



Northern
Territory
Government



Darwin Harbour Advisory Committee

Darwin Harbour Strategy

*A comprehensive guide for the
responsible stewardship and
sustainable development of
the Darwin Harbour region*



Tourism NT

**greening the
Territory**

A Territory Government initiative

The Darwin Harbour Strategy has been prepared by the Darwin Harbour Advisory Committee.

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The Darwin Harbour Strategy is available at www.harbourplan.nt.gov.au

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Message from the Chair

Darwin Harbour is one of the most beautiful in the world, and depends on its large surrounding catchment to thrive.

Fortunately our harbour and its catchment are currently in very good condition. However we all need to ensure that this condition does not deteriorate, and that we can hand on the legacy of a healthy and beautiful harbour to future generations. The growth and development of Darwin, both as a population centre and as an industrial base, will put enormous pressure on harbour environments and resources, making the sustainable management of this region vital.

Our harbour has been a working port since Goyder and his survey team 'set-out' Darwin and the hinterland more than 140 years ago. Prior to settlement, Darwin Harbour provided abundant food resources and sanctuary for Aboriginal people, in particular the Larrakia people. No doubt visitors from the North also used it as a safe haven from time to time.

This Darwin Harbour Strategy has been prepared by the Darwin Harbour Advisory Committee as a key reference document. It sets out goals, principles and guidelines for all users and stakeholders of Darwin Harbour and its catchment to imbed in their planning for any action which could have an impact on the region. A key objective is to achieve a balance between environmental, social and economic values.

On 1 June 2010 the Darwin Harbour Strategy was endorsed by the Northern Territory Government. The Darwin Harbour Advisory Committee continues to view the Strategy as a living document, and welcomes comment on the Strategy from all users and stakeholders of the region, including the general public, business, industry and governments.

The Darwin Harbour Advisory Committee will actively promote the Darwin Harbour Strategy, and thereby encourage best practice for the sustainable use and management of the region. Going forward, the Committee remains committed to providing expert advice and recommendations to Government to ensure the region retains its health, productivity and beauty.

Bill Stuchbery

Chair, Darwin Harbour Advisory Committee

Message from the Minister

Darwin Harbour is a special, sparkling jewel in the Territory's crown.

In its natural state it is perfectly formed – beautiful, fascinating and flawlessly integrated with the surrounding environment and its people.

But like any jewel, the choice of what we place around it, or the way we alter its natural wonder, is crucial.

The right kind of man-made additions can enhance our appreciation of its natural beauty and increase its value. On the other hand, the wrong kind can detract from and devalue our jewel or – in the very worst situation – damage it forever.

The current generation of Territorians are in the privileged position to make choices about the way we protect and enhance the jewel that is Darwin Harbour.

This Darwin Harbour Strategy provides the pathway for making the right choices.

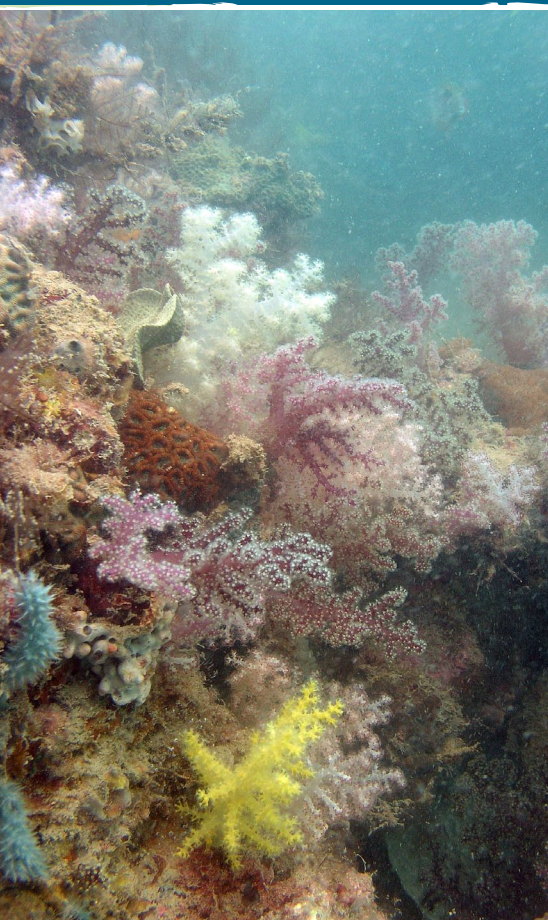
I congratulate and thank the Darwin Harbour Advisory Committee – which is comprised of local people who know and love our harbour – for their fine work in developing the Darwin Harbour Strategy.

I encourage members of the Darwin Harbour community and all users of the Harbour to continue to contribute their views to ensure the Darwin Harbour Strategy underpins a sustainable future for our magnificent harbour.

