

Charting the Future of Malaysia's Most Important Migratory Waterbird Roost Site: the Kapar Power Station Ash Ponds



Report from the Asian Waterbird Census (AWC) Seminar
Saturday, 25 June 2016
Malaysian Nature Society, Kuala Lumpur

Malaysian Nature Society's Mission

To promote the study, appreciation, conservation and protection of Malaysia's natural heritage.

MNS-BCC Waterbirds Group's Mission

Promoting the conservation of waterbirds and their ecosystems in Malaysia, by conducting research, raising awareness, providing training and networking, both locally and globally.

MNS is a partner of BirdLife International

BirdLife International is a global partnership of autonomous conservation organisations present in more than 120 countries, with a global membership of more than 2.7 million people. Its mission is to conserve wild birds, their habitats and global biodiversity, by working with people towards sustainability in the use of nature resources.

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EXECUTIVE SUMMARY

This report provides an overview of the proceedings of the 'Asian Waterbird Census (AWC) Seminar: Charting the Future of Malaysia's Most Important Migratory Waterbird Roost Site: the Kapar Power Station Ash Ponds' held on Saturday, 25 June 2016, at the Malaysian Nature Society (MNS) in Kuala Lumpur.

In doing so, this report provides a brief on the 3 presentations given by various experts and a summary of discussions held as well as identified next steps. The report is organized as follows:

- Introduction
- Keynote presentation: 'International Cooperation for a Shared Biodiversity Resource: Migratory Waterbirds in the East Asian-Australasian Flyway (EAAF)' by Spike Millington, Chief Executive, EAAFP
- Presentation 1: 'Why Kapar Power Station Ash Ponds? and Introduction to Kapar Waterbird Count 2015/2016' by Chin Choong Liung, MNS Bird Group
- Presentation 2: 'Kapar Waterbirds: The Bigger Picture' by Dave Bakewell, MNS Bird Group
- Seminar Discussion: Charting The Future of Kapar Power Station Ash Ponds
- Conclusion

In the keynote presentation, Spike Millington, on behalf of the Partnership for the East Asian-Australasian Flyway (EAAFP), provides an explanation of the East Asian-Australasian Flyway (EAAF) from a global context. He also discusses the threats and challenges currently faced by the EAAF as well as the various initiatives the EAAFP is undertaking to secure and safeguard sites along the EAAF identified as important for migratory waterbirds. Lastly, EAAFP explains Malaysia's role and importance as a member of this international multi-organisation and government partnership.

In the first presentation, Chin Choong Liung of MNS provides an introduction to migratory waterbirds in general as well as their characteristics and features. Zooming into the Kapar Power Station (KPS) ash ponds in Malaysia, he presents the methodology, results and recommendations of the recently concluded Kapar Waterbirds Count 2015/2016.

In the second presentation, Dave Bakewell of MNS explains the history of studies previously carried out at the KPS ash ponds. He presents past to present results of the Asian Waterbird Census (AWC) carried out at the site over the years and proceeds to explain these results from a local, national and flyway context. Finally, he explains why the KPS ash ponds are used by waterbirds, what would happen if the ash ponds are left as it is (without active management) and what can be done to manage the site.

Discussions held during the seminar are captured and organised according to the following headings/questions:

- Is there scientific information showing that if the KPS Power Station ash ponds go, the birds will go too?
- What size is required to maintain the KPS ash ponds site as a suitable high tide roost site for waterbirds?
- How does TNB currently manage the ash ponds?
- Were there any recommendations (focusing on waterbirds) made to TNB prior to the development of the power station?

Would TNB be willing to manage the site purely for the livelihood of the waterbirds?

- What are TNB's future plans for the Kapar Power Station?
- Are dredging activities carried out at the site?
- What is the status of the Klang Islands as a feeding site for waterbirds?
- What is the status of the Kuala Selangor Nature Park as an alternative roosting site for waterbirds?
- Can successful models of using ash ponds as high roosting sites for migratory birds be found elsewhere?
- Next steps and roles of stakeholders

In concluding the seminar, all participants helped draft, deliberated on and agreed to 'The Kapar Declaration – The Future of Kapar Ash Ponds.' The declaration is intended to be distributed to relevant stakeholders and will serve as a guide for further discussions as well as provide recommendations on ways forward.

INTRODUCTION

The aim of the Asian Waterbird Census (AWC) Seminar, held on 25 June 2016 at MNS, is to share the results of the 2015-2016 waterbirds monitoring initiative conducted by dedicated MNS bird group members at the Kapar Power Station (KPS) ash ponds. The seminar also provides a platform for interested stakeholders to discuss the future conservation of the KPS ash ponds, a site identified as the most important migratory waterbirds roosting site in Peninsular Malaysia along the East Asian-Australasian Flyway (EAAF).

The KPS started operations in 1987, as the first coal-fired power plant in Malaysia (see [Image 1](#)). The site was first identified as an important roosting site for waterbirds in 1988 by the Asian Wetlands Bureau (now known as Wetlands International - Malaysia). AWC counts during 1990- 1995 and annually since 1999, have shown an increasing trend in usage of the ash ponds by migratory waterbirds.



[Image 1](#): Kapar Power Station (photo by Sonny Wong).

With global and national commitments to reduce greenhouse gases, the future of coal-fired power plants is a concern. What will be the future of KPS and its ash ponds if the old plant is decommissioned? Where will migratory birds go with the ongoing development, reduction and fragmentation of the majority of Malaysia's coastal wetlands? On top of it all, a crucial link in the EAAF will be disturbed for all migratory birds if the future of KPS is not safeguarded.

Malaysia became a partner of the Partnership for the East Asian-Australasian Flyway (EAAFP) in 2012 and as a result, is committed to designate a network of coastal wetlands for migratory birds flying from the north to winter in the south. This commitment is timely due to ongoing rampant development of coastlines along the EAAF across multiple countries. Malaysia is recognised as a key link along the pathway of the EAAF and in Malaysia, the KPS ash ponds is THE most crucial location for resting and roosting migratory waterbirds.

The outcome of this seminar will help to set a clear direction and register commitments from power station managers and the government towards safeguarding the KPS ash ponds for future generations. If successful, the conservation and management of the KPS ash ponds can then be showcased as a model for advocating the safeguarding of other important flyway sites in Malaysia, particularly wetlands. Such efforts will benefit waterbirds and other wildlife as well as local communities who depend on the natural resources provided by other wetlands.

In addition, Malaysia can fulfill its national commitment and obligations to the EAAFP and Ramsar Convention through the protection of coastal wetlands and sharing of data related to the conservation of coastal waterbirds. At the local level, Selangor's conservation of its wetlands and wildlife will also add value towards encouraging ecotourism in the State.

With this seminar, we hope to monitor environmental issues and advocate for change while educating and increasing awareness of issues amongst the public.

KEYNOTE PRESENTATION

International Cooperation for a Shared Biodiversity Resource: Migratory Waterbirds in the East Asian-Australasian Flyway (EAAF)

By Spike Millington, Chief Executive, EAAF

The main objective of the Partnership for the East Asian-Australasian Flyway (EAAF) is to create a network of sites along the flyway. The EAAF is one of the world's great flyways (see [Image 2](#)). At its northernmost reaches, it stretches eastwards from the Taimyr Peninsula in Russia to Alaska. Its southern end encompasses Australia and New Zealand. Between these extremes the EAAF covers much of eastern Asia, including China, Japan, Korea, South-East Asia and the western Pacific. It is especially important for the millions of migratory waders or shorebirds that breed in northern Asia and Alaska and spend the non-breeding season in South-East Asia and Australasia. In total, the flyway passes through 22 countries with approximately 55 migratory species travelling along it. According to the EAAF, the EAAF is used by a minimum of 50 million individuals consisting of 200 waterbird species. This also includes the highest number of IUCN threatened bird species (33) and the highest number of declining species with annual declines of 9% recorded for some shorebirds.

