



Ecologically Sustainable Development in the Darwin Harbour Region



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Ecologically Sustainable Development in the Darwin Harbour Region
REVIEW OF GOVERNANCE FRAMEWORKS

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Acronyms

DEWR	Department of the Environment and Water Resources
DEWHA	Department of Environment, Water, Heritage and the Arts
DHAC	Darwin Harbour Advisory Committee
DLP	Department of Lands and Planning
DOR	Department of Resources
DPC	Darwin Port Corporation
EAA	<i>Environmental Assessment Act</i>
EPA	Environment Protection Authority
EPBC	Environment Protection and Biodiversity Conservation
EPO	Environmental Protection Objective
EMS	Environmental Management System
ESD	Ecologically Sustainable Development
FMA	Fishery Management Area
IGAE	Inter-governmental Agreement on the Environment
INRM	Integrated Natural Resource Management
IUCN	International Union for the Conservation of Nature
LDC	Land Development Corporation
MBI	Market Based Instruments
MMA	Mining Management Authority
MPA	Marine Protected Area
NRETAS	Natural Resources, Environment, the Arts and Sport
NRMBNT	Natural Resource Management Board Northern Territory
OECD	Organisation for Economic Cooperation and Development
PEHB	Public and Environmental Health Bill
RO	Reserve of Occupation
TPWC Act	<i>Territory Parks and Wildlife Conservation Act</i>
WAC	Water Advisory Committee
WAP	Water Allocation Plan
WMPC	Waste Management and Pollution Control
WQPP	Water Quality Protection Plan
WSUD	Water Sensitive Urban Design

Executive Summary

The Darwin Harbour region is a jewel in the Territory's crown, developmentally, economically, recreationally, environmentally. It is appropriate for the EPA to consider and examine this precious resource from the perspective of ecologically sustainable development (ESD) to guide future decision-making for Darwin Harbour.

Protecting the environment of the Darwin Harbour region requires a strong foundation of good governance based on the principles of ecologically sustainable development. These principles recognise that our economic and social progress depends on the basic services provided by a healthy environment.

The aim of this report is to investigate whether existing governance frameworks (set out in legislation, policies and plans) are adequate to support ESD in the region.

ESD provides an internationally recognised framework for integrating sectoral activities and development planning processes. Governance frameworks underpinned by ESD principles ensure decisions are based upon the most appropriate and accurate information available, are made in a transparent and accountable way, and consider and weigh up environmental, economic, social and cultural factors.

A specific focus of the terms of reference for the review was the *Darwin Harbour Strategy* launched in June 2010 by the Darwin Harbour Advisory Committee (previously referred to as Draft Darwin Harbour Regional Management Strategic Framework 2009-2013).

The terms of reference for the review were to:

- Examine the existing governance frameworks for promoting ESD in the Darwin Harbour region
- Determine if and where ESD is defined in legislation, policies and plans applying to the region
- Identify the key government agencies and regulatory bodies with responsibilities for the region
- Identify processes for promoting integration in planning, decision-making and environmental management
- Examine provisions for community input and public participation
- Provide advice to the government and community of the Northern Territory on the adequacy of existing systems and processes.

This review is intended to provide the basis for further discussion with government and the community by presenting an analysis of the existing key policies and legislation that currently apply to decision making for Darwin Harbour and the ways in which these are informed by and reflect the principles of ESD.

It is intended as a first step, the beginning of a conversation towards putting in place the governance measures necessary to support the Darwin Harbour Strategy in its vision for best-practice planning and decision making for ESD in the Darwin Harbour region.

The EPA provides the following advice towards that goal.

1. Develop an overarching governance framework for the Darwin Harbour region

The layering of legislation, policy and strategies applicable to the Darwin Harbour region has resulted in a complex web of roles and responsibilities competing to set strategic direction and planning for development. This has resulted in ad hoc management and use of resources, and complex decision-making frameworks.

The Darwin Harbour Strategy (endorsed by the Northern Territory Government in June 2010) and its predecessor, the Darwin Harbour Regional Plan of Management (2003), attempt to align applicable legislation, decision-making and strategic planning towards a common objective and goal and in doing so set the parameters necessary to meet the common goal.

The Darwin Harbour Advisory Committee has provided a consistent voice in promoting a coordinated and integrated approach to decision-making, environmental management and protection in the Darwin Harbour region. It is commendable that a committee made up of community members has been able to achieve the first necessary steps towards integration through the Darwin Harbour Strategy.

There is a risk, however, that the Darwin Harbour Strategy will result in little change to the status quo, particularly in resolving the current competing interests when determining the strategic direction for the Darwin Harbour region. To achieve this level of integration will require legislative and policy change to provide an overarching governance framework, which coordinates and integrates the strategic planning processes and decision making by the various interests and agencies that have a role in the use, exploitation and management of Darwin Harbour. This action requires commitment and support from government.

The strategy sets the vision for Darwin Harbour but is unable to provide the governance framework necessary to support the vision. The framework necessary for the achievement of this vision has to come from government.

2. Implement ESD in policy, legislation and planning

There are a number of high-level government policy documents that are of critical importance to decision-making regarding future of the Darwin Harbour region. Significantly, these include the Northern Territory Government's Territory 2030 Strategic Plan and Northern Territory Climate Change Policy. While these documents do not directly cite ESD principles as part of their objectives, they are clearly informed by the principles and are implicitly based upon the recognition for sustainability in the Territory.

There are also a number of key pieces of legislation that are relevant in shaping ESD outcomes not only in the Darwin Harbour region but across the Northern Territory. These include the *Planning Act*, the *Mining Act* and *Mining Management Act*, the *Water Act*, the *Territory Parks and Wildlife Act*, the *Darwin Ports Corporation Act*, the *Fisheries Act*, the *Waste Management and Pollution Control Act*, the *Marine Pollution Act* and the *Environmental Assessment Act*.

Of these pieces of legislation, only the *Waste Management and Pollution Control Act* and the *Fisheries Act* specifically refer to ESD within their objectives, although the *Planning Act* establishes the sustainable use of resources and protection of the environment as supporting objects to the Act.

The absence of the concept and principles of ESD within the objectives of an Act means that the Act itself is not informed by the concept of ESD and therefore its provisions are not necessarily drafted to support sustainability objectives, such as achieving integration with broader policy and legislative frameworks.

As a consequence, the existing legislative frameworks applying in the Darwin Harbour region lack a common framework that would enable key legislative instruments to inform each other (for example the translation of biodiversity and water protection objectives in into development approvals) and to function within an governance framework that effectively promotes ESD.

Under the current situation various pieces of legislation compete with each other, operate without reference to each other, contain varying levels of public participation and accountability, resulting in a complicated layering of legislation that is difficult to navigate and disparate in its application.

3. Integrate legislative and regulatory frameworks based upon ESD

A critical issue is the lack of integration across the key legislative and regulatory regimes applying to the Darwin Harbour region and across the Territory. There is presently no legislative mechanism that integrates planning processes and decisions across the key legislative frameworks which determine decisions on critical issues such as land allocation, development and environmental management. The Darwin Harbour Strategy is presently the only document that attempts to align relevant policy, legislation and regulatory instruments towards a common vision for the sustainable management of the region.

The lack of integration between legislative and regulatory frameworks has resulted in:

- legislative frameworks for mining activity having substantial power and the ability to effectively override standard planning and environment protection frameworks
- inconsistency in the way in which recommendations from the *Environmental Assessment Act* are implemented into the development consent and mining approval processes
- The inability to translate known biodiversity values established under frameworks such as the *Territory Parks and Wildlife Act* into other key legislative frameworks, such as the planning regime
- a fundamental disconnection between the approval of mines at a mine site level and the flow-on of impacts associated with the movement and transport of ore through transport nodes, specifically the East Arm Wharf
- Agencies undertaking separate strategic planning and visioning exercises for Darwin Harbour

4. Ensure effective regulatory and enforcement mechanisms

A number of current land uses and development activities have the potential for significant environmental impacts in the Darwin Harbour region. However, regulatory regimes governing the operation of land uses and subsequent activities in the region, vary substantially in their application, are inconsistent or in many cases simply do not exist. Significantly, these frameworks do not operate in an integrated manner to enable an understanding of the cumulative effects of decisions on land-use and development on the region.

Activities at East Arm Wharf have the greatest potential for environmental impact on the harbour and yet these activities do not require licensing and are not covered effectively by existing environmental protection legislation. The Darwin Port Corporation is also exempt from the *Corporations Act* and does not have a duty to comply with any environmental reporting obligations under that Act.

The effectiveness of the *Waste Management and Pollution Control Act* is compromised through the limited number of land-use and activity types that are identified to require licensing. Offences under the Act are also difficult to establish and rely upon levels of environmental harm as the standard of proof. Specific offences addressing water, air and land pollution are absent from the Act.

Other important pieces of legislation, such as the *Marine Pollution Act*, are also limited due to their reliance on the standard of environmental harm for establishing an offence.

Conditions of approval can be attached to a development consent issued under the *Planning Act*, but as the planning framework in the Northern Territory is largely sectoral, conditions relating to matters currently outside the scope of the *Planning Act* are at times not included or dependent upon compliance activities of relevant agencies.

5. Address cumulative impacts

The lack of integration that currently exists between the key pieces of legislation applying to Darwin Harbour is reflected in the lack of integration that exists between strategic planning activities undertaken by the various agencies administering responsibilities under legislation applying to the region. This situation results in the risk of having a suite of strategic plans, each operating independently of the other, all driving towards continued development in the region without accounting for the impacts of activities beyond of the jurisdiction of each plan. This lack of integration does not enable consideration of the cumulative effects of decision-making on the harbour.

Similarly, the lack of appropriate provisions for the consideration of cumulative impacts under key legislative instruments, in line with ESD, does not facilitate the consideration of cumulative impacts as part of decision-making under these frameworks. Significantly, in relation to the Darwin harbour region, the regulatory component of the *Water Act* operates on a site by site basis (licensing specific discharge points), the *Environmental Assessment Act* is currently only being applied at the project level and the *Waste Management and Pollution Control Act* is used on a site by site basis or where an incident or activity results in environmental harm.

6. Provide for public participation and transparency

One of the major issues identified in the Darwin Harbour region is the lack of processes for formally assessing the ecological sustainability of strategic planning options for future development and land use. As a consequence, it is impossible to conceptualise, or involve the public in a rational assessment of, the overall sustainability of land use. The disparate nature of strategic planning for the Darwin Harbour region makes this even more difficult.

Without formal processes that enable the public to assess strategic planning options for the Darwin Harbour region, it will be difficult for the community to ensure that ESD goals, such as those articulated in the Darwin Harbour Strategy, are effectively informing strategic planning in the region.

The key pieces of legislation that apply to land allocation, use and management within the Darwin Harbour region vary substantially in the provisions they establish for public participation and transparency in decision-making. Similarly, various approaches have

been applied in relation to the involvement of the public in key planning, strategy and management documents. As a result, public consultation and engagement may be undertaken as a merely symbolic gesture without allowing for meaningful input to decision-making.

The lack of consistency in approach across legislative regimes and sectors significantly reduces public accountability and places increasing pressure on those regimes that do provide for public participation to become the “fix-all” forum for community concerns and issues.

Advice

The following advice is provided in respect to the key aim of this report:

To investigate whether existing governance frameworks (set out in legislation, policies and plans) are adequate to support ecologically sustainable development in the Darwin Harbour Region, with specific focus on the Darwin Harbour Strategy, launched in June 2010 by the Darwin Harbour Advisory Committee.

The advice provides recommendations under three four headings: Ecologically Sustainable Development; Darwin Harbour Region; Integration; and Broader Implications.

Ecologically Sustainable Development

1. The EPA has previously advised on the importance of the concept of ESD and its principles being central to sustained economic growth and development that protects its environment and ensures the wellbeing of all members of its community. The EPA recommended that the Northern Territory Government develop and implement governance mechanisms for the application of ESD in the Northern Territory.
2. Upholding the current economic, natural and social values of Darwin Harbour is dependent upon governance frameworks (set out in legislation, policies and plans) that are informed by the principles of ESD and accordingly promote the sustainable development of Darwin Harbour. There is currently no legislative mechanism that provides the necessary overarching ESD governance framework.

Darwin Harbour Region

3. The Darwin Harbour Strategy (the Strategy) provides an effective basis for best-practice decision-making – it articulates a common vision, principles and goals for the Darwin Harbour region. One of its founding principles is for sustainable development to be realised within the region. In doing so, the Strategy attempts to align applicable legislation, decision making and strategic planning. It also promotes public participation. It is currently the one document for Darwin Harbour that aims to achieve integration across government and various interest groups, recognising the above governance elements.
4. The Northern Territory Government has endorsed the Strategy and in doing so has committed to:
 - Annual reporting by its agencies against the strategy
 - Establishing and supporting an Integrated Monitoring Plan for the Harbour

This is commended.

5. The Darwin Harbour Strategy alone cannot achieve the necessary change required to ensure sustainable decision making for, and management of, the Darwin Harbour region. The development of appropriate legislative and policy measures is for the implementation of the Strategy is necessary. This should be based upon ESD and informed by the vision and principles outlined in the Darwin Harbour Strategy.
6. A coordinated approach to legislative and policy change is recommended to achieve an integrated system for strategic planning, decision making, regulation, management and monitoring for the region, which is based on principles of ESD. A coordinated approach would need to include key agencies with responsibilities in the region such as the Department of Lands and Planning and the Department of Natural Resources, Environment and the Arts.
7. The review undertaken by the EPA has determined that the existing governance frameworks (set out in legislation, policies and plans) do not adequately support the concept and principles of ESD. In summary:
 - The current legislative frameworks do not facilitate the consideration of environmental, economic, social and cultural sustainability factors as part of decision making
 - Existing pieces of legislation do not speak to each other, have the ability to override each other and therefore compete with each other
 - Responsibility for strategic planning and decision making about the Harbour is highly sectoral and therefore the cumulative impacts of decisions are not being considered
 - The current regulatory regime is disparate in its application, its powers and ability to be effective
 - There is a significant lack of consistency in the provisions for public participation and engagement in existing legislation, policies and strategies
8. A number of significant recent environmental pollution incidents in the Darwin Harbour region have demonstrated the degree of public concern about the current and future health of the Harbour. There is public expectation that government will make the changes necessary to put in place robust and effective regulatory frameworks in order to ensure the values of Darwin Harbour are protected for current and future generations.

Integration

9. The principle of integration is of critical importance when:
 - Planning for future development in the Darwin Harbour region
 - Making decisions about land allocation and use within the region
 - Regulating competing and potentially polluting land uses within the region
 - Implementing management approaches to protect the region's areas of natural, social and cultural significance

- Undertaking monitoring in the Darwin Harbour region
10. An integrated approach ensures that each of the above governance elements for Darwin Harbour inform and enhance each other for the greater good of the region.

Broader Implications

11. While this review has focused on the Darwin Harbour region the EPA considers that a number of its findings are relevant beyond the region, specifically:
- The significance of the relationship of the *Mining Act* and *Mining Management Act* with the *Planning Act*, the *Environmental Assessment Act*, the *Water Act*, the *Waste Management and Pollution Control Act*, and the *Territory Parks and Wildlife Conservation Act*. This information is considered relevant to the current government initiative of harmonisation
 - The lack of appropriate governance mechanisms to ensure the findings of the EIA process are informing subsequent decisions about development. This was highlighted in the EPA's report "Improving Environmental Assessment in the Northern Territory" and is recognised by the EPA as an issue in its current investigation of the copper concentrate spill at East Arm Wharf
 - Important short-comings in the *Waste Management and Pollution Control Act*, specifically its limited licensing regime and the current difficulty of establishing an offence under the Act. This is relevant to the current review of the *Waste Management and Pollution Control Act*
 - A lack of effective integration between key environment protection frameworks, such as the *Territory Parks and Wildlife Conservation Act*, and important development approval frameworks, such as the *Planning Act*, which results in key decisions, such as land allocation, being made without adequate reference to biodiversity and water protection objectives
 - Establishing effective governance frameworks requires the incorporation of ESD principles in overarching legislation, policies and plans. This includes ensuring that ESD is defined in these frameworks and appropriately applied as part of decision-making
 - The absence of effective ESD provisions limits the capacity of current governance frameworks to promote sustainability outcomes in the Darwin Harbour region and across the Territory more broadly.

