



East Asian – Australasian Flyway Conservation Status Review 1

Presentation on EAAFP MOP11, 17 Mar 2023

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Local People



NGOs

*Working together for
migratory waterbirds*

Governments



Ramsar
Convention
Brisbane
Australia
1 9 9 6



Conventions



Private Sector

How many migratory waterbirds in the EAAF?

28 to 68 million individuals from 248 of 276 populations with size estimates

+ Sooty Tern estimated at 18,2 million &
Black-legged Kittiwake 4,8 million individuals



Kick-starting the first EAAFP Conservation Status Review

POSTED ON APRIL 20, 2021

The 1% waterbird population estimate threshold is a key criterion for identifying sites of international importance, including designating Ramsar Sites and EAAFP Flyway Network Sites. Thus, this information



First EAAFP Conservation Status Review (CSR1) consultation

POSTED ON MAY 16, 2022

Up to date information on population sizes and trends of waterbirds is critical to inform conservation actions. The East Asian – Australasian Flyway Partnership (EAAFP) Secretariat has prioritized a regular update of the populations and contracted Wetlands International to coordinate the preparation of the 1st Conservation Status Review of migratory waterbirds for the East Asian – [...]

CONTINUE READING →

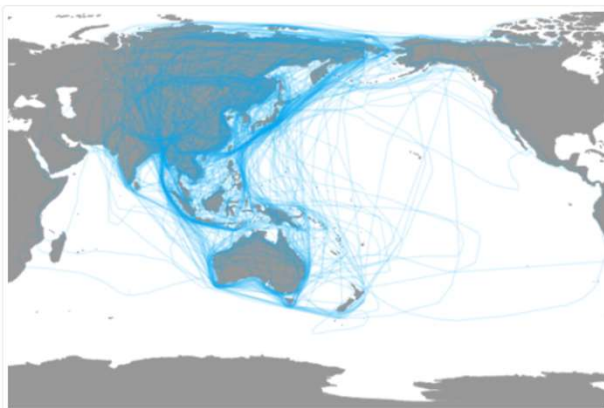


First EAAFP Conservation Status Review (CSR1) consultation draft update webinar

POSTED ON APRIL 25, 2022

Following the MOP 10 adopted Decision 12 “Development of a Conservation Status Review of Migratory Waterbird Populations for the EAAFP” in 2018, the first EAAFP Conservation Status Review (CSR1) was kicked off on 8th April 2021, to ensure researchers, government agencies, conservationists and other stakeholders can get access to up-to-date information of waterbird population estimate. After one year of [...]

CONTINUE READING →



The first Conservation Status Review for East Asian – Australasian Flyway now published for stronger waterbirds conservation

POSTED ON JULY 29, 2022

There is an urgent need for ensuring updated waterbird population status information in order to protect migratory waterbirds that use the East Asian – Australasian Flyway (EAAF), many of which are globally threatened. The findings are based on a new report, the first EAAF Conservation Status Review (CSR 1) contributes to Objective 3 of the [...]

CONTINUE READING →

Background

1. The EAAFP requires **up-to-date information on status of populations** of waterbirds for a range of prioritization and review purposes, including to:
 - (a) derive the EAAF Flyway Site Network thresholds (1%),
 - (b) provide an international context for prioritization and supporting the identification of changes in the status of populations, including threatened populations,
 - (c) provide a technically sound basis for cooperative actions to develop & implement conservation action plans for these populations, and
 - (d) assist in measuring the success of the Partnership in achieving its goal that “Migratory waterbirds and their habitats in the EAAF are recognised and conserved for the benefit of people and biodiversity”.

3. **EAAFP Strategic Plan 2019-2028**, Key Result Area 3.2 states:
 - “**Conservation status reviews** for waterbird populations are periodically produced to set and adapt priorities for action”.

4. **EAAFP Decision 10.12** Development of a Conservation Status Review of Migratory Waterbird Populations for the EAAFP

EAAFP MOP 10 (2019) Decision 12 Development of a Conservation Status Review of Migratory Waterbird Populations for the EAAFP

states that the Partnership:



1. **Adopts** a systematic process to **maintain up-to-date information on waterbird population estimates, trends and 1% thresholds** through the **preparation of a periodic EAAF Conservation Status Review**;
2. **Calls** on the **Partners and the Secretariat to support periodic production of the EAAF Conservation Status Review** (at least every alternate MoP or not more than four yearly) as appropriate within national circumstances.
3. **Mandates Wetlands International to coordinate preparation of the EAAF Conservation Status Review in consultation with the Technical Sub-Committee, Science Unit of the Secretariat, Partners, Working Groups, Task Forces and other experts**, with a target for a first edition to be produced by end 2019 (with a draft structure provided in Annex 1.3);
4. **Calls** on Secretariat in liaison with Wetlands International to **ensure that the output of the periodic EAAF Conservation Status Reviews feed into the global WPE updates**.
5. **Calls** on the **Monitoring Task Force to develop standardised guidance required for development and implementation of comprehensive national waterbird monitoring programmes**.

Overview of coverage of taxonomic groups of waterbirds included in CSR1

Taxonomic Group	English Name	No. of EAAFP populations	Working Groups or Task Forces
Gaviidae	Divers/Loons	4	Seabird Working Group
Podicipedidae	Grebes	5	None
Phalacrocoracidae	Cormorants	4	Seabird Working Group
Pelecanidae	Pelicans	2	Dalmatian Pelican TF
Ardeidae	Hérons, Egrets and Bitterns	28	None
Ciconiidae	Storks	5	None
Threskiornithidae	Ibises and Spoonbills	8	None
Anatidae	Swans, Geese and Ducks	63	Anatidae Working Group
Gruidae	Cranes	16	Crane Working Group
Rallidae	Rails, Gallinules and Coots	16	None
Heliornithidae	Finfoots	1	None
Jacanidae	Jacanas	1	None
Haematopodidae	Oystercatcher	1	Shorebird Working Group
Recurvirostridae	Stilts and Avocet	3	Shorebird Working Group
Glareolidae	Pratincoles	2	Shorebird Working Group
Charadriidae	Plovers	19	Shorebird Working Group
Scolopacidae	Sandpipers	49	Shorebird Working Group
Laridae	Gulls, Terns and Skimmers	47	Seabird Working Group
Total		276	

Biogeographic populations of Alcidae (Auks, murres and puffins), Oceanitidae (Austral Storm Petrels), Procellariidae (Shearwaters & petrels), Stercorariidae (Skuas and jaegers), Phaethontidae (Tropicbirds), Hydrobatidae (Northern storm petrels), Sulidae (Gannets and boobies), Fregatidae (Frigatebirds) need to be defined by the Seabird Working Group and adopted by the Partnership.

These populations should be included in future CSR editions

Final timeline for development of the 1st EAAF-CSR

Main Action		2021			2022		2023
		Q2	Q3	Q4	Q1	Q2	Q1
1	EAAFP Webinar - introduce & encourage participation	X					
2	Consultation on population size estimates & trends with partners and experts	X	X				
3	Consultation on waterbird biogeographic pops (maps) with partners and experts	X	X				
4	EAAFP CSR1 summary report collation, collation & review of population size estimates & trends			X	X		
5	Review of draft Report by partners and experts				X		
6	EAAFP Webinar – final draft Report					X	
7	Finalisation of report Review					X	
6	Final review and approval by Tech SC & sign off by Management Comm					X	
7	Upload population size estimates, trends, 1% thresholds and boundaries on Waterbird Populations Portal					X	
8	Presentation of CSR1 at EAAFP MOP11						X

Structure of the EAAF CSR1 Summary Report

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Waterbirds Populations Portal

Your source of the world's latest waterbird population information.



Direct access to major flyway frameworks

Data-driven Waterbird Population Estimates

Direct access to:

AFRICAN-EURASIAN MIGRATORY WATERBIRD AGREEMENT	CMS CENTRAL ASIAN FLYWAY	EAAF PARTNERSHIP
EU BIRDS DIRECTIVE	WESTERN HEMISPHERE SHOREBIRD RESERVE NETWORK	RAMSAR: RAMSAR CONVENTION ON WETLANDS

EAAF Partnership

The Waterbird Populations Portal (WPP) online database provides current and historic estimates, trends and 1% thresholds for over 800 waterbird species and 2300 biogeographic populations worldwide. This project has been developed by Wetlands International with the support of Environment Agency Abu Dhabi.

Waterbirds Populations Portal

Your source of the world's latest waterbird population information.



