive environment for the development of the national economy and its related factors such as human resources. National planning and development plans also support these efforts. The attempt to incorporate sustainable development in the NDP II is not providing any incentives for any drastic

changes. The “business as usual” strategy is still followed. Namibia does not have a national policy or campaign to support and encourage the establishment of Local Agendas 21 on a national scale. This is an indication for the lack of commitment, the indifference to consider a new approach or ignorance. A champion is not present to drive a process of educating and awareness raising as a first step.

It was made clear during the NDP II workshops that a national vision or definition was not on the cards. The resolution taken by the NPC that each sector has to formulate its own mission statements indicates the segmented thinking and compartmentalisation within the body responsible for national planning. Many mission statements emulate the definition of UNCED and the Brundtland Commission. According to Thompson (1997:82):

> *“The theme of Namibia’s development story is evident. Wrapped in techno-jargon and neo-Weberian efficiency talk, the government is defining its character according to the neoliberal economic paradigm which is internationally, not regionally oriented, and internationally, not nationally scripted. This orientation is reinforced implicitly and/or explicitly by international development agencies”.*

These rhetorical influences of international agendas are found on national as well as local level, such as the NDP II and LA21 projects respectively.

3.4.4 Implementing Local Agendas 21

The sub-hypothesis states that Local Agendas 21 do not embrace all four components required for the implementation of sustainable development. The implementation process has to consider the national and international context in order to understand the shortcomings. Therefore issues ranging from eco-philosophy to the interfaces and linkages have to be taken into account in order to evaluate the reasons for the shortcomings.

The review of the National Plan of Action (National Habitat Committee 2002:59) states that there is a lack of understanding and commitment by local authorities to promote and implement the Habitat Agenda and Local Agenda 21 programmes in Namibia. Besides Windhoek and Walvis Bay, very few local authorities have so far considered the establishment of a Local Agenda 21 programme. However, only documentation from Tsumeb was available during the period of this study. Discussions with various officials have indicated that some local authorities are interested in a LA21, but lack information and knowledge about the process and objectives.

The Windhoek municipality was considering the creation of a post to deal with the issues. “The whole matter is seen as being something of an experiment which may not be financially justified” (ACD/ILEDS, 1996). The decision by the Windhoek Council to implement a Local Agenda 21 in 1997, led to the establishment of an office, called *Environment*, not Local Agenda 21. This office is supporting efforts of WELA and is the Local Agenda 21 implementation agency (Watson, 22 January 2003). The Environment Division has introduced Environmental Assessments (EA) for major projects (WELA, 2002). However, in the case of establishing a textile industry in Windhoek, no EA was carried out.

Windhoek is planning a strategic structure plan which is an inventory and will include, for example, the roads master plan, and aspects of Vision 2030 (Kozonguizi, 2003). Activities of WELA are limited to interests expressed by certain participants that focus on a few environmental issues. This is in contrast to the much wider scope of activities in Walvis Bay.

The implementation of a three year Local Agenda 21 project in Walvis Bay, started in August 2001. It was initiated to study and manage the town's unique environment (Botes & Manning 2002:6). Data relating to the coastal area was collected, while the component dealing with environmental policy and LA 21 micro projects are well underway (The Namibian, 6 March 2002). An Integrated Environmental Policy was formulated to translate the responsibilities into action in such a way that it can effectively manage the precious and unique environment of Walvis Bay (Walvis Bay Municipality 2002:4). This policymaking activity has fallen under the auspices of the Walvis Bay Local Agenda 21 Project. The Local Agenda 21 project in Walvis Bay works with different groups that include the fishing industry. As a result, part of the project's coastal study looked at marine pollution in the bay (The Namibian, 8 August 2002). The amount of effluent pumped from fishing factories is several hundred times greater than the combined man-made wastewater from all other industries.

An air quality study was planned for the first quarter of 2003, when the horse mackerel season starts and the smell from the fishmeal factories is at its worst (The Namibian, 8 August 2002). However, due to time and financial constraints, only a minor air quality study was planned for early February 2004 (communication with David Uushona, 13 October 2003).

As part of the process to preserve the lagoon, the municipality has come up with an Environmental Fund which will try and raise money for the cause (Namibia Economist, 5 July 2002). The Coastal Environmental Trust of Namibia is also involved in the project and the promotion of tourism into the area.

There are three distinct practical examples of projects dealing with Local Agenda 21s in Namibia: two local authorities and a proposal by the MRLGH to promote LA 21 in all local authorities. Windhoek and Walvis Bay are both Grade 1 municipalities. These are the largest local authorities in Namibia. These municipalities are relatively autonomous, because they have the specified powers to control most of their affairs. The involvement of a smaller municipality in hosting conferences on Local Agenda 21 issues, prompted the following response.

In a letter to ALAN, the Town Clerk of Tsumeb claims: "[a]t this point in time we foresee no problem in promoting Local Agenda 21. Councils' policies and programmes are all aimed at achieving sustainable development into the 21st century" (Tsumeb Municipality, 1997a). The working document of the municipality (Tsumeb Municipality, 1997b:1) states *inter alia*, that Local Agenda 21 refers to local actions to achieve sustainable development into the 21st century; sustainable development can be defined as meeting the social and economic needs of today without damaging the natural resources of the future; and the key principle in Local Agenda 21 is that the local community must get involved in consultation and setting local priorities. The key elements of the Local Agenda 21 are in the case of Tsumeb:

- Managing and improving our own environmental performance
- Integrating sustainable development aims into our policies and activities
- Awareness raising and education
- Consulting and involving the public
- Partnership
- Measuring, monitoring and reporting on progress towards sustainability (Tsumeb Municipality, 1997b:2).

The Tsumeb document (Tsumeb Municipality, 1997b) also refers to certain main issues[10]. They are:

- *social environment:* mentions health problems such as the unawareness of immunisation services, malaria, tuberculosis, measles and diarrhoea;
- *economic environment:* where unemployment, poverty and crime are mentioned;

- *environmental pollution:* that refers to domestic and commercial waste problems, not the air pollution emanating from the smelter operations of the mine;
- *physical environment:* in which housing is the main issue;
- *water supply:* which includes problems relating to providing fresh quality water to residents and the use of semi-purified water.

In analysing the two LA21s in Namibia, the first step is to look at why they were considered. The approval of the Windhoek Council to establish a LA21, is an outcome of the UNCED in 1992 and follow-up conferences, such as in Manchester 1994 (see Watson 1995:36). A committee was formed in 1995 “to set out objectives for a more sustainable city” (Watson 1995:36). An offer by the Danish government to support the establishment of a LA21 in Walvis Bay provided the incentive to consider this project, after a similar offer to the Windhoek municipality did not materialise.

The focus for both LA21s, similar to most international attempts, is the natural environment. They are very much inspired by the UNCED agenda and the Namibia Green Plan which emphasise the environment. This is indicative of the one-sided nature of these “sustainability” attempts, as they do not display any holistic approach to the current national or international problems.

The non-sustainability of policies and agendas on local level are influenced by the views documented on the international level. The requirements for what is regarded as the policy objective are clearly based on Western style developments, for example, waterborne sewage or water networks within urban areas. If so-called poorer sections of the urban population receive these modern services it is regarded as a success. Whether the majority can afford these services is not a major political issue. Besides the question of affordability, land is limited in each local authority. A drastic increase of the urban population has so far not resulted in the achievements

claimed by international agendas, e.g., housing for all, health for all, or water for all, because they are not sustainable and require money. As funding is also limited the objectives can hardly be achieved.

The international agendas have placed a large part of the responsibility for the implementation of sustainable development on local authorities. The original intention by UNCED that most local authorities should have initiated a LA21 programme by 1996 has not been realised in Namibia and worldwide. Activities on regional level (SADC) since 1995 have also not been successful in promoting the objective. Both LA21s in Namibia are relatively recent projects. Therefore, no longitudinal assessment was possible for this study. The inadequate documentation of the initiatives is contributing to an incomplete description of the implementation. However, if other LA21s are considered, some of the results can be deduced. The two local authorities display different characteristics with regard to the Implementation of LA21, its policies and administration. The structures and interfaces of the LA21 implementations of the two municipalities can be illustrated as follows:

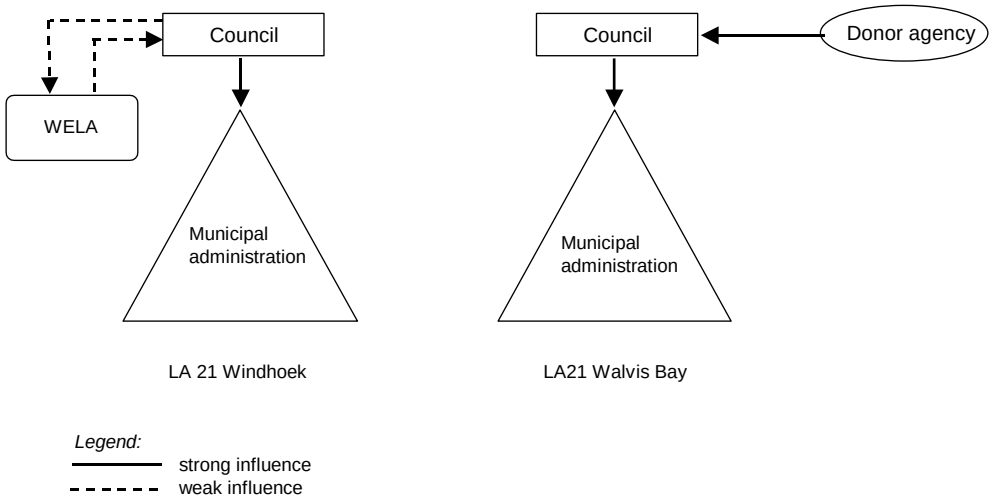


Figure 4.2 LA 21 implementation interfaces

Windhoek's LA21 idea started as a result of a Council decision. However, the implementation has been relegated to WELA's activities whose actions are still far from anything qualifying as sustainable. The domination of interest groups and the non-involvement of the municipal council exemplify the limited understanding and absence of an intellectual foundation to promote the issues surrounding sustainable development and sustainability. The flow of information from WELA to the public is non-existent. The municipal newsletter *Aloe* has not published information on the activities of WELA and the Local Agenda 21 idea. Therefore no education, awareness raising or dissemination takes place.

As WELA 's activities run parallel to the municipal system, only supported by a small department, their influence on municipal policies, decision-making and initiation of projects, is very limited. Involvement of a larger part of the resident population is still a distant aspiration. Unlike Walvis Bay, the implementation phase of the LA21 in Windhoek has no time limit with respect to funding and external support. WELA's activities can be regarded as ongoing. Long-term outcomes of Walvis Bay's LA21 are at present not available as the project started only recently.

WELA operates as a relative autonomous body and is hardly influencing the council's administration, whereas the Danish donors have direct access to policy-making and its implementation by sections of the local administration through human resources, funding and strategy. The low importance of the LA21 initiative is characterised by the lack of interest by the public and Council in Windhoek. The lack of a budgetary provision for WELA activities is another illustration of the disinterest Council is displaying with regard to supporting and promoting sustainable development.

The LA21 in Walvis Bay is the result of donor support. Without this support the project would probably not have taken place, due to the absence of a policy or declaration in this regard which precedes the initiative. This situation is similar to Nakuru where external funding shaped the conditions for the implementation. Furthermore, the projects focus on certain problems within the municipal area. The four years that have been earmarked for the initiative are not yet over. For that reason, the LA21 in Walvis Bay is still work in progress. The suggested project components provide substantiation of what is planned during the period. Nevertheless changes such as the limited air quality study due to time and financial constraints, illustrate the uncertainties of implementing the components.

A visit to Nakuru in 1999 and follow-ups in 2001 provided insights into the processes of preparing the municipality for the LA21. The first year was used for awareness raising, meetings and training activities. Once the various problems were identified, project components were formulated. In an interview with Raf Tuts in Nairobi (15 February 2001), it was made clear that Nakuru has shown that a whole project can be jeopardised if a few key people, e.g., the mayor and the town clerk, are leaving their positions. According to Tuts, during 2000 little progress was made as a result of the resignation of the town clerk and the mayor was not reelected. Both had shown support to the project. The donors were also considering an extension of their assistance for a limited time during 2001 to conclude the project.

In how far a capacity can be built within a few years to institute a leading and learning organisational culture is still unclear. Capacity building is one requirement for achieving sustainable development and is an integral part of the generic administrative functions such as personnel, organisation and control. To establish a

small department tasked to look after the environment is inadequate. Capacities remain ineffective if not supported by strong and progressive leadership guided by a vision. The latter also requires a forward-looking mindset and not a focus on pursuing mainly short-term interests. Curitiba's former mayor has demonstrated this. In Namibia this leadership is not available.

Governance is part of the Local Agenda 21 in Windhoek (Kozonguizi, 2003). However, no specific activities have so far been implemented to incorporate good governance principles in the City of Windhoek administration. Issues, such as security, are the responsibility of special departments which have not been part of the Local Agenda 21 process. In the two Namibian local authorities no major change in generic administrative functions has occurred or are envisaged as part of good governance. The two municipalities have created small environmental departments tasked with supporting LA21 activities. As the case of Windhoek shows, the new department's inability to conduct or demand an EA before a textile factory was constructed means that theory and practice are complete opposites. Laws, rules and procedures are only of any value if they can be enforced. A major obstacle is the continuous need to find funding for Local Agenda 21 projects. Those local authorities with access to external funds can be regarded as fortunate. Without this access LA21 proposals will probably only focus on a few efforts which in turn contribute little to achieving the objective of sustainable development.

Projects carried out under the LA21 umbrella do not constitute a dismantling of the non-sustainable components or causes. Furthermore, they do not deal with the issues of poverty reduction or employment creation which cannot be solved by local initiatives alone. Tsumeb's local authority has mentioned unemployment as a major

problem. The ventures to establish factories as part of the local economic development are not contributing to the decrease of poverty. In Walvis Bay the Export Processing Zone (EPZ) has not been too successful, whereas the textile industry in Windhoek has so far offered meagre wages to its workers. These industrialisation efforts also attract immigrants from other parts of Namibia which in turn increases the population, the demand for more work and services which are not forthcoming. As a consequence the reduction of poverty is a futile ambition[11].

Good governance is another grandiose concept trying to promote such elaborate ideas as sustainability, decentralisation, equity, efficiency, transparency and accountability. These concepts are far from attainable in Namibia. Good governance also relates to the concept that power exists inside and outside the formal authority and institutions of governments such as local authorities. However, actual power has not been exerted by any of the external partners of Namibia's local authorities during the LA21 initiatives, for example, with regard to changing non-sustainable attitudes, or contributed to an understanding of the concept sustainability. One major problem in implementing new ideas is access to funds. WELA has to source its own funds for its activities, whereas Walvis Bay's LA21 project is supplemented by external donor funds. This exemplifies the fact that without money nothing would be achieved which in turn is not promoting sustainability. Porto Alegre is one of the few examples where broad participation by all levels of the community can influence the formulation of the local authority's annual budget. It is the exception, not the rule.

The failures of the *Initiative for Local Environment and Development* (ILEDS) in the SADC region and ALAN's Local Agenda 21 project to become operational, have exposed the lack of leadership in general and the absence of a strong institution,

capable of championing the cause of sustainable development in the region, including Namibia[12]. There is no indication that this will change in the near future. In addition, local authorities still require personnel with skills in administration, job descriptions, performance monitoring, skills assessments, human resources development plans, and the need for councillor training. These restrictions are experienced in many local authorities. Therefore the question can be asked, how can local authorities in general, and those smaller than Windhoek and Walvis Bay in particular, institute the complex processes associated with sustainable development efforts, as described in the Habitat Agenda or Agenda 21. The situation is complicated by the fact that Walvis Bay's local economy depends on fish, the harbour and to a lesser extent on transport. Windhoek has a more diverse local economy, as the seat of the national government, some industries, the head offices of private and international organisations, and its functions as a national transport and communication centre.

The vagueness of the United Nations description of Local Agendas 21 is contributing to the non-sustainability of these initiatives. The content and form of each Local Agenda 21 is to be different which is the outcome of the dialogue between the partners involved. As a result only those issues will be considered which can be tackled with relative ease. This excludes issues which cannot be tackled by a local authority alone such as national policies or the impact of the international economic system. Therefore the approaches of LA21s are focussing on certain sectoral and isolated problem areas which is in line with the international interpretation. Local Agendas can only be regarded as some measure of crisis management. As sustainability requires a holistic approach, LA21s cannot be regarded as contributing to sustainable development. The apparent problem solving

efforts of LA21 are at its best a kind of crisis intervention. This is another indication of the nonexistence of understanding the concept sustainability in Namibia, but also internationally. Platitudes, such as environmental justice, equality, or intergenerational equity, are not assisting in promoting sustainable development. A major obstacle in achieving the goal of sustainability is the fact that non-sustainability and the reasons for this state of affair do not receive enough attention. Identifying the major cause of a problem is required in order to solve it.

Adopting a policy to promulgate a LA21 is the easy part, not a major step forward, if not followed by a real commitment to change. The potential for far-reaching change is restricted, because of the position of local authorities as the lowest tier of government. This is a major disadvantage, as national, regional and international factors and influences cannot be avoided. Windhoek and Walvis Bay's LA21 confirm the findings of ICLEI namely that LA21s primarily engage in environmental projects as the easiest way of initiating projects. This represents a tinkering with the concept sustainable development, as the LA21s do not contribute to the dismantling of the non-sustainable causes.

The economic, ecological, social, ethical factors and practical examples, described *inter alia* in Chapter 4, show the one-sidedness of the approaches in the perceived implementation of sustainable development, as they do not present a move towards holistic problem solving. This is the systemic problem of sustainable development. One holon does neither represent a whole nor a holistic system (see Chapter 2). However the claim that sustainable development is a reality is based on the mistaken assumption that one part is sufficient to represent the whole. This

reductionist view contravenes holism's philosophy, as described by Smuts (see Chapter 2), that wholes are composites not simples.

Therefore the reductionist interpretation of sustainability in development which is typical in Western thought, is anti-holistic, because the sum of a few parts taken into account will be smaller than the whole. Problems are the outcome of this deficiency which is exemplified by the imbalances created by the non-sustainable approaches. Imbalances cannot attain a sustainable state or condition. Therefore one or a few projects in the name of sustainable development do not symbolise anything sustainable. Furthermore, non-sustainability cannot be solved on local level alone. Non-sustainability is a global problem which is created by humans. Sustainability can only be achieved on a global level if a holistic approach is followed.

Alternative ideas to create less destructive human settlements such as Arcosanti, ecovillages, or Curitiba, have still to enter Namibian thought. Traditional African alternatives are still defined in Western terms as primitive, backward or an obstacle to what is called progress, disregarding the fact that this "progress" is destroying sustainable cultures, the environment, and diversity. Future initiatives will also depend on what happens on national level with regard to policies and support. This requires strong leadership on all levels in order to achieve the changes necessary. The conventional prescriptions for establishing local agendas are in line with the weak approach to sustainable development. Major changes cannot be expected in the foreseeable future. Except in rhetorical terms, sustainable development cannot be achieved locally unless major changes on the national and international levels occur. National policies are a reflection of what a government desires to achieve whereas international agendas outline certain international concerns.

4. Conclusion

This chapter focuses on the dissertation's hypothesis which states that the holistic approach is not understood as being essential to Sustainability and the components necessary for the implementation of sustainable development are not integrated into a holistic whole in Namibian policies and the practices of local authorities. This study has evaluated the policies and practices which are supposed to promote sustainable development. So far the results show that the ideal and the practice are indeed growing increasingly apart. Sustainability is a long-term concern. Therefore the objective of achieving sustainability contradicts the short-term interests of politicians and the capitalist business sector. The one-sidedness of activities such as the Local Agendas 21, show that an understanding of the philosophical and conceptual ideas is lacking and therefore, a non-holistic approach is followed and promoted. The changes are superficial and do not address the underlying problems of non-sustainability, i.e., production and consumption patterns, population pressures, and the limitations of the natural environment.

Namibia's approach to sustainable development is non-holistic. It is fragmented and segmented. It is also biased towards the socio-economic model of the West and therefore, non-utilitarian when sustainability is considered. These are all characteristics of a sham sustainability which is supported by the anthropocentric position in official documents and activities. The Local Agenda 21 initiatives in Namibia are still very recent activities. However, it is evident that the underlying concepts are not understood. Activities in progress show that they do not promote sustainable development, except as defined internationally by the weak approach.

Sustainable development in Namibia is not deviating from the Brundtland definition. This indicates that the debate surrounding this complex concept has so far been very limited. The lack of a national long-term vision which supports sustainability is absent from Namibian policies and activities; Vision 2030 is not the solution or a contribution to sustainable development as it merely tries to imitate the prescriptions by the capitalist system, such as industrialisation.

Namibia claims to have made progress in implementing Agenda 21, whereas WSSD clearly showed the opposite. The claims by Namibia's Green Plan that a national common vision for sustainable development was created, and that Namibia is progressing towards achieving sustainable development are preposterous. The delays surrounding the establishment of the SDC show that politics and political interests are major obstacles in the implementation of sustainable development. Power and authority are more important than utilitarian policies. *Sustainable* and *development* are only two nice and meaningless words which are currently "in", therefore, have to be used as often as possible.

Recalling the hypothesis, that Namibian policies and the practices of local authorities do not reflect a concern for a holistic approach and the components required to promote sustainable development. International influences and the global consensus on what sustainable development constitutes have an impact on the Namibian situation. Namibia is a copy reflecting the international position which in turn is affected by the Western standpoint. The latter has become the international standard. This includes the adaptation of vague and oxymoronic definitions in order to promote a concept which suit established interests. This position results in addressing certain symptoms, but not the causes of

nonsustainable development. Nevertheless the advocates claim that these fragmented approaches constitute sustainable development. Therefore it can be concluded that the hypothesis is confirmed.

Namibia follows the Western model of administration, for example, by applying the generic functions and urban development. It also includes the uncritical adoption of the conventional interpretation of sustainable development by following the nonholistic international consensus which supports the Western position. Therefore neither the autopoietic principles are considered, nor are ethical issues incorporated in the interpretation and implementation of sustainable development to support an utilitarian position as articulated by eco-philosophies. The conventional practices support the *status quo* which has been confirmed to be nonsustainable.

In conclusion, neither in Namibia nor on the international level, is sustainability being understood as a holistic phenomenon. The four components, economy, social, ecology and ethics, necessary for the implementation of sustainable development, are not integrated into a holistic whole in Namibian policies and the practices of local authorities. Instead a fragmented approach is followed which constitutes a very weak approach to so called sustainable development. This approach has not and will not accomplish anything that conforms to real sustainability because autopoietic processes and the limitations of Nature are not taken into account. Due to this ambiguity it is necessary to consider a framework that supports the process of achieving sustainability and sustainable development and its requirements. This will be the concern of the next chapter.

