

F-2.3 Study on identifying important bird areas and a database system to analyze the important bird areas

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Abstract

Important bird areas were identified in the Philippines and in Maluku islands in Indonesia by using a geographic information system and locality data of threatened species. Most of the locations are identified in forest areas and major threats to these habitats are deforestation and cultivation.

Key Words threatened species, habitat, Indonesia, Philippines

1. Introduction

Asia has a great number of threatened bird species and conservation of these species is an urgent matter. To appropriately protect these species, it is necessary to identify important habitat for these species quickly and analyze the area in order to plan necessary actions for conservation of the species. This study examined important bird habitats or important bird areas in the countries which have considerably higher numbers of threatened bird species, namely, Indonesia, Philippines, and China. An important bird area in northern Japan was also examined.

2. Research Objective

The objective of this study is to develop a method to identify important bird areas in Asia Pacific region. To speed the identification process, threatened bird localities are entered in a geographic information system and combined by other information sources.

3. Method

Categories for identification of important bird areas are made through discussion and reviewing by ornithological experts from BirdLife Partner organizations. Based on the categories, important bird areas are identified using the geographic information system in the Philippines and Indonesia.

3-1. Summary of categories and criteria

Category	Criterion	Notes
Globally threatened species	The site regularly holds significant numbers of a globally threatened species, or other species of global conservation concern.	The site qualifies if it is known or thought to hold a population of a species categorised as Critical, Endangered, Vulnerable, Conservation Dependent or Data Deficient.
Restricted-range species	The site is known or thought to hold a significant component of the restricted-range species whose breeding distributions define an Endemic Bird Area (EBA) or Secondary Area (SA).	Restricted-range bird species have a total world range size of less than 50,000 km ² and EBAs are defined as places with two or more restricted-range bird entirely confined to them. SAs are defined as place which support one or more restricted-range species but do not qualified as EBAs as less than two species are entirely confined to them.
Biome-restricted assemblage	The site is known or thought to hold a significant component of the group of species whose distributions are largely or wholly confined to one biome.	The site also has to form one of a set selected to ensure that, as far as possible, all species and habitats characteristic of a biome are adequately represented.
Congregations	(i) The site is known or thought to hold, on a regular basis, $\geq 1\%$ of a biogeographic population of a congregatory waterbird species. <i>or</i>	This applies to waterfowl species as defined by Rose and Scott (1997). Thresholds have been set by combining flyway populations within Asia. For species lacking quantitative data, thresholds were set by estimating 1% of the Asian biogeographic population.
	(ii) The site is known or thought to hold, on a regular basis, $\geq 1\%$ of the global population of a congregatory seabird or terrestrial species. <i>or</i>	This includes those seabird species not covered by Rose and Scott (1997). Where quantitative data were lacking, numerical thresholds were set by estimating 1% of the global population.
	(iii) The site is known or thought to hold, on a regular basis, $\geq 20,000$ waterbirds or $\geq 10,000$ pairs of seabirds of one or more species. <i>or</i>	This is the Ramsar criterion for waterbirds, the use of which is discouraged wherever data are good enough to permit the use of (i) or (ii).
	(iv) The site is known or thought to exceed thresholds set for migratory species at bottleneck sites.	Thresholds are set regionally or inter-regionally, as appropriate.

3-2 Identification of important bird areas in Indonesia and the Philippines

Locality data of threatened and near-threatened species were mapped and overlaid with vegetation data, topographic data, and protected area data. Then, the above criteria were considered to identify important bird areas. The species locality map of the Philippines, the identified important bird areas in the Philippines and the Maluku islands are shown in Fig.1, Table 1 and Table 2.

3-3 Reduction of White-naped crane (*Grus vipio*) habitat in Sanjiang Plain

Sanjiang Plain, located in the northeast China, was once one of the largest wetlands in China and it is identified as an important bird area. However, a large area of the wetland was reclaimed for farm land in the past fifty years. Changlingdao by the Naoli River was proved to be a remaining important habitat for White-naped Crane (Kanai et al. 1994)⁽¹⁾. The comparison of the same area using LANDSAT satellite images from 1975 and 1994 shows considerable reduction of wetland.