Introduction

1 Background

The Environment Protection Authority (EPA) was established in March 2008 under the *Environment Protection Authority Act*. Its function is to provide independent advice and recommendations to the Northern Territory Government, businesses and the community about ecologically sustainable development (ESD).

The Darwin Harbour region is a key focus for heavy debate on ESD in the Northern Territory. The region is destined to be the focus of future growth and development and is subject to demands from a range of different sources. For the purposes of this review the Darwin Harbour region is understood broadly to include the land and catchment areas of the region, as well as the feature of the harbour itself.

Darwin is recognised as one of the last remaining places in the world where a large natural harbour environment still exists next to a major urban settlement. It contains one of the largest intact areas of mangroves in Australia, is recognised as a site of international conservation significance and has strong cultural meaning for the Larrakia people and the residents of the wider Darwin region.

In April 2009 the EPA initiated an investigation into how future development of Darwin Harbour can be guided by the principles of ESD- with specific reference to the *Draft Darwin Harbour Regional Management Strategic Framework* developed by the Darwin Harbour Advisory Committee (DHAC).¹ This document has recently been finalised and publicly released as the *Darwin Harbour Strategy*.

1.1 Terms of Reference

The aim of this investigation is:

To investigate whether existing governance frameworks (set out in legislation, policies and plans) are adequate to support ecologically sustainable development of Darwin Harbour, with specific focus on the *Darwin Harbour Strategy*.

The terms of reference for this investigation were:

- 1) Determine if and where “ecologically sustainable development” is defined in legislation, policies and plans that apply to Darwin Harbour for the purposes of informing:
 - the future vision for Darwin Harbour;
 - decisions made on the development and use of Darwin Harbour; and
 - environmental management and monitoring of the harbour.
- 2) Examine the existing provisions and mechanisms which allow for community input and engagement to both define and achieve the sustainable development of Darwin Harbour.
- 3) Map the existing governance frameworks that apply to Darwin Harbour that regulate and/or guide decisions made about the development and continued use, management and monitoring of Darwin Harbour, in order to critically

¹ Darwin Harbour Advisory Committee 2009

evaluate the adequacy of provisions for ecologically sustainable development, environmental protection and monitoring of the harbour.

- 4) Identify the key government agencies and regulatory bodies responsible for planning and decisions made about the use of the harbour; reliant on the harbour to support their business / service provision; and for the ongoing environmental management of the harbour.
- 5) Identify processes that have been put in place to achieve an integrated approach to planning for Darwin Harbour, decision-making and ongoing environmental management.

And provide advice to the government and people of the Northern Territory on the adequacy of the current systems and processes.

1.2 Scope and Structure of the Review

The purpose of this report is to promote discussion within government and the broader community of the issues regarding ESD in the Darwin Harbour region. The EPA aims to do this by taking a broad overview of the regulatory frameworks currently in place and evaluating whether they are properly designed to achieve ESD. This report aims to provide an assessment existing policy and legislative frameworks in order to inform how planned, holistic reform to achieve ESD may be approached.

The report is primarily focussed on the legislative policy frameworks applying to the Darwin Harbour region. These governance frameworks have been assessed across a broad range of sectors relating to key activities in the region. In certain instances, the non-statutory processes undertaken by agencies may be more informed by ESD than those required from a strictly regulatory perspective. Nevertheless, the legislative and policy instruments examined in this review provide the primary basis for achieving ESD not only in the Darwin Harbour region but the Northern Territory more broadly.

This report is structured in the following manner:

1 Background

Provides the background to the review including a broad overview of the geography and environments of the Darwin Harbour region

2 Governance Frameworks

Identifies the legislation, policies and plans applying to the region on a sectoral basis and identifies the key government agencies and regulatory bodies with responsibilities relating to the harbour

3 Discussion and Findings

Discusses and presents key findings of the investigation

4 Advice

Provides EPA advice in response to the aim of the investigation

1.3 Ecologically Sustainable Development and Governance

Protecting the environment requires a strong foundation of good governance based on the principles of ecologically sustainable development. These principles acknowledge that our economic and social progress depends on the basic services provided by a healthy environment. These so-called 'ecosystem services' provide not only the tangible, visible environment in which we live, but also the less obvious functions provided by ecosystems that lead to desirable environmental outcomes, such as air and water purification, drought and flood mitigation, climate stabilisation, and protection from coastal erosion and tidal surge.²

The Darwin Harbour region provides a wealth of ecosystem services that directly support the environmental, economic, social and cultural wellbeing of the communities that make the region their home. To protect our capacity for future economic growth and development, we must protect the ecosystem services on which the region depends.

Governance frameworks are 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.³ Good governance is participatory, transparent and accountable. It ensures that political, social and economic priorities are based on broad consensus in society and that all citizens acquire a voice on how decisions are made on issues of public concern.⁴

1.4 Ecologically Sustainable Development — Principles and Criteria

The concept and principles of ESD form the basis for this review of governance frameworks in the Darwin Harbour region. The Northern Territory became a signatory to the Intergovernmental Agreement on the Environment and adopted the National strategy for Ecologically Sustainable Development. ESD is defined 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.'

The EPA has defined six principles of ESD for the Northern Territory:

- Integration;
- Precautionary principle;
- Inter-generational and intra-generational equity;
- Conservation of biological diversity and ecological integrity;
- Improved valuation, pricing and incentive mechanisms; and
- Public participation.

² Murtough et al 2002

³ Dodson and Smith 2003

⁴ UNDP 1997

The following table more fully explains these principles and identifies a range of criteria within each principle that have been used to guide this review.

ESD Principle	Possible criteria relating to the governance of Darwin Harbour
<p>Integration</p> <p>Decision-making processes should effectively integrate both long-term and short-term economic, social, environmental and equitable considerations.</p>	<ul style="list-style-type: none"> • Is integration an object of the legislation, policy or plan? • Have priorities for achieving ESD been identified? • Are community-based or regional plans taken into consideration when developing government wide or larger-scale plans? • Does decision-making require a consideration of local and indigenous knowledge? • Are ESD considerations a mandatory requirement for decision-making? • Is assessment of environmental, social, economic and cultural benefits of activities a required consideration of decision-making?
<p>Precautionary principle</p> <p>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.</p>	<ul style="list-style-type: none"> • Is the precautionary principle an object of the legislation, policy or plan? • Are there provisions for precaution where there are threats of serious or irreversible environmental damage? • Are there provisions for considering cumulative environmental impacts? • Are there appropriate provisions for appropriate monitoring and data collection where there are threats of serious environmental damage? • Are there appropriate measures for managing environmental risk? • Has an adaptive management approach been included where there are threats of serious or irreversible environmental damage? • Have appropriate thresholds been identified for managing threats of environmental harm?
<p>Inter-generational and intra-generational equity</p> <p>The present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of present and future generations.</p>	<ul style="list-style-type: none"> • Is intergenerational and intergenerational equity an object of the legislation, policy or plan? • Are there provisions for the assessment of important environmental, social, cultural and economic values? • Are there provisions for considering cumulative environmental impacts? • Are there provisions for appropriate monitoring and data collection where there are threats of serious environmental damage? • Has an adaptive management approach been included where there are threats of serious or irreversible environmental damage? • Have appropriate thresholds been identified for managing threats of environmental harm?

<p>Conservation of biological diversity and ecological integrity</p> <p>The conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making.</p>	<ul style="list-style-type: none"> • Is the conservation of biological diversity and ecological integrity an object of the legislation, policy or plan? • Are there suitable provisions for assessment of environmental impacts? • Has an ecosystem-based approach been included where this is appropriate? • Are there provisions for considering cumulative environmental impacts? • Is there reference to relevant legislation, policies, plans or targets for the conservation of biological diversity and ecological integrity?
<p>Improved valuation, pricing and incentive mechanisms</p> <p>Should be promoted to ensure that the costs of environmental externalities are internalised and that the polluter bears the costs associated with environmental pollution.</p>	<ul style="list-style-type: none"> • Is the promotion of improved valuation, pricing and incentive mechanisms an object of the legislation, policy or plan? • Are there provisions to ensure that current and long-term environmental costs and benefits are assessed? • Are there appropriate provisions for the use of incentive mechanisms to promote ESD outcomes? • Are there appropriate mechanisms for internalising the costs of environmental pollution?
<p>Public participation</p> <p>Decisions and actions relating to ecologically sustainable development should provide for broad community involvement on issues which affect them.</p>	<ul style="list-style-type: none"> • Is public participation an object of the legislation, policy or plan? • Are there mechanisms for involving the community in establishing ESD objectives? • Are there opportunities for adequate stakeholder engagement (indigenous and non-indigenous) and is this done in an appropriate format? • Are there processes for public appeal of decisions where this may be appropriate? • Are decision-makers formally required to provide a public statement of reasons for key decisions relating to ESD?

1.5 The Darwin Harbour Region

Darwin Harbour lies in the Northern Territory of Australia on the southern shores of the Timor Sea. Darwin Harbour extends from Charles Point in the west to Gunn Point in the east and encompasses Woods Inlet, West Arm, Middle Arm, East Arm and Shoal Bay - an area of water totalling just over 800 km² (Map 1). This water body represents the northernmost natural deep water port in Australia. The Howard River drains into the shallow waters of Shoal Bay while the Elizabeth, Blackmore and Darwin Rivers are the main watercourses draining into the harbour.

Darwin is one of the fastest growing capital cities in Australia, with an annual growth rate of 3.1 % since 2008.⁵ An influx of tourists to the top-end each year between April and October swells the region's population by around 581,000 people.⁶ The land area of 2400 km² that surrounds the Harbour is administered by six local government councils covering the Darwin, Palmerston and Litchfield municipalities and the Wagait, Belyuen and Coomalie Shires.

History

The Larrakia people have inhabited the Darwin Harbour region for many thousands of years before the area was chosen in 1869 as a site for European settlement. Initially known as Palmerston, Darwin was the name that was eventually adopted in 1911 when South Australia ceded control of the settlement to the Commonwealth.⁷

The establishment of Darwin as the landfall for the undersea telegraph cable from Britain was the turning point for its emergence as a permanent European settlement. The early growth of Darwin was consolidated by the discovery of gold at Pine Creek in the early 1870s and the construction of a rail link to mining and pastoral areas in the late 1880s. Both reinforced the growth of Port Darwin as an export facility.

World War II and the associated build-up of a military presence provided the impetus for a growth in infrastructure, but also saw the loss of life and destruction of many vessels and buildings with multiple bombings between 1942 and 1943. Following the war, the city underwent significant rebuilding and, in subsequent decades, the Commonwealth Government increased scientific research into the Territory's mineral and agricultural resources.

In December 1974, Darwin was again destroyed by Cyclone Tracy and was subsequently rebuilt. The Northern Territory achieved self-government in 1978 and, in 1981, the town of Palmerston was established. Infrastructure and industry across the region have continued to grow over the last 30 years with developments such as the Channel Island power station, completion of the Adelaide-Darwin rail link, the new port facility at East Arm and the Wickham Point Liquefied Natural Gas plant at Middle Arm.

The Larrakia people lodged the Kenbi Land Claim over the Cox Peninsula in 1978. In 2009, the Territory Government recognised the rights of the Larrakia Traditional Owners in return for an agreement that part of this land would be granted as Territory

⁵ ABS 2010, *Regional Population Growth, Australia 2008-2009*, available at: <http://www.abs.gov.au/ausstats/abs@.nsf/Products/3218.0~2008-09~Main+Features~Northern+Territory?OpenDocument>

⁶ Tourism NT.

⁷ DHAC 2003:2-2

Freehold, which the Larrakia Traditional Owners would then be able to develop as land held in trust.

Economy

The Darwin Harbour region provides a hub for economic activity in the NT.⁸ Mining is by far the largest contributor to the Territory's economy and while mining in the Darwin Harbour region is largely limited to extractive materials for construction, Darwin port provides an important hub for mining exports. Tourism is also a key industry for the region and a significant Defence Force presence provides opportunities for development as a regional supply, service and distribution centre for both the Australian and international defence sectors.

The Darwin Harbour catchment is the focus of 90 percent of the entire primary production occurring in the Darwin region. Production is based on fruit, vegetables, nursery products, cut flowers and some mixed farming.

Activities at Darwin port include in livestock export, offshore and gas rig services, container and general cargo, mineral resources, dry bulk, petroleum and other liquid products, and cruise and naval vessels. The ongoing expansion of these activities is expected to significantly increase future cargo volume through the port.⁹

Environment

The Darwin Harbour region hosts threatened plant and animal species of national and international significance, and wetlands and flora of national significance. Almost 500 vertebrate animal species are present in the region and over 30 are listed as threatened or vulnerable under NT legislation.

While research is currently underway, little is known about the harbour's marine flora and fauna. It has been estimated, however, that the harbour may support 'in excess of 3000 marine invertebrate species including sponges, hard and soft corals, crabs, prawns, marine worms, seastars, jellyfish, mussels, marine snails, seasquirts and seawhips'.¹⁰ Dugongs and dolphins frequent the harbour, as do three threatened turtle species (the flatback, hawksbill and green turtle). Of all the fish species, 15 are classified as threatened under IUCN classifications.

Society and Culture

The harbour's natural environment is innately tied to the region's indigenous heritage. Archaeological sites including shell middens, artefact scatters and historical campsites and gathering places are also spread throughout the region, telling a story of thousands of years of occupation. These ties continue with ongoing traditional use of the region's resources by the Larrakia people and a desire to combine traditional ecological knowledge with scientific approaches to conservation management in the region. European heritage sites, also scattered throughout the region, pertain to the region's more recent past and include significant WWII and colonial heritage sites. The natural environment of the region also provides for a range of important social and cultural values that include tourism, fishing, sports, recreation, as well as aesthetic and spiritual values.

⁸ DHAC 2003: 2-22

⁹ DHAC 2003: 2-20

¹⁰ DHAC 2003: 2-32

2 Governance Frameworks

Ecologically Sustainable Development in Legislation, Policies and Plans

This part of the review addresses the terms of reference for the review under a number of sectors which incorporate the range of activities that are significant for ESD in the Darwin Harbour Region.

Sectors:

1. Strategic Development and Management
2. Land Use
3. Minerals, Extractive Materials and Petroleum
4. Ports
5. Pollution, Waste and Public Health
6. Water
7. Fisheries and Marine Areas
8. Biodiversity, Heritage and Natural Resource Management
9. Environmental Assessment

The diagram on the following page identifies the range of key government agencies and regulatory bodies with responsibilities for activities relating to ESD in the Darwin Harbour region, as established under legislation, policies and plans.

Agencies	Sectors								
	Strategic Development & Management	Land Use	Minerals, Extractive Materials & Petroleum	Ports	Pollution Waste & Public Health	Water	Fisheries and Marine Areas	Biodiversity Heritage & Natural Resource Management	Environmental Assessment
Aboriginal Areas Protection Authority	●							●	
Darwin Port Corporation	●	●		●					
Department of Business & Employment	●								
Department of the Chief Minister	●								
Department of Construction and Infrastructure	●								
Department of Education & Training	●								
Department of Health & Families	●				●	●			
Department of Housing, Local Government & Regional Services	●	●			●				
Department of Justice	●				●				
Department of Lands & Planning	●	●	●	●		●	●	●	
Department of Natural Resources, Environment, the Arts & Sport	●	●	●		●	●		●	●
Department of Resources	●	●	●			●		●	
Land Development Corporation	●	●							
Power & Water Corporation	●	●			●	●			
Northern Territory Treasury	●								
Tourism NT	●								
Commonwealth									
Australian Fisheries Management Authority				●			●	●	
Australian Quarantine Inspection Service				●	●		●	●	
Department of Defence		●		●	●			●	
Dept. of Sustainability, Environment, Water, Population and Communities						●	●	●	●

2.1 Strategic Development and Management



In the Darwin Harbour region, policies and plans for strategic development and management determine the demands that will be placed upon the environment and how the values of the region, including economic, social, historic, cultural, aesthetic, ecological and recreational values, are protected and maintained into the future.