Endnotes

[1] The Threats to SD background paper mentions the various statements (see Krugmann, 2000a): 1. Natural resources (agriculture, water, fisheries, forestry, wildlife and tourism): To contribute to national development through the promotion of sustainable use of renewable natural resources and the promotion of sustainable livelihoods. 2. Trade and Industry (mining, energy, trade and industry): To contribute to national sustainable development through economic growth that is diversified, is equitable across regions and people, while minimizing negative environmental and social impacts. 3. Social (health, social welfare, labour, education): To strengthen the human resources of Namibia by stemming the rising AIDs epidemic, countering violence and substance abuse, and reducing the burden of poverty through, (wherever possible) the implementation of community based approaches. In so doing, counter the increased degradation of natural resources arising from poverty, lack of information and lack of decision-making power. 4. Infrastructure (communication, transport, housing, local government): To contribute to national sustainable development through the coordinated provision of appropriate infrastructure that is equitably distributed across regions and people, enhances social well being, contributes to economic growth and is environmentally friendly, and through the development of efficient and effective democratic national, regional and local institutions in partnership with relevant stakeholders.

[2] With respect to the objective dealing with enhancing environmental and ecological sustainability the NDP reflects the three components of sustainable development according to the conventional interpretation: "National development entails not only economic but also social and environmental costs. Therefore, planning for national development needs to ensure the provision of optimal benefits from the utilisation of natural resources through judicious use, and that costs to society and damage to the environment are limited and mitigated, if not altogether avoided" (NPC no date:52; NPC 2000c:3-12).

[3] The NPC suggests that: "Increasing community participation in the management of natural resources would not only help in maintaining the environmental assets, but will also raise the incomes of the rural population" (NPC no date: 56).

[4] Others include: Provide appropriate information, and education that will enable couples to make rational choices regarding family formation; Reduce the overall growth rate of the population from over 3% to 3% per annum by 2006, and to 2% by 2025, by reducing the level of fertility through the adoption of modem methods of family planning; Promote human resource development through proper education/training and its effective utilisation through gainful employment opportunities.

[5] Kingston comments: "MORAL, ETHICAL, VIRTUOUS, RIGHTEOUS, NOBLE mean conforming to a standard of what is right and good. MORAL implies conformity to established sanctioned codes or accepted notions of right and wrong. ETHICAL may suggest the involvement of more difficult or subtle questions of rightness, fairness, or equity. VIRTUOUS implies the possession or manifestation of moral excellence in character. RIGHTEOUS stresses guiltlessness or blamelessness and often suggests the sanctimonious. NOBLE implies moral eminence and freedom from anything petty, mean, or dubious in conduct and character" (Kingston, 2002).

[6] See also post scriptum in Chapter 6 which refers to some activities after completion of the project

[7] Other examples of the non-sustainable financial position of many local authorities include the water accounts, with the exception of Swakopmund which can influence urban development and the utilisation of a scarce natural resource. In Windhoek the water distribution loss amounted to 19.84% (in 1999 13.85%) and no reasons for the losses could be obtained (Auditor General 2001:2). These losses amounted to N$9 018 083 (in 1999 the amount was N$ 9 245 544). Distribution losses in Karasburg increased from 10.54% in 2000 to 14.04% in 2001 (Auditor General 2002b:4). Swakopmund also has a high percentage of losses on water distribution which in 2000 were 14.4% and in 2001 stood at 16.4% (Auditor General 2002c:5). In Oshakati the lack of statistics meant that no distribution losses could be calculated (Auditor General 2002d:2).

[8] Members include representatives from the City of Windhoek, Greenspace, Earthlife Namibia, Shack Dwellers Association, NHAG, Move-a-Mess, Junior City Council, Khomas Regional Council, Namibia Girl Child, WCCY, and a private consultant (WELA, 2002b).

[9] An explanation of the resistance to change which is also experienced in Namibia, can be taken from the field of psychology. Change can be a difficult emotional mental state. "There are times when the

unpleasantness experienced in dealing with the problems of existence become so great that we direct our attention to controlling the feeling state, and not to addressing the problem faced in life" (Campos, no date:16). Such an emotion-focused coping may invoke a defensive behaviour such as denial. The greatest obstacle to treatment for a dependent person [dependence relating to chemical substance abuse] is denial (Spencer Recovery Centers Inc., 2003). The denial of the non-sustainable nature of the Western economic and political systems obstructs the promotion and pursuit of alternatives.

[10] For each of the main issues, municipal action plans were formulated. The plans include the following examples: social environment: announcing immunisation services, awareness campaign and health education to improve household nutrition, lobby the central government to build more clinics; economic environment: economic development and growth, expand the tourism industry, promoting small scale industries, encouraging basket making and wood carving, improving farming methods to increase agricultural output through surplus, encourage investment in the region, and encourage labour intensive methods in job creation; environmental pollution: transfer some responsibility to environmental groups/agencies or individuals, examine the possibility of composting garden waste, start a recycling project, tree planting scheme and cleaning operations, and enforce environmental protection legislation to control air and water pollution; physical environment: develop shelter strategies, lobby the central government and form partnerships with organisations to implement a programme that will address the housing need, facilitate the implementation of national housing programmes, providing security, stability and economic power to the family unit; water supply: exploring ways to address the hardness of water, provide the consumer with an acceptable water quality at the lowest cost possible, municipality guard against over utilising of underground water not to harm the environment. With regard to semi-purified water: upgrading the existing sewerage treatment plant, using the semi-purified water for landscaping and the overall greening of many public places, education and cooperation with local schools on water management, safe water campaign, and training of municipal meter readers (Tsumeb Municipality, 1997b).

[11] This is unlike the conditions in the beginning of the 1960s, where, for example, the Lüderitz Chamber of Mines had to ask government agencies to help with the recruitment of labourers, as Ruth First described the situation in 1963 (First 1963:131). Nowadays too many work seekers chase too few jobs. In other words there is no balance between demand and supply. Without balance there cannot be sustainability.

[12] The Chief Executive of the ALAN confirmed (personal communication February 2001) that members of the organisation have hardly any knowledge of the concept of sustainable development and its related issues.

CHAPTER 5 – NORMATIVE FRAMEWORK FOR IMPLEMENTING SUSTAINABLE DEVELOPMENT

1. Introduction

Sustainability cannot be discussed as an isolated event. Although the activities on local level can have an impact on global conditions, it is impracticable to separate the debate into local and international issues as demonstrated in Chapter 4 (Figure 4.2). Therefore philosophical issues are as much part of the overall examination of sustainability and the framework for implementing sustainable development. Without a solid philosophical foundation, sustainable development remains ineffectual.

As shown in Chapter 4, in Namibia major changes to support sustainability are not evident. On the local level a few Local Agendas 21 were instituted. National policies, such as NDPII and Vision 2030 and regional levels, e.g. SADC, in addition to the global level (international treaties, agreements) have produced very little, as the outcome of the WSSD in Johannesburg has revealed with regard to ecologic, social and economic changes.

The idea behind the thought “act locally, think globally” is that local action produces global results, in the name of sustainable development. This is certainly true where climatic conditions are concerned, for example, air pollution or the ozone layer. Another case is the overexploitation of fish resources as a result of providing for the markets in the North. However, local changes in order to promote sustainable development are barely evident as global problems increase, not decrease as envisaged. One reason is the promotion of economic “development” according to the capitalist principles[1]. This perspective also degrades alternatives such as functional sustainable communities. Despite the existence of such communities, sustainability is deemed to be an ideal.

A normative framework to implement sustainable development, in Namibia and elsewhere, has to take into account the various requirements to achieve a state of sustainability. As a first step this requires a re-evaluation of the concepts and to examine their usefulness and practicality in the light of having been unable to achieve a state of sustainability so far. This has been demonstrated by testing the hypothesis in Chapter 4. The weak approach to sustainable development is the current focus in developmental policy-making in Namibia and also internationally, as the close relationship between the external and the internal positions have shown. To expect an understanding of the concept sustainability is under these conditions unreasonable. The main problem in implementing sustainable development, as stated in the research problem (Chapter 1), is that a clear definition is absent which is capable to guide efforts. This ambiguity is also influencing the implementation of Local Agendas 21.

To alter the resistance to fundamental change requires *inter alia* an intellectual and mental transformation before practical issues can be undertaken. In this transformation process, attitudes, ethics, and utilitarian values play an important role. However, these are absent from the current consensus and rhetoric relating to sustainability. Before redefining sustainable development, a summary of sustainable and non-sustainable principles is presented.

2. Sustainable and non-sustainable principles

The efforts in Namibia and the international level to implement sustainable development have not been very successful, as described by the previous chapter. Therefore a conceptual framework is needed to address the uncertainties and to point out alternatives. Before this can be attempted, the principles of sustainability and non-sustainability will be examined.

To implement what is conventionally termed sustainable development as in the case of Local Agendas 21, has to be regarded as doublespeak in practice (as discussed in Chapter 4). A comparison between some of the sustainable and non-sustainable principles provides inputs into a framework for sustainability (see Table 5.1). This can be illustrated by the linear and circular metabolism with reference to urban areas, especially cities. In the first case, a city takes what it needs from an extensive area with no thought for the consequences, and throws away the remains (Giradet 1996:23). As a result, the urban-industrial societies accelerate environmental destruction and the future of the planet. In the second case, every output can be used as an input into the production system. This reduces the amount of waste production which is a characteristic of the nonsustainability of modern societies. Luhabe (1999:295) sarcastically remarks: ”[t]he only species on earth capable of making things no one wants is the human. In nature the concept of waste does not exist”. Therefore this holistic system is sustainable. The principles can be summarised as follows:

Non-sustainable	**Sustainable**
Mono cultures	Maintaining diversity
Overpopulation	Space
Decline of diversity	Filling niches
Focusing on anthropogenic needs	Providing for the needs of each component and holon of a whole
Primary use of non-renewable resources	Primary use of renewable resources
Human made catastrophes	Bouncing back after natural catastrophe
Crisis management (reactive change)	Constant change to adapt and maintain balance
Linear metabolism	Circular metabolism
Extracting resources (industries, overharvesting, mining)	Balancing resource consumption and availability
Anthropocentric principles	Utilitarian principles
Short-term orientation	Long-term orientation
Waste production	No waste
Urbanisation	Small settlements
Environmental destruction	Autopoiesis
Fragmented sectoral approach	Holistic approach

Table 5.1 Sustainable and non-sustainable principles

To promote and implement sustainable development, as per redefinition, capacity is required. Current capacity building efforts only support the continuation of the unsustainable systems which have created the status quo. As described in this study, local authorities often do not have a capacity to carry out their generic functions. The dismal performance of several local authorities has been reported in The Namibian newspaper (12 May 2004:3). This begs the question, how can they implement sustainable development which demands visionary leadership, an international vision, intellectual understanding and a willingness to change.

Capacity is also required to formulate a national vision and to provide the leadership necessary for change. This necessitates an understanding of the underlying issues of sustainability such as the limited resources available on Earth, the sustainable processes of Nature as illustrated by autopoiesis and how this sustainability is maintained. The current consensus on sustainable development is based on an artificially created system comprising social, economic and ecological elements. These elements are dysfunctional, as they do not form a holistic whole, but a fragmented human ontology. By avoiding ethical issues, the national and international consensus on sustainable development reinforces the vagueness of the concept and eliminates attempts to change from the non-sustainable status quo. In order to provide a solution to the question of what constitutes sustainable development and sustainability, a redefinition of the concept sustainable development is required to avoid the present ambiguity. This is one of the outcomes of this dissertation.

3. Redefinition

Sustainability is a global concern and is not applicable to one country only, such as Namibia. The confusion and ill-suited attempts to define sustainability and sustainable development were identified in this study. Furthermore, the continuous

use of certain words or terms does not necessarily imply that they are understood as pointed out in Chapter 2. The use and the meaning can be very different. According to UNIDO, there is no formal definition of sustainable development, even ten years after publication of the report of the World Commission on Environment and Development. “A clear definition may be unnecessary to design action programmes; however, basic conceptual guidelines must be drawn (or rather re-drawn), to set sustainability goals” (UNIDO, 2000). ICLEI/IDRC (1996:1) argue that no one fully understands how or even if sustainable development can be achieved. This dissertation has provided examples to the opposite and provides an answer to the question of what sustainability is and also the requirements of achieving sustainability if “made by human society”. Modern societies are incapable to emulate these examples. They try to homogenise, standardise, reduce diversity in natural and cultural environments. The achievements are still fairly primitive. “Measured in bits of pure information, the genome of a cell is comparable to all editions of the Encyclopedia Britannica published since its inception in 1768” (Wilson 2002:131).

Despite the prevalence of global non-sustainability as a result of the modern human-made systems, sustainability works not only on a small scale, for example, cells and traditional societies, but also on a large scale in Nature, before human interference. These contrasting perspectives can be explained by Kant’s consideration of antinomy which literally means 'conflict of laws' and are usually described as 'paradox' or 'contradiction'. “The contradiction arises because valid arguments can be made in favour of both views. If unresolved this antimony could lead to 'the euthanasia of pure reason' (skepticism)” (Pelusa, 2002). The proofs offered by Kant were presented as a thesis and an anti-thesis[2].

In this dissertation, the question whether sustainable development could be created or not, as in the case of Local Agendas 21, can be expressed as an antinomy:

Thesis: sustainable development can be created by humans (This is the position of the United Nations)
Anti-thesis: Sustainable development cannot be created by humans (This is the position of this dissertation)

“The ‘solution’ to Antinomies is that we cannot know how to resolve them. We must suspend judgment in the matter” (Pyrrho of Elis quoted by Ross, 1999). Pyrrho did not believe that any knowledge, about anything, was possible. This is expressed by Pyrrho (quoted by Ross, 1999) as follows: "... but we should be unopinionated, uncommitted, and unwavering, saying concerning each individual thing that it no more is than is not, or it both is and is not, or it neither is nor is not". According to Ross, the entire tradition of Hellenistic skepticism may have Buddhist roots. Since the Hellenistic Academic Skeptics based their skepticism on the idea that equally good arguments can be offered for any thesis which is the form of Kant's Antinomies, Kant's own doctrine may owe something to Buddhist influence.

The Brundtland Commission’s definition ‘Sustainable development is development that meets the needs of the present without compromising the needs of future generations to meet their own needs’ has been placed in the wrong context. The definition works in the context of an environment which has not been damaged beyond repair. Savroy (1991:35) refers to Herodotus, who described Libya in the fifth century B.C. as having deep, rich soils and an abundant supply of springs. Due to agricultural practices, only deserts remain today.

Natural processes over the last millions of years have provided continuous changes in order to maintain sustainability on Earth. “Everything changes, nothing remains without change” (Buddha quoted by Quotable Quotes, no date). If these sustainable levels cannot be maintained, as the ecological footprints illustrate, the return to sustainable levels is endangered. At present the needs of the present are not met at all. This is illustrated by poverty, environmental degradation and damage, pollution,

inequalities which are found in all modern human societies. The question is, therefore, how can the needs of future generations be met under such circumstances?

To redefine sustainability it is necessary to look at the relationship between the availability of resources and the usage thereof. If, for example, a 100 units of a resource are available and 10 are used, but no restoration takes place, a deficit of 10 units occurs, in other words the curve is going down to a level below the level of 100% (see figure 5.3) which represents sustainability. If the equivalent of 10 units are made available, the level returns to 100%.

One example is forestation, where the number of trees provides an indicator of the availability of this resource. If another 10 units are taken from the remaining 90 units, the resource continues to diminish and the deficit grows. This is only possible in the case of renewable resources, not in the case of non-renewable resources such as mining operations, where the deficit will become 100% over time, in other words exhausted. If the deficit cannot be restored to previous levels, permanent damage occurs, as the example of the Easter Island shows. If resources can be restored over time, as in the case of a drought, sustainability is assured. If a resource level of 100% can be achieved, sustainability is possible. If the resource availability is and remains below 100%, it is not sustainable.

If the population and consumption continues to grow, resources will be depleted over time. This gap between availability and exploitation leads to non-sustainability. Responsible behaviour implies that resources are available in future. In order to achieve sustainability, a balance between availability and consumption has to be restored, i.e., 100% of the natural resources are available and there is a surplus between usage and availability.

Resources availability and behavioural trends, such as consumption, can be illustrated in Figure 5.1. Before the arrival of unsustainable practices, especially the capitalist economic system, the availability of resources in relation to their usage by humans, can be described as plentiful, i.e., availability was in excess of demand or exploitation, or a **surplus**. Without a surplus, sustainability cannot be achieved. In the last 200 years the situation changed, leading to the current conditions of non-sustainability. Non-sustainability is the **deficit** between what is globally available with regard to resources and the consumption of these resources by the population.

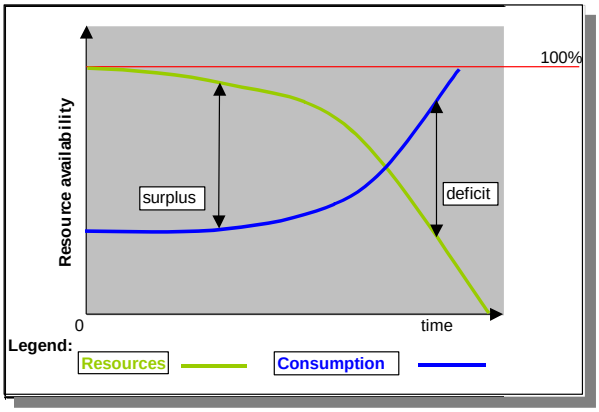


Figure 5.1 Sustainable versus non-sustainable trends

A radical change in human behaviour and attitude would result in the will to promote the reduction of the human population from its current unsustainable levels. This would include the call of going back to the roots or the village to create small sustainable communities. This represents a major challenge. A change to smaller families has and will encounter major resistance by certain interest groups. India and the People 's Republic of China have tried various approaches, and largely failed to reduce their population growth rates. However, the Islamic Republic of Iran claims that with regard to demographics and sustainability the country has achieved a lowering of the population growth from 3% in 1989 to 1.41% in 1999 (Islamic Republic of Iran 2002:21). This unique decline was accomplished by various measures, for example, "families will be deprived of all child benefits upon birth of a fourth child". Several Northern countries are experiencing negative population growth

rates, but the impact thereof on the reduction in the consumption of resources is negligible. Overpopulation in this regard is related to overconsumption, i.e., there are still too many people consuming too many resources.

The pressure and consequences of populations in the South on the available resources has been documented. The high growth rates worsen the already dire situation in many countries. Overpopulation here means that there are too many people consuming the few available resources which cannot be supplemented from other sources due to the low incomes.

Sustainability is not a static situation, as the advocates of Western style development want to make believe and cannot become a standardised system. The oscillation (blue line) in Figure 5.2, indicates the changes that occur and which are necessary to maintain diversity.

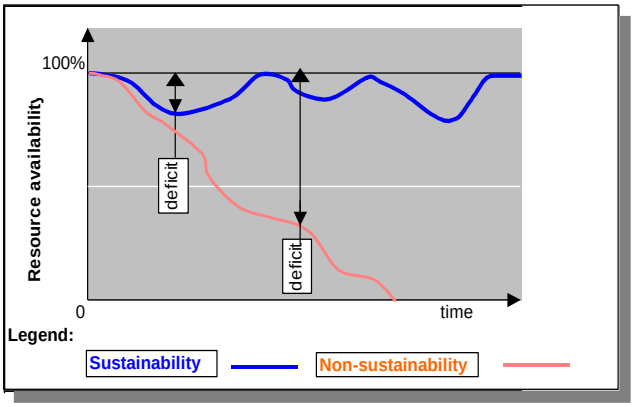


Figure 5.2 - Sustainability levels

These oscillations are a sign of sustainability. Changes and adaptations have to be made continuously during the period of non-sustainability until the level of sustainability is reached again. If this happens, it is an indication of the resilience of the natural system. However, neither human communities in general, nor local authorities in particular, can copy these creative and dynamic processes as found in Nature. Deficits in resource availabilities require additional space to locate new

resources. This required moving to these areas which is done by traditional communities such as the Ovahimba and the Chukchi. However, in modern local authorities this is not achievable. Resources have to be imported from outlying regions.

Local authorities are regarded as an important part in the process to achieve sustainability and Local Agendas 21 are regarded as one possibility. Most "modern" local authorities are responsible for urban areas and are involved in urbanisation processes. As local authorities do not generate the resources required, for example, equipment, food, building materials and water, these items have to be imported. The system employed is the economic system which is supported by industrialism. Urbanisation which supports *inter alia* industrial development, is a destructive process. Concrete and tarred environments are no substitute for the natural environment. Therefore, the question has to be asked, whether local authorities can achieve sustainability?

> *"The issue of sustainable human settlements lies within a broader international debate on sustainable development. This debate has been hampered by the perceived ambiguity, and even contradictory nature of the term. Its all-encompassing nature and inherent complexity has also made the concept vulnerable to large-scale co-option by agencies within the international development community and multinational business arena, agencies that very often use the term 'sustainable development' for promoting activities that remain in essence based on an unsustainable development model"* (CSIR 2002:7).

Livelihoods are sustainable when they (Ashley & Carney 1999:46):

- are resilient in the face of external shocks and stresses;
- are not dependent upon external support (or if they are, this support should itself be economically and institutionally sustainable);
- maintain the long-term productivity of natural resources; and
- do not undermine the livelihoods of, or compromise the livelihood options open to, others.

Comparing the above aspects with Local Agendas 21, then local authorities in Namibia are not sustainable. They are dependent on external support such as from government, they do not maintain long-term productivity of resources (most of which have to be imported), they can compromise the livelihood of others, as in the case of

globalisation or global air pollution, but also by expanding into rural areas. Finally, if resilience is considered, there are four crucial aspects of the resilience of a system at a particular organisational scale (Walker, 2004):

i) Latitude: The maximum amount of change it can experience before losing its ability to recover (before crossing a threshold which, if breached, makes recovery difficult or impossible).
ii) Resistance: The ease or difficulty of changing it - how 'resistant' it is to being changed.
iii) Precariousness: How close it currently is to a limit or threshold.
iv) Panarchy: Because of cross-scale interactions, the resilience of a system at a particular focal scale will depend on the influences from states and dynamics at scales above and below. For example, external oppressive politics, invasions, market shifts or global climate change can trigger local surprises and flips.

If the four scales are applied to Local Authorities the following was found in Chapter 4: i) urban areas cannot recover as they lack a natural environment which provides resources, ii) resistance to change towards sustainability was evident, iii) as for i), and iv) influences due to policies, global climate, foreign markets, invasion alien concepts are affecting Namibia's local authorities. Therefore the resilience of urban areas is precarious as they are not self-sufficient.

The Habitat Agenda (UNCHS 1998a:23) states that a sustainable human settlement will make efficient use of resources within the carrying capacity of ecosystems and takes into account the precautionary principle approach. The Habitat Agenda is also an example for the vagueness created in international documents, and shows the confusion and evasion of real action. The UN evades responsibility for the overall implementation by stating that States are responsible for it:

> *"Implementation of the Habitat Agenda, including implementation through national laws and development priorities, programmes and policies, is the sovereign right and responsibility of each State in conformity with all human rights and fundamental freedoms, including the right to development, and taking into account the significance of and with full respect for various religious and ethical values, cultural backgrounds, and philosophical convictions of individuals and their communities, contributing to the full enjoyment by all of their human rights in order to achieve the objectives of adequate shelter for all and sustainable human settlements development"* (UNCHS 1998a: section 24).

