

Review

The Tiwi Land Council will also manage accountability by monitoring the implementation of the Strategy and assessing progress towards outcomes. Ongoing monitoring, amendment and review is crucial to Strategy implementation, and will be achieved through assessment against the key performance indicators. Three formal review processes have been proposed, and included in the Action Plan:

1. Twelve to eighteen months after Strategy implementation, an assessment of achievements to date and outcomes achieved. Management response may include a re-evaluation of time-lines and resourcing.
2. Three years after Strategy implementation, an analysis of progress towards Objectives. Management response may result in changes to the Recommended Actions.
3. Five years after Strategy implementation, an assessment of whether the Objectives are still valid. Management response will result in a review and update of the Strategy.

Formal review of the Strategy will be a consultative process, and recommendations for change will be considered from all stakeholders, including government, communities, industry and other land users.

In order to achieve a responsive management process, informal review activities and Strategy updates may also be undertaken at other times. These could be triggered by a number of internal and external influences such as changes in government policies, technological changes, key milestones achieved ahead of time, changing priorities of stakeholders and identification of new opportunities for sustainable natural resource utilisation.





Action PLAN





The Table following lists the Recommended Actions in priority order. The timeframe for implementation has been assigned as:

Current – already being carried out, and should continue.

Immediate Priority – action within the next 12 to 18 months.

High Priority – action within the next three years.

Moderate Priority – action within the next five years.

Each Recommended Action has also been assigned a responsible agency, an indicative cost for currently unfunded items, and a key performance indicator against which progress will be measured.

The following acronyms have been used:

AFANT	Amateur Fishermen's Association of the NT	IHANT	Indigenous Housing Association of the NT
AQIS	Australian Quarantine Inspection Service	NAHS	National Aboriginal Health Strategy
ARUGF	Aquatic Resource User Group Forum	OEH	Office of Environment and Heritage
CDEP	Community Development Employment Programme	PMFEU	Police Marine Fisheries Enforcement Unit
CSIRO	Commonwealth Scientific and Industrial Research Organisation	PPA	Pitlangimpi Progress Association
DCDSA	NT Department of Community Development, Sport and Cultural Affairs	PWS	Parks and Wildlife Service of the Northern Territory
DBIRD	NT Department of Business Industry and Resource Development	SLAP	Serviced Land Availability Plan
DIPE	NT Department of Infrastructure Planning and Environment	TASMAC	Tiwi and Sylvatech Management Advisory Committee
DEH	Commonwealth Department of Environment and Heritage	TCWCC	Tiwi Coastal Waters Consultative Committee
FTO	Fishing Tour Operator	THB	Tiwi Health Board
GIS	Geographic Information System	TILG	Tiwi Islands Local Government
		TITEB	Tiwi Islands Training and Employment Board
		TLC	Tiwi Land Council



Current – already being carried out, and should continue.

Recommended Action (summarised)	Responsible Organisation	Partner Bodies & Potential Partner Bodies	Estimated funding requirement (\$)		Key Performance Indicators
			Start-up	Recurrent	
Institutional processes					
6.3 Lobby for FTO's to be recognized as commercial operators.	TLC	TCWCC, ARUGF	Core business		Commercial status recognised.
15.4 Include quarantine requirements in tenders let.	TLC	TILG, DIPE	Core business		Quarantine requirements included in tenders.
Processes that develop local capacity					
19.8 Continue to access short term funding for on-ground projects.	TLC	Natural resource management funding bodies.	Core business		Project funding received.
15.5 Maintain quarantine public awareness.	TLC	TILG		5,000	Public awareness material produced; media interviews; activities undertaken.
13.3 Support and encourage local weed management.	TLC, TILG	DIPE, PWS		1,500	Weed control undertaken; public awareness activities.
18.1 Support and maintain community and forestry fire management training.	TILG, Sylvatech	DIPE, TITEB	Core business		Training carried out.
19.2 Facilitate school based natural resource management activities and projects.	TLC	All Tiwi schools, Education Dept		2,000	School visits, material provided, projects undertaken.
1.5 Source and obtain data held within other organisations.	TLC		Core business		Natural resource management data obtained.
6.2 Continue representation on marine and coastal bodies.	TLC		Core business		Representation on marine and coastal bodies.
2.1 Provide advice to government on Tiwi natural resource management issues	TLC		Core business		Representation on natural resource management bodies; meetings with government