Species information

Common name	Northern Pintail	Scientific name	<i>Anas acuta</i>	Global Red List	● LEAST CONCERN
Order name	Anseriformes	Family name	Anatidae		

Population information

Population name	E & SE Asia		
Breeding range	E Siberia	Non-breeding range	E & SE Asia S to Thailand
Ramsar regions	Asia		
Active	Yes		
Notes	-		



Conservation frameworks

EAAF Partnership

AFRICAN-EURASIAN
WATERBIRD AGREEMENT

EU BIRDS DIRECTIVE

The Waterbirds
2300 birds

Waterbirds Populations Portal

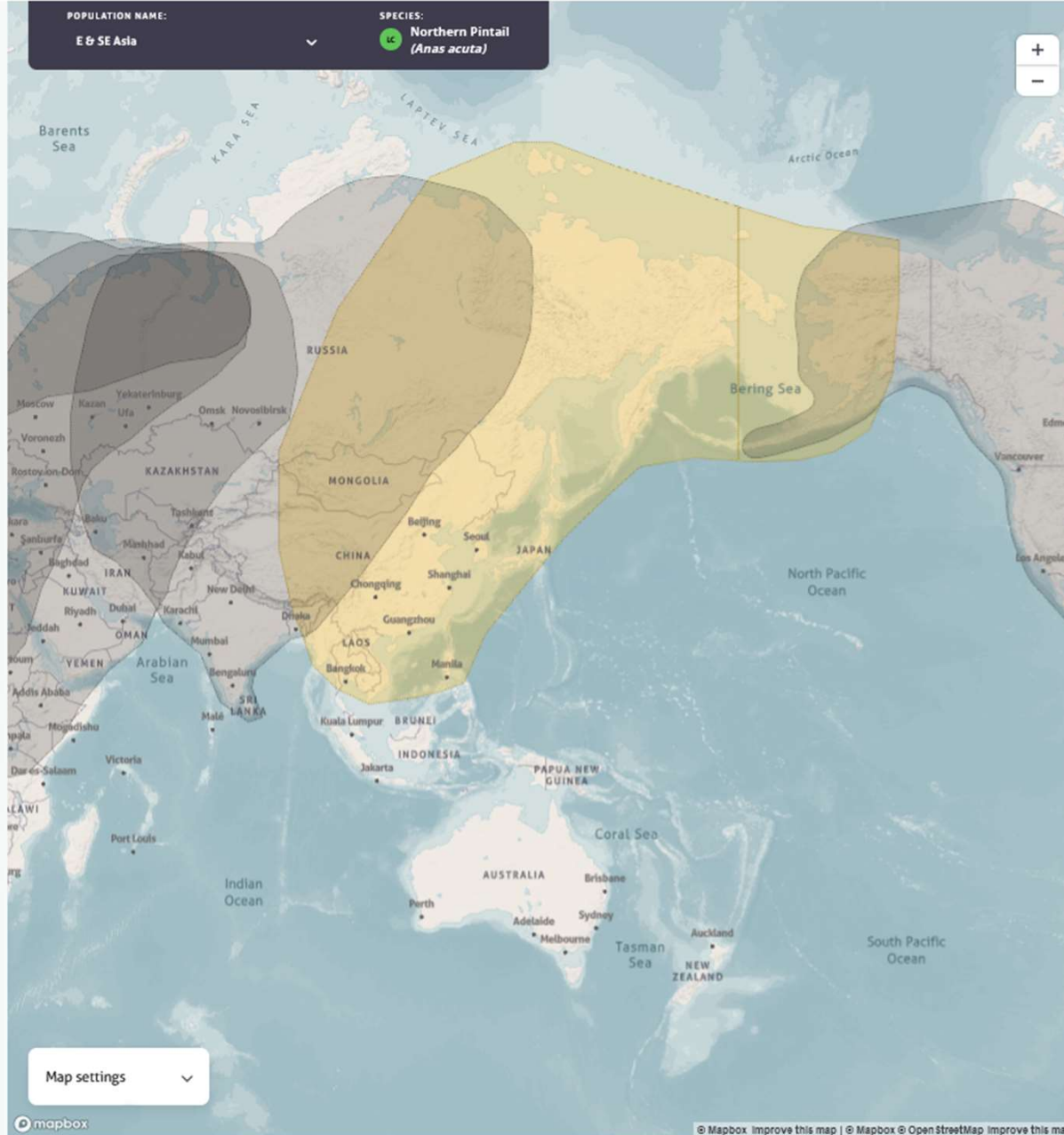
Your source of the world's latest waterbird population data

Data

AFRICAN-EURASIAN MIGRATORY WATERBIRD AGREEMENT

EU BIRDS DIRECTIVE

The Waterbird Populations Portal (WPP) online of 2300 biogeographic populations worldwide. The



Neil Fifer

Common name	Northern Pintail	Scientific name	<i>Anas acuta</i>	Global Red List	● LEAST CONCERN
Order name	Anseriformes	Family name	Anatidae		

Population information

Population name E & SE Asia



Neil Fifer

Population size

Collapse

Publication	Start year	End year	Minimum	Maximum	Estimate quality	Notes	References
EAAFP CSR 1	2006	2006	200000	300000	Expert opinion	N9765	R1851 , R1878 .
WPE 5	0	0	200000	300000	No quality assessment	N8055	R519
WPE 4	0	0	200000	300000	No quality assessment	N5345	R519
WPE 3	0	0	500000	1000000	No quality assessment		R519
WPE 2	1987	1991	10000	1000000	No quality assessment		R519
WPE 1	1987	1991	100000	1000000	No quality assessment		R519

Population trend

Collapse

Publication	Start year	End year	Trend	Trend quality	Notes	References
EAAFP CSR 1	2011	2020	STA?	Poor	N18	
WPE 5	1977	1991	DEC	No quality assessment		R407
WPE 4	1977	1991	DEC	No quality assessment		R407
WPE 3	1977	1991	DEC	No quality assessment		R455
WPE 2	1977	1991	DEC	No quality assessment		R519
WPE 1	1977	1991	DEC	No quality assessment		R519

Population 1% level

Collapse

Publication	Yearset	1 percent	Notes
EAAFP CSR 1	2021	2400	
WPE 5	2012	2400	
WPE 4	2006	2500	
WPE 3	2002	7500	
WPE 2	-1	-1	N6810
WPE 1	-1	-1	N6810

Common name	Northern Pintail	Scientific name	<i>Anas acuta</i>	Global Red List	LEAST CONCERN
Order name	Anseriformes	Family name	Anatidae		

Population information

Population name E & SE Asia



Population size

Publication	Start year	End year	Minimum
EAAFP CSR 1	2006	2006	200000
WPE 5	0	0	200000
WPE 4	0	0	200000
WPE 3	0	0	500000
WPE 2	1987	1991	10000
WPE 1	1987	1991	100000

Population trend

Publication	Start year	End year
EAAFP CSR 1	2011	2020
WPE 5	1977	1991
WPE 4	1977	1991
WPE 3	1977	1991
WPE 2	1977	1991
WPE 1	1977	1991

Population 1% level

Publication	Yearset	
EAAFP CSR 1	2021	
WPE 5	2012	
WPE 4	2006	
WPE 3	2002	7500
WPE 2	-1	-1
WPE 1	-1	-1

References

- R519 - Perennou, C.P., Mundkur, T. and Scott, D.A. 1994. The Asian Waterfowl Census 1987-1991: distribution and status of Asian waterfowl. IWRB Spec. Publ. No. 24; AWB Spec. Publ. No. 86. Slimbridge, UK and Kuala Lumpur, Malaysia.
- R1851 - Langendoen, T, Mundkur, T. & Nagy, S., (2021) Flyway trend analyses based on data from the Asian Waterbird Census from the period of 1987-2020. Online publication. Wetlands International, Wageningen, The Netherlands.
- R1878 - Sung Y-H, Pang C, Li TC, Wong PPY, Yu Y (2021) Ecological Correlates of 20-Year Population Trends of Wintering Waterbirds in Deep Bay, South China. Front. Ecol. Evol. 9: doi: 10.3389/fevo.2021.658084
- R407 - Li, David, and Asian Waterbird Census network in litt. 2005.
- R455 - Miyabayashi, Y. and Mundkur, T. 1999. Atlas of Key Sites for Anatidae in the East Asian Flyway. Wetlands International ? Japan ? Tokyo, and Wetlands International ? Asia Pacific, Kuala Lumpur. 148 pp.

