POPULATION ANALYSIS AND COMMUNITY WORKSHOP FOR FAR EASTERN CURLEW CONSERVATION ACTION IN PANTAI CEMARA, DESA SUNGAI CEMARA – JAMBI

Final Report
Small Grant Fund of the EAAFP
Far Eastern Curlew Task Force

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The aim of this project are to Identify the condition of Far Eastern Curlew Population and the remaining potential sites for Far Eastern Curlew stopover in Sumatera, Indonesia and protect the remaining stopover sites for Far Eastern Curlew by educating the government, local people and community around the sites as the effort of reducing the threat of habitat degradation, habitat loss and human disturbance at stopover area.

INTRODUCTION

The Far Eastern Curlew (*Numenius madagascariencis*) is the largest shorebird in the world and is endemic to East Asian – Australian Flyway. It is one of the Endangered migratory shorebird with estimated global population at 38.000 individual, although a more recent update now estimates the population at 32.000 (Wetland International, 2015 in BirdLife International, 2017). An analysis of monitoring data collected from around Australia and New Zealand (Studds et al. in prep. In BirdLife International, 2017) suggests that the species has declined much more rapidly than was previously thought; with an annual rate of decline of 0.058 equating to a loss of 81.7% over three generations. Habitat loss occuring as a result of development is the most significant threat currently affecting migratory shorebird along the EAAF (Melville et al. 2016 in EAAFP 2017). Loss of habitat at critical stopover sites in the Yellow Sea is suspected to be the key threat to this species and given that it is restricted to East Asian - Australasian Flyway, the declines in the non-breeding are to be representative of the global population. (BirdLife International, 2017).

Pantai Cemara, Jambi

Pantai Cemara, Desa Sungai Cemara, Jambi which located near Berbak-Sembilang National Park is one of the most important stopover area for migratory shorebird in Indonesia. Every year more than thousands birds are stop in this area to take a rest and refill its energy to continue their migratory journey. Pantai Cemara have sandy beach type with mangrove and Australian Pine on the edge of the beach. In Field Guide Book : Shorebird in Pantai Desa Sungai Cemara (Tirtaningtyas and Febrianto 2010) recorded 32 species of migratory shorebird including Far Eastern Curlew as one of several endangered species recorded there. Far Eastern Curlew also recorded by WCS (Wildlife Conservation Society) - GAINS (Global Avian Influenza Network for Surveillance) in 2009 (published in Tattler no. 9 and no. 14 (2009)). In mid of May 2017, in WMBD (World Migratory Bird Day) event at Pantai Cemara, Jambi, we met local government of district of Tanjung Jabung Timur and the people from government mention about their plan to develop this area to be an ecotourism area. This plan is like two side of coin, on one side, it means that the government have a concern to protect the birds and this area because they've seen the potency of this area, but on the other side this can be a threat for the birds and the habitat, because if the area are open for public as a tourist site it will increase human disturbance, and might be effecting the habitat and Far Eastern Curlew population.

SAMPLING METHOD

Observation Point Coordinate

-1.434020, 104.455430 (**1°26'02.5"S 104°27'19.6"E)**

Sampling Method

From preliminary survey we determine one survey point. From the condition of the site and the access of the area, it was not possible to have more than one survey point. We do the survey when it is high tide, in this condition the flock will be gathered on the survey point so it easier to count and identified the species.

RESULT

Far Eastern Curlew Species Population Count & Benthic Sampling

There were 73 individuals of Far Eastern Curlew recorded during the monitoring period (Table 01). The species recorded almost everyday during the monitoring activity except on 24th ,25th , and 26th of November 2019 we didn't see any of Far Eastern Curlew on those days because of the tide is not too low and not too high, local people called it "pasang konda". In this condition the birds will be spread so it will hard to count and identified.

Fig. 01 : Shorebirds flocks and Far Eastern Curlew species

Table 01 : Population Count of Far Eastern Curlew Species

Species	Population Count Daily (20-30 November 2019)										Total Population Count
	20	21	23	24	25	26	27	28	29	30	
Far Eastern Curlew (*Numenius madagascariencis)*	36	4	3	0	0	0	6	9	11	4	**73**

When high tide, most of the Far Eastern Curlew population that recorded during the monitoring period are resting with another flock of shorebird , but when the sea was receding, it spread and foraging. On the 6th day (26th of November, 2019) we did benthic sampling on the monitoring area. We take samples with custom corer (fig. 02).