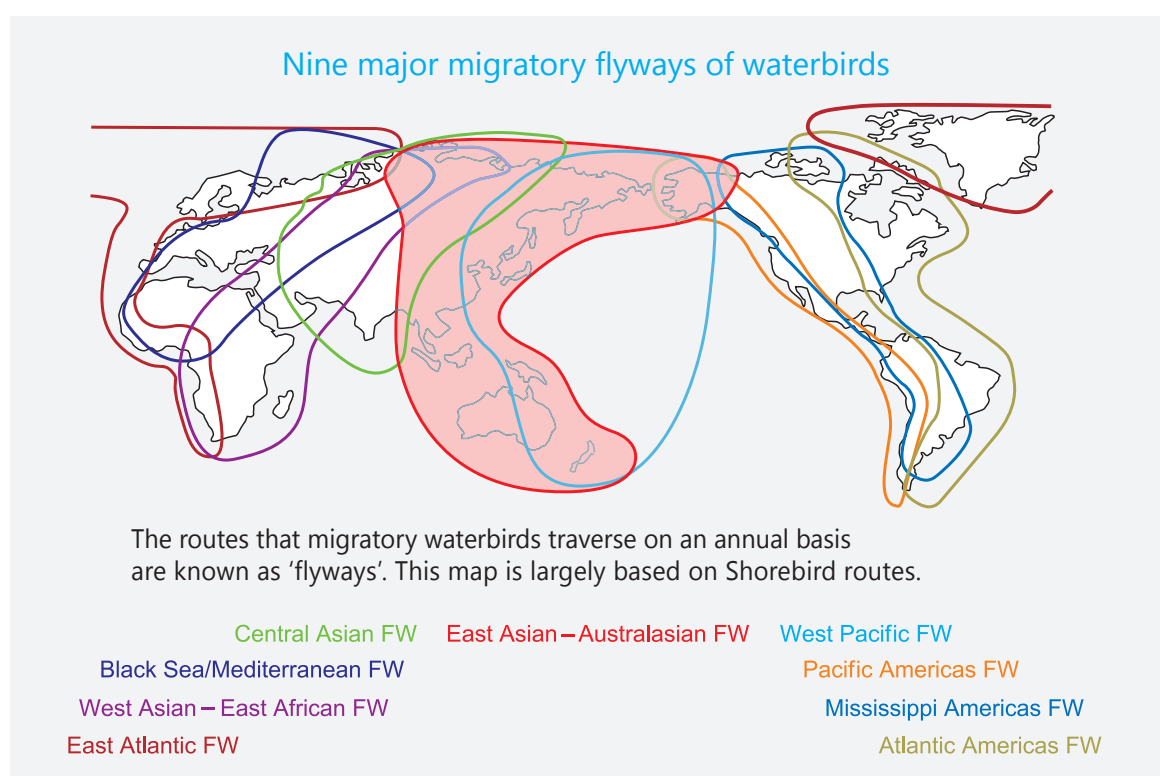


Image 2: Nine major migratory flyways of waterbirds (EAAF)

According to the report 'IUCN situation analysis on East and Southeast Asian intertidal habitats, with particular reference to the Yellow Sea (including the Bohai Sea),' the populations of all waterbirds in the region are declining including shorebirds (most endangered) and freshwater birds. The main reason for this decline is the loss of habitat (mainly intertidal mudflats) as well as pollution and hunting. According to the IUCN report, different countries experience different

developmental pressures. In the report, Malaysia's North-Central Selangor Coast (NCSC) has also been identified as the country's key intertidal area. The Kapar Power Station (KPS) Ash Ponds site located within the NCSC in particular, has been identified as a very important step along the flyway as a whole.

Conservation of the EAAF represents a transboundary issue requiring international cooperation. Migratory birds are a true shared biodiversity resource compared to tropical forests, for example, which are often protected in-situ by each country where forests are located. On the other hand, it is highlighted that birds found in Thailand, for example, are the same birds found in other places like China and Australia.

EAAFP partners (35 organisations to date) consist of governments, intergovernmental organizations, international NGOs and the private sector, representing a unique, all-encompassing partnership network. EAAFP's objectives are as follows:

- Develop the Flyway Network of Sites of international importance for migratory waterbirds. Enhance communication, education and public awareness of the values of migratory waterbirds and their habitats
- Enhance flyway research and monitoring activities, build knowledge and promote exchange of information on waterbirds and their habitats
- Build the habitat and waterbird management capacity of natural resource managers, decision makers and local stakeholders
- Develop flyway wide approaches to enhance the conservation status of migratory waterbirds.

Malaysia joined the EAAFP in 2012 through its Ministry of Natural Resources and Environment (MNRE). For the first objective, the EAAFP has identified 900 sites as internationally important potential flyway sites. To date, 125 (as at October 2016) out of 950 flyway network sites have been designated, consisting of a mix of protected and unprotected sites. Therefore, there is a need to clarify the protection status of KPS and there is a desire to see Malaysia's premier flyway site adopted.

It is emphasised that stopover sites (such as KPS) are rarely protected compared to breeding and non-breeding grounds. Using the example of the Great Knot (*Calidris tenuirostris*) (see cover page), whose range covers breeding areas in Russia to wintering grounds in the coasts of southern Asia and Australia, it is found that 7.4% of Great Knot breeding grounds and 11.5% of non-breeding grounds are protected. However, only 0.03% of Great Knot stopover sites are protected along the EAAF. In addition, it was found that when an important Great Knot stopover site was developed, research showed that cockle populations declined and as a result, Great Knot numbers in other sites demonstrated similar declines. Once a site is developed, shorebirds have nowhere to go because each shoreline is unique and cannot be simply replaced with another.

According to the EAAFP, South-East Asia is an important but threatened area for many species of smaller shorebirds, including the critically endangered Spoon-billed Sandpiper. In addition, recent increases in the breeding populations of colonially-breeding waterbirds, such as storks, pelicans and darters, have led to increasingly regular migratory patterns across national boundaries. Given the ecological connectedness of countries and sites in South-East Asia, shared species and populations, as well as common pressures and threats, it is proposed to create a Southeast Asia Network in the EAAFP for the conservation of migratory waterbirds and their habitats in the region.

Lastly, countries along the EAAF have made commitments to global biodiversity targets under several key multilateral environmental agreements but it will only be possible for the countries to meet these commitments if they halt the declining trends in species populations and habitat availability and quality.

PRESENTATION 1

Why Kapar power station ash ponds? and Introduction to Kapar Waterbird Count 2015/2016

By Chin Choong Liung, MNS Bird Group

On first impressions, the Kapar Power Station (KPS) ash ponds look like a wasteland. Effectively, it is a place for the coal-fired power station to dump and dispose of ash waste (see [Image 4](#)). However, this presentation serves to highlight the importance of the KPS ash ponds for migratory waterbirds by addressing the following questions:

- Why are there an abundance of birds found at the KPS ash ponds?
- Why did we carry out the waterbird count at the KPS ash ponds?
- Why should this site be conserved?



Image 4: Kapar Power Station ash pond (photo by Chin Choong Liung).

What are waterbirds/waders?

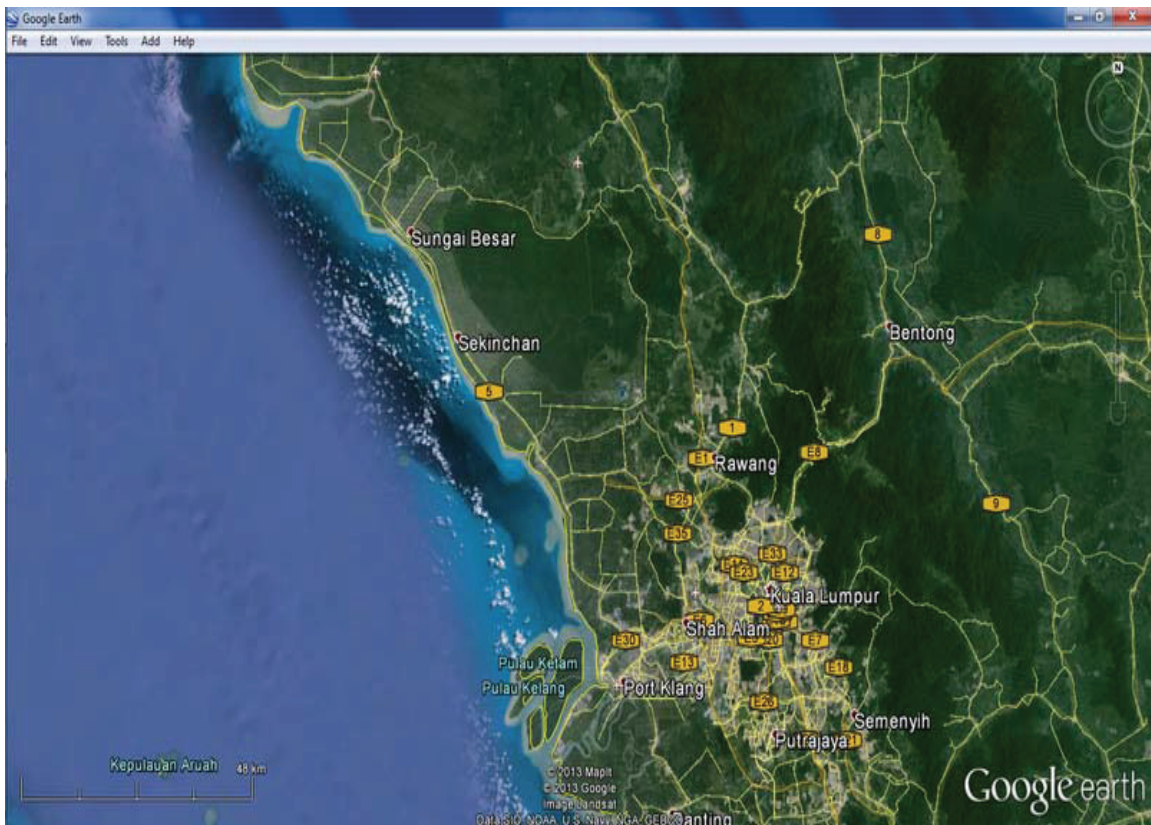
Waterbirds refer to birds that live on or around water. In the context of waterbirds and the conservation of their habitats, it refers to any birds that inhabit or depend on bodies of water/wetland habitats. Examples of waterbirds include Herons (Striated, Grey), Storks (Milky, Painted), Egrets (Little, Great), Terns (Gull-billed, Caspian) and waders. Waders (called shorebirds in North America), a subset of waterbirds, are predominantly brown/grey/white and have longish legs suitable for 'wading' on the mudflats of sea coasts at low tide. Examples of waders include Plovers (Black-bellied, Pacific Golden), Sandpipers (Common, Terek, Curlew), Sand-plovers