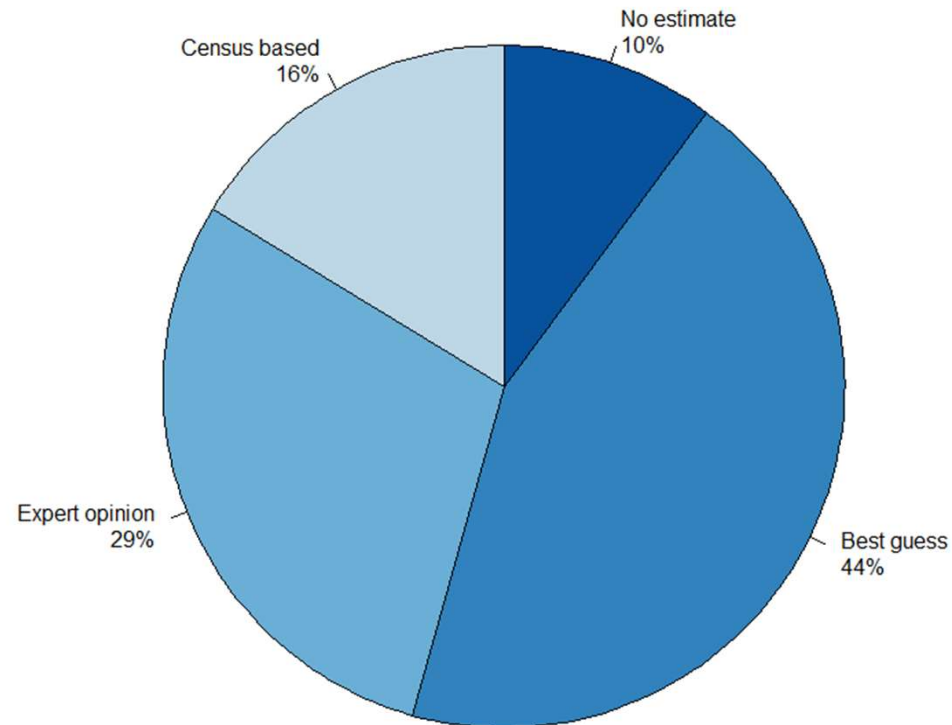
Notes

- NS9765 - No recent population assessment is available; previous estimate from 2006 (WPE4, Wetlands International, 2006). Max counts in AWC 2016-2020: CN 18,839, TH 976, VN 36 in 2016; MM 5272, MY 1, TW 4,292 in 2017; HK 3,747 in 2018; ID 6, JP 34,216, KP 218, KR 12,484, PH 679, in 2020. In a separate analysis, the eastern CN population was estimated at 47,000 between 2010-2020 (Beixi Zhang et al. in prep.).
- NS8055 - Moores, N. in J. Kear (ed.) 2005, Li in litt. 2005: Low thousands winter in Korea, 100,000 in Japan. Barter et al. (2004): Fewer than 10,000 counted in the Yangtze valley during 2003-2005. Gerasimov & Gerasimov 2003: 180,000 migrate through the Kamchatka Peninsula in spring.
- NS5345 - Moores (2005), Li (2005): Low thousands winter in Korea, 100,000 in Japan. Barter et al. (2004): Fewer than 10,000 counted in the Yangtze valley during 2003-2005. Gerasimov & Gerasimov (2003): 180,000 migrate through the Kamchatka Peninsula in spring.
- NT18 - The IWC analysis reports a moderate increasing trend for 2011-2020 (1.0797), a decreasing trend for 1989-2020 (0.981) and stable over 3 generations 2001-2020 (0.9948). In a separate analysis, the eastern CN population was estimated to be between 80,000 and 150,000 during the 1990s, but fell to 46,000 during 2000-2010, remaining stable to an estimated 47,000 during 2010-2020 (Beixi Zhang et al. in prep.), mainly in coastal areas as reported in two of five sectors along the wider CN coast between 2012-2019 (Choi et al., 2020). However, a recent 68% decline between 2008-2017 and a long term decline of 90% between 1998-2017 has been reported from HK (Sung et al., 2021). In JP a decline was recorded between 2004-2017 (Ministry of the Environment, 2021); that coincides with a long term decline of 70% between 1996 to 2018.
- N%6810 - Not Set

[N6810](#)

[N6810](#)

Population size estimates

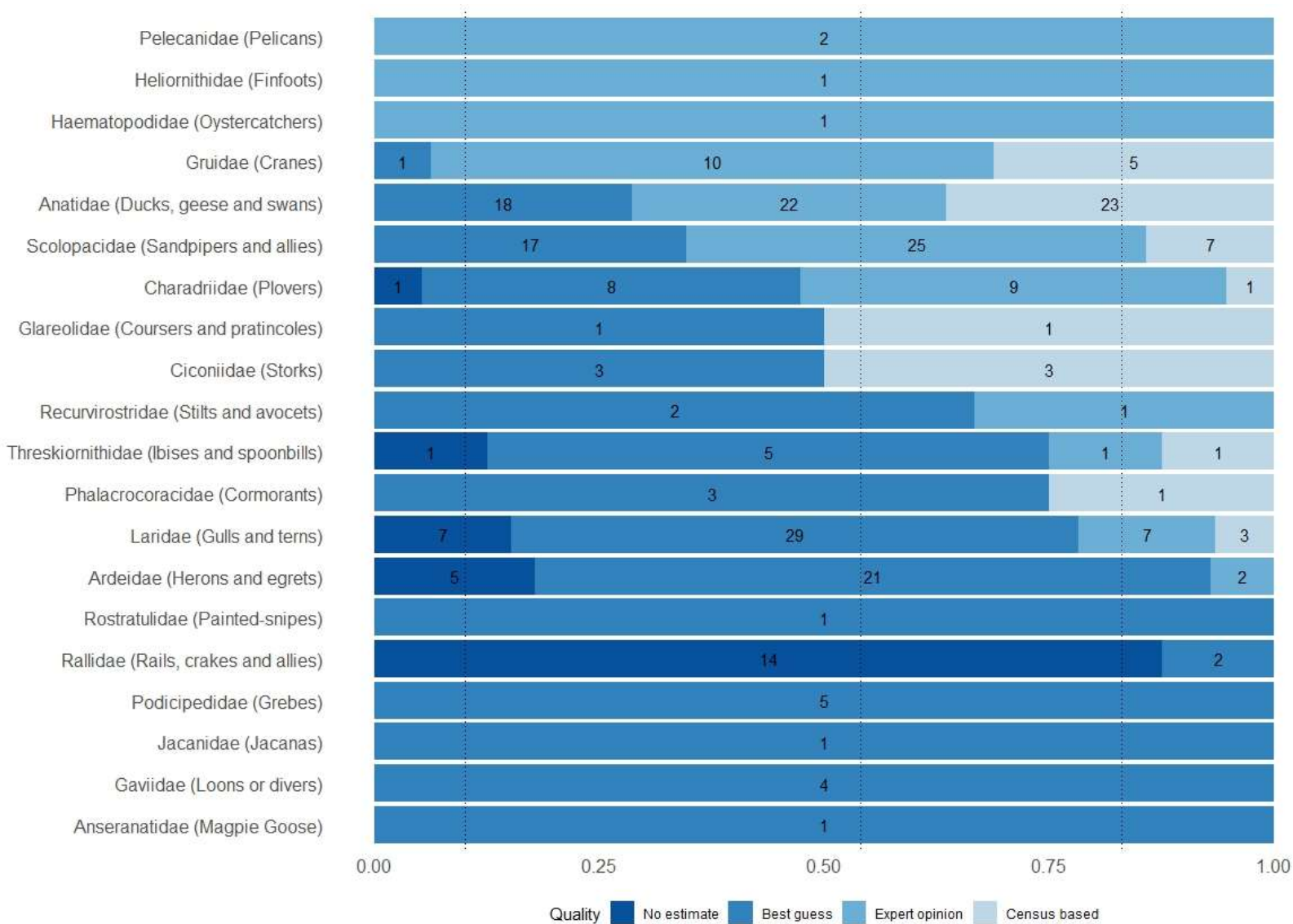


45 pops (16%) census based, 81 (29%) expert opinion, and 122 (44%) are best guess

How many migratory waterbirds in the EAAF?