This is typical “polit-speak”, nothing substantial or concrete. Vagueness is promoted to evade responsibilities and necessary action. Most definitions relate to the interpretation of sustainable development which originated in the West. At the same time the human race is put on a pedestal and placed above everything on Earth, instead of regarding humans as a *primus inter pares* with regard to Life on Earth. The situation is worsened by various economic systems, developed over the ages which contributed to the current situation of un-sustainability.

The question, of who is causing non-sustainability, is usually not addressed. Humans created the current dominating system, called capitalism which destroys and diminishes resources on a global scale. As long as this fact is not recognized as one of the main reasons for non-sustainability, a solution will always be evaded. It is impossible to maintain the growth of the human population and the capitalist economy within the limited resources found on Earth. The human species is acting like a parasite with regard to the resources available, as new resources cannot be created at the same rate to offset the loss. To reflect the concerns discussed, the redefinition of sustainable development reads (see also Figure 2.1 in Chapter 2):

> *Sustainable development is the process of moving away from non-sustainable systems in order to achieve a balance between usage of resources and the natural production thereof based on autopoietic principles.*

A state of sustainability can only be achieved through a transformation process which is based on the reduction of the consumption patterns of humans (dematerialisation) and a reduction of the human population. Only then the needs can be met without compromising the needs of future generations to meet their own needs. However, there are many obstacles in the way. The outcome of the Brundtland Commission, UNCED and the WSSD have shown that something has to be done to stop the decay and degradation of the Earth’s resources and environment. The major obstacle for

change is found in the psychological realm, as humans are the main cause for the present unsustainable condition.

In order to achieve the intention of the redefinition, a prerequisite can be formulated as a hypothesis:

> *Only small human settlements which do not damage the natural environment, can be sustainable.*

The autopoietic theory states that an organism requires space. This has been illustrated by traditional societies. Artificial creations such as urban areas are not and cannot be sustainable if they grow beyond the capabilities to provide and maintain what is required with regard to resources. They often display parasitic characteristics as they demand resources from outside the surrounding area, for example, the water supply for Windhoek, food imported from the Cape, or oil and petrol. Local self-sufficiency, another characteristic of sustainability, is not promoted in this way. As Capra puts it:

> *"What is sustained in a sustainable community is not economic growth or development, but the entire web of life on which our long-term survival depends. It is designed so that its ways of life, businesses, economy, physical structures and technologies do not interfere with nature's inherent ability to sustain life"* (Capra 2002:187)

Chambers and Conway discussed the concept of rural livelihoods and came to a similar conclusion:

> *"[A] livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living: a livelihood is sustainable which can cope with and recover from stress and shocks, maintain and enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation, and which contributes net benefits to other livelihoods at the local and global levels in the short and long term"* (Chambers & Conway 1991:6).

The livelihood of rural communities is largely dependent on what they produce and what they can harvest from uncultivated sources (Agostino (2004:38). When these communities are forced to move into cash production within the traditional development approach, they become dependent on the international markets and could damage the fertility of the soil and negatively impact natural local resources. In

Namibia the majority of inhabitants still live in rural areas. Therefore it would make sense to look at how these settlements could be made sustainable and the requirements. As this study has shown, many urban areas can hardly cope with the current demands expected from them. In such a case how can they cope with the future demands of the next generation? Chambers and Conway (1991:11) stress that future generations and their livelihoods are undervalued for four reasons (Chambers & Conway 1991:12): 1. Innumeracy which refers to the failure to recognise the increase in population numbers. 2. Undemocratic democracy: the lack of democratic representation of these future generations. “Future generations have no votes. Their interests can only be represented through the exercise of our imagination, altruism, restraint, and net responsible stewardship” (Chambers & Conway 1991:12). 3. Discounting refers to the devaluing of the future by economists in order to maximise net present value and politicians in order to win votes. 4. Uncertainty, i.e., inability to predict the future.

In the light of the above, the next section combines the redefinition and the hypothesis for human settlements by formulating a normative framework or an alternative to conventional development in order to achieve the objective of sustainability. This will be applicable to the Namibian and the international situation.

4. Framework for sustainability

According to Agostino (2004:32), since the 1980s several authors from various parts of the worlds have questioned the development discourse and called for alternatives. The nonsustainability of the current promotion of Western style development is barely acknowledged by its advocates. To advance sustainability, an emphasis has to be placed on a holistic approach, instead of promoting the fragmented sectoral development methodology. Although in the 1970s concerns emerged about the ecological consequences resulting from the economic explosion characterised by

unlimited growth and consumption, the model that was shaped in the 1950s and 1960s was not questioned (Agostino 2004:36). Instead the model had to become sustainable, i.e., to sustain growth. This has become an impossible theorem.

According to Agostino (2004:36): "[s]ustainability – of life, of the planet – on the contrary, does require an end to business as usual". Present developmental trends, trajectories and critical alternatives in the academic field include contributions from the post development movement. It is "a commitment to a rich tradition of critical enquiry that rejects status quo assumptions as to the linearity, inevitability and equity of the developmental progress. Rather, there is a need to develop alternative conceptualisations, analytical tools and policy options" (Haines & Wood 2004:7).

Based on the principles described in section 2, the redefinition of sustainable development and the hypothesis that only small human settlements can be part of a sustainable relationship, the normative conceptual framework will focus on the following requirements: understanding and education, political will and ethics, ecological footprints and carrying capacity, dematerialisation and the necessity of a transformation period.

4.1 Understanding and education

Namibia's development is based on Western concepts and practices partly as a result of history, partly because of the abandonment of an alternative ideology. Ntuli (1999:186) puts it as follows: "[w]hile Westerners are frantically searching for new paradigms to fashion their lives, we as African people continue to be caught in the West's mirror of fascination". This has been reinforced in the post-independence era which rendered indigenous culture irrelevant as foreign cultures were embraced. Davidson (quoted by Breytenbach 1999:95) argues: "[i]nstead of building new states from the foundation culture of Africa's precolonial states, Africa has tried to build new

states from the foundation culture of colonial states, a very different thing. …So independence had not been able to join Africa to its own history and tradition". An attempt was made by the vision of an African Renaissance. Vilakazi (1999:202) asserts that the tragedy of African civilisation is that Western-educated Africans became lost and irrelevant as intellectuals who could develop African civilisation further. They also absconded and abdicated their role as developers, minstrels and trumpeters of African civilisation. An African enlightenment has to integrate tradition and modernity in order to conquer the new powers of science and technology (Gueye 1999:257, 261). According to Ngugi (1999): "[t]he renaissance in Europe was in essence a direct product of a revitalised philosophy, method and application of knowledge or education. An African renaissance cannot happen without a sober reappraisal of our philosophy, method and application of education".

In order to promote meaningful change, an understanding[3] of the matters of concern and an understanding of the reasons is essential. Learning, understanding and education are closely related issues. Education is a process of learning and understanding. This process has to be life-long, in other words, adults, who are responsible for leadership and decision-making, have to be educated continuously. Adult education has been defined as the learning process arranged for those adults who had never had any formal education or were unable to complete their formal education, but also those adults who have completed their formal education, and wish to continue studying (Brooker & Lindström 1991:3). The content of teaching is not only to teach people to read and write, but to understand and relate their learning to the reality of their everyday life (Jarvis 1987:273).

According to Capra meaning includes a multitude of interrelated characteristics that are essential to understanding social reality. Meaning is defined as an idea conveyed to the mind that requires or allows of interpretation and is itself a systemic

phenomenon: it always has to do with context (Capra 2002:73). Therefore to understand the meaning of anything it has to be related to other things in its environment, in its past or in its future. A difference therefore exits in the understanding of the context of a traditional way of life compared to the modern lifestyles. “Nothing is meaningful in itself” (Capra 2002:73). Such a position could lead to the emergence of non-conventional viewpoints which oppose those of the establishment. Lyotard speaks of the current “ideology of development” (quoted by Olivier 2004:26) which holds the world in thrall. No one would dare to oppose ‘development’, because it is uncritically viewed as being beneficial for everyone. Few stop to consider that development is usually understood in a narrow, mono-dimensional, technological sense, where the link between capital and such development is not questioned (Olivier 2004:26).

Examples of dissent are found in the disparate set of writings by the post-development movement that embodies a profound disenchantment with conventional development theory and practice (Haines & Wood 2004:12). Extremist or minority views have been found throughout history, ranging from Copernicus[4] to Karl Marx to Steve Biko[5]. The positions held by the post-development movement could also be regarded as extreme or eccentric as they reclaim **diversity** as one of the riches of humanity which include, for example, indigenous peoples, non-formally educated, and rural populations (Agostino 2004:34). Agostino then states: “[t]his plurality of possibilities is not – and cannot be – valid for all cultures and all historical times. Diversity cuts horizontally as well as vertically and challenges individuals and communities to find answers that are relevant in time and space”. Diversity does not denote a majority opinion or approach. Instead the plurality of possibilities is tailored to specific circumstances, cultural settings and the availability of resources.

John Stuart Mill in 1859 wrote (quoted by Treanor, 2003):

> *"It does seem, however, that when the opinions of masses of merely average men are everywhere become or becoming the dominant power, the counterpoise and corrective to that tendency would be, the more and more pronounced individuality of those who stand on the higher eminences of thought.* ***It is in these circumstances most especially, that exceptional individuals, instead of being deterred, should be encouraged in acting differently from the mass.*** *In other times there was no advantage in their doing so, unless they acted not only differently, but better. In this age the mere example of non-conformity, the mere refusal to bend the knee to custom, is itself a service. Precisely because the* **tyranny of opinion** *is such as to make eccentricity a reproach, it is desirable, in order to break through that tyranny, that people should be eccentric.* ***Eccentricity has always abounded when and where strength of character has abounded; and the amount of eccentricity in a society has generally been proportional to the amount of genius, mental vigor, and moral courage which it contained. That so few now dare to be eccentric, marks the chief danger of the time****" (author's emphasis).*

Opposing or unconventional perspectives are nothing new in academic deliberations. Hyden (1994:308) states: "[d]evelopment is the product of human effort. As a result, it has both architects and auditors". In the first case, these are typically persons with a vision, most occupying positions of power which is a prerequisite for the successful dissemination of their ideas. In the second case, the principal auditors of development are *academics*. Their task, according to Hyden, is, to assess how successful the architects are in shaping the process of social change according to their own models. Academics become activists when unanticipated consequences of architectural ambitions become imminent, i.e., when the ideal and practice of development grows increasingly apart, as in the case of sustainable development.

Benefits of "development" to the majority of Namibian society have so far been limited. "Global capitalism does not alleviate poverty and social exclusion; on the contrary, it exacerbates them" (Capra 2002:127). The implications of implementing Agenda 21, as an example, have also received inadequate attention by the upper echelons of society. Treanor (2003) explains this as follows: all western democracies have stable party systems, dominated by elites. Together they form what in Italian is called the *classe politica* which is extremely difficult to break open from the outside.

The system is neither dynamic, nor open to innovation. As a result, it is not a force for social and cultural innovation.

The task ahead is not just to change conditions and create new institutions, but to change consciousness in the process (van Rensburg quoted by Kinyanjui 1994:281). What is needed is realism tempered with some inspiring vision for improving human development through a process of transformation and revitalisation not only of existing institutions, but also the system of values, attitudes and behaviour that sustain the process of change (Kinyanjui 1994:281). The latter requires leadership and, as Plato wrote, leadership comes from understanding, understanding from continued exposure to the good (Bowen 1972:106). It necessitates the education of leaders, including professionals, officials, and as Dewey described it (Cross-Durant 1987:85) the growth of individuals through education. This is a lifelong process, and as Lindeman argued, adults have to adjust to new situations, for example, becoming involved in the implementation of sustainable development activities. The latter requires a different mindset and understanding which should be propagated through education.

Education in Namibia focuses on a formal education system originating in Europe. It incorporates some environmental education in schools. A limited environmental education is also a part of the Local Agenda 21 in Walvis Bay. However this level of education does not contribute to an understanding of the overall concept of sustainability on local and global levels. At present individuals have minimum responsibility for a sustainable world (Bormann 1996:675). This is true for the situation in Namibia as well as on the international level, where economic development is left to industrialists, financiers, politicians and technologists who believe the “Modern Age” philosophy of the inevitable dominance of humans over the rest of nature. An example of this thinking is found in the debate concerning the

failure of the educational system to prepare children (and adults) for the future. "Modern Age" advocates promote education designed to fuel competitiveness and growth of the human enterprise, whereas the reality of the future demands education for a sustainable world.

With regard to the above, Capra provides an example of Hill's "tyranny of opinion" from the field of molecular biology. Scientists have often to perpetuate the dogma of genetic determinism[6] in spite of mounting contrary evidence (Capra 2002:179). Industrial scientists are often hired for specific and narrowly defined projects and face numerous limitations on the implications of their research. They are under pressure to conform with the official doctrine of genetic determinism. The reason is that biotechnology is expensive. According to Capra (2002:17) in the academic world the pressures are different but almost equally strong. In order to obtain funding, biology departments form partnerships with biotechnology corporations. These grants shape the nature and direction of the ensuing research. "Academic biologists and corporate researchers have become indistinguishable, and special awards are now given for collaborations between these two sectors for behaviour that used to be cited as a *conflict of interest*" (Strohmann quoted by Capra 2002:179, *authors emphasis*). It is science in the service of the dominant global powers, not in the service of sustainable development or higher education. The World Conference on Higher Education in 1998 defined the missions of higher education, *inter alia*, as:

> *"The paramount mission of higher education is to serve the human person and society. This can be achieved through research and enquiry, courses of study and training, co-operative activities and partnerships with various social actors.* ***Higher education can contribute to the opening up and highlighting of new paths to a better future*** *for society and the individual, and can provide direction and shape to that future"* (UNESCO, 1998, *author's emphasis*)[7].

Agenda 21 (UNCED, 1992:§36.1) states: "[e]ducation, raising of public awareness and training are linked to virtually all areas in Agenda 21, and even more closely to the ones on meeting basic needs, capacity-building, data and information, science,

and the role of major groups". Education and public awareness are absolutely fundamental to achieving a sustainable future, because the global community is now facing the need to make changes that touch the very core of its value systems, involving shifts in attitudes and perspectives in the ways humans view themselves in relation to the environment and the utilisation and allocation of resources, and in the structures and processes of the systems of governance (Brevik, 1999).

What is needed is a new category of education which promotes an understanding of what sustainability is and how a holistic system works. At the same time the impact of anthropogenic activities on the natural environment has to be included. Some attempts have been made, for example, the establishment of Education for Sustainable Development (ESD). The British Department of the Environment, Transport and the Regions (1998) defines ESD as follows:

> *"Education for sustainable development is about the learning needed to maintain and improve our quality of life and the quality of life of generations to come. It is about equipping individuals, communities, groups, businesses and government to live and act sustainably; as well as giving them an understanding of the environmental, social and economic issues involved. It is about preparing for the world in which we will live in the next century, and making sure that we are not found wanting".*

The Department of the Environment, Transport and the Regions (1998) summarises certain key principles relating to the broad subject ESD, namely "sustainable development is the responsibility of everyone; education for sustainable development needs to pervade every aspect of life; and the UK's prosperity in the long term depends on our capacity to learn about sustainable development".

The implementation of sustainable development means that far-reaching changes have to be applied, in order to move away from non-sustainable practices. The dynamism generated by these changes calls for life-long learning and education. The latter can take place in various forms, such as non-formal and informal education, in-service training, and experiential learning. As municipal Councillors and officials are

all adults, the aspect of adult education and andragogy play a role in this regard. Education should be lifelong since humans face a lifetime of novelty and uncertainty as a result of "knowledge explosion" and the resultant effect, not only on the role but also on the number of roles an individual has to adapt to in order to contend with the rapidly accelerating social change (Brooker & Lindström 1991:3). Lifelong learning means that a person's education and training does not end when they complete their compulsory schooling or after higher education. To succeed in this process, the willingness and ability to learn would depend on the capacity of each individual to learn and understand what he/she is learning. To implement change towards sustainability is not a simple or straightforward process.

ESD has to be introduced on all levels of an educational system to generate a critical mass of knowledgeable individuals. Therefore higher education has also to play an important role in the endeavour. Higher education can play an important role in the pursuance of sustainable development. Certain universities have developed and introduced courses and degrees relating to sustainable development. The Faculty of the Built Environment (FBE) at the University of New South Wales, Sydney, Australia, offers a Master degree in Sustainable Development, called MBEnv(SustDev). The courses include: Sustainable Development and the Urban Environment; Resources, Materials and Sustainability; Energy and the Built Environment; Human Factors, Sustainability and Habitability[8].

The School of Public Management and Planning at the University of Stellenbosch, started in 2003 with a Masters in the Practice of Sustainable Development (MPhil. Development Planning). The aim of the degree is as follows:

> *"For many, sustainability is little more than common sense. But to achieve it will require another kind of leadership inspired by the possibility of a world where human society and nature can coexist and where the suffering caused by poverty has been eliminated"* (Sustainability Institute, 2002a)[9].

Staffordshire University is offering postgraduate distance learning courses in the Faculty of Health and Sciences. The modules for the degree *MA Sustainable Development* include: Introduction to Sustainable Development; Sustainability Strategies and Indicators; Sustainability, Participation and Education; Globalisation, Environment and Development; Sustainability Issues and Case Studies; Sustainable Cities; and Food, Agriculture and Sustainability (Staffordshire University 2003:8-9). The study is based on the 1992 Rio Earth Summit and Agenda 21. The university states that "it is now widely recognised that understanding sustainability and integrating its principles and methods into everyday practice is vital for the environmental, economic and social welfare of society. This assertion of the importance of sustainable development was renewed at the World Summit on Sustainable Development in Johannesburg in 2002" (Staffordshire University 2003:6). The aims of the study include: to provide an advanced course of *study of the theory and practice of sustainable development*; to engage students in the *evaluation of key conceptual and policy issues and debates* and their associated literatures; to develop a critical understanding of the techniques and methods deployed in the implementation of sustainable development; to develop the ability to synthesize and analyze differing approaches to the area of study; and *to develop the capacity for independent and creative thought*.

The most comprehensive studies and a wide range of topics relating to sustainable development are offered in India by the Sikkim Manipal University of Health, Medical and Technological Sciences in Gangtok. The university is offering as part of the activities of the Indian Institute of Ecology and Environment (IIEE) a degree of Master of Sustainable Development. It is Two Years Distance Learning Programme with Annual Examinations held in June and December every year. This is the only institution of its type in India dedicated for studies, training, research and consultancy in the areas of ecology, environment, pollution control, natural resources

conservation, disaster mitigation and sustainable development in the third millennium (Sikkim Manipal University, no date)[10].

All these attempts by the various universities are located in a particular department. The question is whether this contributes to a holistic approach or whether departmental interests determine the contents. The Indian example has the most comprehensive contents, whereas the FBE has a clear technical focus.

Education, to support sustainable development, is also needed for the identification of solutions, and to explain, analyse and clarify alternative ideas. The meaning of terms and concepts relating to sustainable development has been moulded in a particular environment, in this case Western thinking. Standardised and static systems are not capable of promoting change and adaptation to new situations and conditions. An understanding can be gained from the experiences of other cultures which could lead to innovative ideas and practices. Many lessons are available which could be used to support educational processes and innovations.

Alternatives and possible solutions, supported by educational activities have been perused in all countries as part of a framework for change. Therefore Namibia could utilise these experiences and the expertise available, provided that an enabling environment is established in which the different forms of education can be promoted and applied. An understanding of the educational requirements surrounding sustainable development in Namibia and elsewhere is needed. Otherwise, as Geis and Kurtmark (1995) remark: "...we are trying to solve new problems with outdated perceptions and planning". In order to achieve this objective, education and an understanding of sustainability are required in order to generate the political will to encourage a sustainability ethics.

4.2 Political will and ethics

Policies are prepared by politicians and through political processes, to change specific circumstances. Namibian policies such as NDP II or the Namibia Green Plan (see chapter 4) include numerous references to sustainable development. However the approach does not differ from the international proclaimed way of achieving sustainable development as expressed in the weak approach. To bring about change, political will is required. A change from non-sustainability to sustainability also requires a new ethic and mindset that promotes sustainability. "The challenge is simple: To develop the political will to change" (Rusk quoted by Cunningham & McKinney, 1999). This is however, extremely difficult to achieve, although Namibia and other southern African countries have since 1989 experienced a major change in the political ideology of the ruling elites. The question is whether such a change could be repeated, in this case the political will to support sustainability?

Transparency International (TI) explains that it is

> *"important to view political will as not simply the 'will of politicians' and those overtly in the political life of the nation. Rather we should be looking at leaders in all walks of life – professional groups, the private sector, trade unions, religious institutions and other civil society groups… The starting-point does not have to be at the highest echelons of power, but unless clear and unambiguous signals of support are emanating from the top, those responsible for administering and enforcing crucial aspects of the country's national integrity system may well feel inhibited"* (TI 2000:41).

The lack of political will is not a surprise in a country where political office is seen as the quick route to acquiring personal riches. This is a means of self-service, not public service and a means of benefiting one's family and clan rather than the nation as a whole. "Indeed, the reasons why people go into political life in the first place are important issues for public debate" (TI 2000:41). Transparency International continues to point out that a principal challenge in assessing political commitment is the ability to distinguish between reform approaches that are superficial and designed only to bolster the image of political leaders, and those which are

substantive efforts to create real and sustainable change. This is important as some well-intended regimes have engineered their own destruction through inept or ineffective strategies, and some exploitative rulers have successfully hidden their motives behind a façade of cosmetic measures (TI 2000:41-42).

The will to do something different and to implement certain changes has been realised in Curitiba as a result of the ethics of its former mayor and his collaborators. The changes so far emerging in Windhoek and Walvis Bay's LA 21 initiatives are meagre due to their narrow focus and because ethical issues which promote change towards sustainability, are absent[11]. Brookes asks (quoted by Cunningham & McKinney, 1999): "Will We be Judged for What We Refuse to Become?" Federico Mayor (1999) points out that the greatest need at the present time is perhaps for a global ethic – transcending all other systems of allegiance and belief - rooted in a consciousness of the interrelatedness and sanctity of all life[12].

Transparency International poses the question whether "political will" can be consciously created or does it emerge in the form of individual champions who may have previously and consciously concealed reformist tendencies as they rose to the top? If it can be created, how can we identify the likely ingredients for building it? (TI 2000:42). One possibility which also links up with good governance (in particular efficiency, transparency and accountability), and its association with sustainable development, relates to national watchdog agencies, such as the ombudsman and the Auditor-General in Namibia. Though technically "non-political" in nature, there is a broader political role to be played by these official watchdog agencies (TI 2000:43). Another possibility involves donors. They can play a role to build political will in the short term by identifying "anti-corruption champions", and providing the occasions, and possibly the protection they may need in order to act (TI 2000:44). Finally the raising of awareness at the grass-roots level is another starting point (TI 2000:42).

Whether grassroots would support policies that are affecting these groups negatively is doubtful. Walvis Bay and the importance of the fishing industry is one illustration (see chapter 4). Doulman (2003) uses the example of fishing to explain the political support that is lacking for unpopular decisions, as in the case of fisheries management. “Governments tend to take a short-term view and defer difficult management decisions because of their social and economic consequences. Regrettably, such procrastination occurs even in the face of declining catches and declining financial returns” (Doulman, 2003).