3-4 Expansion of Alder (*Alnus japonica*) in the surrounding wetland of Utonai marsh

Utonai marsh is located in northern Japan and identified as an important bird area. Alder trees are found in patches in the east coast of the marsh and they are found in tracts in the northwest coast. Analysis of the 40 years of succession of the vegetation in the northwest coast proved that alder tree areas grew bigger and areas of herbaceous plants became smaller when the water level of the marsh was lower during 1972-1984. During 1984-1992 when the water level was higher, some herbaceous plants increased their area sizes. The size of the alder patches in the east coast has positive correlation with the number of trees, the number of trees higher than 3m, and the height of the highest tree. Therefore, it suggests the patches grew larger as time passed. However, the trees between 100-150 cm height consists the larger group than any other height groups. The number of the trunks germinated at the bottom of the tree increases until the main trunk height reaches 200cm. Then, the number of the germinated trunks decreases as the main trunk gets higher than 200cm. This suggests that when alder trees are small, they keep a certain height by germinating new trunks until they reach the height of 100-150. Therefore the alder trees of 100-150 cm height are most frequent in the patches.

1. References

- (1) Kanai et al. 1992. Analysis of crane habitat using satellite images. The future of cranes and wetlands, pp. 72-85. Wild Bird Society of Japan, Tokyo.

	地名	緯度			経度			現在保護されているか	抽出基準
		Deg	Min	N/S	Deg	Min	E/W		
1	Wayabula	2	23	N	128	26	E	Not Protected	1,2
2	Galela	1	49	N	127	51	E	Not Protected	1,2
3	Tahafo	1	25	N	127	30	E	Not Protected	1
4	Gunung Gamkonora	1	16	N	127	27	E	Not Protected	1,2
5	Dodaga	1	11	N	128	12	E	Not Protected	1,2
6	Labi-Labi	1	25	N	128	17	E	Not Protected	1
7	Kao-Taliwang	1	19	N	127	46	E	Not Protected	1,2
8	Tanjung Baleo-Kao	1	9	N	127	53	E	Not Protected	1
9	Lalobata	1	11	N	128	24	E	Not Protected	1,2
10	Aketajawe	0	37	N	127	50	E	Not Protected	1,2
11	Gunung Tanah Putih	0	55	N	127	33	E	Not Protected	1,2
12	Rawa Sagu Sidangoli	0	53	N	127	33	E	Not Protected	1
13	Kepulauan Widi	0	35	S	128	25	E	Not Protected	1,2
14	Saketa	0	9	S	127	48	E	Protected	1,2
15	Pulau Damar	1	0	S	128	21	E	Not Protected	1,2
16	Gunung Sibela	0	43	S	127	32	E	Protected	1,2
17	Taliabu Utara	1	45	S	124	34	E	Not Protected	1,2
18	Pulau Seho	1	59	S	124	20	E	Protected	1,2
19	Lifamatola	1	49	S	129	26	E	Protected	2
20	Gunung Loku	1	51	S	125	59	E	Not Protected	1,2
21	Obi	1	34	S	127	44	E	Not Protected	1,2
22	Gunung Kapalata Mada	3	17	S	126	10	E	Not Protected	1,2
23	Danau Rana	3	24	S	126	34	E	Not Protected	1,2
24	Teluk Kayeli	3	21	S	127	3	E	Not Protected	1,2
25	Selwadu	3	5	S	126	25	E	Not Protected	1,2
26	Wai Nibe	3	4	S	126	36	E	Not Protected	1
27	Lamahang-Waplau	3	8	S	126	53	E	Not Protected	1
28	Wamulang-Wai Kase	3	35	S	126	10	E	Not Protected	1
29	Wai Tina	3	50	S	126	41	E	Not Protected	1
30	Oki	3	47	S	126	51	E	Not Protected	2,4
31	Gunung Masbait	3	31	S	127	9	E		1,2
32	Kaya Putih	3	40	S	127	5	E	Not Protected	1
33	Pulau Boano	2	58	S	127	54	E	Not Protected	1,2
34	Manusela	3	7	S	129	29	E	Protected	1,2
35	Wai Bula	3	7	S	130	17	E	Not Protected	1,2
36	Semenanjung Hua Moal	3	18	S	127	59	E	Protected(一部)	1,2
37	Pulau Kassa	3	18	S	128	8	E	Protected	1
38	Pegunungan Taunusa	3	20	S	128	29	E	Not Protected	1,2
39	Pantai Utara Seram	2	51	S	129	22	E	Protected(一部)	1
40	Gunung Hila	3	36	S	128	1	E	Not Protected	1,2
41	Air Panas	3	34	S	128	18	E	Not Protected	2
42	Kailolo-Haruku	3	31	S	128	25	E	Not Protected	1
43	Iha Baru	3	14	S	128	49	E	Not Protected	1
44	Pulau Seram Laut	3	53	S	130	55	E	Not Protected	1,2
45	Kepulauan Gorong	4	4	S	131	22	E	Not Protected	2
46	Kepulauan Watubela	4	36	S	131	42	E	Not Protected	2
47	Pulau Suanggi	4	19	S	129	42	E	Not Protected	1,4
48	Kepulauan Banda	4	33	S	129	54	E	Protected(一部)	1,2
49	Pulau Manuk	6	19	S	130	1	E	Protected	2,4
50	Kepulauan Tayandu	5	28	S	132	10	E	Not Protected	1,2
51	Gunung Daab-Boo	5	29	S	133	5	E	Protected	1,2
52	Kobroor	6	16	S	134	29	E	Not Protected	1,2
53	Pulau Baun	6	30	S	134	41	E	Protected	2
54	Kepulauan Aru Tenggara	6	48	S	134	32	E	Protected	2
55	Pulau Larat	7	8	S	131	52	E	Protected	1,2
56	Tanimbar Tengah	7	32	S	131	21	E	Protected	1,2
57	Pulau Angarwase	8	2	S	131	5	E	Protected	1,2
58	Pulau Babar Utara	7	54	S	129	44	E	Not Protected	1,2
59	Pulau Sermata	8	12	S	128	54	E	Not Protected	1,2
60	Kepulauan Leti	8	11	S	127	54	E	Not Protected	1,2
61	Pulau Kisar	7	49	S	127	18	E	Protected	1,2
62	Pulau Damar	7	8	S	128	38	E	Not Protected	2
63	Pulau Gunung Api	6	38	S	126	39	E	Not Protected	1,4
64	Kepulauan Lucipara dan Penyau	5	26	S	127	40	E	Not Protected	4
65	Gunung Arnau	7	48	S	125	58	E	Not Protected	1,2