Policies and plans that strategically guide future development and environmental management are a critical component in enabling ESD to be achieved in the region. Strategic planning for development is important for ensuring economic and social well-being, providing for choices about economic development pathways and enabling evaluation of the environmental, social and cultural impacts that may result from different development opportunities.

A core number of important high-level policies and plans are important in shaping the future development and management of the Darwin Harbour region. These include the Territory 2030 Strategic Plan, Northern Territory Climate Change Policy and Darwin Harbour Strategy.

Territory 2030 Strategic Plan

The Territory 2030 Strategic Plan is the overarching strategic plan intended to guide the next 20 years of the Territory's development. The Darwin Harbour region is the Territory's most populated region and a focus for commercial and industrial activity and the Territory 2030 plan is significant in guiding its future development.

The Territory 2030 Strategic Plan focuses on priorities in six core areas

- Education
- Society
- Economic Sustainability
- Health and Wellbeing
- The Environment
- Knowledge, Creativity and Innovation

The plan describes several objectives for each of these areas and provides targets and measurable actions to track progress on each objective.

ESD

The Territory 2030 plan does not expressly define the concept and principles of ESD. However, it contains the commitment to manage the Territories' natural resources according to the principles of ESD and includes sustainability goals across a range of areas, including social, economic, environmental and cultural objectives. In its ongoing development and implementation, the plan has the opportunity to support principles of ESD and the goal of environmental sustainability in the Territory.

Integration

Through the process established for the implementation of the Territory 2030 plan, a number of mechanisms have been established to promote integration within and across government. A subcommittee of Cabinet has been established to oversee implementation of the plan and an implementation unit has been established in the Department of the Chief Minister to coordinate the plan's implementation. All government agencies have also reviewed strategic plans and policy frameworks to align with Territory 2030. As the plan does not specifically define ESD, these mechanisms are limited in the support they provide for achieving sustainability outcomes.

Public Participation

The Territory 2030 plan includes a number of mechanisms intended to promote public participation. The development of the plan included community consultation and was led by a steering committee comprised of community members. As part of ongoing consultation, it is intended that further conferences will be held to advance key strategic targets within the plan. It is also intended that data on the implementation of the plan's targets will be made publicly available through a series of public scorecards. As well, it is intended that an independent review of the plan be undertaken every five years. These mechanisms establish a basis for public participation.

Northern Territory Climate Change Policy

The Northern Territory Climate Change Policy is an action plan outlining the Northern Territory Government's approach to assist in national and international efforts to control climate change.

The majority of targets and associated actions contained within this critical policy document for the Territory will influence outcomes for the Darwin Harbour region by providing a policy context for decision-making in the harbour.

The policy comprises nine elements with 40 targets, including actions aimed at helping the Territory move towards a low carbon economy and adapt to the impacts of climate change. The nine elements are:

- Government leadership on climate change
- A focus on green energy
- Land management – a unique Territory offset opportunity
- Building green cities and towns
- Rethinking waste

- Expanding green business and industry
- Developing a green workforce
- Promoting green communities
- Living with change

Integration

If the recommendations contained in the targets and goals of each of the three government policies are adopted, the Northern Territory will be closer to being prepared for climate change adaptation and mitigation. However, without actively mainstreaming climate change adaptation and mitigation considerations into Northern Territory Government policy, in particular *Territory 2030*, the policies may not be appropriately prepared for climate change adaptation and mitigation.¹¹

Darwin Harbour Strategy

With the Darwin Harbour region currently experiencing unprecedented growth and development pressures, it is timely to establish a Darwin Harbour Strategy so that the Northern Territory Government and other decision-makers can ensure that community expectations are being met. This strategy is designed to protect the region's ecosystems, resources and values and support its sustainable development.

The Darwin Harbour Strategy aims to provide a comprehensive guide to the responsible stewardship and sustainable development of the Darwin Harbour region. The strategy is intended to provide policy and decision-makers within government, industry, commerce and the community, with guidance for the integrated management of the Darwin Harbour region. The strategy advocates a consistent, coordinated approach to decision-making and resource use for the region, encouraging an integrated approach to managing the sustainable development of the region.

The strategy provides a shared vision for the region, as well as founding principles to underpin its stewardship. It contains goals and guidelines that outline the management approach needed to maintain the region's residential, recreational, cultural, urban, economic, environmental and scenic values. The strategy should inform all decisions regarding activities affecting the region.

Vision for the Darwin Harbour Region:

'A biologically rich and diverse marine and terrestrial environment for our enjoyment and use today and for the future'.

Goal 1: To maintain a healthy environment

Goal 2: To support recreational use and enjoyment of the environment

Goal 3: To ensure that development is implemented in an ecologically sustainable manner

¹¹ Dr Geraldine Li (unpublished report). *Review of Ecologically Sustainability Development Principles & Preparedness for Climate Change Adaptation & Mitigation in Northern Territory Government Policy: Territory 2030, NT Climate Change Policy & Darwin Harbour Strategy*. Report to the Environment Protection Authority.

Goal 4: To protect cultural values and heritage

Goal 5: To foster community awareness, industry partnerships and stewardship of the Darwin Harbour Region

ESD

The strategy provides a shared vision for the region, as well as founding principles to underpin its stewardship. It contains goals and guidelines that outline the management approach needed to maintain the region's residential, recreational, cultural, urban, economic, environmental and scenic values. The strategy should inform all decisions regarding activities affecting the region.

Integration

Bringing the Darwin Harbour Strategy to life relies upon government agencies, industries and individuals across the region taking responsibility for their shared role in protecting Darwin Harbour and committing to taking steps to advance the strategy's goals.

It expects that the government, as a major decision maker in the Darwin Harbour region, will choose to be informed and guided by this document, providing a clear direction for those within government on the management of the Darwin Harbour region. At this stage the strategy has not been coupled with legislative reform.

It should be noted that the implementation of principles such as ESD require a whole-of-government approach. The strategy seeks to encourage inter-agency collaboration and the recognition that advancing social, economic and environmental values is the charge of every government agency. DHAC shall be available to advise interested parties on how the strategy's guidelines may be integrated into their work and decision-making.

This approach represents a shift from a fragmented model in which individual departments advocate for single components of the 'triple bottom line' (social, economic and environmental values).

While some elements of the strategy are currently mandated by law or are reflected in current policy, other elements are voluntary guidelines for improving coordination and planning, and reducing negative environmental impacts.

The strategy seeks the adoption of best practices and advocates high standards for development and natural resource use – even when these standards are more demanding than current legal or policy requirements.

Public Participation

The Darwin Harbour Strategy is a living document and will be reviewed and updated as required.

DHAC will conduct a formal review of the strategy in 2015 and include community consultation.

Individuals and organisations are encouraged to send comments and suggestions to DHAC both during and between formal review periods.

Working in partnership, DHAC and the Northern Territory Government will undertake reporting against the Darwin Harbour Strategy. Each government agency will be asked to provide yearly information in their annual reports on what actions have been taken against guidelines in the strategy that are relevant to the agency's work. These results will be collated by DHAC and published on the DHAC website.

Findings:

- **The Territory 2030 Strategic Plan and Northern Territory Climate Change Policy play a critical role in shaping strategic development and management in the Darwin Harbour region and across the Northern Territory and both address key aspects of ESD and objectives of sustainability for the Territory.**
- **However, at present there is no clear overarching policy statement on the goal of sustainability and value of ESD principles in the Northern Territory.**
- **The Darwin Harbour Strategy provides a comprehensive basis for planning for the strategic development and ongoing management of the Darwin Harbor region by establishing a common ESD vision and guiding goals and principles for sustainable development in the region.**
- **However, supporting mechanisms will be required to enable the Strategy to become an effective overarching framework for development planning and management based upon a clear goal of sustainability and ESD principles.**

2.2 Land Use

Land Use	
Legislation	
<i>Aboriginal Land Act</i>	<i>Lands Acquisition (Pastoral Leases) Act</i>
<i>Crown Lands Act & Regulations</i>	<i>Lands Planning and Mining Tribunal Act</i>
<i>Cullen Bay Marina Act & Regulations</i>	<i>Local Government Act & Regulations</i>
<i>Darwin Port Corporation Act</i>	<i>Mining Act & Regulations</i>
<i>Darwin Waterfront Corporation Act & Regulations</i>	<i>Mining Management Act & Regulations</i>
<i>Land Development Corporation Act</i>	<i>Pastoral Land Act & Regulations</i>
<i>Land Title Act & Regulations</i>	<i>Planning Act & Regulations</i>
<i>Lands Acquisition Act & Regulations</i>	<i>Power and Water Corporation Act</i>
	<i>Special Purposes Leases Act & Regulations</i>
Policies and Plans	
Darwin and Palmerston Regional Land-Use Plan (In Development)	Northern Territory Planning Scheme
East Arm Wharf Facilities Masterplan 2030	Strategic Land-Use Plan for Middle Arm (In Development)
Northern Territory Climate Change Policy	Territory 2030 Strategic Plan
Commonwealth	
<i>Aboriginal Land Rights (Northern Territory) Act 1976</i>	
<i>Aboriginal Land Rights (Northern Territory) Amendment Act 2006</i>	

Land is not statutorily managed as a single resource in the Northern Territory. Instead it is allocated under a number of frameworks with various management arrangements applying to different uses of land. This situation applies to land allocation and use in the Darwin Harbour Region with various implications in terms of the promotion of ESD.

The *Crown Land Act* is the primary piece of legislation applying to the management and use of Crown Land in the Northern Territory and is administered by the Department of Lands and Planning. The Act grants power to the Planning Minister to grant leases or alienate Crown Land. Under the Act, Crown Land can be sold through a public competitive process (auction, invitation, ballot, tender etc), or directly to a particular entity for commercial development (which usually occurs under an agreement to develop the land, which is securitised by granting a lease which turns to freehold land upon development).

The Department of Lands and Planning also has power to allocate land for road construction, and the Administrator, on the recommendation of the Minister for Lands and Planning, has the power to grant a licence, lease or easement over Crown Land to construct an energy pipeline (i.e. gas or petroleum pipeline from offshore and onshore gas fields).

Land Use Frameworks

The Territory has no single overarching framework which seeks to allocate Crown Land for use in an ecologically sustainable manner. Instead, a number of sectoral frameworks provide for allocation of land which is then managed to the extent that it is not inconsistent with the purpose for which it was allocated.

The primary frameworks for land use allocation and management in the Northern Territory, and that apply to the Darwin Harbour region, include:

- *The Mining Act*, which grants mineral tenures than regulates the mining through the *Mining Management Act*
- *The Planning Act*, which enables Crown Land to be alienated by the Department for Lands and Planning for urban uses in line with its strategic and town planning functions
- *The Pastoral Land Act*, which enables the Pastoral Lands Board to grant rights to the use of land for pastoral purposes
- *The Northern Territory Parks and Wildlife Act*, under which the Administrator, on the recommendation of the Parks and Wildlife Commission of the Northern Territory, may declare a park or reserve over any land, including Crown Land, primarily for conservation purposes
- A number of Northern Territory Government statutory corporations including the Land Development Corporation, Power and Water Corporation and the Darwin Port Corporation, which may also allocate land for use
- Special purpose legislation, which may be used to provide for the allocation and use of land for specific major projects
- The *Aboriginal Land Rights Act (Cmth)*, which enables the Commonwealth Minister for Indigenous Affairs to grant land as communal freehold title to Aboriginal Traditional Owners that may establish a claim for vacant Crown Land outside of a Town.¹²

There is considerable difference between these frameworks in regard to the powers they establish to allocate and manage land and the extent to which they promote the achievement of ESD in the Darwin Harbour region. Each of these frameworks is discussed in further detail below.

Planning Act

Planning and land development in the Northern Territory is the responsibility of the Department of Lands and Planning (DLP). The Development Consent Authority (DCA), established under the *Planning Act*, is a division of the DLP whose function is to assess and determine development applications.

The primary object of the *Planning Act* is to provide a framework of controls for the orderly use and development of land. Further objects established by the Act include the strategic planning of land use and development for the sustainable use of resources, the strategic planning of transport corridors, the establishment of effective controls and guidelines for the appropriate use of land, and the control of

¹² Aboriginal Land Rights Act (Cmth)

development to provide protection of the natural environment, including by sustainable use of land and water resources.

The Act establishes the sustainable use of resources and protection of the environment as supporting objects of the Act. However, neither ESD nor the principles of ESD are defined within the Act to support these objectives and the principles of ESD are not linked in an operational way to decision-making processes under the Act.

The current framework is formulated by the *Planning Act* and the NT Planning Scheme. Land Use Structure Plans and Objectives inform the creation of Planning Schemes. The principal means of managing urban land is through the *Planning Act* and Planning Schemes. However this framework is largely based upon managing socio-economic issues between land uses rather than managing urban land use on natural resources or biological integrity of the environment.

Few restrictions in the NT Planning Scheme relate to environmental values, except for dredging in Darwin Harbour and the requirement to obtain approval for clearing vegetation in some circumstances. Most provisions appear to relate to amenity issues, for example building heights and density criteria relate to the purpose of protecting scenic views of the Darwin Harbour rather than consolidating urban development, encouraging sustainable transport or reducing the use of natural resources.

Integration

The *Planning Act* attempts to integrate other sectoral considerations that arise from a use of land when a decision about an application is made. The consent authority has to take into consideration Beneficial Use Declarations under the *Water Act* and environmental objectives under the *Waste Management and Pollution Control Act*. Again, the framework is set up for these considerations to operate on individual projects rather than requiring a planning scheme to accord with Environmental Objectives under the *Waste Management and Pollution Control Act* and Water Allocation Planning. However there are no principles or ESD guidelines for how this weighting exercise should be applied and ultimately a decision may be made which conflicts with these other considerations.

Planning in the Northern Territory is heavily sectoral (i.e. it is a separate department from those concerned with environment or natural resource protection) and accordingly there is not the process in the Planning framework to ascertain the environmental values of areas covered by the Planning Regime and place limits or thresholds on degradation of those values.

Public Participation

Objects of the *Planning Act* include ensuring that, as far as possible, planning reflects the wishes and needs of the community through appropriate public consultation and input in both the formulation and implementation of planning schemes and also ensuring fair and open decision-making and appeals processes. However, the provisions for public participation are limited in relation to the operational provisions of the Act.

While the *Planning Act* prevents an approval which is in conflict with the Planning Scheme being issued, this is subverted by the exceptional development permits –

and the ability to change the Planning Scheme itself in response to a development application.

The *Planning Act* is unclear on the extent to which failure to comply with development approval conditions is an offence. The Act appears to treat conditions as static rules which do not continue to operate on the development.

Northern Territory Planning Scheme

As a broad based legislative document, the *Planning Act* relies on the Northern Territory Planning Scheme to provide a mechanism for development control and define directions for future land use development. The NT Planning Scheme contains provisions that include:

- statements of policy with respect to the use or development of land
- provisions that permit, prohibit or impose conditions on a use or development of land
- provisions for instructions, guidelines or assessment criteria to assist the consent authority in assessing development applications
- other provisions connected with planning for, or control of, the use or development of land
- maps, plans, designs and diagrams (WSUD discussion paper).

Pastoral Land Act

The *Pastoral Land Act* provides for the conversion and granting of title to pastoral land and the administration, management and conservation of pastoral land.

The object of the Act is to provide a form of tenure of Crown Land that facilitates the sustainable use of land for pastoral purposes and the economic viability of the pastoral industry. These objects also include providing for the monitoring of pastoral land so as to detect and assess any change in its condition; the prevention or minimisation of degradation of or other damage to the land and its indigenous plant and animal life; and the rehabilitation of the land in cases of degradation or other damage.

