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MIGRATORY  
SPECIES**

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Agenda Item 25.1

**PROPOSAL FOR THE INCLUSION OF  
THE CHRISTMAS FRIGATEBIRD (*Fregata andrewsi*)  
ON APPENDIX I OF THE CONVENTION**

Summary:

The Government of the Philippines has submitted the attached proposal\* for the inclusion of the Christmas Frigatebird (*Fregata andrewsi*) on Appendix I of CMS.

\*The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CMS Secretariat (or the United Nations Environment Programme) concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries. The responsibility for the contents of the document rests exclusively with its author.

## PROPOSAL FOR THE INCLUSION OF THE CHRISTMAS FRIGATEBIRD (*Fregata andrewsi*) ON APPENDIX I OF THE CONVENTION

### A. PROPOSAL

Inclusion of *Fregata andrewsi* in CMS Appendix I. *Fregata andrewsi* is classified as Critically Endangered (IUCN) on account of a small population which breeds within a tiny area of occupancy on just one island, and which is continuing to decline.

**B. PROPONENT:** Government of the Republic of the Philippines

### C. SUPPORTING STATEMENT

#### 1. Taxonomy

- 1.1 Class: Aves
- 1.2 Order: Suliformes
- 1.3 Family: Fregatidae
- 1.4 Genus, species or subspecies, including author and year *Fregata andrewsi* Mathews, 1914
- 1.5 Scientific synonyms: No known synonyms
- 1.6 Common name(s), in all applicable languages used by the Convention
  - English: Christmas Frigatebird, Andrews' Frigatebird, Christmas Frigatebird
  - French: Frégate d'Andrews
  - Spanish: Rabihorcado de la Christmas

#### 2. Overview

*Fregata andrewsi* breeds exclusively on Christmas Island where a small population continues to decline. When not breeding, it covers a large area encompassing several Range States where it would benefit from enhanced protection especially in roosting sites on small islets and in main feeding areas where anthropogenic activities have negative impacts on the population.

#### 3. Migrations

##### 3.1 Kinds of movement, distance, the cyclical and predicable nature of the migration

*Fregata andrewsi* breeds exclusively on Christmas Island, an island off the north-western coast of Australia in the Indian Ocean.

Breeding and non-breeding birds have been recorded foraging at low densities in the Indo-Malay Archipelago (James 2004) over the Sunda Shelf to the South China Sea, the Andaman Sea, the Sulu Sea, off south-west Sulawesi, off south-west Thailand and in the Gulf of Thailand (Catterall 1997, Vromant and Chau 2007, D. James *in litt.* 2007, Jensen 2017, Tebb *et al.* 2008, Jensen and Tan 2010, Conlin 2013, Jensen and Songco 2016), commuting directly over Java in the process (James 2006). The seas around West Java are particularly important during the non-breeding season (typically 100-200 individuals recorded [Noni 2012, Burung Laut Indonesia 2013]); up to 10 per cent of the global population of the species has been recorded in Jakarta Bay, Indonesia in one day (Burung Laut Indonesia 2013). When not breeding, the species ranges widely across the seas of South-East Asia to Indochina and south to northern Australia (Stokes 1988). The species' status in the Indian Ocean to the west is generally less well known. However, one individual was recorded off the coast of Kanyakumari district, southern India in 2014 (Arivanantham 2014).

##### 3.2 Proportion of the population migrating, and why that is a significant proportion

Only adult birds return to breed on Christmas Island, therefore the entire population of non-breeding sub-adult birds, as well as adults outside the breeding season, migrate around the range.

#### 4. Biological data (other than migration)

##### 4.1 Distribution (current and historical)

Breeding: Australia (Christmas Island)

Migrant / non-breeding range: Australia, Christmas Island; Brunei Darussalam; Cambodia; China; Hong Kong SAR; Indonesia; India; Japan; Malaysia; Philippines; Singapore; Sri Lanka; Thailand; Timor-Leste; Vietnam

##### 4.2 Population (estimates and trends)

The most recent population census indicates a population of 2,400-4,800 mature individuals (D. James *in litt.* 2003), roughly equivalent to 3,600-7,200 individuals in total. A recent genetic analysis estimated the effective population size to be approximately 5,000 individuals (Morris-Pocock *et al.* 2012).

