

# Information Sheet on Ramsar Wetlands

*Categories approved by Recommendation 4.7 of the Conference of the Contracting Parties.*

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## 1. Date this sheet was completed/updated:

October 2002.

FOR OFFICE USE ONLY.

DD MM YY

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Designation date

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Site Reference Number

## 2. Country:

Australia

## 3. Name of wetland:

Coral Sea Reserves (Coringa-Herald and Lihou Reefs and Cays).

## 4. Geographical coordinates:

The site includes the following major components:

Coringa-Herald National Nature Reserve:

Herald Cays – Latitude: 16° 58' S; Longitude: 149° 08' E;  
Coringa Islets – Latitude: 16° 56' S; Longitude: 150° 00' E; and  
Magdelaine Cays – Latitude: 16° 30' S; Longitude: 150° 17' E.

Lihou Reef National Nature Reserve:

A horseshoe-shaped line of cays and reefs from

Nellie (No. 9) Cay – Latitude: 17° 39' S; Longitude: 151° 18' E, to  
Licklick Cay – Latitude: 17° 07' S; Longitude: 152° 11' E.

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## 5. Altitude:

Wetland areas within the site are situated at, and several metres below, mean sea level. Small islands and sand cays within the site have an elevation of no more than 5 metres above mean sea level.

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## 6. Area:

Total area of Coral Sea Reserves:	1,729,200 ha
Coringa-Herald National Nature Reserve	885,600 ha
Lihou Reef National Nature Reserve	843,600 ha

The site boundary corresponds to the boundaries of Coringa-Herald National Nature Reserve (885,600 ha, including a 124 ha terrestrial component), and Lihou Reef National Nature Reserve (843,600 ha, including a 91 ha terrestrial component).

The total area of cay-associated wetland (primarily fringing reef) within the Reserves is estimated to be 10,600 ha, approximately 3,700 ha in Coringa-Herald National Nature Reserve and 6,900 ha in Lihou Reef National Nature Reserve. The estimate for Lihou Reef includes only a small proportion of the interior of the lagoon: the lagoon comprises in the order of 300,000 ha of water of varied depth. For both Reserves, the estimated area of wetland includes some water more than 6.0 metres deep at low tide.

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## 7. Overview:

The site comprises oceanic islet and reef habitats that are representative of the Coral Sea region and are in near-pristine condition. Several islets within the site comprise undisturbed sandy habitat used for nesting by the globally endangered Green Turtle *Chelonia mydas*, along with forest and shrubland that supports important breeding populations of terns and other seabirds. Coral reef habitat within the site supports a distinct community of marine benthic flora and fauna, a relatively rich diversity of decapod crustacean and hydroid fauna, and significant feeding habitat for migratory shorebirds and seabirds.

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**8. Wetland Type:**

**marine-coastal:**    A    B    C    D    E    F    G    H    I    J    K  
**inland:**            L    M    N    O    P    Q    R    Sp    Ss    Tp    Ts  
  
                          U    Va    Vt    W    Xf    Xp    Y    Zg    Zk  
  
**man-made:**        1    2    3    4    5    6    7    8    9

**Please now rank these wetland types by listing from the most to the least dominant:**  
C, E.

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**9. Ramsar Criteria:** 2, 3, 4, 5 and 8.

1    2    3            4    5            6    7            8

**Please specify the most significant criterion applicable to the site:** 4.

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**10. Map of site included?** Please tick *yes*  -or- *no*.

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**11. Name and address of the compiler of this form:**

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**12. Justification of the criteria selected under point 9, on previous page.****Criterion 2.**

Green Turtle *Chelonia mydas* is listed as vulnerable under Australian Commonwealth legislation (*Environment Protection and Biodiversity Conservation [EPBC] Act 1999*), is classified as endangered on the IUCN Red List, and is protected under the *Convention on the International Trade of Endangered Species of Wild Animals* (CITES) to which Australia is a signatory. Green Turtle breed on sandy islets of the Coringa-Herald cluster and on 11 cays of Lihou Reef. Hawksbill Turtle *Eretmochelys imbricata*, also listed as vulnerable under the Australian EPBC Act, and classified as critically endangered on the IUCN Red List, has been sighted within the Reserves but has not been observed nesting (Environment Australia 2002c).