Further objects include recognising the right of Aborigines to follow traditional pursuits on pastoral land; providing reasonable access for the public across pastoral land to waters and places of public interest, and providing a procedure to establish Aboriginal community living areas on pastoral land.

The Act has objectives that include facilitating the sustainable use of land for pastoral purposes and minimising degradation to the land and its indigenous plant and animal life, it However, it does not include a definition of ESD or the principles of ESD to support these objectives. The principles of ESD also are not made requirements for decision-making under the Act.

Land Development Corporation Act

The Land Development Corporation (LDC) is a significant land holder in the Darwin Harbour region and its functions in relation to land development have important potential implications for ESD.

The *Land Development Corporation Act* establishes a statutory corporation to develop and manage land for use by new and existing industries in the Territory, and for use for residential developments and associated activities.

The functions of the corporation are to develop and promote project land for use by industrial businesses and for residential developments. It is also required to undertake residential developments on project land and to provide services, facilities and general assistance to facilitate the establishment and conduct of industry on project land.

The corporation's functions also include facilitating other activities associated with the development or management of project land, the use of project land by industrial businesses or for residential developments, including commercial or recreational activities and activities relating to heritage and environmental conservation.

While the *Land Development Corporation Act* establishes significant responsibilities to the Land Development Corporation (LDC) in regard to land development and management, it does not define ESD or the principles of ESD as considerations for the exercise of these functions under the Act.

Power and Water Corporation Act

Power and Water Corporation is significant in the Darwin Harbour region as an owner, operator and developer of major infrastructure for the production and supply of electricity, gas, water and sewage services. The corporation also has significant responsibilities for land use and management within the Darwin Harbour region.

The *Power and Water Corporation Act* establishes a government owned corporation for the purposes of providing essential services in the Northern Territory. The corporation's broad functions include a range of activities relating to the supply of infrastructure and services for electricity, water and sewerage and gas, as well as communications and other services.

In order to support these functions, the corporation has broad ability to do whatever it determines is necessary to be conducive or incidental to the performance its functions. This includes acquiring, establishing and operating any undertaking, including any necessary tenements and licences.

The *Power and Water Corporation Act* does not define ESD or the principles of ESD as either objects in support of functions undertaken in accordance with the Act, or as considerations to guide decision-making under the Act in respect to the corporation's primary functions or its role in regard to land use and management in the Darwin Harbour region.

Darwin Port Corporation Act

The main legislation regulating the use of port facilities is the *Darwin Port Corporation Act* and Port By-Laws. Darwin Port Corporation (DPC) is primarily responsible for 'the regulation, improvement, management, operation and control of and the promotion of trade utilising the port' (Section 16). Under the Act, DPC is obliged to carry out its functions in a commercial manner and, while established under the public sector, operates as an independent private entity. The Act assigns functions to the Darwin Port Corporation (DPC) but only one of these reflects a matter of environmental protection.

Legislation applicable to port activities general fails to acknowledge the impact of these activities on the ecological integrity and sensitivity of the surrounding environment. As these are laws regulating activities with an undeniable and often adverse impact on the environment (e.g. activities involving the handling of hazardous substances), the failure to consider environmental values to any extent demonstrates that ESD is absent in legislation which has perhaps the greatest relevance for environmental damage in the harbour. Further information on the importance of this legislation is provided in section 2.4.

East Arm Wharf Facilities Masterplan 2030 Land Use Strategy

The Masterplan 2030 is a key document guiding development of the East Arm Wharf over the next 20 years. The Darwin Port Corporation Masterplan 2030 does not refer directly to ESD or any of the associated principles. However, it does address environmental considerations and states that all future works at the wharf area will require environmental impact assessment under NT and Commonwealth legislation.

Options within the plan have been formulated on the basis of maximising trade and economic opportunities. The masterplan acknowledges that all future works will require environmental impact assessment under NT and Commonwealth legislation but these processes don't currently promote consideration of the cumulative impact of multiple uses of the port. The inclusion of the concept of ESD and its principles as a key issue informing the plan would ensure environmental issues are of equal value and aligned with maximising trade and economic opportunities

Directly related to the failure to consider cumulative impacts is a failure to acknowledge the environmental values, including biological diversity and ecological integrity, present within the harbour, and a failure to consider the need for intergenerational equity in relation to development of East Arm. Intergenerational equity would demand that cumulative impacts are addressed and that there is consultation with both the general public and particularly with indigenous community members, who may seek protection of cultural values within the harbour.

No public consultation has been carried out on the content of the masterplan and the document is not a public document. While Territory Government and agency stakeholders, port users and future users were consulted, the process did not include the general public. The recent pollution incidents at East Arm have highlighted the public interest concerns that exist in relation to the activity that is undertaken at the wharf area. As the key document that will direct development at East Arm over the next 20 years, public input would benefit this process.

Special Purpose Legislation

A key gap in the framework applying to the Darwin Harbour region is the lack of binding policy, protocol or other mechanism to ensure that "special legislation" is not used to extract major projects from normal ESD frameworks.

The use of special purpose legislation to override existing environmental and approval regimes (that are based upon ESD principles) carries the risks of unnecessarily politicising the development process. Projects subject to special regimes often have the largest potential for significant social, economic and environmental implications. Accordingly these projects need to remain within an ESD framework.

Findings

- **The Northern Territory does not have a single integrated framework that seeks to allocate Crown Land for use in an ecologically sustainable manner.**
- **Instead, the allocation and use of land is determined variously across a number of sectoral frameworks.**
- **A significant issue across this range of legislation is the failure to effectively incorporate and implement principles of ESD as part of decision making.**
- **A notable lack of integration between these frameworks is problematic for the achievement of ESD outcomes.**
- **There is significant disparity across these legislative instruments in regard to provisions for public participation and transparency of decision making.**

2.3 Minerals, Extractive Materials and Petroleum



This sector and its associated activities have relevance for the Darwin Harbour region in a number of ways:

- Mining activities are exempt from key planning and environmental protection legislative frameworks applying to the harbour.
- The bulk of minerals and extractive materials mined in the Northern Territory are allocated for export, resulting in their transport to and loading at ports located on the harbour.
- Significant deposits of minerals, sands and extractive materials occur within and around Darwin Harbour and the Darwin Harbour region catchment.
- Petroleum operations based outside of the harbour have resulted in construction of energy pipelines within the region. The close proximity of potential oil and gas developments to the region also presents the prospect of significant environmental risks on a regional scale.

Minerals

Legislation

The *Mining Act* and the *Mining Management Act* are the key pieces of legislation that establish the regulatory regime for mining in the Northern Territory and they regulate these activities in the Darwin Harbour region.

The *Mining Act* establishes a system for the granting of legally transferable rights of title applying to mining and related activities, including exploration, extraction, processing and transport. *The Mining Management Act* forms a second component of the regulatory regime and provides for the authorisation of mining and management of activities, including environmental protection, on sites established by interests under the *Mining Act*.

ESD

The objective of ESD is not defined in either the *Mining Act* or the *Mining Management Act* despite its relevance to activities governed by this legislation. Although not defining ESD, the *Mining Act* recognises the objective of removing risks to the environment. The *Mining Management Act* also establishes the objective of environmental protection. Neither of these pieces of legislation includes any of the associated principles of ESD.

Integration

Unlike other land-use regimes, the mining framework provides for the issue of some forms of tenure with the ability to override other forms of tenure and land-use, including normal planning and environmental protection frameworks.

The only cases in which exceptions to the power of mining tenure currently apply are where exploration activities are proposed on Aboriginal Land, and must be based upon the informed consent of the traditional owners, and in situations relating to Commonwealth national parks and the Cobourg Peninsula Marine Park.

Apart from these limited requirements, the mining regime is not integrated with standard planning and environment protection frameworks. At present, mining activities are exempt from the general strategic frameworks that apply to land-use planning, water planning, fisheries planning, Northern Territory parks and reserve planning and biodiversity protection and vegetation clearing, as well as waste management and pollution control. The objectives and principles under these regimes are not reflected under the framework established by the *Mining Act* and the *Mining Management Act*.

The exemption of processes for granting mining tenure from general strategic planning and environment frameworks is a significant issue for ESD. This is because facilities associated with mining, such as processing plants, export ports or wharf terminals have the potential to be established under this regime when located on mining tenure. Accordingly, these facilities may also escape normal planning and environmental regulation.

The problems of exempting facilities on mining tenements from standard environment and planning controls have been demonstrated through a number of recent environmental incidents in the Northern Territory, and these risks apply to all mining facilities located within the Darwin Harbour region.

Public Participation

The environmental management system for a mine site, in the form of a Mine Management Plan (MMP), is the main vehicle through which environmental considerations are factored into mining activities. These plans are currently not made publicly available. This lack of public information on how the mine is being managed to prevent environmental harm severely limits any public participation in ensuring accountable and transparent practices by miners and mine monitoring agencies.

Other Critical Issues for ESD

The Reservation of Occupation (RO) mechanism is the only way in which the location of mining activities can be limited under the mining legislative framework. An RO is currently in place for the Darwin Harbour region. The application of this mechanism,

however, is highly discretionary. In cases where an RO is established, mining within the RO may still be permitted at the discretion of the Minister and there are no requirements placed on the wholly discretionary decision to either grant or revoke an RO. There is strong potential for the mechanism to be used to achieve ESD outcomes but the RO framework is not integrated into key regimes (such as the planning, water allocation, and biodiversity protection and vegetation management frameworks) that could apply it in this way.

Mine Management Plans (MMPs) are the primary mechanism for the management of environmental impacts resulting from mining activities. However, recent mine site incidents have shown there are a number of areas that MMPs have failed to address appropriate environmental management issues. The monitoring and inspection of mine site infrastructure (including records of such inspections) and the reporting of water consumption and use are two issues not currently addressed by MMPs.

Extractive Materials

Significant deposits of extractive minerals, sands and gravel are found in the Darwin Harbour region. Urban settlements traditionally create demand for high volume and low cost extractive minerals for construction. The pressure to place these activities on the urban fringe and reduce extraction and transport costs is high but also creates significant potential for conflict with rural lifestyle, amenity and environmental values.

One of the critical issues for ESD in relation to mining is the inclusion of extractive mineral activities under the mining, rather than the planning, framework. This prevents decision-making regarding these activities being integrated into the normal land use and planning context.

The RO over Darwin Harbour fails to capture these extractive mineral activities which predominantly occur around Humpty Doo. Strategic planning processes, such as the *Litchfield Planning Concepts and Land Use Objectives* (NTG 2002), have attempted to canvass extractive industry issues. However, because the NT Planning Scheme is not able to place limits on where extractive minerals activity occurs, and there is no mechanism under the *Mining Act* to do so, they can be sited in areas very close to urban development. The mechanisms for public participation under the mining framework are weak and only grant objection rights to the owner of the land upon which the extractive permit is to be granted.

Petroleum

No exploration or production licences are currently approved for petroleum or gas within the Darwin Harbour region but production licences exist for the Black-Tip, Ichthys and Bayu-Undan gas and oil resources in offshore waters.

The proximity of potential oil and gas developments to the region does present the prospect of significant environmental risks at a regional scale, including the cumulative impacts associated with increasing seismic activities and pollution from growth in industrial, shipping and dredging activities.

Legislation

Frameworks under the *Mining Act*, *Petroleum Act*, *Petroleum (Submerged Lands) Act (Commonwealth)*, *Petroleum (Submerged Lands) Act (NT)*, *Offshore Petroleum and Greenhouse Gas Storage Act* and *Energy Pipelines Act* are designed to allow these

resources to be accessed, extracted, transported and used to generate electricity or fuel or exported from both onshore and offshore areas.

Beyond three nautical miles from the Northern Territory coast, petroleum and gas operators are required to implement an environmental management plan under the *Petroleum (Submerged Lands) (Management of Environment) Regulations*.

The *Petroleum Act* covers energy sources from hydrocarbons such as natural gas and petroleum on land, and under water up to three nautical miles out to sea. The framework provides for granting of petroleum exploration and production tenures in a similar fashion to the *Mining Act*. However, the *Petroleum Act* deals exclusively with environmental obligations.

ESD

None of these frameworks include ESD as an objective or relevant consideration in decision-making.

Integration

The transportation of hydrocarbons has inherent environmental risks. Despite this, key decision-making regarding these resources is not integrated within existing environmental protection frameworks and as such does not require assessment under the *Environmental Assessment Act*. While the Minister must consider whether the application would conflict with the Planning Scheme, the lack of environmental considerations within this scheme means that such values are unlikely to be reflected in decisions made under the energy resources legislative framework. This is a significant obstacle to the achievement of ESD.

Public Participation

Due to their commercially intensive nature, energy resources are largely managed without reference to public participation. The *Energy Pipelines Act* enables a person to apply for a permit to enter land to conduct surveys for the route of a pipeline and a licence to enter land to construct a pipeline. Notification of such applications is only required to be made to the local council, landowner and relevant indigenous bodies.

In granting the licence, the Minister must consider whether the pipeline will 'unnecessarily interfere with flora, fauna, fish or fisheries or scenic attractions on or in the vicinity of the land specific in the application'.¹³ Many environmental values (such as water, soil, habitat, and vegetation communities, for example) are not captured by this requirement.

Other Critical Issues for ESD

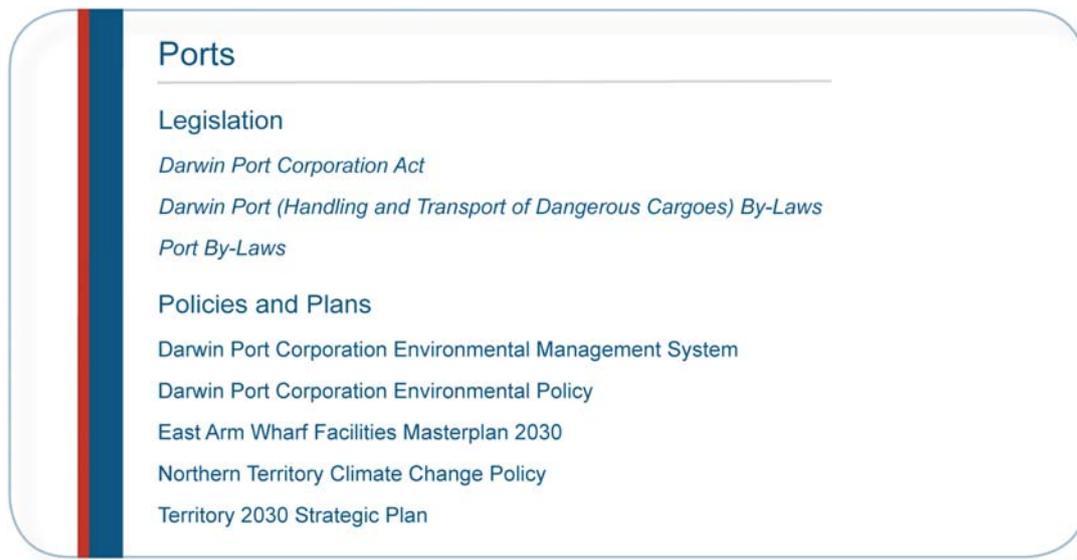
The construction of pipelines for the production of petroleum is currently approved under the *Petroleum (Submerged Lands) Act*. This Act allows for a licence to construct a submerged pipeline to be granted to the proponent without reference to environmental impacts of what that construction may involve, particularly dredging operations. Under normal circumstances, dredging activity must be licensed under the *Water Act* but this Act specifically exempts interference with waterways from its operation where that interference occurs in the course of mining or petroleum activities.

¹³ *Energy Pipelines Act* Section 15(2)(d)(ii)

Findings

- Frameworks for mining and the granting of mining tenure have substantial power and override planning and environmental land use regimes.
- There is a disconnection between the approval of mines at a mine site level, and the flow-on impacts associated with the movement and transport of this additional material through port areas. There is a lack of assessment, including cumulative impact assessment, of how the granting of approval to a mine site may impact the port or transport hub from which it is exported.
- The approval of submerged pipelines under the *Petroleum (Submerged Lands) Act* removes dredging and other impacts through construction of these pipelines from the requirement for licensing and approval under other environmental frameworks such as the *Water Act*.