Karl Hampton

Minister for Natural Resources, Environment and Heritage

Development of the Darwin Harbour Strategy



Tony Ayling

Development and Consultation

The need for the Darwin Harbour Strategy (the Strategy) – a comprehensive guide for the responsible stewardship and sustainable development of the Darwin Harbour region – was identified by the Darwin Harbour Advisory Committee (DHAC) in late 2007 as a result of the review of the 2003 Darwin Harbour Regional Plan of Management (the 2003 Plan) (DHAC, 2008).

The 2003 Plan (DHAC, 2003) as a comprehensive and ambitious document prepared through extensive consultation, underpins the Darwin Harbour Strategy. The vision and goals of the 2003 Plan, as well as the background information and community aspirations, remain current, continue to provide valuable context, and reflect expectations for regional management. However, the list of actions called for in the 2003 Plan is now outdated.

The 2003 Plan was designed as a five-year rolling plan and subject to annual review. The 2003 Plan's implementation relied on a large set of definitive actions being resourced by government; some actions were completed, while others are yet to be addressed. It is expected that a number of these outstanding actions will be undertaken as part of normal government and community business. Further progress on their implementation will not be measured.

The Strategy builds upon the 2003 Plan through the development of guidelines to support the vision and five shared goals. These guidelines replace the outcomes and actions contained in the 2003 Plan and present a new approach for achieving the sustainable management of the Darwin Harbour region. The Strategy also introduces founding principles that underpin the document, new information on Ecologically Sustainable Development (ESD) and Water Sensitive Urban Design (WSUD), and an updated reference section.

The desire for the Strategy to be a joint, widely supported document shaped its development. The Strategy has gone through extensive consultation with government agencies, interested stakeholders, members of the public and DHAC representatives and the comments received have further strengthened the document and reinforced its broad-based support.

A wide range of stakeholders were asked to provide comment during the development of this document. Organisations and government agencies that chose to provide comment include, and are not limited to:

- Amateur Fishermen's Association of the Northern Territory
- Department of Justice
- INPEX
- Australian Government Department of Defence

- Australian Government Department of the Environment, Water Heritage and the Arts
- Northern Territory Government, Department of Local Government and Housing (now Department of Housing, Local Government and Regional Services)
- Northern Territory Seafood Council
- Northern Territory Government, Department of Regional Development, Primary Industry, Fisheries and Resources (now Department of Resources)
- Northern Territory Government, Department of Planning and Infrastructure (now Department of Lands and Planning and Department of Construction and Infrastructure)
- Darwin City Council
- Northern Territory Government, Department of Business and Employment
- Northern Territory Government, Environmental Protection Authority
- Land Development Corporation
- Northern Territory Government, Department of Natural Resources, Environment, The Arts and Sport
- Castaway Exploration
- Northern Territory Treasury
- Charles Darwin University
- PPlan: The Planning Action Network
- Environment Centre Northern Territory
- Power and Water Corporation
- Tourism NT

Darwin Harbour Advisory Committee

Darwin Harbour Advisory Committee (DHAC) is an advisory body appointed by the Minister for Natural Resources, Environment and Heritage, which has the sustainable development and the long-term protection of the Darwin Harbour region as its focus. Originally established in 2002 to develop, oversee, and review the Darwin Harbour Regional Plan of Management, DHAC's role and responsibilities have continued to evolve. DHAC currently provides the Northern Territory Government with advice on planning, development, land use and natural resource management within the Darwin Harbour region.

DHAC members represent a wide range of stakeholders interested in the planning and management of the coastal and marine environments. Government officials from the Department of Defence, the Northern Territory's Department of Lands and Planning and the Department of Natural Resources, Environment, The Arts and Sport, also participate in DHAC meetings. For more information on DHAC's members, Terms of Reference and Statement of Expectations, visit www.harbourplan.nt.gov.au

Current members as of May 2010 include:

Bill Stuchbery	Independent Chair
Greg Bicknell	Chamber of Commerce NT
Alastair Black	Darwin Port Corporation
Melanie Bradley	Environment Centre Northern Territory
Greg Constantine	Larrakia Development Corporation
Peter Dummett	Perkins Shipping, representing the shipping and transport industry
Tom Harris	NT Horticultural Association
David Jan	Greening Australia NT
Graeme Lewis	Tourism Top End
Chris Makepeace	Amateur Fishermen's Association of the Northern Territory (AFANT)
David Parry	Australian Institute of Marine Science
Pam Robinson	Darwin City Council
Sue Sultana	Community Representative – Tek Ventures Diving
Robert Wasson	Charles Darwin University



Tourism NT

Overview

The Darwin Harbour region plays a central role in the economy of the Northern Territory and the lifestyle and character of the Top End. It is the Territory's most densely populated area, and the region supports the Territory's largest concentration of commerce and industry.

The Darwin Harbour region

The Darwin Harbour region includes Port Darwin and Shoal Bay and covers 3227 square kilometres of land and water. It extends from Charles Point to Gunn Point including the estuarine areas, tributaries and catchment areas of Cox Peninsula, Woods Inlet, West Arm, Middle Arm, East Arm, and the Howard River. The total area of land is 2417 square kilometres (see the Darwin Harbour region boundary map on page 10).