Table 1 Important Bird Areas in the Philippines

	地名	緯度	経度	現在保護されているか	標高	抽出基準
C02	Tabunan	10 22N	123 46E	Protected	450-650 m	1,2
C03	Olango Island	10 16N	124 3E	Protected	0 m	1,4
C04	Mactan, Kalawisan and Cansaga Bays	10 20N	123 58E	Not Protected	0 m	1,4
M01	Lake Naujan, including Alcate, Victoria	13 10N	121 11E	Protected	20 m	1,2,4
M02	Bogbog, Bongabong and Mt Hiding	12 44N	121 28E	Not Protected	100-1,000 m	1,2
M03	Malpalon	12 42N	120 58E	Not Protected		1,2
M05	Mount Calavite	13 29N	120 24E	Not Protected		1,2
M06	Mount Halcon	13 15N	120 59E	Not Protected	?-2,580 m	1,2
M07	Mount Hinunduang	12 35N	121 17E	Not Protected		1,2
M08	Iglit-Baco mountains	12 51N	121 10E	Not Protected	?-2,487 m	1,2
M09	Mount Malacinto	13 30N	120 56E	Not Protected		1,2
M10	Siburan	12 48N	120 55E	Not Protected	50-400 m	1,2
N01	Mt Baloy	11 6N	122 5E	Not Protected		1,2
N02	Ban-ban	9 54N	123 2E	Not Protected		1,2
N03	Eastern Cuernos de Negros	9 16N	123 8E	Not Protected		1,2
N04	Hinoba-an	9 38N	122 32E	Not Protected		1,2
N05	Ilog River	10 2N	122 44E	Not Protected	0 m	1,4
N06	Lake Balinsasayao	9?21'N	123?10'E	Not Protected	830-1,200 m	1,2
N07	Mt Caniaon National Park	10 25N	123 8E	Protected	306-2,465 m	1,2
N08	Mounts Silay and Mandalangan	10 38N	123 13E	Protected	400-1,885 m	1,2
N09	Western Cuernos de Negros	9 15N	123 0E	Not Protected		1,2
N10	Mts Madia-as and Nangtud	11 24N	122 9E	Not Protected	?-2,100 m	1,2
N11	North-west Panay peninsula	11 47N	121 58E	Not Protected	200-915 m	1,2
N12	Mt Bandila-an	9 11N	123 35E	Not Protected	577 m	1,2
N13	Talabong Island and Bais Bay	9?34'N	123?10'E	Not Protected	0 m	1,2
N14	Mt Inaman	11 0N	122 19E	Not Protected		1,2
P01	Balabac island	7 57N	117 1E	Not Protected		1,2
P02	Busuanga island	12 5N	120 5E	Not Protected		1,2
P03	Calauit Island	12 18N	119 52E	Protected	0-50 m	1,2
P04	Culion island	11 50N	119 55E	Not Protected		1,2
P05	Tubbataha Reef	8 50N	119 55E	Protected	0 m	4
P06	El Nido	11 10N	119 23E	Protected		1,2
P07	Victoria and Anapalan ranges	9 45N	118 40E	Not Protected	50-600 m	1,2
P09	Mt Mantalingahan	8 48N	117 40E	Not Protected	?-2,086 m	1,2
P11	San Vicente-Taytay-Roxas forests	10 46N	119 20E	Not Protected		1,2
P12	St Paul's Subterranean River National Park	10 10N	118 55E	Protected	0-1,027 m	1,2
P16	Ursula island	8 20N	117 31E	Protected		1,2
S01	Mt Dajo National Park	5 58N	121 6E	Protected	?-790 m	1,2
S06	Sibutu and Tumindao Islands	4 46N	119 29E	Not Protected		1,2
S07	Simunul and Manuk Manka Islands	4 53N	119 49E	Not Protected		1,2
S12	Tawitawi Island	5 15N	120 7E	Not Protected		1,2