Fig. 02 : Corer. Tool that used to take benthos sample.

From the samples we got, we identified *Macrophthalmus* crab (fig. 03) and unidentified worm (fig.04). *Macrophthalmus* known as one of Far Eastern Curlew food. Based on Finn (2009), in Zharikov and Skilleter (2004) there is some evidence to suggest that Eastern Curlews often feed in seagrass for example on crabs (*Macrophthalmus crassipes*) in sandy areas of North Stradbroke Islan, Queensland. On other journal, Piersma (1986) report on observation of Eastern Curlew foraging on an Indo-Pacific sentinel crab, *Macrophthalmus japonicas*, and some other crab species in Nakdong Estuary in South Korea.

Fig.03 : *Macrophthalmus sp*

Fig. 04 : Unidentified worm

Waterbird Monitoring Result

We did the monitoring for 10 days from 20 until 30 November 2019 and we recorded more than 40.000 individuals from 31 species of migratory waterbird including the Far Eastern Curlew, and two other endangered species, Nordmann's Greenshank or Spotted Greenshank (Fig. 05 (a)) and Great Knot (Fig. 05(b)). We also spotted White-faced Plover (Fig. 05 (c)) which divided to be a different species from Kentish Plover (Kennerley, Peter. R., *et al*., 2004) with IUCN status as Data Deficient species.

(a) (b) (c)

Fig. 05 : (a) The picture of Bar-tailed Godwit and Nordmann's Greenshank., (b) Picture of Great Knot., (c) Picture of White-faced Plover

From the monitoring process, we recorded total 50 individuals of Nordmann's Greenshank (3,8 % of global population), the most encounters on 27th of November 2019 with 28 individuals of Nordmann's Greenshank (2,2 % of global population). For Great Knot, in ten days we recorded total 6711 individuals or 2,3% of global population, the most encounters on 30th of November 2019 with 1950 individuals of Great Knot species (Fig. 06).

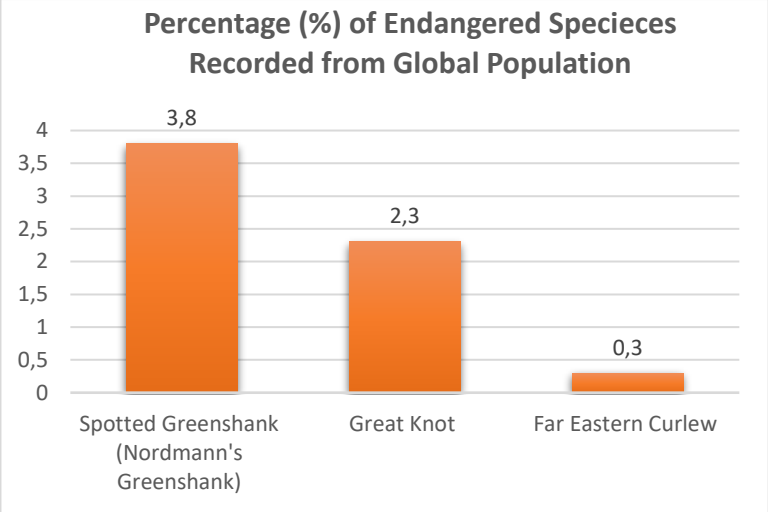

Fig. 06. Chart of percentage (%) of Endangered Species Recorded from Global Population

Based on Table 02, Pantai Cemara also became a stopover site for more than 40,000 individuals from 31 migratory waterbird species. The most abundance species is Bar-tailed Godwit with total species count are 13,468 individuals or 1,2% of it's global population. The species with highest percentage of global population is Asian Dowitcher with 1,252 total species count and 5,4% of global population.