(Greater, Lesser), Godwits, Curlews and many more in the order Charadriiformes. Most of these birds are migratory birds. Waders make up the majority of bird species found at the KPS ash ponds and were the main subject of the Kapar Waterbird Count 2015/2016. See [Appendix](#) for sample images of these magnificent waterbirds.

Migration of waterbirds/waders

Twice a year, migratory birds travel between their breeding grounds in the north to their wintering grounds in the south via established flyways. The flyway that brought these birds to the coastlines of South-East Asia (including Malaysia) and beyond is the East Asian-Australasian Flyway (EAAF). The EAAF extends from Arctic Russia and North America down to large parts of East Asia, all of Southeast Asia, to the southern limits of Australia and New Zealand. During these migratory journeys, waterbirds stop over at various 'staging sites' along the flyway to refuel before moving on. The North-Central Selangor Coast (NCSC), on the west coast of Peninsula Malaysia, is one such important site. While some birds stop at this site to feed before continuing south until reaching their 'wintering grounds,' some have stayed on and effectively called it their winter home. When winter is over, these birds make the reverse journey back north to their 'breeding grounds' to breed.

The NCSC is estimated to cover an area of 28,000 hectares. It covers the coastal mudflats, sand flats and remaining discontinuous mangroves stretching for 110km from the estuary of Sungai Klang to the river mouth of Sungai Bernam (Selangor/Perak State border) (see [Image 5](#)). NCSC also includes several mangrove islands known as the Klang Islands, which provide rich feeding grounds for these waterbirds during low tide.



[Image 5](#): Satellite image showing the North-Central Selangor Coast area (Google Earth).

A day in the life of a wader

During low tide, waders feed on the mudflats along NCSC when these rich feeding grounds are exposed (see [Image 6](#)) but twice daily, as the tide starts to come in and covers these low tide feeding grounds, waders have to find a place to roost/rest, called high tide roost sites (see [Image 7](#)). Feeding sites are unique because each caters for many different species of birds, which feed on different benthic creatures living at different depths of the mudflat.



[Image 6](#): Waders feeding on mudflats during low tide (photo by Sze Ming Hui).



[Image 7](#): Waders resting, bathing and preening at the roost site (photo by Chin Choong Liung).

Kapar Power Station (KPS), situated within the NCSC, has a few man-made ponds located within its compound. These ash ponds, usually filled with shallow levels of water, are a suitable and safe high tide roost site for waders and as a result, waders congregate here in great numbers during high tides. Roosting is a very important part of the birds' lifecycle. For example, it is the time when birds preen and keep their feathers in optimal conditions for long flights. For the purposes of this count, the KPS ash ponds site provides the best opportunity for observers/counters to study these birds in detail or to count them. As the tide goes out, the birds will leave these ponds and feed on the mudflats again. After 6 hours, the cycle repeats again.

Kapar Waterbirds Count 2015/2016

The KPS ash ponds were first identified as important roosting site for waterbirds back in 1998 by the Asian Wetland Bureau (AWB), now Wetlands International. Since then, counts were carried out annually during the Asian Waterbird Census (usually in January). However for the first time in 2008, counts were conducted throughout a calendar year (covering 9 months) and as a result, the 'Kapar Power Station Waterbird Report 2008' was published.

Kapar Waterbirds Count 2015/2016 was conducted from April 2015 to March 2016 (12 calendar months). The purpose of the latest count was to collect data for comparison with results from the previous 'Kapar Power Station Waterbird Report 2008' (7 years gap) and to assess the current status of the site and its occupants. Ultimately, it is hoped that the latest data collected can convince key stakeholders of this site's importance for waterbirds that use the NCSC either as a 'staging site' or their 'wintering grounds' and facilitate the development of plans to conserve this prime high tide roost site for these waterbirds.

Methodology

Since this is a high tide roost site, visits were timed to coincide with the high tide. High tides of 4m and above were chosen to ensure most mudflats were covered so that the majority of the waders would have made their way to the site (for maximum count). Counters arrive on site 2 to 3 hours before high tides occur. Counts were commenced only after incoming birds have 'stabilized' and ended after all waterbirds were counted or when daylight started to fail. Binoculars (8-12x magnification) were used for scanning and tripod-mounted telescopes (minimum 40x) were used for species identification and the actual count (See Image 8). Birds were counted by species in blocks of 100 birds, 10 birds or individually, depending on flock sizes.



Image 8: The dedicated counting team with viewing and counting equipment (photo by Chin Choong Liung).

Results of Kapar Waterbirds Count 2015/2016

Month/ year	Jan 16	Feb 16	Mar 16	Apr 15	May 15	Jun 15	Jul 15	Aug 15	Sep 15	Oct 15	Nov 15	Dec 15
Date	10th	28th	27th	19th	17th	14th	12th	23rd	13th	11th	14th	13th
High Tide level(m)/ time (hr)	4.7/1808	4.4/0833	4.6/0737	5.3/1815	5.0/1711	4.6/1603	4.3/1447	4.0/1047	4.6/1756	4.3/1705	4.7/1903	4.7/1854
1)Pacific Golden Plover	23		1	13	1				3	30		
Black- bellied/ Grey Plover	360	37	70	20	42	18	20		217	169	400	
Kentish Plover				1						1		1
Lesser Sand Plover	6722	810	3200	21	800	800	0	2002	5320	3200	6520	2520
Greater Sand Plover	1680	202	800	14	200	200	0	500	1330	800	260	630
Asian Dowitcher	4	2		8	3	1			15	10	16	3
Black- tailed Godwit	2000	107	150	100	125	120		35	400	841	1210	583
Bar- tailed Godwit	1150	400	428	25	8	4		2	403	388	3900	293
Whimbrel	1013	603	766	1000	50	193	29	505	850	1190	900	299
Eurasian Curlew	4000	2700	282	100	348	435	931	750	3500	3200	3000	500
Far Eastern Curlew		2			1	1		1			1	
Common Redshank	2100	271	1170	2620	136	37		321	3000	250	1020	700
Marsh Sandpiper	477	347	411	11				11	309	230	10	
Common Greenshank	414	115	61	30	4	14	4	112	214	183	180	33
Nordmann's Greenshank	35	9		6		1				1	24	4
Terek Sandpiper	400	10		234	251	41	10	45	350	400	450	42
Common Sandpiper	2			1				2	1	1	7	1
Ruddy Turnstone	3			8	20	28	1	3		8	1	1
Great Knot	3100	2800	130	70	1	13		5	1100	1700	2700	200
Red Knot	13	31	5	19	9			3	2		22	2
Little Stint				1							3	
Red- necked Stint	469	1850	260		283	563		181	800	600	1981	
Sharp-tailed Sandpiper										1		
Curlew Sandpiper	1031	333	274	40	50	38		145	20	700	500	271
Broad-billed Sandpiper	10	17	3		1			2	1	10	40	15
26)Ruff										1		
Total	25006	10646	8011	4342	2333	2507	995	4625	17835	13914	23145	6098

Table 1: Count of waders during Kapar Waterbirds Count 2015/2016.

NOTE: Lowest counts in July and December 2015 could be due to heavy rainfall or other disturbances on the day of the count.