Table 2 Important Bird Areas in Maluku islands, Indonesia

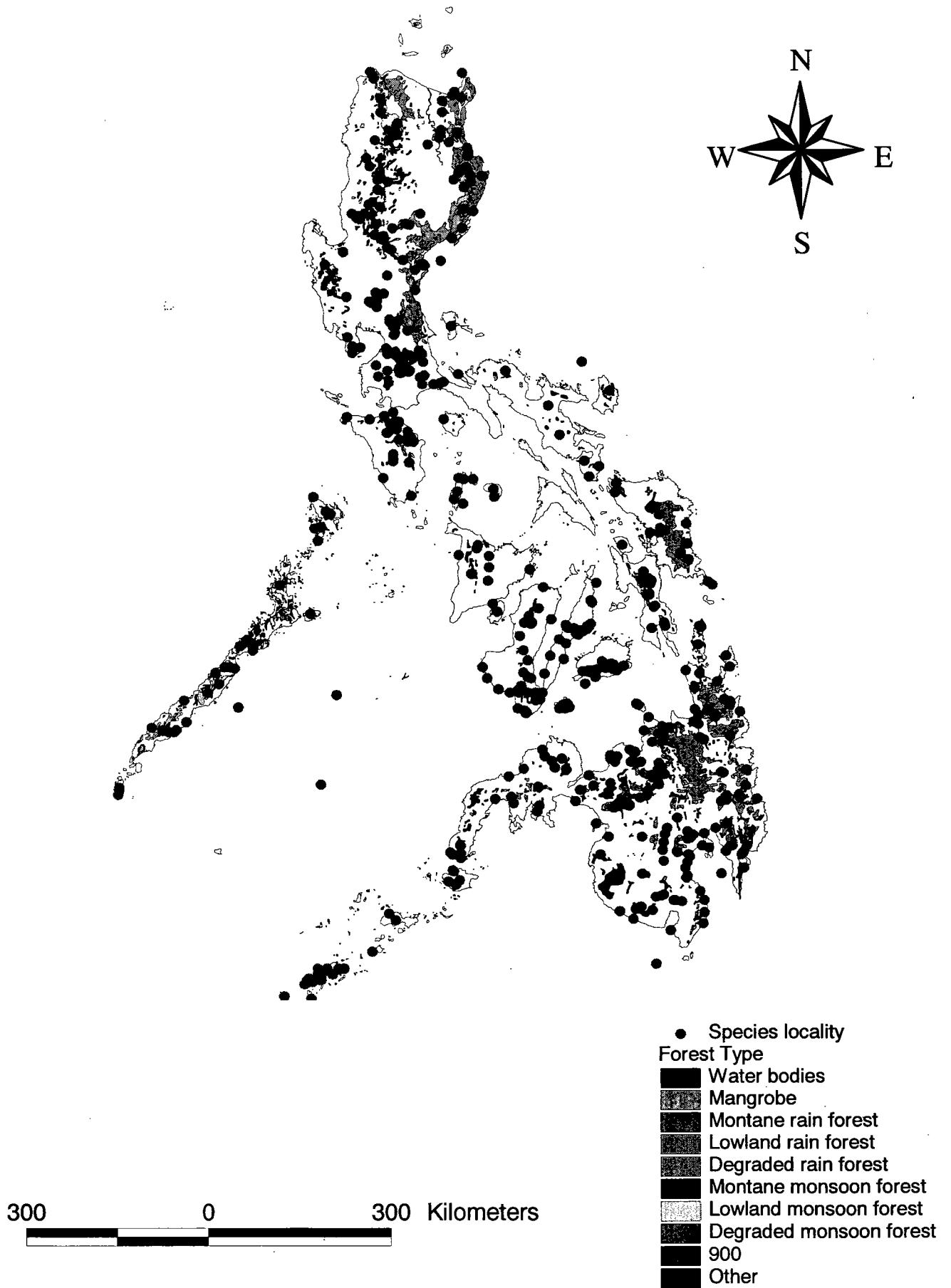


Fig. 1 Localities of threatened species in the Philippines