Several examples in Namibia, such as NDP II and the Environmental Commissioner, demonstrate the prevalent short-term view on the decision-making level and the disregard for local cultures and the natural environment. This can be illustrated by looking at the dormant proposal of constructing the Epupa hydroelectric dam project. Energy is one important component in industrialisation. Namibia imports a significant percentage of its energy from South Africa. To reduce this dependency Epupa was considered as a solution. The dam would have major negative impact on the local cultures and the environment. In addition a feasibility study was carried out before a project proposal could be formulated. This study assumes that there is little potential for reducing electricity demand through conservation measures (LAC 1998:14). The Legal Assistance Centre (LAC) summary quotes Prof. Harring (LAC 1998:16) who states that whatever data was included on social issues has been flawed to the point of being misleading. He goes on:

> *“The scant information on the social impacts trivalises the Himba culture and economy, minimises the project’s impacts on the Himba way of life, glosses over the Himba’s land and water rights, and offers a glib assessment of the resettlement costs”.*

Modern human societies became nonsustainable. Technology (“hi-tech” in particular) is part of the problem and not part of the solution. What is required is a low impact lifestyle (a simple lifestyle) which utilises “low-tech” as part of the dematerialisation process. One example in Namibia is water and sanitation. Local authorities, central

government and the international agencies have so far promoted the use of waterborne sewer systems. In the driest country south of the Sahara with limited water resources this is a sign of the narrow-mindedness of the political and business mindsets. An alternative would be ecological sanitation. Besides utilising what is regarded as waste, i.e., faeces and urine, the costs for infrastructure development and maintenance of these technologies are considerably lower for the taxpayers and the local authorities, than the waterborne systems. A reduction of materials for the reticulation, costly technologies, for example, pumps, manholes, or deep trenches, and a scarce resource such as water, could be considered as a contribution to dematerialisation. The utilisation of “waste” for food production has the characteristics of a circular metabolism which is an attribute of sustainability. Towards the end of 2004, Gibeon’s local authority opted for a high tech solution to its sanitary problem instead of a low tech option which was also promoted in Mariental. The local authority does neither have the human resources nor the know-how of maintaining this system which was developed in Germany.

Namibia as a single country is unable and unwilling to embark upon a sustainable future, as per redefinition. The situation will remain unchanged as long as international influences do not promote a global ethic for sustainability. A new consensus needs to be created which is compiling and implementing an international ethic for sustainability. To ensure this part of a sustainability framework, champions who are able to drive this process are indispensable. Another precondition is to reduce the ecological footprints of those societies guilty of wasteful practices and the degradation of the environment on a global scale.

4.3 Ecological footprints and carrying capacity

Namibia’s small population size and its relative large geographical area have put the country on the positive side of the ecological footprint analysis. To declare this

position as a positive sign of the small impact human activities have on the natural environment is a misleading notion. Regions in the country with a high concentration of people in rural areas and established urban areas, are displaying negative characteristics with reference to the ecological footprint as they are impacting on the natural carrying capacity of the land. Furthermore, urban development and in particular urban sprawl experienced in the major centres continue to destroy the natural environment.

UNCHS has prepared some proposals aimed at reducing a city's footprint. They consist of:

1. *Urban self-sufficiency - Urban agriculture and urban forestry in low-income economies can combine environmental goals with broader economic and social goals, allowing cities to generate some of their own resources.*
2. *Transport demand management - commute to work by bicycle by applying demand-management measures for automobile travel.*
3. *Implementing a recycling policy - Packaging material constitutes about 20 percent of all waste, of which only two per-cent is recycled. In 1996, a law on environmental charges was passed, levying a rate on defined products at the first point of sale for domestic goods, custom duty for imported goods* (UNCHS, 2001b).

As discussed earlier, Namibian urban areas are not self-sufficient. Neither food provision nor forestry are viable options for the expanding urban settlements (see Chapter 4, section 3.1.3). Transport management is not an issue for local authorities in Namibia. Not one urban area has bicycle lanes. Recycling as a means to reduce the use of natural resources is taking place on a limited scale in Namibia. Most of the local authorities have not implemented this activity in their areas of jurisdiction. Windhoek and Walvis Bay are involved in recycling some of their domestic waste. Recycling is done on a limited scale, for example, glass, metal, and paper. However there is no local recycling industry as these collected materials are transported to South Africa from where most of the materials originated. The proposals made by UNCHS are therefore insufficient in Namibia's urban areas. As long as more and more materials are needed for consumption all the proposed measures are insufficient to stop the plunder of natural resources. Some countries have introduced

ecological taxes, to make market prices reflect the full environmental costs of economic activities. These are frequently weakened by a variety of loopholes (Worldwatch Institute, 2004).

Political will is a requisite to create an enabling environment in order to develop new ideas and alternatives. One area to demonstrate this is urban planning and "development". Various models have been considered in Chapter 3. Arcosanti and ecovillages are attempts in line with the UNCHS proposal to reduce the footprint of cities. Except for some isolated instances these ideas have received scant attention. In the case of Arcosanti the requirements for smaller human settlements is recognised and therefore a miniaturisation of settlements has been attempted. This contrasts with the way urban areas are planned in Namibia. One factor is that in the majority of developments single plots are planned (with a government directive of having a minimum size of 300 square metres per household in low income areas. This increases the costs to the households in acquiring a plot and paying rates and taxes thereafter. The process also requires large tracts of land which in turn causes urban sprawl and the destruction of the natural environment. This is the exact opposite of what Arcosanti and the idea of ecovillages are promoting, namely smaller and more inefficient liveable areas. As described in this study, societies such as the Ovahimba, do not at present add to negative effects described in the ecological footprint. They are self-sufficient, they do not require modern transport modes, they have no unsustainable urban settlements, and they produce no waste which needs to be recycled.

Although environmental awareness and associated levels of regulation, expenditure, and public concern, have been rising for thirty years, environmental issues are generally still treated as overhead, not strategic, for consumers, firms, and society as a whole (Allenby, 2003). He goes on:

> *"Environmental issues are considered only after people and firms have done what they want to do, rather than integrated into all activities from the beginning. The new focus on "sustainability" and 'sustainable development' is, in part, an implicit recognition of the limitations of the overhead approach, but is still inadequate, principally because of the failure to understand the many and fundamental scientific and technological issues which for the most part have yet to be recognized, much less addressed. Our ignorance is profound"* (Allenby, 2003).

Many solutions have been labelled "green" such as the "greening of business", or as Miller (1996:683) puts it "making working with the earth profitable". The conventional view held by economists, business leaders, and politicians centres around the belief that all problems caused by the market-based economy can be cured by ever-increasing economic growth with as little government interference as possible (Miller 1996:683-684). Many environmentalists have recognised that an economy, based on the depletion of Earth's capital which results in environmental degradation, pollution, and waste, is ultimately unsustainable. As Hawken (quoted by Miller 1996:684) describes it: "[q]uite simply, our business practices are destroying life on earth. ... What is the logic of extracting diminishing resources in order to create capital to finance more consumption and demand on those same resources?"

Proponents of green architecture have attempted promoting changes to the conventional way of construction. Examples include energy saving designs, materials and technologies. However, Horns (Chapter 3) assertion that a sustainable building would have zero consumption of energy, water and materials, in order to ensure that no deterioration in quality of the ecosystem takes place. This ideal is however far removed from what green architecture is promoting. Buildings which conform to the ideal, are those built with locally available natural materials. In other words, the materials can be reclaimed by Nature. This is also an important aspect in the next sections which deal with dematerialisation.

Namibia's ecology is unable to support a burgeoning population due to its ecological characteristics as the driest country south of the Sahara and its limited carrying

capacity as a result thereof. Manufacturing industries, although small in scale, are following the example of similar industries elsewhere. They remain contributors to an increase of the ecological footprint. What is needed, in Namibia and on a global scale, is to significantly reduce the ecological footprint of human settlements. One possibility is dematerialisation.

4.4 Dematerialisation

Namibia is emulating the nonsustainable Western style modernisation and economic development on all levels of society. Therefore the objective of dematerialisation has not yet entered the realm of politics and economics in Namibia. To move away from consumerism and the unsustainable throw-away society entails a process of dematerialisation:

> *"Today's industrial economies are able to churn out large quantities of goods with considerable ease and at such low cost that there is a great incentive to regard most merchandise as throwaways…rather than designing and manufacturing for durability"* (Worldwatch Institute, 2004).

Local authorities are the locations where industries and markets are situated, especially larger centres such as Windhoek or Walvis Bay. They are a major factor in the spreading of ideas such as consumerism and consequently the usage of resources. Urban centres and their local governments are important contributors or opponents in the process of reducing materialism. It is essential to consider the theoretical and practical possibilities of decreasing the ecological footprint and thereby promote dematerialisation.

In order to reduce the ecological footprint, dematerialisation processes are required as a precondition. To a limited extent the idea of recycling is pointing in this direction. "Recycling post-consumer materials makes an important contribution to conserving natural resources by using what might have been considered waste as a resource for new production" (Columbia University, 2000b). Recycling measurers are only partially

a solution. As long as the world economy is growing, more and more waste is generated. Only a no-growth economy with a circular metabolism would ensure that no additional waste is produced. This is exactly what Nature is doing. “If we’re going to protect the planet’s ecology, we’re going to need to find alternatives to the consumerist dream that is attracting the world” (Mikhail Gorbachev quoted by Maser 1996:21). The standard of living in industrialised countries is constantly pushed up and has already reached unrealistic levels, threatening the ecological balance of the planet (Leatt, et al. 1986:12).

Herman Daly, whose steady-state economy, tried to address this issue, considered this aspect. A steady-state economy is defined as a constant stock of physical wealth and people (Daly 1996:688). The wealth and the population size is maintained at some desirable, chosen level, and is characterised by a low rate of throughput of matter and energy resources and a throughput which is roughly equivalent to GNP, or the annual flow of new production. To determine a desirable level is, however, very ambiguous, if not idealistic. Moreover, Daly (1996:688) argues that stocks of essential items should be maintained, for example, a sufficient stock of cars with a lower throughput of iron, coal, petroleum and other resources. The result would be that “we are better off, not worse” (Daly 1996:688). Daly does not take into account issues such as pollution and the limitations of non-renewable resources such as iron and oil. Daly’s proposal is not a solution, as the capitalist system is part of the problem and not part of the solution. Resources will be exploited and diminish before a stop can be evoked. A steady state cannot be continued at a low level (unsustainable level) of natural resources to maintain a large although a constant human population as illustrated in Figure 5.3. New and more resources are still needed which is impossible especially in the case of non-renewable resources.

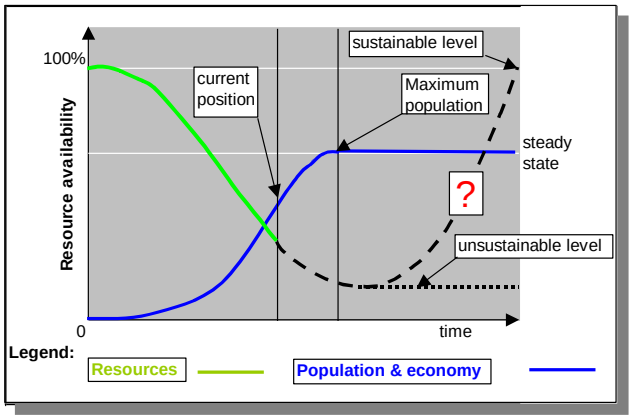


Figure 5.3 Population, economy and resources

The Easter Island experience provides some valuable clues. In the beginning resources were available everywhere. When humans settled on the island and used these resources to an increasing extent, the civilisation developed to the point when the imbalance between what is available and what is needed as part of the consumption pattern tilted towards non-sustainability. Once the peak of the civilisation was reached, the unsustainable lifestyle started to collapse, with the result of wiping out the natural resources and the human civilisation, until only a few individuals were left of this civilisation. This can be illustrated as follows:

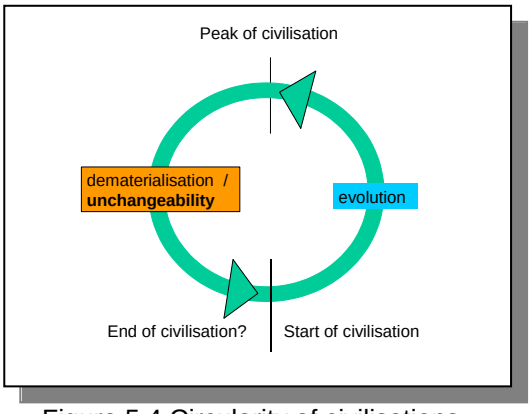


Figure 5.4 Circularity of civilisations

Evolution is a gradual process which is characterised by changes of something into a different, and usually more complex or better form (a synonym for this is development); a. the process of developing; b. gradual development (American Heritage Dictionary, 2003). Woojae (1999) states that, the antonym of 'Evolution' is neither 'Creation' nor 'Devolution', but 'Unchangeability'. Unchangeable means

incapable of changing or being modified (American Heritage Dictionary, 2003). Evolution is a progression from a simple form to a more complex one. In the case of the Easter Island this was the opposite of what happened, i.e., the total degeneration of a civilisation as a result of not changing the consumption patterns.

The Wuppertal Institute has called for the de-materialisation of current economies in industrial countries by a factor of 10 (Bartelmus 1999:3). Even over a lengthy period of time this would require drastically modified production (technology) as well as curtailing consumption. This is also applicable to all other countries, including Namibia, that are promoting industrialisation and consumerism. All societies and their institutions use and consume resources. Therefore dematerialisation would affect everyone and everything associated with a particular life style and its underlying psychological aspects. It also would affect policies such as Namibia's Vision 2030 which promotes Western styled industrialisation.

Dematerialisation concepts cater to 'strong sustainability' (Daly quoted by Bartelmus et al. 1999:3), refuting substitution between natural and other product factors, but allow some substitution among natural assets, such as non-renewable by renewable resources. The term dematerialisation has been often broadly used to characterise the decline over time in weight of the materials used in industrial end products or in terms of the decline in "embedded energy" in industrial products (Herman, Ardekani, & Ausubel, 1989).

Colombo (quoted by Herman, Ardekani, & Ausubel, 1989) speculates that, dematerialisation is the logical outcome of an advanced economy in which material needs are substantially satiated. Herman, Ardekani, and Ausubel point out that many industrial products have become lighter and smaller with time such as cars, dwelling units, television sets, clothes pressing irons, and calculators. However, there is a

lower bound regarding how small objects such as appliances can be made and still be compatible with the physical dimensions and limitations of human beings (who are themselves becoming larger), as well as with the tasks to be performed. Another problem is that the production of smaller and lighter toasters, irons, television sets, and other devices in some instances may result in lower-quality products and an increased consumer attitude to ”replace rather than repair” which results in an increase of the number of units produced[13].

The analytical concept of industrial metabolism is based on thermodynamics and system analysis (Bartelmus et al. 1999:5). Dematerialisation is based on the recognition of limited resource availability. With regard to industrial metabolism, dematerialisation aims at reducing quantitatively the material throughput of the economic system[14]. Dematerialisation is linked to the sustainable development paradigm by specifying how much dematerialisation is needed while still allowing for the human quest for increased economic welfare (Bartelmus et al. 1999:6)[15].

Allenby (2003) claims that despite the nascent state of industrial ecology, it is possible to make several suggestions concerning the implementation of dematerialisation which can facilitate immediate improvement in material use. They include[16]:

Dematerialisation at its most basic is the reduction of material use per unit quality of life. It therefore has a cultural dimension which in the longer term, is dominant. It can be achieved not only through the obvious means - lightweighting products, for example - but through reducing the velocity of materials through the economy (e.g., product life extension).

It is necessary to understand when dematerialisation is appropriate, and when it is less important. To do this, it is necessary to evaluate the direct environmental implications of materials in particular applications, but also the indirect consequences. These would include the environmental impacts which are already embedded in the materials before use.

Allenby also notes that dematerialisation, in itself, is not the primary goal. “Rather, the primary goal is to achieve a state of ‘sustainable material use’ as part of a

sustainable economy. Dematerialisation, material substitution (both by environmentally preferable materials and by services of various kinds), materials cycling systems, identification and use of environmentally preferable materials through the economy - all have a role to play" (Allenby, 2003). In spite of progress in specific areas, overall material inputs per person rose in developed nations during the 1980s and 90s. According to Adriaanse et al. (Columbia University, 2000b), dematerialisation has not enough to cause an absolute reduction in the use of natural resources to date, but it holds great promise for further application in the future.

The necessity for dematerialisation demonstrates the inefficiencies of Western style "development" compared with the efficiencies of small human settlements such as those of the Chukchi and the Ovahimba. The dichotomy displayed by Namibia's modern and traditional parts of the society provides examples of sustainable and non-sustainable standards of living in one country. Promoting the modernisation agenda is an indication of the narrow-minded mindset and lack of understanding of sustainable principles. The requirements for dematerialisation call for political will, understanding, education, ethics, and a concern to reduce the ecological footprint. To achieve sustainability on the global level in general and Namibia in particular by means of dematerialisation cannot be accomplished immediately. The requisites to accomplish this goal include an understanding of the issues and obligations involved in order to phase out the unsustainable practices. Such a process has to be considered over a certain period of time and depends on the willingness and support of everyone involved.

4.5 Transformation period

Based on the assumption that sustainability is understood and supported by the political will and the necessary ethics, in addition to the introduction of the dematerialisation process, the final component of the framework to achieve a state of

sustainability is the necessity for a transformation period. Change implies the creation of a new condition which is an improvement of the previous situation. In the case of Namibia, it is necessary not to replicate and support the unsustainable practices of the North. This also applies to local authorities which are supposed to promote sustainable development. Urban areas have been focal points for the non-sustainability of current development efforts e.g., as a seat for industries, markets and consumers. If a change towards sustainability is to be achieved, local authorities have to play their role in this endeavour. As they are influenced and linked to the global economy, they also have to be transformed. Therefore uncertainties remain with regard to the actual outcome of these far reaching efforts. In order to reflect on the possible results of the transformation period, three scenarios are considered to evaluate the goal of achieving sustainable development or sustainability, based on the redefinition of the term sustainable development.

The first scenario reflects the current “business as usual approach“ which produces insignificant or no changes and therefore does not support sustainable development, as per redefinition, except on the rhetorical level. The rhetoric in this case is doublespeak, i.e., nonsustainability is sustainable, as the dominating powers try to maintain the status quo. The second scenario mirrors an approach which attempts to stretch available resources in the hope that a solution could be found to existing problems. It is therefore a kind of “muddling through” approach. The third scenario refers to the characteristics of sustainable human settlements in line with the hypothesis formulated above.

4.5.1 Scenario 1 – business as usual

Scenario 1 espouses the economic system and its political associations as proposed in Vision 2030, i.e., changing the national economy into a copy of the Northern model. Kay (1989:6) describes the situation as follows:

> *"The modernization paradigm of the sociology of development argued that Third World countries should follow a path similar to that of the advanced capitalist countries. It also viewed the economic, social, and cultural penetration by the modern West into the traditional South as furthering modernization".*

Towards the end of the 20th century the major economic feature of globalisation[17] has revealed the growing concentration and monopolisation of economic resources and power by transnational corporations and financial institutions (Khor 2003:51)[18]. The 1997 UNCTAD Trade and Development Report shows that since the 1980s, the world economy has been characterised by rising inequality and polarisation among countries which was accompanied by increasing income inequality within the countries. This situation is similar to the nineteenth century: "[t]he effects of the industrial Revolution prove that free competition may produce wealth without producing well-being" (Toynbee, 1884). This shows that little has changed with respect to equality and distribution of wealth in the last two hundred years.

"Global industrialization, with its ever-increasing consumption of energy and material goods, infringes on the functional wholeness of a system" (Maser 1997:109). These infringements denote a shortcoming between industry and environment, between governments and the governed, between the industrialised North and the less industrialised South, and hence between the materially rich and the materially poor. This is illustrated by an advertisement in a supplement to the Mail & Guardian (March 28 - April 3, 2003:7) by Anglo American which states the commonly held position of proponents of the capitalist system: "[t]he earth is a treasure house of natural resources. When wisely unlocked they continue to enrich mankind. Which is why Anglo American remains committed to resourcing our future and to spearhead the global transition towards securing a sustainable future".

"Securing a sustainable future" is one of the many rhetorical expressions which are used to protect the status quo of the dominant economic system, as illustrated by the

Local Agendas 21 in Namibia. The increasing number of wars and conflicts in the 20th century and at the beginning of the 21st century are an indication of conflicts relating to resource availability or access to strategic resources. Political and economical control of the dominant powers will ensure access to what is available. In the first half of 2003, the US led war in Iraq has been described as a war to guarantee access to the oil resources in the country. Renner (2002:8) points out in his study on resource conflicts that besides "the struggles arising out of a context of contested resource wealth, there are also a host of other conflicts that emerge from situations of resource scarcity—overuse and depletion—and are exacerbated by the social and economic repercussions of environmental degradation". Renner goes on (2002:9): "[w]here resource wealth is a factor in conflicts, it is primarily non-renewable resources such as fuels and minerals that are at issue (though a nominally renewable one, such as timber, is important as well). On the other hand, where resource scarcity is a factor, it concerns principally resources that cannot be looted and traded, such as farmland and water".

The mixture of political and economic interest has the potential for conflict. This happened before. The Thirty Years' War originated as a religious quarrel and became a political battle reflecting the national ambitions of the participants (Reader's Digest 1978:578). If economic interests become part of the battle for survival, a major turmoil is probable. That is what happened, on a small scale, on the Easter Island when the end was near. Ivan Illich has portrayed the *Homo economicus* the protagonist of scarcity, "who in pursuit of the satisfaction of needs assumed to be unlimited through means that are assumed to be scarce, has been transformed from *Homo sapiens* into *Homo miserabilis*" (Agostino 2004:32).

Monbiot (2003) summarises the fundamental aspects of the first scenario as follows:

"The global economy is working. The rich may be acquiring an ever greater share of the world's wealth, the ecosystem may be collapsing, but - or so we believe - the poor are emerging from poverty. This is portrayed as the ultimate test of the great neo-liberal experiment: if, as the world's resources are privatised and its corporations deregulated, the war against poverty is being won, then the accompanying inequality and destruction can be accounted as little more than collateral damage".

The problem of non-sustainability is highlighted by Samuelson (Newsweek 7 April 2003:54):

"We Americans want it all: endless and secure energy supplies; low prices; no pollution; less global warming; no new power plants (or oil and gas drilling, either) near people or pristine places. This is a wonderful wish list, whose only shortcoming is the minor inconvenience of massive inconsistency".

The inconsistencies are reflected in the overconsumption of the "developed" world. This is nevertheless the model of development for many countries, for example, Namibia. According to the World Bank (2002): "Overconsumption creates an unsustainable demand for resources. As the world globalizes, the effects of excess demand crosses borders and affects societies environmentally, socially, and economically. As consumption rates increase, the debate continues on the positive and negative effects as well as which policies are optimal for controlling it". Eric Brown argues that there is the need to reduce the current consumption patterns of overconsumption in wealthy countries, while increasing consumption in poorer nations (World Bank, 2002).