Month/ year	Jan 16	Feb 16	Mar 16	Apr 15	May 15	Jun 15	Jul 15	Aug 15	Sep 15	Oct 15	Nov 15	Dec 15
Date	10th	28th	27th	19th	17th	14th	12th	23rd	13th	11th	14th	13th
High Tide level(m)/ time (hr)	4.7/1808	4.4/0833	4.6/0737	5.3/1815	5.0/1711	4.6/1603	4.3/1447	4.0/1047	4.6/1756	4.3/1705	4.7/1903	4.7/1854
Gull- billed Tern	437	732	760	381	205	131		20	190	400	311	140
Caspian Tern	44	31	30	4	1						11	3
Common Tern												
Littern Tern		8			5	28	24	56	86	2	2	
White- winged Tern		1	200						4	115		
Whiskered Tern									1			
Total	481	772	990	385	211	159	24	76	281	517	324	143

Table 2: Count of gulls and terns during Kapar Waterbirds Count 2015/2016.

Month/ year	Jan 16	Feb 16	Mar 16	Apr 15	May 15	Jun 15	Jul 15	Aug 15	Sep 15	Oct 15	Nov 15	Dec 15
Date	10th	28th	27th	19th	17th	14th	12th	23rd	13th	11th	14th	13th
High Tide level(m)/ time (hr)	4.7/ 1808	4.4/ 0833	4.6/ 0737	5.3/ 1815	5.0/ 1711	4.6/ 1603	4.3/ 1447	4.0/ 1047	4.6/ 1756	4.3/ 1705	4.7/ 1903	4.7/ 1854
Lesser Adjutant											1	
Striated Heron		2		1	1			1	3	2		1
Pond- Heron, sp.												
Cattle Egret												
Grey Heron	4	2						14	9	6	6	1
Purple Heron		1				1	1				1	
Great Egret	2	2	1		1		2	1		1	2	
Intermediate Egret						1						
Little Egret	1		1	1				1	2	2	3	1
Red- wattled Lapwing	2				1	3	7	3				
Pacific Reef- Heron							1					
Painted Stork	11		10	5	14			4	6		85	
Milky Stork											1	
14)Black- winged Stilt							1	4	2			
Total	20	7	12	7	17	5	12	28	22	11	99	3
Grand Total	25507	11425	9013	4734	2561	2671	1031	4729	18138	14442	23568	6244

Table 3: Count of other birds during Kapar Waterbirds Count 2015/2016.

No	Species/ Trend	Max. count recorded in Dec/Jan 2008	Max. count recorded in Dec/Jan 2015/16
	Marked Increase:		
1	Black- tailed Godwit	174	2000
2	Great Knot	553	3100
3	Curlew Sandpiper	400	1031
4	Marsh Sandpiper	163	477
	Increase:		
1	Lesser Sand- Plover	4000	6722
2	Bar- tailed Godwit	614	1150
3	Terek Sandpiper	300	400
4	Caspian Tern	26	44
5	Red Knot	1	13
6	Pacific Golden Plover	3	23
	Stable:		
1	Whimbrel	1081	1013
2	Common Greenshank	350	414
3	Black- bellied/ Grey Plover	318	360
4	Nordmann's/ Spotted Greenshank	35	35
5	Kentish Plover	2	1
6	Spoon- billed Sandpiper	1	*1
7	Far Eastern Curlew	0	0
8	Little Stint	0	0
9	Common Sandpiper	2	2
10	Ruddy Turnstone	7	3
11	Asian Dowitcher	0	4
	Decline:		
1	Eurasian Curlew	4900	4000
2	Common Redshank	3214	2100
3	Greater Sand- plover	2500	1680
4	Gull- billed Tern	520	437
5	Broad- billed Sandpiper	25	15
	Marked Decline:		
1	Red- necked Stint	2500	469
2	Little Tern	170	0
3	White- winged Tern	150	0

Table 4: Comparison between 2008 and 2015/2016 counts.

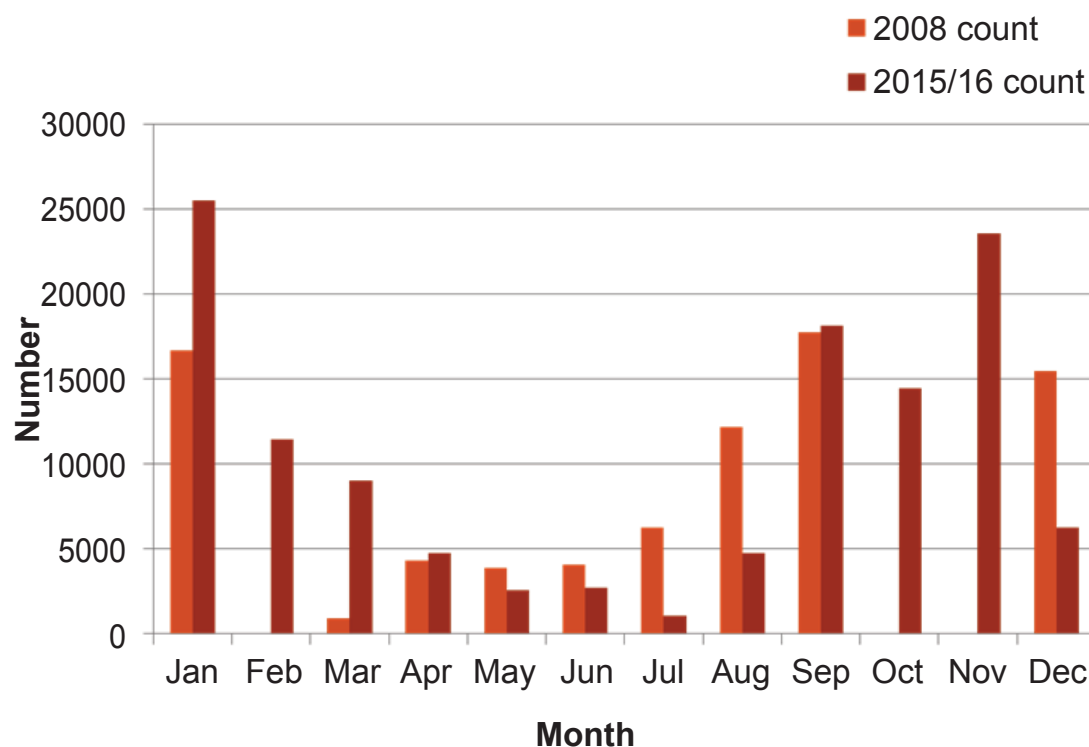


Chart 1: Comparison of total number of waterbirds counted/month between 2008 and 2015/2016 counts.

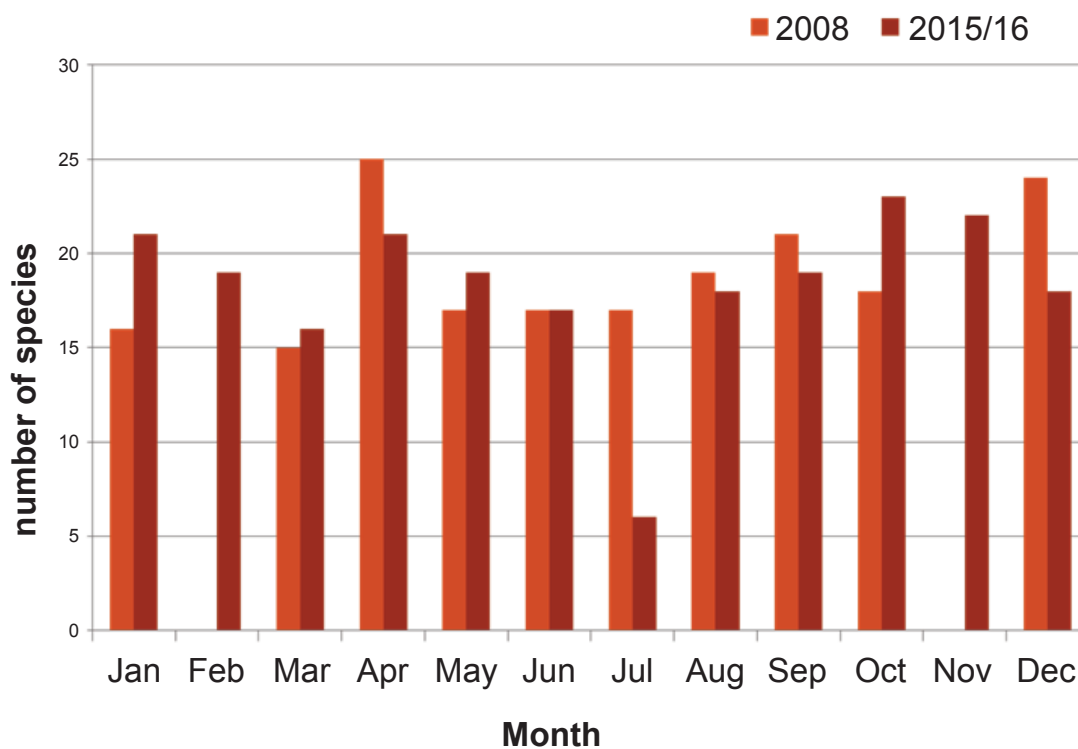


Chart 2: Comparison of wader species diversity throughout the year between 2008 and 2015/2016 counts

