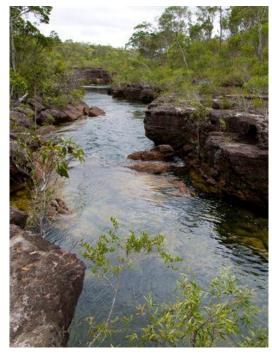
# Jardine-Heathlands Aggregation Management Statement 2013

Park size:	384,200ha				
	Heathlands RR	126,000ha			
	Jardine River NP	237,000ha			
	Jardine River RR	21,200ha			
Bioregion:	Cape York Peninsula				
QPWS region:	Northern				
Local government estate/area:	Cook Shire Council				
State electorate:	Cook				



Heathlands Resources Reserve. Photo: NPRSR.

Within this document, Jardine River National Park, Jardine River Resources Reserve and Heathlands Resources Reserve are collectively referred to as the Jardine–Heathlands Aggregation.

#### Legislative framework

~	Aboriginal Cultural Heritage Act 2003
~	Environment Protection Biodiversity Conservation Act 1999 (Cwlth)
~	Native Title Act 1993 (Cwlth)
~	Nature Conservation Act 1992

#### Plans and agreements

~	Bonn Convention
>	Burra Charter
>	China–Australia Migratory Bird Agreement
>	Japan–Australia Migratory Bird Agreement
>	National recovery plan for the spectacled flying-fox Pteropus conspicillatus
>	Nature Conservation (Estuarine Crocodile) Conservation Plan 2007
>	Recovery plan for marine turtles in Australia
>	Recovery plan for the southern cassowary Casuarius casuarius johnsonii
~	Republic of Korea–Australia Migratory Bird Agreement



## **Vision**

The diversity and integrity of landscapes within the Jardine–Heathlands Aggregation, such as inland and coastal heathlands, rainforests and vine thickets, wetlands and grassy woodlands, will be conserved in an undeveloped and predominantly natural state.

Heathlands Resources Reserve and, to a lesser extent, Jardine River National Park will continue to be promoted as popular visitor destinations which provide camping, day-use and swimming opportunities.

Following tenure resolution and the formalisation of joint management arrangements, the Jardine–Heathlands Aggregation will be managed in partnership with relevant Aboriginal groups to ensure its land and waters are managed effectively, sustainably and in a culturally appropriate manner.

## **Conservation purpose**

The Jardine–Heathlands Aggregation was gazetted in stages and consolidated to form a large conservation area in a predominantly undeveloped and natural condition. Some vegetation communities within the aggregation are amongst the best examples of their vegetation class on the Peninsula (Abrahams et al 1995). The area provides habitat for many animal and plant species that are of conservation concern and/or endemic to Cape York Peninsula.

Heathlands Resources Reserve was previously leased by Comalco and used by the Commonwealth Scientific and Industrial Research Organisation as a research site to investigate whether nutrient-poor soils could be developed into productive land. The area was unable to be converted into viable agricultural land and, in 1985, the lease was converted to protected area.

Jardine River National Park was dedicated to protect the Jardine River.

## Protecting and presenting the park's values

## Landscape

The Jardine–Heathlands Aggregation is bordered to the east by the Great Barrier Reef Marine Park, to the north by a declared fish habitat area, to the south by a pastoral property and to the west by the Old Telegraph Road. Aboriginal land lies to the west of the Old Telegraph Road.

Considerable heath vegetation occurs on generally undulating, sandy soils. Eucalypt woodlands generally have a grassy or shrubby understorey. Rainforest pockets are scattered throughout the heathlands and eucalypt woodlands, and around Captain Billy road. Jardine River Resources Reserve is dominated by eucalypt woodlands with a very dense, scrubby understorey.

The coastline is comprised of sandy beaches and cliff-lines that rise 60–100m above the ocean. Minimal graffiti and only a few engravings have made on the cliffs by tourists.

At various high vantage points along roadways within Heathlands Resources Reserve, visitors can obtain panoramic views of the silica sand dunes of Shelburne Bay, and of heathlands interspersed with termite mounds. Smoke and sea mist often determines the distance that can be viewed. The cliff top by Captain Billy's Landing provides spectacular views of the ocean, Hannibal Islands and Pirie Island, the landing and the beaches to the north and south. Interpretive signs have not yet been developed for any of the viewing sites, nor is there a sign to indicate the location of the lookout.

