

**Cover sheet: Final Report to James A. Kushlan Wading Bird Research & Conservation Grant
Revisited Status of Endangered Milky Stork *Mycteria cinerea* in South Sumatra (Indonesia)
after 10 years**

Reported by Muhammad Iqbal

Abstract

The Milky Stork *Mycteria cinerea* is currently listed as Endangered. In Indonesia, although good numbers can still be found at sites in Sumatra, but there are reports that numbers have declined considerably. Further searches at east coastal zone in Sumatra are therefore urgently needed to clarify the recent status of this species, particularly to determine the recent population size of Milky stork within South Sumatra Province. The main goal of the 2022 Milky stork revisited survey in South Sumatra was to obtain information of Milky Stork in the east coastal zone of Sumatra, as a basis data for its conservation. Surveys will be conducted mainly by using boats. Trip routes will be planned on roads and tracks that cross as many river and tributaries as possible. A major coastalline along the east coastal of South Sumatra Province from the coastal line Ogan Komering Ilir District (in the South) to along Banyuasin Peninsular/rivers (in the north) will be regularly visited. It is more than 200 km a coastal line will be visited. Standard site description and waterbirds count forms (Asian Waterbird Cencus form) designed and tested by Wetlands International will be used for the surveys.

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Professional affiliation:

Local NGO: KPB-SOS or Kelompok Pengamat Burung Spirit of South Sumatra (Spirit of South Sumatra Bird Society)

IUCN Species Survival Commission (SSC): Stork, Ibis and Spoonbill Specialist Group; and IUCN SSC Bird Red List Authority 2021-2025.

Other affiliation: Biology Programme, Faculty of Science, Sriwijaya University (South Sumatra, Indonesia)

Short biography of the applicant pertinent to the proposed work: Muhammad Iqbal has under his belt more than a decade of field experiences with biodiversity surveys, specializing in birds, particularly waterbirds. He holds a Bachelor's degree in Biology from Sriwijaya University, Indonesia after completing a thesis on the monitoring White-headed Stilt in South Sumatra. In 2008-2012, he conducted mega survey to learn about status of Milky Stork in Sumatra. Active in research, Iqbal regularly attends conferences and has authored and co-authored more than three dozens publications, with research conducted with grants from various leading organisations including RSPB, Rufford Small Grant, Mohamed Bin Zayed, WCS RFP and ZGAP. He is a member of several ornithology organizations, including the Indonesian Ornithologist's Union (IdOU), International Wader Study Group and the Oriental Bird Club, and has received recognition for his work including from IdOU in 2008. He is a member of the IUCN Species Survival Commission (SSC) of Stork, Ibis and Spoonbill Specialist Group (see <https://storkibisspoonbill.org/members/>); and IUCN SSC Bird Red List Authority 2021-2025.

Narrative page

Background/rationale: Milky Stork *Mycteria cinerea* is an Endangered wading bird because recent population estimates from its stronghold in Sumatra suggest that it is undergoing a very rapid ongoing population decline owing to intense hunting pressure at nesting colonies, human disturbance and the rapid loss and conversion of coastal habitat (BirdLife International 2022). The global population was thought likely at around 2,200 birds. Hunting for food and trade also exerts a significant pressure throughout its range. Hunting of chicks is thought to have largely impacted subpopulations at Kumpai lake and Kuala Puntian with respective declines of 80% and 73% between 2005 and 2008 (Iqbal *et al.* 2012). On Sumatra, the largest counts in recent years have included 500 birds in 2005 in Muara Padang subdistrict, South Sumatra (Iqbal & Hasudungan 2008), up to 300 individuals estimated at Kumpai lake (South Sumatra) in 2008 (Iqbal *et al.* 2008, Iqbal *et al.* 2009, Iqbal *et al.* 2012). East coastal zone of South Sumatra is important habitat for Milky Stork. Unfortunately, since 2012, information on population of Milky Stork is unavailable. For this reason, a fieldwork to revisited population status of Milky Stork is urgently required to learn about recent population trend.