Ramsar Convention on Wetlands

Results from Kapar Waterbirds Count 2015/2016 show that the Kapar Power Station (KPS) ash ponds meet the following conditions that the Ramsar Convention on Wetlands has established for identifying wetlands of international importance:

Criterion 2: *A wetland should be considered internationally important if it supports vulnerable, endangered, or critically endangered species or threatened ecological communities.*

KPS supports 4 globally threatened species:

- Spoon-billed Sandpiper (CR, Critically endangered)
- Far Eastern Curlew (EN, Endangered)
- Nordmann's/Spotted Greenshank (EN, Endangered)
- Great Knot (EN, Endangered)

Criterion 5: *A wetland should be considered internationally important if it regularly supports 20,000 or more waterbirds.*

KPS fulfills the figures above as shown by results from the Kapar Waterbirds Count 2015/2016 during the following months:

- November 2015: Total of 23,568 birds counted
- January 2016: Total of 25,507 birds counted

Criterion 6: *A wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbirds.*

As stated in the criterion above, the presence of 1% of total flyway population of a particular species is the threshold for consideration as a wetland of international importance. Many birds in KPS exceed 1% and the presence of rare/endangered species is additionally noteworthy. Sightings of rare species like the Spoon-billed sandpiper were also recorded. Hence, KPS meets the above criterion for the following 9 species of waterbirds (refer to individual species accounts in the results section above for details):

- Lesser Sand-plover
- Greater Sand-plover
- Black-tailed Godwit
- Bar-tailed Godwit
- Whimbrel
- Eurasian Curlew
- Nordmann's/Spotted Greenshank
- Common Redshank
- Great Knot

Conclusion

Results from the Kapar Waterbirds Count 2015/2016 provide clear evidence to demonstrate that the KPS ash ponds are the most prime roosting site for waterbirds in Malaysia. However, it must be remembered that the KPS ash ponds and the greater area of NCSC are interrelated; meaning one cannot function without the other. The ash ponds provide a critical function, as a high tide roosting site, for birds wintering in the NCSC area. Hence, it must be conserved. However, the KPS ash ponds are only a part of the greater NCSC Important Bird and Biodiversity Area (IBA). Conservation efforts cannot focus solely on the KPS ash ponds but must also include the NCSC IBA as a whole. Only then, can we ensure the long term survival of these magnificent birds that have come to call Malaysian shores their 'second home.'

In the words of the presenter, "No words or reports are actually needed to highlight the importance of a site that supports such colossal numbers of life (birds)" (see [Image 9](#)).



[Image 9](#): A picture paints a thousand words (photo by Ang Teck Hin).

PRESENTATION 2

Kapar Waterbirds: The Bigger Picture

By Dave Bakewell, MNS Bird Group

Waterbird study at Kapar

The Kapar Power Station (KPS) ash ponds were first identified as an important roosting site for waterbirds in 1988. Annual counts were made (usually in January) as part of the Asian Waterbird Census (AWC) from 1990 to 1995, 1999 to 2011, and 2015 to 2016 (covering 21 out of 26 years). An intensive study of waterbirds at Kapar in March/April 1993 was commissioned by Tenaga Nasional Berhad (TNB) and conducted by the Asian Wetland Bureau (AWB) (now Wetlands International – Malaysia). The Kapar Power Station Waterbird Report 2008 was based on monthly counts made for the first time in that year (though no counts were made in February, October and November).

The latest Kapar Waterbirds Count 2015/2016 is the first study to make at least one count in every calendar month within a 12-month period (see previous section 'Why Kapar power station ash ponds?' and Introduction to Kapar Waterbird Count 2015/2016' for more details about this study). Kapar Power Station is now well-known as the prime waterbird site in Malaysia and has been mentioned in several publications. It is also mentioned on TNB's website.

The Asian Waterbird Census (AWC)

The Asian Waterbird Census (AWC) covers East Asia, South Asia, Southeast Asia and Australasia. Started in 1987, and in Malaysia, the Department of Wildlife and National Parks (PERHILITAN) was the National Coordinator of the AWC. The Malaysian Nature Society (MNS) joined the AWC in 1999 as Joint National Coordinator. Surveys are conducted during the second or third week of January when wintering populations are considered stable. The results provide long-term data on the size of and changes in waterbird populations in the region, including the East Asian- Australasian Flyway (EAAF).

Graph 3 provides the results of the Kapar AWC counts from 1990 to 2016.

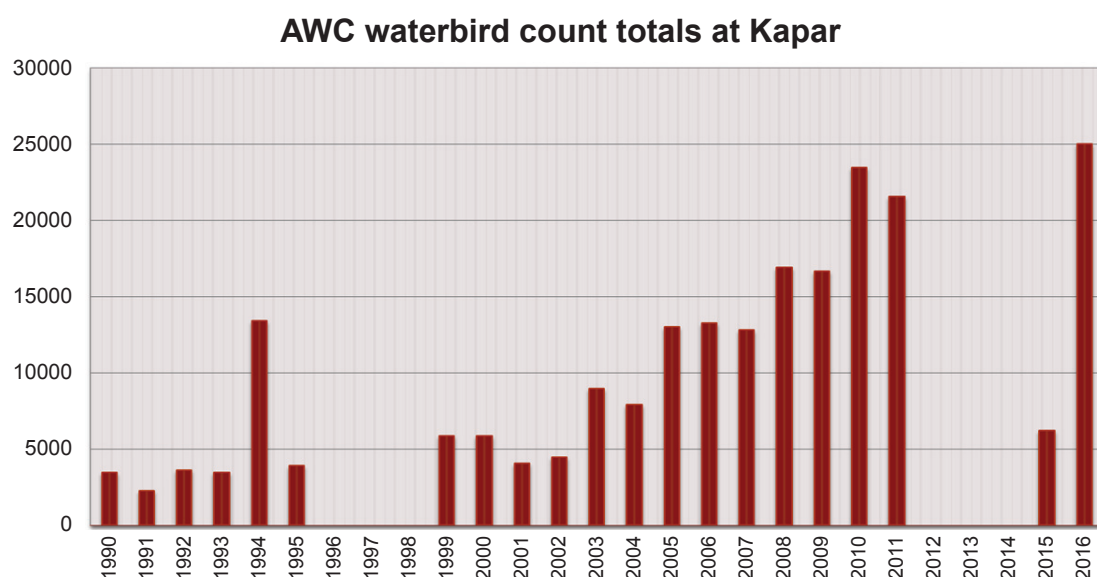


Chart 3: Asian Waterbird Census (AWC) waterbird count totals at Kapar (1990-2016).

Explaining the results: the Local Context

Some variation in numbers may be linked to the state of the tide. It was found that the majority of birds move between the Klang Islands (especially Pulau Tengah) and Kapar (see Image 10).

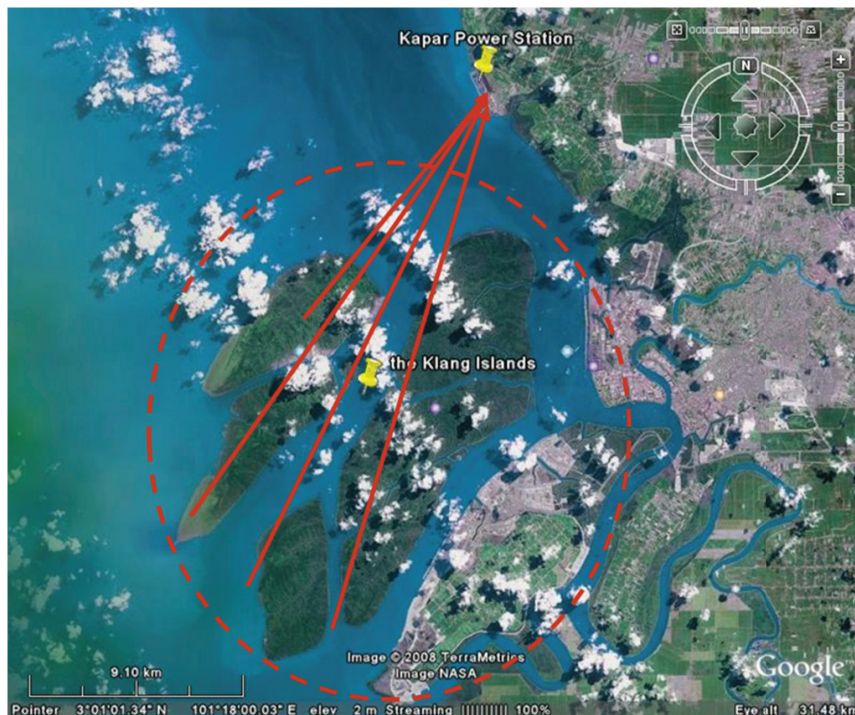


Image 10: Movement of birds between the Klang Islands and Kapar Power Station.