While part of the region is unincorporated government area, there are six local government areas within the region, including: the Darwin City Council, Palmerston City Council, the Municipality of Litchfield, Wagait Shire Council, Belyuen Community Government Council and Coomalie Community Government Council.

The current estimated residential population across the six local government areas is more than 125 000 (ABS, 2010). Additionally, 766 000 tourists visit Darwin Tourism Region annually (Tourism NT, date unknown).

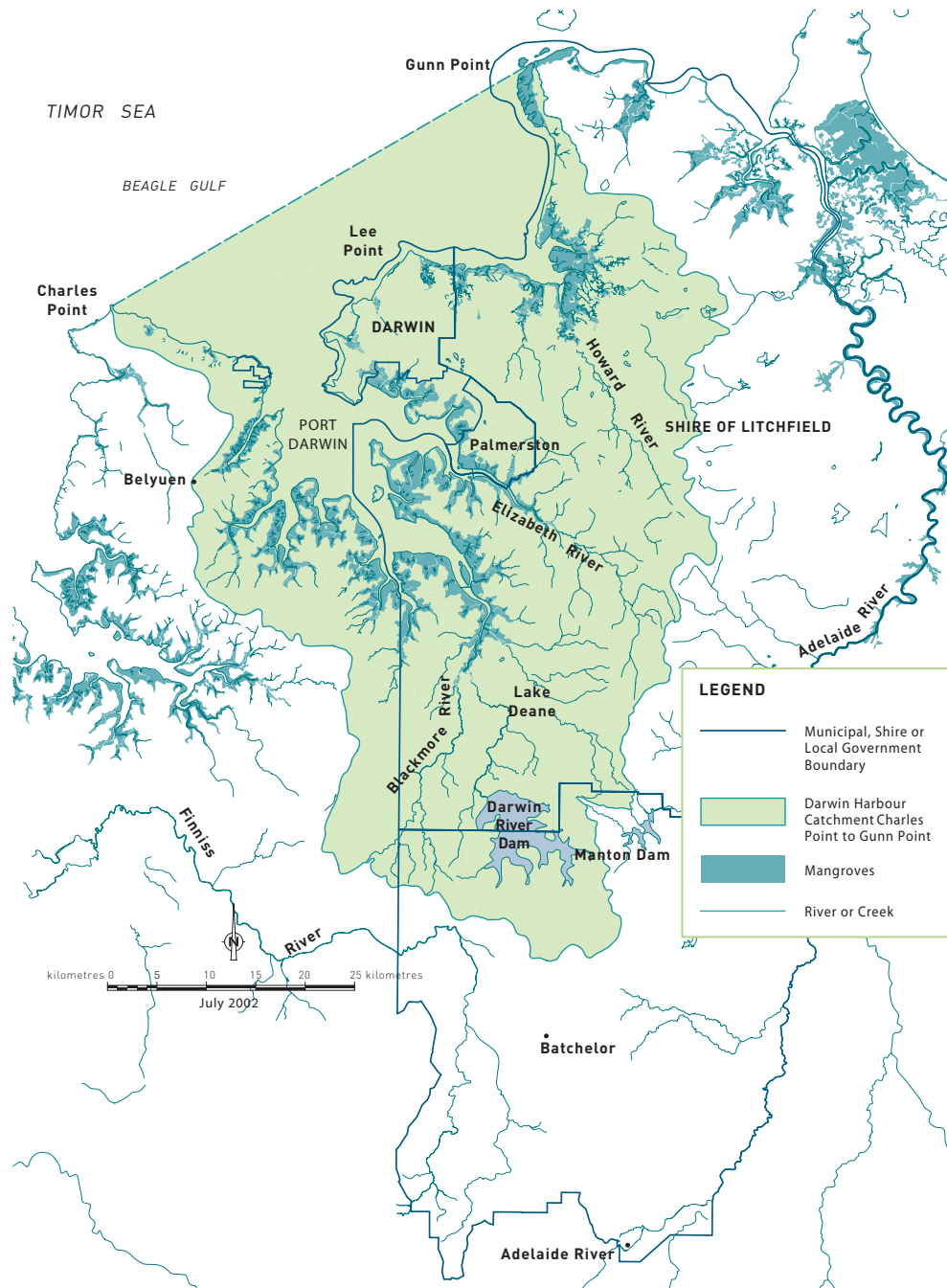
Population projections released by the Australian Bureau of Statistics predict that the population of Darwin will double in size between 2007 and 2056 (ABS, 2008).