The Jardine River is Queensland's largest perennial river system. Its headwaters are conserved within Jardine River National Park. The Escape River forms the border between Jardine River National Park and Jardine River Resources Reserve. The McHenry River forms the border between the Jardine River National Park and Heathlands Resources Reserve. Westerly-flowing creeks are perennial, clear, flowing systems, edged by dense riparian vegetation.

Perched lakes are scattered through the coastal heaths, with higher concentrations in the False Orford Ness area. In places they are surrounded by high dunes (up to 80–100m) with sand blows. Accessible examples of these special lakes can be found near Ussher Point.

The many perennial waterfalls located within the Jardine–Heathlands Aggregation present a drawcard to the area. Without careful planning, inappropriate infrastructure may detract from the aesthetics of these sites. Vehicle access upstream of Twin Falls (and off-park) increases sediment levels, severely impacting water quality at this key location turning the water cloudy to white from the upstream disturbance of Kaolin bearing clays.

## Regional ecosystems

Forty-seven regional ecosystems are mapped within the Jardine–Heathlands Aggregation. Some of these are unique variants on the more widespread regional ecosystem types. Eighteen are listed as of concern communities under their biodiversity status (Table 1). The remaining 29 are listed as not of concern at present.

The degree of impact caused by dust settling on the leaves of rainforest trees adjacent to roads is unknown. The growing amount of rubbish that is found in these areas reflects the increase in visitor numbers using the rainforest communities as cool spots to rest.

Large freshwater swamps are scattered throughout low lying areas within Jardine River National Park. The Jardine River Swamps are known to attract illegal pig hunters to the area.

A lack of fire threatens coastal heath communities. Some areas have not been burnt for 30 years, and have started senescing. Little regeneration is evident.

Grassy woodlands occur predominantly on high country in the northern half of the park. Mature, large *Eucalyptus tetrodonta* trees dominate. Shrubby areas normally occur where there has been a lack of fire management. Woodland density is largely dependent on previous fire regimes. Hot, late season fires have thinned some areas and created even-aged stands of similar size in other areas.

Inland heath occurs over approximately a quarter of the park, generally on low-nutrient, sandy soils. Lack of fire may threaten this community. Staff have undertaken a lot of work over the last four years to improve fire regimes in these heath communities. Some improvements are still required.

Rainforest and vine thickets are encroaching on grassy woodlands due to a lack of fire in the surrounding woodlands. It is assumed that rare and threatened species are present within the vine thickets.

Dense riparian vegetation along perennial creek-lines provides habitat for a number of species of conservation significance, including the palm cockatoo *Probosciger aterrimus*. Late season, hot fires have the potential to reduce the size and density of this community. Feral pig management in visitor sites is important. Visitor access to the Jardine River campsites has created access pads and shortcuts that have potential to erode during the wet season.

## **Native plants and animals**

Jardine River National Park is currently known to protect 35 species of state or national conservation significance (Tables 2), and 23 species which are listed in international agreements (Table 3).

Many endemic species and species of conservation significance, including the Cape York worm skink *Anomalopus pluto*, southern cassowary *Casuarius casuarius johnsonii* (northern population) and endangered little tern *Sternula albifrons*, have been recorded from the area. The aggregation area conserves habitat of many species with disjunct distributions across northern Australia, or those displaying a strong biogeographic relationship with fauna in New Guinea. The spectacled flying-fox *Pteropus conspicillatus* and the southern cassowary have specific management actions identified through their recovery plans.

Shorelines provide important habitat for the vulnerable beach stone-curlew *Esacus magnirostris*, and little tern and is a critically important stretch for marine turtle nesting. The area is a major breeding habitat of the estuarine crocodile *Crocodylus porosus*. The viability of nesting for these animals is hindered through indiscriminate vehicle traffic.

Dense riparian communities provide breeding and nesting habitat for palm cockatoos. Many other bird, reptile and amphibian species use these areas as a food source and for protection.