28 to 68 million individuals from 248 of 276 populations with size estimates
+ Sooty Tern estimated at 18,2 million & Black-legged Kittiwake 4,8 million ind

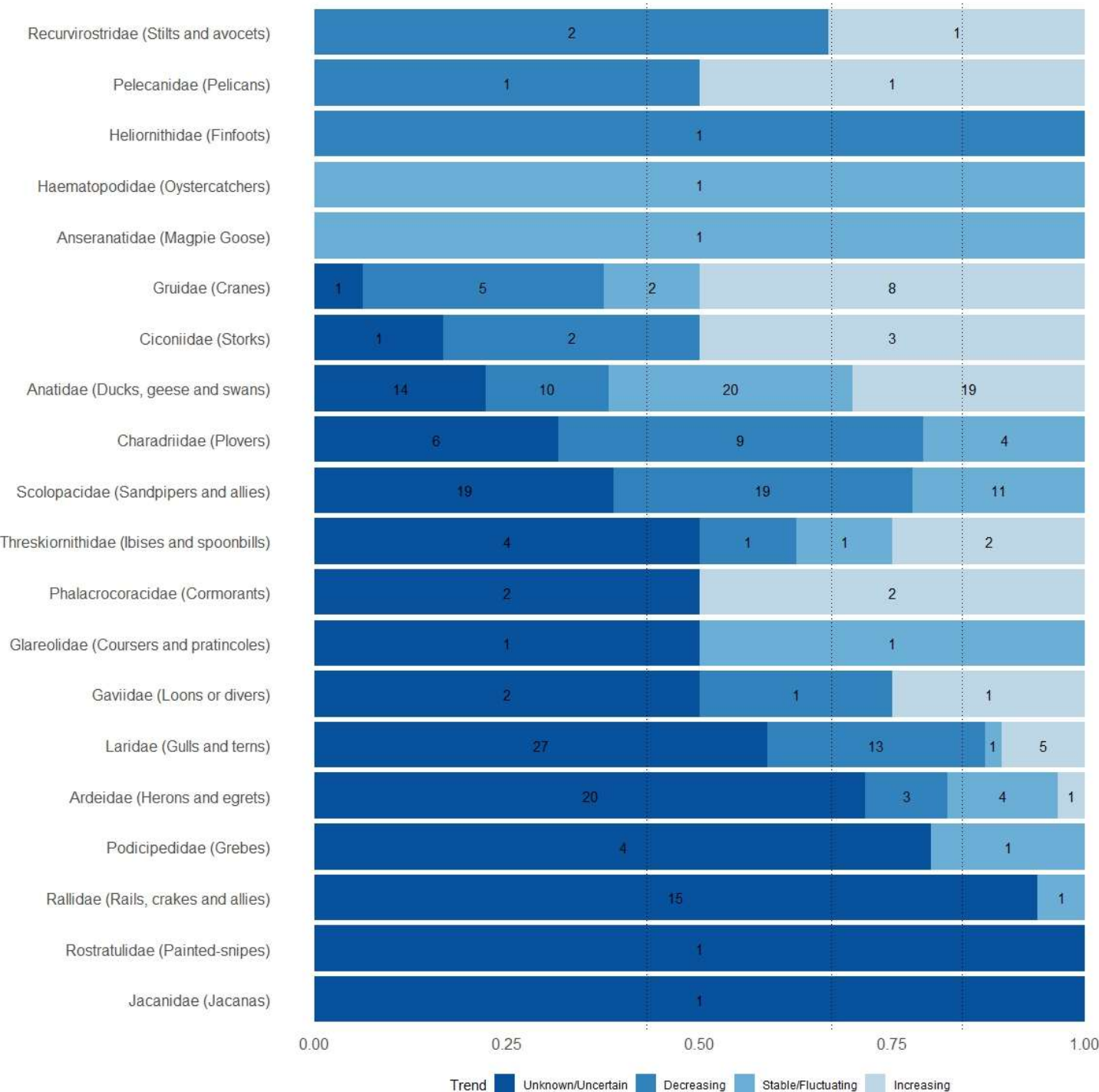
Quality of population size estimates by family



16% census based
29% expert opinion
44% best guess

Dotted lines from the left to right indicate overall proportion of pops with no estimate, best guess and expert opinion

Trend direction of EAAFP populations by family



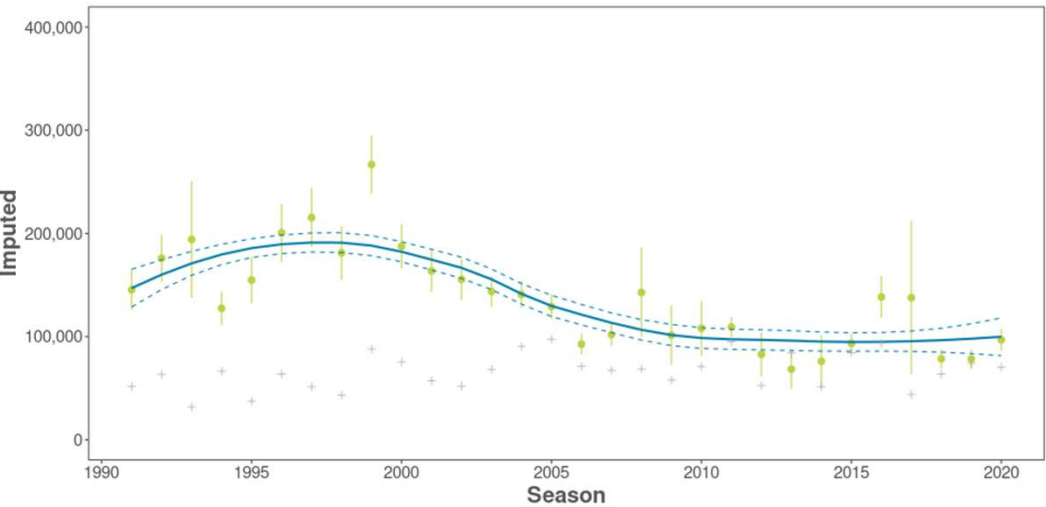
16% increasing,
17% stable or fluctuating
25% decreasing
43% unknown

Trend analysis using Asian Waterbird Census data

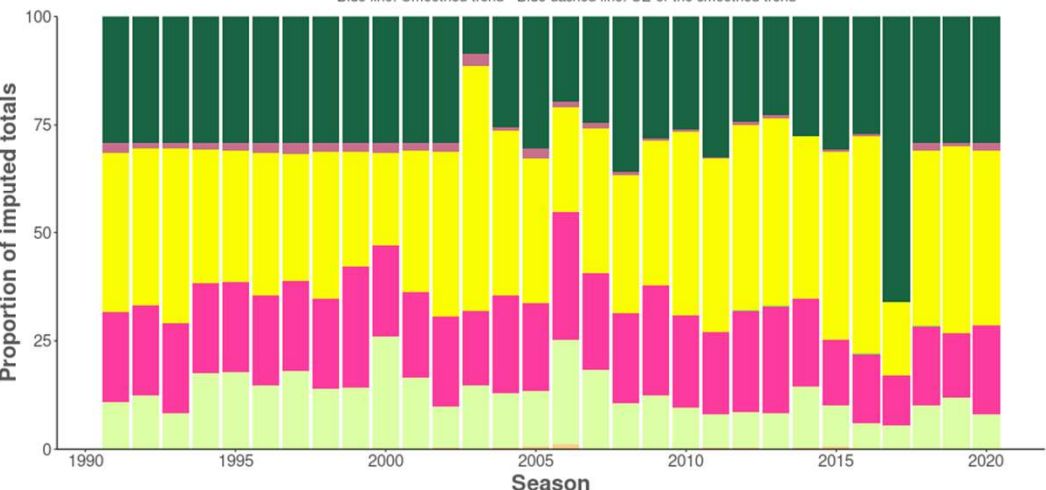
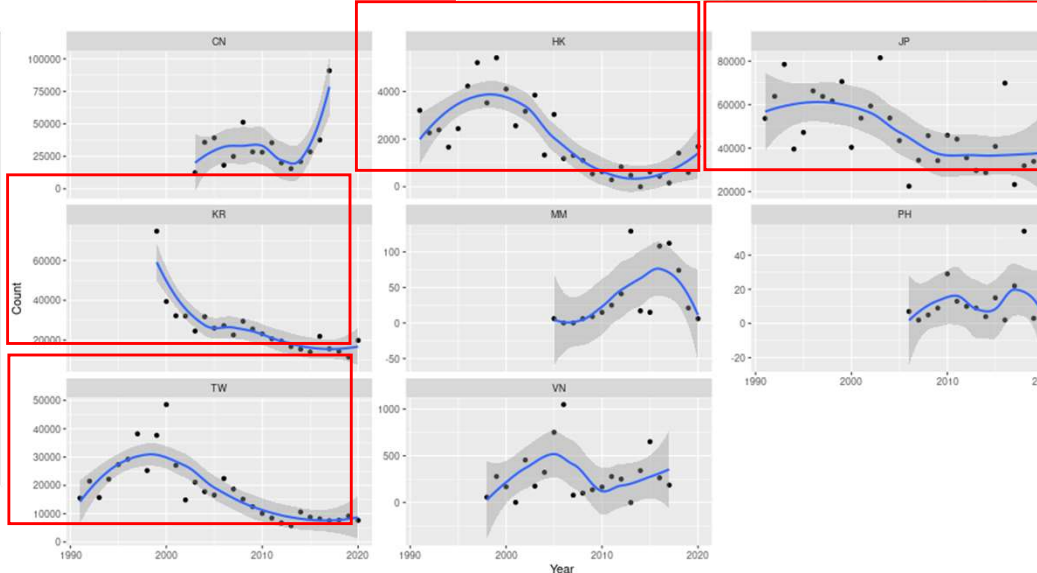
Anas crecca (Common Teal), *crecca*, E & SE Asia (non-bre)