Objectives: To obtain recent information on a basis data of Milky stork in the east coastal of South Sumatra Province (to monitor recent population, searching breeding areas, define recent threats, and thereby promote their conservation).

Methods

A field survey of Milky Stork in east coastal zone of South Sumatra province, Indonesia, has been conducted in 2022 and 2023. The team consisting from various people, including applicant, a counter part management authority (Department of Forestry or local government), a student or friend from University, and a representative of local NGO or local people.

Because most survey areas are wetlands habitat, surveys have been conducted mainly by using boats. Trip routes have been planned on roads and tracks that cross as many river and tributaries as possible. A major coastalline along the east coastal of South Sumatra Province from the coastal line along Banyuasin Peninsula (in the north) and Ogan Komering Ilir District (in the South) will be regularly visited.

Standard site description and waterbirds count forms (Asian Waterbird Cencus form) designed and tested by Wetlands International have been used for the surveys. It is hope that information gained from this project have been shared to local community and local government (prepared a report in Indonesian language), and including to scientific community (published in pre-review journal).

Results and Discussion

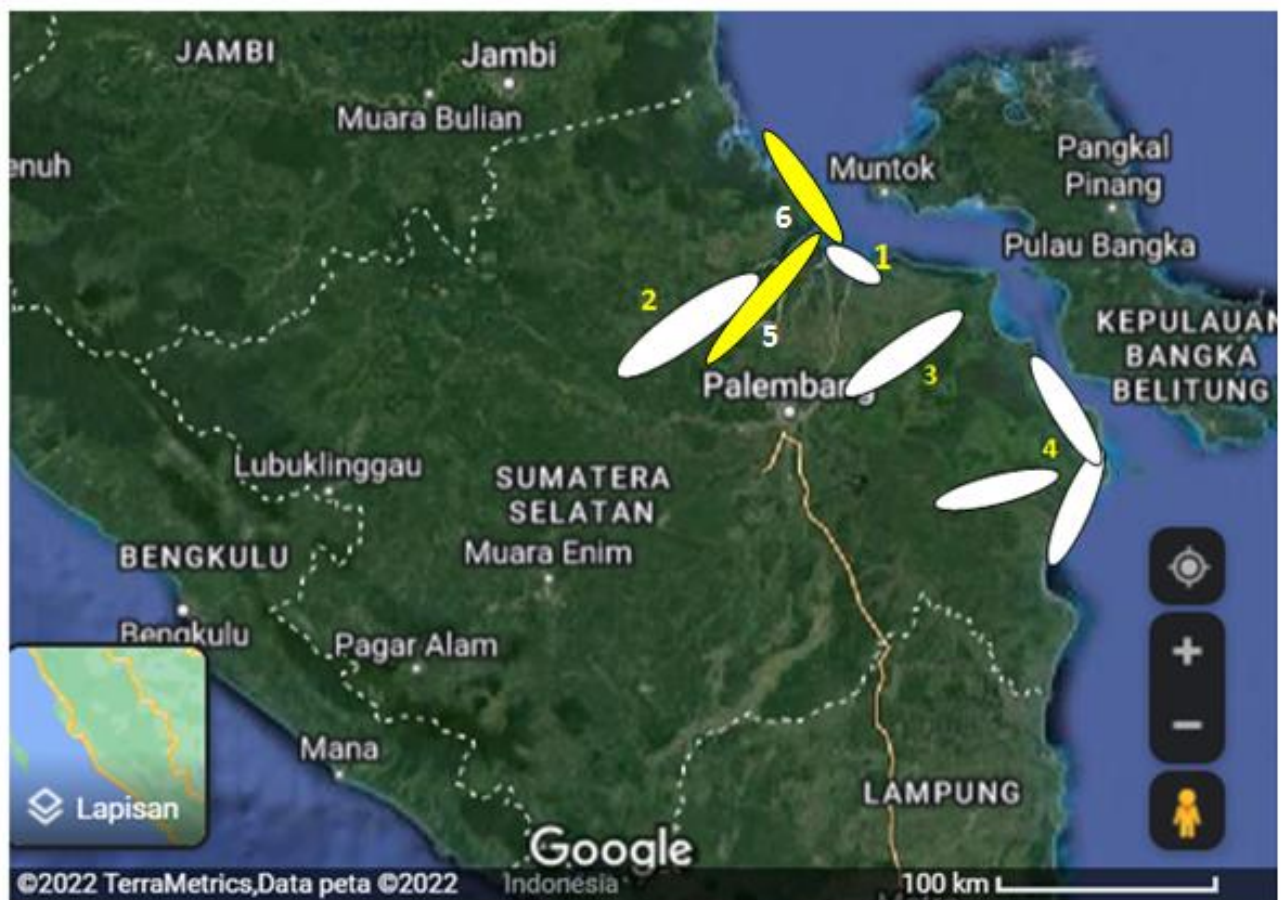
Itinerary of fieldwork summarized here:

