

## ISLAND CONSERVATION SOCIETY

### POSITION PAPER ON THE CROPPING OF SOOTY TERN EGGS IN SEYCHELLES

#### Background

Sooty Tern is one of world's most abundant seabirds and is not globally threatened, with a global population probably in excess of 20 million pairs (Least Concern, IUCN 2015). A study focussed on Ascension Island suggests that a re-evaluation of Sooty Tern conservation status is necessary including globally, with massive declines at several locations (Hughes *et al.* 2017). Many colonies have been extirpated or severely reduced in size by factors including egg collection, human development, habitat change and introduced predators (Schreiber *et al.* 2020). Sooty Tern eggs have been collected in Seychelles since the earliest days of settlement. The histories of some island populations are among the best documented in the world through harvesting records and associated research. The western Indian Ocean population has been estimated at over 6.2 million pairs, about half of which breed on islands of Seychelles (Feare *et al.* 2007). Seychelles has been at the cutting edge of Sooty Tern research particularly through the work of ICS Honorary Member Chris Feare, providing insights into subjects including breeding cycles, longevity, natal site fidelity and migration. However, the populations and status of Sooty Terns at some islands are poorly known (especially the two major colonies of Cosmoledo and Desnoeufs that have not been censused for about 20 years) and there has never been a national all-island census of birds in a single year. There are increasing concerns regarding sustainability of the harvest.

ICS is responsible directly or indirectly for conservation at islands where the majority of Sooty Terns of Seychelles breed. The annual seabird census had estimated the Aride population at a high of 360,000 pairs in 1999 (Bowler & Hunter 2000) and a low of just a few thousand pairs in 2020 (ICS unpublished data); a huge decline attributed to the combined effects of habitat change and poaching. Population estimates at Desnoeufs vary from a high of 1,831,000 pairs in 1966 (Ridley & Percy 1966) to 500,000 pairs in the early 2000's (Feare *et al.* 2007). The last census of Sooty Terns at Farquhar in 2019 estimated the population as 205,000 pairs, the lowest from all surveys over the last 5 years suggesting a decrease of ~80-90,000 pairs (Morgan *et al.* 2020). The Cosmoledo population was estimated at 1,165,000 pairs in 1999 (Rocamora *et al.* 2003) and the trend since then is unknown. On African Banks the population appears to be in steep decline due to poaching, estimated at 43,300 pairs in 1955 (Ridley & Percy 1958), 34,000 in 1966 (Ridley & Percy 1966), 20,300 in 1974 (Feare 1979) and 10,000 pairs in 2001 (Skerrett *et al.* 2001); there are no subsequent estimates. The Etoile population was estimated at 5,000 pairs in 1995 (Skerrett 1995); there are no subsequent estimates. It is unknown if birds breed at Boudeuse. Population estimates should be treated with caution due to differing methodologies used, but the general trend is downward.

Historically, unregulated collection of eggs resulted in extinction at some islands. Poaching continues to contribute to declines. Colonies on Booby, L'Ilot Frégate, Ile aux Récifs, African Banks and Etoile may be in danger of extinction due to poaching despite all except for L'Ilot Frégate having theoretical legal protection (Skerrett *et al.* 2001). Aride Island Nature Reserve faces an

annual onslaught from poachers and incurs considerable expenses from limited resources in attempting to defend the law and the reserve, without any support from government.

The Birds' Eggs (Collection) Regulations 1972 made collection of seabird eggs illegal except for eggs of Sooty Tern and Brown Noddy harvested at Desnoeuufs (unlimited) and L'Illet (Frégate) (70,000 limit). In 1976, a paper recommended that eggs should be collected from these two islands only, that all other colonies should be protected as far as is practicable and that exploitation should be restricted to 20% of the Seychelles/Amirantes population of Sooty Terns (Feare 1976). However, regulations were amended in 1991 to add a quota for Bird Island (30,000 limit); reports suggest this quota was consistently exceeded. In 2020, the regulations were amended again by repealing the 1972 quota for L'Illet (Frégate) and substituting "Cosmoledo 800,000, Bird Island 600,000".

New quotas made collection at Cosmoledo legal for the first time and raised the quota for Bird Island by a factor of twenty, a figure close to the estimated number of breeding pairs. One local collector was quoted as saying "They should have done this a long time ago as the island [Cosmoledo] has many, many more birds than on Desnoeuufs. It is a good decision because every year when the season opens it seems the demand always surpasses the supply." Online comments were less enthusiastic, such as "How long before alarm bells start ringing in this situation. These outdated historic traditions must stop in the modern age" (BirdGuides 2020). Seychelles wants to appear as a world leader and champion in nature conservation but persistence of seabird egg cropping (both legal and illegal) is tarnishing this image. One thing all can agree on: demand exceeds supply.

In 2020, IDC could only collect fewer than 450,000 eggs at Cosmoledo over a period of nearly two months from 10 May to 5 July. This is little more than half the new quota and less than half the 923,000 eggs collected in 2018 at Desnoeuufs. "It has been one of our worst seasons in the collection of birds' eggs this year even though the birds were in abundance," said Mr Savy of IDC, noting that in the past IDC had collected on average around 700,000 eggs per season. Mr Savy presumed that a lack of food among other factors may have had an impact on the birds' reproduction cycle (Joubert 2020).