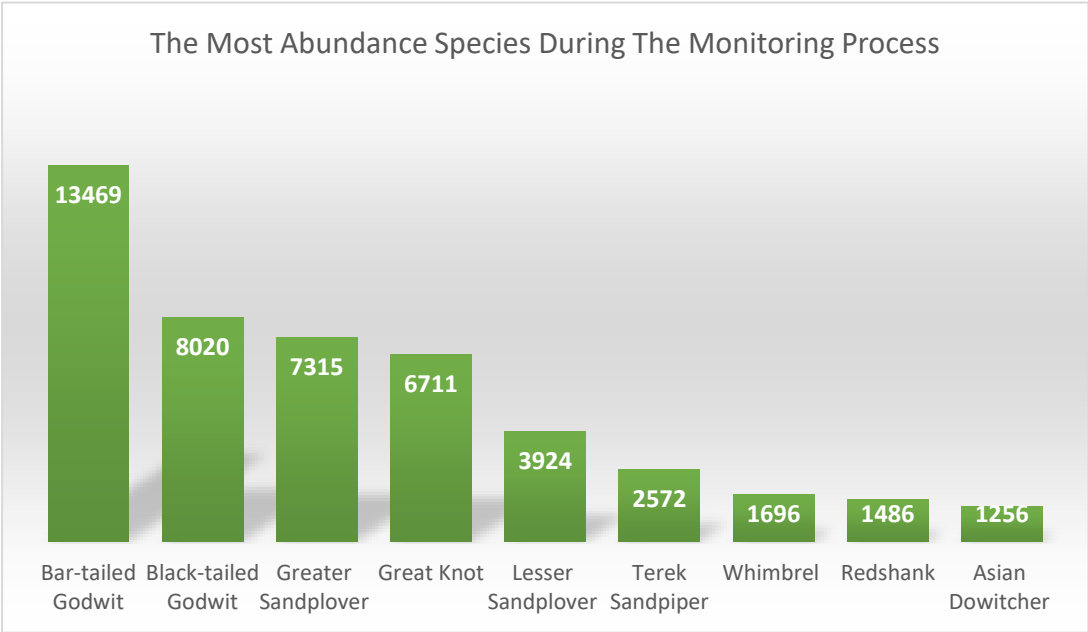

Fig. 07. Chart of nine most abundance species during the monitoring process at Pantai Cemara, Jambi

Beside those species which already listed in the Book of Pantai Cemara Shorebird (Tirtaningtyas and Febrianto, 2010), we also recorded a non-migratory shorebird which is Javan Plover which never recorded before at Jambi. It is first record of Javan Plover at Pantai Cemara Jambi. Based on IUCN website, Javan Plover was pr e eviously considered to only be found at Java and the Kangean Island, Indonesia (BirdLife International, 2001), but has also

been recently reported from Sumatra, Sulawesi and the Lesser Sundas including Timor-Leste (Trainor 2011, Iqbal *et al.* 2013). Based on Iqbal *et al.*, (2013), Javan Plover reported from Sumatra at Lampung Province and Bangka Island, but not yet been reported spotted at Jambi Province.

Table. 02 : Monitoring Result

No	Species	Total Species Count	IUCN Status	Percentage of Total Species Count from Global Population
1.	White-Faced Plover	16	DD (Data Deficient)	Unkown
2.	Great Knot	6711	EN	2,3%
3.	Far Eastern Curlew	73	EN	0,3%
4.	Spotted Greenshank / Nordmann's Greenshank	50	EN	3,8%
5.	Greater Sandplover	7315	LC	2,2%
6.	Grey Plover	117	LC	0,012%
7.	Lesser Sandplover	3924	LC	1%
8.	Pacific Golden Plover	33	LC	0,01%
9.	Kentish Plover	8	LC	0,002%
10.	Caspian Tern	872	LC	0,2%
11.	Common Tern	524	LC	0,01%
12.	Common Gull-billed Tern	181	LC	0,04%
13.	Greater Crested Tern	997	LC	0,09%
14.	Little Tern	50	LC	0,01%
15.	Marsh Sandpiper	679	LC	0,06%
16.	Terek Sandpiper	2572	LC	0,2%
17.	Common Redshank, Redshank	1486	LC	0,05%
18.	Whimbrel	1696	LC	0,07%
19.	Common Sandpiper	6	LC	0,0002%
20.	Rudy Turnstone	25	LC	0,03%
21.	Common Greenshank	11	LC	0,0007%
22.	Sanderling	7	LC	0,001%
23.	Malaysian Plover	7	NT	0,028%
24.	Javan Plover	1	NT	0,025%
25.	Asian Dowitcher	1256	NT	5,4%
26.	Black-tailed Godwit	8020	NT	1%
27.	Bar-tailed Godwit	13469	NT	1,2%
28.	Red Knot	768	NT	0,8%
29.	Eurasian Curlew	284	NT	0,02%
30.	Red Necked Stint	34	NT	0,01%
31.	Curlew Sandpiper	23	NT	0,002%
32.	Chinese Egret	3	VU	0,08%

Sharing and Educate the Local People of Pantai Cemara about Migratory Birds

On 22nd of November 2019, we gathered the local people to share and provide education about migratory waterbird to the local people. Total of the participant are 23 people, and they were all enthusiastic when we talking about birds. The people of Desa Sungai Cemara are positive and eager to learn about birds. There are three local people that we invited to join the monitoring and we trained to identified and count the birds. Since this report is made, they are still do the monitoring on migratory waterbird every month.