Recommended Action (summarised)	Responsible Organisation	Partner Bodies & Potential Partner Bodies	Estimated funding requirement (\$)		Key Performance Indicators
			Start-up	Recurrent	
Research					
4.4 Turtle and dugong population and habitat status and recommendations for management.	TLC	Research and educational bodies		7,500	Research projects developed and implemented.
Regional planning processes					
4.3 Progress sea-closures and other protective measures for the north coast of Melville Island.	TLC	TCWCC, ARUGF, DEH, PWS		2,500	Protective measures identified and implemented.
8.2 Continue coastal monitoring in high-risk areas, and develop estimates of erosion rates.	TLC		Core business		Estimates of erosion rates determined.
8.3 Implement a policy of assessing all developments within 100m of the coastline.	TLC	TILG	Core business		Policy developed and implemented.
7.6 Seek opportunities for high-end eco-tourism ventures.	TLC		Core business		Opportunities identified and assessed.
7.8 Support and encourage considered approaches for commercial wildlife utilisation opportunities.	TLC		Core business		Approaches received and considered.
4.9 Discussions for areas set aside as reserves, and management requirements	TLC	DEH, PWS	Core business		Discussions held and options assessed.
5.11 Include assessments of freshwater resource requirements for large scale development projects.	TLC	TILG, DIPE, developers	Core business		Projects assessed.
1.7 Agreements for research and study to include provision of data in an appropriate format	TLC	Research bodies	Core business		Data provided.



Recommended Action (summarised)	Responsible Organisation	Partner Bodies & Potential Partner Bodies	Estimated funding requirement (\$)		Key Performance Indicators
			Start-up	Recurrent	
1.8 Regularly review and update this Strategy and Tiwi GIS.	TLC	All interested stakeholders.		2,000	Strategy and GIS regularly reviewed and updated.
Processes that protect and restore regional natural resource values					
15.3 Review and update the Cane Toad Action Plan.	TLC		Core business		Plan updated.
4.6 Implement existing commitments for biodiversity management under EPBC.	TASMAC	DEH, PWS	84,000	74,000	Biodiversity management and monitoring programme implemented.
4.5 Progress biodiversity management and monitoring protocols for aquaculture and forestry through inclusive negotiation.	TASMAC, Marine Harvest	PWS, DEH	Core business		Prior commitments reviewed and accepted by all stakeholders.
Processes that protect and restore local natural resource values					
14.1 Develop and implement a pig eradication programme for Rangini (Melville Island).	TLC	PWS, DEH	19,000 (funding committed)	8,600	Eradication programme developed and implemented.
5.8 Implement freshwater management and monitoring commitments for the plantation forestry project.	TASMAC	DIPE		26,500	Freshwater management and monitoring programme implemented.
11.3 Continue erosion control works at Port Hurd airstrip.	TLC	Marine Harvest, DIPE		2,500	Works implemented annually.

Recommended Action (summarised)	Responsible Organisation	Partner Bodies & Potential Partner Bodies	Estimated funding requirement (\$)		Key Performance Indicators
			Start-up	Recurrent	
Additional personnel requirement: Project management; 0.5 staff Forestry environmental management; 1 full time staff	TLC TASMAC			30,000 55,000	
Total estimated funding required for continuation of current activities			84,000	217,100	



Immediate Priority – action within the next 12 to 18 months.