The 1993 survey showed that birds used several sub-roosts as the tide rose, moving to Kapar only when the tide covered these. In 1993, sub-roosts were covered when the tide was above 4.4m high. The location of sub-roosts, and their elevation, may vary from year to year. Counts undertaken at tides less than approximately 4.4m high may miss significant numbers of birds (e.g. 2015 – see [Chart 3](#)). Other factors, such as disturbance at the roost site, were noted to have a significant impact on numbers counted.

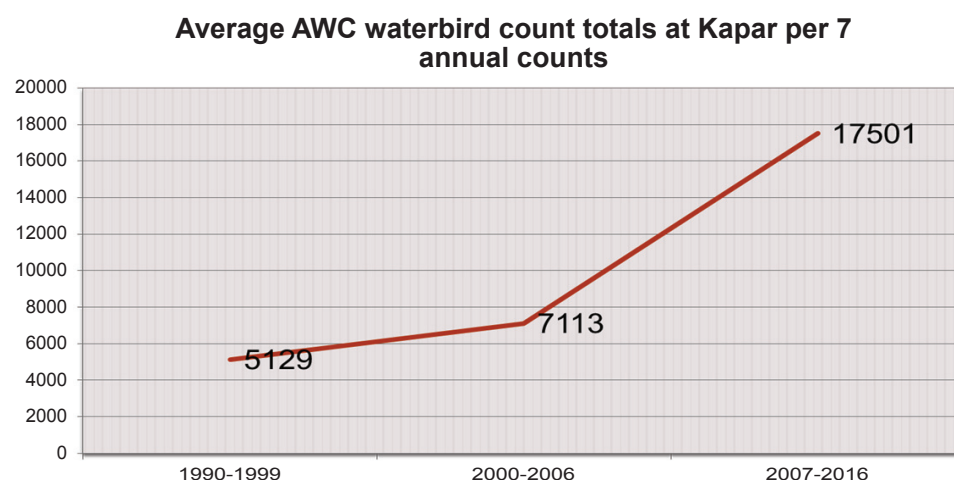


Chart 4: Average Asian Waterbird Census (AWC) count totals at Kapar per 7 annual counts.

Explaining the results: the National Context

The last analysis of national shorebird populations revealed that the overall numbers of shorebirds in Peninsular Malaysia declined by 23% during the period between 1986 and 2006. Land use change and habitat destruction in coastal areas were cited as the likely major drivers of this decrease. The increase in waterbird numbers at Kapar may partly be due to a reduction in availability of suitable roost sites elsewhere on the North-central Selangor coast (NCSC) or that alternative roost sites are also much smaller and less significant than Kapar. It may also well mask overall declines in species numbers using the wider area.

Explaining the results: the Flyway Context

AWC counts of two shorebird species at Kapar in 2002, 2006, 2011 and 2016

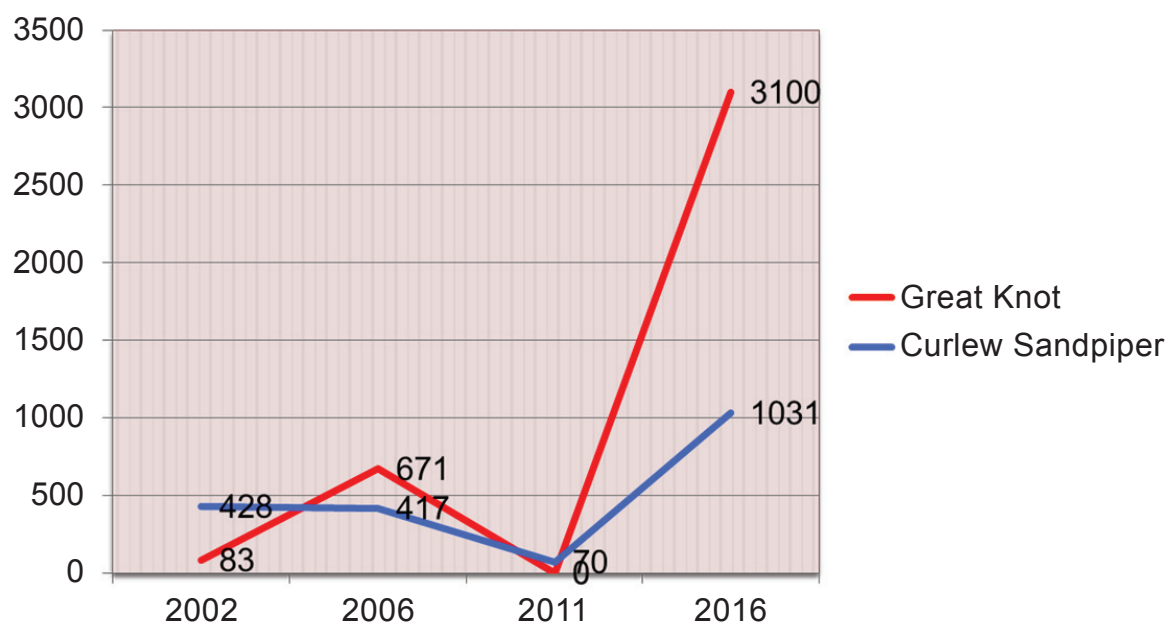


Chart 5: Asian Waterbird Census (AWC) counts of two shorebird species at Kapar in 2002, 2006, 2011 and 2016.

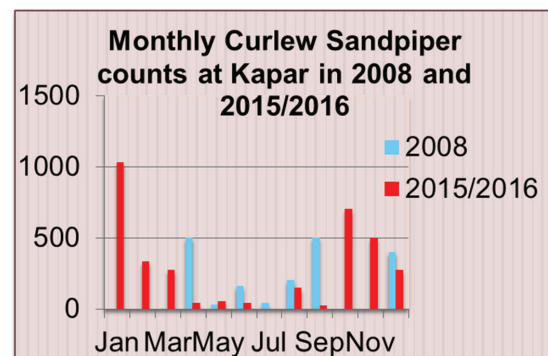
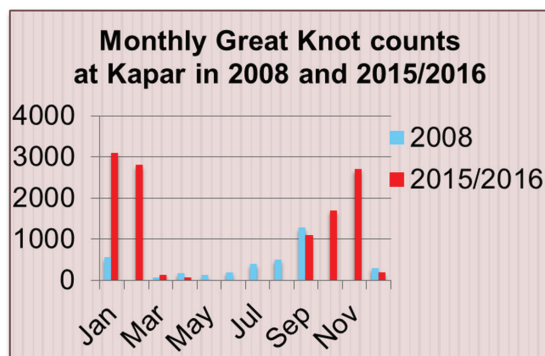
Over 80% of wetlands on the EAAF are threatened. China reclaimed 1.36 million ha of intertidal habitat between 2003 and 2013. More than two-thirds of the Yellow Sea coast has been reclaimed. Ultimately over the past 50 years, 51% of coastal wetlands in Mainland China, 40% in Japan, 60% in Republic of Korea and 70% in Singapore have been lost.

In Australia, the wintering population of Curlew Sandpiper (see [Image 11](#)) has declined by more than 80% in just three generations. The Curlew Sandpiper was uplisted to *Critically Endangered* in Australia (2015) due to an annual rate of decline of 7.5%. The reclamation of South Korea's Saemangeum wetland, which previously held up to 20-30% of the global population of Great Knots (see cover photo), led to the death of 90,000 Great Knots in 2006. In Australia, this species has suffered a 77.8% population decline over the last three generations, with an annual rate of decline of 7.1%. It is now listed as *Endangered* in Australia and as *Vulnerable globally*.



Image 11: Curlew Sandpiper.

How do we explain the fact that the wintering population of these two species, which have declined by approximately 80% in Australia, have increased by 460% (Great Knot) and 158% (Curlew Sandpiper) at Kapar (see [Chart 5](#))?



[Chart 6](#) (L) and [Chart 7](#) (R) respectively: Monthly Great Knot (L) and Curlew Sandpiper (R) counts at Kapar in 2008 and 2015/2016.