(a)

(b)

(c)

Fig. 08 : (a) Sharing and Education from team to Local People at Desa Sungai Cemara (Sungai Cemara Village)., (b) Photo session after sharing and discussion., (c) Photo of handover process of 2 Binocular to two local people who we trained to identified and count the birds.

Workshop for Far Eastern Curlew Conservation Action

After the survey activity at Pantai Cemara, we conducted a workshop about migratory waterbird conservation action (especially for Far Eastern Curlew Species). The participant are stakeholders of the Pantai Cemara Conservation Area, from several departments of Jambi Provincial Government, Lecturer and Students of Jambi University and Batanghari University, representative from local people of Pantai Cemara, and NGOs (Gita Buana, ZSL, and KKI Warsi) with total 44 participant.

We have 5 speakers, 2 from government department which are Mr. Taupiq Bukhari from Forestry Department Jambi, and Mr. Rahmad Saleh from Conservation and Natural Resources Agency (BKSDA). They presenting material about government program and plan for Pantai Cemara Jambi. From NGOs are Mr. Iwan Febrianto (EKSAI Foundation) presenting about the survey result, and the important of Pantai Cemara for Far Eastern Curlew and other migratory birds species, and Mr. Ragil Satriyo Gumilang (Wetland International Indonesia Program) presenting about Flyways Site Network and wetland management of migratory waterbird habitat, and 1 from NParks Singapore, Mr. David Li, presenting about conservation and management of Sungai Buloh Wetland Reserve and his experiences when managing Sungai Buloh National Park and his other project relating on management wetland as migratory bird habitat and ecotourism or edu-tourism.

Fig. 09 : Workshop of Far Eastern Curlew Conservation Action at BKSDA Jambi

The result from the workshop are the increasing of stakeholder understanding about the important of Pantai Cemara as migratory waterbird stopover site so it would be a priority to not disturb or damage the habitat during the development of Pantai Cemara, Jambi. Another output is the Conclusion or Formulation of Far Eastern Curlew Conservation Workshop which agreed by all participant and signed by the representative of each stakeholder.

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FINANCIAL REPORT

No	Expenses for	Amount	Price (IDR)	Total (IDR)	Total (US$)	Notes
1	Equipment : Binocular	2	3,000,000	6,000,000	440	
2	Equipment : Salinometer	1	720,000	720,000	53	
3	Printing Banner	2		350,000	26	2 Banner, 1 For Survey, 1 for Workshop
4	Workshop Kit	1		8,000,000	585	
5	Snack & Meal for Workshop	60 pax	200,000	12,000,000	878,4	
6	Local Transport for Workshop Participant	44	200,000	8,800,000	650	
7	Airplane Surabaya – Jambi	3	2,000,000	6,000,000	440	For Survey and Getting Permission for the Activities.
8	Airplane Jambi – Surabaya	3	2,000,000	6,000,000	440	
9	Local Transport During the Survey	2	1,000,000	2,000,000	147	
10	Accommodation During the Survey	1		1,500,000	110	
11	Pompong / Fisherman Boat for Monitoring Process	10 days	250,000	2,500,000	183	transportation from Air Hitam to Desa Sungai Cemara
12	Travel from Jambi to Nipah Panjang	2	1,500,000	3,000,000	219	Round-trip
13	Overweight Bagage	1		4,100,000	300	Overweight on 2 Flight because of tripod and monocular
14	Snack for Meeting with Local People Jambi	25 pax	60,000	1,500,000	110	accomodation before flight back to Surabaya
15	Meal Allowance	8 days/4 person	150,000	4,800,000	351,4	Meal allowance during the activities at Jambi City
16	Meeting with Team	5 times	180,000	900,000	66	
				TOTAL	**4,999**	