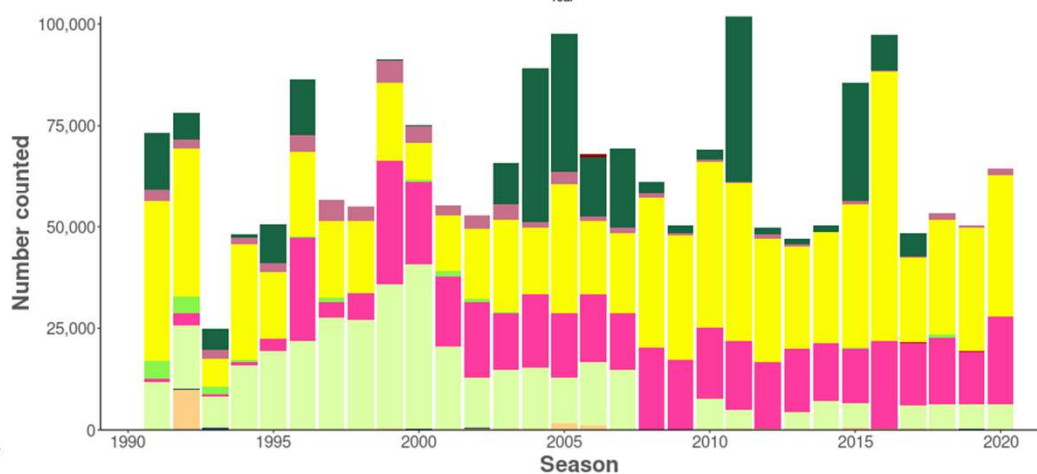
1991- 2020: **Moderate Decrease** 2009-2020 (3 generations): **Stable** 2011-2021 (10 year): **Uncertain**



Green dots: Total imputed count value with SE bars Grey cross: True count values used in the trend
Blue line: Smoothed trend Blue dashed line: SE of the smoothed trend



China mainland Japan Philippines Taiwan
Hong Kong Myanmar Republic of Korea Vietnam



Cambodia China mainland Democratic People's Republic of Korea
Hong Kong Japan Laos Myanmar Philippines Republic of Korea Vietnam

https://iw-c-wi.shinyapps.io/eaaf_trends/



Population Boundaries

A waterbird biogeographical population is a population of a species or a subspecies that is either geographically discrete from other populations at all times of the year, or at sometimes of the year only, or is a specified part of a continuous distribution so defined for the purposes of conservation management.

For the CSR1, the following three codes of quality of information for delineation of boundaries have been proposed:

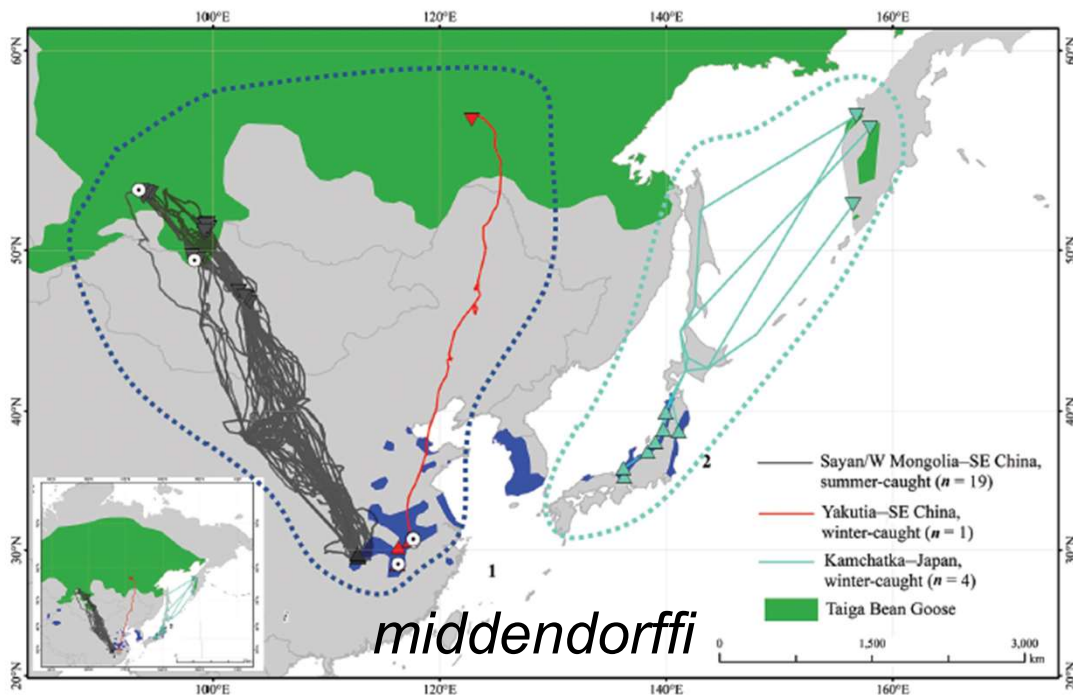
- 1 Based on **poorly studied and uncertain** ranges of populations during breeding and /or non-breeding period.
- 2 Based on **basic distribution information** during breeding and non-breeding period, with some information from movements of marked individuals, genetics, isotope and/or morphological differences.
- 3 Based on **extensive knowledge** of distribution during breeding and non-breeding period, including results from movements of marked individuals, genetics, isotope and/or morphological differences or distinct subspecies.

34 (12%) pops - boundaries are based on extensive movement knowledge across range - *Gruidae* (Cranes), *Anatidae* (Ducks, geese and swans) and Shorebirds.

41 (15%) pops - boundaries prepared on basic information of distribution supported by limited information on movements

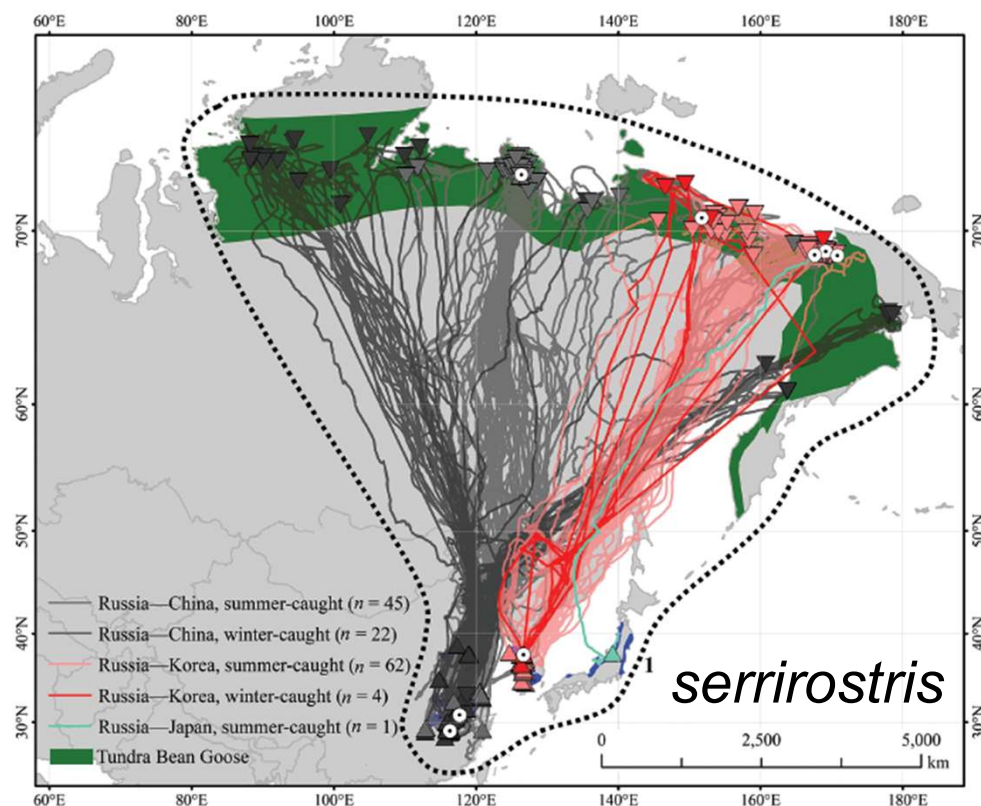
212 (73%) pops have only very basic information of distribution