The Darwin Harbour region:

- provides the region's drinking water
- is a vital hub for road, rail, sea and air transport
- offers a significant range of popular recreational opportunities
- is an important tourist attraction and destination
- supports a variety of primary and manufacturing industries, in particular the extractive minerals industry and gas manufacturing
- offers a range of lifestyles, from city to rural living
- includes significant Larrakia and other Aboriginal cultural heritage
- includes significant European and Asian heritage
- is strategically important for supporting Australia's defence capability
- supports a diverse range of marine, estuarine, freshwater and terrestrial environments.

A major challenge for all Territorians is to maintain the values of the Darwin Harbour region while utilising the resources it provides and recognising it as a gateway to Australia. 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.

Darwin Harbour region boundary map

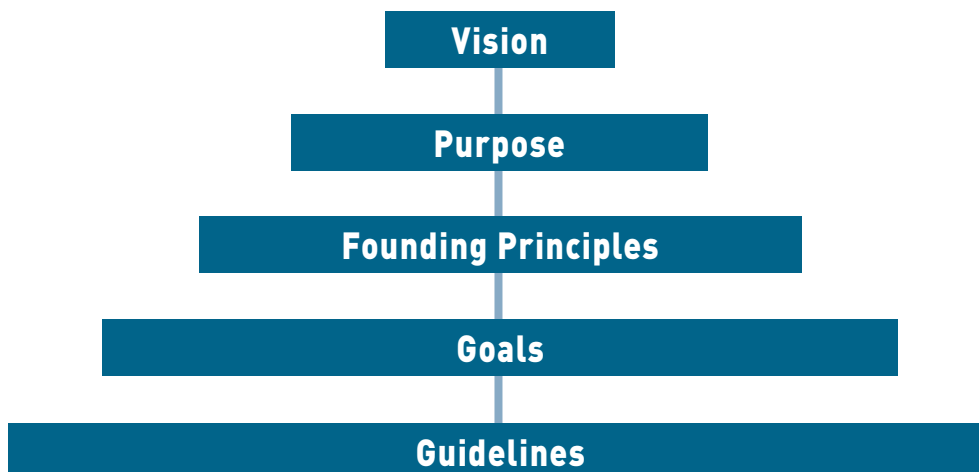


Purpose of the Darwin Harbour Strategy

The Darwin Harbour Strategy is a comprehensive guide for the responsible stewardship and sustainable development of the Darwin Harbour region.

The Strategy's purpose is 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, and it encourages stakeholders to work together and adapt their practices to ensure that values of the region are recognised and conserved for current and future generations.

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.



Application

This Darwin Harbour Strategy brings together the founding principles, goals and guidelines for the use of the Darwin Harbour region in one document. It is designed to:

- Inform all levels of government in decision making regarding development and natural resource management.
- Inform all users of the region including the community, industry, business and developers in decision making regarding their use of the region.
- Inform the community on the important elements and appropriate use and treatment of Darwin Harbour.
- Inform industry and business of community and government expectations on the use and conservation of the Darwin Harbour region.

The Strategy is not intended to replace or duplicate other plans, policies or legislation, nor, taken alone, is it a sufficiently detailed document to manage either harbour use or catchment land use.

Implementation

Bringing the Darwin Harbour Strategy to life will rely 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. The progress of the Strategy will be measured annually.

It is expected that the government, as a major decision maker in the Darwin Harbour region, will choose to be informed and guided by this document, and it will provide a clear direction for those within government on the management of the Darwin Harbour region. DHAC shall be available to advise interested parties on how the Strategy's guidelines may be integrated into their work and decision making.

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

Evaluation and Reporting

In partnership, DHAC and the Northern Territory Government will undertake reporting against the Darwin Harbour Strategy. On a yearly basis, each government agency will be asked to provide information in their Annual Reports, on what actions have been taken, as well as those which are expected to be taken, in support of each guideline relevant to the agency's work. These results will be collated by DHAC and published on the DHAC website at www.harbourplan.nt.gov.au

The progress and success of the Strategy will be measured through both the progressively increasing number of actions reported in support of the guidelines and the increasing capacity of these actions to fully address the contents of the guidelines. DHAC will assess these results and provide recommendations for further actions in an annual status report to the Minister for Natural Resources, Environment and Heritage and this document will be available on the DHAC website.

Review

The Darwin Harbour Strategy is a living document and will be reviewed and updated as required. Regular revision will ensure that the Strategy reflects the current situation and adapts to changes occurring within the Darwin Harbour region and developments within the relevant sciences and technologies. A formal review of the Strategy will be conducted by DHAC 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.

Relationship to legislation and policy

The requirements of Local, Northern Territory and Australian Government legislation take precedence over the guidelines in the Darwin Harbour Strategy should inconsistencies occur.

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.

In March 2009, the Northern Territory Environment Protection Authority (EPA) Board announced that it will investigate whether existing regulatory plans and processes support the Strategy. Their work is expected to highlight gaps and make recommendations for providing a stronger legislative basis to this document. More information on the EPA's investigation can be found at www.epa.nt.gov.au

The guidelines in the Strategy are not cross-referenced to legislation and policy as changes will occur. Users of the Darwin Harbour region should make their own investigations regarding legislation and policy requirements (refer to Associated documents on pages 31–35 for more information on relevant legislation, policies and plans).