## **Aboriginal culture**

The area is known to be of significance to the Atambaya, Angkamuthi, Yadhaykenu, Gudang and Wuthathi language and social groups. They use the area for traditional hunting, gathering and social purposes. Currently no formalised management arrangements have been established with these traditional owner groups.

No current native title applications exist over the Jardine–Heathlands Aggregation area. One Indigenous land use agreement overlaps the western sections of Jardine River National Park and Heathlands Resources Reserve—area agreement Ql2006/043.

Subject to successful negotiation with Traditional Owners, the park is identified for future transfer to Aboriginal ownership under the *Aboriginal Land Act 1991*. A joint management regime will be established under the framework provided by the *Nature Conservation Act 1992* for the Cape York Peninsula region.

Places of material Aboriginal culture, such as midden and hearth sites, have been recorded along the coastline of the Jardine–Heathlands Aggregation. Potential exists for vehicles to drive over some of these sites. Managing vehicle access will assist in the preservation of these places. Given the size of the aggregation and inaccessibility issues, it is likely that many other unrecorded sites exist.

## **Shared-history culture**

The barge landing still remains at Captain Billy's Landing. It has deteriorated badly and it is likely that it will be unsafe to use in a few years. Interpretive signs located on-site and at Eliot Falls, outline the story attached to the history of this site.

Old buildings, such as the old slaughter house, and a cattle dip remain in situ at the Queensland Parks and Wildlife Service (QPWS) ranger base. These pastoral relics range in condition from reasonable to poor. All internal fences have deteriorated and rusted or been burnt. A dam located near the ranger base is shallow, and often dries up.

An old log hut used by the linesmen when maintaining the original telegraph line is located near Canal Creek. It is in fair condition. The precise location of the hut is unclear and further information is required to confirm if the hut is located within the protected area.

## **Tourism and visitor opportunities**

Heathlands Resources Reserve receives an estimated 13,000 visitors per annum, comprising approximately 11,000 campers, 1,600 people in commercial activity groups and 500 day-users. Most visitor use occurs during the dry season from June to September, with the majority of campers using the park during the July school holidays. Little is known about visitor use within Jardine River National Park or Jardine River Resources Reserve.

Visitors can access the area from the Peninsula Development Road or via vessel. Four-wheel drive vehicles and motorcycles are most commonly used. However, due to improved road conditions, more conventional vehicles are now accessing through the park. There is also a growing trend in the number of vehicles towing trailers and caravans.

The aggregation is popular with a wide cross section of the community from young couples through to retirees, and these can also include return travellers. Four-wheel drive enthusiasts, nearby residents and Aboriginal groups access the Jardine River protected areas primarily to camp, fish and experience solitude.

Key visitor attractions include Eliot Falls, Fruit Bat Falls and Captain Billy's Landing. The main recreation activities undertaken at and around these sites include four-wheel driving, camping, swimming, fishing, boating, sightseeing, relaxation and nature photography.

The Eliot Falls campground has designated campsites defined by bollards, and capacity is managed through an online booking system. Demand had previously been exceeding capacity on an increasing basis due to a lack of available alternatives and the remoteness of the area. In areas people are pushing into the vegetation and creating unauthorised camping areas. Establishing a greater management presence at Eliot Falls during the peak visitor periods will assist with managing these issues.

Visitor infrastructure installed to minimise impacts from people accessing the waterfalls blends well with the natural environment. Infrastructure at Fruit Bat Falls is being replaced and updated. Planning for greater volumes of day traffic is also underway. The redevelopment of the day use area at Fruit Bat Falls is the highest priority project for visitor management in this aggregation. No significant impacts from swimming are evident.

Numerous commercial operators have permits to conduct commercial activities in Heathlands Resources Reserve and Jardine River National Park—principally in the form of safari, tag-a-long and motorcycle tours. Commercial groups rarely utilise permits for Jardine River National Park.

The Old Telegraph Road and Gunshot Crossing are premier four-wheel drive destinations on Cape York Peninsula, but are not technically located on protected area estate. Erosion at the Gunshot Creek and Canal Creek crossings (a tributary for Twin Falls) is causing sedimentation downstream, in the protected area estate.