"Compulsive worship at the altar of consumption has brought humanity to the edge of an environmental abyss—depleting resources, spreading dangerous pollutants, undermining ecosystems, and threatening to unhinge the planet's climate balance" (Worldwatch Institute, 2004).

The view that the conditions of the poor are improving are supported by data provided by the World Bank which are quoted thousands of time and are treated as facts (Pogge, 2003). The data shows a trend which suggests that between 1990 and 1999, the percentage of the world's people living in absolute poverty fell from 29% to 23%, therefore ugly "as some of its characteristics may be, the existing economic model is helping the poor" (Monbiot, 2003). The World Bank's set of global poverty figures are presented with six-digit precision, but suffer from severe shortcomings as

the Bank uses an arbitrary international poverty line unrelated to any clear conception of poverty (Reddy & Pogge 2003:1). Reddy and Pogge explain that a misleading and inaccurate measure of purchasing power "equivalence" is employed. This creates serious and irreparable difficulties for international and inter-temporal comparisons of income poverty, as incorrect extrapolations from limited data are used. In this way the figures create an appearance of precision that masks the high probable error of its estimates.

Monbiot (2003) points out that the first of the bank's two principal surveys measured price levels in only 63 countries. China was not among them, and neither that nation nor India figured in the second survey from which the trend has been established. Monbiot concludes, a “set of global poverty figures, presented with six-digit precision which contains no useful comparative data from the two largest nations on earth, could be described as imaginative”. Reddy and Pogge (2003:33) conclude:

> *“We are surprised that the Bank has been publishing regular poverty statistics for twelve years now - “precise” to six digits and very widely used in academic publications and popular media all over the world — without significant attention having been paid to the flaws in its procedures. It is hard not to see this fact as indicative of the low priority that has hitherto been attached to the global problem of persistent severe poverty”.*

As shown in the cases of Windhoek and Walvis Bay, Local Agendas 21 do not have a major impact on local conditions, such as the environment or poverty alleviation. Local authorities in this scenario are what they are now, administrative and bureaucratic institutions with hardly any impact on achieving sustainable development, but they are perpetuating nonsustainability. This means, that very few solutions to the many problems will be found. Furthermore, governments on the central and local level will remain influenced by international political and economical conditions (see chapter 4).

The shortcomings of the "business as usual" approach and the inability to control Nature, can be illustrated by a few examples. Schwartz and Randall (2003:1) have produced a report with the purpose "to imagine the unthinkable". The researchers point out that there is a possibility that gradual global warming could lead to a relatively abrupt slowing of the ocean's thermohaline conveyor. This could lead to harsher winter weather conditions, sharply reduced soil moisture, and more intense winds in certain regions that currently provide a significant fraction of the world's food production. The result could be a significant drop in the human carrying capacity of the Earth's environment as a result of adverse weather conditions which could develop relatively abruptly.

Another form of devastation could be the outcome of the professed advances of modern technology. In Namibia and around the world, the use of antibiotics has brought about resistance by microbes to the strongest antibiotics (see Newsweek December 13, 2004:43). In the beginning of the 21st century SARS and chicken flue have illustrated that conditions created in human settlements have generated an environment for a particular virus to mutate and then spread to humans across borders with alarming speed (Newsweek, 7 April 2003:55). Especially with the advent of globalisation, there are increased possibilities to disperse a virus throughout the globe. This happened in the previous two decades when the HIV/AIDS virus started to spread. "Even today, microscopic pathogens can outsmart us. And more are likely to emerge" (Newsweek, 20 April 2003:43). "SARS is just a dress rehearsal for the next one" (Dr. Andrew Simor quoted by Newsweek, 20 April 2003:43)[19]. Disregarding the limits set by Nature can only result in a major catastrophe. If this scenario is happening, the situation aptly illustrated by Toles (in Miller 1996:101) could occur:

Figure 5.5 – Biodiversity[20]

Friedrich Engels (quoted by Turan 1983:143) wrote in the nineteenths century: “when abused nature takes its revenge on us”.

In scenario 1 change towards sustainability is evaded and business prevails. The illusion that progress can only be achieved through economic means is propagated and that Nature can be conquered by humans. Imagine the unthinkable is not part of the agenda as demonstrated by the earthquake and the tsunamis in Asia in December 2004.

4.5.2 Scenario 2 – muddling through

In the second scenario endeavours are made to modify some of the aspects associated with the unsustainable status quo. Examples which were considered, include Daly’s steady state model, green architecture, Local Agendas 21, or the United Nation’s sustainable cities programme. Attempts are made to minimise, reduce or play down the unsustainable practices and features of the capitalist system. Alternatives offered, such as Dahl’s steady-state economy and the United Nations Agenda 21, lack from a deeper understanding of the underlying issues of sustainability. Real sustainability is regarded as an ideal. “Sustainability is a difficult concept to operationalize, not least in part because it may well be an emergent

characteristic of a properly self-organized complex system (the global economy) and thus not definable on lesser scales" (Allenby, 2003).

Martin Khor, one of the critics of globalisation, reviewed the structural adjustment policies and the liberal free-market. The model shows that a reconceptualisation of development strategies is required and alternative approaches are needed (Khor 2003:57). The search for alternative options for developing countries has to consider the development of economic and development approaches that are based on the principles of sustainable development. The integration of environment with economics, and in a socially equitable manner, is, according to Khor, perhaps the most important challenge for developing countries and the world.

Green architecture is looking at certain alternatives in design, pollution, recycling of components, alternative energy use and the utilisation of natural materials as opposed to toxic industrial products. Other aspects considered relate to water and sanitation, e.g. composting toilets, greywater irrigation, and rainwater harvesting. These ideas can be relatively easily incorporated in the existing architectural philosophy, as they do not deviate too much from the known.

Another model which relates to the second scenario is the sustainable cities programme (SCP) which is closely related to Local Agenda 21 initiatives. The results so far are similar, i.e., focusing on certain sectors. This can also be described as a piece-meal approach. Like green architecture, SCPs fit into the current pattern of municipal administration and government. The changes are associated with a stronger emphasis on environmental factors and the broader participation of various stakeholders coming from the local authority, community and external partners.

Green architecture and the SCP are biased towards environmental aspects. The five practices pointed out by UNCHS (section 6.5, chapter 3) indicate this bias. Three out of the five issues relate directly to environmental concerns, one relates to resource mobilisation, whereas the fifth is associated with planning activities. Both arrangements incorporate some ethical facets which relate to certain changes envisaged. Some of these changes conform to the requirements of dematerialisation, because recycling and the use of renewable resources reduce the need for industrial products. “Governments can take a number of steps to facilitate the transition to a less consumptive economy. But these will need to be expanded dramatically to put consumption on a sustainable footing” (Worldwatch Institute, 2004). This recognises the fact that the current way of life is not sustainable, but the position refrains from promoting a more radical approach. This is also the case with Local Agendas 21.

Local Agendas 21 support the weak approach, because they have a minimal impact on the overall implementation of sustainable development. Despite some concern for environmental factors, the objective of Western style economic growth is not discarded. Therefore a Local Agenda 21 is a method of muddling through, hoping that some solutions may appear which would solve prevailing problems. Environmental problems are treated when necessary, for instance, when a crisis occurs such as droughts or flooding.

The higher levels of government and the global system exert influences on the functioning of local authorities in addition to economic factors which influence the viability of local authorities. The reductions of fish quotas affect Walvis Bay and Lüderitz, whereas Tsumeb suffered after the closure of the mines. Omaruru and Outjo faced difficulties when local industries closed. The dependencies created by the economic system show the weakness of the neo-classical paradigm.

Scenario 2 can be summarised as a “muddling through” approach. A transition from the current approach to a “more sustainable” condition (not a sustainable one) is the declared goal. To achieve the objective, several new approaches have been defined, such as good governance, democracy, equity and equality. These fine ideals are used as support and reinforcing values for a materialistic global regime which thrives on money. They do not modify existing belief systems with regard to non-sustainability, but reflect the egoistic position of the dominant powers in today’s world. Agenda 21 and the Habitat Agenda do not present lasting solutions towards the goal of achieving sustainable development. They could however, support certain efforts during the transformation phase, such as promoting the more efficient use of available resources, awareness raising and good governance.

In the case of Namibia, local authorities could use dry sanitation technologies to reduce water consumption and the need for large amounts of money for infrastructure developments. Another possibility would be the use of so-called renewable energy resources which also would reduce dependencies on South African imports. These small steps are a means to an end, but cannot be an end in themselves. This also requires support from the central government regarding budget allocations, policies, and development plans.

Far-reaching changes are inevitable if the current dilemma has to be solved, and to provide for future generations. This requires fundamental changes in the social consciousness and cultural norms which means thinking new (Maser 1996:xiv). But “a great many people think they are thinking when they are merely rearranging their prejudices” (William James quoted by Maser 1996:xiv). This is exemplified by Chambers and Conway (1991:4): “[i]n development prose, ‘sustainable’ has replaced ‘integrated’ as a versatile synonym for ‘good”. Few, if any, dissent from the view that development should now be sustainable”.

In scenario 2 the main psychological change is the recognition that something has to be changed. However, practices such as SCPs, green architecture and Local Agendas 21 in Namibia, show that these changes are limited. They include modifications that do not encourage drastic steps to correct the unsustainable situations. Therefore they could be regarded as steps in the right direction which still require more concerted efforts to achieve sustainability such as understanding and education, political will and ethics, ecological footprints and carrying capacity, and dematerialisation.

4.5.3 Scenario 3 –sustainable settlements development

The most fundamental shift the present modern human societies could undertake is a conscious transformation from the current nonsustainable Western dominated approach to one that is comparable to the functioning traditional communities. A move to achieve sustainability has consequences for all. It would result in the abolishment of the destructive practices of one species and the effects of their activities.

A transformation as described by scenario 3 would result in small human communities. The latter would be self-sufficient and human encroachment on the natural habitat is limited. These settlements do not require an expensive bureaucracy and the facilities such a bureaucracy requires. They also do not require inappropriate technologies, institutions, a global economy, values and norms which are not promoting sustainability[21].

Ideas supporting the proposition of scenario 3 were proposed in the nineteenth century by Thoreau. He suggested to retreat to nature for the sake of achieving clarity and simplicity in living (Porter 1995:170). “I went to the woods because I wished to live deliberately to front only the essential facts of life, and see if I could not

learn what it had to teach, and not, when I came to die, discover that I had not lived" (Thoreau quoted by Porter 1995:170). Porter (1995:171) elaborates that Thoreau was retreating from a world that entices people to obtain more and more in the way of inessential goods, to live in debilitating comfort, and to spend an unnecessary portion of their lifetime earning money to support a wasteful, superfluous, artificial existence. Furthermore, towns divert people from the satisfaction of their primary needs and separates them from the beauties of nature and the dignity of labour. Instead of being self-reliant, people grow weak and dependent, self-indulgent and timid, as towns render people oblivious to what is essential in life whereas the demands of rural living make them aware of the basic terms of human existence.

During the twentieth century in Western countries, movements in the 1960s advocated a back to nature transformation of communities. They tried to follow a more natural life, preferring the natural environment of the country over the artificial urban life, preferring the tenderness of making love in place of the violence of making war, they sought the rhythm of the days and seasons as their measure of time, the simplicity, space and silence of the land to make them gentle, balanced, sensitive and tranquil. Furthermore, they ate organic food without pesticides or preservatives, drank pure water and maintained good health through a balanced nutrition and physical activity with a minimum reliance on machines (Porter 1995:169-170). In the 1990s some of these ideas were absorbed in present day thinking, such as the concern about the environment, pollution, and conserving natural resources, in additional to health and physical fitness, eating natural food, dressing informally, and protecting endangered species (Porter 1995:170).

A sustainable scenario is found in a naturalistic ethic which can mean the following:

- Being natural or living physically close to nature and satisfying our basic needs in simple, elementary ways

- Following the divine spirit within nature and being guided by its inherent character, laws and ways
- Cooperating with the natural development of life as it has progressed and unfolded throughout biological history, doing nothing to counteract its dynamic movement and tendencies, its thrust towards greater being (Porter 1995:168-169).

Unlike functional traditional societies, most modern human societies have lost the knowledge of living in harmony with nature. Lost knowledge can hardly be recovered. Therefore to go back to the traditional roots or to adapt an unknown culture is impracticable. Functioning traditional communities have gathered this knowledge and understanding over centuries and integrated this in their culture. They know what Nature can deliver; whereas modern humans have lost this ability. The search for an alternative, that will be sustainable in future, has to go back to the origins of humankind and to those few communities that are at present still displaying a sustainable way of life[22]. It would be worthwhile to study them before they disappear. However this is not always possible[23].

Local authorities in this scenario would cease to exist. Small sustainable communities do not need expensive bureaucracies which have to be financed by taxpayers, as it is evident from traditional communities. Human communities and Nature would form a symbiosis. Nature determines what needs to be done, similar to the Chukchi and the Ovahimba. Those who did not take the limitations of nature into account, vanished, as experienced by the inhabitants on the Easter Island, Chaco and Great Zimbabwe.

If human societies and Nature are to continue their existence in future, sustainability is an unconditional necessity. This requires a symbiotic relationship between the two parts. The only solution seems to be a transition to form small and sustainable communities who do not have to be concerned with the GDP and an exploitative economy. Both would vanish. This scenario would mean that agrarian societies

would again be dominant and rural areas are providing self-sufficiency which is another indicator of sustainability. Unlike in urban areas, space would be available for all living organisms and diversity. During the deliberations of the Brundtland's Commission in Brazil, a speaker from the floor stated:

> *"You talk very little about life, you talk too much about survival. It is very important to remember that when the possibilities for life are over, the possibilities for survival start. And there are peoples here in Brazil, especially in the Amazon region, who still live, and these peoples that still live don't want to reach down to the level of survival"* (WCED 1987:40).

The loss of diversity is debilitating the biosphere of which humanity is a part (Mayor, 1999). Mayor also points out that the rapid destruction of age-old cultures and traditions is diminishing the collective repertoire of cultural response[24].

The key to sustainable human communities is a simple life style. "The Ecological Footprint accounts show us that humanity's consumption and waste production today exceed the Earth's capacity to create new resources and absorb waste. We are, as a result, liquidating natural capital to support current resource use, thereby reducing the Earth's capacity to support future life" (Wackernagel, et al., 2002). A sustainable relationship between humans and Nature is only possible if the main obstacle could be solved: the human psyche. Sustainability is only achieved if one phenomenon is guaranteed: Life on Earth. This is the exact opposite of the current situation.

> *"While sustainable development professes intergenerational equity, little multigenerational thinking is happening in the currently dominant approach of sustained development. Driven by short term interests such as political terms and preferred return on investment cycles, planning happens in short cycles of three to five years. Even scenario planning happens in 15-20 year increments. … Thus by maintaining an inherently flawed development model, this approach is akin to rearranging the deckchairs on the Titanic"* (du Plessis, 2004).

The goal of sustainability is diminishing the longer humanity waits for change, and should a major catastrophe occur, the goal would probably disappear, as the experience of the Easter Island shows. Paul Hawken's golden rule (quoted by Miller 1996:684) proclaims:

"Leave the world better than you found it, take no more than you need, try not to harm life or the environment, and make amends if you do".

5. Conclusion

Many attempts and proposals have been propagated, such as Local Agendas 21, sustainable economic growth, or political aspects, as solutions to the problems created by human societies. All have so far failed to deliver on the promise of achieving sustainable development. In the case of Namibia where, during 2003, it became obvious that many local authorities are functioning primarily in a crisis mode. It is therefore unlikely to expect that these institutions could become a force in implementing development that is sustainable, or even changing towards sustainable development (as per redefinition).

To achieve Sustainability through Sustainable Development (as per redefinition) is an anti-establishment process as described in scenario 3. The past two hundred years since the start of the industrial revolution, have shown that the economic system which emerged since then, is not geared towards creating equality, equity, alleviating poverty, or promoting an utilitarian approach[25]. Perpetuating this model is a recipe non-sustainability. Each civilisation has been marked by its birth, maturation and demise. Having "learned little or nothing from history, our civilization is currently destroying the very environment from which it sprang and on which it relies for continuance. …Civilizations as we know it cannot, therefore, be the final evolutionary stage for human existence" (Maser 1996:xiv). In order to promote meaningful change, a certain level of understanding is required by decision-makers on international, national and local level.

Sustainability exists in functioning traditional societies and, as many writers have pointed out, in Nature. Various scholars have pointed out that the Western development model is not suitable for the South. Namibia is nevertheless following

the model of the North which includes the implementation of Local Agendas 21. The requirements of a holistic approach in the case of human settlements do not form part of the consciousness of the leadership in national and local governments. This can be justified with the argument that the conventional versions of sustainable development and sustainability are vague and ill-defined concepts.

The normative framework presented, is in line with the thinking of the post-development movement. Agostino argues (2004:35): “[t]he alternative proposed by post-development is to produce less, recognising that this does not mean a compromise to reduce the quality of life but a new perspective to a fuller life with fewer commodities”. Any alternative has to ensure an understanding of new perspectives which have to be promoted through education in order to realise a new mindset among decision-makers and the population. Once understood, the political will and ethics have to guide the process of change. To achieve a state of sustainability, ecological footprints and the carrying capacity of each country has to be a concern. Dematerialisation is needed to lower consumption and the utilisation of finite resources. All these processes require a transformation period to become effective on all levels, international, national and local.

Local authorities, as the lowest tier of government, are only able to function in the context of national policies, laws and strategies. They are not independent and self-sufficient entities. The global consensus on the definition of “sustainable development” and the resulting activities related to the implementation of “sustainable development”, for example Local Agendas 21, show, that the weak approach is succeeding unopposed. This confirms the argument that real sustainability is either not understood or that the indoctrination by the dominant global forces, to protect their short-term interests, has been overwhelming.

Endnotes

[1] Faber provides one example for the non-sustainability of capitalist development: "The industrialization of China is progressing at breakneck speed, creating a voracious new consumer economy that makes America look small by comparison". Its demand for cement is five times that of the U.S. cement industry and the largest consumer of tobacco with 330 million smokers (Faber 2004:44). The economic growth rates are described as a success for modernisation and a model for others to follow. In these circumstances not much consideration is given to the concern of sustainability, as greed is the central force for this "development". In other words, psychological or ethical issues prevail which in turn support nonsustainability.

[2] Encyclopaedia Britannica (2003) explains the term antinomy as follows: "in philosophy, contradiction, real or apparent, between two principles or conclusions, both of which seem equally justified; it is nearly synonymous with the term paradox. Immanuel Kant, the father of critical philosophy, in order to show the inadequacy of pure reason in the field of metaphysics, employed the word antinomies in elaborating his doctrine that pure reason generates contradictions in seeking to grasp the unconditioned".

[3] The American Heritage Dictionary defines understanding as: "The quality or condition of one who understands; comprehension". To understand means to perceive and comprehend the nature and to grasp or comprehend the meaning intended or expressed by another.

[4] Copernicus challenged the earth-centred view of the universe held by European states and the Roman Catholic Church in the middle ages. Aritarchus preceded this view, who already in the 3rd century BC, proposed the geocentric idea (Reader's Digest 1978:16). Some supporters of Copernicus risked their life for their positions.

[5] Manzo argues that the Black Consciousness Movement offered a counter-modernist discourse in the 1970s. It questioned the traditional inferior/superior and black/white dichotomies. Steve Biko stressed that the only way to overcome the oppression (not just for the blacks in South Africa) but for all people was to see white system as the model. Instead the African value systems, cultures, and religions, should be re-evaluated (Agostino 2004:34).

[6] Genetic determinism has become the conceptual basis of genetic engineering. Its dogma states: "Genes determine behaviour" (Capra 2002:148).

[7] Other mission's of higher education include: (a) participating actively in the solving of major problems, such as poverty, hunger, illiteracy, social exclusion, protecting the environment, and (b) drawing up alternative proposals and recommendations, promote sustainable human development; share knowledge; and advance equal rights for women and men. Furthermore, the traditional mission of maintaining, increasing and diffusing knowledge through research and intellectual creation, and teaching and spreading knowledge in various ways, is fundamental. Another task is to update and improve knowledge and skills, further education, and career-change retraining of graduates or non-graduates. Finally, one of the major missions of higher education is to contribute to the implementation of lifelong learning for all, to become an essential element and driving force in such education and to change and transform itself. This can be achieved by strengthening links with the different levels and forms of education, by stepping up its educational research, by strengthening and extending its training courses for education personnel and participating in the preparation, it has a role to play in helping attain the goal of education for all and in improving the quality and increasing the effectiveness of the educational process in its various aspects (UNESCO, 1998).

[8] In addition several elective courses are offered such as: People and Urban Space, Critical Urban Theory, Environmental Impact Assessment, Environmental Systems and Process, Population, Health and the Environment (FBE, 2002).

[9] The core modules for the degree are: Sustainable Development; Complexity and Systems Thinking; Leadership and the Ethics of Sustainability; Governance, Globalisation and Civil Society; Sustainable Cities; Biodiversity and the Challenge of Sustainable Agriculture; Ecological Design for Community Building; and Corporate Citizenship.

[10] The Master's programme consists of the following modules: 1. Introduction to Sustainable Development; 2. Bio-diversity; 3. Energy; and 4. Habitat and Population. Specialisation areas include: Climate Change (Atmospheric Pollution, Sea Level Rise, Global Warming and Ozone Depletion); Natural Resources Conservation (Small Island Development; Protected Area Networks; Wildlife, Wilderness and Forest Conservation); Greening of Development (Green Movements; Green Philosophy; and Environmental Policies); Pollution Control (Marine Pollution and Control; Atmospheric Pollution and Control; Toxic and Hazards and Nuclear Wastes) (Sikkim Manipal University, no date).

[11] According to Tötemeyer (2000:47): “Ethics is concerned with both individual and collective morality. Ethics as a collection of moral principles and views is about a collection of acceptable and also unacceptable actions in public. It involves motive and action. In moral philosophy it deals with values relating to rightness or wrongness of certain actions, and to the goodness or badness of the motives and the ends of such actions. Ethics is concerned with what is morally defensible”.

[12] He further argues (Mayor, 1999): “Such an ethic would temper humanity's acquired knowledge and power with wisdom of the kind found at the heart of the most ancient human traditions and cultures - in Taoism and Zen, in the understandings of the Hopi and the Maya Indians, in the Vedas and the Psalms, in the very origins of human culture itself. Is this not perhaps the essential role of culture in and beyond sustainable development - to be the crucible for a common ethic, corresponding to the intuition of a shared yet diverse destiny?”

[13] Attempts to promote the dematerialisation of the materialistic societies of the North led to the emergence of Industrial Ecology. Robert Frosch and other authors, define industrial ecology by analogy to biological ecology. Frosch was the first to articulate the idea that industrial systems can be viewed much like ecological systems and that both encompass consumers, digesters, and excreters of materials and energy. “From this perspective, a major thrust of industrial ecology is that industrial systems should be modeled after natural ecological systems. In both systems, living and nonliving things are part of numerous interacting cycles through which materials are repeatedly exchanged and reused, with the transfer of materials supported by energy flow, ideally from renewable or perpetual sources” (Columbia University, 2000a). The study of how energy and materials move through the economy is termed industrial metabolism which involves the tracing energy and materials from the initial extraction of natural resources through industrial processing and manufacturing, consumer use, and final disposal of all wastes (Columbia University, 2000b).