The Strategy

Integrated management and protection of Darwin Harbour region is the responsibility of everyone who has connections with the region, including those living within the region and those using or developing its resources and facilities.

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.

Founding principles

The Darwin Harbour Strategy is supported by the following founding principles, which should underpin all decision-making processes and/or plans of action that could affect the Darwin Harbour region.

These principles are:

- 1. Ecologically Sustainable Development (ESD):** To be considered ecologically sustainable, developments in the Darwin Harbour region should seek to meet the needs of those living today, while conserving our ecosystems and resources for the benefit of future generations (ESD Steering Committee, 1992). All decisions, actions and uses of the Darwin Harbour region are to be undertaken after considering the recommendations within the EPA NT document Ecologically Sustainable Development in the Northern Territory (EPA NT, 2010).

ESD takes into account impacts on economic, social and ecological wellbeing; this is known as the 'triple bottom line' (refer to the Glossary for further information on ESD).

- 2. Responsiveness to Climate Change:** The effects of climate change must be considered in all planning and decision-making processes regarding current and future developments and uses of the Darwin Harbour region. Research produced by Australian and international scientific research agencies has suggested that climate change effects may include: changes to sea level, changes to land and sea temperatures, increased cyclone intensity and frequency of fire, and increased extreme weather events including storms, droughts and floods. Planning and decision-making processes should reflect current international, national and Territory policies and agreements.
- 3. Community and Stakeholder Engagement:** The community and stakeholders such as Northern Territory and Australian Government agencies, local government, business and industry should be engaged and where appropriate form partnerships in the implementation and review of the Strategy. The public should be informed of current management and monitoring actions, the health of the environment, and the progress of the Strategy.

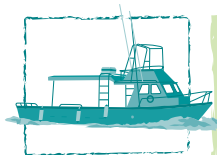
4. **Transparency in Decision Making:** Decisions that impact the Darwin Harbour region should be made through processes that are clear and transparent to stakeholders, including non-governmental and community based organisations. When applicable, clear links should be made to the Strategy's founding principles, goals and guidelines.
5. **Integration:** Decision-making processes should effectively integrate both long-term and short-term environmental, social, economic, cultural and equitable considerations, and include the conservation of biological diversity and maintenance of ecosystem function as a fundamental consideration.
6. **Flexibility:** Environmental goals for the management of the region should be achieved through preparation and implementation of a strategic and flexible mix of policy, legislative, educational and economic instruments.
7. **Equity:** Management decisions in the Darwin Harbour region should deal equitably with the needs and aspirations of Larrakia and other Aboriginal people as well as non-Aboriginal people residing in the region.
8. **Adaptive Management:** A systematic approach to learning from the outcomes of operational programs should be taken in order to continually improve management policies and practices.

Goals

The Darwin Harbour Strategy advances five important goals, each supported by a series of guidelines. As with the founding principles, these goals are to be considered as part of decisions that are made, actions that are taken, or uses proposed that could affect Darwin Harbour and its catchment. The Strategy's five goals are:



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

Guidelines to support goals

The following section sets out guidelines for the use of Darwin Harbour region in relation to more specific subjects. When taking actions to apply these guidelines practitioners should consider incorporating the approaches, tools and planning embodied within ecosystem-based management – an integrated approach that considers entire ecosystems, including people (see Glossary for further information on eco-system based management).



Goal 1: To maintain a healthy environment

General

1.1 Consideration of proposed development in the region should take account of economic, social and environmental values. Economic development is not to have a net negative environmental impact on the region. If development is accepted where environmental impact is unavoidable, measures to minimise the impact should be undertaken, including consideration of offset programs with preference given to programs in the Darwin Harbour region or, as a second preference, the Northern Territory.

1.2 The Strategy recognises that if a development would significantly compromise values of the Darwin Harbour region, the development should not proceed. Thresholds or benchmarks that determine this unacceptable level of impact should be determined through legislative processes, policy or guidelines. If relevant thresholds or benchmarks for Darwin Harbour region have yet to be established, appropriate national or international standards should be considered.

1.3 Management and decisions affecting the region are to be informed through ongoing research, monitoring and understanding of our environment.

Water

1.4 Water quality and ecological health of the marine, freshwater and terrestrial catchment environments in the region are to be maintained or, if quality and health have been negatively affected through human activity, improved where possible.

1.5 Any development decisions which impact on water resources are to be based on legislated water quality and quantity criteria, endorsed policy or declared guidance.

1.6 All activities that have the potential to impact on the water quality of the region's water resources must demonstrate compliance with legislation. Where appropriate, guidance on how to achieve compliance shall be sought from the relevant documents of the National Water Quality Management Strategy or other Northern Territory Government endorsed guidance or regulation documents.