Captain Billy's Landing is currently used as a combined camping and day-use area. No major visitor impacts are noticeable. However, king tides and wave action are undercutting the north-eastern corner of camping area.

#### **Education and science**

The Jardine–Heathlands Aggregation area protects numerous rare, restricted or biogeographically important species, such as the Jardine River turtle *Emydura subglobosa subglobosa*, which are of educational and research interest.

Knowledge gained from research and monitoring programs improves staff knowledge and guides future park management, and is an integral part of adaptive park management. Given the outstanding natural and cultural significance of the aggregation, collation of existing information and ongoing monitoring and survey work should be seen as a priority by QPWS.

## **Partnerships**

QPWS staff maintain working relationships with people from neighbouring properties and Aboriginal land trusts to ensure protected area values are appropriately managed. Where possible, pest and fire management activities are coordinated with neighbouring landholders.

## Other key issues and responses

## Pest management

#### **Pest plants**

Pest plants pose a low risk to the natural and cultural integrity of the park. Small, scattered and isolated gamba grass *Andropogon gayanus* infestations occur in the pasture grass clearing near Captain Billy's Landing, and pond apple *Annona glabra* occurs along the coastline in the outlets and mouths of small, freshwater creeks. QPWS staff are currently actively managing of these weeds.

#### **Pest animals**

Feral pigs occur throughout the park, and are in higher concentration in rainforest areas and riparian areas. There is evidence of pig *Sus scrofa* disturbance to sea turtle nests. QPWS are conducting a baiting program along the coastline to reduce impacts to turtle populations.

A small herd of cattle Bos spp. graze the pasture grass area near the ranger base. No park boundary fences exist, as it is not practical to fence the protected area.

## Fire management

Staff are using fire to limit the encroachment of rainforest into grassy woodlands. Four photo monitoring sites are located along the Ussher Point access road, and are being actively monitored.

Late season, hot fires typically originate from popular roadways, such as the Southern Bypass road and the Old Telegraph Track, and result in canopy scorch and a completely blackened understorey. Hot fires produce evenaged stands of vegetation and a lack of old hollow-bearing trees. No formal research has been undertaken to determine their long-term impacts.

A lack of active fire management leads to late season, hot and large-scale fires, substantial thickening and changes to vegetation structure and, in some cases, encroachment of rainforest or vine thickets into surrounding woodlands.

Regular burns are being undertaken to break up patches of even-aged heath vegetation. Where the same areas are constantly targeted or fires are conducted too frequently, seed banks and regeneration rates may be reduced. Staff are reticent to implement fire regimes in coastal areas due to the associated erosion risk and a general lack of understanding about the appropriateness of fire in these areas.

The cleared pasture areas are currently burnt every 2–3 years as a protection measure to reduce risks to built infrastructure at the Heathlands ranger base. Despite this frequency of burning, native species are slowly recolonising and in some places have re-established in place of the introduced pasture.

## Other management issues

#### **Safety**

The natural environment presents the potential for interaction with dangerous wildlife, including crocodiles, snakes and spiders. Warnings and information about these natural hazards are highlighted on information boards and signs within the aggregation area, and in park brochures.

Approximately 2–3 vehicle accidents, ranging from minor injuries to fatalities, occur in the planning area each year. This is assumed to be because many drivers are not adequately experienced or are inappropriately positioned on the road.

The boardwalk at Eliot Creek is currently maintained in accordance with critical infrastructure guidelines. Staff replace damaged sections as required to maintain the boardwalk in a safe condition.

#### **Gravel extraction**

The Southern Bypass road through the aggregation is currently un-gazetted; however is being maintained by the Department of Transport and Main Roads. All other roads on the park are maintained by QPWS. The majority of the Old Telegraph Road, which forms the western boundary of the aggregation is not maintained.

Numerous active and inactive gravel extraction sites are located within the Jardine–Heathlands Aggregation. Inactive gravel pits are regenerating naturally. Some have large, stockpiles of gravel which are now well-vegetated, and others hold water.

The Department of Transport and Main Roads have consent from Traditional Owners and the relevant environmental authorities to undertake the improvement works that have been carried out on the Southern Bypass road. Any new works will require approval and notification to regional QPWS management in the first instance. It is a high priority for QPWS to assist the Department of Transport and Main Roads in the gazettal of the Southern Bypass road on a suitable alignment.

