Ecologically Sustainable Development in the Northern Territory

epa Northern Territory

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Executive Summary

The Environment Protection Authority (EPA) is responsible for providing independent advice and recommendations to the Northern Territory Government, businesses and the community about ecologically sustainable development (ESD).

In carrying out its functions, the EPA is required to have regard to principles of ecologically sustainable development (section 7(2) of the *Environment Protection Authority Act 2007)*.

Ecologically sustainable development is an approach to economic development that evolved and became internationally recognised as a result of the Brundtland Report in 1987. It is expressed through a number of principles that seek an outcome of human progress which goes on more or less indefinitely, respects ecological boundaries and addresses social equity.

This approach to development directly responded to increasing evidence of environmental degradation (including deforestation, depletion of marine resources, pollutants in the food chain and higher levels of land, air and water pollution) and recognition that these environmental impacts (if they remained unchecked) would have real and negative consequences for future economic progress and community wellbeing.

In 1992, the Northern Territory became a signatory to the Intergovernmental Agreement on the Environment and adopted the National Strategy for Ecologically Sustainable Development. Considerable progress has been made in implementing principles of ESD across Australian jurisdictions, most notably in Victoria, NSW, and Western Australia. The Northern Territory has yet to implement the principles in a systematic way (although various policies and pieces of legislation refer to the principles of ecologically sustainable development).

The establishment of the EPA is a first step in seeking a coordinated and understood approach to achieving a path to ecologically sustainable development in the Northern Territory. The EPA's function is to review practices and procedures of agencies and to make recommendations in regard to legislation. Accordingly, the EPA is able to systematically review current policies, government practices and legislation, and advise on whether they meet the objective being sought by ecologically sustainable development.

The EPA's objective through this current project is to lay down the foundation for the Territory to take an approach to sustained economic growth and development that protects its environment and ensures the wellbeing of all members of its community. This project therefore seeks to:

- establish a common understanding of the term, ecologically sustainable development, and therefore agreement on what is being sought when using this terminology within Northern Territory Government policies and legislation.
- promote governance systems for decision-making based on the principles of ecologically sustainable development.
- provide a basis for the EPA when fulfilling its legislated functions.

The EPA began this project by holding public meetings in Darwin and Alice Springs. It then released a public discussion paper, *A Northern Territory Approach to Ecologically Sustainable Development,* in February 2009 and public comment was

invited until the end of June 2009. In response to the discussion paper, the EPA received submissions from the Territory and local governments, community groups and private individuals.

A clear message communicated in the public response to the discussion paper was that overarching ESD principles themselves will be largely ineffective in achieving the goal of ESD unless they are recognised through legislative implementation, and through appropriate administrative and judicial structures. An expectation was expressed that government would show leadership in this regard, by demonstrating a whole-of-government approach to the implementation of ESD through its processes of policy development, planning, legislation and decision-making.

The EPA has formulated its advice and recommendations to address expectations communicated by the public and to provide a path forward for the Northern Territory to implement ESD and ensure that its future growth and development is sustained through healthy ecosystems and a high level of community wellbeing.

The EPA makes the following recommendations in accordance with section 5(1) of the *Environment Protection Authority Act*. These recommendations are provided to the Minister for Natural Resources, Environment and Heritage in accordance with section 24(1) of the *Environment Protection Authority Act.*

Recommendation 1

It is recommended that the Northern Territory Government adopt the national definition of ESD, as expressed in the National Strategy, as the agreed whole-of-government definition for the Territory.

Definition of ESD for the Northern Territory:

"*Using, conserving and enhancing the communities' resources so that ecological processes, on which life depends, are maintained, and the total quality of life now and in the future can be increased.*

ESD is development that aims to meet the needs of Australians today, while conserving our ecosystems for the benefit of future generations."

Recommendation 2

It is recommended that the Northern Territory Government adopt the following as agreed Territory ESD principles to be integrated into decision-making processes across government and used to inform subsequent legislative and policy development.

Principles of ESD for the Northern Territory:

Integration

Decision-making processes should effectively integrate both long-term and short-term economic, social, environmental and equitable considerations.

Precautionary Principle

Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

Inter-generational and Intra-generational Equity

The present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations. Intra-generational equity involves consideration of equity within the present generation.

Conservation of Biological Diversity and Ecological Integrity

The conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making.

Improved Valuation, Pricing and Incentive Mechanisms

This includes recognition of the principles that the costs of environmental externalities should be internalised and that the polluter should bear the costs associated with environmental pollution.

Public Participation

Decisions and actions relating to ecologically sustainable development should provide for broad community involvement on issues which affect them.

Recommendation 3

It is recommended that the Northern Territory Government develop and implement governance mechanisms for the application of ESD in the Northern Territory. Critical requirements to be addressed include:

- placement of overall responsibility
- strategic coordination
- legislative underpinning
- integration with planning and budgeting processes
- policy integration
- stakeholder involvement
- links to local level governance mechanisms
- use of ESD indicators.

Recommendation 4

It is recommended that the Northern Territory Government develop and adopt a public sustainability statement that provides a commitment to achieving ESD in the Northern Territory.

It is recommended that this statement be adopted and promoted by the Chief Minister, demonstrating commitment to sustainability from the highest levels of government in the Northern Territory.

It is recommended that as a minimum, the statement should incorporate the following elements:

- Recognition of the unique and internationally significant values of the natural environment of the Northern Territory.
- Recognition of the concept of ESD and the associated need for economic, social and environmental factors to be integrated together in decision-making.
- Acceptance of the concept and principles of ESD as expressed at an Australian national level through the NSESD, and endorsed internationally by the Australian Government through agreements such as the Rio Declaration, Millennium Development Goals and Johannesburg Declaration.
- Affirmation of the definition of ESD provided by the NSESD.
- Affirmation of the principles of ESD for the Northern Territory as identified by the Northern Territory EPA.
- Acknowledgement of the role of the whole of the Northern Territory community in achieving ESD.

1. Introduction

The Environment Protection Authority (EPA) was established in March 2008 under the Environment Protection Authority Act. It has the function of providing independent advice and recommendations to the Northern Territory Government, businesses and the community about ecologically sustainable development. The role of the Authority includes the review of practices and procedures of agencies and to provide recommendation in regard to legislation (section 5(2) of the *Environment Protection Authority Act*). In carrying out its functions, the authority is required to have regard to principles of ecologically sustainable development (section 7(2) of the *Environment Protection Authority Act*).

To fulfil this function, the EPA agreed that it should first define what ecologically sustainable development meant within the Northern Territory context and develop and establish overarching principles for achieving it (acknowledging the Territory's particular socio-economic and biophysical features). It agreed it should also establish principles on which to base and promote governance systems for decision-making that support the Territory's economic, community, cultural and environmental wellbeing.

To commence this project, the EPA hosted two public forums, in Alice Springs and Darwin in August and September 2008, titled 'Public Conversations on ESD'. Public presentations were made by a range of community and business groups and an on-line forum was made available as a further way for people to contribute their views and comments.

In February 2009, Dr Doug McKenzie-Mohr presented a series of EPA-hosted-workshops to promote community understanding of the concept of ESD and to provide practical steps for changing people's behaviour to embrace sustainable living options

The EPA also released its discussion paper, *A Northern Territory Approach to Ecologically Sustainable Development,* in February 2009 (Appendix A – Overview of the Discussion Paper) and invited public comment on this until the end of June 2009. In response, the EPA received a wide range of submissions from Territory and local governments, community groups and private individuals (Appendix B – Outcomes of Public Consultation).

Public input and comment throughout this process, combined with the discussion paper, form the basis of the EPA's recommendations to the Minister for Natural Resources, Environment and Heritage contained in this Final Report.

2. What is ESD?

Sustainable development simply means a path for human progress that goes on more or less indefinitely, respects ecological boundaries and pays attention to social equity. It is a development path that does not shift negative external effects – in terms of environmental problems, social consequences or economic impacts – to other places or on to future generations (Gibson 2001).

Ecologically sustainable development (ESD) acknowledges that our economic and social progress depends on the basic services (such as clean air and water) provided by ecosystems and a healthy environment. It is an approach to development that ensures we protect the values of the healthy environment on which we depend. This approach also acknowledges that the benefits and opportunities of a healthy environment, and economic development, should be distributed equitably within and between present and future generations.

ESD embodies a number of principles to guide decision-making and actions concerning the environment and development. These include:

- integration
- the precautionary principle
- equity within and between generations
- conservation of biological diversity and ecological integrity
- improved valuation, pricing and incentive mechanisms
- public participation.

The scope of sustainability and ecologically sustainable development ranges from maintaining the integrity of biophysical systems to offering better services to more people to provide freedom from hunger and deprivation. It also covers choice, opportunity, and access to decision-making, which are aspects of equity within and between generations (Bosselmann, Engel & Taylor 2008).

The notion of sustainability is consistent with the world view of Aboriginal peoples around the world, perhaps best embodied in the seventh generation philosophy of the Native American Iroquois Confederacy, which made chiefs responsible for the impact their actions had on their descendants for seven generations (Clarkson, Morrissette & Régallet 1992).

World Commission on Environment and Development

The concept of sustainable development emerged from widespread concern at the increasingly apparent evidence of environmental degradation around the globe, and concern at the current and future social and environmental impacts of economic development.

Associated with this concern was growing awareness of major environmental problems including the depletion of the ozone layer, global warming, deforestation, and desertification, depletion of marine resources and increasing levels of land, air and water pollution.

In 1987, The World Commission on Environment and Development (WCED) chaired by the Prime Minister of Norway, Gro Harlem Brundtland, published a report Our Common Future (The Brundtland Report), which brought the concept of sustainable development onto the international agenda.

The WCED contended that the planet's finite natural environments were facing unprecedented pressures and that current patterns of economic growth and resource exploitation could not be sustained without significant changes in policies and practices by government, business and the community.

The Brundtland commission recognised that environmental degradation was being driven by the pursuit of economic and social development without regard for the impacts of human activities on the environment. To address these problems, the Brundtland Report argued that a new form of 'sustainable development' was required. It defined this as:

"*Development that meets the needs of the present, without compromising the ability of future generations to meet their own needs*".