- Fund received from Kushlan Award: April 2022
- First fieldwork, 2-6 June 2022 in Tanjung Api-api coastal zone of Banyuasin district. Total Number of Milky Stork recorded c. 10 birds.
- Second fieldwork, 10-14 June 2022, inland Banyuasin River. We want to check about possibility breeding site of Milky Stork, but only c. 5 Milky Stork observed. Other interesting records is a total of c. 50 Lesser adjutant.
- Third fieldwork, 2-6 August 2022, Sugihan river in Ogan Komering Ilir District. No observation of Milky Stork, but some species of waterbirds are recorded.
- Fourth fieldwork, 10-14 August 2022. East coastal zone of Ogan Komering Ilir District. There are c. 50 Milky Storks found, including we found people keep young Milky Storks as pet.

- Fifth fieldwork, 19-23 November 2022. Inland Banyuasin 2 (from Simpang PU to Banyuasin estuary, and Banyuasin Peninsula).
- Sixth fieldwork, 6-10 February 2023. Inland Banyuasin 2 (from Simpang PU to Banyuasin estuary, and Banyuasin Peninsula).

Table of Itinerary of fieldworks.

Date/Period	Locations	Number of Milky stork
2-6 June 2022	Tanjung Api-api coastal zone of Banyuasin district	10
10-14 June 2022	Inland Banyuasin, Lalan River	5
2-6 August 2022	Sugihan river in Ogan Komering Ilir District	0
10-14 August 2022	Coastal zone of Ogan Komering Ilir District	50
19-23 November 2022	Banyuasin inland 2 (C. 100 Milky storks) and 120 in Banyuasin Peninsula	220
6-10 February 2023	Banyuasin inland 2 (not observed) and only 31 in Banyuasin Peninsula	31
	Total	316



Map cover in this survey. Number indicate survey areas mention in itinerary fieldworks.

Best estimation of recent population

Based on our survey, the population of Milky storks c. 300 individuals. There are potential habitats still not covered in this survey, and maximum estimation could be c. 500 (presumed 300 birds in Banyuasin wetlands, and 200 birds in Ogan Komering Ilir District). However, best estimation could be c. 400 birds (250 birds in Banyuasin wetlands, and 150 birds in Ogan Komering Ilir wetlands).

Breeding areas

Our survey failed to rediscover breeding areas of Milky stork in east coastal zone in South Sumatra. However, we found some young birds in the field. Interview with local people suggest that there are three remote area as breeding site of Milky Stork: two in Ogan Komering Ilir wetlands and one in Banyuasin wetlands. One breeding site in Ogan Komering Ilir wetlands is reported in a remaining forest area of Sinar Mas Group pulp and paper plantation.

Recent threats

The hunting of young Milky stork is not massive last decade in South Sumatra wetlands. However, we still found collection of young Milky stork carried out by local people in Ogan Komering Wetlands. In Ogan Komering Ilir coastal zone, we found that local restaurant received waterbirds from hunters, and served the birds as their menu. In Banyuasin Peninsula, we found local people still shoot Milky stork and waterbirds for hunting. The hunting have two reason, keep their fish pond from waterbirds, and also for consumption (for themselves).