Bean Goose *Anser fabalis*



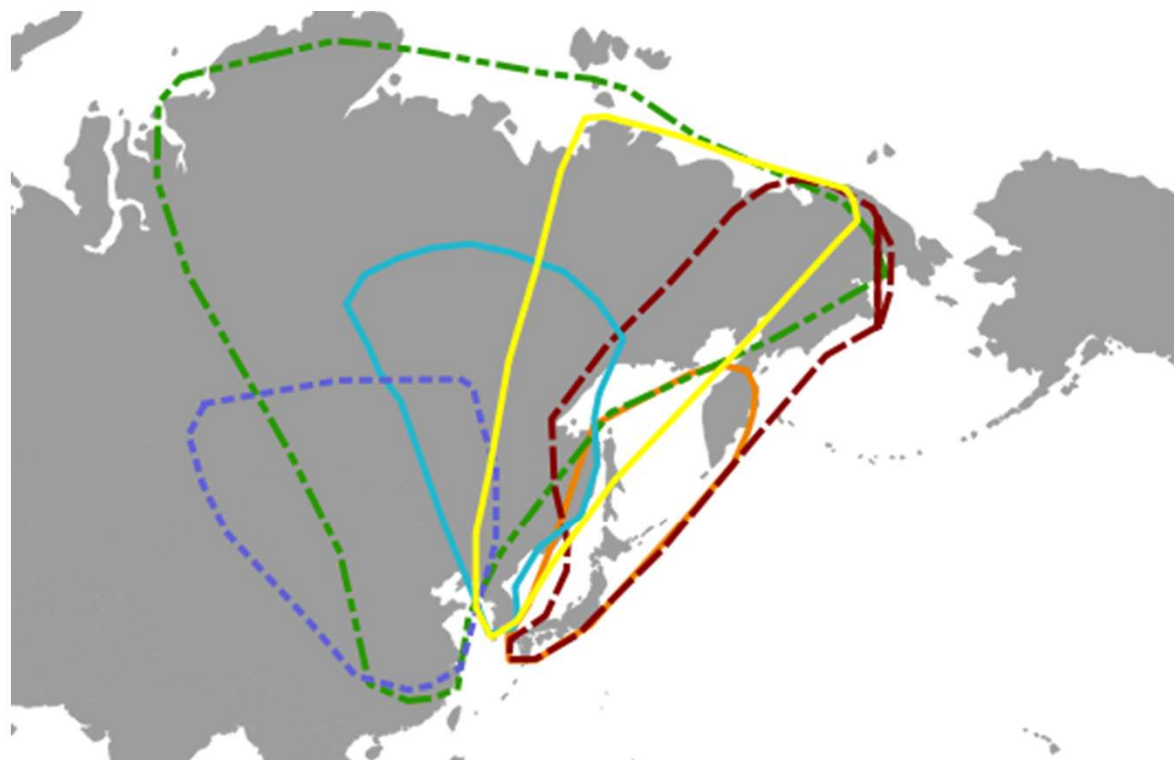
1 = East Asian Continental flyway in China (24,100 geese, stable) and South Korea (7,700 geese, stable)
 2 = West Pacific flyway in Japan (9,400 geese, increasing)

Li et al 2020. Population trends and migration routes of the East Asian Bean Goose *Anser fabalis middendorffii* and *A. f. serrirostris*. *Wildfowl* (2020) Special Issue 6: 124–156



1 = East Asian flyway in three management units:
 China (229,000 geese, increasing), South Korea (80,600 geese, increasing) and Japan (900 geese, increasing)

Biogeographic boundaries for six populations of Bean Goose *Anser fabalis* in the EAAFP region



blue dashed *middendorffi* China non bre
orange solid *middendorffi* Japan non-bre
light blue solid *middendorffi* Korea non bre
green dashed *serrirostris* China non-bre
bright red dashed *serrirostris* Japan non-bre
yellow solid *serrirostris* Korea non-bre

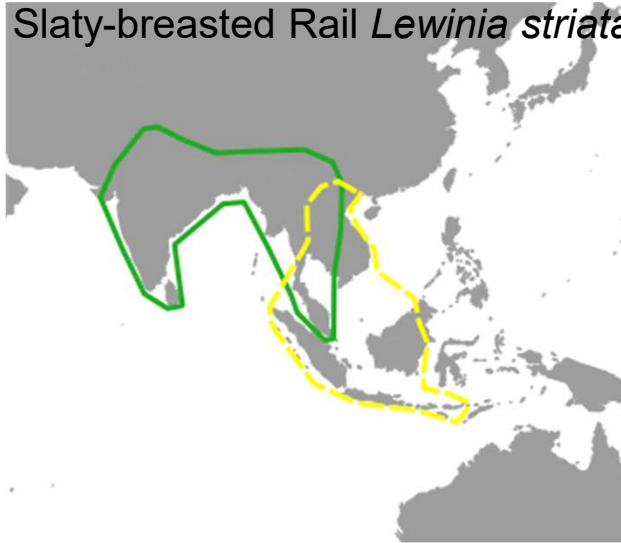
Population Name	Breeding Range	Non Breeding Range	Start Year	End Year	Minimum size	maximum size	Estimate quality	Start Year	End Year	Trend Code	Trend Quality Code
middendorffi, China (non bre)	Sayan/Altai, Mongolia	China: Dongting Lake	2006	2020	24100	24100	Census based	2006	2020	STA	Reasonable
middendorffi, Japan (non-bre)	Kamchatka	Japan	2014	2019	9400	9400	Census based	2014	2019	INC	Reasonable
middendorffi, Korea(non bre)	Yakutia	Korean peninsula	2016	2019	7700	7700	Census based	2012	2021	UNK	No idea
serrirostris, China (non-bre)	Taymyr to E Chukotka (excl. Kamchatka)	E China	2006	2020	229000	229000	Census based	2004	2020	INC	Poor
serrirostris, Japan (non-bre)	Kamchatka to E Chukotka	Japan	2014	2019	900	900	Census based	2014	2019	INC	Reasonable
serrirostris, Korea (non-bre)	Indigirka to E Chukotka (excl. Kamchatka)	Korean peninsula	2016	2019	80600	80600	Census based	2004	2020	INC	Good