1.7 The management and use of the fresh water resource should be supported by resource management policies, including water allocation planning and water conservation initiatives, best practice water pricing aligned with the National Water Initiative and National Water Reforms, and a national approach to environment protection measures for water quality.

1.8 The quality and quantity of groundwater is to be maintained at levels suitable to maintain or improve ecosystem function.

1.9 The principles of Water Demand Management (WDM) should be applied by water users and suppliers when meeting domestic, commercial, and industrial water needs (refer to the Glossary for further information about WDM).

Stormwater

1.10 Stormwater collection systems are to be designed and managed to minimise pollution of receiving waters, protect the structure of waterways, optimise the protection of property, and where and when possible provide grey water for reuse, and ensure public health and safety.

Ecosystem function and biodiversity

1.11 The integrity of ecosystem function and the protection of both terrestrial and marine biodiversity are to be maintained.

Coastal zones

1.12 Development in the Harbour should not impact on the free flow of water and sediments if that impact will adversely affect the overall environmental health of the Harbour or impact on sensitive ecosystems that have been identified as important to preserve.

1.13 Development within coastal areas is to be managed to avoid leachate from acid sulphate soils entering the natural environment and wherever possible, avoiding disturbance of acid sulphate soils altogether.

Climate change

1.14 Practices that minimise, reduce, or offset greenhouse gas emissions are to be implemented wherever possible to contribute to global efforts to mitigate climate change and address climate change.

1.15 Climate change projections relevant to the Darwin Harbour region produced by Australian and international scientific research agencies are to inform decisions affecting the region.



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

2.1 Responsible and sustainable recreational use of the region is to be strategically planned and monitored in order to minimise impacts to the environment.

2.2 The quality of our leisure time associated with the Harbour should be enhanced by protecting and enhancing recreational amenity, recreational opportunity and the diverse range of aesthetic values of the Darwin Harbour region, including its visual amenity.

2.3 Areas designated as conservation zones and recreation zones (Department of Lands and Planning, 2010) in foreshore areas, around creeks, rivers and wetlands should be retained and effectively managed to ensure availability of open space and promote conservation and recreational values.



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

Development

3.1 Development is encouraged to comply with the guidelines established in this Strategy.

3.2 All developments should be designed to minimise their impacts on ecosystem function and maximise environmental and social utility.

3.3 Protection of significant habitats that are sensitive to disturbance should take precedence over development; if disturbance cannot be avoided, it should be minimised and offsets implemented where applicable.

3.4 For all developments, it is the responsibility of the developer to demonstrate the environmental sustainability of the development and its minimal impact.

3.5 Developments should minimise the use of water, energy, and materials both embodied in infrastructure and during its operation, maximise energy efficiency so as to reduce the production of greenhouse gas emissions and minimise the production of other waste products.

Planning

3.6 Strategic land use planning and land use zoning should be based on an understanding of the environment and its capacity to support the proposed land use.

3.7 The cumulative impacts of developments are to be considered in decision making and strategic planning for the region.

3.8 Strategic environmental risks should be accounted for in land use planning. This includes: flooding, storm surge, coastal erosion, rising sea levels, and cyclonic activity.

3.9 Planning processes should continue to engage the public, reflect community values and aspirations, and should apply sound economic and environmental sustainability principles.

3.10 Sustainability principles should be integral to the planning of urban development in the Darwin Harbour region. Developments should be designed to promote energy and water use efficiency, and public transport networks, including cycle paths, should be provided to reduce greenhouse gas emissions.

Environmental impact

3.11 Natural resources in the Darwin Harbour region should be used in a sustainable manner that accounts for multiple and sequential use.

3.12 The cumulative environmental impacts of development should be considered in approval processes.

3.13 Proposed major developments are to be assessed using the most rigorous methods available including the use of assessment tools such as the document *Providing a Scientific Basis to Managing the Region's Development* (ERG, 2006).

3.14 The impact of land and water based activities should be recognised and managed to maintain the community's water resource values in the Darwin Harbour catchment (see Beneficial Uses under Part 3 of the *Water Act*).

3.15 The risks posed by invasive plant and animal species should be proactively managed to prevent introduction, reduce further spread, and offset or repair damage to ecosystems.

3.16 Fishing, marine harvesting and aquaculture enterprises should be performed using ecologically sustainable practices, and where the activities are commercial, industries should work within a framework of resource stewardship.

Residential, commercial and industrial development

3.17 All phases of development, including design, construction and operation, are to take into account climate change projections relevant to the region.

3.18 Residential, commercial and industrial developments are to apply Water Sensitive Urban Design (WSUD) principles tailored to the wet-dry tropics and employ strategies to increase water efficiency and manage demand (refer to the Glossary for further information about WSUD).

3.19 All development should incorporate relevant best practice energy management standards to reduce greenhouse gas emissions in the Darwin Harbour region.

3.20 Any development with the potential to pollute Darwin Harbour should implement best practice management and pollution control technology to ensure waterways and the Harbour are protected. It is recognised that in some cases best practice technology may not meet triple bottom line (social, economic and environmental) considerations, and in these cases other options that protect the waterways and Harbour should be implemented.