The WCED found that making development sustainable would require environment and development considerations to be integrated in decision-making at all levels. This meant that actions and decision-making would need to consider and account for both the economic, social and environmental consequences of the decision being made.

The concept of sustainable development introduced by the Brundtland commission acknowledged that pursuit of human wellbeing through economic and social development must take account of the ecological limits to development. This was necessary to ensure that the benefits of a healthy environment and sustainable development could be available to future generations.

Rio United Nations Conference on Environment and Development

Sustainable development was internationally accepted at the 1992 United Nations Conference on Environment and Development, held in Rio de Janiero. The concept and principles of sustainable development were affirmed in a number of international agreements, including: The Rio Declaration on Environment and Development; Agenda 21; The Convention on Biological Diversity; The Framework Convention on Climate Change and The Statement of Forrest Principles.

The 1995 World Summit on Social Development further defined sustainability as 'the framework for our efforts to achieve a higher quality of life for all people', in which 'economic development, social development and environmental protection are interdependent and mutually reinforcing components' (UNDESA 1995).

The National Strategy for Ecologically Sustainable Development

In Australia, governments have adopted the term, Ecologically Sustainable Development (ESD). The word, 'ecologically', is used to emphasise the necessary integration of economy and environment. In 1992, Australia's National Strategy for Ecologically Sustainable Development (NSESD) was adopted by state and territory

governments through the Council of Australian Governments (COAG). The national strategy defines ESD as:

"Using, conserving and enhancing the communities' resources so that ecological processes, on which life depends, are maintained, and the total quality of life now and in the future can be increased.

ESD is development that aims to meet the needs of Australians today, while conserving our ecosystems for the benefit of future generations."

In 1992, the Northern Territory Government endorsed the national strategy and agreed, along with all other states and territories, to the Intergovernmental Agreement on the Environment (IGAE). The agreement establishes broad principles to guide the development of environment policy and specifically calls on the principles of ESD to inform policy-making and program implementation. The principles are reiterated in the national strategy, and include:

- adoption of the precautionary principle
- intergenerational equity
- conservation of biological diversity and ecological integrity
- improved valuation, pricing and incentive mechanisms.

The Implementation of ESD

Over the past two decades, the concept and principles of ESD have been extensively incorporated into government legislation and both public and private sector policy, planning and decision-making processes. Considerable progress has been made in implementing these national principles across Australian jurisdictions, notably in Victoria, NSW, and Western Australia. The Northern Territory has yet to implement the principles in a systematic way.

The Australian Government has since reaffirmed its commitment internationally to achieving sustainable development, notably via the United Nations General Assembly Millennium Development Goals in 2000, the Johannesburg Declaration in 2002, and the 2005 United Nations World Summit. Australia has also again affirmed its commitment to promoting the integration of the three components of sustainable development – economic development, social development and environmental protection – as interdependent and mutually reinforcing pillars.

3. Why Adopt a Path of ESD?

Over the past 50 years, humans have changed ecosystems more rapidly and extensively than in any comparable period of time in human history, largely to meet rapidly growing demands for food, fresh water, timber, fibre, and fuel. This has resulted in a substantial and largely irreversible loss in the diversity of life on Earth (MA 2005).

The Millennium Ecosystem Assessment, completed in 2005 by more than 1360 scientists working in 95 countries, examined the state of the world's ecosystems and 24 key ecosystem services. Ecosystem services are the conditions and processes through which natural ecosystems, and the species that make them up, sustain and fulfil human life. They maintain biodiversity and the production of ecosystem goods, such as seafood, forage, timber, biomass fuels, natural fibre, and many pharmaceuticals, industrial products and their precursors. Ecosystem services are also the actual life-supporting functions, such as cleansing, recycling, and renewal, and confer many intangible aesthetic and cultural benefits (Daily et al 1997).

About 60% (15 out of 24) of the ecosystem services examined during the Millennium Ecosystem Assessment are being degraded or used unsustainably (MA 2005).

The degradation of ecosystem services represents loss of a capital asset. Both renewable resources such as ecosystem services, and non-renewable resources such as mineral deposits, some soil nutrients, and fossil fuels, are capital assets. The full costs of the loss and degradation of these ecosystem services are difficult to measure, but the available evidence demonstrates that they are substantial and growing (MA 2005; UNEP 2007).

National Trends

The 2006 Australian Bureau of Statistics report, Measures of Australia's Progress, indicates negative trends on a number of key environmental indicators including biodiversity, land clearance, land degradation, inland waters and greenhouse pollution (ABS 2006).

The Commonwealth Australia State of the Environment 2006 (*SoE2006*) report provides an independent national assessment of the Australian environment. The report finds that many of the pressures and negative trends reported in the *Australia State of the Environment 2001,* still exist and some have intensified (Beeton et al 2006).

Climate Change

Climate change is now recognised as a global environmental problem and threatens to have significant environmental, social and economic impacts for Australia and the Northern Territory.

The recent Fourth Assessment Report of the Intergovernmental Panel of Climate Change found that climate change is occurring and that this is very likely the result of the observed increase of human greenhouse gas (GHG) emissions (IPCC 2007). Australia's per capita emissions are the highest in the OECD, among the highest in

the world, and per capita emissions are significantly high in the Northern Territory (DCC 2007; Garnaut 2008).

Such changes in climate will have diverse implications for Australia's environment, economy, and public health. The biodiversity, ecosystems, and natural habitats of Australia are world renowned, yet potentially the most fragile of the systems that will be exposed to climate change. World heritage assets in the Northern Territory have been identified as vulnerable to the impacts of climate change (ANU 2009; STCRC 2009).

The CSIRO has identified that loss of unique natural habitats, increasingly scarce water supplies and more frequent extreme weather events will all have significant implications for important industry sectors within the Australian economy (Preston & Jones 2006; CSIRO 2007). The impacts of climate change have implications for land use planning and infrastructure provision, as well as human wellbeing and health.

The Northern Territory Government's recently released Climate Change Policy has recognised the need to reduce greenhouse emissions levels in the Northern Territory and plan for climate change impacts.

Biodiversity

Australia's biological diversity is globally significant. Australia is recognised as one of 17 'mega-diverse' countries, with ecosystems of exceptional variety and uniqueness (ABS 2006).

The ways in which organisms interact with each other and their environment are also vital to human survival: society relies on ecosystems that function properly for clean air and water and healthy soil (ABS 2006).

According to the National Land and Water Audit, threatened ecosystems occur across much of Australia. Most terrestrial bioregions (94%) have one or more threatened ecosystems. In all, there are 2891 threatened ecosystems and ecological communities across Australia (ABS 2006).

Between 1995 and 2005, the number of terrestrial bird and mammal species listed as extinct, endangered or vulnerable in Australia rose by 41% from 120 to 169 (of which 67 were birds and 102 were mammals). In the arid zone, about one-third of mammal species are regionally extinct, the highest extinction rate on the Australian mainland, and many birds are declining. The Northern Territory has lost an estimated 14 mammal species (ABS 2006).

The health of our biodiversity has direct implications for the provision of ecosystem services (ABS 2006; de Groot et al 2008; TEEB 2009).

Land Management

Land management practices and use have a significant impact on Australian biodiversity and Inland waters. Land management practices also have implications for the economy.

During the early 1990s, invasive plants (weeds) cost the Australian economy an estimated $3.3b each year in lost agricultural production and control expenses. The cost to the wider environment is virtually unknown. In 2002, figures estimated that 30

of the more serious animal pest species cost the economy at least $420m a year (mainly in lost agricultural production) (ABS 2006).

The rates of land clearing within Australia continue to increase, adding to the risk of land degradation (soil structures, erosion and salinity), decline in inland water quality, potential impacts on ecosystem health and loss of biodiversity. The estimated 333,600 hectares of land cleared in 2005 was 6% more than the 314,700 hectares cleared in 1995. Of the land cleared in 2005, almost half (152,400 ha) was land cleared for the first time (ABS 2006).

Human Settlements and Resource Consumption

Most Australians live reasonably well, enjoying clean air and water, more than enough to eat, and ready access to employment, housing and a range of high quality health and education and other services. Many remote Indigenous communities, however, are notable exceptions (Beeton et al 2006).

From an environmental perspective, the key issue arising from human settlements is the pressure they impose on the environment in terms of the demand for land, water, energy and other resources. It has been estimated that each year, every Australian (on average):

- produces 28.1 tonnes of greenhouse emissions per capita (the highest among developed nations) (Garnaut 2008)
- uses 1540 kL of water (the highest of any continent - compared to 1510 kL/year per capita in North America; 665 kL/year in Europe; 650 kL/year in Asia; 670 kL/year in the world). On average, total water use in Australia increased by 65% between 1983-84 and 1996-97
- produces 620 kg of domestic waste - second only to the USA. When commercial, industrial, construction and demolition wastes are added, Australia has a waste disposal stream of 1.15 tonnes per person per year
- uses total flows of material resources of almost 180 tonnes per person per year. This is several times the material flow per capita of other OECD countries (Newton 2001).[1]

Water

Apart from drinking water, much of Australia's economy (agriculture in particular) relies on water. The condition of freshwater ecosystems has a critical impact on the wider environment.

A number of significant water management challenges remain particularly as overall water consumption is still increasing. These challenges will be exacerbated by impacts of climate change. Important river systems and groundwater aquifers remain over-allocated. In 2000, about one-quarter of Australia's surface water management areas were close to, or had exceeded, sustainable extraction limits (ABS 2006). Many larger estuaries suffer chronic algal blooms, leading to anoxic areas where aquatic ecosystems are disturbed (OECD 2006).

4. The Benefits of ESD

Economic Development and Growth

Commitment to the principles of ecologically sustainable development is a commitment to the future growth and sustained economic development of the Northern Territory. It recognises that sustained economic growth relies upon the ecosystem services provided by a healthy environment. To compromise our environment is to compromise the Territory's economic future.