Recommended Action (summarised)	Responsible Organisation	Partner Bodies & Potential Partner Bodies	Estimated Funding Requirement (\$)		Key Performance Indicators
			Start-up	Recurrent	
Institutional processes					
15.6 Actively explore opportunities for intra-territory quarantine legislative controls.	TLC	DBIRD	Core business		Legislative controls identified.
13.1 Develop and enforce policies and by-laws for regional weed issues, including education and awareness programmes.	TLC	TILG, DIPE, TASMALC	5,000	1,500	Policies and by-laws developed, education and awareness programmes developed.
3.3 Develop Codes of Practice for appropriate consultation prior to land and sea access and disturbance.	TLC	All agencies and industry with business in the region.	2,500		Codes of Practice produced and disseminated.
4.1 Early and full inclusion of Tiwi stakeholders in determination of biodiversity values.	TLC	DEH, PWS	1,000	500	Formal protocols for consultation and consideration accepted by stakeholders and implemented.
4.2 Consultative mechanisms for preparation of species recovery plans.	TLC	DEH, PWS	1,000	500	Consultative mechanisms developed and accepted by stakeholders.
Processes that develop local capacity					
19.5 Develop and resource a natural resource management team.	TLC	TILG (CDEP), TITEB, DEH, PWS	85,000	295,000	Natural resource management team in place.
6.9 Expand the Tiwi Marine Ranger Programme to two vessels and four ranger staff.	TLC	TILG (CDEP), TITEB, DBIRD	90,000	170,000	Expanded Marine Ranger programme in place.
6.10 Provide ongoing training opportunities for Marine Ranger staff.	TITEB	TLC, DBIRD		5,000	Training opportunities identified and accessed.
19.4 Facilitate Tiwi involvement in mainstream natural resource management training and education programmes.	TITEB	TLC, TILG	Core business		Mainstream courses identified and accessed

Recommended Action (summarised)	Responsible Organisation	Partner Bodies & Potential Partner Bodies	Estimated Funding Requirement (\$)		Key Performance Indicators
			Start-up	Recurrent	
1.3 Finalise development of the Tiwi GIS.	TLC		7,000		Tiwi GIS completed.
18.2 Carry out an annual awareness and education programme for the protection of plantation forestry lease areas from wildfire.	TASMAC		1,000	2,000	Annual programme developed and implemented.
Research					
6.6 Initiate and manage research on the impacts of commercial and recreational fishing.	TCWCC	Research and educational bodies.	10,000		Research projects developed and implemented.
1.1 Finalise current studies on biodiversity, water resources and land capability.	PWS, DIPE, Consultants	TLC			Current studies finalised.
7.3 Finalise biodiversity studies in order to provide certainty to landowners and investors.	PWS	TASMAC	5,000		
1.2 Identify and fill current gaps in resource knowledge.	TLC	Consultants	2,500	To be determined	Gaps identified, programmes developed in relevant areas.
6.5 Initiate log book projects for recreational fishers.	AFANT	TLC	5,000	5,000	Log book project implemented.
Regional planning processes					
19.6 Form a Tiwi natural resource management committee, and develop communication links between Tiwi organisations.	TLC	TILG, TITEB, THB		12,000	Committee established and operational, meeting every two months.
10.1 Identify sites for extraction of sand, gravel and topsoil.	TLC	TILG	1,500		Sites identified, recorded on Tiwi GIS and disseminated to Community Management Boards.



Recommended Action (summarised)	Responsible Organisation	Partner Bodies & Potential Partner Bodies	Estimated Funding Requirement (\$)		Key Performance Indicators
			Start-up	Recurrent	
3.4 Prepare and distribute maps of land ownership and authority.	TLC		5,000		Maps prepared and distributed.
7.4 Investigate the development and implementation of 'development zones' and 'conservation zones'.	TLC	DEH, PWS	Core business		Discussions held and options assessed.
10.5 Include rehabilitation and revegetation in work scopes for all new developments.	TLC, TILG	All agencies carrying out development in the region.	Core business		Processes developed and implemented.
4.7 Record on the Tiwi GIS as protected from significant changes in land use: <ul style="list-style-type: none"> • Seagull Island. • The mouths and landward waters of Shark Bay, Snake Bay, Goose Creek, Lethbridge Bay, Brenton Bay and adjacent areas significant for turtle breeding, sea grass and seaweed. • Known locations of listed threatened species, and associated buffers. • Environments listed as threatened. • Rainforest areas. • Riparian zones. • Wetlands. • Other significant habitats for animals listed under international treaties. 	TLC		Core business		Locations recorded and classified.