Biogeographic boundaries for selected populations

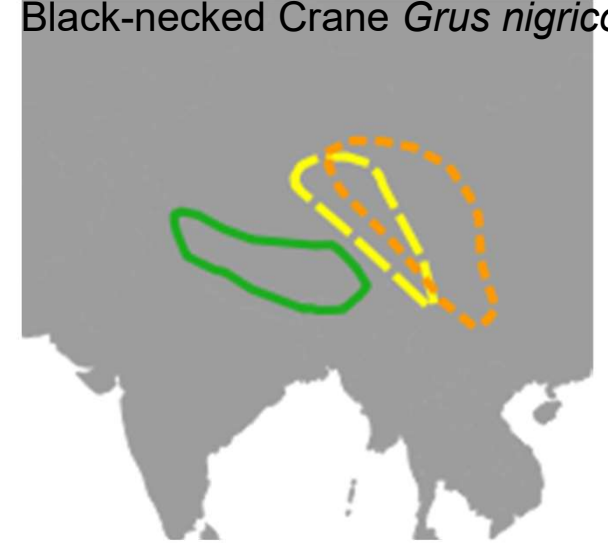
Great White Egret *Ardea alba*



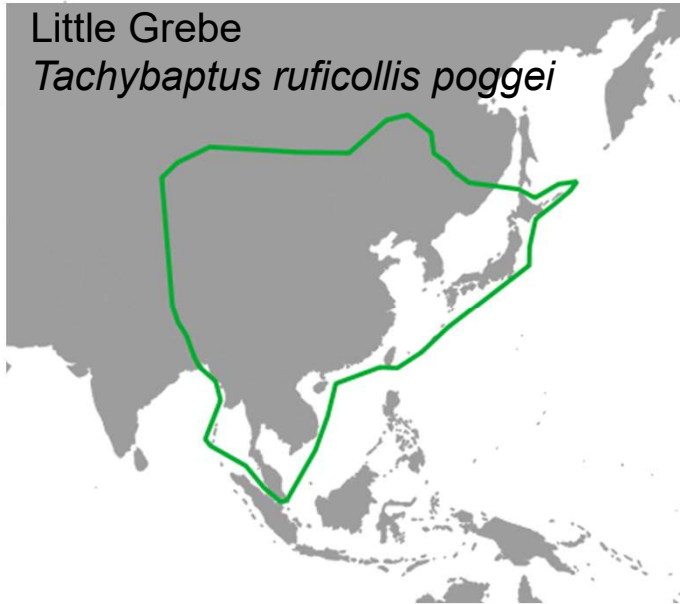
Slaty-breasted Rail *Lewinia striata*



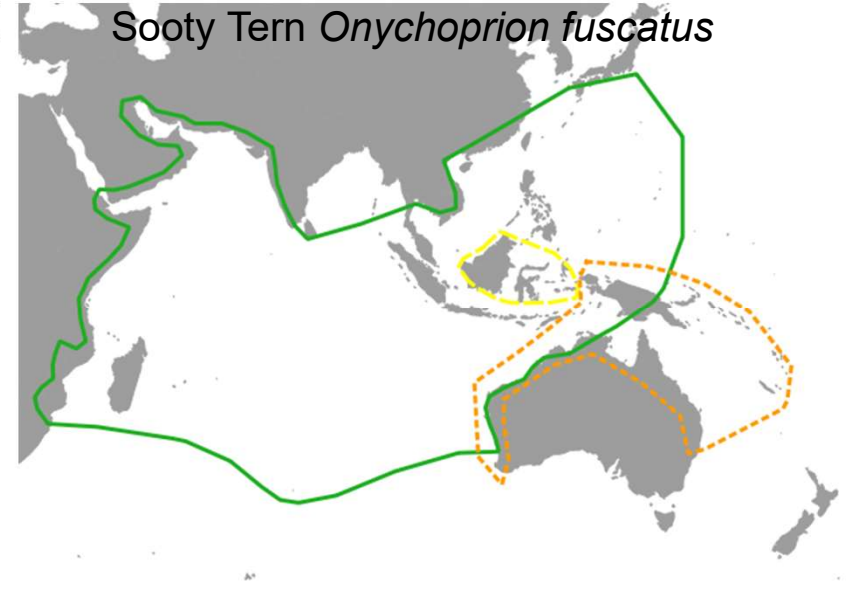
Black-necked Crane *Grus nigricollis*



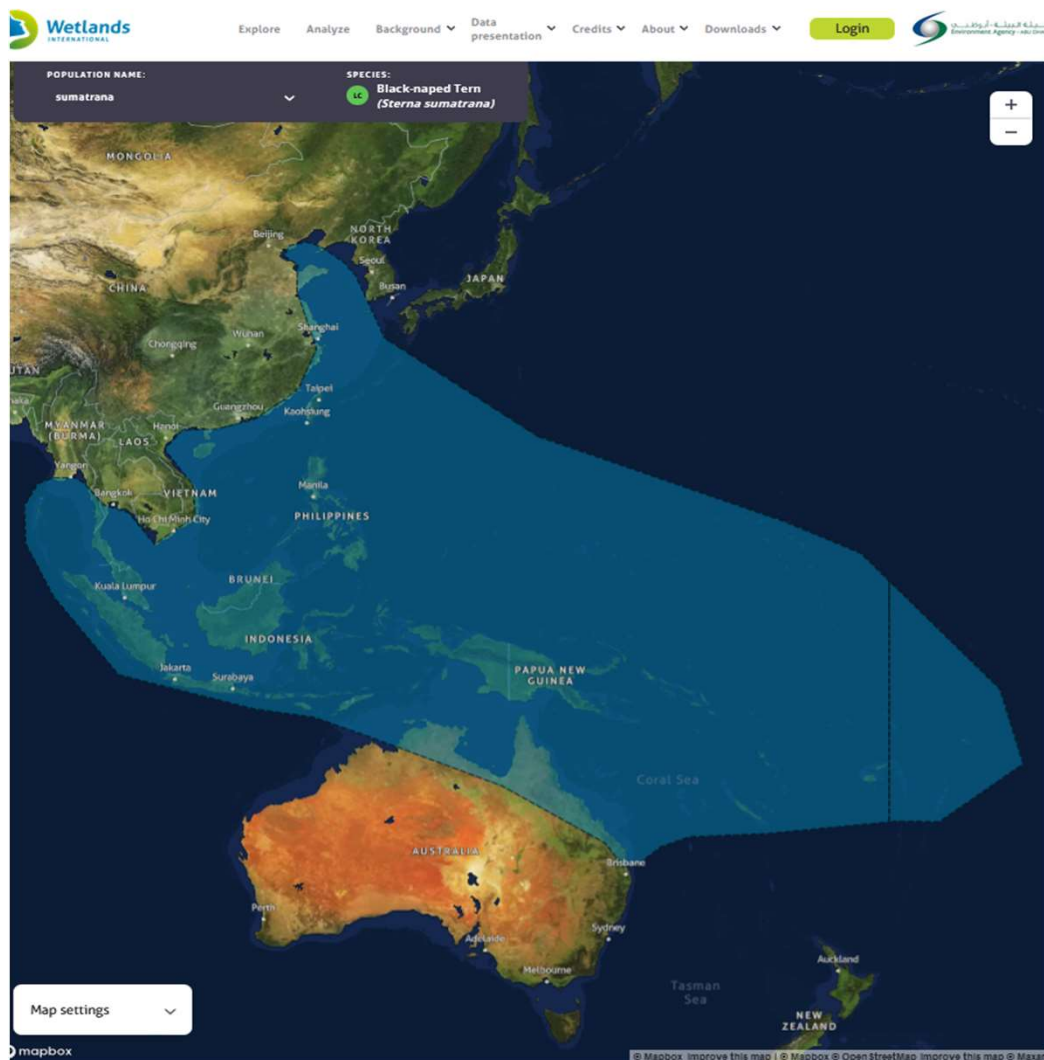
Little Grebe
Tachybaptus ruficollis poggei



Sooty Tern *Onychoprion fuscatus*



Black-naped Tern *Sterna sumatrana*



Ayuwat Jearwattanakanok

Breeding Range	Non Breeding Range	Start Year	End Year	Minimum size	maximum size	Estimate quality	Start Year	End Year	Trend Code	Trend Quality Code
NE Indian Ocean, Malaysia, Indonesia, Philippines, S China, Taiwan, S Japan S to N & E Australia, SW Pacific Is	NE Indian Ocean, Malaysia, Indonesia, Philippines, S to N & E Australia, SW Pacific Is	1994	2021	-1	-1	No estimate	1980	2015	UNC	Poor

Recommendations 1/4

1. *Improve information on population size estimates and trends*

a. **Develop a comprehensive flyway monitoring programme covering all EAAFP waterbird populations:**

- Prioritise pops for which no size estimate exists and pops for which no recent (within the last decade) size and trend estimate are available.
- Develop a schedule for special efforts to feed into the CSR process, including
 - Breeding surveys, especially for colonial species and dispersed breeders.
 - Migration surveys, especially if found appropriate for some species and populations that may congregate during migration at bottleneck sites/areas.
 - Small, threatened populations, e.g. Greater Adjutant *Leptoptilos dubius*, Black-bellied Tern *Sterna acuticauda*, River Tern *Sterna aurantia*.
 - Special monitoring efforts for secretive species, e.g. snipes, rails.
 - Special monitoring efforts for waterbirds occurring outside wetlands.
 - Aerial or boat surveys for off-shore waterbird populations.

b. **Provide national monitoring guidance (as called for by MOP Decision 10.12), including advice and standards for appropriate methods to monitor different waterbird populations.**