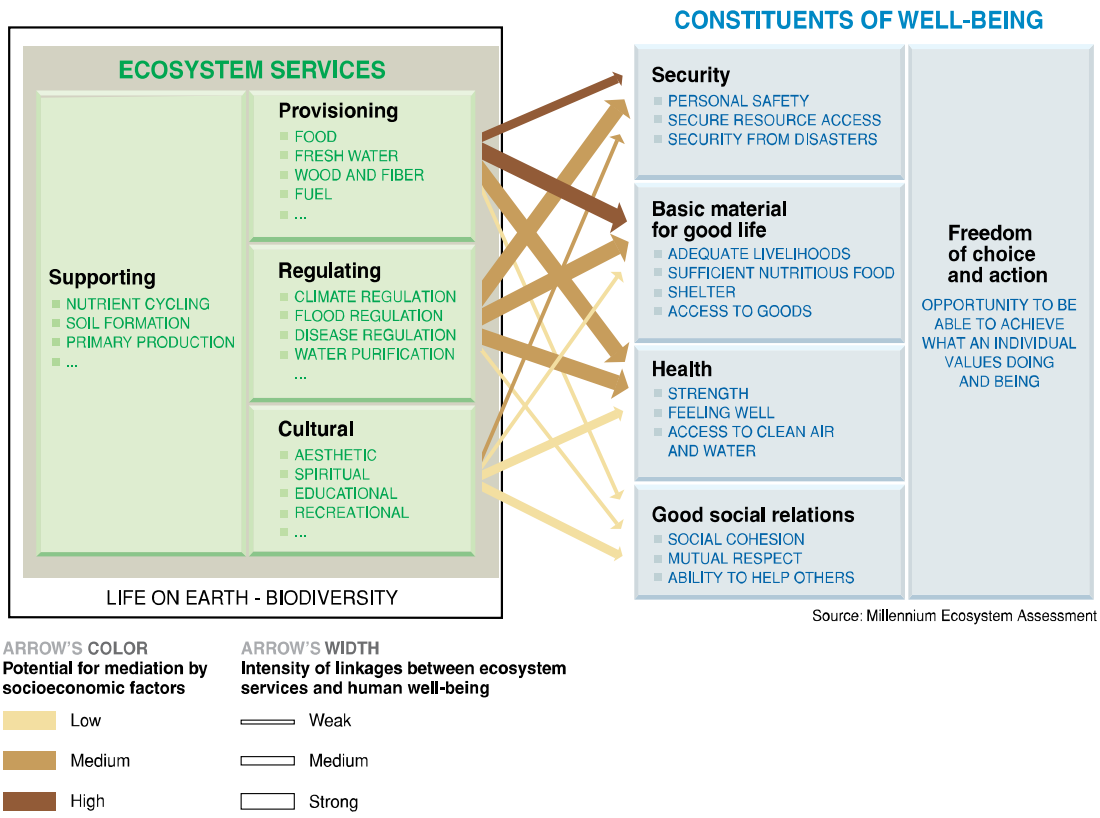
The principles of ESD were not formed to stop development and applying them does not have the objective of doing that. The principles are about ensuring that development decisions are made in full public view; on the best available information, understanding and accounting for risk, so as not to compromise our future, ensure the protection of our biodiversity, and maximise community wellbeing.

Ecologically sustainable development can be interpreted in economic terms as 'development that lasts' (Pearce & Barbier 2000; OECD 2001a).

Protecting Ecosystem Services

Humanity depends on healthy ecosystems; they support or improve our quality of life, and without them, the Earth would be uninhabitable. Ecosystem services are the functions performed by ecosystems that lead to desirable environmental outcomes, such as air and water purification, drought and flood mitigation, and climate stabilisation (Murtough, Aretino & Matysek 2002).

Figure 1: Ecosystem Services (Source: MA 2005)



As illustrated in Figure 1, the Millennium Ecosystem Assessment describes four categories of ecosystem services:

- Supporting services - such as nutrient cycling, soil formation and primary production
- Provisioning services - such as the production of food, freshwater, materials or fuel
- Regulating services - including climate and flood regulation, water purification, pollination and pest control
- Cultural services - including aesthetic, spiritual, educational and recreational.

For the Northern Territory to protect its capacity for future economic growth and development it must protect the ecosystem services on which it depends. By protecting ecosystem services we protect our ability for future economic growth and development and our ability to maintain human wellbeing.

A healthy Northern Territory biodiversity directly influences ecosystem services. In this respect, the EPA notes the preparation of a biodiversity conservation strategy for the Northern Territory and the statement by government for "development to happen in a mature and sophisticated way, by linking development with counter-balancing increases in conservation management resources". This initiative, coupled with the Eco-link initiative, provides opportunity for implementing and promoting the principles of ESD within decision-making.

Human Wellbeing and Sustainable Livelihoods

A development path based on the principles of ESD recognises the importance of economic growth and development to our society's wellbeing. Decision-making in accordance with ESD ensures that human and community wellbeing are essential outcomes of a development decision. This makes the central purpose of development the creation of an enabling environment in which all can enjoy long, healthy and creative lives (UNDP 1994).

Human wellbeing is assumed to have multiple constituents, including the:

- basic material for a good life - such as secure and adequate livelihoods, enough food at all times, shelter, clothing and access to goods
- health - including feeling well and having a healthy physical environment, such as clean air and access to clean water
- good social relations - including social cohesion, mutual respect and the ability to help others and provide for children
- security - including secure access to natural and other resources, personal safety and security from natural and human-made disasters
- freedom of choice and action - including the opportunity to achieve what an individual values doing and being. Freedom of choice and action is influenced by other constituents of wellbeing (as well as by other factors, notably education) and is also a pre-condition for achieving other components of wellbeing, particularly with respect to equity and fairness (MA 2005).

In relation to human wellbeing, sustainable development involves ensuring that all members of society have access to sustainable livelihoods. The sustainable livelihoods framework is a model of practice in international development, and increasingly, Aboriginal and Torres Strait Islander affairs in Australia (Fisher 2002; Moran et al 2007).

Under this framework, sustainable livelihoods have been defined in the following way:

"… *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 or 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 and in the long and short-term"* (Chambers & Conway 1992).

The distinctive demographic characteristics of the Northern Territory were highlighted in responses to the EPA discussion paper, including a population that is largely Indigenous, young and dispersed. The geographic concentration of economic activity around a limited number of major centres was also recognised and a number of submissions highlighted the challenges posed by remoteness. This included the impacts on service delivery and the need to acknowledge the importance of local factors in applying policy and legislation.

Choosing a path to development based on the principles of ESD is one way to ensure regional differences are recognised and addressed, and that development provides opportunity for remote communities and strives to ensure benefits are equitably distributed. In this respect, the Northern Territory has in place strategies and measures communicated through its Working Future initiative. In fulfilling these strategies, opportunity exists for their implementation to be demonstrably based upon ESD principles.

5. ESD in the Northern Territory

The EPA has sought to formulate its advice and recommendations to address expectations communicated by the public and to provide a path forward for the Northern Territory to implement ESD and ensure that its future growth and development are sustained through healthy ecosystems and a high level of community wellbeing.

A clear message communicated in the public response to the EPA discussion paper was that overarching ESD principles themselves will be largely ineffective in achieving the goal of ESD unless they are recognised through legislative implementation and by appropriate administrative and judicial structures. The public expressed an expectation that government would show leadership in this regard, by demonstrating a whole-of-government approach to the implementation of ESD through its processes of policy development, planning, legislation and decision-making.

The recommendations of the EPA are based upon the following objectives:

- establishing a common understanding of the term, ecologically sustainable development, and therefore agreement on what is being sought when using this terminology within Northern Territory Government policies and legislation.
- promoting governance systems for decision-making based on the principles of ecologically sustainable development.
- providing a basis for the EPA when fulfilling its legislated functions.

The EPA has developed the following recommendations, in accordance with section 5(1) of the *Environment Protection Authority Act,* to support the Northern Territory's steps towards ESD. These recommendations have been provided to the Minister for Natural Resources, Environment and Heritage in accordance with section 24(1) of the *Environment Protection Authority Act*.

Recommendation 1

It is recommended that the Northern Territory Government adopt the national definition of ESD as expressed in the National Strategy for Ecologically Sustainable Development as an agreed whole-of-government definition of ESD for the Northern Territory.

"Using, conserving and enhancing the communities' resources so that ecological processes, on which life depends, are maintained, and the total quality of life now and in the future can be increased.

ESD is development that aims to meet the needs of Australians today, while conserving our ecosystems for the benefit of future generations."

The EPA's public discussion paper explained the meaning of ESD giving both international and national definitions of the term. It proposed that the national definition as described in the National Strategy for ESD be adopted within the Northern Territory as the agreed definition. This recommendation was made because the Northern Territory was a signatory to the national strategy and therefore had agreed to this definition in the early 1990s, and because the definition is commonly

known and understood. The inclusion of the word, 'ecologically', within the term emphasises that a healthy environment is essential to continued economic growth and human wellbeing.

Public submissions responding to the EPA discussion paper indicated broad acknowledgement and support for the national definition of ESD, as expressed in the National Strategy for ESD, as articulating a commonly recognised and agreed definition.

Accordingly, it is recommended that the Northern Territory Government adopt the national definition of ESD, as expressed in the National Strategy for ESD, as an agreed whole-of-government definition of ESD for the Northern Territory.

Recommendation 2

It is recommended that the Northern Territory Government adopt the following principles as agreed principles of ESD for the Northern Territory to be integrated into decision making processes across government and used to inform subsequent legislative and policy development:

- **Integration**
- **Precautionary Principle**
- **Inter-generational and Intra-generational Equity**
- **Conservation of Biological Diversity and Ecological Integrity**
- **Improved Valuation, Pricing and Incentive Mechanisms**
- **Public Participation.**

The public submissions received by the EPA generally promoted the use and adoption of the principles of ESD as described at the national level, arguing that these are now well-established and recognised at the international and national levels. The submissions recognised Territory circumstance but argued that this did not necessitate going beyond the already-nationally accepted and recognised principles of ESD when trying to define principles of ESD for the Northern Territory. It was argued that Territory circumstance and context, rather than the principles themselves, should serve as guiding considerations when it comes to implementing the principles.

The EPA discussion paper also recognised these national principles as being fundamental to the Northern Territory. However, the EPA had proposed five additional principles:

- The nature-dependent Northern Territory identity is to be protected and promoted
- Equity and social cohesion are intrinsically linked to how the Northern Territory operates
- The public sector must lead in advocating and enacting ecologically sustainable development in the Northern Territory
- The Northern Territory community and business must be key partners in ecologically sustainable development
- Acknowledging and addressing regional realities is a key to achieving ecologically sustainable development.