[14] The insights that come from tracking materials flows can be useful in many ways, including in dematerialisation which literally means the loss of material; in Industrial Ecology it refers to a reduction in the amount of materials needed to produce or use a product (Columbia University, 2000b). According to Graedel and Allenby (Columbia University, 2000c) the following life stages of a product can be described:

Stage 1 – natural resource extraction and processing (provision of basic materials or components)
Stage 2 – product manufacturing (further processing and product assembly)
Stage 3 – distribution (packaging and shipping and, if applicable, installation)
Stage 4 – customer use ("customer" may be a retailer or consumer)
Stage 5 – refurbishment, recycling, or discarding of product.

[15] Dematerialisation matters enormously for the human environment, as lower materials intensity of the economy could reduce the amount of waste produced, limit human exposures to hazardous materials, and conserve landscapes (Wernick, Herman, Govind, & Ausubel, 1996). Fears have occasionally been expressed that humanity will imminently exhaust both its material and energy resources. Historically this has been demonstrated to be an exaggeration for the so-called nonrenewable resources such as metals and oil. However, if the economy continues to metabolise large amounts of the Earth's carbon or cadmium, the health and the environmental consequences could be dire. So-called renewable resources, such as tropical woods, are proving difficult to renew when demand is high. A general trajectory of dematerialisation would favour sustaining the human economy over the long term.

[16] Other measures include: Given the lack of systemic data, dematerialisation and proper material selection will have to rely primarily on heuristics. Examples are: the use of less toxic substitutes; product and material takeback which can both extend the life of products and materials in the economy and to ensure proper management of materials to minimise environmental impact over their lifecycles. Progress beyond heuristics depends on supporting comprehensive research programmes which generate the requisite knowledge to improve material use across the economy. An evaluation of the many tradeoffs has to be undertaken which practitioners commonly see such as toxicity versus energy efficiency. The economic impact as a result of the knowledge gained about the environmental preferability of various materials, must be recognized. Shifts within material classes (from PVC to ABS, for example), and among classes (from wood to plastics) may occur. This can result in significant transition costs, such as stranded manufacturing capacity, or some firms may lose business during the process. “An interesting and defensible hypothesis is that a more sustainable (and more complex) economy will substitute information and intellectual capital for inputs of materials and energy. Thus, the evolution of the service economy should foster dematerialization. Proper costing of materials - albeit a politically unrealistic goal - would facilitate this process” (Allenby, 2003). Developing knowledge about environmentally preferable materials, and increasing dematerialization, offer the potential for enhanced environmental performance throughout the economy at little cost and no loss of

functionality to consumers. Presumably the old options would still be available in a competitive economy). “It may not be a completely free lunch, but it is a very cheap one” (Allenby, 2003).

[17] Lenin has predicted globalisation: “There is no doubt that the development is going in the direction of a single world trust that will swallow up all enterprises and all states without exception. But the development in this direction is proceeding under such stress, with such a tempo, with such contradictions, conflicts, and convulsions - not only economical, but also political, national, etc., etc. - that before a single world trust will be reached, before the respective national finance capitals will have formed a world union of "ultra-imperialism," imperialism will inevitably explode, capitalism will turn into its opposite” (Lenin, 1915).

[18] Khor provides some figures on the growing inequalities which are the result of globalisation. In 1989 the average income of the 20 percent of people living in the richest countries was 60 times higher than that of the 20 percent living in the poorest countries, compared to 30 times in 1950 (Khor 2003:54).

[19] Historically, the impact of a virus is well known. It was experienced in Europe in the fourteenth century, when the plague spread from Asia to Europe along the trade routes (Reader’s Digest 1978:598). About a quarter of the population was wiped out (Castor 1969:533). International trade north of the Alps was less in the year 1400 than in 1300. Land went out of cultivation in England and Germany, caused by soil exhaustion and the population decline. Although they recovered in the following centuries and emerged even stronger (economically and socially) than before, this strength is now endangering the globe as an unsustainable system. One example is the damage to the ozone layer, where chemical reactions are changing the original composition of the atmosphere.

[20] “Well, people succeeded in reducing biodiversity down to one species. And they always thought it would be them”.

[21] To a certain extent these were the ideas of Nyerere’s Ujamaa ideology. The term means familyhood, and refers to the characteristics of traditional family life. Nyerere believed that family attitudes and practices could be extended beyond the family unit to incorporate everyone in the country (McHenry 1979:39). A system that supports individualism, material possession, property, are examples of the philosophy of the capitalist system, “which seeks to build a happy society on the basis of the exploitation of man by man” (Nyerere quoted by McHenry 1979:38).

[22] Huisgenoot (26 September 2002) reported of a resident of Kamanjab in Namibia, who became a member of a local Ovahimba community in 1998. The change in lifestyle occurred after a headman, staying north of Opuwo, adopted the resident Mr Burger as member of his family. According to Burger (Huisgenoot 2002:206): “*Die Himba’s het ‘n lewende kultuur waar ek baie meer tuis voel*” (The Himbas have a living culture in which I feel more at home).

[23] An expedition to discover where the hidden tribes of the Amazon live, such as the Flecheiros, in order to for authorities to keep out intruders, was led by Sydney Possuelo. He is sure that once you make contact with the Indians, you begin the process of destroying their universe (Wallace 2003:22). Therefore, Possuelo argues: “We have to respect their way of life. We’re not going to pursue them. The best thing we can do is stay out of their lives” (Wallace 2003:23). For the Ovahimba and others it is already too late. Their universe is under assault as a result of alien educational, religious and tourism activities, i.e., modernisation.

[24] Mayor (1999) concludes: “Unlike modern industrial society, many traditional cultures promote not only the need but the sacred duty for people to live in symbiosis with their natural environment. If the unique and particular understandings of humanity's different cultures are lost or simply reduced to a lowest common denominator, something precious and perhaps even essential for our collective survival will have been squandered. Their world view, their values and their innate respect for nature and life represent potential contributions to the profound change in attitude and behaviour that can alone engender a global culture capable of acting responsively and responsibly in the face of global change. The world's cultures must be preserved in their diversity - 'for their sake and ours'”.

[25] John Muir, cited by Devall and Sessions, asked: “Nature’s object in making animals and plants might possibly be first of all the happiness of each one of them, not the creation of all for the happiness of one. Why ought man to value himself as more than an infinitely small composing unit of the one great unit of creation?” (quoted by Wall 1994:6).

CHAPTER 6 – CONCLUSION AND FINDINGS

The study illustrated the difficulties expressed in the research problem which relates to the failure so far to define the concept “sustainable development” in such a way that sustainable development can be implemented on the local level, in order to achieve sustainability. Based on the one-sided approach promoted by the major political and economic forces and interests, the concept has become an oxymoron and not a solution to global and local problems. The concept “sustainable development” draws its political sustenance from its unifying, consensual and essential conservative connotations. In addition, it provides status and support to the scientific community; endows environmentalists with much-desired credibility; creates a platform for politicians; and transforms the image of business (Buttel quoted by Blowers in Treanor, 1998).

Sustainability should be viewed as a philosophy, or ethic, affording people the ability to consider long-term consequences of actions and of thinking broadly across issues, disciplines and boundaries (Five E’s Unlimited, 1999). The introduction of *sustainability* on local level requires a new approach if the implementation of the concept is attempted, based on a holistic approach to development. The Government of Namibia has committed itself twice at international conferences in 1992 and 1996 to achieve the objectives of sustainable development as defined in Agenda 21 and the Habitat Agenda. However, many officials, professionals, politicians and communities have not yet been exposed to the concept. Therefore they do not understand the principles, ideas and meanings of this concept, except as a shallow and rhetorical term. This has become evident in personal discussions, national and international conferences, workshops and from official documents

which insinuates that, by using the words *sustainable development* in any context, the implementation of the concept is promoted.

1. Findings

1.1 Findings regarding the objectives

The debate surrounding sustainable development has international, national and local components. This conventional view has resulted in promoting an ambiguous concept which is being reinforced by international conferences or "another jamboree of government delegations fussing over nothing" (Fakir 2001:123), as the WSSD in 2002 has shown. Less well-known meetings, for example, the bi-annual gatherings in Nairobi of UN-Habitat (UNCHS), provide fora to repeat *ad nausea* the resolutions taken at other meetings. Many fragmented and isolated projects are elevated to "best practices" despite the fact that they can hardly be repeated elsewhere. The best practices of real sustainable communities are not considered, because they are "primitive" and do not fit in the modern ontology.

Sustainability and sustainable development are international concerns. This also involves local authorities because they have been allocated a major responsibility in the implementation process. However, many external influences limit manoeuvrability and action. Local authorities are the lowest ranking tier of government, and often lack the authority, resources, knowledge, willingness, ability and ethics, to challenge national or international issues. They are pre-occupied with day-to-day issues in the administration of the area under their jurisdiction. This dissertation focused on the implementation of sustainable development by local authorities in general and in Namibia in particular. The findings related to the objectives are summarised as follows:

1.1.1 Broad objectives

1.1.1.1 Philosophies, principles, and theories

Namibia does not have a home-grown sustainability philosophy, but has embraced the narrowly defined Western paradigm of development. Therefore this dissertation brought together a wide variety of philosophies and theories to prove the diversity of views and opinions and examined them in the context of the role local authorities are supposed to play in the implementation of sustainable development. The study investigated the meaning of the notions *sustainable development* and *sustainability* to clarify the issues surrounding them and to identify issues required for the development of a framework to achieve sustainability. This necessitated the analysis of related concepts, such as autopoiesis, holism, ethics and eco-philosophies to derive at a redefinition of sustainable development.

"Development studies was nearly always interdisciplinary, and this was one of its enduring strengths. It was a positive Enlightenment legacy to reject artificial disciplinary boundaries and seek a common approach to a common problem" (Munck, 2000:2). Most of the development approaches have their origin in the West. Contending theories emerged such as the *dependentistas,* post-development or African Renaissance. The later two allude to the inclusion of indigenous knowledge and cultures. However, they have not been able to distance themselves from the position of the West, for example, with regard to economic development or industrialisation which are among the main causes for the current state of non-sustainability.

The consensus building definition of sustainable development, as espoused by the Brundtland Commission, has paved the way for shaping public opinion in

maintaining the *status quo* and to protect the economic and political Western establishments and their dominating interests. These establishments propagate the capitalist system as the solution to all global problems whereas “most of our present environmental and social problems are deeply embedded in our economic systems. …the current form of global capitalism is ecologically and socially unstable, and hence politically unviable in the long run” (Capra 2002:184). Western interests have succeeded in influencing individuals and institutions to such an extent that they are convinced to follow the hegemonic Western economic, social and political models.

The conventional meaning of the definition “sustainable development” is as follows: ‘sustainable’ is a substitute for the capitalist interests, or as Ausubel (1997:207) has put it “the market is God”. *Development* means change based on the Western social, political and economic model. This has given rise to such ludicrous notions such as sustainable mining, sustainable tourism, sustainable growth, or sustainable financing. The vagueness of the Brundtland Commission’s definition suits these interests. An unambiguous definition would undermine the predatory nature of the capitalist system.

Those not conforming to the dominance of the prevailing view have tried to propose alternatives. These non-conformists range from Karl Marx to the *dependentistas* to the deep ecologists. The latter advocate a holistic and organistic philosophy which is the opposite of the atomist, mathematical philosophy (see 2.7.1). The analysis of the various approaches to “sustainable development”, i.e., the treadmill approach, weak and strong approaches and the ideal model, provide an understanding of the attempts made to explain and implement the concept. However, the ideal model is regarded as idealistic and therefore, not realisable. This position ignores the

existence of sustainable societies at the beginning of the 21st century. Another example to describe sustainability was based on the naturalistic view. Contrary to modern human systems, Nature's evolution has been producing more and more multilevel complex systems through synergy; cooperative and combinatory effects (Lourenci, 1994). In this way a minimum use of energy is required to organise ecosystems both functionally and structurally. This study confirmed that Sustainability could only be achieved by fundamentally changing mindsets and the prevailing ethic in modern societies.

"No society is ever static and totally unchanging; nevertheless some changes are more important than others" (Roxborough 1979:1). Modernisation has resulted in an alienation of humans from Nature. The technological superiority created by humans and the consequent superiority complex[1] that has developed over time in the psychological realm, prevent an assessment of the causes of nonsustainable practices and the required changes needed to achieve sustainability. It is a question of whether human will look after Nature or whether Nature looks after the humans. The Encyclopedia of Marxism (no date) clarifies the term Alienation as follows:

> *"Alienation is the process whereby people become foreign to the world they are living in. The concept of alienation is deeply embedded in all the great religions and social and political theories of the civilised epoch, namely, the idea that some time in the past people lived in harmony, and then there was some kind of rupture which left people feeling like foreigners in the world, but some time in the future this alienation would be overcome and humanity would again live in harmony with itself and Nature".*

The study also pointed out that the United Nations and international agencies are promoting a weak approach towards sustainability. This is an insufficient and inadequate attempt to solve the global and local problems of the current state of non-sustainability. To promote environmentally friendly technologies does not contribute to sustainable development. Furthermore, sustainable cities are an impossible theorem, because urbanisation as well as commercial agriculture,

destroy the natural habitat on which Life depends and they require external resources. Outside interventions are a sign of non-sustainability.

The major obstacles to change identified by this study include the egoistic nature of interests of politicians, the business sector, and the finite natural resources on Earth. By following the prescriptions of the Western development model no sustainability has been and will be achieved, as it is not an autopoietic systems. Therefore sustainable development is, like other concepts such as equality, equity or democracy, primarily a theoretical and idealistic construction promoted by the North. This position has been investigated with regard to local authorities and governance.

1.1.1.2 Urban governance

Local authorities are regarded as important executors of “sustainable development”. The dissertation dealt with the proposition that sustainable development can be achieved by promoting good urban governance through sustainability, decentralisation, equity, efficiency, transparency and accountability, civic engagement and citizenship, and security. These are in essence idealistic principles which have a limited impact on local authority conditions.

Decentralisation, for instance, is propagated as part of the efforts to achieve the goal of sustainability, but limited power and influence is given to most decentralised entities. Transparency and accountability, civic engagement and citizenship are also producing limited results. The achievements often benefit only minorities, who are involved in changing their immediate situation. Mass participation is usually restricted to elections on local, regional and national levels. Thereafter the influence of the voters dwindles. This is then regarded as democracy.

With the increases of human populations, the issue of security is becoming an increasing concern which is exacerbated by problems such as poverty, and inequalities. The current needs of a majority are not met. How can they be met in future? There are no practical models of modern good governance that could be regarded as promoting the goal of achieving security, equality and equity for all.

“Developmental local government is local government committed to working with citizens and groups within community to find sustainable ways to meet their social, economic, and material needs and improve the quality of their lives” (White Paper on Local Government quoted by Parnell & Pieterse 1999:61). Local authorities depend on many external factors and cannot be regarded as independent. Furthermore, officials and Councils are not in a position to comprehend the complexities of sustainability. They are not “philosopher kings”. This lack of understanding limits any feasible attempt to achieve “Sustainable Development”. The repetition of the two words *sustainable development* in speeches and official documents does not indicate an understanding of the concepts and components related to sustainable development at all.

1.1.1.3 Components of sustainable development

The study discussed the common approach to “sustainable development”, i.e. economic, ecological and social aspects. However, it was argued that change can only be accomplished if ethical and related philosophical issues form part of the overall framework. This has been illustrated by Namibian examples, but also in cases from other parts of the world. Development is being portrayed as a change to a better condition compared to the current state. However, the increase in problems and crises in Namibia, but also globally, illustrates that so-called sustainable

development has failed, because “[t]he significant problems we face cannot be solved at the same level of thinking we were at when we created them" (Einstein quoted by UBS Warburg. 2003:6).

The three components of sustainable development advocated by the dominant interests are indicative of the fragmented Western ontology. The reason for the inability of the economic, ecological and social components to produce a state of sustainability is their inability to emulate autopoietic systems and processes. Humans lack the ability of Nature to self-regulate themselves in order to balance consumption and resource availability. There is a creative tension between the following two goals: staying within the capacity of natural capital and securing satisfying lives for all, now and in the future.

According to Jones (1998:44) the “phenomenon of the global economy is now so entrenched and so much a part of our way of life and existence that it precludes viable self-sustaining communities in any socially and economically interconnected context”. Jones envisions that local communities could put pressure on local government authorities, “but to make an impact on the very real dangers we now face on a global scale, direction and leadership is needed from the top” (Jones 1998:44). This could prove extremely difficult in a world dominated by Western hegemonism.

Therefore the question of ethics and the importance of psychological aspects have to be examined in order to advance a solution. The discussion surrounding sustainability has to emphasise what Terri Meyer Boake (no date) describes as: "Sustainability: It's not a ‘Topic’ but an ‘Attitude’". An attitude change from the

current unsustainable way of life to something that is truly sustainable is dependent on the functions of one human organ: the brain. This means that psychological factors need to be a concern in the discussion of sustainable development.

The question is, whether the position of reasonableness is indeed found in the case of sustainable development. The study pointed out the apparent contradictions between the objective of achieving sustainable development and the anthropocentric position of the North. Development cannot be sustainable and non-sustainable at the same time. The international consensus on sustainable development is based on the idiosyncratic belief that sustainability can be achieved by maintaining a non-sustainable system. In other words, sustainability can be achieved through non-sustainability, or sustainability can be achieved by destroying Earth's resources. The advocates of this interpretation do not understand that an oxymoron cannot be implemented and that achieving sustainable development is therefore an illusion.

1.1.2 Specific objectives

1.1.2.1 Namibian policies

The dissertation examined Namibian policies to identify the understanding of the establishment and their ways of implementing sustainable development on national and local level. The findings were that the Namibian government and its agencies are following the international consensus and uncritically. Thereby they have adopted the position of the dominant global interests. This indicates that the ruling elite cannot think in alternative terms. Instead development is equated with Western economic growth. The latter has become the official government policy as exemplified in Vision 2030. It states that the challenge for Namibia is to ensure that

development and industrialisation are sustainable (Republic of Namibia et al. 2002:19; MET, 2002)[2]. Vision 2030 is assumed to provide a good framework for sustainable development planning (Republic of Namibia, et al. 2002:11).

Namibia's government policies on sustainable development are heavily influenced by the international order and ideas. This is illustrated by the definition of sustainable development and the avoidance of a holistic approach. NDP II is but one example claiming to support sustainable development, although sectoral interests are advanced. The mentioning of some environmental considerations in the sectoral policies is regarded as promoting sustainable development. Enacting laws which require environmental assessments before projects, such as mining and township establishments, were promulgated. However, they have not contributed to a "more sustainable" condition. The fragile natural environment in Namibia is of little concern in the urbanisation processes, so are the growing population and the finite resources, for example, water and biomass. NDP II *attempts* to incorporate the most important issues relating to environment and sustainability (Republic of Namibia, et al. 2002:4).

The decentralisation policy in Namibia has in the few years of its existence not been able to produce a decentralised system. The slow progress means that the achievement of the goals of this policy is uncertain. The decentralisation process in Namibia is expected to take place over decades. Decentralisation is but ONE component in the implementation of sustainable development according to the global plan of action. The MRLGH's Strategic Plan 2001/02 to 2005/06 has as one of the sector goals for decentralisation: "[t]o ensure and safeguard **rapid** sustainable development" (MRLGH 2002:7 and 11, *author's emphasis*).

In Namibia, the DEA is responsible for broad environmental leadership (Republic of Namibia, et al. 2002:9), but as the dissertation has shown, to little avail. The Green Plan and other documents analysed also follow the conventional global view. This disregards the disharmony in the relationship between humans and Nature. Aspects related to Nature, as the resource base, are treated indifferently, whereas human short-term interests dominate. Furthermore, they can be influenced by values, norms and beliefs. The dissertation found that the claim that the Green Plan created a national vision is a total over-exaggeration. The so-called sustainable development approaches are focusing on particular issues and sectors. This represents a fragmented approach, not a holistically based methodology. Attempts to implement what is considered to be sustainable development are merely peripheral, “nice to have projects”. In many cases they are closer to crisis management – reactive attempts, not pro-active considerations. They do not address the core problem of unsustainability – human activites and their impacts.

Namibia is copying all the damaging elements of a neo-liberal state in the futile attempt to create wealth and prosperity. NDP II follows a fragmented sectoral development pattern, which does not conform, to anything sustainable, except a very weak approach. This dissertation has argued that the Namibian government’s approach and the related policies are not promoting sustainability. Similar to the international approach, symptoms are treated and not the cause of non-sustainability, i.e., humans and their impact on the global environment.

1.1.2.2 Generic administrative functions

In order to assess the implementation of sustainable development on local levels, generic administrative functions were analysed. The dissertation argues that change

is needed on all levels of a society which includes the administrative structures. Policies and decisions taken by an authority have to be put into practice. Therefore generic functions have to be adapted to changing circumstances, for example, if sustainable development is to be achieved. The study established that in Namibia the issue of generic functions and their possible impact on sustainable development has neither been considered, nor touched upon by local authorities. The administration of the municipal areas proceeds as according to the business-as-usual principle. In Namibia only two local authorities have so far considered the possibility of alternative ideas in the form of Local Agendas 21. Many of the remaining local authorities are overwhelmed by the local conditions, such as financial problems, poverty, and environmental degradation on the one hand, and on the other hand are ignorant of the concept sustainable development.

Local authorities are also influenced by external factors, for example, economic factors, or central government influences, *inter alia,* development policies and decentralisation. Many are still dependent on central government support. This makes the promotion of decentralisation an ineffective policy. As the lowest tier in the government structure, local authorities have limited means to change the non-sustainable situation. Should the implementation of sustainable development be carried out, it would also involve changes in the generic functions to support these efforts, for instance, in the implementation of Local Agendas 21.

1.1.2.3 Local Agendas 21

In Namibia only two examples of implementing LA21s are available. These Local Agendas 21 represent inadequate models of sustainable development. This study's analysis of the attempts in Windhoek and Walvis Bay to implement LA21s confirmed

the non-holistic nature of these initiatives[3]. The political sphere is unable to provide genuine support for the implementation of sustainable development, because this process requires drastic changes and a new framework. Many activities related to sustainable development are merely crisis management as symptoms are addressed not the causes of non-sustainability.

The history of human settlements has shown that, only those communities are sustainable which are not exhausting natural resources on which they depend. Those who exceeded the carrying capacity have vanished. Global sustainability was only possible, due to the holistic nature of Nature and where autopoietic processes provided the basic requirements for life. “Dramatic, fundamental change is necessary if we are really concerned with bettering the quality of life, even that of next year. It is not a question of can or can’t we change, but one of will we or won’t we change” (Maser 1996:xv). This presents the dilemma between what is needed and what is practiced.

ALAN has so far proven to be a total failure, so has ILEDS. The two Local Agenda 21 projects are not effectively addressing the causes of non-sustainability. The question is what will happen once the internationally supported projects come to an end, e.g., in Nakuru and Walvis Bay? A meaningful implementation of sustainable development requires far-reaching changes in order to make a difference, but “a difference has to make a difference to be a difference” (van Zyl Slabbert 1999:58).