##### *Trend Justification:*

A historical review suggests that the population declined by around 66 per cent over the last three generations (James 2003), apparently owing to habitat clearance and dust fallout from phosphate mining, marine pollution, over-fishing and bycatch in fishing gear. These declines are projected to continue. Surveys from 2008-2013 show an ongoing declining trend in breeding numbers (Hennicke 2014). While the introduced yellow crazy ant has not yet been shown to adversely affect frigatebird colonies, it undoubtedly represents a serious future threat.

##### 4.3 Habitat (short description and trends)

It nests in tall forest trees. *Terminalia catappa* and *Celtis timorensis* trees hold 65.5 per cent of all nests (Hill and Dunn 2005). It forages for flying fish, squid and other marine creatures, and is largely dependent on subsurface predators to drive prey to the surface. Most food is captured by plucking it from the sea surface while on the wing, but it is also an accomplished aerial kleptoparasite. Evidence suggests that breeding birds frequently forage hundreds or even thousands of kilometres from the colony. Satellite tracking showed that one female with a large chick undertook a non-stop 26-day 4,000 km return flight from Christmas Island via Sumatra and Borneo (James 2006). In Jakarta Bay the species roosts on bamboo fish traps ("sero") (Burung Laut Indonesia 2013). Elsewhere, e.g. in the Philippines, the species occurs in multi-species roosts with other frigatebird species which show a preference to isolated islets with tall beach forest vegetation (Jensen and Tan 2010).

##### 4.4 Biological characteristics

It is only capable of raising a maximum of one fledgling every two years and reach reproductive maturity only after 5-7 years. Replacement rate of pairs is thought to be extremely slow (15-25 years) rendering the population slow to recover following declines (Hill and Dunn 2005).

##### 4.5 Role of the taxon in its ecosystem

#### 5. Conservation status and threats

##### 5.1 IUCN Red List Assessment (if available)

Red List Category & Criteria: Critically Endangered

Year Published: 2016

Date Assessed: 2016-10-01

##### *Justification:*

This species has a small population which breeds within a tiny area of occupancy on just one island, and which is continuing to decline. For these reasons, it is listed as Critically Endangered.

Previously Published Red List Assessments:

- 2015 – Critically Endangered (CR)
- 2013 – Critically Endangered (CR)
- 2012 – Critically Endangered (CR)
- 2010 – Critically Endangered (CR)
- 2009 – Critically Endangered (CR)
- 2008 – Critically Endangered (CR)
- 2007 – Critically Endangered (CR)
- 2005 – Critically Endangered (CR)
- 2004 – Critically Endangered (CR)
- 2000 – Critically Endangered (CR)
- 1996 – Vulnerable (VU)
- 1994 – Vulnerable (VU)
- 1988 – Threatened (T)

## 5.2 Equivalent information relevant to conservation status assessment

Australia: threatened species scientific committee

Established under the *Environment Protection and Biodiversity Conservation Act 1999*. The Minister approved this conservation advice and transferred this species from the Vulnerable to the Endangered category, effective from 07/12/2014

### Conservation status

The Christmas Island Frigatebird has been found to be eligible for listing under the following categories:

Criterion 1: A2 (a),(b): Endangered Criterion 2: B2 (a),(b)(ii),(iii),(v): Endangered Criterion 3: C2 (a)(ii): Vulnerable

The Christmas Island Frigatebird was listed as Vulnerable under the predecessor to the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), the *Endangered Species Protection Act 1992*, and transferred to the EPBC Act in July 2000.

## 5.3 Threats to the population (factors, intensity)

The species is hunted by fishermen in Indonesia and Malaysia (shooting, live catching, sedating and poisoning) and can become trapped in fishing gear (Burung Laut Indonesia 2013, Hennieke 2014). It is thought that these threats occur across the species' range and may have significant impacts on the population. About a quarter of the breeding area was cleared before 1946 for phosphate mining, and the Flying Fish Cove colony was largely deserted because of continuing dust fallout from phosphate dryers. Future habitat loss is possible through clearance for mining. A new application to mine a 250 ha area of rainforest (P. Green *in litt.* 2007) is currently under review. However currently there are no mining activities near breeding sites (Hennieke 2014). About two thirds of the nests are now located in a single colony, making the species vulnerable to cyclones. Poaching ceased in the 1980s. A possible threat is the introduced yellow crazy ant *Anoplolepis gracilipes* which formed super-colonies during the 1990s and spread rapidly to cover about 25% of the island or about 3,400 ha. Control measures have so far been unable to eradicate this non-native species, but to date frigatebirds have not apparently been adversely affected by them (Hennieke 2014). However, ant super-colonies alter island ecology by killing the dominant life-form, the Red Crab *Gecaroidea natalis*, and by farming scale insects which damage the trees. This may alter the breeding habitat of the species in the medium-to long-term (Hennieke *in litt.* 2010).