Rather than adopting these as 'principles' within themselves, it is now suggested that they be used to explain the nationally recognised principles and guide their application within the Northern Territory circumstance.

The following principles are recommended to be adopted as agreed principles of ESD for the Northern Territory. The principles have been established both nationally and internationally, and are expressed at the national level in Australia through the IGAE, NSESD and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999.*

Integration - decision-making processes should effectively integrate both long-term and short-term economic, social, environmental and equitable considerations.

The principle of integration underpins all the principles of sustainable development and is the core element in the approach to decision-making guided by the concept of ESD. The WCED recognised the need for economic, social and environmental dimensions to be integrated in decision-making; and at the United Nations 2005 World Summit, Australia affirmed its commitment to promote the integration of the three components of sustainable development - economic development, social development and environmental protection - as interdependent and mutually reinforcing pillars.

While generally there is reference to the 'three' pillars underlying ESD, an issue raised by a range of public responses to the EPA discussion paper was the importance of the cultural aspects of ESD. It was suggested that for all Territorians, cultural values, including lifestyle values, are closely tied with 'natural capital'. The cultural aspects of ESD were highlighted as important in achieving ESD. As such, it was identified that ESD requires that economic, social, *cultural* and environmental considerations are all integrated into decision-making.

A range of respondents suggested that ESD in the Territory would be best achieved with consideration of Indigenous knowledge and the economic, social, cultural and environmental wellbeing of the Territory's Indigenous people and their communities.

To support the principle of integration, mechanisms and procedures are required that actively facilitate an integrated approach to decision-making. As with all the principles of ESD, this principle cannot merely be referenced in an objective of an Act. The Act itself must be drafted and implemented in a way that allows and facilitates decision-making that accounts equally for economic, environmental, social and cultural outcomes. For example, an Act that oversees the use of a resource (such as land, water or minerals) should be drafted in such a way to ensure that decisions made on the use of the resource can publicly account for economic, social, cultural and environmental considerations.

The principle of integration also has application for the operation of government. The principle requires a whole-of-government approach to decision-making and policy development to ensure economic, environmental, social and cultural elements are understood and accounted for in decisions made for the Territory's future and growth. This is particularly important for ensuring that the Territory's biodiversity is protected and conserved, and for acknowledging that economic development, and that social as well as cultural growth, depends on healthy ecosystem services.

The Territory 2030 Strategy provides the opportunity to achieve a whole-of-government approach in applying the principles of ESD as it provides the mechanism to achieve integration.

Precautionary principle - where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

The principle of precaution requires taking appropriate action to anticipate, prevent and monitor the risks of potentially serious or irreversible damage from human activities, even without scientific certainty.

In the application of the precautionary principle, public and private decisions should be guided by careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and an assessment of the risk-weighted consequences of various options.

The type and level of precautionary measures to be taken will depend on the combined effect of the seriousness and irreversibility of the threat, and the degree of uncertainty. In applying the precautionary principle, measures adopted should be proportionate to the threats.

The precautionary principle is often misunderstood and considered to be a 'tool' to stop development. This is not the intent of the principle. Rather, it acknowledges that often decisions are made where there is incomplete knowledge and, accordingly, it demands precaution, or a risk-based approach, to decision-making. The principle demands that measures are put in place to prevent serious threat to the environment.

Exercising the precautionary principle can result in the development of policy, (such as the Climate Change Policy) or lead to decisions for investing in research and knowledge (in this respect, a number of public submissions highlighted the need for ongoing research to improve the state of knowledge of natural systems and biodiversity) in order to support ESD.

The application of the precautionary principle should be reflected in the tools that guide decision-making (such as legislation and policy), not just within the objectives of those instruments but also in their application. Decision-making based on the precautionary principle should strive to prevent impact – decision-making cannot just rely on commitments to 'react' in the event of impact (where there is a known threat to serious or irreversible damage to the environment). This principle acknowledges the need to protect and conserve biodiversity (protecting ecosystem services and accordingly the ability for growth and development within society).

Inter-generational and intra-generational equity - the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations. Intra-generational equity involves consideration of equity within the present generation.

Equity and social cohesion are intrinsic in how the Northern Territory operates. This principle recognises that equity within and between generations, as well as

cooperation among the people of the Northern Territory, is necessary to achieve ecologically sustainable development.

The principle acknowledges the need to promote a cooperative approach to protecting and managing the environment, involving governments, the community, landholders and Indigenous peoples. The Territory community and business are key partners in ecologically sustainable development.

This principle demands the consideration of both the short-term and the long-term consequences (benefit and impact) of decision–making, policy development and government positioning. This is particularly important in terms of resource use and planning. The application of this principle positions the Northern Territory to invest in and facilitate development that brings about sustainable livelihoods. This principle demands that both benefit and impact for a locality, a community, and a region, be considered in decision-making, particularly in respect to employment opportunities (for example, contributing to information gathering, on-site employment, land management etc).

There are examples within Australia where current and future opportunities for a locality, a community, a region, were not accounted for and not properly realised by a development (with social costs incurred by the people and local and state governments). In this respect, initiatives already being taken by the Northern Territory Government (requiring investment into local businesses) are acknowledged. Further opportunity can be realised through employment policies informed by this principle.

Conservation of biological diversity and ecological integrity - the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making.

This principle recognises that future economic development, as well as human and community wellbeing depends on maintaining biological diversity and ecological integrity.

The maintenance of ecological integrity involves preserving processes which shape climate, cleanse air and water, regulate water flow, recycle essential elements, create and regenerate soil and enable ecosystems to renew themselves. Maintaining ecological integrity involves maintaining and preserving ecosystem health, functioning and services.

Our Northern Territory identity, lifestyle, culture and well-being all depend on the health and productivity of the unique Territory environment. This principle allows for the nature-dependent Northern Territory identity to be protected and promoted.

The application of this principle is not just the responsibility of the environment department. The long-term consequences of losing ecosystem services (such as clean air and clean water) demands that the responsibility for conservation of biological diversity and ecological integrity lies with all parties involved decision-making, investment and development. Accordingly, key legislation needs to emphasise this responsibility and provide the mechanisms to ensure that decision-makers and proponents account for the application of this principle. An Act should not just reference the principle as an objective but be drafted to ensure that this principle can be achieved.

The principle recognises that the environmental consequences of a decision cannot be viewed as an impact that can be 'managed' by the environment department, nor allow for the department to be 'a' stakeholder in decision-making or policy development. The knowledge held by the environment department allows it to be a key to government planning, policy development and decision-making. The environmental consequences of historical decision-making in southern jurisdictions demonstrate the costs to a state when this principle is ignored.

The principle therefore demands knowledge and investment in research as well as making the information accessible. In this respect, preparation of the Biodiversity Strategy is noted. A number of public submissions on the EPA discussion paper highlighted the need for ongoing research to improve the state of knowledge of natural systems and biodiversity, in order to support ESD. These submissions focused on the need to establish replenishment and formation rates in natural systems in order to extract or use key resources at a lesser rate, and to avoid exceeding tipping points.

This principle also demands supporting policy (for example, an Offsets Policy) that can guide decision-making and allow for development and growth.

The principle also recognises the need for integration – that is, understanding the inter-linkages between natural systems, or what is known as an 'ecosystem-based approach'. An ecosystem approach has been defined by the Convention on Biological Diversity as a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way (CBD 2009). It recognises the relationships between healthy and resilient ecosystems, biodiversity conservation and human wellbeing.

Improved valuation, pricing and incentive mechanisms should be promoted - this includes recognition of the principles that the costs of environmental externalities should be internalised and that the polluter should bear the costs associated with environmental pollution.

This principle requires accounting for both short-term and long-term external environmental costs. This can be achieved in a number of ways, such as:

- Including environmental factors in the valuation of assets and services
- adopting the polluter pays principle, that is, those who generate pollution and waste should bear the costs of containment, avoidance or abatement
- basing the prices paid for goods and services on the costs of the full life cycle of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste
- using incentives including market mechanisms.

The application of this principle recognises that it is naïve to omit the cost of environmental impact and the true cost of ecosystem services when understanding economic cost and benefit of development. Accordingly, it requires an investment in knowledge and policy development in order to provide the tools that allow for true costs to be understood and accounted for in decision-making. Southern jurisdictions have invested in market mechanisms (such as load-based licensing in NSW) that acknowledge the cost of environmental impact and use economic drivers to minimise these costs. The risk for the Northern Territory is that true costs of decisions and developments remain unrealised and accordingly long-term costs associated with environmental degradation and loss of ecosystem services increase – a cost that will be borne by the people of the Northern Territory.

Some public submissions to the EPA discussion paper saw it as government's role to provide appropriate market incentives. This included the example of promoting energy efficiency opportunities in the residential sector and commercial sector through green star rating.

Public participation - decisions and actions relating to ecologically sustainable development should provide for broad community involvement on issues which affect them.

An underlying premise of ESD is inclusion, which recognises the importance of providing opportunity for all community members and all stakeholders engaging in decisions about the Northern Territory. Public submissions stressed the importance of participation and the role and contribution of stakeholder groups – providing for a collective pursuit of solutions and acceptance of decisions. Critical issues raised included regional and Indigenous engagement.

This principle recognises that environmental issues are best handled with participation of all concerned citizens and that ecologically sustainable development requires the support and involvement of the whole community. The principle recognises that each individual should have appropriate access to information concerning the environment, and the opportunity to participate in decision-making processes.

The active involvement of local communities in decision-making is crucial for sustainability. Local participation by community groups, local governments, NGOs and businesses is a fundamental element of ESD. Local level participation is particularly apt at providing forums for democratic participation of civil society in decision-making, finding local solutions to environmental problems, and encouraging action for change (Bosselmann, Engel & Taylor 2008). This requires improved governance capacity at the community level, to enable Indigenous, regional and remote communities to make informed decisions about what kind of local development they want to support, and which strategies and activities will achieve better outcomes (Dodson & Smith 2003). Acknowledging and addressing regional circumstances is required to achieve ecologically sustainable development in the Northern Territory.