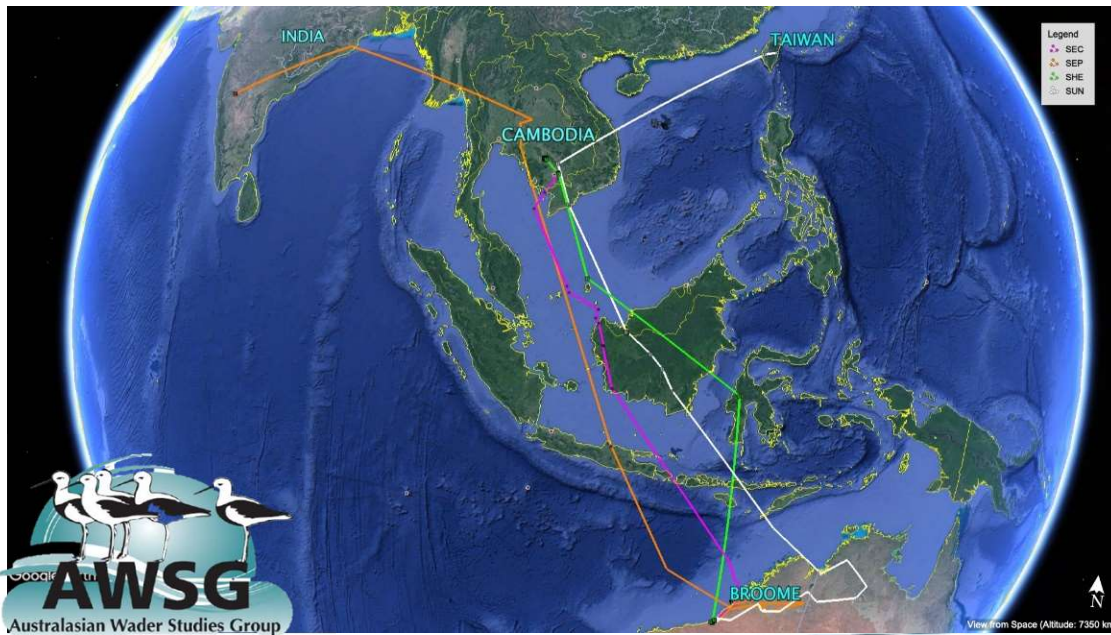
Recommendations 2/4

- c. Strengthen national monitoring efforts as a priority action within EAAFP national and site partnerships (incorporation into new EAAF guidelines being developed).
- d. Strengthen and resource ongoing national and local waterbird monitoring efforts in all countries (in line with KRA 3.1 of the EAAFP Strategic Plan 2019-2028). This includes:
 - Regular (monthly) counts at all sites of national and international importance.
 - Expanding AWC in areas with low coverage and capacity gaps.
- e. Maximize impact of **ongoing** non-breeding season international monitoring programmes of single species through:
 - collection of information on all waterbirds and assessment of wetlands
 - provision of information to national partners for incorporation into the AWC database.
- f. Examine novel methods to analyse and extrapolate from existing monitoring data sources.
- g. Establish a partnership of organisations with international experience of waterbird monitoring to develop and support the implementation of the flyway monitoring programme and national monitoring guidance.

Recommendations 3/4

2. Improving understanding of biogeographic populations distribution and definition

- a. Establish a procedure linked to the CSR to review the list of species and populations covered by the EAAFP (including for eight families of seabirds not covered in this first review).
- b. Prioritise research to determine international movement patterns of populations for which information is limited (as called for by MOP Decision 9.9).



Recommendations 4/4


3. *Improving the procedures to prepare the CSR*

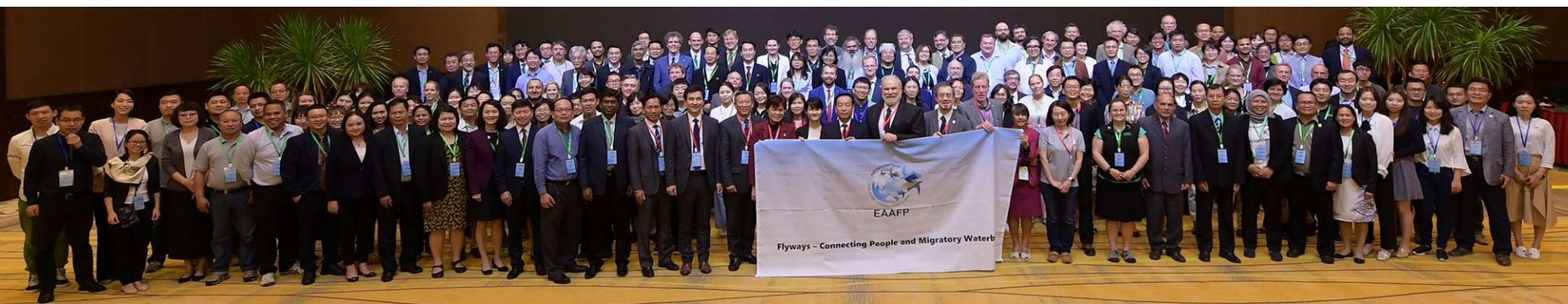
- a. Produce regular CSR updates. Ensures familiarity and establishes a routine, both for data reporting from monitoring programmes and for experts contributing to the consultation process.

Ideally an updated CSR produced every three years and in line with reviews in other flyways to feed into global WPE updates or “at least every alternate MOP or not more than four yearly” as called for by MOP Decision 10.12.

- b. Identify ways to enhance and strengthen involvement of the existing EAAF Working Groups and Task Forces in future CSR developments.
- c. Establish EAAF Working Groups to cover taxonomic gaps that can contribute to future reviews.

Acknowledgements

- EAAFP Science Unit for joint coordination for consultation
- EAAFP Partners, Working Groups and Task Forces
- Specialist Groups, AWC Coordinators and Experts
- Chair, Vice Chair & Members of the EAAFP Technical Sub-Committee
- Interns and volunteers in preparing the population boundaries
- Secretariat and  for financial resources



Experts who contributed - our deepest appreciation

Brad Andres, Aleksei Antonov, George Archibald, Qingquan Bai, Dave Bakewell, Bas van Balen, Nyambayar Batbayar, Phil Battley, Mark R. Bezuijen, Simba Chan, Ying Chi Chan, Jimmy Choi, Chang-Yong Choi, Jesse Conklin, Nick Davidson, Devinder Singh Dhadwal, Igor Fefelov, Julian Fischer, Richard Fuller, Stephen Garnett, Ken Gosbell, Ward Hagemeyer, Birgita Hansen, Chris Hassell, Richard Hearn, Jiang Hongxing, Elena Ilyashenko, Micha Jackson, Roger Jaensch, Shengwu Jiao, Jin Jiefeng, Arne Jensen, Allen Jeyarajasingam, Yifei Jia, Robb Kaler, Li Keesup, Kyong-Chol Kim, Woo-Yuel Kim, Marcel Klaassen, Kazuo Koyama, Masayuki Kurechi, Benoit Laliberte, Richard Lanctot, David Li, Cao Lei, Fanjuan Ma, Nikki McArthur, Bruce McKinlay, Spike Millington, Ma Ming, Claire Mirande, Yulia Satsuki Momose, Nial Moores, Colin O'Donnell, Kiyooki Ozaki, Olga Prokopenko, T Piyakarn, Nuchjaree Purchoon, Pinjia Que, Adrian Riegen, Xiaotong Ren, Chung-Song Ri, Danny Rogers, Philip D. Round, Sonia Rozenfeld, Daniel R. Ruthrauff, Jin Ryu, Paul Sagar, Yusuke Sawa, Anthony Sebastian, Sampath Seneviratne, Boripat Siriaronrat, Tetsuo Shimada, Diana Solovyeva (and colleagues of the Laboratory of Ornithology, Institute of Biological Problems of the North, Far East Branch Russian Academy of Sciences), Ha-Cheol Sung, Pavel Tomkovich, Terry Townshend, Triet Tran, Brian Uher-Koch, Katsumi Ushiyama, Tatsuya Ura, Eric J. Woehler, Chol-Nam Yun, Ma Zhijun, Christoph Zockler and Bingrun Zhu.

For this review, we greatly appreciate input and feedback from the following AWC national or subnational Coordinators and database managers – Hong Chamnan (Cambodia), Tomoko Ichikawa (Japan), Hwajung Kim (Republic of Korea), Da-Li Lin (Taiwan), David Melville (New Zealand), Toshifumi Moriya (Japan), Yus Rusila Noor (Indonesia) and Yat-Tung Yu (Hong Kong SAR).

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Wetlands International website <https://www.wetlands.org/publications/eaaf-conservation-status-review1/>

Access individual population size, trend, 1% threshold & boundary map info on the Waterbirds Populations Portal

<https://wpp.wetlands.org/>