2.4 Ports



Ports

Over the past decade, Darwin Harbour has been established as a major transport hub for northern Australia. Wharf and port facilities have been developed at a number of locations, most notably East Arm Wharf. This established use is expected to increase, placing growing pressure on environmental values and presenting possibly the greatest environmental threats to Darwin Harbour.

Legislation

The main legislation regulating the use of port facilities is the *Darwin Port Corporation Act* and *Port By-Laws*. Darwin Port Corporation (DPC) is primarily responsible for 'the regulation, improvement, management, operation and control of and the promotion of trade utilising the port' (Section 16). Under the Act, DPC is obliged to carry out its functions in a commercial manner and, while established under the public sector, operates as an independent private entity.

The legislation outlines the various functions of the DPC, including regulation of companies and vessels utilising the port facilities, and management and upgrading or maintenance of the facilities for trade purposes. A number of offences are prescribed under the Port By-Laws for various types of pollution in declared port areas. Both pieces of legislation require shipowners to pay remediation costs where water pollution occurs at the port.

The *Darwin Port (Handling and Transport of Dangerous Cargoes) By-Laws* adopt Australian Standard 3846-1998 and impose strict controls on the DPC to ensure that dangerous cargoes are handled safely within the port and are moved out of the port area promptly. Dangerous cargoes are defined as those that may present a safety hazard to people or the marine environment.

ESD

None of the legislation discussed above refers to ESD or any of the associated principles. The Darwin Port Corporation acts as a commercial body, subject to the

direction of the Minister for Transport. Decision-making under the legislation adopts the same trade-focussed approach.

Policies and Plans

The DPC's Environmental Policy refers to various components of ESD, but these references are vague. The policy appears to be a general statement reflecting the aspirations of the DPC without any specific application in its activities and plans.

There is no reference within the policy to the public interest or the desire of the DPC to consult with and engage the broader community. It appears that 'other accountable parties' (industry clients) are the only stakeholders that have been considered in forming the policy, and that DPC's focus is meeting regulatory obligations irrespective of ESD.

Integration

A lack of integration across legal frameworks applicable to port activities is a critical issue. The *Marine Pollution Act* and the activities of the DPC are inextricably linked, when one considers the potential for environmental impacts of port activities. Despite this, the *Marine Pollution Act* captures only those incidents involving ship-sourced pollution, and does not address pollution on the port surface, which may include dust emissions, and/or stormwater contamination. There are also significant omissions in the types of pollution covered by the *Port By-Laws*, considering the materials currently being handled. Similarly, there is overlap and uncertainty in agency responsibilities regarding enforcement of marine pollution offences, between the Department of Planning Marine Safety Division under the *Marine Pollution Act*, and DPC under the *DPC Act* and Port By-Laws.

As port activities do not require licensing under the *Waste Management and Pollution Control Act*, there is a significant gap in the consideration and implementation of ESD - particularly the precautionary approach - in the key legislation addressing these activities.

Legislation, policies and plans relating to ports and port activities are currently isolated, independent layers of regulation fail to accommodate or relate to one another creating a disjointed and ad hoc pattern of regulation. This approach is compounded by the division of administration responsibilities between the Department of Natural Resources, Environment, the Arts and Sport (NRETAS), the Department of Lands and Planning's Marine Safety Division and DPC. Even when considered in isolation, none of these frameworks can be considered best practice in the implementation of ESD.

Public Participation

No provision is made for public participation in the legislative framework applicable to ports and port activities.

Other Critical Issues for ESD

The commercial nature of the DPC's role, with no reference to ESD, has failed to acknowledge that it is a key regulatory arm of the Territory Government with regards to activities directly impacting the harbour. Its commercial role sits in direct conflict with its power to regulate pollution of ports under the *DPC Act* and the *Port By-Laws*. It is also noted that the DPC is exempt from the *Commonwealth Corporations Act*, preventing the application of any environmental and reporting obligations imposed under that legislation.

Findings

- **Activities at ports have the greatest potential for environmental impact on the harbour.**
- **Activities at ports do not require licensing and are not covered effectively by existing environmental protection legislation.**
- **DPC has been established for a purpose that is not environmentally focussed or regulatory, and is not legally required to operate under an environmental management plan.**
- **Despite the establishment of DPC as an independent private corporation, it is exempt from the *Commonwealth Corporations Act*, which means it does not have to comply with any environmental reporting obligations under that Act.**

2.5 Pollution, Waste and Public Health

Pollution, Waste and Public Health	
Legislation	
<i>Agricultural and Veterinary Chemicals (Control of Use) Act & Regulations</i>	<i>Poisons and Dangerous Drugs Act & Regulations</i>
<i>Agricultural and Veterinary Chemicals (Northern Territory) Act</i>	<i>Public Health Act & Regulations</i>
<i>Dangerous Goods Act & Regulations</i>	<i>Radioactive Ores and Concentrates (Packaging and Transport) Act & Regulations</i>
<i>Dangerous Goods (Road and Rail Transport) Act & Regulations</i>	<i>Waste Management and Pollution Control Act & Regulations</i>
<i>Litter Act</i>	<i>Water Act & Regulations</i>
<i>Marine Pollution Act & Regulations</i>	<i>Workplace Health and Safety Act & Regulations</i>
Policies and Plans	
Container Deposit Scheme	Rethinking Waste Strategy
Northern Territory Climate Change Policy	Territory 2030 Strategic Plan
Plastic Bag Ban	
Commonwealth	
<i>Export Control Act 1982</i>	National Environment Protection (Pollutant Inventory) Objectives
<i>Hazardous Wastes (Regulation of Exports and Imports Act) Act 1989</i>	National Waste Policy: Implementation Plan
<i>Imported Food Control Act 1992</i>	National Waste Policy: Less Waste, More Resources
<i>Quarantine Act 1908</i>	
<i>Quarantine Amendment (Health) Act 2003</i>	

The management of pollution and waste within Darwin Harbour's catchment and marine environment is crucial to securing ESD. As urbanisation and industrialisation increase, a lack of management based on ESD principles will undoubtedly lead to declines in the harbour's environmental condition.

Recent events involving the outbreak of e-coli bacteria across Darwin's beaches and waterways, highlights the relevance of frameworks addressing public and environmental health issues. The use of the harbour and its beaches for fishing and other recreational pursuits demands consideration of ESD in the management of these resources.

Pollution and waste

Legislation

The key legislation addressing pollution and waste in relation to Darwin Harbour is the *Waste Management and Pollution Control Act* (WMPC Act). The Act provides for the licensing of environmentally risky activities and also creates a number of offences where environmental harm is caused. The Act also allows for the Minister to declare Environmental Protection Objectives (EPOs) that must be adhered to.

The *Litter Act* also has a limited application in relation to the harbour. This Act creates an offence where littering occurs, and refers specifically to littering from boats into NT waters.

ESD

While ESD is included within the objectives of the *WMPC Act* and is defined within the Act, there is no reference to any of specific ESD principles. Decisions made under the Act regarding licensing and the declaration of EPOs do not require consideration of ESD. Both these mechanisms have significant potential to achieve ESD outcomes, but this has not been realised. Only one EPO has been endorsed to date.

The *Litter Act* does not refer to ESD. While the Act prohibits littering, there are no objects which define its intended outcomes.

Integration

In relation to pollution within the harbour, the *WMPC Act* exists alongside a number of other pieces of environmental protection legislation, including the *Water Act*, the *Darwin Port Corporation Act* and the *Marine Pollution Act*. The *WMPC Act* is the only one of these Acts that refers to ESD, yet three of four of these Acts rely upon the standard of environmental harm in establishing an offence. The administration of each piece of legislation is divided between a range of agencies, including those without an environmental focus, despite the fact they all address environmental protection issues to some extent. This demonstrates a lack of integration across these frameworks, where ESD could be established as a common objective.

There is also no harmonisation or integration between the *Litter Act* and the *WMPC Act*.

Public Participation

The *WMPC Act* does not allow for public input on the granting of licences or opportunities to appeal the granting of licences. The Act demands that the Minister take into account certain factors in the granting of a licence, but there is no transparency within this decision-making and no requirement that the Minister provide evidence of the factors considered. There is also no provision allowing members of the community to seek reasons for a decision to grant a licence.

Other Critical Issues for ESD

Offences under the Act are based on levels of environmental harm which are difficult to prove, and strict liability offences are absent, even where companies are the offender. The way that these offences are currently handled fails to provide an effective incentive not to pollute.

The lack of specific offences and strict liability offences, and the requirement to establish a causative link between the release of contaminants or pollution and identified environmental harm, fails to consider the cumulative impact of pollutants in the environment, and processes such as bioaccumulation, which can lead to later environmental harm.

The number of activities which require licensing under the *WMPC Act* are very limited and do not include activities at ports. There are arguably a large range of activities

occurring within the Darwin Harbour catchment that have significant potential to adversely impact the harbour environment, yet only the processing of hydrocarbons and landfill activities are required to be licensed. Legislation regulating waste and pollution in other jurisdictions has a considerably broader application to environmentally harmful activities (for example, the NSW *Protection of the Environment Operations Act 1997*).

The limited ability of the Chief Executive Officer of the Department of Natural Resources, Environment, The Arts and Sport (NRETAS) to impose additional or new licence conditions upon a licence holder is also a concern for ESD, where continual improvement in environmental management is a desired outcome. The CEO can only impose new conditions where required to do so in accordance with the Act, such as under a declared EPO, or where there is risk of pollution. This prevents the imposition of additional licence conditions where new scientific evidence or technological advancement comes to light.

Public and Environmental Health

Recent events involving the outbreak of e-coli bacteria across Darwin's beaches and waterways highlight the relevance of frameworks addressing public and environmental health issues. The use of the harbour and its beaches for fishing and other recreational pursuits demands consideration of ESD in the management of these resources.

The key piece of legislation addressing public and environmental health is the *Public Health Act*. This Act was drafted in 1958 long before the concept of ESD came into use. The Act is in the process of being repealed and will be replaced with the *Public and Environmental Health Bill* once that is passed. This draft legislation is broader than its predecessor and addresses issues of environmental health where the public health is threatened. The precautionary principle is specifically referred to within the objects of the draft Act. As the PEHB is expected to be passed prior to the end of the year, it has been discussed here in place of the *Public Health Act*.

ESD

While the PEHB demands that in carrying out the objects of the Act, regard is had to the precautionary approach, there is no further mention of ESD and other associated principles.

Integration

The resolution of public health concerns resulting from an environmental issue necessarily requires the combined efforts of both the Department of Health and Families and NRETAS. While the Bill provides for situations where the Chief Health Officer can refer the issue to another agency, the Bill is unclear about the responsibilities of relevant environmental authorities where there is an environmental health issue that has implications for public health. This demonstrates poor integration between the roles of agencies responding to environmental and public health issues.

Public Participation

There is a lack of public participation in the Bill, particularly in regards to activities that require registration. There is also no mandatory review period for registrations and registration documents are not made public under the Bill. Considering the

inherent public interest nature of the legislation, the public should be able to access information regarding registered businesses and the conditions under which they operate.

Water Act

Section 16 of the Northern Territory *Water Act* prohibits the pollution of water. Section 74 of the *Water Act* permits authorisation of waste discharge to water. This authorisation takes the form of a Waste Discharge Licence (WDL). WDLs are regulatory instruments used to regulate the quality and quantity of wastewater created by industrial and commercial operations that are then discharged to receiving waters in the NT.

Licences can only be issued where beneficial uses or water quality objectives for the receiving waters have been declared by notification in the Gazette pursuant with Section 73 of the *Water Act*. Beneficial uses (or environmental values) include ecosystem protection, drinking water, recreation and cultural use, agricultural supply and industrial use. The preferred process for selection of the beneficial uses is via public stakeholder consultation in accordance with the National Water Quality Management Strategy.

The *Water Act* has been used to regulate a number of uses within Darwin Harbour. This includes Power and Water operations (wastewater treatment facilities), aquaculture facilities, dredging operations (disposal of spoil) and marinas. Licences are issued on a site by site basis but are guided by declared beneficial uses or water quality objectives determined for Darwin Harbour. Beneficial uses have been declared for Darwin Harbour and marine reaches of rivers and creeks draining into the Harbour.

Diffuse sources of potential pollutants are not regulated by the *Water Act*, however, as discussed in the next section, government has adopted initiatives such as applying Water Sensitive Urban Design principles in decision making.

In early June 2010, the Department of Health and Families (DHF) closed beaches in the Darwin area to swimming and fishing due to the detection of high counts of *E. coli* and *Enterococci* bacteria in the sea water which were above public health safety guidelines.

This was followed by an announcement in mid June by NRETAS that an algal bloom (*Lyngbya majuscula*) was to be cleaned up from various beaches.

Since then DHF, NRETAS, Power and Water Corporation (PWC) and the Darwin City Council (DCC) have been undertaking extensive water quality monitoring and testing throughout the Darwin Harbour region, including beach water, tidal creeks, lagoons, sewerage outfall sites and mixing zones, and stormwater sites. The EPA has maintained a watching brief on this situation.

Marine Pollution

As indicated in the *Territory 2030 Strategic Plan*¹⁴ and Darwin Port Corporation's *MasterPlan 2030*, there are significant expansions planned for the wharf and port facilities located in Darwin Harbour. Similarly, urbanisation within the catchment and

¹⁴ NTG 2009

around the coastal fringes of the harbour is planned to increase. These are just two factors that will undoubtedly increase the pressures placed upon the harbour and the likelihood of marine pollution events.

Legislation

The *Marine Pollution Act* seeks to regulate all ship-sourced pollution in NT waters. All vessels are subject to the *Marine Pollution Act* and *Regulations* except government and Naval vessels. The protection of environmental values within the harbour is considered under the Act through a number of offences dealing with pollution of the marine environment, and the requirement that all ships must have in place a shipboard oil pollution emergency plan.

ESD

The Act does not refer to ESD or any of the associated principles, but a number of mechanisms established under the Act reflect certain principles to some extent.

Integration

There is a lack of integration between the *Marine Pollution Act* and other legislation addressing threats to the environment posed by ships and marine transport. The incidents at East Arm Wharf have highlighted a failure of environmental protection legislation to address pollution entering the harbour from a port area, as the offences established under the *Marine Pollution Act* can only be enforced against the ship owner or shipping company and only apply to ship-sourced pollution.

The *Port By-Laws* also create a number of offences where wastes are discharged in port areas, creating some overlap with the *Marine Pollution Act*. The Department of Lands and Planning (DLP) Marine Safety Branch has key responsibility for administering the *Marine Act* and the *Marine Pollution Act*, while DPC is charged with administering the *Port By-Laws*. This administrative overlap creates uncertainty regarding which agency is responsible for monitoring compliance with environmental protection laws in port areas. A similar issue arises in the operation of the Marine Safety Branch (DLP), the DPC and NRETAS which is responsible for administering the *Waste Management and Pollution Control Act*.

Public Participation

There is no provision for public participation under the marine pollution regulatory framework.