**Criterion 3.**

Formal inventories of wetland biodiversity in the Coral Sea are incomplete, and a biogeographic regionalisation for Australia's oceanic territory has not been finalised. However, given the type of environment typically associated with isolated oceanic reefs, the site can be considered a 'hotspot' of biological diversity (Ramsar Convention 2002) within the Coral Sea. The limited scientific investigations of the site to date have recorded moderately large numbers of marine animal species (Environment Australia 2002c), including:

- 745 species of marine molluscs (representing 118 families, of which 87 are gastropods);
- 356 species of fish (54 families);
- 128 species of decapod crustaceans (includes some terrestrial species);
- 66 species of marine algae;
- 55 species of hydroid (representing 14 families);
- 29 species of waterbird (as defined by Ramsar: see Annex); and
- corals, starfishes, brittle stars, feather stars, sea urchins, sea cucumbers and other invertebrate groups not yet comprehensively surveyed (Environment Australia 2002c).

Nine of the decapod crustacean species recorded appear not to have been previously described, and therefore may be endemic to the site. Furthermore, 17 of the decapod crustacean species and nine of the hydroid species have not been recorded elsewhere in Australian waters (Environment Australia 2002c).

**Criterion 4.**

The sandy cays of the site support important breeding colonies of Green Turtle. Genetic studies have indicated that the nesting population of Green Turtle within the site are of the same genetic stock as Green Turtle in the Great Barrier Reef and Torres Strait (Environment Australia 2002c). Therefore, it is possible that this highly migratory species is travelling between these locations. The nesting sites within the Coral Sea Reserves are particularly important as they are primarily free from disturbances including lighting, beach use, pollution, feral animals and boat traffic, which are current threats throughout the Great Barrier Reef. The site therefore provides reference against which the impact of such disturbances on Green Turtle populations can be measured.

The Coral Sea Reserves support breeding colonies of 14 seabird species, 12 of which (boobies, frigatebirds, tropicbirds and terns: see Annex) are defined by the Ramsar Convention as waterbirds. The seabirds gather from an extensive oceanic ‘catchment’ for breeding, which generally commences at the end of the cyclone season in March-April and continues during the cooler months. Therefore, the site is important to the ecological balance of the Coral Sea region (Environment Australia 2002c). Some of these seabird species have an extensive distribution outside of Australian waters, however have a limited distribution within Australia. The site therefore supports a significant proportion of the Coral Sea’s breeding populations. In 1997, a breeding population of 386 pairs of Red-tailed Tropicbird *Phaethon rubricauda* were recorded on North-East (Herald) Cay. This represents the largest-known breeding population of this species in the Coral Sea, and the second largest in Australia after Christmas Island, Indian Ocean (Royal Geographical Society of Queensland 2001, p. 70). In addition, at least eight species of migratory shorebird, including the Pacific Golden Plover *Pluvialis fulva* and Ruddy Turnstone *Arenaria interpres*, use the site’s reefs and cays as migration stop-over areas (Environment Australia 2002c).

Furthermore, the site includes the only forested cays in the Coral Sea Islands Territory and the reefs, islands and associated habitats within the boundaries of the site provide the only habitat for a diverse community of sedentary reef-inhabiting animals within an extensive area of deep ocean. Conceivably, the reefs provide rare shelter for other species during severe storms.