Recommended Action (summarised)	Responsible Organisation	Partner Bodies & Potential Partner Bodies	Estimated Funding Requirement (\$)		Key Performance Indicators
			Start-up	Recurrent	
<p>4.8 Flag on the Tiwi GIS as requiring further investigation when considering changes in land use:</p> <ul style="list-style-type: none"> • The northern coast of Melville Island. • Treeless plains. • Data deficient species, with the priority on endemic species. 	TLC			Core business	Locations recorded and classified.
10.4 Develop and disseminate Codes of Practice for external contractors and service providers.	TLC		5,000		Codes of Practice produced and disseminated.
5.7 Develop and disseminate Codes of Practice for tour operators and recreational users using waterways and wetlands, and include in licence provisions.	TLC		2,500		Codes of Practice produced and disseminated. Clauses included in licence provisions.
Processes that protect and restore regional natural resource values					
15.2 Seek and obtain funding support for expanded quarantine infrastructure at Tiwi Barge.	TLC	Tiwi Barge Services		Core business	Funding obtained.
14.5 Carry out a prioritised feral ant eradication programme.	TLC	CSIRO	10,000 (funding committed)	2,500	Eradication programme complete, monitoring programme developed.



Recommended Action (summarised)	Responsible Organisation	Partner Bodies & Potential Partner Bodies	Estimated Funding Requirement (\$)		Key Performance Indicators
			Start-up	Recurrent	
6.4 Carry out permit checks for recreational camping twice yearly.	PMFEU	AFANT, TLC		6,000	Checks implemented.
Processes that protect and restore local natural resource values					
5.2 Designate and exclude from development the potential Pirlangimpi bore field.	TLC	TILG, PowerWater, IHANT	Core business		Area designated as future bore field and entered on SLAP.
12.3 Prepare and implement marine pest management protocols for timber export.	TASMAC	DBIRD, Forest industry partners	2,500	1,500	Protocols developed and implemented.
5.3 Implement contamination protection measures for Blue Water Creek.	PowerWater	TILG, NAHS	7,500		Protection measures implemented.
9.2 Rehabilitate the old waste disposal site at Nguu, and discourage informal use.	TILG	NAHS, OEH	10,000		Site rehabilitated and closed.
5.5 Provide a sustainable water supply for Paru outstation.	TILG	NAHS	245,000		Water supply installed.
6.8 Erect 'No Trespassing' signs around Marine Harvest aquaculture lease.	Marine Harvest		2,500		Signs installed.
6.7 Relocate Port Hurd closure line to the mouth of Port Hurd.	TLC	ARUGF, DBIRD	Core business		Closure line installed.
9.3 Upgrade sewerage disposal facilities at Munupi Lodge, Pirlangimpi.	PPA		80,000		Sewerage upgraded.
Additional personnel requirement					
GIS & Project management; 0.5 staff	TLC			30,000	
Total estimated funding required for Immediate Priority Actions			576,500	531,500	

Review Activity 1 – Assessment of Key Performance Indicators

Assess status of completion and outcomes achieved	TLC	All stakeholders	5,000	Management response which may result in a re-evaluation of time-lines and resourcing.
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High Priority – action within the next three years.

Recommended Action (summarised)	Responsible Organisation	Partner Bodies & Potential Partner Bodies	Estimated Funding Requirement (\$)		Key Performance Indicators
			Start-up	Recurrent	
Institutional processes					
2.2 Formation of co-management bodies to negotiate competition in natural resource allocation, and to ensure differences in views are addressed in the decision-making process.	TLC	DEH, PWS, DIPE	5,000	2,000	Co-management bodies established and operational.
12.5 Collaborative approach to infrastructure development with a focus on providing sustainable resource development and optimum opportunities for investment within the region.	TLC	TILG, Relevant NT and Commonwealth Govt representatives, relevant industry representatives	2,000	1,000	Formal protocol for collaboration developed; collaborative bodies established and operational.
8.4 Consultative review of stormwater drainage design, and revise standards for communities and outstations.	IHANT	TILG, TLC, DIPE, NAHS	10,000		Revised standards accepted by all stakeholders.
Processes that develop local capacity					
19.1 Investigate and implement methods of including natural resource information into existing community information technology links.	TLC	TILG		Core business	Methods identified and implemented.