Promote Milky Stork conservation

We have some information on recent status of Milky storks in east coastal zone of South Sumatra. We have shared our information with Alex Berryman (IUCN/Birdlife International) who assess recent status of global Milky stork. We have also keep close to work and share information with Berbak Sembilang National Park authority about Milky Stork and waterbirds conservation. We recently review number of comparison of Milky stork number with previous data to see trend of population of Milky stork in Banyuasin Peninsula.

Literature cited

BirdLife International (2022) Species factsheet: *Mycteria cinerea*. Downloaded from <http://www.birdlife.org> on 16/01/2022.

Iqbal, M. & Hasudungan, F. 2008. Observations of Milky Stork *Mycteria cinerea* during 2001-2007 in South Sumatra province, Indonesia. *BirdingASIA* 9: 97-99.

Iqbal *et al.* 2008. Rediscovery of a Milky Stork *Mycteria cinerea* breeding colony in South Sumatra province, Indonesia. *BirdingASIA* 62-66.

Iqbal *et al.* 2009. A note on the breeding success of Milky Stork *Mycteria cinerea* in 2008, South Sumatra province, Indonesia and more on its diet. *BirdingASIA* 11: 73-74.

Iqbal *et al.* 2012. An alarming decrease in the Milky Stork *Mycteria cinerea* population on the east coast of South Sumatra province, Indonesia. *BirdingASIA* 18: 68-70.

Amount being requested: \$5,000

The individual to the grant would be made: Muhammad Iqbal (similar individual in previous page).

Details regarding how the money have been spent: see table below

Activity, Proposed budget in proposal	Budget in \$			Remarks
	Unit Price/\$	Unit	Cost/	
Preparing permit to entering and carrying out survey in conservation area	\$200	1 package	\$200	As proposed, to entering Banyuasin Peninsular (This area is part of Berbak Sembilang National Park). This cost include local transportation and consumption meeting with conservation staffs
Rent a car from Palembang city to speedboat jetty for 4 days (for picking up team to trip to Banyuasin Peninsula and Ogan Komering Ilir District, go-back)	\$50/day	4 days	\$200	As proposed. We used when we go to Sugihan River (2 days: go-back) and Ogan Komering Ilir coastal zone (2 days: go-back)
Rent a speed 40 HP for 12 days, including driver and fuel (all survey areas can only be reach with speedboat): \$150 perday for 12 days	\$150	12 days	\$1800	As proposed. We use this budget for rent a 40 HP during fieldworks.
Logistic/Consumption during survey: \$20 for each people x 5 people (4 people, and one car driver or speedboat driver) for 12 days	\$20	5 x 12	\$1200	As proposed. For logistic/consumption in the field
Dailly substitute allowance for team survey: \$25 for each people x 4 people x 12 days	\$25	4x12	\$1200	As proposed. For Dailly substitute allowance of member of field survey in the field
Internet and communication cost (for internal member team, to stakeholder, and etc.)	\$100	1 package	\$100	As proposed
First Aid and Cov19 test (possible test for entering a site based on authority management suggestions)	\$200	1 package	\$200	After all member team have been vaccinated, the conservation authority allow us to entering the park with Cov19 test. We use this item for first aid, and additional logistic/consumption
Expendable materials (wg. papers, printer ink, pens, etc)	\$100	1 package	\$100	As proposed
TOTAL FUND REQUESTED			\$5000	

Actual Timelines for the grant-funded portion of the project

Activities	Months in 2022/2023											
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar-Apr
Received fund from Kushlan	+											
Coordination to stake holder and our team to prepare fieldwork		+		+								
Fieldwork Tanjung Api-api coastal zone of Banyuasin district			+									
Fieldwork inland Banyuasin, Lalan River			+									
Sugihan river in Ogan Komering Ilir District					+							
Coastal zone of Ogan Komering Ilir District					+							
Banyuasin inland 2 and Banyuasin Peninsula								+				
Banyuasin inland 2 and Banyuasin Peninsula											+	
Data compilation												+
Submit final report to James A. Kushlan Wading Bird Research & Conservation Grant												+