3.21 All development should comply with the relevant erosion and sediment control guidelines for the built environment (NRETAS, 2008A), service corridors (NRETAS, 2008B) and transport corridors (NRETAS, 2008C).

3.22 Creeks and rivers, wetlands, distinctive landform features and distinctive stands of natural vegetation, including mangroves, should be identified, retained and protected.

3.23 All development with the potential to impact on visual amenity should consider community values relating to visual amenity, and this applies to the design, construction and operation of the development. Design specifications and visual image projections may assist when consulting with the community.

3.24 Minimising the impact of biting midges and mosquitoes in residential developments and other developments, where people spend time outdoors, should be factored into developments and addressed in the planning stage. This will minimise the need for control measures and the environmental impact of those control measures.



Goal 4: To protect cultural values and heritage

4.1 Larrakia and other Aboriginal and non-Aboriginal cultural, spiritual and heritage sites in the Darwin Harbour region are to be managed and protected in ways considered appropriate and effective by relevant Larrakia and other Aboriginal and non-Aboriginal stakeholders.

4.2 Management of the Larrakia and other Aboriginal and non-Aboriginal cultural, spiritual and heritage sites in the Darwin Harbour region is to be informed through improved research, and identification of sites.

4.3 Climate change projections relevant to the region produced by Australian and international scientific research agencies are to inform the management and protection of Larrakia and other Aboriginal and non-Aboriginal cultural, spiritual and heritage sites.

4.4 Larrakia and other Aboriginal people's interests, values and concerns and their innate connection with the Darwin Harbour region should be recognised and respected in land use decisions and management.

4.5 Where Larrakia and other Aboriginal cultural uses of the region have been identified, these uses should be able to continue.



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

5.1 The community is to be engaged and consulted in planning, implementing and reviewing the management of the region.

5.2 Public awareness of environmental, social and economic values and issues should be encouraged, including the use of mediums for improving public awareness such as community radio, television and newspapers.

5.3 All efforts should be made for Larrakia and other Aboriginal people to be engaged in economic opportunities in the region.

5.4 Partnership approaches are encouraged. For example, industries operating in the region are encouraged to partner with or support research bodies undertaking baseline studies and other research to improve knowledge of the region.

Glossary

Development

For the purpose of the Darwin Harbour Strategy, the term development refers generally to planned or ongoing activities associated with commercial, industrial and residential growth. For example, the Waterfront Development, new housing estates and the LNG plants at Wickham Point and Blaydin Point.

DHAC also recognises the broader definition of development as “improvement in a country’s economic and social conditions”. In this context, development refers to efforts that seek to improve the economic wellbeing and quality of life for a community by creating or retaining jobs and supporting or growing incomes and the tax base. A wide variety of indicators, including literacy rates, life expectancy, and poverty rates, may be used to measure the social impacts of development.

More recently the ‘triple bottom line’ approach has been used to assess the impacts of development on economic, social and environmental values. This approach is gaining recognition as a framework for conceptualising and measuring development.

Development Consent Authority

The Development Consent Authority (DCA) is established under section 82 of the *Planning Act*. Divisions of the DCA determine development applications within their division area. There are seven division areas generally associated with the larger population centres. These division areas are Alice Springs, Batchelor, Darwin, Katherine, Litchfield, Palmerston and Tennant Creek. Outside of these areas the DCA is the Minister for Lands and Planning. More information on the DCA can be found at www.nt.gov.au/lands/planning/dca/index.shtml

Ecologically Sustainable Development (ESD)

For the purpose of the Darwin Harbour Strategy, ESD is defined as:

“Development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends”. (Ecologically Sustainable Development Steering Committee, 1992).

The following principles as outlined by the Northern Territory Environment Protection Agency Board (2007) are also supported through the Strategy:

- protection of biological diversity and maintaining the integrity of essential ecological processes and life-support systems
- the precautionary principle
- fairness and justice between and within generations
- improved valuation pricing and incentive mechanisms that reflect 'true cost economics' (such as 'polluter pays').

In 2009, the Northern Territory Environment Protection Authority created six draft principles for ESD in the Northern Territory. The draft principles support the Strategy's founding principle on ESD and include:

- ESD is necessary to support a strong, diversified and healthy Northern Territory society.
- The nature dependent Northern Territory identity is to be protected and promoted.
- Equity and social cohesion are intrinsic to how the Northern Territory operates.
- The public sector must lead in the advocacy and enactment of ESD in the Northern Territory.
- The Northern Territory community and business are key partners in ESD.
- Acknowledging and addressing regional circumstances is required to achieve ESD in the Northern Territory.