#### **Criterion 5.**

Breeding waterbirds at the North-East (Herald) Cay have regularly been recorded in numbers in excess of 20 000 (Royal Geographical Society of Queensland 2001). This estimate includes a population of Black Noddy *Anous minutus* which has been recorded in numbers in the order of tens of thousands, with 37,000 active nests reported in 1984 (Royal Geographical Society of Queensland 2001, p. 71), in *Pisonia* forest associated with this Cay. Other breeding populations recorded at the North-East Cay include Least Frigatebird *Fregata ariel* (a few thousand pairs), Great Frigatebird *F. minor* (high hundreds), Red-footed Booby *Sula sula* (about 150 pairs in *Argusia* shrubland and 1000 pairs in the *Pisonia/Cordia* forest) and Red-tailed Tropicbird *Phaethon rubricauda* (up to 386 pairs; Royal Geographical Society of Queensland 2001, pp. 70-71). Data has not been collected for other cays within the site.

#### **Criterion 8.**

It is assumed that the productive shallow waters of the site’s reefs and lagoon are a significant nursery area for fishes that have open-water adult stages (Ramsar Convention 2002). Coral Sea reefs also act as aggregation areas for Bigeye Tuna *Thunnus obesus* - a target species in Australia’s Eastern Tuna and Billfish Fishery.

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### **13. General location:**

Coringa-Herald National Nature Reserve is located in the central Coral Sea, its centre is approximately 440 km east of Cairns (population approximately 100,000), Queensland. Lihou Reef National Nature Reserve is also located in the central Coral Sea, its centre being about 650 km east-south-east of Cairns and 200 km east-south-east of Coringa-Herald National Nature Reserve. The Reserves lie about 300 km north-east of the Great Barrier Reef. They are located within the Coral Sea Islands Territory, administered by the Commonwealth of Australia (see item 28).

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### **14. Physical features:**

The site is comprised of a series of oceanic islets and associated coral reefs, occurring on the Coral Sea (Queensland) Plateau. They represent one of the largest carbonate platforms in today’s oceans and are the dominant feature of the site.

Coringa-Herald National Nature Reserve includes three separate platform reef systems, each at a different stage of reef formation. Islets and cays supported by these reefs are the Herald Cays (South-West Cay,

North-East Cay), Coringa Islets (Chilcott Islet, South-West Islet) and Magdelaine Cays (North-West Islet, South-East Cay). The islets and cays are composed of sand, rock and coral rubble and range from 16 to 37 ha in area. Each has a fringing coral reef fully exposed to the influences of oceanic currents and swells. Reef flats are up to 4 m deep and are composed of turf and coralline algae along with sponges and soft and hard corals.

Lihou Reef National Nature Reserve includes the largest reef structure in the Coral Sea (Environment Australia 2002c): the reef forms an incomplete loop with 18 small sand cays along its edge. The cays extend from Nellie Cay in the far south-west, eastward to Licklick Cay in the far north-east, thence westward to Juliette Cay. Lihou Reef is separated from the Coringa-Herald system by deep ocean.

The marine habitats present in the shallower areas of both Reserves are front (windward) reef slopes, exposed reef crests/rims, reef flats, back (leeward) reef crests, back reef slopes, reef shoals, and inter-reef channels. Lihou Reef has a lagoon habitat formed within the U-shaped structure of the reef system; detailed information on the habitats of the deeper lagoonal areas is not available.

Due to the tropical location and the oceanic influence, there is little variation in daily or annual temperatures at these Reserves. Annual air temperatures range between 21°C and 31°C. Mean daily temperatures during the two hottest months (December, January) range from a minimum of 25°C to a maximum of 31°C; for the coldest month (August), these data are 22°C and 26°C respectively. Data from Willis Islets, approximately 50 km north-west of Magdelaine Cays, indicate mean annual rainfall of 1094 mm with 68% falling between January and April (Royal Geographical Society of Queensland 2001; Bureau of Meteorology 2002). Wind energy and direction have a critical influence on sediment transport dynamics, cay location on reefs, and the distribution and growth of flora. South-east winds and swells are typical in the Coral Sea between March and November (windiest from April to September). North-west monsoons and cyclones occur in the summer months (December to March). Destructive winds and swells may occur during this period (Proh 1995; Royal Geographical Society of Queensland 2001).