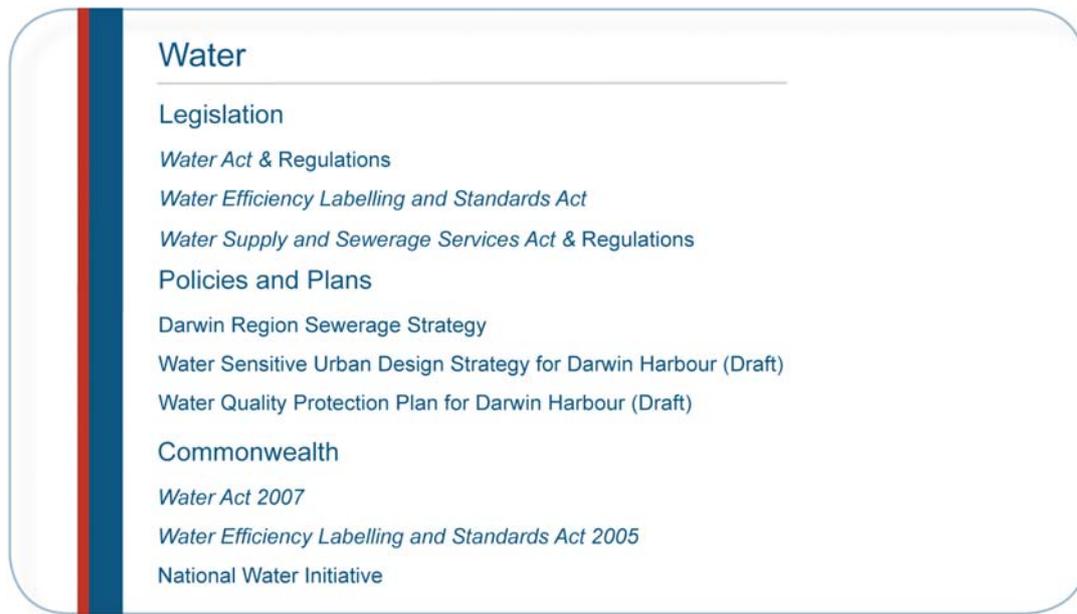
Other Critical Issues for ESD

While the *Marine Pollution Act* addresses a number of specific sources of pollution that are prohibited in coastal waters, grants specific and broad powers to authorised officers, and creates a number of offences where that pollution occurs, these penalties will be ineffective unless they are supported by a rigorous and robust enforcement regime. The Act covers all coastal waters including the area from the low water mark of the NT coast to approximately three nautical miles seawards. Given the extent of this area, significant investment by the relevant agencies is required to establish such a regime.

Findings

- The *Waste Management and Pollution Control (WMPC) Act* is inadequate in regulating industrial activities within the harbour. The Act fails to provide for licensing of all significantly risky environmental activities.
- The offences established under the *WMPC Act* are difficult to establish, relying on levels of environmental harm as the standard of proof, which in practice have prevented penalties being effectively applied. Specific offences addressing water, air and land pollution are absent from the Act. Additionally, where a substance is leaked into the harbour, the burden of proof lies with the regulator to establish that environmental harm has been caused, rather than upon the offending company/individual to establish that environmental harm was not caused and/ or they did not leak the substance.
- The *Water Act* is a key regulatory instrument for Darwin Harbour, operating specifically on a site by site basis, however guided by beneficial use declarations. Where there are not declared beneficial uses under the *Water Act* a licence to discharge waste water is not required.
- The role and application of the *Marine Pollution Act* is limited and inadequate. Its reliance on the standard of environmental harm for establishing an offence under the Act makes a successful prosecution, even where a substance has leaked into the harbour unauthorised, unlikely.
- The *Marine Pollution Act* is enforced by the Marine Safety Division of the Department of Lands and Planning, which typically does not have a focus on environmental protection.

2.6 Water



Northern Territory waters are vested in and regulated by the Crown, subject to limited riparian, domestic and stock watering rights. Ownership of watercourse beds and banks is also granted to the Crown unless otherwise specified.

Legislation

The *Water Act* regulates the issuing of licences to take and use surface and groundwater, pollute water, and construct facilities such as dams and bores. Strategic planning is enabled through the declaration of water control districts and beneficial uses and the development of water allocation plans. The latter are not necessarily developed for all water control districts. The Darwin region was declared a water control district in 1999 and beneficial uses apply to water bodies in the region.

Policies and Plans

A Water Quality Protection Plan (WQPP) for Darwin Harbour is being developed using the national Framework for Marine and Estuarine Water Quality Protection. This framework was developed as part of the National Water Quality Management Strategy and provides a nationally consistent approach to water quality protection. The aim of the WQPP is to ensure that water quality objectives and community values associated with Darwin Harbour waterways are maintained. Phase one was reported in 2009¹⁵.

The Territory Government has also identified that water sensitive urban design (WSUD) principles must be applied to all new development and redevelopment areas in order to manage environmental impacts on Darwin Harbour. This is a holistic approach to the planning and design of urban development that aims to minimise impacts on the natural water cycle and protect the health of aquatic ecosystems. Water sensitive urban design entails the integration of stormwater, groundwater,

¹⁵ Fortune and Maly 2009

water supply and wastewater management and is represented by the following principles:

- Protecting and enhancing natural water systems (harbours, creeks and rivers etc)
- Treating urban stormwater to meet water quality objectives for reuse and/or discharge to receiving waters (including groundwater)
- Matching the natural water runoff regime as closely as possible
- Reducing potable water demand through water efficient fittings and appliances, rainwater harvesting and wastewater reuse
- Minimising wastewater generation and treatment of wastewater to a standard suitable for effluent reuse opportunities
- Integrating stormwater management into the landscape, creating multiple use corridors that maximise the visual and recreational amenity of urban development. (WSUD discussion paper).

The major goal of the *WSUD Strategy for Darwin Harbour* is the adoption of WSUD in all new subdivisions in the region. In order to ensure WSUD is an integrated part of the planning and stormwater management process, the strategy must be incorporated within the existing planning and legislative framework.

The *NT Climate Change Policy* also outlines key targets for water management relevant to the Darwin Harbour region. This includes a review of the *Water Act* to ensure that water resources are proactively managed to respond to climate change impacts and that a framework is developed for better managing water resources under the additional stresses and uncertainties created by climate change.

Water pollution can be grouped into two main components –*point source pollution*, or pollution from a single industry such as a sewage treatment plant, and *diffuse source pollution*, or low level pollution from large areas that is carried by runoff from bare soils, roads, and other areas subject to poor water management.

Point source pollution produced by large industries is regulated by waste discharge licences (issued under the *Water Act*) that set discharge limits, and establish mixing zones and environmental monitoring programs to verify the discharge limits are being met. This occurs on a site by site basis.

ESD

Ecologically Sustainable Development principles are not explicitly stated in the *Water Act* apart from where a water management plan is required to allocate water according to an estimated sustainable yield. These principles also do not inform whether a water allocation plan should be prepared, what it should contain or how it should regulate water use.

Ecologically sustainable management of the Territory's water resources is therefore at the discretion of:

- the Controller of Water Resources, in issuing licences
- the Minister, in declaring water control districts and preparing and water allocation plans

- the Power and Water Corporation which manages and provides the Territory's drinking water supplies and which is not legislatively required to adhere with ESD principles
- mining and petroleum operations which are not regulated by the *Water Act*, except for the issuing of waste discharge licences and limited emergency powers.

Integration

The *Water Act* framework fails to integrate with other key elements within the water sector or with other relevant external sectors such as parks and reserve management, urban planning and mine management.

The framework does not integrate water allocation with water quality or water diversion issues, i.e. there is no requirement that a water allocation plan deal with any issue apart from allocation.

In its current form, the *Water Act* cannot be used to control demand through urban water restrictions or requirements for re-use or recycling based upon seasonal supply. The primary means by which the consumption of water can be reduced in the region is through proper and efficient urban design. In this regard the planning, infrastructure and building frameworks are critical to achieving this outcome.

While mining activity in the Darwin Harbour region is restricted to extractive industries, it is nevertheless important to note that water management in the mining context is treated under separate legislation and management structures. Mining and petroleum activities are exempted from sections of the *Water Act* relating to interference and obstruction of waterways and prohibition of pollution.

Public Participation

Applications for water licences must be advertised. Public submissions are invited and the Water Controller must both consider these comments and include a statement in the final decision about how they have been taken into account and the reasons for doing so.

The Act provides rights for a 'person aggrieved' from a decision of the Water Controller to appeal on its merits to the Minister or a Review Panel. This only includes decisions relating to the issuing of licences and permits, not water planning. Under the *Water Act* the community:

- cannot seek review of a water allocation decision
- does not have to be consulted in the course of water investigations which inform water planning decisions
- does not have a mechanism whereby it can contribute to issues of compliance, either regarding other members of the public or the government's compliance with the law and the planning process.

Despite the lack of statutory obligation, the government has actively sought community engagement in water planning projects. Key studies to inform water

planning in the region have led to an assessment of social and cultural values and environmental flow requirements¹⁶.

Community engagement in water planning is enabled through the creation of Water Advisory Committees (WACs), which in the case of the Darwin Harbour region include the Darwin Harbour Advisory Committee and the Rapid Creek Catchment Water Advisory Committee. Water Advisory Committees are not mandatory and outside this process, the community does not have any statutory ability to be involved in water planning.

Findings

- **The *Water Act* is not informed by the principles of ESD. Planning for the sustainable use and management of water resources is discretionary and dependent upon the good practice of NRETAS.**
- **The *Water Act* framework fails to integrate with other key elements within the water sector or with other relevant external sectors such as parks and reserve management, urban planning and mine management.**
- **The regulatory component of the *Water Act* operates on a site by site basis (licensing specific discharge points) and is therefore limited in its ability to consider the cumulative impact of various land uses on the water quality of Darwin Harbour.**

¹⁶ Woodward et al 2008

2.7 Fisheries and Marine Areas

Fisheries and Marine Areas	
Legislation	
<i>Fisheries Act & Regulations</i>	<i>Marine Pollution Act & Regulations</i>
<i>Marine Act & Regulations</i>	
Policies and Plans	
Draft Northern Territory Marine Protected Areas Strategy (In Development)	Northern Territory Strategic Plan for Fisheries Research and Development 2007-2011
Marine Bio-security Policy	Territory 2030 Strategic Plan
Commonwealth	
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Guidelines for the Ecologically Sustainable Management of Fisheries
<i>Environment Protection (Sea Dumping) Act 1981</i>	The North Marine Region Bioregional Plan (In Development)
<i>Navigation Act 1912</i>	
<i>Protection of the Sea (Prevention of Pollution from Ships) Act 1983</i>	

Darwin Harbour is a primary resource used by both commercial and recreational fishermen in the Northern Territory. As industrialisation and urbanisation around the area expands, increasing pressure on the resource and strong cultural ties to certain fish and marine species are driving the need for sustainable management.

This legislative framework for this sector is discussed in terms of fisheries and marine area management and marine pollution.

Fisheries and Marine Area Management

Legislation

The *Fisheries Act* and *Fisheries Regulations* make up the legislative framework applicable to management of fisheries in the harbour. Key elements of this framework include the requirement for licensing of aquaculture and commercial fishing operations, the creation of an offence where these activities are undertaken without a licence, the imposition of amateur fishing limits (relating to the number, size and weight of fish, methods of fishing used, types and amounts of fishing gear allowed, and times when fishing can and cannot take place), and provision for Fishery Management Areas (FMAs). Once such an area is declared there is a statutory requirement that a plan of management is prepared.

ESD

The *Fisheries Act* specifically lists ESD within its objectives, stating that one of the objects of the Act is 'to manage the aquatic resources of the Territory in accordance with the principles of ecologically sustainable development' (Section 2A). There is no

reference, however, to any of the specific principles of ESD, such as the conservation of biological diversity and ecological integrity.

While ESD is recognised as an objective of the Act, the Part of the Act providing for FMAs¹⁷ does not specifically refer to ESD or its associated principles, and there is no statutory requirement for decision-makers to take these into account when making decisions regarding FMAs.

Policies and Plans

The Department of Resources' Fisheries group have adopted a policy which commits them to implementing the principles of ESD into the management of all its fisheries under the existing framework.

Northern Territory export fisheries must demonstrate that their management is ecologically sustainable in order to receive export accreditation and exemption from export controls under the Commonwealth's *Environment Protection and Biodiversity Conservation (EPBC) Act 1999*. Under the EPBC Act all Australian fisheries that export product are required to be assessed for their environmental performance against the *Guidelines for the Ecologically Sustainable Development of Fisheries*¹⁸. The process involves intensive reporting and negotiation with the Department of Sustainability, Environment, Water, Population and Communities (DSEWPC)¹⁹ to accurately reflect and ultimately accredit the management arrangements.

Integration

A gap in the legislative framework applying to fisheries, regarding the protection of threatened species of fish and aquatic life, highlights a lack of effective integration of the *Fisheries Act* within broader environmental protection frameworks. The *Fisheries Regulations* (Regulation 10) specifically prohibit a person from taking fish or aquatic life which is a protected species under the *Territory Parks and Wildlife Conservation Act (TPWCA)*. The *TPWCA*, however, does not include fish within its definition of 'wildlife'. This means that the declaration of 'threatened' species under Section 30 of that Act, and the protections afforded to those species, do not apply to fish.

A Memorandum of Understanding between NT Fisheries and the Parks and Wildlife Commission states that threatened fish and aquatic species, as identified jointly by the two agencies, are to be declared and managed under the *TPWC Act*. However, as noted above, there is no provision within that Act for fish species to be declared and protected as threatened species.

The failure of the legislative framework applying to marine areas to provide for the protection of marine habitats such as seagrass beds, mangroves, mudflats and intertidal zones is another obstacle to the conservation of biodiversity resulting from a lack of integrated frameworks. The increase of residential development in areas surrounding or adjacent to marine areas is a particular threat in the Darwin Harbour region, as runoff from these areas has a direct impact on the sensitive receiving marine environment.

¹⁷ Part III, Section 21

¹⁸ DEWR 2007

¹⁹ Previously the Department of Environment, Water, Heritage and the Arts (DEWHA)

The abundance of mosquitoes and other biting insects in these areas has also typically created demand for clearing or control of these environments. This pressure has not been addressed within the planning framework. The *Planning Act* and the Planning Scheme do not address fisheries issues or the potential for significant conflict between these two land uses which could be resolved, for example, by segregating residential areas and sensitive marine environments

Public Participation

There is a lack of public participation under the *Fisheries Act* in regards to the selection and declaration of a FMA. Public participation is not invited when the area is being proposed or declared and notice of such declaration only occurs at the discretion of the Minister once it is finalised. The Minister can also decide whether or not to invite public involvement in the drafting of plans of management for a FMA.

Other Critical Issues for ESD

While there is potential for 'no-take' zones to be established under the *Fisheries Act* through the use of the FMA mechanism, there is no provision in any of the relevant marine legislation for the establishment of marine parks or protected marine areas. This is a significant obstacle to the conservation of biological diversity.

It is understood that the Territory Government is currently considering the possibility for marine parks to be established under amendments to existing legislation. The EPA encourages the adoption of ESD principles as a solid foundation for the legal establishment of these parks.

Findings

- **The *Fisheries Act*, while referring to ESD, does not reflect these principles or require them as a consideration in decision-making under the Act. Specifically, there is a lack of public participation in the nomination and declaration of Fisheries Management Areas, and an absence of a marine park protected area mechanism.**
- **There is poor integration between the *Fisheries Act* and the *Territory Parks and Wildlife Conservation Act*, resulting in a failure to protect fish species as threatened under the legislation, and reliance on protection and management measures for threatened species under the *TPWC Act*, which (unlike the *Fisheries Act*) does not refer to ESD.**

2.8 Biodiversity, Heritage and Natural Resource Management

Biodiversity, Heritage and Natural Resource Management	
Legislation	
<i>Biological Control Act</i>	<i>Parks and Wildlife Commission Act</i>
<i>Biological Resources Act & Regulations</i>	<i>Soil Conservation and Land Utilisation Act</i>
<i>Bushfires Act & Regulations</i>	<i>Territory Parks and Wildlife Conservation Act & Regulations</i>
<i>Heritage Conservation Act & Regulations</i>	<i>Weeds Management Act & Regulations</i>
<i>Northern Territory Aboriginal Sacred Sites Act & Regulations</i>	
Policies and Plans	
Northern Territory Bushfire Management Strategy (In Development)	Northern Territory Parks and Conservation Masterplan (Draft)
Northern Territory Climate Change Policy	Sites of Conservation Significance
NT Integrated Natural Resource Management Plan 2010-2015 (In Development)	Territory Eco-link
Northern Territory Marine and Coastal Biodiversity Management Strategy (In Development)	Territory 2030 Strategic Plan
Northern Territory Marine Protected Areas Strategy (In Development)	Weed Management Plan for Gamba Grass
Commonwealth	
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	<i>Wildlife Protection (Regulation of Exports and Imports) Act 1982</i>
<i>Historic Shipwrecks Act 1976</i>	National Strategy for the Conservation of Australia's Biological Diversity 2010 - 2030
<i>Protection of Moveable Cultural Heritage Act 1986</i>	

The Darwin Harbour region is rich in biological diversity and is home to sites of national and international ecological, cultural and heritage significance. There is a range of Territory and Commonwealth legislation, policies and plans intended to protect these values for the benefit of present and future generations. Key items of legislation and policy which have relevance to the region will be discussed below in two sections relating firstly to parks, reserves and wildlife, and secondly, to natural resource management.