Recommended Action (summarised)	Responsible Organisation	Partner Bodies & Potential Partner Bodies	Estimated Funding Requirement (\$)		Key Performance Indicators
			Start-up	Recurrent	
19.3 Staff training in natural resource management information and techniques, including field days.	TLC	All Tiwi organisations.	5,000	5,000	Training courses and field days carried out.
1.4 Purchase appropriate computer hardware and software dedicated to natural resource management, and develop a central library.	TLC		30,000	2,500	Equipment purchased and central library established.
15.1 Expansion of existing AQIS programmes and training.	AQIS	TLC		5,000	Expanded AQIS programme.
5.4 Education and awareness programme on domestic water use.	TLC	DIPE, TILG	7,500		Education and awareness programme developed and implemented.
Research					
17.1 Expand land capability mapping to identify areas of erosion risk, and use as a basis for land use planning.	TLC	Consultant	3,500		Erosion risk mapping included as a layer on Tiwi GIS.
7.9 Identify and assess wild catch fishery resources, and Tiwi access to commercial opportunities.	TCWCC		Core business		Opportunities identified.
5.10 Recommission surface water gauging stations at Blue Water Creek, Taracumbi Creek and Takamprimili Creek.	TLC	DIPE	27,000	9,000	Automatic gauging stations operational.
Regional planning processes					
15.7 Develop and implement a Quarantine Management Plan for the region.	TLC	DBIRD	5,000	To be determined	Plan developed and implemented.



Recommended Action (summarised)	Responsible Organisation	Partner Bodies & Potential Partner Bodies	Estimated Funding Requirement (\$)		Key Performance Indicators
			Start-up	Recurrent	
6.1 Record important marine and coastal hunting areas as protected on the Tiwi GIS.	TLC		Core business		Locations recorded and classified.
3.1 Confirm areas of cultural significance and update Tiwi GIS where appropriate.	TLC		Core business		Areas recorded and classified.
7.7 Identify and protect areas of high value to eco-tourism.	TLC		Core business		Areas recorded on Tiwi GIS, and excluded from inappropriate development.
7.1 Development and expansion of land and sea based aquaculture in line with suitability studies.	TLC	Relevant industry	Core business		Opportunities for expansion identified, and approaches made to potential investors.
7.2 Development and expansion of forestry enterprise in line with land capability studies and biodiversity planning.	TLC	Relevant industry	Core business		Opportunities for expansion identified, and approaches made to potential investors.
8.1 Develop 5 to 10 year land use structure plans for Nguuu, Milikapiti and Pirlangimpi.	IHANT	TILG, TLC, DCDSCA	25,000		Land use structure plans developed.
1.6 Develop protocols for updating Tiwi GIS, including data format protocols.	TLC		1,000		Protocols developed and disseminated.
7.5 Update suitability and capability ratings as information becomes available, and use as a basis for regional planning.	TLC		1,000		Ratings updated and recorded on Tiwi GIS.
17.3 Carry out an erosion survey and enter results onto Tiwi GIS.	TLC		5,000		Survey completed and data recorded on Tiwi GIS.

Recommended Action (summarised)	Responsible Organisation	Partner Bodies & Potential Partner Bodies	Estimated Funding Requirement (\$)		Key Performance Indicators
			Start-up	Recurrent	
3.5 Regular orientation workshops for non-Tiwi staff and residents.	TLC			2,000	Workshops undertaken.
10.2 Implementation of guidelines for borrow pit operation and rehabilitation.	TLC	TILG, DIPE, External contractors	Core business		Improved borrow pit operation and rehabilitation undertaken.
10.3 Develop and disseminate best practice guidelines for the construction and maintenance of unsealed roads.	TLC		2,500		Guidelines developed and disseminated.
12.1 Update, review and implement the Port Hurd Aquaculture Environmental Management Plan.	Marine Harvest	TLC		1,500 (review only)	Plan updated, reviewed and implemented.
12.2 Update, review and implement the Tiwi Islands Plantation Forestry Strategic Plan.	TLC	Sylvatech		1,500 (review only)	Plan updated, reviewed and implemented.
Processes that protect and restore regional natural resource values					
9.1 Identify priority areas, and explore options for prioritised stormwater drainage upgrades in all communities.	TILG	IHANT, NAHS	2,500		Priority areas identified, report produced and approaches made to relevant organisations for works.
11.2 Prepare and cost a plan for progressive upgrading/rehabilitating of roads and tracks.	TLC	TILG	2,000		Plan prepared.
11.1 Develop and implement a rehabilitation plan for spent extractive areas.	TLC	TILG	1,500 (dev. only)		Plan developed and implemented.
14.4 Investigate and encourage economic opportunities for buffalo and pig utilisation.	TLC		Core business		Discussions held with potential operators.