Tidal range in the Coral Sea Reserves is approximately 2 m. The waters are a mix of warm, moderately saline equatorial water and cooler, more saline sub-tropical water. The salinity is constant at about 35.2 parts per thousand. The characteristics of salinity and temperature of the water are believed to be important to coral development.

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### **15. Hydrological values:**

The site comprises mostly isolated oceanic wetlands (coral reefs) with only small scattered islets of dry land. The islets are low (not exceeding 5 m above mean sea level) but have minimal freshwater lenses and perform no hydrological value with regards to this information category.

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### **16. Ecological features:**

Vegetation (23 plant species) occurs on all Coringa-Herald cays except North-West Cay, and on five of the Lihou cays (Turtle Islet and Georgina, Nellie, Lorna and Anne Cays: seven plant species). Grassland and herbfield communities occur in both Reserves; dominant grass species are *Lepturus repens*, *Stenotaphrum micranthum* and *Sporobolus virginicus*. Shrubland (open-scrub) of *Argusia argentea* occurs on the vegetated Coringa-Herald cays and low closed-forest of *Pisonia grandis*, with some *Cordia subcordata*, to 10 m height occurs on North-East (Herald) Cay and South-East (Magdelaine) Cay (Environment Australia 2002c; Royal Geographical Society of Queensland 2001). Although these are not wetland plant communities, some are important as habitat for breeding waterbirds (seabirds).

The marine habitats present in the shallower areas of both Reserves are front (windward) reef slopes, exposed reef crests/rims, reef flats, back (leeward) reef crests, back reef slopes, reef shoals, and inter-reef channels.

Marine algal communities are an important ecological feature of the site, frequently covering a greater area than the corals. During a 1997 preliminary survey of marine algae of North East (Herald) Cay, 66 species were recorded, though this is expected to be only a fraction of the total present. Forty-one species of red algae, 23 of green algae and two of brown algae were recorded. *Halimeda* spp., a calcified algae of warm seas, is a prominent feature of the benthic habitat. The near absence of brown algae is unusual for what appears to be a typical reef environment (Environment Australia 2002c). The apparent absence of seagrasses (from benthic survey data) is also unusual for reef platforms containing vegetated islands in the Western Pacific.

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### **17. Noteworthy flora:**

*Pisonia grandis* forest ecosystem is relatively uncommon, both in Australia and globally, despite having an extensive Indo-Pacific distribution. Throughout much of its range, *P. grandis* forests have been cleared for subsistence agriculture and guano mining. *P. grandis* forests are known to remain on only 44 (of 950) islands within the Great Barrier Reef region. The species is rare on reef islands in the north of this region and does not generally form monospecific stands. In this context, the *P. grandis* forests of Coringa-Herald are of intrinsic value. They also play a significant role in providing habitat for nesting waterbirds (seabirds). Some of the forest has suffered damage caused by cyclonic storms, scale insects and erosion of the islets (Environment Australia 2002c).

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### **18. Noteworthy fauna:**

The faunal assemblage of the site is distinctive for a number of reasons. Namely, sponges (family Spongiidae) form an important part of the reef fauna and often are more abundant than coral. This is markedly different to the shallow reefal areas of the Great Barrier Reef. In addition, hard corals cover a relatively small proportion of reef area compared to the hard corals of the Great Barrier Reef and other sites in the western Pacific. The site also supports a relatively rich diversity of decapod crustacean and hydroid faunas, and some of the fish species common at the site are rare or absent from the Great Barrier Reef, and vice versa.

Commonly occurring sponges in the site's large and spectacular sponge gardens include *Thorecta* n. sp., *Polyfibrospongia flabellifera*, *Phyllospongia* n. subsp., *Carteriospongia lamellosa*, *Carteriospongia* n. sp., and *C. pennatula*. *Phyllospongia pennatula*, which had not been collected since 1889, is common at Chilcott Islet. The dominant hard corals of the site are *Acropora palifera*, *A. humilis* and *Poecilopora* spp. and the dominant soft corals are *Sarcophyton* sp. Two species of marine mollusc, *Rissopsis typica* and *Cypraea childreni*, are quite common at the site despite being rare over much of the rest of their range (Environment Australia 2002c).