Approximately 10 per cent of the population nests outside the national park and does not have any formal protection (Hill and Dunn 2005). Clearance of vegetation within 300 m of nesting colonies should be avoided (Hill and Dunn 2005). Research is underway to establish whether a potentially new blood parasite poses a threat to the species (Hennieke *in litt.* 2010). Initial results show infected birds have higher stress levels which could impact negatively on foraging efficiency and reproductive success (Hennieke 2014).

#### 5.4 Threats connected especially with migrations

Frigatebirds are highly susceptible to entanglement in fishing gear, so intense fishing pressure in the South-East Asian waters and severe marine pollution there represent significant threats to the species (James 2006, Noni 2012).

Clearance of vegetation and hunting on non-breeding roost islands. Other less specific threats include over-fishing and marine pollution (P. Green and D. O'Dowd *in litt.* 2003, S. Garnett *in litt.* 2003, James 2003, Jensen 2007, Jensen and Tan 2010)

#### 5.5 National and international utilization

### 6. Protection status and species management

#### 6.1 National protection status

The species is listed as Endangered under the Australia's Environment Protection and Biodiversity Conservation Act 1999.

It is also protected in the Philippines under Republic Act 9147, otherwise known as the Wildlife Resources Protection and Conservation Act which provides general prohibition in the wildlife hunting.

#### 6.2 International protection status

The species is listed as Appendix I in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

It is also listed on the China-Australia Migratory Bird Agreement (CAMBA) and is a protected migratory species in both countries.

#### 6.3 Management measures

A recovery plan has been completed on Christmas Island (Hill and Dunn 2005) and a study using satellite telemetry to study movements has been underway since 2005 (J. Hennicke *in litt.* 2008, 2010). A control programme for *A. gracilipes* was initiated after 2000, including aerial baiting in 2002, and effectively eliminated the ant from 2,800 ha of forest (95 per cent of its former extent) (P. Green and D. O'Dowd *in litt.* 2003, Olsen 2005). However, the ant population continued to increase, covering upwards of 500 ha by 2006. Despite continued control efforts, ants remained persistent in 2009, and perpetual baiting may be the only means of controlling them (Olsen 2005). Efforts are underway to find alternative bait that is not toxic to invertebrates on the island (Olsen 2005). Plans have been established to control the scale bugs that the ants tend for their sugar secretions in order to reduce this food supply, but there remains no evidence that they are adversely affecting frigatebird colonies (Hennicke *in litt.* 2010).

#### 6.4 Habitat conservation

The Christmas Island National Park was established in 1980, and has since been extended to include two of the three current breeding colonies (90 per cent of the population) (P. Green and D. O'Dowd *in litt.* 2003).

Status of conservation of main roost islands within the species range differs. In Thailand, a major roost is located within the National Park of Ko Phi Phi Island. Roosts in the Philippines are unprotected.

#### 6.5 Population monitoring

Monitoring is only known to take place within the species' breeding area in Australia.

## **7. Effects of the proposed amendment**

### **7.1 Anticipated benefits of the amendment**

Establish methods across all ranges to reduce threats to *Fregata andrewsi*, specifically to eliminate hunting or death as by-catch and protection of roost habitats.

### **7.2 Potential risks of the amendment**

None.

### **7.3 Intention of the proponent concerning development of an Agreement or Concerted Action**

The intention is to collaborate with the Government of Australia and countries within the species' range where substantial numbers of *Fregata andrewsi* occur, e.g. Indonesia, Malaysia, and Thailand. A proposed concerted action plan would include a) reduction in hunting or death as by-catch b) protection of main roost habitat sites and c) establishment of standardized trend monitoring in sample key roost sites within the species' migration range.

## **8. Range States**

Breeding: Australia (Christmas Island)

Migrant / non-breeding range: Australia; Brunei Darussalam; Cambodia; China; Hong Kong SAR; Indonesia; India; Japan; Malaysia; Philippines; Singapore; Sri Lanka; Thailand; Timor-Leste; Vietnam

## **9. Consultations**

Preliminary consultations have been undertaken with Narelle Montgomery, Government of Australia, and with Wetlands International and BirdLife International and BirdLife Philippines. Other consultations will be undertaken with the EAAFP Seabird Working Group.

## **10. Additional remarks**

None

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