The Old Telegraph Road crosses the Sailor's Hill pit. This pit is larger than the original proposal, and QPWS receive a lot of negative comment about how visually imposing the pit is.

The Department of Transport and Main Roads are responsible for communicating and mandating the environmental standards and conditions of their environmental authorities and licences in the Northern Peninsula area, particularly to their contractors. Monitoring of on-ground activities is essential to ensure continued environmental compliance into the future.

#### Water extraction

Water is used by the Department of Transport and Main Roads during road maintenance activities. The demand for water to maintain the roads has increased as road standards have improved. The long-term sustainability of this practice is unknown. Sailor's Creek was pumped dry in 2009 and 2010.

## References

Abrahams H Mulvaney M Glasco D and Bugg A 1995, *An assessment of the Conservation and Natural Heritage Significance of Cape York Peninsula*. Cape York Peninsula Land Use Strategy, Office of the Co-ordinator General of Queensland, Brisbane, Department of the Environment, Sport and Territories, Canberra, and Queensland Department of Environment and Heritage, Brisbane.

# **Management directions**

Desired outcomes	Actions and guidelines
Native plants and animals  The health and diversity of plant and animal communities on the protected areas is maintained.	<ul> <li>A1. Encourage regeneration of native vegetation such as heath communities within cleared grazing areas adjacent to the ranger base and towards Captain Billy's Landing.</li> <li>A2. Encourage research to improve knowledge about the habitat requirements and distribution of the Jardine River turtle and, within the heath communities, the Cape York worm skink.</li> </ul>
Joint management  Traditional Owners are involved in management of the protected areas.	<ul> <li>A3. Establish and implement a formal joint management regime with Traditional Owners under the statutory framework provided by the Nature Conservation Act 1992 and the Aboriginal Land Act 1991 for the Cape York Peninsula region.</li> <li>A4. Maintain cooperative working relations with nearby land trusts to maximise management effectiveness of the Jardine–Heathlands Aggregation and adjacent traditional land and sea country.</li> </ul>
Shared-history culture Sites of cultural and historical significance are appropriately protected and presented.	<ul> <li>A5. Determine the appropriateness of presenting places of material culture and areas of spiritual significance to the public through consultation with relevant Traditional Owner groups.</li> <li>A6. Allow relics of pastoral history to deteriorate naturally, where they have no feasible management use or other significance.</li> </ul>
Tourism and visitor opportunities  The Jardine–Heathlands Aggregation offers a range of recreational opportunities which are appropriate to the remote character of the park.	<ul> <li>A7. Plan and develop the Fruit Bat Falls day-use area to cater for significant future increases in visitor use.</li> <li>A8. Revise and upgrade interpretive materials to educate visitors of the park's key natural and cultural values.</li> <li>A9. Encourage visitors to take personal responsibility for their safety, through the production of interpretive materials that emphasise the hazards and risks presented by the natural environment, and the level of preparation and self-sufficiency required to visit the area safely.</li> </ul>
Partnerships Park staff maintain good working relationships with community partners and other interested parties.	<ul> <li>A10. Maintain ongoing relationships with the local police, the Royal Flying Doctor Service and emergency services.</li> <li>A11. Maintain good working relations with neighbouring landholders and, where possible, cooperatively undertake fire and pest management programs.</li> </ul>
Fire management  The integrity of native plant and animal communities is maintained through strategic, sustained fire management.	<ul> <li>A12. Complete a Level 2 fire management strategy for the Aggregation as a matter of priority.</li> <li>A13. Maintain age structure, biodiversity and complexity of native vegetation communities through appropriate fire management.</li> </ul>
Pest management  The integrity of native plants and animal communities is maintained by coordinating pest management across the landscape.	A14. Continue feral animal management programs aimed at reducing impacts on turtle populations.  A15. Undertake active monitoring to establish the presence, distribution and ecological requirements of cassowaries within the management area, and continue feral pig management to reduce competition.