In 2008, both species showed a pronounced autumn passage peak, and then a reduction in midwinter numbers, suggesting that birds were wintering further south. As shown in [Chart 6](#) and [Chart 7](#), in 2015/2016, the biggest numbers of both species arrived later. In 2015/2016, January counts were much higher than in 2008, suggesting that many more birds were overwintering. Overall numbers of both species were much higher in 2015/2016 than in 2008.

It is noted that to undertake their epic migrations, shorebirds live on a very tight energy budget. If they cannot store enough fat, they cannot complete their journey. Based on data from Kapar and elsewhere in South-East Asia, it was found that many Great Knots are now forced to overwinter in Malaysia because they cannot find enough food in time to make it to traditional wintering grounds in Australasia. This means that the continuing existence of coastal wetlands such as the Klang Islands and Kapar ash ponds are now even more critical to the survival of these populations than ever before.

Why are Kapar Power Station ash ponds used by waterbirds?

Location, location, location! Kapar power station is located approximately 22km from the feeding grounds on Pulau Tengah.

Why are the ash ponds used by waterbirds?

- Wide area of shallow water for bathing and keeping cool!
- Open area, so that threats can be seen approaching
- Secure area, so there is minimal disturbance, enabling birds to rest

What would happen if the ash ponds are left as they are?

As soon as the ash ponds are no longer flushed regularly with water, the ash will harden, the standing water will evaporate, plants and shrubs will colonize, and the area will rapidly become unsuitable for roosting shorebirds (see [Images 12 and 13](#)). Previous research on habitat change (e.g. Saemangeum Estuary) suggests that this will have an immediate and serious impact on birds, which formerly used the area. Birds are unlikely to be able to find alternative roost sites, and the net result will probably be significant mortalities.



Image 12: Satellite image of Kapar Power Station ash ponds (2001).



Image 13: Satellite image of Kapar Power Station ash ponds (2009).

What can be done to manage the site for birds?

- Maintaining the site in optimum condition for waterbirds will require active management, rather than 'leaving it alone'
- Management actions should focus on maintaining correct water levels and preventing natural colonization by vegetation.
- Regular flushing of the ponds with seawater using existing water gates (sluices) may form an important part of management activities
- A management plan should be drawn up in consultation with waterbird and wetland experts, and on the basis of a detailed ecological study of the site
- The impact of management actions should be monitored regularly to ensure positive benefits

SEMINAR DISCUSSION

Charting the Future of the Kapar Power Station Ash Ponds

Is there scientific information showing that if the KPS Power Station ash ponds go, the birds will go too?

EAAFP responded that there are so few habitats remaining along the flyway that there is a clear and direct relation between decline of habitats and bird population. In essence, this issue boils down to the availability of good quality habitats along the flyway. As mentioned earlier, different types of mudflat habitats provide different foods for different types of birds.

What size is required to maintain the KPS ash ponds site as a suitable high tide roost site for waterbirds?

This depends on the species of waterbirds. Different species have different adaptability, requirements, etc. In general, the bigger the area, the better the site will be for waterbirds as a high tide roosting site. Ideally, the site should have lots of fringes and areas with varying water levels.

How does TNB currently manage the ash ponds?

The main purpose of the ash ponds is for the disposal of ash: Fly ash and heavy/bottom ash. Water pumping frequency for the ash ponds (effecting water levels) depends on the power station's requirements. Currently, heavy ash is no longer pushed by sea water but is now being manually transported / dumped by trucks. Eventually, no water will be pumped into the ash ponds. However, water is still currently being pumped into the ash ponds to move the fly ash only.

Were there any recommendations (focusing on waterbirds) made to TNB prior to the development of the power station?

According to TNB, the entire situation happened by accident. Environmental Impact Assessments (EIAs) carried out prior to the development of the power station would not have covered the waterbirds. This is because the waterbirds only came to the site when the ash ponds were constructed. Previously, mangroves, which are unsuitable as a roosting site, dominated the site. Over the years, TNB has rejected plans to build any permanent structures on the site (for people to view birds).

Would TNB be willing to manage the site purely for the livelihood of the waterbirds?

Currently, TNB does not actively manage the site for waterbirds. TNB commissioned a study of the waterbirds in the 90s carried out by Asian Wetland Bureau (AWB) but did not follow any of the recommendations suggested in the report. When the Phase 2 ash pond is no longer required, it will not be sustainable for TNB to continue pumping water into the ponds to maintain the site for the waterbirds. TNB will need to find a new site for ash disposal and meanwhile, other stakeholders should develop a mechanism for maintaining current water levels. In other words, funding for regular water flushing will be required and TNB is unlikely to provide this. Currently, there is an existing water management system at the ash ponds using sluices and water gates. It was suggested that it may be cost-effective to install a timer to allow periodic flushing of the ash ponds. However, a hydrological and/or ecological study will be required to provide more information for decision-making.

What are TNB's future plans for the Kapar Power Station?

Kapar Power Station (KPS) is an Independent Power Plant (IPP) meaning it is not wholly owned by TNB. Ownership of KPS is 60% TNB and 40% Malakoff Corporation Berhad, a subsidiary of MMC Corporation Berhad. Commercial concerns and subsequently, penalties, are high for this type of joint venture. During phase 1, TNB is slated to maintain operations until 2029. There is a chance that TNB or the government will request the plant to cease operations due to the presence of alternative power plants located in the area. Coal, as an energy source, may be phased out as well as the country moves towards renewable sources of energy. Coal is currently still the cheapest fuel in the market as the power plant continues to import coal from as far as Australia and South Africa. However, TNB is in the process of phasing out old power plants and soon, Kapar will cease to be economically viable. When making future plans for managing the ash ponds, stakeholders need to consider phase 2 (post 2029) as well. There is a need to hold official discussions with TNB to find out about their growth plans and how to integrate conservation of the Kapar Power Station ash ponds into these plans.

Are dredging activities carried out at the site?

According to TNB, siltation is still a huge issue. Kapar Power Station carries out dredging work just outside their compound. This is mainly done for maintaining cooling water intake.

What is the status of the Klang Islands as a feeding site for waterbirds?

The Klang Islands is a crucial feeding ground. What is less crucial in the case of the Klang Islands is finding a permanent solution for conservation, in that there are no apparent immediate threats facing the Klang Islands, whereas there are facing the ash ponds

What is the status of the Kuala Selangor Nature Park as an alternative roosting site for waterbirds?

Kuala Selangor Nature Park (KSNP) was meant to be an additional shallow roosting site for waterbirds but the earmarked site ended up turning into a lake. Over time, dense vegetation has taken over the site. Currently, efforts are being made to lower water levels and remove the vegetation to ultimately revert the site back to a tidal flat suitable for waterbirds. In summary, there has been limited success in transforming a small area within KSNP into a roosting site for waterbirds but it has been difficult to get contractors and machinery to do this kind of work. In addition, it was found that roosting birds that utilise the KSNP site may not be from the KPS ash pond site.

Can successful models of using ash ponds as high roosting sites for migratory birds be replicated elsewhere?

Successful models can be replicated elsewhere. However, it is an immense task. Ash ponds actually have no benefit for waterbirds. Feeding grounds are the feature that draws birds to a particular area. For example, it has been found that ash ponds located in areas without nearby feeding grounds, have no birds. It was suggested that there could be a need for international collaboration between all relevant power producers to share best management practices that are already being used by successful models of ash ponds for migratory waterbirds.

Next steps and roles of stakeholders

TNB suggested that interested stakeholders should hold follow up discussions with TNB's senior management. TNB may be looking for Corporate Social Responsibility (CSR) opportunities. A year ago, TNB undertook a rebranding exercise and explored the possibility of developing the KPS ash

ponds for tourism purposes. With regards to water pumping requirements (for maintaining the ash ponds), one only needs to explore operational costs and correspondingly, stakeholders should look into financing options for this. In summary, stakeholders need to make the case to TNB for why conservation and active management of the KPS ash ponds is globally important. A proper avenue and relevant contact information was provided by TNB to stakeholders for the purpose of furthering these discussions. MNS added that the organisation has an existing relationship with TNB where TNB had contributed funds and participated in a project to conserve fireflies in Kuala Selangor.

Wetlands International reported that they have an existing and relevant program working with the commercial sector on pledges and crowd-sourced funds. When asked about Wetland International's desire to be involved in a KPS ash ponds project, Wetlands International stated that the organisation is very interested in collaborating at the present moment. Wetlands International is willing to contribute to inputs in proposal development and include KPS ash ponds in existing projects. If Malaysia fails to recognise Kapar's importance, Wetlands International can highlight this issue globally.