Consultation should become an integral part of all issue-specific and sectoral level decision-making processes. All major stakeholders should be identified and their involvement in the consultative process encouraged. Adequate opportunities should exist for timely input to the consultative process and stakeholders should be provided with opportunities to develop a sufficient understanding of the issues to enable effective involvement in the consultative process.

Recommendation 3

It is recommended that the Northern Territory Government develop and implement governance mechanisms for the application of ESD in the Northern Territory. Critical requirements to be addressed include:

- **placement of overall responsibility**
- **strategic coordination**
- **legislative underpinning**

- **integration with planning and budgeting processes**
- **policy integration**
- **stakeholder involvement**
- **links to local level governance mechanisms**
- **use of ESD indicators.**

A major theme raised by many public submissions to the EPA discussion paper was the need for strategies and frameworks to be developed for the practical implementation of ESD by government in the Northern Territory. It was emphasised that overarching principles are themselves largely ineffective in achieving the goal of ESD unless they are recognised through legislative implementation, and by appropriate administrative and judicial structures.

Public submissions identified the need for long-term planning and vision combined with clear targets and goals for implementation. Key steps to implementation include incorporating ESD and its component principles into both the objects and machinery provisions of relevant legislation and as mandatory considerations for decision-makers. It was also suggested that mechanisms should exist to ensure accountability for pursing sustainable outcomes.

Public submissions communicated an expectation that the EPA's recommendations to the Minister further elaborate on and specifically explain how these principles will be used to ensure ESD in practice in the Northern Territory. That is, the recommendation for a governance framework to support the implementation of ESD principles.

Governance comprises the traditions, institutions and processes that determine how power is exercised, how citizens acquire a voice and how decisions are made on issues of public concern (UNDP 1997). At the most general level, governance involves the formation of rules and decision-making procedures and the operation of social institutions guided by these rules (Bosselmann, Engel & Taylor 2008).

In Australia, governance has been defined as: the *processes*, *structures* and *institutions* (formal and informal) through which a group, community or society makes decisions; distributes and exercises authority and power; determines strategic goals; organises corporate, group and individual behaviour; develops rules and assigns responsibility (Dodson & Smith 2003).

Simply put 'governance' means the process of decision-making and the process by which decisions are implemented (or not implemented) (UNESCAP 2009).

Good governance is, among other things, participatory, transparent and accountable. It is also effective and equitable - and promotes the rule of law. Good governance ensures that political, social and economic priorities are based on broad consensus in society and that the voices of the poorest and most vulnerable are heard in decision-making over the allocation of development resources (UNDP 1997).

Governance includes the state, but transcends it by taking in the private sector and civil society. All three are critical for sustaining human development. The state creates a political and legal environment that is conducive. The private sector generates jobs and income, and civil society facilitates political and social interaction - mobilising groups to participate in economic, social and political activities (UNDP 1997).

Governance for sustainability originates in community empowerment, social equality, and responsible values, visions, and actions (Bosselmann, Engel & Taylor 2008).

A wide range of experience now exists internationally in relation to implementing sustainable development. From this experience, a number of key requirements for establishing effective governance mechanisms and processes can be identified (OECD 2002b; Kemp, Parto & Gibson 2005)

Placement of Overall Responsibility

The placement of overall responsibility and legislative underpinning are important governance aspects for the implementation of ESD – and the more involved the Senior Ministerial office is in the ESD implementation process, the better.

The government has a critical and recognised leadership role to play in implementing ESD.

"Governments need to 'lead by example' in promoting sustainable development. Governments should therefore focus their internal policy design and implementation processes on more effectively integrating the three dimensions of sustainable development (economic, environmental, and social); improving their own capacity to support sustainable development; and developing transparent and productive mechanisms for interacting with civil society" (OECD 2001a).

Public submissions to the EPA discussion paper communicated an expectation that top-level leadership oversee the implementation of ESD, specifically seeking overall responsibility for ensuring that ESD is effectively embedded into policy and legislation.

Strategic Coordination

Strategic coordination is an integral part of governance and the implementation of ESD. Strategic coordination has many important characteristics including coordination across sectors, across scales, and across multiple stakeholders. The nature of strategic coordination can be assessed according to two criteria. Relevance and comprehensiveness: the more departments and levels of government for which ESD implementation is relevant, the better. Department involvement: the more involved individual departments and other levels of government are in the ESD implementation process, the better.

Public submissions recognised that the effective incorporation of environmental, social and economic considerations into decision-making involved the integration of ESD principles across government policy areas (not just the environment or planning departments).

Legislative Underpinning

The effectiveness of efforts toward implementing ESD can be assessed in relation to legislative underpinning - the more embedded in legislation, the better. This is more than just the inclusion of ESD principles within the objectives of legislation. It includes how the Act is subsequently drafted and implemented to ensure the principles of ESD are met.

A range of public submissions responding to the EPA discussion paper identified the need for ESD principles to be embedded into legislation. Key steps to implementation include incorporating ESD and its component principles into both the objects and machinery provisions of relevant legislation and as mandatory considerations for

decision makers. It was also suggested that mechanisms be put in place to ensure accountability for pursuing sustainable outcomes.

Integration with Planning and Budgeting Process

A government's planning and budgeting system is part of the central machinery of government. The greater the required linkage between ESD objectives and an agency's strategic plan and budget, the more effective implementation will be.

Public submissions to the EPA discussion paper identified the need for long-term planning and vision to be based on the principles of ESD combined with clear targets and goals for their implementation. This included the development and implementation of sustainability strategies at the agency level. In this respect, submissions made by a number of Northern Territory Government agencies highlighted efforts to incorporate ESD principles and sustainability considerations into current operations and activities. A governance framework enables this to occur in a coordinated manner.

Policy Integration

The integration of ESD principles into government policy development processes is critical to the implementation of ESD. It ensures that all government policy is underpinned by the principles of ESD and, accordingly, is working towards achieving ESD.

It also recognises that the environmental sector alone cannot secure sustainability objectives, and that each sector must take on board sustainability policy objectives if these are to be achieved. Integration can be achieved by comprehensive cross-sectoral strategy (coordinated and developed by a central agency), as well as the adoption and implementation of sustainability objectives within an agency.

Stakeholder Involvement

Stakeholder involvement is a fundamental tenet of sustainable development. and is therefore an extremely important aspect of ESD governance.

The more formal the requirement for stakeholder involvement in the development and ongoing implementation of the ESD objectives, the better, and the broader the perspective attained through stakeholder involvement, the better.

Public submissions to the EPA discussion paper also recognised that sustainability cannot be achieved, nor significant progress made toward it, without the support and involvement of the whole community. This highlights the need for effective mechanisms for stakeholder and public participation and engagement. It was suggested that community engagement and participation in decision-making about ESD will help foster a greater willingness for collective pursuit of solutions and acceptance of ESD principles and strategies. Critical issues identified in relation to public participation included the need to ensure Indigenous participation and rights to consultation in first language. A related issue was the need for regional public consultation.

Some submissions stated that government has a role in community education to increase public understanding of sustainability and the links between daily lifestyle choices and the health of the environment. There was also support for including sustainable decision-making in the educational curriculum.

Links to Local Level Governance Mechanisms

To be considered strategic and effective, any action toward sustainable development must link to strategies and actions being taken at local levels. The clearer the recommendation for ESD-related strategies at the regional and community levels, the better; and the more coordination between government ESD objectives and the objectives of local government and community levels, the better.

A number of public submissions received in response to the EPA discussion paper highlighted the role of local government in supporting the implementation of ESD principles at the local level.

Use of ESD Indicators

The use of appropriate environmental and social indicators linked to ESD objectives is a critical element of ESD governance. Indicators provide information to decision-makers, enable performance monitoring, ensure accountability and allow public review of ESD policies and decision-making outcomes.

A number of public submissions highlighted the need for indicators and targets as a core part of strategies for implementing ESD principles. Respondents identified the need for monitoring requirements to be established in legislation to ensure that outcomes are sustainable. Some submissions highlighted that at the broad level, in order to ensure progress towards ESD in the Northern Territory, it was important to establish ESD indicators and state-of-the-environment reporting.

Recommendation 4

It is recommended that the Northern Territory Government develop and adopt a public sustainability statement that provides a commitment to achieving ESD in the Northern Territory.

It is recommended that this statement be adopted and promoted by the Chief Minister of the Northern Territory, demonstrating commitment to sustainability from the highest levels of Government in the Northern Territory.

It is recommended that as a minimum the statement incorporate the following elements:

- **Recognition of the unique and internationally significant values of the natural environment of the Northern Territory.**
- **Recognition of the concept of ESD and the associated need for economic, social and environmental factors to be integrated together in decision-making.**
- **Acceptance of the concept and principles of ESD as expressed at an Australian national level through the NSESD, and endorsed internationally by the Australian Government through agreements such as the Rio Declaration, Millennium Development Goals and Johannesburg Declaration.**

- **Affirmation of the definition of ESD provided by the NSESD.**
- **Affirmation of the principles of ESD for the Northern Territory as identified by the Northern Territory EPA.**
- **Acknowledgement of the role of the whole of the Northern Territory community in the achievement of ESD.**

This recommendation supports the findings presented in the discussion on Recommendation Three. It supports submissions received through public consultation recommending the importance of government leadership and government's role in establishing frameworks for the implementation of ESD.

While the Northern Territory is already a signatory to the National Strategy, having a public sustainability statement demonstrates the Territory's commitment to a development path based on the principles of ESD. It also demonstrates commitment to a coordinated, whole-of-government approach to establishing the measures required to integrate the principles of ESD into government's planning, policy development and decision-making.

6. Conclusion

A clear message communicated in the public response to the EPA discussion paper was that overarching ESD principles themselves will be largely ineffective in achieving the goal of ESD unless they are recognised through legislative implementation and by appropriate administrative and judicial structures. The public expressed an expectation that government would show leadership in this regard, by demonstrating a whole-of-government approach to the implementation of ESD through its processes of policy development, planning, legislation and decision-making.

The EPA has formulated its advice and recommendations to address expectations communicated by the public and to provide a path forward for the Northern Territory, to implement ESD and ensure that its future growth and development are sustained through healthy ecosystems and a high level of community wellbeing.