The definition of ESD continues to evolve, and each variation helps to build a more nuanced view of ESD's meaning. The concept was first popularised in 1987 with the publication UN World Commission on Environment and Development Report (commonly known as "The Brundtland Report"). It defined ESD as:

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

In 1992, following the UN Conference on Environment and Development in Rio de Janeiro (the "Earth Summit") Australia developed a National Strategy for Ecologically Sustainable Development (1992) which defined ESD as:

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

In 2003, the Western Australia Government developed its State Sustainability Strategy, defining ESD as:

“...meeting the needs of current and future generations through an integration of environmental protection, social advancement, and economic prosperity.”

Other elements of ESD include the promotion and protection of diversity, including biological, social, cultural and economic; sensitivity to factors and limitations that shape ecosystems; and concepts of inter-species equity.

In 2010, the Northern Territory Environment Protection Authority (EPA) released recommendations for the ESD of the Northern Territory. The recommendations are

- The Northern Territory Government adopt a Territory-wide definition of ESD;
- The adoption of the six guiding principles of ESD to inform legislation, policy and decision making across Government;
- The Northern Territory Government develop and implement governance mechanisms and apply ESD principles; and
- The Northern Territory Government adopt a public sustainability statement committing to ESD in the Northern Territory.

Ecosystem-based management

The 2005 Scientific Consensus Statement on Marine Ecosystems-based Management (Communications Partnership for Science and the Sea) states:

“The goal of ecosystem based management is to maintain an ecosystem in a healthy, productive and resilient condition so that it can provide the services humans want and need. Ecosystem-based management differs from current approaches that usually focus on a single species, sector, activity or concern; it considers the cumulative impacts of different sectors.”

Planning

The Northern Territory Department of Lands and Planning (DLP) develops land use policies and strategic plans in consultation with the community. The DLP also manages the planning and development framework incorporating the *Planning Act*, the Northern Territory Planning Scheme, and it provides professional and technical support to the Development Consent Authority.

All planning processes and zoning maps can be found on DLP's website under the NT Lands Group link at www.nt.gov.au/lands/planning/system/index.shtml

Strategic planning

Strategic planning is the shaping of land use and development plans to match broad, long-term objectives and achieve planned outcomes within a given timeframe. In some organisations Corporate Plans and Strategic Plans may be included in one document.

Strategic planning in terms of land use/development planning seeks to order and regulate the use of land in an efficient and ethical way. Strategic planning incorporates the scientific, aesthetic, and orderly disposition of land, resources, facilities and services with a view to securing the physical, economic and social efficiency, health and wellbeing of urban and rural communities.

Water Demand Management (WDM)

Water Demand Management (WDM) specifically refers to the technical, regulatory and market tools, which are used to promote more efficient levels or patterns of water use. They are considered technical innovations because they are designed to generate more “water services” from a given volume.

Rather than just accessing, treating and distributing greater supplies of water - usually through building additional infrastructure such as dams or desalination plants (known as Supply Side Management), which can be expensive and damage the environment – a demand management approach attempts to modify users’ demand for water. This can be accomplished by reducing water consumption and, perhaps more critically, completing tasks with less water (i.e. being more efficient).

Examples of WDM include the use of front-loading washers, water efficient showerheads and low-flow toilets. Regulatory mechanisms include government rebates for installing water efficient appliances and water saving devices and imposing water restrictions.

Water Sensitive Urban Design (WSUD)

WSUD is an approach to urban planning and design philosophy, which aims to overcome some of the deficiencies associated with conventional developments. This is achieved by integrating the total water cycle into new urban development and redevelopment areas from the strategic planning phase through to the design and construction phase (Taylor and Weber, 2004).

WSUD promotes an approach to urban development that responds to a site's natural features, protects natural ecosystems on site and downstream, and optimises the use of water as a precious resource. WSUD aids in the smart planning of urban spaces and infrastructure, and emphasises the importance of onsite collection, treatment and utilisation of water flows, including stormwater.

The Northern Territory Government are continuing to refine the WSUD Strategy for the Darwin Harbour region. The WSUD Implementation Discussion Paper (McAuley, McManus and Knights, 2009) defines the principles of WSUD as:

- protect existing natural features and ecological processes
- maintain natural hydrologic behaviour of catchments
- protect water quality of surface and ground waters
- minimise demand on the reticulated water supply system
- minimise wastewater discharges to the natural environment
- integrate water into the landscape to enhance visual, social, cultural and ecological values.

The Darwin Harbour region's unique wet-dry tropical climate, natural features and rate of growth require a specially tailored approach to WSUD. The Darwin Harbour Water Sensitive Urban Design Strategy provides information for designers, developers, engineers, builders and the general public about WSUD in the Top End. These resources are available online at www.equatica.com.au/Darwin/index.html

Associated documents

There is currently a wide range of legislation, policy, plans, strategies, studies and frameworks prepared and implemented by government that complement the Darwin Harbour Strategy. The following list of documents includes those most relevant to the use of the Darwin Harbour region at the time of publication, however this list should not be considered to be exhaustive and therefore consideration of policy and legislation should not be limited to this list.

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