Parks, Reserves and Wildlife

Legislation

The *Territory Parks and Wildlife Conservation Act (TPWC Act)* is the principal piece of legislation enabling the protection and conservation of the Territory's biodiversity through the creation of parks and reserves and the protection of wildlife.

Activities in parks and reserves are regulated by the *TPWC Act* and relevant By-Laws which are administered by NRETAS. The Act also contains mechanisms for the listing, management and protection of threatened species of wildlife, including the declaration of areas of essential habitat and the protection of wildlife within parks and reserves.

The Act provides two legislative mechanisms for regulating land use outside of reserves: declarations of 'essential habitat'; and agreements with land owners under Section 75.

An essential habitat may be declared where a discrete area of land or sea has been identified as essential to the survival of a species. The declaration prescribes certain activities which may not be carried out. However, there is no positive requirement to declare essential habitats and the absence of such declarations to date possibly reflects this difficulty.

Financial assistance is a possibility under Section 75 agreements whereby Parks and Wildlife may enter into agreements with a land owner for the protection and conservation of wildlife and natural features on their land. Many agreements have been entered into in the past and positively reflect the ESD principle relating to incentive mechanisms. More recently, NRETAS has developed the Territory Eco-link initiative which focuses strongly on partnerships with stakeholders and landholders to achieve more effective and broader conservation outcomes.

ESD

The *TPWC Act* does not specify overarching objectives and ESD is not referred to either as an intended outcome, or as part of any decision-making occurring under the Act. The Act specifies an objective for the declaration and management of parks and reserves, although this objective is merely to 'make provision for the establishment and management of parks and reserves appropriate to be established by the Administrator'²⁰.

Integration

A major legislative shortcoming of the framework is its lack of integration in decision-making processes across the system of land allocation and management in the Territory. Other governmental processes such as land use planning, water allocation planning, development decision-making, waste and pollution control, pastoral land management and mine management are not being appropriately informed by the *TPWC Act*. Issues outlined in management programs for threatened wildlife, for example, are not reflected in other processes which may actually be able to address the threats posed to wildlife, therefore severely compromising the effectiveness of those programs.

A further shortcoming of the current framework is that it is characterised by what is effectively the subservience of the *TPWC Act* to the various pieces of legislation governing the mining and petroleum sectors. The relationship gives the ultimate decision-making authority concerning the protection of conservation areas from the adverse impacts of mining to the Minister for Mines, who is not bound under that legislative framework to consider the principles of ESD.

Public Participation

Before declaring an area of land or sea to be a park, reserve, sanctuary, or wilderness zone, the Administrator must first consider a report from the NT Parks and Wildlife Commission about the proposed area of land or sea to be declared.²¹ Parks

²⁰ TPWC Act Part II, Section 11

²¹ AMCS undated

and Wildlife must consult the public and include any representations made (together with its comments on those representations) in its report to the Administrator.

The *TPWC Act* also provides for members of the public to make submissions on a draft plan of management after it has been prepared and before it is provided to the Legislative Assembly for final approval. There is no requirement for public participation when an approved plan of management is amended, but the amended plan must go before the Legislative Assembly for final approval.

Natural Resource Management

Legislation

Legislation relating to natural resource management (NRM) in the Northern Territory includes the *Soil Conservation and Land Utilization Act*, *Weeds Management Control Act*, and the *Bushfires Act*.

The *Soil Conservation and Land Utilization Act* can be used to declare: areas of erosion hazard; soil conservation orders; and restricted use areas. A restricted use area is in place on the coastal strip adjacent to Imaluk and Wagait Beaches on the Cox Peninsula.

Private land managers are encouraged to develop control plans to minimise the risks of erosion and sedimentation, while developers are required to submit plans for individual developments. Despite this, the *Planning Act* does not regulate the time between ground preparation works and subsequent development - a time lag which can potentially lead to significant erosion.

Just over 160 species of weed are found in the Darwin Harbour region. Those that pose a more serious threat are Mimosa (*Mimosa pigra*), cabomba (*Cabomba caroliniana*), gamba grass (*Andropogon gayanus*) and mission grass (*Pennisetum polystachion*).

Plans of management are the primary tool for managing weeds under the *Weeds Management Control Act 2001*. The Darwin Harbour region has been declared a management zone for gamba grass, which allows landholders to manage and control, rather than eradicate, existing infestations.

Management of bushfires in non-urban areas of the Northern Territory is implemented through the *Bushfires Act*. The Bushfires Council of the NT is the statutory body established under the Act, while Bushfires NT is responsible for supporting the Bushfires Council and volunteer brigades across the Territory. Bushfires NT has a number of fire management objectives including:

- 'protection of life, property and the environment from the effects of wildfires
- maintenance of natural resources, including native ecosystems and productive lands, by the use of appropriate fire regimes'²².

These objectives are informing the development of a *NT Bushfires Management Strategy* but are not reflected in legislation.

²² <http://www.nt.gov.au/nreta/natres/bushfires/about.html> (Accessed 26 August 2010)

Plans and Policies

One of the most fundamental issues with ESD in Darwin Harbour is that very little is known of its coastal ecosystems and how these may be valued within the broader Northern Territory context. Approaches to rectify this issue include the *Marine and Coastal Biodiversity Strategy* and the *NT Marine Protected Areas Strategy*.

The Northern Territory is establishing a comprehensive, adequate and representative system of Marine Protected Areas (MPAs) to be a part of the National Representative System of Marine Protected Areas. In order to address national and international obligations and cater for unique Northern Territory circumstances, a strategy for identifying, selecting, managing and monitoring a system of MPAs has been initiated. The strategy aims to recognise the unique and relatively pristine habitats of NT marine ecosystems, their strong socio-cultural associations and the prevalence of coastal Indigenous ownership and legal rights (e.g. *Land Rights Act*, *Native Title Act*, *Sacred Sites Act*). It will also recognise the significant social, ecological, fisheries and economic benefits of establishing MPAs and the need for a science-based and participatory approach to MPA identification and selection involving all stakeholders.

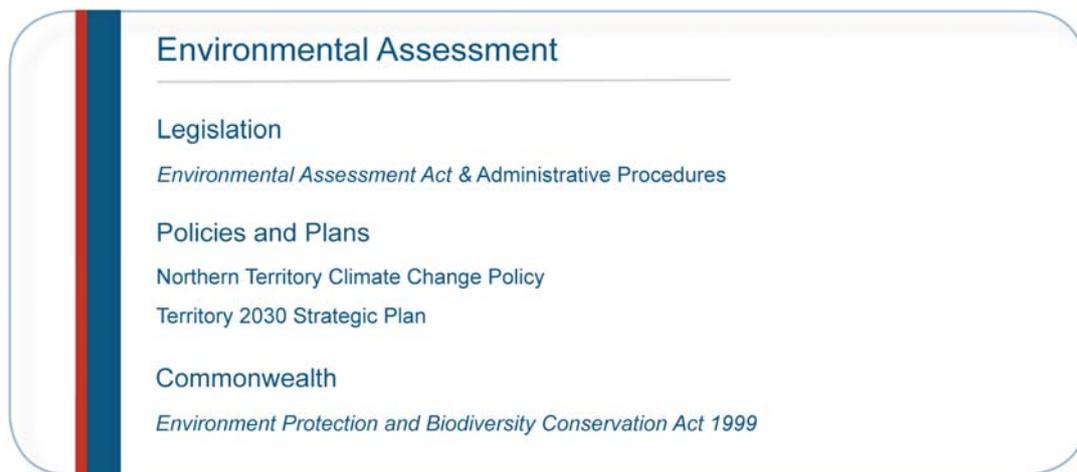
The NT Marine and Coastal Biodiversity Management Strategy is currently being developed by NRETAS and will review existing strategic, policy and technical documents relating to the NT's coastal and marine ecosystems, habitats and species. Key issues, actions, responsibilities, performance indicators and resources required for conservation management will be prioritised. Conservation and threat assessment for each coastal and marine habitat/species group will enable prioritisation of conservation management issues. Strategic, policy and technical issues and proposed actions will also be outlined.

Another critical issue is achieving the integration of management across the range of sectors with an interest in the harbour region. The Integrated Natural Resource Management Plan (INRM Plan) provides the framework for management of the Northern Territory's natural environment by government, industry and community sectors. The plan is broadly based on the principles of ESD and is a good example of a framework encompassing Darwin Harbour that promotes integration and public participation.

Findings

- **The subservience of the *TPWC Act* to legislation associated with the mining and petroleum sector effectively cedes decision-making authority to the Minister for Mines who is not bound to act according to ESD principles.**
- **One of the most fundamental issues with ESD in Darwin Harbour is that very little is known of its coastal ecosystems and how these may be valued within the broader Northern Territory context.**
- **The Integrated Natural Resource Management Plan for the NT provides a good example of a framework encompassing Darwin Harbour that promotes integration and public participation.**

2.9 Environmental Assessment



Environmental Assessment

Environmental assessment processes are a critical means of providing for the assessment of wide range of activities with the potential to significantly impact upon the environment of the Darwin Harbour region. Environmental assessment is an important part of the overarching governance framework in the Territory to ensure environmental protection.

Processes for the environmental assessment activities within the Darwin Harbour Region are established at a federal level under the Commonwealth *Environment Protection and Biodiversity Conservation Act* and at the Territory level under the *Environmental Assessment Act*. The *Environmental Assessment Act* has recently been reviewed by the EPA and final advice and recommendations were provided to the Territory Government in April 2010.

Legislation

The *Environmental Assessment Act* and the Administrative Procedures provide the framework for environmental assessment undertaken within the Northern Territory. The current framework focuses on the environmental assessment of specific developments, on a site by site basis. While the Minister for the Environment has a “call in” power, the process is triggered when a development seeks a form of approval from another piece of legislation (for example, the *Planning Act*).

The Act and Administrative Procedures have relevance for Darwin Harbour as they are used to assess major developments occurring in the region. In assessing development proposals, the environmental assessment process draws from major policy initiatives as well as plans and strategies and applicable legislation.

ESD

The *Environmental Assessment Act* and Administrative Procedures date back from the early 1980s and do not site the concept or principles of ecologically sustainable development in the objectives of the Act. The principles of ESD do not guide how the environmental assessment process is to be undertaken or the outcomes being sought from the process.

Integration

The environmental assessment process is triggered by the approval mechanisms of other pieces of legislation and serves the purpose of providing advice and recommendations to the entities responsible for granting an approval. Accordingly, integration is central to the operation of this process.

An assessment of a development proposal will include examining how a proposal sits within the policy context, for example, whether a proposal is in keeping with the objectives of T2030 or Growing the Territory. The process therefore provides a mechanism to examine, on a site by site basis, how the various layers of policy and legislation apply to a specific development.

When reviewing the *Environmental Assessment Act* and Administrative Procedures the EPA stated that greater public transparency was required to support the integration of this process with the approval process, allowing the community to understand and be assured that environmental issues identified through the assessment process are accounted for by the approval process, subsequent conditions of approval as well as regulation of conditions.

Public Participation

The *Environmental Assessment Act* and Administrative Procedures allow for public consultation, but this is limited to reviewing environmental assessment documents when an assessment is being undertaken. The decision on whether a proposal requires environmental assessment is not open to public scrutiny.

Findings

- **Recent environmental incidents in the Darwin Harbour region have served to highlight a number of the weaknesses in the framework provided by the existing *Environmental Assessment Act*. These include the failure of development approvals to incorporate appropriate operating conditions based the findings of an environmental assessment, and the ongoing problems created by the lack of integration between the *Environmental Assessment Act* and development approvals issued under other regulatory frameworks such as the *Planning Act*.**
- **The Act is not informed by the principles of ESD. It is not referenced as an objective of the Act and the operations of the Act are not constructed around supporting the implementation of the principles.**
- **The integration of the outcomes of an environmental assessment for a development and the subsequent approval and regulatory regime is not consistent between the different approval regimes; and not always publicly transparent.**
- **The Act has the ability to integrate the various policies, plans and legislation that apply to a development, but this is on a site by site basis – it is not conducive to studying or understanding the cumulative impact associated with the various development pressures on the harbour.**

3 Discussion and Findings

Ecologically sustainable development (ESD) provides a common framework for integrating sectoral activities and development planning processes. Governance frameworks that are based upon the concept of ESD ensure accountable and transparent decision-making that considers and weighs up economic, social, cultural and environmental factors. Governance frameworks based on ESD recognise that there are trade-offs that need to occur in decision-making between economic, social, cultural and environment factors but ensure this occurs in a transparent manner and is based upon the most appropriate and accurate available information.

In its advice to the Minister on ESD (provided in February, 2010) the EPA recommended that a common definition and principles of ESD be accepted for the Northern Territory and articulated through a Sustainability statement. This reflected the undertaking by the Northern Territory when becoming a signatory to the Intergovernmental Agreement on the Environment in 1992. The EPA recommended the statement include a commitment to develop appropriate governance frameworks to support the integration of the principles of ESD into the development of policy, legislation and regulation, to guide strategic and sustainable decision-making. The Minister is yet to respond to these recommendations.

In undertaking this review on the existing governance systems that inform planning and development for Darwin Harbour, the EPA has used its powers to determine whether these systems are able to promote and facilitate decision-making based upon the principles of ESD, and accordingly are able to deliver sustainable outcomes and development for the harbour region.

From this comprehensive analysis of the current level of integration across sectors, the EPA makes the following key findings:

1. An Overarching Governance Framework for the Darwin Harbour Region

The layering of legislation, policy and strategies applicable to the Darwin Harbour region has resulted in a complex web of roles and responsibilities competing to set strategic direction and planning for development. This has resulted in ad hoc management and use of resources, and complex decision-making frameworks. The Darwin Harbour Strategy (endorsed by the Northern Territory Government in June 2010) and its predecessor, the Darwin Harbour Regional Plan of Management (2003), attempt to align applicable legislation, decision-making and strategic planning towards a common objective and goal and in doing so set the guidelines necessary to meet a common goal.

The Darwin Harbour Advisory Committee has provided a consistent voice in promoting a coordinated and integrated approach to decision making, environmental management and protection in the Darwin Harbour region. The committee has successfully proposed for an integrated monitoring plan to be applied to Darwin Harbour (with the governance structure of this is yet to be finalised). It is commendable that a committee made up of community members has been able to achieve the first necessary steps towards integration through the Darwin Harbour Strategy.

With the endorsement of the Darwin Harbour Strategy, the Northern Territory Government has committed to the annual reporting by its agencies against the strategy, as well as establishing and supporting an integrated monitoring plan for the harbour.

While the Harbour Strategy is to be praised for its attempt to provide focus to a complex legislative environment, there is a risk that the strategy will result in little change to the status quo, particularly in resolving the current competing interests when determining the strategic direction for the Darwin Harbour region. To achieve this level of integration will require legislative and policy change to provide an overarching governance framework, which coordinates and integrates strategic planning processes and decision making by the various interests and agencies that have a role in the use, exploitation and management of the Darwin Harbour regions resources, as well as the conservation and protection of its natural, social and cultural values.

Currently, the only statutory instrument that captures the competing interests and demands in the region is the zoning map located in the Planning Scheme. However, while the Planning Scheme maps and illustrates land allocation and use, it does not provide the governance framework to oversee land allocation, land use decisions, land management considerations and the setting of environmental objectives and standards.