Recommended Action (summarised)	Responsible Organisation	Partner Bodies & Potential Partner Bodies	Estimated Funding Requirement (\$)		Key Performance Indicators
			Start-up	Recurrent	
Processes that protect and restore local natural resource values					
12.4 Actively encourage ongoing management of land degradation issues associated with Maxwell Creek and Pickertaramoor	TLC	Sylvatech	Core business		Restoration activities carried out.
5.1 Develop and implement a groundwater monitoring programme for Nguuu and Milikapiti bore fields.	PowerWater	TILG, DIPE	1,000	1,000	Monitoring programme implemented.
Total estimated funding required for High Priority Actions			135,500	31,500	

Review Activity 2 – Assessment of whether the Actions are meeting the Objectives

Analyse progress towards Objectives	TLC	All stakeholders	5,000		Management response which may result in changes to the Recommended Actions.
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Moderate Priority – action within the next five years.

Recommended Action (summarised)	Responsible Organisation	Partner Bodies & Potential Partner Bodies	Estimated Funding Requirement (\$)		Key Performance Indicators
			Start-up	Recurrent	
Institutional processes					
19.7 Develop and maintain communication links between the Tiwi regional natural resource management committee and government.	Tiwi regional natural resource management committee.	DEH, PWS, DIPE, DBIRD, OEH		6,000	Regular meetings between Tiwi committee representative and government representatives.
14.6 Develop and enforce policies and by-laws for regional feral animal issues, including education and awareness programmes.	TLC	TILG, PWS	5,000	1,500	Policies and by-laws developed, education and awareness programmes developed.
Processes that develop local capacity					
5.6 Investigate the feasibility of 'Waterwatch' type programmes to monitor surface water.	TLC	Tiwi schools	1,000		Programmes assessed, and recommendations made for adoption.



Recommended Action (summarised)	Responsible Organisation	Partner Bodies & Potential Partner Bodies	Estimated Funding Requirement (\$)		Key Performance Indicators
			Start-up	Recurrent	
Research					
14.2 Assess and record the extent of degradation from feral pigs and buffalo.	TLC	PWS	10,000		Survey completed and data recorded on Tiwi GIS; management recommendations prepared.
5.9 Initiate and manage research on environmental flow, spring flow and deep aquifer production capability and recharge.	TLC	DIPE, research and educational organisations.	To be determined		Research programmes developed and implemented.
Regional planning processes					
13.2 Develop and implement a Weed Management Plan under the <i>Weeds Management Act 2001</i> .	TLC	Darwin Region Weeds Advisory Committee	2,500 (dev. only)	To be determined	Weed Management Plan developed and implemented.
17.2 Identify key land use activities that contribute to soil erosion, and develop and disseminate sector specific guidelines/awareness material.	TLC		3,500		Guidelines and awareness material developed and disseminated.
16.1 Develop and disseminate generic clearing guidelines.	TLC		2,500		Guidelines developed and disseminated.

Recommended Action (summarised)	Responsible Organisation	Partner Bodies & Potential Partner Bodies	Estimated Funding Requirement (\$)		Key Performance Indicators
			Start-up	Recurrent	
Processes that protect and restore regional natural resource values					
14.3 Investigate options for pig and cat control under Commonwealth Government species recovery plans.	TLC	DEH, PWS	Core business		Opportunities identified and follow up commenced.
3.2 Identify areas of cultural significance that require management/rehabilitation plans; develop and implement plans where required.	TLC		1,500 (Areas identified only)	To be determined	Plan developed, including a programme for implementation.
17.4 Prepare and cost a plan for erosion control works based on the level and extent of active soil erosion.	TLC		1,500		Plan developed, including a programme for implementation.
Total estimated funding required for Moderate Priority Actions			27,500	7,500	

Review Activity 3 – Strategy Review

Determine whether Objectives are still valid	TLC	All stakeholders	5,000		Management response which will result in a review and update of the Strategy.
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