1.1.2.4 Framework for implementing sustainable development

In order to address the ill-defined and vague character of the conventional definition of sustainable development, the study provided a framework whose principles

outline requirements necessary to achieve sustainable development, as per redefinition. History has shown that only small human settlements have the chance of functioning sustainably if natural resources are not overexploited, i.e., a circular metabolism is maintained with regard to consumption and availability of essential resources.

Non-sustainability is a global problem. The situation at the beginning of the 21st century is worsening, for example, in the areas of overfishing, pollution, waste generation, human overpopulation as illustrated by the ecological footprint, deforestation and desertification. This requires changes which cannot be accomplished in only one country, such as Namibia. It has to be dealt with on the local, national and international level simultaneously. The “jumping on the bandwagon” approach prevails in Namibia. This eliminates a critical analysis of issues and approaches, and results in a change avoiding condition, exemplified by empty talk and little action. Self-interests dominate and an individualistic position is promoted, not an utilitarian approach. This is reinforced by the anthropocentric view which supports the status quo and, therefore, non-sustainability. The human factor and in particular the psychological aspects which guide and determine human actions, are not playing a role in Namibian policies related to the issue of sustainable development. Instead business as usual prevails. Government commitments and the political will to change are very limited on all levels[4]. The study pointed out that an understanding of the concept sustainability is essential as the issue of non-sustainability is the result of not considering psychological factors.

The current problem with sustainability originates in the human brain of the “modern” humans. To promote a future state of sustainability a radical change in the psyche of

humans is required. This, *inter alia*, necessitates education to promote a process of dematerialisation. As Fioruzzi (1996) argues, the disappointing results of the strategies for sustainability are the result of a wrong model and vicious circles:

> *"All the step-by-step, 'continuous change' mode, of both industry today and eco-design efforts, are bound to fall short from the 'factor 10+' (more than 90% reduction) efficiency improvement required by sustainability. In fact this failure is already visible and it can be partially explained in terms of shortcomings of the traditional 'linear' model of decision making".*

What is needed in Namibia, and elsewhere, is a framework which considers the model "Earth" as the prime example of sustainability. The framework spells out that, sustainability is only possible if renewable resources are utilised as the basis to support the existence of life in general and humans in particular. Furthermore, to achieve state of sustainability requires a drastic reduction of the human pressure on available resources. This has to be accompanied by a process of dematerialisation, as part of the transformation process, to reduce the ecological footprint and to balance the availability of resources and the consumption thereof. This means a utilitarian approach is indispensable which considers the roles and contributions made by all forms of life.

1.2 Findings regarding the sub-hypotheses

Sub-hypothesis 1 was confirmed, i.e., the four components required to achieve sustainable development are neither integrated into a holistic framework, nor are all four reflected in Namibian policies. The emphasis is the promotion of the capitalist economic system as the overriding concern. Some consideration for environmental aspects is included as a sideline issue to make a policy look "sustainable". Social issues centre on poverty and inequality patterns in Namibian society which are connected to prevailing economic conditions. Symptoms are considered not the causes for these conditions.

The failure to establish the Sustainable Development Commission in Namibia shows the inability of the government to promote an institution which could institute some measures of preventing unsustainable practices. The effectiveness of such a commission remains unclear, at least until its operations commence. Its eventual functions could indicate whether the commission is a weak institution or whether a weak government tries to limit its powers[5].

The concerns expressed in the national population policy, with regard to population growth and the carrying capacity are positive. However, the reduction in the population growth rate is not the result of good government policies, but the impact of HIV/Aids. No ethical foundation for the promotion of sustainable development is provided. Therefore, Sub-hypothesis 1 is correct: the four components and their principles are neither integrated into a holistic framework, nor reflected fully in policies and activities.

Sub-hypothesis 2 has also been corroborated. The generic functions of Namibia's local authorities have not been changed as a result of promoting sustainable development. They still support the old order. Policies on sustainable development are primarily related to the environment. Municipal procedures have not been affected by the implementation of a Local Agenda 21. Furthermore, employees, officials and residents are hardly involved and are usually not aware of the meaning of the concept "sustainable development" or its implications. No education or training has been provided in this sphere. The finances have only marginally been affected in Windhoek as a new division with a few staff members was created, whereas in Walvis Bay, major funding was provided with the help of the Danish government. The organisational structure of both municipalities has hardly been

changed and the control over the implementation of sustainable development is absent so far. Sub-hypothesis 2 is correct, as generic functions have neither deviated from the old order, nor changed to accommodate the principles of sustainable development. No paradigm shift is evident.

Sub-hypothesis 3 found that only very few principles of good governance are attempted. Their effectiveness has so far been negligible. Sustainability is mentioned in documents, but this does not have an effect on any activity or consideration by councils. The normative framework of good governance does not affect the issues of equity, efficiency, security, civic engagement and citizenship. Only the decentralisation policy is an achievement, although the implementation is still far from being concluded. Therefore, the sub-hypothesis is correct, as governance of local authorities neither does reflect the objectives and principles of sustainable development, nor the principles of good governance.

Sub-hypothesis 4 showed that the four components required for the implementation of sustainable development are not integrated in a holistic manner. Practical examples from Namibian and international instances emphasise environmental projects and their implementation. Since ethical considerations are absent from any of the practical examples, it can be concluded that the sub-hypothesis has been confirmed, i.e., that the practical examples of implementing sustainable development at local level (such as Local Agendas 21) do not embrace all four components required for the implementation of sustainable development and no paradigm shift is evident. Project components emphasise usually one specific component such as economic, social or environmental aspects. This represents a non-holistic approach.

1.3 Obstacles in the implementation of sustainable development

The dissertation identified numerous obstacles on the way towards sustainability. These obstacles can be divided into two major groups. The first relates to the limits of the natural environment and the second to human activities and their impact on the natural environment. These obstacles are also important considerations for the transformation process, as described in the framework, in Namibia and elsewhere.

The first obstacle relates to **Natural resources**. Life on earth depends on the one-way flow of energy from the sun through the ecosphere, the cycling of crucial elements (nutrients) and gravity (Miller 1996:91). Herman Daly noted:

> *"The Earth's ecosystem develops (evolves), but does not grow. Its subsystem, the economy, must eventually stop growing, but can continue to develop. The term 'sustainable development' therefore makes sense for the economy, but only if it is understood as 'development without growth'… Currently the term 'sustainable development' is used as a synonym for the oxymoronic 'sustainable growth'. It must be saved from this perdition"* (Daly quoted by Byrne & Hoffman, 1996).

Wines (2000:149) points out that, key elements of natural capital, arable land, water, forests, fisheries, and oil, are ultimately finite and not subject to proportionate capital growth. They are being decapitalised by overharvesting and environmental destruction. The question is whether this destructive process can be halted or not. Pearce, et al. (1990:14-15) explain the importance of natural capital. Natural capital qualifies as a primary good. A rational being would always prefer more of it to less. The life support functions of the natural environment fit this category, since less of it would remove the very capability of choosing and having preferences. The ability to make a choice would have a higher ethical status than the rights and wrongs of making a particular choice. The second argument by the authors focuses on the difference between natural capital and man-made capital. "Man-made capital is virtually always capable of symmetric variations – it can be increased or decreased

at will. Natural capital is subject to *irreversibilities*, in that it can be decreased but often not increased if previous decrements lead to extinction" (Pearce, et al. 1990:14-15, *authors emphasis*). According to Eugene Odum (quoted by Lourenci, 1994), "Nature maximizes for gross production, whereas man maximizes for net production". These arguments preclude natural changes of Earth's environment[6].

Maser (1997:13) points out that the knowledge of the way Nature works has increased dramatically over time, but "we still do not have the answer to one of our most pressing questions: Will the ecosystem of the future which we are today shaping, continue to function in such a way that the quality of human life we have come to expect will continue?" Nature provides many learning opportunities, as it has been the only sustainable and holistic system for millions of years. Interference of mankind in nature has the single most damaging impact on the global environment and its diversity

Namibia's natural environment is fragile due to its aridness. In addition the soils are fragile and can therefore easily become degraded. This should be a major concern when "developments" take place. Prescribing Environmental Impact Assessments (EIAs) for any major project is a step in the right direction, but no project has so far been shelved because of concerns for the environment. Urbanisation occurs unabated, the beachfront at the coast is a target for tourism "developments", water from the Okavango river is targeted to be diverted to Windhoek, the Kaoko region is advertised as a tourism haven, and industrialisation is very much on the cards of government and the private sector.

It is unknown whether Nature has the capacity to restore the damaged nature through the autopoietic processes, especially if interventions into natural processes continue to disrupt the restoring processes. Non-renewable resources cannot be replaced and are, therefore, not sustainable, as is any system which depends on these resources. This fact will sooner or later have an impact on the functioning of non-sustainable human activities, such as the reliance on oil and especially water[7].

The second impediment to sustainable development includes **political will**. Among the champions of non-sustainability are politicians, who cooperate with the advocates of the capitalist system. This results in a lack of long-term concerns, fear of change, a lack of understanding of the concepts and their implications. Furthermore, the impossibility of creating autopoietic processes represents a major impediment for modern societies. Therefore, international agendas such as the Habitat Agenda and Agenda 21 are futile exercises of combining a non-sustainable system with the requirements of sustainability. International conferences and the resolutions they produce, repeat *ad infinitum* declarations such as “we reaffirm”, “we commit ourselves”, “we further commit ourselves”, “we support”, “we shall promote”, “we shall work”, and “we recognize”. This rhetoric is self-serving opposition to change by the powers of the day and instead promotes a “cancer” called modernisation[8].

The dominating market system creates another obstacle: the **production and consumption patterns** that are not changing to support “sustainable development”. Cultural norms that equate increased consumption with success are unsustainable in a world with finite resources and an expanding population. Cheap labour and resources from developing countries to meet the ever expanding cycle of supply and

demand on which the economies of developed nations and increasingly also of developing nations are based, deepen global inequities and environmental degradation.

Lloyd (1998) discusses the relationship between responsibility and the market economy, which can be, regarded as essentially a power (and self) driven vehicle. In this context, Lloyd points out, that Adam Smith was a Professor of moral philosophy not of economics, and he built his theories on the basis of a moral community. Before writing *A Theory of the Wealth of Nations*, he wrote *A Theory of Moral Sentiments*. Smith argued that a stable society was based on 'sympathy', a moral duty to have regard for fellow human beings. The market was and is, a mechanism for sorting the efficient from the inefficient. It was and is not a substitute for responsibility.

ICLEI (2002) has drawn together several barriers which are also applicable to Namibia and were confirmed in this dissertation[9]:

1. *Government Structures, Capacity, and Institutional Frameworks*
2. *Legitimacy in Governance*
3. *Jurisdictional Conflicts and the Compartmentalization of Government*
4. *Concentration of Economic Power*
5. *Allocation and Management of Resources*
6. *Lack of Political Will*
7. *Communicating Sustainable Development*

Due to the international dominance of political and economic systems including the creation of dependencies, the **local authority levels** do not represent a force in promoting sustainability. They are a creation of modernism and function as its local representative. Sustainability cannot be created on local government level only. To achieve sustainability requires a paradigm shift of major proportions. Currently the talk about sustainable development focuses on promoting a sham-sustainability and

empty promises. Achieving sustainability or sustainable development under current conditions is like waiting for Godot. This will only change if enlightenment is attained as illustrated by the holistic approach to sustainability. The strong approach is

> *"the idea that there are certain functions that the environment performs that are essential for the welfare and survival of the human species and which cannot be duplicated by humans. These ecological assets are called 'critical natural capital' and cannot be traded for any of the other forms of capital, as their depletion would endanger human survival. Examples are the ozone layer, the carbon cycle and the hydrological cycle"* (CSIR 2002a:11).

Namibia's inability, on central as well as local levels, to promote sustainable development is based on the obstacles presented by the international order and the absence of an original approach applicable to Namibian conditions. The government follows UN interpretations and guidelines to a large extent based on the "riding the bandwagon" principle and the weak approach to sustainable development. This is an indication of the lack of intellectual and academic debate regarding the concept, despite the fact that the country provides a living "laboratory" ranging from modern first world conditions to the traditionally sustainable communities. The current attempts with regard to sustainable development are thinly spread, half-heartedly supported and without a major impact on unsustainable behaviour and attitudes. Activities on all authority levels show ignorance, a lack of information, understanding, comprehension and the inability to change existing attitudes towards sustainability[10]. The two Namibian municipalities Windhoek and Walvis Bay have exemplified this situation.

The international order presents an obstacle which can be illustrated by the Kyoto agreement. The history since 1980 has shown that attempts to contain pollution have failed despite UNCED and the Kyoto Protocol. Many countries in the North have lowered their emissions by relocating some polluting industries to the South,

for example, to Brazil, China, and India. They have become worst polluters (see page 119). The Kyoto Protocol has helped to promote pollution in the North and especially in the USA. The American President announced firm goals in February 2002 for greenhouse gas emissions in the United States. However, the achievements would rely mainly on voluntary cooperation to reach them. “In the past, voluntary programs to curb emissions have not been successful” (Resources for the Future, 2002). In addition, the President had a year earlier withdrawn his support of Kyoto, denouncing it as harmful to the economy.

“While industrialized countries will be required to reduce their combined CO2 emissions by an average of 5.2% below 1990 levels by 2012, developing countries will face no restrictions in the near term. Though, on average, the United States and Canada currently emit 5.5 times more CO2 than developing countries, emissions in developing countries are growing sharply and are projected to surpass those of industrialized countries in about 20 years” (Roberson & Baxley 2001:3). The most incongruous outcome of the Kyoto Protocol is the “bizarre agreement in which permissible emissions of greenhouse gases would be based on the sizes of national populations, but those states not producing the amounts they were permitted could be allowed to sell their excess capacity to others who were exceeding their targets” (Middleton & O’Keefe 2001:59).

Another obstacle is the unsustainable current position and the **influence of pollutants** (greenhouse gases) on the global climate. Jones (1998) similarly maintains that buildings in the Western world are responsible for 50% of the deleterious emissions which cause the planet to overheat. “Industrialists and, by and large, politicians calculate matters differently. For them, a serious onslaught on

emissions would be a threat to their environment of competition, profitability and because it could dramatically affect the lives of the voting middle class" (Middleton & O'Keefe 2001:59). A web of commercial interests bolsters governments of developed countries. They do not respond kindly to sudden change and the consequent risks to which their investment income and plans are subjected (Jones 1998:43)[11]. In a world warmed by greenhouse gases, the El Niños[12] could become more frequent and more powerful (National Geographic Channel, 30 June 2003). Ocean atmosphere systems are still not understood, as they evolve over decades, even centuries. This could also increase the frequency of droughts and floods[13].

At present Namibia is not a major producer off green house gases. Nevertheless global air pollution can affect the country where droughts are assumed to become more frequent. During the workshop on "Technology needs assessment for adaptation to and mitigation of climate change" (October 20, 2004) it was pointed out that Namibia is expected to become drier not wetter in future. This lowers the carrying capacity of the land and increases not only the occurrences of droughts but also an expansion of the deserts and the arid shrub lands. This also will reduce the biodiversity especially of plants due to the risk of species loss.

There are many limiting **human activities**, such as urbanisation and commercial agriculture. These human activities result *inter alia* in the degradation of the local natural atmospheric environment (Asimakopoulos 2001:137). In metropolitan areas, according to Asimakopoulos, all main meteorological parameters are affected. This is characterised by increases in temperatures and reduction in humidity and wind. Higher urban temperatures have a serious impact on the electricity demand for air conditioning of buildings[14]. The physical infrastructure of every city is the result of

systems which were invented between 1877 and 1889: indoor plumbing, incandescent lamps, steel frame buildings, ready-mix concrete, the subway and the telephone. These systems are costly to install and maintain. They are also unnecessarily wasteful of water, energy and materials.

Throughout Namibia, **modern architecture** has been a feature in all urban areas. The construction of “modern” buildings increases material consumption and land requirements. An increase in incomes results in larger houses and higher demands for services. Suzuki, referring to Canada, notes that in the last forty years the size of Canadian families has shrunk by 50 percent, but their living spaces have doubled (Capra 2002:22). A similar trend is expected in Namibia. About 80 percent of all building materials are imported from South Africa, so is much of the food. Similarly in the United States, the average ounce of food now travels over a thousand miles before being eaten which puts an enormous stress on the environment (Capra 2002:129).

“One of the greatest obstacles on the road towards sustainability is the continuing increase in material consumption” (Capra 2002:229). Sustainable development has to promote the development of dematerialisation processes and the consequent decline in the human population to reduce the problem of overpopulation and unsustainable consumption patterns. However, whether the degradation and destruction of the environment can be stopped is questionable, as the impact of, for example, pollution will last for many decades, if not centuries. Dematerialisation provides a solution which can address many of the current problems. There is still much resistance towards protecting the environment.

“The costs of containing pollution are easier to calculate than the benefits of unpolluted air and water. There is also a temptation for a country to set lower standards than another

> *in order to attract industry and create jobs"* (Independent Commission on International Development Issues 1980:114).

Concern for the future is a moral concern. The Brundtland commission declared the need of future generations as an important objective. This intergenerational concern requires a **global ethic,** based on a philosophy and a perspective which supports sustainability. However, such an initiative is not on the international agenda. Kyoto is one example of the obstacles experienced. Education on all levels has to be revised to raise awareness for the understanding of and the implications of sustainable development, unlike the current formal educational systems that are mostly designed to support the status quo as part of the prevailing interests. "It is never too late to become wise; but if the change comes late, there is always more difficulty in starting a reform" (Kant, 1783). The current situation has been summarised by Szent-Györgi (quoted by Fiedler et al. 1992:1): "This is an age of much knowledge, little wisdom and even less ethics".

The **dominating philosophy** is another obstacle in the debate surrounding sustainable development as it is based on the one-sided Western perspective. Marx and Engels wrote in 1848: "[t]he executive of the modern State is but a committee for managing the common affairs of the world bourgeoisie" (Berki 1977:192, Marx & Engels, 1848). Little has changed in the last 150 years. Robert Michels explains that society is ruled by an elite which consists of the leaders of various organisations and parties (Haralambos 1980:290). Their overriding concern is the maintenance of its own power in the political and economic spheres in order to maximise the benefits of this elite. Hill (1981) pointed out: "[t]o make Eco-philosophy a reality we must work on all fronts at once - social, individual, spiritual, ecological, and political. … We are an adventurous civilization. But we are also a stupid civilization, afflicted with a death wish - destroying the very tissue from which society is made". Peter Vitousek

and colleagues argue that the two basic ways of slowing the growth in human effects on the Earth are to slow population growth and to use resources more efficiently (Johns Hopkins School of Public Health, 1997). Continuing the current non-sustainable paradigm could result in ruining the biosphere. Karl Marx and Friedrich Engels argued that capitalism carries within it the seeds of its own destruction (Marx & Engels, 1850), although not for the reasons they imagined.

Utilitarian individualism views human life as the individual pursuit of power in a world of competing interest and encourages a politics of self-interest, primarily in economic terms, aggressive, technological capitalism promotes sheer individualism, isolating persons from one another and from the community (Bennaars 1993:38). This is the opposite of the traditional African society. Its communalism formed the basis of social ethics. However the pure form of the traditional community hardly exists in Africa and elsewhere. Among the exceptions are the Ovahimba in Namibia. They nevertheless face an onslaught on their life style through tourism, Western based religion and education which are accelerating the demise of these once sustainable people.

2. Contribution of study

The aim of the study was to examine the four components of Sustainable Development and to identify contributions of related philosophies and guidelines. The latter were tested in the Namibian context, to assess how local authorities and the national government are understanding and implementing sustainable development in Namibia. The dissertation challenged the conventional view of sustainable development and established that the notion has to be regarded as an oxymoron. The contradicting interpretations have been expressed as antinomies.

Rees (2003:29) explains that beyond a certain point, there is an unavoidable conflict between economic development or 'material economic growth' and environmental protection.

> "*Unsustainability is not a technical nor economic problem as usually conceived, but rather a state of systemic incompatibility between an economy that is a fully-contained, growing, dependent sub-system of a non-growing ecosphere. Potential solutions fly in the face of contemporary development trends and cultural values" (*Rees 2003:29).

The study pointed out wide ranging substantiations that change is needed and highlighted the obstacles towards achieving the international set goal of implementing sustainable development. It was also established that the international agendas and movements such as African Renaissance or post-development, do not provide a teleological explanation of sustainable development. Instead these groupings are aiming to protect the unsustainable status quo, although with a few modifications. This dissertation showed that sustainability is not an ideal, but exists in the natural world and in human settlements which do not exceed the capacity of Nature to provide the necessary resources for all living organisms.

The contributions of the dissertation can be summarised as follows:

1. The study utilised an **interdisciplinary approach** and presented the inadequacies of the conventional approach in Namibia and also internationally. Three components (social, economic and environmental) commonly regarded as fulfilling the requirements of sustainable development do not represent a non-holistic approach. Local governments in Namibia follow the examples of the international agendas and their interpretations and therefore do not contribute to sustainable development.
2. The study **clarified sustainability and sustainable development** concepts and provided existing examples from Namibia. Traditional communities display a sustainable way of life whereas modern or modernising societies are unable to emulate these examples. It is however impossible for most modern communities to revert back to a sustainable lifestyle which is similar

to the traditional one, because they lack the essential culture and knowledge needed to sustain a non-materialistic existence.

3. A **redefinition** was formulated to avoid the vagueness of the conventional understanding and provided an end goal, i.e. sustainability, and to provide a starting point for a framework to achieve sustainability.
4. In order to achieve a state of sustainability, the dissertation offers an **alternative framework** to suggest a new approach in achieving sustainability, based on the redefinition. A major deficiency of the conventional approach is the absence of the psychological factors in development thinking which were identified as a major obstacle.
5. The study identified the **limitations of local authorities** as the lowest level of government in Namibia with regard to the implementation of sustainable development and the environmental focus, their lack of understanding of the phenomenon sustainability with respect to governance or generic functions, and the fragmented approach which is followed on local level as well as on national and international level. Local authorities are not major contributors to sustainable development. The projects examined focussed on local problems not sustainability.

3. Recommendations

Sustainability has to be a global concern. One country or one local authority does not bring about sustainability. The situation in Namibia relies very much on the international position which is influencing the thinking of the elite, policies and practices. One example is Walvis Bay's Local Agenda 21 which is supported and, therefore, influenced by outsiders and their definition of sustainable development. An in-depth analysis is essential to define and understand the issues surrounding small human settlements within the context of the holistic approach.

Sustainability is an international concern and development is subject to changes. Academic interest and research in this regard could be supported by the

establishment of an organisation similar to the ECLA (Economic Commission for Latin America), to facilitate an **alternative development model**. It was a United Nations Agency, established 1947 which was able to construct an alternative autochthonous analysis (Kay 1989:25), known as the dependency theory. ECLA provided the institutional infrastructure and the inspiration for the project. The group consisted of intellectuals from various Latin American countries. Kay (1989:26) maintains that ECLA can claim to be the first genuine Third World development school. Another such school, emphasizing the study of sustainability, is definitely needed at the beginning of the 21st century, for example in Africa, where humans originated. A holistic approach could include contributions from fields such as philosophy, psychology, biology, geography, ecology, sociology, education, public and local government administration. This requires further education on all levels.