Desired outcomes	Actions and guidelines
Other management issues Gravel and water extraction activities are formalised and managed to protect the natural and cultural resources.	<ul> <li>A16. QPWS will assist the Department of Transport and Main Roads where necessary in the gazettal of the Southern Bypass road on a suitable alignment.</li> <li>A17. Ensure that an environmental management plan is in place prior to any disused gravel pits being re-opened.</li> <li>A18. Provide a buffer between the road alignment and gravel extraction sites, where possible.</li> <li>A19. Revegetate and appropriately drain gravel pits and old road alignments at the end of their useful life.</li> <li>A20. Liaise with the Department of Transport and Main Roads to monitor road maintenance activities to ensure compliance with environmental management plans.</li> </ul>

# **Conservation values management**

Table 1: Of concern regional ecosystems

Regional ecosystem number	Description	Biodiversity status
3.2.1a	Evergreen notophyll vine forest in coastal dunefield systems	Of concern
3.2.4b	$\it Melaleuca\ leucadendra \pm M.\ dealbata$ open forest. In dune swales, and swampy areas	Of concern
3.2.8a	Corymbia nesophila ± C. novoguinensis ± Eucalyptus spp. woodland on old stabilised dunes	Of concern
3.2.9	Eucalyptus phoenicea ± Corymbia nesophila woodland. Occurs on dunefields around Cape Bedford	Of concern
3.2.17	Leucopogon yorkensis ± Asteromyrtus angustifolia closed scrub on dunefields	Of concern
3.2.22	Acacia humifusa ± Lithomyrtus obtusa dwarf open heath on dunes and headland	Of concern
3.2.24	Closed herbland of mixed graminoids and forbs. Occurs on exposed foredunes	Of concern
3.2.33	Gahnia sieberiana open to closed heath. Drainage swamps in east coast dunefields	Of concern
3.2.27a	Ephemeral and perennial lakes in coastal dunefields	Of concern
3.3.6	Evergreen notophyll vine forest with Melaleuca leucadendra on swamps	Of concern
3.3.12	Melaleuca quinquenervia open forest. Associated with scattered coastal swamps	Of concern
3.3.66 (a, x1a)	Permanent lakes and lagoons, frequently with fringing woodlands or sedgelands	Of concern
3.5.5b	Corymbia novoguinensis or C. nesophila ± C. tessellaris woodland on northern Cape York Peninsula	Of concern
3.5.21	Corymbia clarksoniana ± C. tessellaris open forest on coastal ranges and lowlands	Of concern
3.5.30 (x1,x3)	Themeda arguens, Dichanthium sericeum closed tussock grassland on low undulating rises	Of concern
3.7.1x1a	Semi-deciduous notophyll/microphyll vine thicket on isolated lateritic hillslopes	Of concern
3.11.6a	Eucalyptus platyphylla ± E. leptophleba ± Corymbia nesophila open forest to woodland on hill slopes	Of concern
3.12.31x2b	Themeda triandra tussock grassland on headlands and islands on acid volcanic rocks	Of concern

Table 2: Species of conservation significance

Scientific name	Common name	Nature Conservation Act 1992 status	Environment Protection and Biodiversity Conservation Act 1999 status	Back on Track status
Plants				
Archidendron hirsutum	-	Near threatened	-	Low
Calamus aruensis	-	Near threatened	-	Low
Calophyllum bicolor	-	Vulnerable	Vulnerable	Low
Centotheca philippinensis	creek grass	Near threatened	Vulnerable	Low
Crudia papuana	-	Near threatened	-	Low
Cryptocarya claudiana	-	Near threatened	-	Low
Cyathea felina	-	Endangered	-	Low
Dendrobium bigibbum	Cooktown orchid	Vulnerable	Vulnerable	High
Dendrobium carronii	-	Vulnerable	Vulnerable	Low
Dendrobium johannis	brown antelope orchid	Vulnerable	Vulnerable	Low
Eremochloa ciliaris	-	Near threatened	-	Data deficient
Freycinetia percostata	-	Vulnerable	-	Data deficient
Hydriastele costata	-	Vulnerable	Vulnerable	Low
Lindsaea walkerae	-	Near threatened	-	Low
Litsea macrophylla	-	Near threatened	-	Low
Lycopodiella limosa	-	Near threatened	-	Data deficient
Phyllanthera grayi	-	Vulnerable	-	Medium
Ryticaryum longifolium	-	Near threatened	-	Low
Schefflera bractescens	-	Near threatened	-	Low
Schoenus scabripes	-	Near threatened	-	Medium
Spathoglottis plicata	New Guinea ground orchid	Vulnerable	Vulnerable	Low
Syzygium buettnerianum	New Guinea satinash	Near threatened	-	Low
Animals	1	l	l	l
Accipiter novaehollandiae	grey goshawk	Near threatened	-	Low
Anomalopus pluto	-	Near threatened	-	Low