Based on preliminary surveys of the site, the families of fishes with the greatest diversity of species are the Labridae (wrasses), Pomacentridae (damselfishes), Acanthuridae (surgeonfishes), Chaetodontidae (butterfly fishes), Serranidae (cods and coral trout), and Scaridae (parrotfishes) (Environment Australia 2002c).

Three non-colonial waterbirds—Eastern Reef Egret *Egretta sacra*, Buff-banded Rail *Gallirallus philippensis tournelieri* and Purple Swamphen *Porphyrio porphyrio*—breed at the site (Royal Geographical Society of Queensland 2001).

Non-waterbirds that use the site include 60,000 to 130,000 breeding pairs, annually, of Wedge-tailed Shearwater *Puffinus pacificus* (Royal Geographical Society of Queensland 2001).

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### **19. Social and cultural values:**

The Coringa Islets were named after the cargo ship *Coringa Packet*, wrecked there in 1845. However, Lihou Reef appears to have been the site of more shipwrecks than the Coringa-Herald cays. There are several well-documented wrecks on Lihou Reef, dating back to the 1890's. Shipwrecks located within the Reserves are protected under the *Historic Shipwrecks Act 1976* if they are more than 75 years old.

Guano mining occurred on Chilcott Islet in the 1860s-70s and some relics remain from this enterprise (ANPWS, 1989a; Coleman, 1992).

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## **20. Land tenure/ownership:**

- a) Site
- b) Surrounding area

The Ramsar site comprises two separate National Nature Reserves that are owned by the Commonwealth Government of Australia. The Reserves and surrounding oceanic waters lie within the Coral Sea Islands Territory of Australia.

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## **21. Current land use:**

- a) Site
- b) Surroundings/catchment

The site is used for nature conservation and scientific research, also some recreational diving. There is no resident human population on the site or in surrounding areas. Surrounding areas support the commercial Coral Sea Fishery and Eastern Tuna and Billfish Fishery, which are managed by the Australian Fisheries Management Authority.

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## **22. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land use and development projects:**

- a) Site
- b) Around the site

The site is currently in near-pristine condition: no exotic species have been observed since the Black Rat *Rattus rattus* (1940s to 1991) was eradicated, and mining for guano (1860s-70s) has long ceased. The site is now subject to infrequent and largely benign visitation by humans. Human influences on or external to the site with the potential to adversely affect its ecological character include general marine pollution, oil spills associated with shipwrecks, impacts of anchoring and diving, disturbance to seabird and turtle breeding colonies, and introduction of exotic species. With the increasing availability of new technology, notably global positioning systems, human visits to the site may increase in the future.

Some natural factors have impacted the site's ecological character. There are reports of cyclonic activity damaging areas of *Pisonia grandis* forest within the Coringa-Herald cluster during the 1980s. The former forest on South-West (Coringa) Islet was extensively damaged, reduced to herbfield, by an outbreak of the scale insect *Pulvinaria urbicola* in 1991; scale insect attack is now monitored. In 1997, a survey of North East (Herald) Cay recorded that the windward beach was actively eroding. This was leading to destabilisation of the fringing *Argusia* shrubland that provides a windbreak for the *P. grandis* forest. Some forest areas have already been destroyed as a result, and it is possible that if erosion continues the forest will gradually be replaced with grassland. This would have implications for the terrestrial ecology of the cay, particularly the composition of the nesting seabirds, and the hatching success and sex ratios of breeding Green Turtles (Royal Geographical Society of Queensland 2001).

Cyclones have also been suggested as possible causes of drastically reduced coral cover and consequent impacts on fish abundance and species richness, particularly on the exposed reef crest and front slope (Ayling & Ayling 1984; Royal Geographical Society of Queensland 2001). Repeated incidences of pan-tropical coral bleaching, and global sea temperature rises are a particular concern for these wetland habitats in the Coringa-Herald and Lihou Reefs.