One possibility to change the existing situation is through focused **research and education** in Namibia. Additional studies, analysis and actions relating to the goal of achieving sustainability are required in a number of fields. They include:

- Research into sustainable societies still in existence to test the new hypothesis
- Research into dematerialisation processes and changes required
- Research into the holistic approach and knowledge as part of the transformation
- Research into the issues of carrying capacity and the ecological footprint in Africa
- Research into institutional change on all levels and its implication
- More debate to raise awareness of sustainable thinking and inputs
- Community based approaches to investigate what constitutes “simple communities” and “simple lifestyles” which includes understanding indigenous knowledge
- Studies relating to psychological issues such as willingness, change and the fear of change, attitudes with respect to promoting sustainable development (as per redefinition)
- Constraints have to be analysed and solutions need to be promoted
- Strengthening of the philosophical basis for sustainability, reason and enlightenment.

4. Prospects to achieve sustainability

In November 1992, around 1700 of the world’s leading scientists, including the majority of Nobel laureates in the sciences, issued the following warning concerning humankind-environment relationships:

"We the undersigned, senior members of the world's scientific community, hereby warn all humanity of what lies ahead. A great change in our stewardship of the earth and the life on it is required if vast human misery is to be avoided and our global home on this planet is not to be irretrievably mutilated" (UCS quoted by Rees 2003:29-30).

Therefore positions that do not conform to the views of the political and business sectors as representatives of the dominant ontology, could be regarded as extreme. The apparent majority view is often regarded as the truth (see Copernicus Chapter 5, section 4.1). However, "Truth is not determined by majority vote" (Doug Gwyn quoted in Quotegarden, no date). Some eccentricity is needed as John Stuart Mills described it (Chapter 5, section 4.1) in order to create new ideas or new perspectives, it is necessary to break out of the mould which is "a virtual necessity in a society where the opposite standards apply most of the time" (Aikido Journal, 2004). Creativity, including in the philosophical realm, requires space or an enabling environment in order to flourish. Frantz Fanon (quoted by Magubane 1999:33) wrote: "[t]he colonised man who writes for his people ought to use the past with the intention of opening the future, as an invitation to action and a basis for hope". Smales (1996) poses some important questions regarding a sustainable future:

"Where's the big idea? What will it look like? How can we smell it, see it, touch it, this sustainable future? I think most people when asked to envision, imagine a sustainable future, a greener future, they conjure up images of people sitting in hemp shirts, sitting in a cave with the TV switched off".

In the Millennium Report to the United Nations, the UN Secretary General (Annan, 2000) made some important remarks:

"We are failing to provide the freedom of future generations to sustain their lives on this planet. The challenges of sustainability simply overwhelm the adequacy of our responses - they are too few, too little and too late. The international community has not found the political will needed to make the necessary changes. Today, when factories produce goods but in the process pump pollutants into rivers or the atmosphere, national accounts measure the value of the goods but not the costs inflicted by the pollutants. In the long run, these unmeasured costs may greatly exceed the measured short-term benefits. Only when they reflect a fuller accounting can economic policies ensure that development is sustainable".

It is widely believed that the current problems can be fixed with money and human inventions. Agenda 21 has made provision in the various chapters, under the

heading *Means of implementation.* In order to implement the activities identified earlier, finances are needed. For example, in chapter 7, providing adequate shelter for all, was estimated to cost $75 billion annually between 1993 and 2000, improving human settlement management $100 billion, promoting sustainable land-use planning and management $3 billion each year, and promoting the integrated provision of environmental infrastructure $50 million annually. Promoting sustainable energy and transport systems was included in chapter 9 (Protection of the atmosphere), whereas the promotion of sustainable construction industry activities would require $40 billion annually. Promoting human resource development and capacity building for human settlement development entails only $65 million each year. The WSSD showed that these targets were wishful thinking on the one hand and on the other hand illustrate the lack of commitment and interest in implementing sustainable development. The Asian Coalition for Housing Rights' newsletter (February 2002) argues:

> *"Despite all the inspiring rhetoric you hear about participation, decentralisation and community control, the hard facts of most development interventions reveal an iron grip on project-design, process and – most importantly – MONEY. Even more disheartening is the scandalous inefficiency of the prevailing mechanisms which deliver aid intended to benefit the poor".*

Whenever money is involved, sustainability flies out of the window. As Korten describes it:

> *"The problem is this: a predatory global financial system, driven by the single imperative of making ever more money for those who already have lots of it, is rapidly depleting the real capital—the human, social, natural, and even physical capital—on which our well- being depends. The truly troubling part is that so many of us have become willing accomplices to what is best described as a war of money against life. It starts, in part, from our failure to recognize that* ***money is not wealth****"* (Korten, 1997; author's emphasis).

Porter, representing the Western position, has difficulties to imagine a life which is totally different form the modern one. He ask the question; "If, for example, we choose to live in accordance with nature, following the rhythm of its seasons, harmonizing our spirits with its tranquility, reducing our activities to simple

movements for the satisfaction of elemental needs, are we then linking ourselves to the cosmos in some fundamental way?" (Porter 1995:25). This problem did not exist in traditional African communities, as they had a holistic way of life which combined the natural, human and spiritual worlds (see 2.7.1).

At the time of the arrival of a small group of Polynesians, the natural resources on the Islands provided 100% of what was needed for the "inhabitants" (fauna and flora). The human impact was immediate, as resources were utilised for housing, food and cultural activities. As the population increased the resources diminished, until the population reached its peak and the resource availability was at its minimum. The whole ecological system collapsed after 400 years of human interference. The Easter islands are an example of environmental and human self-destruction. Within 400 years, and a maximum population of about 15,000 humans, the 43 square miles were devastated (Maser 1997:23). Exploitation of natural resources, deforestation, erosion and population growth, contributed to the decline. As a result of hunger, humans turned to warfare and cannibalism. The experiences of the Easter Islands can be illustrated as follows:

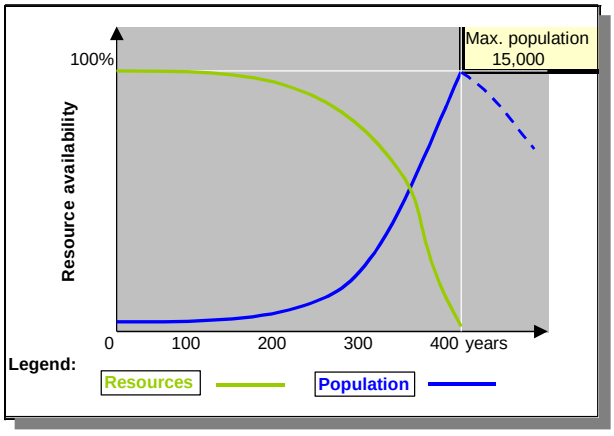


Figure 6.1 - Population and resources

Hobbes described the very nature of man as the cause for conflicts, such as

competition, the quest for power, diffidence and the seeking after pride and glory (Berki 1977:134). “Such a warre, as is of every man, against every man” (Hobbes quoted by Berki 1977:134). In this natural state, according to Hobbes, there is no culture, no industry, no science, and no society. “… and which is worst of all, continuall feare, and danger of violent death; And the life of man, solitary, poore, nasty, brutish, and short” (Hobbes quoted by Berki 1977:134-135). Today’s world is becoming very similar to Hobbes’ description.

Hill’s (1981) statement above, that humans are also a stupid civilization, has been corroborated by Mahatma Gandhi who was asked (Mazrui 1986:239): “What do you think of Western civilisation?” His reported reply was: “I didn’t know they had any”. If accepted, this position renders the anthropocentric view as expressed in Agenda 21, as meaningless: Humans are placed at the centre of concern for sustainable development and they are entitled to a healthy and productive life in harmony with nature. As long as humans are promoting an approach of conquering nature, they are failing to achieve sustainable development. What is needed is a state where humans are, as a species, a *primus inter pares*.

The experience of a Canadian couple visiting Bodh Goya, where 2500 years ago, an Indian prince attained enlightenment and became the Buddha, is illustrative. “There is so much happiness and calm in a simple, uncluttered life” (Florence Caruana quoted in Newsweek, 26 May 2003:56). Sustainability “poses a far more serious challenge to many of society’s most basic beliefs and analytic concepts than most mainstream planners and policy makers have so far been prepared to contemplate” (Rees 2003:31). An example has been provided by the WWF. The organisation placed several adverts to support radical changes to protect the marine eco-system

and to illustrate the dangers of overfishing by industrial countries. “The fish on your plate probably didn’t live long enough to reproduce, as a result the stock it came from didn’t get a chance to recover. … Politicians will probably tell you that the plates are getting bigger” (WWF advertisement in Newsweek 26 August 2002)[15].

Many individuals and organisations in Namibia, as well as internationally, have repeatedly stated that development has to become a little more sustainable[16]. However, in the light of the discussions in this dissertation, the question has to be asked: is it possible to have a little bit more or less sustainability? The answer can be obtained by using a biological example: can a female be a little bit pregnant? The answer is obvious - she is either pregnant or she is not. Or as Maser (1997:16) puts it: “Be forewarned, however, that sustainability is an absolute. A system is either sustainable in a given state or it is not; there are no degrees of sustainability”. Therefore, a lifestyle is either sustainable or not. If the level of sustainability is not longer possible, a condition of non-sustainability exists. This provides several scenarios regarding the outcome of implementing sustainable development:

1. The most far-reaching would be to achieve a reduction of the human population to about 300 million, i.e., the number of at least 5,000 indigenous groups, or “first peoples”, that live in more than 70 countries on five continents (Roth, no date), in order to solve the problem of overpopulation and overexploitation of resources. This would also incorporate a dematerialisation process and, therefore, a decline of the capitalist economy. The achievement of a state of sustainability would be a relative stable balance between resources and the consumption by the human population in small settlements.

2. A less radical option would be an attempt to stop the human population growth rate as soon as possible, look for “more sustainable” technologies and life styles, such as recycling and the minimization of waste, e.g., the ZERI principles, or

permaculture. This is in line with the weak and the strong approach to sustainable development, but will not result in an “ideal” model of sustainability. Non-renewable resources would still be exhausted although at a later stage and the natural environment would still face degradation and destruction.

3. A third option is that the issue of sustainability can only be solved in the philosophical realm, free of the constraints found in the material world. This will however not solve the problems related to the physical destruction of Earth.

4. Another option would be a take over by Nature, i.e. a combination of natural factors such as an epidemic, a meteor impact, earth quakes, or droughts which will lead to the reduction of the human population, as in the case of the Maya (see endnote 13).

In order to avoid repeating mistakes of the past and to promote sustainability, alternatives have to be considered. Wines (2000:19) asks: “Why, for example, aren’t the natural wonders of ecology, hydrology, geology, or the revelations of biophysics and astrophysics, even more of an inspirational resource for the building arts than the structural geometry of a crane, or some Cubist-derived design conventions?” Wines further states that opposition to this proposal

> *“would come from those insular reactionaries within the current architectural scene who invariably protest any hint of narrative or referential content as anathema to the purity of traditional abstract form. Yet it is precisely this content-deprived, technologically driven, and environmentally irresponsible resistance to change that is at the basis of most regressive architectural thinking today”* (Wines 2000:19-20).

The prevailing overconfidence and self-deception created by the dominant global Western political and economic systems, contributes to a situation, where the facts of the current unsustainable way of life are disregarded and the belief in the cannot-do-wrong abounds. This is very similar to the position of E.J. Smith, who boasted in 1907:

> *"When anyone asks me how I can best describe my experiences in nearly 40 years at sea, I merely say, uneventful. Of course, there have been winter gales, and storms and fog and the like, but in all my experience I have never been in any accident of any sort*

> *worth speaking about. I have seen but one vessel in distress in all my years at sea - a brig, the crew of which were taken off in a small boat in charge of my third officer. I never saw a wreck and have never been wrecked, nor was I ever in any predicament that threatened to end in disaster of any sort. You see, I am not very good material for a story"* (quoted by Daino, 1998).

During the night of April 15, 1912, the Titanic sank and with it the captain of the ship – E.J. Smith.

Philosophical ideals which were nurtured in the last 200 years, such as freedom and equality, have done little for the fraternity and solidarity that holds societies together (Maser 1997:100). The future will tell whether sustainable development is similarly an ideal which cannot be realised, except in the philosophical realm. If fundamental change is not forthcoming, then the prospects of achieving sustainability can only be accomplished in the philosophical realm - or in Hollywood, where it is called science **fiction**. To achieve sustainability within the confines and according to the capitalist ethic and the Western model of "sustainable development" is the myth of the 21st century.

5. Post scriptum

Towards the end of 2004, as part of the dissemination of the Local Agenda 21 in Walvis Bay, several workshops were organised throughout Namibia. A number of local authorities responded before conclusion of this study. The assumptions made in this dissertation have so far been confirmed, as the proposals made indicate the fragmented, non-holistic character of the future Local Agendas 21. Witvlei requested assistance to acquire a solid waste dump and sewerage pond system. Eenhana plans to establish a forest reserve, better utilisation of town lands, and a recycling plant. Ondangwa indicated problems with regard to solid waste management. Tsumeb indicated that Council is currently reviewing its 1997 Local Agenda 21.

Endnotes

[1] During the tsunamis in Asia in December 2004, the superiority of Nature was experienced and reported by the media (SABC Africa, The Namibian, 3 January 2005), when agitated elephants in Thailand felt the flood coming and escaped after some struggle with their mahouts. The tsunami drove up to 1 kilometre inshore and stopped short of where the elephants and the saved tourist stood (The Namibian, January 3, 2004:7).

[2] However, the 2004 United Nations Human Development Report ranks Namibia 126th (United Nations, 2004), down from the 2001 position of 111. This is part of the downward trend over the last years in the areas of education, poverty, employment and adult literacy. If these issues cannot be tackled successfully, how can the government promote sustainable development?

[3] A recent example illustrates this point. The Namibian (11 September 2003) reported that the Walvis Bay Council approved the Environmental Strategy and Action plan as part of the LA 21. The same newspaper (23 September 2003) gives an account of a proposed housing project outside the urban area of Walvis Bay alongside the ocean. This beach area is a breeding place for the endangered bird species Damara Tern which is endemic to Namibia. The Namibian quotes the CEO saying: "I feel we have sacrificed many lives for political independence. I cannot see why we cannot sacrifice the lives of a few birds for economic independence". What has the CEO learned from the LA21 initiative? Absolutely nothing. In Windhoek the textile industry uses 30 MW of energy which is more than is needed to run the entire Walvis Bay (Hangala quoted by The Namibian October 2, 2003). The Namibian government and the municipality are in the process of setting up a second textile plant in Windhoek!

[4] Prince Sadruddin Aga Khan (in Newsweek September 2, 2002:60) points out that, there are about 250 international environmental treaties or conventions. They all suffer from neglect. "They're run by toothless and underfunded secretariats. They're helpless and hopeless. We've got to change attitudes". However, sincere change is missing on the agendas.

[5] In France one of the government's ministries is the Ecology and Sustainable Development Ministry. The latter failed to introduce a car tax on "gas guzzlers" to cut back on air-pollution (Newsweek July 12, 2004:17).

[6] There "is only one natural resource base, and this supports all livelihood. The economy and its sustainability depend on how it is managed. People, industries and municipalities have to manage it well. Failure to do so will undermine all efforts to alleviate poverty, efforts to strengthen the economy, and efforts to develop our own human potential. A new strategic framework for development, one that discourages unsustainable consumption practises and wasteful behaviour needs to take root within our society. The process of rebuilding local governance will serve as a basis from which to address the environmental problems of the 21st century" (Environmental Evaluation Unit, University of Cape Town, 2002).

[7] Nowadays there is talk of conflicts over water as populations outrun their water supplies. Some analysts note that in regions facing acute water scarcity, such as the Middle East, future wars are more likely to be over water than oil (Brown & Mitchell, 1998). The competition for water is also moving into world grain markets, as countries try to offset irrigation water shortages by expanding grain imports. The winners are likely to be those who are financially strongest, not those who are the strongest militarily.

[8] Gandhi (quoted by Iyer 1994:89) proclaimed: "I have ventured utterly to condemn modern civilization because I hold the spirit of it is evil. It is possible to show that some of its incidents are good, but I have examined its tendency in the scale of ethics. … I claim to have tested the life which modern civilization has to give, as also that of the ancient civilization, and I cannot help most strongly contesting the idea that the Indian population requires to be aroused by the lash of competition and the other material and sensuous, as well as intellectual, stimuli; I cannot admit that these will add a single inch to its moral stature".

[9] 1. Government Structures, Capacity, and Institutional Frameworks where the limited success of decentralization is a salient feature. 2. Legitimacy in Governance without the active and willing participation of their citizens and their trust that government is acting for their best interests. 3. Jurisdictional Conflicts and the Compartmentalization of Government as the division of responsibilities within a sphere of government complicates attempts at sustainability when

departments and agencies with different responsibilities fail to work together. 4. Concentration of Economic Power has resulted in the liberalisation and deregulation of trade and capital markets which has shifted authority and influence from the public to the private sector. 5. Allocation and Management of Resources: Local governments lack sufficient financial and human resources to properly implement sustainability initiatives, particularly when capital investments are required. 6. Lack of Political Will as governments and their citizens have not placed enough emphasis on sustainability. Sufficient political will can make sustainable development happen, yet there are few incentives to encourage leaders to champion sustainability. However, the relative brevity of electoral terms encourages the adoption of short term goals with immediate results over long range planning for sustainability where the benefits will not be visible for years. 7. Communicating Sustainable Development is absent. Sustainable development as a concept transcends cultural differences and addresses social, economic and environmental issues simultaneously, yet, as this dissertation has shown, it is still perceived as an environmental movement with northern, middle class objectives.

[10] Namibia is importing, for example, electricity and cement from South Africa, where highly polluting coal is widely used in the production processes. Indirectly Namibia is therefore contributing to the pollution of the Southern African environment.

[11] Jones also argues that governments in developing countries recognize that environmental legislation will introduce additional costs to their emerging industries and do not concede that they should be submitted to constraints which Western countries had many years of unfettered development. Governments "of underdeveloped countries are wholly concerned with survival – survival by any means available" (Jones 1998:44).

[12] El Niños are characterised by their tele-connections. The latter relates to a phenomenon in one part of the world which affects the weather or climate in another part of the world. If such a change in the climate or weather patterns, for example, a twenty year drought, is accompanied by weak human leadership which is usually in the hands of the elite, it is devastating (Castillo, National Geographic Channel, 30 June 2003). This has happened in human history in ancient Egypt and Peru. Karl Marx wrote: history is repeating itself, first as tragedy and then as a farce (Friends of the Earth, 1997).

[13] This is exemplified by the decline of the Maya, who were 1200 years ago one of the most advanced societies (Diamond, no date). The collapse and the disappearance of 90 to 99 percent of the Maya population, is ascribed to the occurrences of regular droughts, with the worst one lasting for over 50 years. The area with the densest population also has the most severe water problems. When the Spaniards arrived, they encountered only a few villagers.

[14] Furthermore, smog production is increased, as well as contributing to increased emission of pollutants from power plants, including sulphur dioxide, carbon monoxide, nitrous oxides and suspended particulates (Santamouris 2001:48). These are all signs of the consumer society. The capitalist system, whose emphasis on individualism as a means to promote consumerism, leads to the conditions of non-sustainability because it requires growth to stay buoyant. The Independent Commission on International Development Issues (1980:23) recognised that the persistent confusion of growth with development must be avoided.

[15] As Khosla (2001a) put it: "The reactions of diplomats attending the Commissions and Committees [of the United Nations] in this building seem to show that they have even less of a clue. One of them, centrally involved in the preparations for the UN Conference on Financing for Development which are now at an advanced stage, admitted in a panel discussion in a crowded room this afternoon that the concept of sustainable development had not yet come up in their negotiations. 'Oh, yes! The green thing? Sure, the environment is very important – but hasn't that already been taken care of at other conferences?'"

[16] The state of affairs in Namibia, but also internationally, with regard to the direction or the way of implementing sustainable development, is comparable to and can be illustrated by an extract from Alice in Wonderland, where Alice is asking the Cheshire-Cat (UNCHS 1991b:26-27, Maser 1996:149): "Would you tell me, please, which way I ought to walk from here?"
"That depends a good deal on where you want to get to, " said the Cat.
"I don't much care where," said Alice.
"Then it doesn't matter which way you walk," said the Cat.
"- so long as I get somewhere," Alice added as an explanation.
"Oh, you're sure to do that," said the Cat, "if only you walk long enough!"

GLOSSARY

Arcology - proposes a highly integrated and compact three-dimensional urban form that is the opposite of urban sprawl with its inherently wasteful consumption of land, energy, time and human resources

Autopoiesis - combines the Greek terms *auto* (self) and *poiesis* (creation, production)

Ambient – surrounding, e.g. air surrounding an object or ambient air

Anthropocentric view – human centred view, which regards humans as the most important species on earth and who are in charge of the rest of nature

Biodiversity – or biological diversity to describe the variety of different species, genetic variability, among individuals and the variety of ecosystems

Consequentialism - see **Utilitarianism**

Deep ecology - a holistic worldview, emphasising the whole rather than the part and questioning the relationship between human communities and nature

Eco-centric – emphasis+ing the inherent or intrinsic values of all forms of life

Ecological footprint – calculated as the land required to feed them, to supply them with timber products and to reabsorb the CO_2 emissions by areas covered with growing vegetation

Ecology – (and *economics)* from the Greek root, *oikos,* meaning house or habitat

Eco-philosophy - the eco-centric philosophical platform

Ethics - also called moral philosophy, involves systematizing, defending, and recommending concepts of right and wrong behaviour. The term is derived from the Greek noun *ethos*, meaning the customs and conventions of a given community.

Evolutionary psychology - the combination of evolutionary biology and cognitive psychology that seeks to explain through universal mechanisms of behaviour why humans act the way they do

Equity – equal access to decision-making processes, resources, employment and other opportunities and sources

Generic functions - specific mutually inclusive generic functions which are directed to particular activities for the realisation of functional goals, namely policy, finance, personnel, organisation, procedures, and control

Governance - the exercise of political, economic and administrative authority in the management of a country's affairs at all levels comprising the mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences

Greywater – used water from washbasins, baths or washing machines, which can be recycled, but excludes toilets

Harvested rainwater – collection of rainwater in tanks at houses and buildings to store the water for future uses

Holism - the theory that wholes are to be regarded as greater than the sum of their parts

Holon – is a whole within nature, made of its own parts, yet itself part of a larger whole

Inter-generational equity - declares that all generations have an equal place in relation to the natural system and there is no basis for preferring the present generation over future ones in their use of the planet

Intra-generational equity - justice to the socially disadvantaged within any country and between countries at any given point in time

Local Agenda 21 - a participatory, multi-stakeholder process to achieve the goals of Agenda 21 at the local level through the preparation and implementation of a long-term, strategic plan that addresses priority local sustainable development concerns

Philosophy - derived from the Greek words *philos* (love) and *sophia* (wisdom)

Sustainable - from the Latin *subtenir*, meaning 'to hold up' or 'to support from below'

Utilitarianism - defines morality in terms of the maximization of net expectable utility for all parties affected by a decision or action. The main concerns revolve around the concept of *happiness* and the issues of *right* or *wrong*.

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