Ridley & Percy (1958) quoted hearsay evidence that populations fluctuated in some years and speculated this could be related to food supply. There is currently no evidence that changes in food supply have been responsible for population declines or extinctions in the Indian Ocean. However, emerging threats to food supply include overfishing, shifts in ocean currents, changing sea temperatures and frequency in climatic anomalies (El Niño / La Niña), pollution (heavy metals and plastic) and changing salinity gradients setting off a cascading effect through the marine food web (Croxall *et al.* 2012; Provencher *et al.* 2019). There is also growing evidence of a generalised decline of seabird populations around the world (Paleczny *et al.* 2015; Grémillet *et al.* 2018).

A vision of what might be in store for the Indian Ocean can be seen in the Atlantic Ocean. At Ascension Island there has been an 84% historical decline in breeding Sooty Tern numbers. Sooty

Terns rely heavily on associations with sub-surface predators such as tuna to catch fish prey and the rapid expansion of industrialised fisheries over the same period has been identified as the main likely cause for this drastic decline (Reynolds *et al.* 2019). At the Faroe Islands, seabird egg harvesting was apparently sustainable for more than 1,500 years; today, populations have crashed and collection of eggs of some species has been banned. Arctic Skua breeding numbers in Scotland declined by around 74% during 1986-2011 linked to increasing temperatures and reduced prey. For similar reasons, modelling predicts extinction of Kittiwakes in Norway within the next 10-100 years (Furness 2016).

There are rising concerns that the harvesting of Sooty Tern eggs for local consumption over several decades has negatively affected the national population and a time when environmental pressures have never been more acute. In January 2021, the Ministry of Agriculture, Climate Change and Environment (MACCE) made a decision that there will be no harvesting of Sooty Tern eggs in 2021 in order to carry out a national census on the status of the Sooty Tern colonies across Seychelles islands. The overall objective of the national census is to gain a better understanding on how populations of this species are faring in the light of the mounting pressures of climate change, industrial fishing, predation from invasive species, plastic pollution and continuous harvesting of the eggs.

Once the data has been collected, analysed and conclusions drawn, MACCE will be in a better position to determine future management actions for Sooty Terns as well as recommend whether a quota for the sustainable harvesting of eggs nationwide is still possible. The colonies on Farquhar and Aride will be censused by ICS staff based on those islands, as done every year. The censuses on Cosmoledo, Desnoeuufs, Boudeuse, Etoile and African Banks will require a targeted mission that will be led by MACCE, with support from ICS and IDC personnel. Vegetation is a prime determinant of egg-laying density and the census technique, being well established, the actual census may include vegetation surveys that will be undertaken at the same time and in the same plots as the censuses. MACCE will also be responsible to conduct censuses on Ile aux Récifs and Bird Island.

Under its agreement with IDC endorsed by Ministry of Environment, ICS is the partner involved in the conservation of more Sooty Tern populations and at more Seychelles islands than any other NGO. This includes five islands identified as Important Bird Areas: Aride, Islets of Farquhar, Cosmoledo, African Banks and Desnoeuufs (Rocamora & Skerrett, 2001). However, ICS has not previously taken a position regarding the monitoring of Sooty Tern populations, egg collection of Sooty Tern eggs and population census. This position paper was unanimously endorsed at a meeting of the Board of Trustees held on 28<sup>th</sup> June 2021.

## **POSITION STATEMENT OF ICS**

**Island Conservation Society (ICS) recognises that:**

- ICS is involved directly or indirectly with the conservation management of islands hosting the majority of breeding pairs of Sooty Terns in Seychelles.
- Seychelles has been producing cutting edge research about Sooty Tern biology and ecology.
- Early indications from the 2021 National Sooty Tern Census reveal an alarming decline in populations.
- Sooty Tern populations in Seychelles have been impacted by several factors including regulated and unregulated collection of eggs.
- Legal regulation of quotas for Sooty Tern egg harvesting has been based on fragmentary and imperfect knowledge of the national population and threats.
- Poaching has persisted and legislation has not been effectively enforced.
- Emerging threats to Sooty tern populations and other seabirds include degradation of the marine ecosystem due to climate change, pollution and overfishing.

**Therefore, to assist conservation actions and informed decisions, ICS calls for:**

- Full support to the annual population assessments using a consistent and precise methodology in order to better understand long-term population trends.
- Continued monitoring of Sooty Tern biology and ecology including breeding success, survival and recruitment of juveniles into the breeding population, movements and foraging at sea.
- Research into how changes in the marine ecosystem may be impacting the food supply for Sooty Terns and other seabird populations.
- Renewed government support to make legislation for the protection of seabirds effective, respected by the public and enforcement adequately funded.
- An annual assessment of scientific evidence and changing conservation requirements leading to a revision of lawful Sooty Tern egg collection.
- A national debate to sensitise the general public about the relevance and justification for Sooty Tern egg cropping in Seychelles in the 21<sup>st</sup> century.

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