Several Crown-of-thorns Starfish *Acanthaster planci*, have been observed within the site, however it seems they do not currently occur in numbers sufficient to cause disturbance to the indigenous reef fauna (Royal Geographical Society of Queensland 2001).

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### **23. Conservation measures taken:**

Coringa-Herald National Nature Reserve, and Lihou Reef National Nature Reserve, were proclaimed in August 1982 and are subject to provisions of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. Both Reserves are Category 1a Nature Reserves under the IUCN classification, meaning they are managed primarily for scientific research and environmental monitoring.

A comprehensive Management Plan for each Reserve came into effect in 1989; the Plans were amalgamated and updated in 2001 and will apply for the following seven years (Environment Australia 2002c). The strategic objectives of the Plan are: to protect, preserve and manage the natural and cultural values of the Reserves; to protect key breeding and nesting habitat for listed species such as Green Turtle and seabirds; to manage the Reserves as a reference site for scientific research and long-term monitoring; to allow for limited and appropriate public access to the Reserves for education and enjoyment; and to manage the Reserves as part of a comprehensive, adequate, and representative system of marine protected areas.

Activities such as scientific research, dive charter tours and other commercial activities are managed by use of permits. A limit of 10 commercial tours per year, with up to 30 passengers per tour, has been set. Visitor logbooks are maintained at the Reserves to monitor use of the site. Commercial and recreational fishing, fish-feeding, camping on the islets, bio-prospecting and operations for the recovery of minerals are not permitted during the period of the Plan. Staff of Environment Australia generally undertake three management patrols per year to the Reserves, using Royal Australian Navy patrol boats or Customs vessels for transport and support. Patrols in December and March focus on monitoring the nesting success of Green Turtle, while patrols in August focus on monitoring the abundance of selected seabird populations. Coastwatch undertakes regular aerial surveillance and photo monitoring of the Reserves.

In 1991 an intensive baiting program was carried out to eradicate introduced rats from the South-West (Coringa) Islet and no evidence of rats has been found subsequently (Environment Australia 2002c).

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### **24. Conservation measures proposed but not yet implemented:**

A monitoring program focussing on commercially viable marine species is in preparation. The monitoring program will be designed to detect any significant decline in populations of commercially viable species to indicate potential illegal harvesting inside the reserve boundaries.

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### **25. Current scientific research and facilities:**

Due to the remote location, research opportunities are limited and no permanent field station exists at the Reefs. However, the remoteness and undisturbed condition of the site presents a valuable 'control' site for monitoring of changes in other reef systems such as the Great Barrier Reef to the west. The site has been visited by a number of scientific expeditions, notably three in the early 1960s, and a multi-disciplinary scientific expedition organised by the Royal Geographical Society of Queensland which visited the Herald Cays and surrounding reef in June 1997. Since 1979, a number of scientific surveys have been conducted on a primarily opportunistic basis in conjunction with the regular management/monitoring patrols.

A systematic tagging program for Green Turtle was established in 1991 in collaboration with the Queensland Parks and Wildlife Service, and has continued to the present. The monitoring program has two components: monitoring of nesting activity, tagging and measuring of turtles; and determining the hatching success of stock from the previous nesting survey. The life history of turtles is such that impacts on populations can only be determined from long-term monitoring (20+ years). With a nesting interval of four to eight years, inter-season tag returns are just becoming apparent, and additional years of

monitoring are required to obtain results from the effort expended in previous years (Environment Australia 2002c).

A program is also undertaken to monitor impacts on the stability of the region's seabird populations, and focuses on the following breeding species: Least Frigatebird *Fregata ariel*, Great Frigatebird *F. minor*, Red-footed Booby *Sula sula*, Brown Booby *S. leucogaster*, Masked Booby *S. dactulatra*, Black Noddy *Anous minutus*, and Red-tailed Tropicbird *Phaethon rubricauda*.