Appendix A – Overview of the Discussion Paper

The EPA discussion paper aimed to provide an overview of the history and concept of sustainability both nationally and internationally.

In 1992, the Northern Territory Government became a signatory to the National Strategy for Ecologically Sustainable Development and the Intergovernmental Agreement on the Environment.

The National Strategy for Ecologically Sustainable Development defines ESD as:

"Using, conserving and enhancing the community's resources so that ecological processes on which life depends are maintained, and the total quality of life, now and in the future, can be increased.

ESD is development that aims to meet the needs of Australians today while conserving our ecosystems for the benefit of future generations"

The EPA proposed that this definition be adopted as an agreed definition of ESD for the Northern Territory.

Proposed Principles of ESD

A key aim of the discussion paper was to reflect on the application of agreed national and international principles of ESD in light of the Northern Territory's particular social, economic, cultural and environmental values.

The discussion paper proposed six principles for the public's consideration in relation to the meaning of ESD in the Northern Territory context. These principles attempted to (a) support and explain the national principles of ESD and (b) identify the mechanisms and pathways for integrating ESD into accepted practices for policy and decision-making in the Territory.

1) ESD is necessary to support a strong diversified and healthy Northern Territory Society

The first principle stated the importance of ESD for ensuring the long-term wellbeing of the Northern Territory's society, its economy and environment, and the need to effectively integrate social, economic and ecological considerations together in decision-making. This principle emphasised that future social and economic progress depends on the effective implementation of ESD and that the establishment of frameworks for this to occur is long overdue for the Northern Territory.

This principle highlighted the important need for the Northern Territory to be guided by the objective of ESD, effectively integrating economic, social and environmental considerations into its decisions and actions.

This principle incorporated nationally and internationally established sustainability principles, including:

- the use of the precautionary principle
- the pursuit of inter and intra-generational equity
- conservation of biological diversity and ecological integrity
- the use of improved valuation, pricing and incentive mechanisms.

2) The nature-dependent Northern Territory identity is to be protected and promoted

The second principle recognised the importance of the Northern Territory's unique natural environment as a defining feature for the Territory community and identity. This principle acknowledged both Indigenous Territorians' strong cultural and economic relationships with Country and the significant social and economic value of the natural environment for recreation and tourism. The principle emphasised the importance of ESD for the Northern Territory to demonstrate its commitment to protecting the values of the Territory's natural environments and their contributions to livelihoods and lifestyles of all Territorians.

3) Equity and social cohesion are intrinsic to how the Northern Territory operates

The third principle identified the importance of inter and intra-generational equity to achieving ESD and the current and future wellbeing of the Northern Territory. This principle also reflected the core objectives of a number of policies for economic and social development in the Territory, including the Territory 2030 initiative and the NT Economic Development Framework. It emphasised that equity and community wellbeing are key elements for achieving sustainability in the Northern Territory.

4) The public sector must lead in the advocacy and enactment of ecologically sustainable development in the Northern Territory

The fourth principle highlighted the important contribution of public sector decision-making to environmental, economic and social wellbeing in the Northern Territory. The Territory economy, society and environment rely significantly on public expenditure for investments in infrastructure, income and the delivery of services and programs. This principle highlighted that the Northern Territory public sector therefore has a critical role to play in driving the implementation of ESD through the full range of its areas of responsibility. These include legislation, policy development, governance, planning, decision-making, budgetary and economic decisions, procurement, investment, programs and services delivery and education.

5) The Northern Territory community and business must be key partners in ecologically sustainable development

While government has a key leadership role in achieving ESD, responsibility also rests with the entire Northern Territory community to be engaged and involved in the process. This principle highlighted the vital role of an engaged community and business sector as partners in ecologically sustainable development.

6) Acknowledging and addressing regional realities is key to achieving ecologically sustainable development

The EPA discussion paper stressed the need for regional development strategies to improve people's economic and social prospects, by being constructed around comprehensive understanding of local scale economic and social interactions. It stated that interacting with members of regional communities is fundamental to assessing broad development options and specific proposals. It recognised that opportunities exist for regional initiatives and community-based programs to inform overarching development of government policy – demonstrating leadership on ESD issues (such as the West Arnhem Land fire abatement project).

Implementation

A critical issue highlighted by the EPA discussion paper responses was that the adoption of ESD principles in the Northern Territory will be ineffective without the implementation of laws and policies for their enactment. The discussion paper identified that since the adoption of the National Strategy for Ecologically Sustainable Development, significant progress has been made in implementing ESD principles in other jurisdictions, notably Victoria, NSW and WA. The Northern Territory however, has yet to implement these principles in a systematic way and there are presently few instances where Territory legislation obliges government decision-making to adopt or even consider principles of ESD.

Accordingly the discussion paper emphasised that the successful implementation of ESD requires appropriate structures of governance. This requires government to consider how it can incorporate ESD into its policy development, decision-making, program delivery and budgetary processes.

Appendix B – Outcomes of Public Consultation

As a key part of the task to establish Northern Territory ESD principles, the EPA undertook public consultation to both promote awareness of the project and invite broad community input.

The EPA began the process by conducting two public forums, titled 'Public Conversations on ESD', in Alice Springs and Darwin in August and September 2008. Public presentations were made by a range of community and business groups and an on-line forum was also made available to further encourage people to contribute their views and comments.

In February 2009, Dr Doug McKenzie-Mohr presented a series of EPA-hosted workshops to promote community understanding of the concept of ESD and provide practical steps aimed at changing people's behaviour in relation to choices for sustainable living.

The EPA also released its discussion paper, *A Northern Territory Approach to Ecologically Sustainable Development,* in February 2009 and public comment was invited until the end of June 2009. In response to the discussion paper, the EPA received submissions from Territory and local government, community groups and private individuals.

Public Conversations on ESD

As previously mentioned, the EPA hosted two h 'Public Conversations on ESD' forums in Alice Springs and Darwin in August and September 2008 and presentations were made by a range of community and business groups.

The EPA invited members of the public to contribute their views, opinions and ideas on what is meant by the concept of ESD and on opportunities and constraints in the Northern Territory for the ESD principles to be put into practice.

People were invited to consider a number of questions concerning the establishment of principles of ESD for the Northern Territory. They included:

- What does the concept of ecologically sustainable development mean to your organisation?
- What sorts of issues do you think should be considered, and / or incorporated, when developing overarching principles of sustainability?
- In your opinion, does the Northern Territory have a set of unique circumstances or factors that need to be considered when developing sustainability principles?
- What are the priorities for the Northern Territory when achieving ecologically sustainable development?
- Can you identify any barriers that would inhibit the Northern Territory when achieving ecologically sustainable development?

As well as the public sessions, an on-line forum was made available to further encourage people to contribute their views and comments.

Presentations to the Public Conversations on ESD

Alice Springs

Arafura Resources
Arid Lands Environment Centre
Centre for Appropriate Technology
Department of Natural Resources, the Environment, the Arts and Sport
Desert Knowledge Cooperative Research Centre

Darwin

Amateur Fishermen's Association of the Northern Territory
Professor Bob Wasson, Charles Darwin University
COOLmob
Environmental Defenders Office (NT)
Northern Territory Horticultural Association
Northern Territory Resource Council
Property Council of Australia (NT)
Planning Action Network
World Wide Fund for Nature - WWF, Australia

Discussion Paper on the Principles of ESD

In February 2009, the EPA released a public discussion paper proposing a definition of ESD for the Northern Territory and containing a number of principles relevant to Territory circumstances.

To coincide with the release of this paper, the EPA hosted a series of workshops presented by Dr Doug McKenzie-Mohr to promote community understanding of the concept of ESD and to provide practical steps aimed at bringing about change in people's behaviour to promote choices for sustainable living.

Public submissions on the discussion paper were invited until the end of June 2009and the EPA received a range of responses from Territory and local government agencies, business and community groups and individual members of the public.

Submissions to the Discussion Paper

Darwin City Council
Darwin Harbour Advisory Committee
Department of Local Government and Housing
Department of Natural Resources, the Environment, the Arts and Sport
Darwin Port Corporation
Department of Planning and Infrastructure
Department of Regional Development, Primary Industry, Fisheries and Resources
Environment Centre of the Northern Territory
Individual Response – Jack Ellis
Individual Response – Ian Hollingsworth
Individual Response – Dr Hugh Pringle
Individual Response – Strider
Local Government Association of the Northern Territory
Northern Territory Cattlemen's Association
Northern Territory Resource Council

Public Responses to the Principles and Discussion Paper

The submissions received by the EPA considered a range of issues relating to ESD, the principles of ESD and the implementation of ESD in the Northern Territory. These issues have been considered by the EPA under the following themes:

- Definition, Elements and Principles of ESD
- The Northern Territory Context
- The Need for ESD
- The Role of Government
- The Implementation of ESD
- Public Participation

Definition, Elements and Principles of ESD

The public submissions presented a range of discussion about the meaning of ecologically sustainable development.

"Sustainability involves understanding community assets; understanding community needs; and understanding the ability of resources to meet needs, taking into consideration the vulnerability of the environment as well as threats to the environment." (ALEC)

"It is well established that ESD centres on a concept of integration of environment protection and development. Common and overlapping themes have been identified: (1) The need to maintain properties, processes and functions of natural ecosystems necessary to support human life; (2) The need to pursue an integrated approach to decision-making, which seeks to balance economic, environmental and social values; (3) Equity – the need to have regard to future generations and distribute fairly between and within generations, and (4) Development should encompass non-material wellbeing, satisfaction and quality of life elements, in addition to material wellbeing (for example, recognition of the special and cultural needs of Indigenous people)." (EDO)

"We have to figure out how to manage the environmental and social aspects of developments so we can progress our economy and optimise our lifestyle without unacceptable impacts on our natural environment." (AFANT)

While there was broad discussion of the meaning of sustainability and of ESD, there was also broad acknowledgement and support for the definition of ESD established in Australia through the NSESD as articulating a commonly recognised and agreed definition.