Scientific name	Common name	Nature Conservation Act 1992 status	Environment Protection and Biodiversity Conservation Act 1999 status	Back on Track status
Casuarius casuarius johnsonii (northern pop)	southern cassowary (northern population)	Vulnerable	Endangered	Medium
Crocodylus porosus	estuarine crocodile	Vulnerable	-	Low
Ephippiorhynchus asiaticus	black-necked stork	Near threatened	-	Low
Esacus magnirostris	beach stone-curlew	Vulnerable	-	High
Kerivoula papuensis	golden-tipped bat	Near threatened	-	Medium
Lophoictinia isura	square-tailed kite	Near threatened	-	Low
Probosciger aterrimus	palm cockatoo	Near threatened	-	Low
Pteropus conspicillatus	spectacled flying-fox	Least concern	Vulnerable	High
Saccolaimus mixtus	Papuan sheathtail bat	Near threatened	-	Medium
Spilocuscus maculatus	common spotted cuscus	Near threatened	-	Low
Sternula albifrons	little tern	Endangered	-	High

Table 3: Species listed in international agreements

Scientific name	Common name	Bonn	CAMBA	JAMBA	ROKAMBA
Actitis hypoleucos	common sandpiper	<b>✓</b>	<b>√</b>	<b>√</b>	~
Ardea modesta	eastern great egret	-	<b>✓</b>	<b>√</b>	-
Arenaria interpres	ruddy turnstone	<b>✓</b>	<b>√</b>	<b>√</b>	~
Calidris acuminata	sharp-tailed sandpiper	~	~	~	<b>~</b>
Coracina tenuirostris	cicadabird	-	-	✓	-
Crocodylus porosus	estuarine crocodile	<b>✓</b>	-	-	-
Fregata ariel	lesser frigatebird	-	<b>✓</b>	<b>√</b>	~
Haliaeetus leucogaster	white-bellied sea- eagle	-	V	-	-
Hirundapus caudacutus	white-throated needletail	-	<b>√</b>	<b>√</b>	<b>√</b>
Merops ornatus	rainbow bee-eater	-	-	✓	-
Monarcha frater	black-winged monarch	<b>✓</b>	-	-	-

Scientific name	Common name	Bonn	CAMBA	JAMBA	ROKAMBA
Monarcha melanopsis	black-faced monarch	~	-	-	-
Myiagra cyanoleuca	satin flycatcher	<b>✓</b>	-	-	-
Numenius phaeopus	whimbrel	<b>✓</b>	<b>✓</b>	<b>✓</b>	~
Pandion cristatus	eastern osprey	<b>√</b>	-	-	-
Phaethon lepturus	white-tailed tropicbird	-	~	~	-
Pluvialis fulva	Pacific golden plover	~	~	~	<b>√</b>
Rhipidura rufifrons	rufous fantail	<b>✓</b>	-	-	-
Sternula albifrons	little tern	<b>√</b>	<b>√</b>	<b>√</b>	~
Sula leucogaster	brown booby	-	<b>√</b>	<b>√</b>	~
Symposiarchus trivirgatus	spectacled monarch	~	-	-	-
Tringa stagnatilis	marsh sandpiper	<b>√</b>	<b>√</b>	✓	<b>✓</b>
Tringa nebularia	common greenshank	~	<b>✓</b>	~	✓

Bonn – Bonn Convention

CAMBA - China-Australia Migratory Bird Agreement

JAMBA – Japan–Australia Migratory Bird Agreement

ROKAMBA – Republic of Korea–Australia Migratory Bird Agreement

# Map1. Location