The Australian Bureau of Meteorology operates an automatic weather station on Turtle Islet within Lihou Reef National Nature Reserve.

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#### **26. Current conservation education:**

Due to the remote location, the site is not suitable for a substantial visitor education program. However, education aspirations are included in the Management Plan and signs and other interpretive material exist at the site. Detailed information on the Reefs, including the Management Plan and photographs, and a brochure, is available on the internet (Environment Australia 2002a,b,c).

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#### **27. Current recreation and tourism:**

The reefs of the site, with their spectacular and unusual topographic features, great variety of marine life and world-renowned reputation for extreme clarity of water, are a prime diving venue. Snorkeling and bird watching also occur. However, the remote oceanic location and high cost of gaining access provide a natural limit to visitor numbers. Charter tours visit the Reserves under permit issued by Environment Australia. Estimated numbers of visitors to the Reserves have ranged from 100 to 200 per year over the last decade, with no discernible upward trend (Environment Australia 2002c).

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#### **28. Jurisdiction:**

The Reserves are situated in the Coral Sea Islands Territory, which is under the territorial jurisdiction of the Commonwealth Government of Australia; functional jurisdiction lies with the Director of National Parks, Department of Environment and Heritage, Canberra.

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#### **29. Management authority:**

The Reserves are managed by the Marine Protected Areas Section, Marine and Water Division, Environment Australia, GPO Box 787, Canberra ACT 2601, Australia.

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## Annex: Waterbird Species Recorded from the Site

(\* Species listed under migratory bird agreements between Australia and Japan/China)

(B = Breeding, X = Present but not breeding, – = Not recorded)

Species	Coringa-Herald NNR	Lihou Reef NNR
Red-tailed Tropicbird <i>Phaethon rubricauda</i>	B	-
* Masked Booby <i>Sula dactylatra</i>	B	B
* Red-footed Booby <i>Sula sula</i>	B	B
* Brown Booby <i>Sula leucogaster</i>	B	B
Little Black Cormorant <i>Phalacrocorax sulcirostris</i>	X	
Australian Pelican <i>Pelecanus conspicillatus</i>	-	X
* Great Frigatebird <i>Fregata minor</i>	B	X
* Least Frigatebird <i>Fregata ariel</i>	B	B
* Eastern Reef Egret <i>Egretta sacra</i>	X	-
Australian White Ibis <i>Threskiornis molucca</i>	-	X
Buff-banded Rail <i>Gallirallus philippensis tournelieri</i>	B	B
Purple Swamphen <i>Porphyrio porphyrio</i>	B	-
* Bar-tailed Godwit <i>Limosa lapponica</i>	X	-
* Little Curlew <i>Numenius minutus</i>	-	X
* Whimbrel <i>Numenius phaeopus</i>	X	X
* Grey-tailed Tattler <i>Heteroscelus incana</i>	X	X
* Ruddy Turnstone <i>Arenaria interpres</i>	X	X
* Great Knot <i>Calidris tenuirostris</i>	-	X
* Sharp-tailed Sandpiper <i>Calidris acuminata</i>	X	-
* Pacific Golden Plover <i>Pluvialis fulva</i>	X	X
Silver Gull <i>Larus novaehollandiae</i>	-	X
Crested Tern <i>Sterna bergii</i>	B	-
* Black-naped Tern <i>Sterna sumatrana</i>	X	B
* Little Tern <i>Sterna albifrons</i>	-	B
Fairy Tern <i>Sterna nereis</i>	X	-
* Bridled Tern <i>Sterna anaethetus</i>	X	-
Sooty Tern <i>Sterna fuscata</i>	B	B
* Common Noddy <i>Anous stolidus</i>	B	B
Black Noddy <i>Anous minutus</i>	B	B

Sources: ANPWS 1989a,b; Royal Geographical Society of Queensland 2001; Weston *et al.* 1991.