Findings:

- ***The definition of ESD encompasses a range of elements and considerations, which include:***
  - ***the need to maintain the properties, processes and functions of natural ecosystems necessary to support human life***
  - ***the need to pursue an integrated approach to decision-making which seeks to balance economic, environmental and social values***
  - ***consideration of equity within and between generations, and recognition that development should include consideration of non***

material wellbeing, satisfaction and quality of life elements, in addition to material wellbeing.

- ***The definition of ESD provided in the National Strategy for Ecologically Sustainable Development is broadly recognised.***

The responses received through public consultation presented a range of issues relating to the ecological aspects of ESD. A number of submissions emphasised the importance of establishing an understanding of ecological systems as a basis for understanding and applying the concept of ESD.[2] A critical factor identified in this regard was the need to recognise the finite nature of much of the Northern Territory's natural capital.[3] A particular example was the Northern Territory's water resources, but natural capital was also seen to include land, soils, plants and animals, functioning ecosystems and atmosphere.[4]

A number of submissions stated that these finite conditions created the need to recognise the importance of ecological limits as an underlying condition for development processes.[5] A further issue raised was the need for greater awareness of the state of decline of natural systems and of the drivers for this decline – recognition that our current position internationally, nationally and in the Northern Territory is not sustainable.[6]

A number of submissions highlighted the need for ongoing research to improve the state of knowledge of natural systems and biodiversity, in order to support ESD. Priorities for ESD within the Northern Territory include a need to establish replenishment and formation rates in natural systems, and to know and understand this basic information in order to extract or use key resources at a lesser rate, and to avoid exceeding tipping points.[7]

Findings:

- ***There is a need for a greater awareness of the ecological limitations of natural systems as a basis for implementing ESD***
- ***There is a need for greater awareness of the status of natural systems and the drivers of environmental degradation***
- ***There is an important need for our knowledge of natural systems and biodiversity to be improved.***

A number of submissions identified the importance of economic development as a key component of ecologically sustainable development.[8] There was strong recognition of the importance of economic development to social development in the Northern Territory.[9] A range of submissions highlighted the importance of economic development for Northern Territory regional areas.[10] There was also recognition of the role that economic development can play in promoting environmental protection. A number of submissions highlighted the importance of economic development for Northern Territory Indigenous communities.[11] Accordingly, it was argued that there should be support for economic development within ESD guidelines. [12]

It was recognised that economic development should be ecologically sustainable.[13] Submissions highlighted that development should seek to provide non-material wellbeing, satisfaction and quality of life as well as material wellbeing, for example, recognition of the special and cultural needs of indigenous people.[14] A range of submissions identified the importance of economic development within limits of natural, social and cultural values.[15]

Findings:

- ***There is broad recognition of the importance of economic development to the future of the Northern Territory***
- ***It is broadly acknowledged that development should include consideration of the environmental, economic, social and cultural aspects of well-being.***

A critical part of ESD is delivering social development or opportunity through community education, recreation and lifestyle opportunities, community engagement and public consultation etc. These are considered elements of sustainable practice[16] and are an important aspect of development.[17] It was argued that social improvements resulted in better environmental outcomes and that it is possible to measure sustainable development through increases and improvements in aspects of human wellbeing such as income, education and health.[18]

In respect to social improvements or improvement to community wellbeing, ESD was considered a core component in public policy development and a key component of economic and community development strategies.[19]

Findings:

- ***Social development is recognised as a core component of ESD***
- ***Public and community participation is a core component of ESD decision-making***
- ***The implementation of ESD involves recognition of the links between social, economic and environmental policies to ensure that policy goals are consistent with the principles of ESD in the Northern Territory.***

A number of public responses raised importance of the cultural aspects of ESD.[20] It was suggested that for all Territorians, cultural values, including lifestyle values, are closely tied with 'natural capital'.[21] It was highlighted that the cultural aspects of ESD are important for achieving ESD.[22] As such, ESD was recognised as requiring that economic, social, *cultural* and environmental considerations are all integrated into decision-making.[23]

A range of submissions highlighted Indigenous knowledge and connection to the environment.[24] The Northern Territory was recognised as having a strong base of diverse Indigenous cultures with intimate links to ecological systems.[25] Accordingly, Indigenous culture and belief systems demonstrate an immense knowledge of Northern Territory ecosystems.[26] A number of submissions identified that ESD in the Territory would be best achieved by taking into consideration Indigenous knowledge and the economic, social, cultural and environmental wellbeing of the Territory's Indigenous people and their communities.[27]

Findings:

- ***The cultural aspects of ESD are a vital component in the pursuit of ESD in the Northern Territory***
- ***It is recognised that the Northern Territory has a strong base of diverse Indigenous cultures that have important cultural links to the Northern Territories ecological systems***
- ***It is recognised that ESD in the Northern Territory would be best achieved by with consideration Indigenous knowledge and the economic, social, cultural and environmental wellbeing of the Territory's indigenous people and their communities.***

A number of submissions identified that the concept of ESD and its component principles are now well established at national and international levels.[28] A range of submissions identified that the principles of ESD have been expressed in Australia through documents such as the NSESD, IGAE and the EPBC Act.[29] Submissions agreed that there is a need to articulate and adopt these principles within the Northern Territory[30], while identifying that the Northern Territory context was an important consideration[31]. Submissions identified the need for a consistent and common definition, and for an integrated approach, to ESD from across government.[32]

Findings:

- ***There is broad recognition of the principles of ESD established at the national and international levels***
- ***There is wide recognition of the particular characteristics of the Northern Territory context that should serve as guiding considerations in implementing ESD in the Territory.***

The Northern Territory Context

A number of responses to the public forums and EPA discussion paper highlighted particular social, economic, and biophysical features of the Northern Territory context that represent important considerations for implementing ESD.[33] A number of submissions highlighted the Territory's unique natural environment.[34] This includes internationally recognised natural areas.[35] The large natural resource base was identified as an important feature.[36] A variety of responses also cited the distinct characteristics of both arid and 'Top End' environments.[37] The distinctive climatic features of the Territory were also identified.

A number of submissions highlighted the fact that the Territory had a large Indigenous population and the significance of Indigenous culture.[38] Responses highlighted the Northern Territory's distinctive demographic characteristics, which include a population that is largely Indigenous, young and dispersed.[39]

Distinctive economic features of the Territory include the significance of government expenditure, and the geographic concentration of economic activity around limited major centres.[40] A range of submissions emphasised the importance of environmentally sustainable regional development.[41] Submissions also highlighted the challenges posed by remoteness, which include the impacts on service delivery and the need to acknowledge the importance of local factors in applying policy and legislation.[42]

Findings:

- ***It is broadly recognised that the Northern Territory has distinctive features that are important considerations for implementing ESD in the Territory. These considerations include:***
  - ***a large Indigenous population and the importance of indigenous culture***
  - ***the demographic characteristics of the Northern Territory***
  - ***the climatic features of the Northern Territory***
  - ***the distinctive characteristics of 'top-end' and desert environments***
  - ***unique and internationally recognised natural areas***
  - ***a large natural resource base***
  - ***the need for environmentally sustainable regional development***

- ***the challenges presented by remoteness***
- ***the importance of the natural environment to the culture, lifestyle and identity of the Northern Territory and Territorians.***

The Need for ESD

A number of submissions highlighted as important the issues giving rise to the need for ESD.[43] Processes of environmental degradation and climate change were recognised as major issues driving the requirement for ESD.[44] Accordingly, the extent of ecological decline and the unsustainably of current practice needs to be recognised.[45]

Submissions referred to information demonstrating that the per capita ecological footprint of Territorians is one of the greatest in the world, that per capita water consumption is higher than other jurisdictions, and that large components of our biodiversity are in decline.[46] It was argued that the pursuit of ESD necessarily involves recognition that the Northern Territory contributes to the nation's and world's sustainability, and is affected by actions at these broader scales.[47] It was argued that the current situation should be included in the EPA's final paper to demonstrate the compelling need for the principles of ESD to be adopted into Northern Territory practice.[48]

Findings:

- ***Climate change is a critical imperative for the implementation of ESD in the Northern Territory***
- ***Similarly, drivers of environmental degradation are imperatives for the implementation of ESD in the Northern Territory.***

The Role of Government

Submissions identified the importance of government leadership and coordination in implementing ESD. [49] This not only included the need for government to take direct action but also to play the key role in bringing about community change. It was suggested that government should strengthen initiatives to educate and motivate the community and industry to reduce their greenhouse gas emissions, and ensure that remote communities and businesses, pastoral properties and mining towns are engaged in sustainability practice and decision-making. [50]

Some submissions stated that government has a community education role to increase public understanding of sustainability and the links between daily lifestyle choices and the health of the environment. [51] There was also support for including sustainable decision-making in the educational curriculum. [52]

Some submissions saw government's role in regulating to provide appropriate market incentives, for example promoting energy efficiency and opportunities in the residential and commercial sectors through green star rating. [53]

Findings:

- ***It is recognised that the Northern Territory Government has a critical role in leadership in the implementation of ESD in the Northern Territory. This includes the establishment of appropriate market incentives and the provision of public and community education on sustainability.***

Implementing Principles of ESD in the NT

A major theme raised by a large number of public submissions was the need for strategies and frameworks that would allow practical implementation of ESD by government in the Northern Territory. [54]

A number of submissions highlighted the need for a common definition and consistent approach to implementing ESD in the Northern Territory.[55] Submissions identified the importance of an agreed whole-of-government definition of ESD and recognition of the principles of ESD[56]. This was considered an essential element for implementing ESD in the Northern Territory, in conjunction with strategies and frameworks for applying and integrating ESD principles across government.[57]

Findings:

- ***There is a recognised need for an agreed whole-of-government definition and approach to the implementation of ESD principles in the Northern Territory.***

Another major issue raised in public submissions was the question of strategies and frameworks required for effective implementation of ESD in practice in the Northern Territory. [58] It was emphasised that overarching principles are themselves largely ineffective in achieving the goal of ESD unless they are recognised through legislative implementation, and by appropriate administrative and judicial structures.[59] In this regard, respondents identified the need for further elaboration and specific information to explain how these principles will be used to ensure ESD in practice in the Northern Territory. [60]

A range of submissions identified the need for clear strategies or frameworks for applying and integrating ESD principles across government, to ensure that ESD is embedded into policy and legislation.[61] They identified the need for long-term planning and vision combined with clear targets and goals for implementation. Key steps to implementation include the incorporation of ESD and its component principles into both the objects and machinery provisions of relevant legislation and as mandatory considerations for decision makers. [62] It was also suggested that mechanisms be put in place to ensure accountability for pursing sustainable outcomes.