The strategy sets the vision for Darwin Harbour but is unable to provide the governance framework necessary to support the vision. The framework necessary for the achievement of this vision has to come from government.

2. ESD in Policy, Legislation and Planning.

There are a number of high-level government policy documents that are of critical importance to decision-making regarding future of the Darwin Harbour region. Significantly, these include the Northern Territory Government's Territory 2030 Strategic Plan and Northern Territory Climate Change Policy. While these documents do not directly cite ESD principles as part of their objectives, they are clearly informed by the principles and are implicitly based upon the recognition for sustainability in the Territory.

There are also a number of key pieces of legislation that are relevant in shaping ESD outcomes not only in the Darwin Harbour region but across the Northern Territory. These include the *Planning Act*, the *Mining Act* and *Mining Management Act*, the *Water Act*, the *Territory Parks and Wildlife Act*, the *Darwin Ports Corporation Act*, the *Fisheries Act*, the *Waste Management and Pollution Control Act*, the *Marine Pollution Act* and the *Environmental Assessment Act*.

Of these pieces of legislation, only the *Waste Management and Pollution Control Act* and the *Fisheries Act* specifically refer to ESD within their objectives, although the *Planning Act* establishes the sustainable use of resources and protection of the environment as supporting objects to the Act.

The absence of the concept and principles of ESD within the objectives of an Act means that the Act itself is not informed by the concept of ESD and therefore its provisions are not necessarily drafted to support sustainability objectives, such as achieving integration with broader policy and legislative frameworks.

As a consequence, the existing legislative frameworks applying in the Darwin Harbour region lack a common framework that would enable key legislative instruments to inform each other (for example the translation of biodiversity and water protection objectives in into development approvals) and to function within an governance framework that effectively promotes ESD.

Under the current situation various pieces of legislation compete with each other, operate without reference to each other, contain varying levels of public participation and accountability, resulting in a complicated layering of legislation that is difficult to navigate and disparate in its application.

3. Integration Between Legislative and Regulatory Frameworks Based Upon ESD.

As noted above, there is no current legislative framework which integrates planning processes and decisions about land allocation, development and management for Darwin Harbour. In other jurisdictions traditional planning legislation has rapidly grown to become the key mechanism for the integration of urban and regional land-use issues, informed by environmental constraints and values as well as economic opportunity. The Northern Territory's current planning framework is sectoral and, accordingly, does not provide an integrating mechanism for Darwin Harbour.

For example, the legislative frameworks for the granting of mining tenure and subsequent mining activity have substantial power and override the planning regime (as well as other environment protection regimes). In respect to the environmental impact assessment process, there is inconsistency in how recommendations are implemented into the development consent process and there is a lack of subsequent public accountability related to the uptake of these recommendations. This has been the subject of an EPA report, *Improving Environmental Assessment in the Northern Territory*, provided to government in April 2010. The *Territory Parks and Wildlife Act* similarly does not have the mechanism to translate known biodiversity values into the planning regime and accordingly land allocation is not necessarily being informed by environmental values.

When examining the Northern Territory's mining framework, there is a similar lack of integration. The uptake of recommendations from the environmental impact assessment process is legally discretionary and currently there is no requirement to provide public account of how environmental considerations have been factored into the approval of a mine management plan. Environment protection legislation, such as the *Waste Management and Pollution Control Act* or the *Water Act* currently has no jurisdiction over mining tenures.

While there is a current Reservation of Occupancy on Darwin Harbour under the *Mining Act*, these issues are relevant beyond the harbour itself, including the greater catchment area where extractive industries occur.

Within the mining regime, there is a fundamental disconnection between the approval of mines at a mine site level and the flow-on of impacts associated with the movement and transport of ore through transport nodes, specifically the East Arm Wharf. Accordingly, there is a lack of assessment, including a cumulative impact assessment, of how granting of approval to a mine site may impact on the wharf or other transport hubs from which the ore is transported and/ or exported.

In terms of biodiversity conservation, the lack of integration between the *Territory Parks and Wildlife Act* and the Fisheries Regulations has resulted in a failure to protect fish species identified as threatened under the legislation.

4. Effective Enforcement and Regulatory Mechanisms.

A number of current land uses and development activities have the potential for significant environmental impacts in the Darwin Harbour region. However, regulatory regimes governing the operation of land uses and subsequent activities in the region, vary substantially in their application, are inconsistent or in many cases simply do not exist. Significantly, these frameworks do not operate in an integrated manner to enable an understanding of the cumulative effects of decisions on land-use and development on the region.

The East Arm Wharf is recognised and promoted as a key tool for the economic development of the Northern Territory. This is demonstrated in the aims of the *East Arm Wharf Facilities Masterplan 2030 Land Use Strategy*, which has the stated aims of guiding the future development of East Arm Wharf and providing direction and certainty to stakeholders, industry and the economic growth of the Territory.²³ The wharf is pivotal in realising the Territory's vision of providing Australia's northern gateway of choice for export. Accordingly, the wharf has been promoted as an export hub for mining activities based in and outside of the Territory, as well as other materials.

Activities at East Arm Wharf have the greatest potential for environmental impact on the harbour and yet these activities do not require licensing and are not covered effectively by existing environmental protection legislation. The environmental impact assessment undertaken for the wharf dates back to the mid 1990s and advice provided in response to subsequent notices of intent submitted under the environmental assessment process have not been actively regulated by approval agencies. Subsequent environmental management plans and systems have been prepared by the Darwin Port Corporation, but responsibility for regulating and monitoring compliance of these plans and systems has fallen on agencies that are not responsible for the approval instruments.

Despite the establishment of the Darwin Port Corporation as an independent private corporation, it is exempt from the *Corporations Act*, which means it does not have a duty to comply with any environmental reporting obligations under that Act.

The *Waste Management and Pollution Control Act* is one of the key pieces of legislation responsible for regulating land uses to minimise impacts on the environment through pollution control. Its effectiveness is compromised through the limited number of land use types identified that require licensing. This limits the ability of the Act to serve as an instrument for the prevention of pollution.

However, the Act has application where an incident or activity occurs causing environmental damage regardless of whether that activity is licensed under the Act. Offences under the Act are difficult to establish, relying upon levels of environmental harm as the standard of proof. Specific offences addressing water, air and land pollution are absent from the Act. Where a substance is leaked into the harbour, the burden of proof lies with the regulator to establish that environmental harm has been caused, rather than upon the offending company/individual to establish they did not leak the substance and/ or environmental harm did not occur.

²³ DPC (2010) *East Arm Wharf Facilities Masterplan 2030 Land Use Strategy*. Available at: <http://www.darwinport.nt.gov.au/sites/default/files/masterplan-brochure.pdf> (Accessed 23 Nov 2010).

The *Marine Pollution Act* is also limited due to its reliance on the standard of environmental harm for establishing an offence. The administration of the Act is also a factor in its ability to be used for environment protection purposes, being administered by the Marine Safety Division of the Department of Lands and Planning, which typically does not have an environment protection focus.

Conditions of approval can be attached to a development consent issued under the *Planning Act*, but as the planning framework in the Northern Territory is largely sectoral, conditions relating to matters currently outside the scope of the *Planning Act* are at times not included or dependent upon the relevant agency. For example, the consent issued for the bulk handling facility at the wharf required the preparation of an environmental management plan to the satisfaction of the (then) Office of Environment and Heritage (the Department of Natural Resources, Environment and the Arts). In respect to this example, any non-compliance or concern with the environmental management plan identified by the Office of Environment and Heritage would be reliant upon satisfying the Department of Lands and Planning of that concern as only it has the legislative regulatory authority to respond.

5. Cumulative Impacts.

The lack of integration that currently exists between the key pieces of legislation applying to Darwin Harbour is reflected in the lack of integration that exists between strategic planning activities undertaken by the various agencies administering responsibilities under legislation applying to the region. For example, the Darwin Port Corporation has a Master Plan informing future growth and activity at East Arm Wharf, a land use strategy is currently being drafted within the Planning Framework by the Department of Lands and Planning, and the Land Development Corporation is also drafting a separate strategic plan for future development around East Arm. Overlying these sectoral strategies are the key high-level government policy documents such as Territory 2030, as well as the community driven Darwin Harbour Strategy. This situation results in the risk of having a suite of strategic plans, each operating independently of the other, all driving towards continued development in the region without accounting for the aggregate impacts of activities beyond of the jurisdiction of each plan. This lack of integration does not enable effective consideration of the cumulative effects of decision-making on the harbour

Similarly, the lack of appropriate provisions for the consideration of cumulative impacts under key legislative instruments, in line with ESD, does not facilitate the consideration of cumulative impacts as part of decision-making under these frameworks. Significantly, in relation to the Darwin harbour region, the regulatory component of the *Water Act* operates on a site by site basis (licensing specific discharge points), the *Environmental Assessment Act* is currently only being applied at the project level and the *Waste Management and Pollution Control Act* is used on a site by site basis or where an incident or activity results in environmental harm. The *Planning Act* and Planning Scheme may have the potential to provide a suitable regulatory mechanism to integrate these competing interests, however current frameworks do not support this (for example, the ability of the *Mining Act* and *Mining Management Act* to effectively override the *Planning Act*).

6. Public Participation and Transparency.

One of the major issues identified in the Darwin Harbour region is the lack of processes for formally assessing the ecological sustainability of strategic planning options for future development and land use. As a consequence, it is impossible to conceptualise, or involve the public in a rational assessment of, the overall

sustainability of land use. The disparate nature of strategic planning for the Darwin Harbour region makes this even more difficult.

The Darwin Harbour Advisory Committee, a largely community based group, has articulated a vision for the sustainable management of Darwin Harbour and set out a number of supporting goals:

Goal 1: To maintain a healthy environment

Goal 2: To support recreational use and enjoyment of the environment

Goal 3: To ensure that development is implemented in an ecologically sustainable manner

Goal 4: To protect cultural values and heritage

Goal 5: To foster community awareness, industry partnerships and stewardship of the Darwin Harbour region.

Without formal processes that enable the public to assess strategic planning options for the Darwin Harbour region, it will be difficult for the community to ensure that ESD goals, such as those articulated in the Darwin Harbour Strategy, are effectively informing strategic planning in the region.

The key pieces of legislation that apply to land allocation, use and management within the Darwin Harbour region vary substantially in the provisions they establish for public participation and transparency in decision-making. Similarly, various approaches have been applied in relation to the involvement of the public in key planning, strategy and management documents. As a result, public consultation and engagement may be undertaken as a merely symbolic gesture without allowing for meaningful input to decision-making.

The lack of consistency in approach across legislative regimes and sectors significantly reduces public accountability and places increasing pressure on those regimes that do provide for public participation to become the “fix-all” forum for community concerns and issues.

4 Advice

The following advice is provided in response to the key aim of this report:

To investigate whether existing governance frameworks (set out in legislation, policies and plans) are adequate to support ecologically sustainable development in the Darwin Harbour Region, with specific focus on the Darwin Harbour Strategy, launched in June 2010 by the Darwin Harbour Advisory Committee.

The advice provides recommendations under four key headings: Ecologically Sustainable Development; Darwin Harbour Region; Integration; and Broader Implications.

Ecologically Sustainable Development

1. The EPA has previously advised on the importance of the concept of ESD and its principles being central to sustained economic growth and development that protects its environment and ensures the wellbeing of all members of its community. The EPA recommended that the Northern Territory Government develop and implement governance mechanisms for the application of ESD in the Northern Territory.
2. Upholding the current economic, natural and social values of Darwin Harbour is dependent upon governance frameworks (set out in legislation, policies and plans) that are informed by the principles of ESD and accordingly promote the sustainable development of Darwin Harbour. There is currently no legislative mechanism that provides the necessary overarching ESD governance framework.

Darwin Harbour Region

3. The Darwin Harbour Strategy (the Strategy) provides an effective basis for best-practice decision-making – it articulates a common vision, principles and goals for the Darwin Harbour region. One of its founding principles is for sustainable development to be realised within the region. In doing so, the Strategy attempts to align applicable legislation, decision making and strategic planning. It also promotes public participation. It is currently the one document for Darwin Harbour that aims to achieve integration across government and various interest groups, recognising the above governance elements.
4. The Northern Territory Government has endorsed the Strategy and in doing so has committed to:
 - Annual reporting by its agencies against the strategy
 - Establishing and supporting an Integrated Monitoring Plan for the HarbourThis is commended.
5. The Darwin Harbour Strategy alone cannot achieve the necessary change required to ensure sustainable decision making for, and management of, the Darwin Harbour region. The development of appropriate legislative and policy measures is for the implementation of the Strategy is necessary. This should be

based upon ESD and informed by the vision and principles outlined in the Darwin Harbour Strategy.

6. A coordinated approach to legislative and policy change is recommended to achieve an integrated system for strategic planning, decision making, regulation, management and monitoring for the region, which is based on principles of ESD. A coordinated approach would need to include key agencies with responsibilities in the region such as the Department of Lands and Planning and the Department of Natural Resources, Environment and the Arts.
7. The review undertaken by the EPA has determined that the existing governance frameworks (set out in legislation, policies and plans) do not adequately support the concept and principles of ESD. In summary:
 - The current legislative frameworks do not facilitate the consideration of environmental, economic, social and cultural sustainability factors as part of decision making
 - Existing pieces of legislation do not speak to each other, have the ability to override each other and therefore compete with each other
 - Responsibility for strategic planning and decision making about the Harbour is highly sectoral and therefore the cumulative impacts of decisions are not being considered
 - The current regulatory regime is disparate in its application, its powers and ability to be effective
 - There is a significant lack of consistency in the provisions for public participation and engagement in existing legislation, policies and strategies
8. A number of significant recent environmental pollution incidents in the Darwin Harbour region have demonstrated the degree of public concern about the current and future health of the Harbour. There is public expectation that government will make the changes necessary to put in place robust and effective regulatory frameworks in order to ensure the values of Darwin Harbour are protected for current and future generations.

Integration

9. The principle of integration is of critical importance when:
 - Planning for future development in the Darwin Harbour region
 - Making decisions about land allocation and use within the region
 - Regulating competing and potentially polluting land uses within the region
 - Implementing management approaches to protect the region's areas of natural, social and cultural significance
 - Undertaking monitoring in the Darwin Harbour region
10. An integrated approach ensures that each of the above governance elements for Darwin Harbour inform and enhance each other for the greater good of the region.

Broader Implications

11. While this review has focused on the Darwin Harbour region the EPA considers that a number of its findings are relevant beyond the region, specifically:

- The significance of the relationship of the *Mining Act* and *Mining Management Act* with the *Planning Act*, the *Environmental Assessment Act*, the *Water Act*, the *Waste Management and Pollution Control Act*, and *Territory Parks and Wildlife Conservation Act*. This information is considered relevant to the current government initiative of harmonisation
- The lack of appropriate governance mechanisms to ensure the findings of the EIA process are informing subsequent decisions about development. This was highlighted in the EPA's report "Improving Environmental Assessment in the Northern Territory" and is recognised by the EPA as an issue in its current investigation of the copper concentrate spill at East Arm Wharf
- Important short-comings in the *Waste Management and Pollution Control Act*, specifically its limited licensing regime and the current difficulty of establishing an offence under the Act. This is relevant to the current review of the *Waste Management and Pollution Control Act*
- A lack of effective integration between key environment protection frameworks, such as the *Territory Parks and Wildlife Conservation Act*, and important development approval frameworks, such as the *Planning Act*, which results in key decisions, such as land allocation, being made without adequate reference to biodiversity and water protection objectives.
- Establishing effective governance frameworks requires the incorporation of ESD principles in overarching legislation, policies and plans. This includes ensuring that ESD is defined in these frameworks and appropriately applied as part of decision-making.
- The absence of effective ESD provisions limits the capacity of current governance frameworks to promote sustainability outcomes in the Darwin Harbour region and across the Territory more broadly.

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