Findings:

- ***There is a recognised need for the development of effective strategies and frameworks for implementing ESD in practice across the Northern Territory.***

A further key issue identified in the submissions was the need for a whole-of-government approach to implementing ESD and integrating ESD principles into government processes. [63] Respondents suggested that the principles were important and necessary for ensuring a consistent approach to ESD implementation through their integration into relevant Territory legislation, policy and practice. [64] Integration was also identified as meaning the effective incorporation of environmental, social and economic considerations into decision-making, and involving integration of ESD across government policy areas (not just the environment or planning departments).[65] This requires frameworks being put in place to ensure that ESD principles can be robustly incorporated into whole-of-government decision-making. [66]

Findings:

- ***There is a recognised need for cross-sectoral implementation of ESD and the integration of ESD into decision-making processes across government, in order for the Northern Territory Principles of ESD to be effective in practice.***

A number of submissions highlighted the need for indicators and targets as a core part of strategies for the implementation of ESD. [67] Respondents suggested that monitoring requirements be established in legislation to ensure the sustainability of outcomes.[68] Some submissions highlighted that, at the broad level, the establishment of ESD indicators and state of the environment reporting was essential in order to ensure progress towards ESD in the Northern Territory. [69]

Findings:

- ***There is wide recognition of the need for targets, indicators, monitoring and reporting, as essential components of strategies and frameworks for the effective implementation of ESD in the Northern Territory.***

A range of submissions expressed support for the Northern Territory principles of ESD as a welcome step towards promoting the implementation of ESD across government. [70] This included the development and implementation of sustainability strategies at the agency level. [71] A number of Northern Territory Government agency submissions highlighted efforts to incorporate ESD principles and sustainability considerations into current operations and activities. [72] Initiatives such as the work of DPI to develop an agency level sustainability strategy are important examples of department level actions that assist to promote the implementation of ESD in the Northern Territory.

Findings:

- ***It is recognised that ESD principles are being encompassed in a range of activities at the department level across the Northern Territory Government and that a consistent approach to implementation of ESD at the department level will be an essential component in ensuring the effective implementation of ESD in the Northern Territory.***

A key question raised by a number of submissions was the issue of where overall responsibility would be placed for ensuring that ESD is effectively embedded into policy and legislation.[73] It was suggested by some submissions that responsibility for top-level leadership may require the establishment of an authority to oversee the implementation of ESD. Some submissions proposed that an appropriate solution may be the creation of a Northern Territory Sustainability Agency to provide drivers for change and a voice within government.[74] Similarly it was suggested that a suitable approach may be the establishment of an independent Northern Territory Sustainability Commissioner, in addition to, or in conjunction with, a central coordination unit, that could report on the integration of environmental, social and economic considerations into decision-making.[75]

Findings:

- ***There is a recognised need for effective leadership and responsibility for implementation to ensure the effective integration in practice of ESD principles across government in the Northern Territory.***

Public Participation

A wide range of submissions highlighted the importance of participation and the contribution of stakeholder groups in the development and implementation of ESD.[76] A number of submissions highlighted the role of local government in supporting the development and implementation of ESD at the local level and the building and property sectors were also identified as important players in the pursuit of sustainability.[77]

The role of the agricultural industry was also highlighted, that is, sustainability means farming for future generations, natural resource protection, and the development of socially and culturally appropriate practices as well as ways of meeting these needs.[78]

A number of submissions emphasised the role of Indigenous culture and knowledge in contributing to sustainability in the Northern Territory.[79] Similarly, remote communities and people living on country were also recognised as important stakeholders for ESD implementation, particularly through their contribution in helping to maintain environmental integrity.[80]

Findings:

- ***It is recognised that an important aspect of the achievement of ESD in the Northern Territory will be the contribution made by key stakeholders from throughout the Northern Territory community.***

An important issue raised in submissions was that sustainability cannot be achieved, nor significant progress made toward it, without the support and involvement of the whole community, requiring effective mechanisms for stakeholder and public participation and engagement.[81] It was suggested that community engagement and participation in decision-making about ESD will help foster a greater willingness for collective pursuit of solutions and acceptance of ESD principles and strategies.[82]

Critical issues that were identified in relation to public participation included the need to ensure Indigenous participation and rights to consultation in first language.[83] A related issue was the need for regional public consultation.[84]

Findings:

- ***It is recognised that public participation is an essential component in the implementation of ESD in the Northern Territory, requiring the establishment of effective mechanisms for public and stakeholder engagement.***

[1] Material flow accounting is a widely applied environmental accounting methodology which includes internal economic flows and the exchange of materials with the environment, and with other economies (European Commission 2003; UN et al 2003; OECD 2004). Applying this approach to the Australian economy, Hatfield-Dodds et al (2004) describe total material flows as made up of domestic primary material production and imports. This reflects the total material requirement, which is a measure of all material flows required to support the economic activities of the Australian population, minus hidden flows from imports (Poldy and Foran 1998; Hatfield-Dodds et al 2004).
[2] Submission by Environment Centre of the Northern Territory (ECNT), Submission by Department of Natural Resources, Environment, the Arts and Sport (NRETAS), Presentation by Professor Bob Wasson, Charles Darwin University, Submission by Strider, Presentation by WWF Australia
[3] ECNT
[4] Presentation by Arid Lands Environment Centre (ALEC), Presentation by Centre for Appropriate Technology (CAT), ECNT, NRETAS, Professor Bob Wasson, WWF Australia
[5] ALEC, ECNT, NRETAS, Professor Bob Wasson, WWF
[6] ECNT, NRETAS
[7] NRETAS, Professor Bob Wasson, WWF Australia
[8] Presentation by Amateur Fishermen's Association of the Northern Territory (AFANT), Submission by Darwin City Council (DCC), Submission by Department of Local Government and Housing (DLGH), Submission by Northern Territory Cattlemen's Association (NTCA), Submission by Northern Territory Resource Council (NTRC)
[9] CAT, DLGH, NTRC
[10] AFANT, CAT, DLGH, Submission by Local Government Association of the Northern Territory (LGANT), Presentation by the Northern Territory Horticultural Association (NTHA)
[11] AFANT, CAT, DLGH
[12] AFANT, DLGH, Submission by Department of Regional Development, Primary Industries, Fisheries and Resources (RDPIFR), NTRC
[13] AFANT, DLGH, NTRC, RDPIFR
[14] ECNT, Presentation by Environment Defenders Office (NT) (EDO), DLGH
[15] AFANT, DLGH, ECNT, EDO
[16] ALEC, Presentation by COOLmob, ECNT, DLGH
[17] AFANT, Presentation by Planning Action Network (PLAN)
[18] DLGH
[19] CAT
[20] ALEC, AFANT, CAT, DLGH, ECNT, EDO, PLAN
[21] ECNT
[22] PLAN
[23] DLGH, EDO, ECNT, PLAN
[24] ALEC, CAT, ECNT, EDO, DLGH, PLAN
[25] ALEC
[26] DLGH
[27] ALEC, CAT, ECNT, EDO, DLGH
[28] ECNT, EDO, DLGH, LGANT, PLAN
[29] DLGH, LGANT, NTCA, EDO, RDPIFR
[30] LGANT, NRETAS
[31] AFANT, ALEC, Presentation by Arafura Resources, CAT, DLGH, ECNT, LGANT
[32] DCC, DLGH, Submission by Department of Planning and Infrastructure (DPI), LGANT, NRETAS,
[33] AFANT, ALEC, Arafura Resources, CAT, Desert Knowledge CRC, DLGH, ECNT, LGANT, NTHA, NTCA, PLAN, Submission by Dr Hugh Pringle, Strider, Professor Bob Wasson, WWF Australia
[34] AFANT, ALEC, Arafura Resources, ECNT
[35] ECNT
[36] ALEC, Arafura Resources
[37] ALEC, Arafura Resources, Presentation by Desert Knowledge Cooperative Research Centre, ECNT
[38] AFANT, ALEC, Arafura Resources, CAT, DLGH, ECNT
[39] Arafura Resources, CAT, DLGH, PLAN
[40] Arafura Resources
[41] CAT, DLGH, NTHA
[42] Arafura Resources, CAT, LGANT, PLAN
[43] DLGH, ECNT, NRETAS, WWF Australia
[44] DLGH, NRETAS
[45] ECNT, NRETAS
[46] NRETAS
[47] DLGH, NRETAS
[48] NRETAS
[49] COOLmob, DCC, LGANT
[50] COOLmob
[51] COOLmob, ECNT

[52] ECNT
[53] Presentation by Property Council of Australia (NT) (PCA)
[54] DCC, DLGH, EDO, LGANT, WWF Australia
[55] DLGH, DPI, LGANT, NRETAS
[56] DLGH, DPI, LGANT, NRETAS
[57] DCC, DPI, LGANT, NRETAS
[58] EDO
[59] DCC
[60] DCC, DLGH, EDO, LGANT
[61] EDO, LGANT
[62] EDO
[63] COOLmob, ECNT, EDO, LGANT
[64] NRETAS
[65] COOLmob, NRETAS
[66] EDO, DLGH
[67] DPI, ECNT, NRETAS, EDO, LGANT
[68] EDO
[69] ECNT, NRETAS
[70] DPI, DLGH, NRETAS
[71] DPI
[72] DPC, DPI, DLGH, RDPIFR
[73] COOLmob, DCC, LGANT, WWF Australia
[74] WWF Australia
[75] COOLmob
[76] DCC, DLGH, LGANT, NTCA, NTHA, PCA
[77] DCC, DLGH, LGANT, PCA
[78] NTCA, NTHA
[79] ALEC, AFANT, CAT, ECNT, EDO
[80] CAT, ALEC
[81] DCC, COOLmob, DPI, DLGH, EDO, LGANT, Dr Hugh Pringle
[82] DLGH
[83] CAT
[84] DCC

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