Birdlife International stressed the need to manage the ash ponds from an ecological point of view. Birdlife International also offered assistance and contribution to these kinds of studies. Birdlife International added that historically, flyway-related resources have been concentrated in projects located in the northern and southern ends of the flyway but now, it has been realised that South East Asia is a crucial link. Hence, it is timely for resources to be focused on the tropics. Birdlife International is open to provide funds and expertise towards this goal.

In terms of funding, MNS suggested developing a proposal with Birdlife International and EAAFP to be submitted to the Global Environment Facility (GEF). However, EAAFP responded that GEF has recently changed its approach, preferring to focus on national projects rather than regional ones. EAAFP urged stakeholders to consider accessing private sector funds. Initially, a good proposal is needed and EAAFP is willing to contribute by helping to bring people together. MNS mentioned that current surveys and counts are being carried out by volunteers. MNS suggested exploring National Conservation Trust Fund (NCTF) funds through the Ministry of Natural Resources and Environment (MNRE). MNRE Senior Directors have visited the KPS ash ponds previously and MNS suggested follow up on that encouraging visit.

According to the MNRE, if the site meets the Partnership for the East Asian-Australasian Flyway (EAAFP)'s criteria, MNRE will need to table a cabinet paper for endorsement by the Federal Government of Malaysia. However, nomination of the site (for inclusion as an EAAFP site) needs to first come from the State of Selangor. MNRE suggested calling for a meeting between all parties to discuss this issue. A key point is that the State needs to be committed to the cause and take the initial steps required. The Department of Wildlife and National Parks of Peninsular Malaysia (PERHILITAN) added that Kapar and Kuala Gula (in Perak state) were mentioned as EAAFP sites in previous meetings. However, discussions are only at the initial stage at the moment. Discussions regarding Kuala Gula are at a more advanced stage than Kapar since Selangor state has not mobilised any actions to date. MNS voiced a different opinion in saying that in 2003, Kapar was nominated as an EAAFP site through the actions of NGOs while Malaysia only joined the EAAFP in 2012, 10 years later. MNS opined that the site should already be an EAAFP site and added that the group should not need to start from scratch again, as suggested by NRE and PERHILITAN.

EAAFP chimed in by saying that the KPS ash ponds ARE an EAAFP network site but for whatever reason, it has not been fully realised to date. EAAFP gave the example of South Korea where coastline developmental pressures are more intense but yet, that there is still a chance to conserve areas important for migratory birds. The advantage of the KPS ash ponds is that there is time and people willing to work on the issue. However, EAAFP urged that stakeholders need to urge MNRE to submit the KPS ash ponds as an official EAAFP site and suggested that upcoming international meetings is a good opportunity for countries to nominate sites. In addition, EAAFP expressed hopes that private/public cooperation can be realised for the KPS ash ponds. EAAFP also reminded stakeholders that there is also a need to learn how to properly develop and manage high tide roosts.

Finally, TNB urged all stakeholders in the room to expedite actions because of impending changes at the KPS ash ponds. TNB reminded stakeholders that there is a need to find out more about TNB's future plans for the site. Details like site access, additional infrastructure, etc. would also need to be discussed. TNB has also previously expressed interest in developing tourism at the site so any approach or proposal can revolve around that desire. MNS responded that there is potential brand and image enhancement value to TNB as well. MNS suggested that relationshipbuilding can be done immediately. Current emphasis should be on engaging relevant stakeholders. MNS also warned that even if the ash ponds are unusable by birds for one season, the effects can be detrimental. Time is of the essence!

THE KAPAR DECLARATION 2016

After discussions, seminar participants deliberated on and finalised 'The Kapar Declaration – The Future of Kapar Ash Ponds' (see [Box 1](#)), a document intended to guide stakeholders on required and urgent next steps to further and ultimately realise the long-term goal of protection and active management of the Kapar Ash Ponds site (KPS) as Malaysia's most important migratory waterbird roost site. The Kapar Declaration also calls for a holistic approach to the conservation of the entire north-central Selangor coast, inclusive of KPS. As an immediate next step, the declaration will be distributed to relevant stakeholders and active steps will be taken to follow-up on the 8 recommendations provided by the declaration (see [Box 1](#), items 2.1-2.8). A complete list of seminar participants is also provided as part of the declaration.

THE KAPAR DECLARATION The Future of Kapar Ash Ponds

Participants, representatives and experts from the Malaysian Government, institutions of higher learning, corporate, and national and international non-governmental organisations met at the Asian Waterbird Census (Malaysia) Seminar on 25th June 2016 at the Malaysian Nature Society, Kuala Lumpur. The theme of the seminar was 'Charting the Future of Malaysia's Most Important Migratory Waterbird Roost Site: the Kapar Power Station Ash Ponds'. The following declaration was made in conjunction with this seminar.

Peninsular Malaysia's western coastline has long been utilized by migratory waterbirds during their annual autumn and spring migrations. The mudflats and mangrove belt along the more than 100 km long north-central Selangor coast in particular is the most important wintering, staging and feeding site in the country for migratory waterbirds especially shorebirds. The Malaysian Nature Society (MNS) has been regularly monitoring the area since 1987 and has recorded over 50 waterbird species, with an estimated 50,000 to 100,000 individuals using the site each nonbreeding season. At least six globally threatened (resident and migratory) waterbird species utilize this intertidal ecosystem. At least one percent of the flyway population of 16 waterbird species is also dependent on this site. Hence, the north-central Selangor coast is a crucial site within the East Asian-Australasian Flyway (EAAF) and is internationally recognized as one of Malaysia's Important Bird and Biodiversity Areas (IBA).

Within the north-central Selangor coast, the privately-owned Kapar Power Station (or formally *the Stesen Janaletrik Sultan Salahuddin Abdul Aziz*) ash ponds are intricately linked to the Klang islands which are located about 15 km away. The importance of the ash ponds as a high tide roost for migratory shorebirds was first identified in 1990 after a three year study by Asian Wetlands Bureau (currently known as Wetlands International Malaysia). Migratory shorebirds feeding on the mudflats of the Klang islands during low tides would return to the ash ponds to roost during high tide. As many as 25,000 individuals have been recorded roosting in the ash ponds. To date, no other significant high tide roost has been located along the north-central Selangor coast, hence the need to ensure the future of Kapar Power Station's ash ponds as a high tide roost site. The lifespan of these ash ponds ultimately depends on the management policy and regime of the power station.

We, the participants of this Seminar, recognize that:

- 1.1 Malaysia is an important country for migratory waterbirds along the East Asian-Australasian Flyway.
- 1.2 The government is signatory to the Ramsar agreement on the conservation of wetlands of international importance and the East Asian-Australasian Flyway Partnership (EAAFP) on the conservation of migratory waterbirds and their habitats.
- 1.3 Within Malaysia, the Selangor coast is the most important wintering and staging site for migratory waterbirds in the country as indicated by past surveys and regular annual monitoring activities.
- 1.4 The recently revised National Policy of Biological Diversity 2 strongly supports public participation in safeguarding our biodiversity.
- 1.5 In view of the fact that other roost sites along the NCSC have been lost, Kapar Power Station ash ponds are a critically important refuge for wintering and staging migratory waterbirds.
- 1.6 Many migratory shorebird species and populations are now under threat as a result of coastal development and habitat loss along the EAAF.
- 1.7 The conservation of the north-central Selangor coast, inclusive of Kapar Power Station ash ponds, urgently needs the support and active participation of all its stakeholders.

We, the participants of this Seminar, recommend to:

- 2.1 PROMOTE the active management of the Kapar ash ponds as a roost site of international importance for migratory waterbirds;
- 2.2 ENGAGE Tenaga Nasional Berhad (TNB) and other stakeholders in discussions related to the future management of the Kapar ash ponds as a roost site of international importance for migratory waterbirds.
- 2.3 ENCOURAGE the Ministry of Natural Resources and Environment (MNRE) to nominate the registration of the Kapar Ash Ponds as a Flyway Site under the EAAFP;
- 2.4 SUPPORT, COLLABORATE, and CONDUCT the annual Asian Waterbird Census (AWC) and monthly monitoring of migratory waterbirds at this high tide roost site;
- 2.5 DISSEMINATE the results of the monitoring among government agencies and site management to aid in the management of the ash ponds;
- 2.6 CONDUCT surveys to update information on current feeding site(s) and any other high tide roost(s) along the north-central Selangor coast;

2.7 Call upon the Federal and State Government to PROTECT key feeding and high tide roost sites along the north-central Selangor coast;

2.8 Call upon MNS and other interested parties to FUTHER DEVELOP communication, education and public awareness (CEPA) activities and materials to highlight the importance of this site to the general public, local communities and government.

Dated this 25th day of June, 2016, by the participants of the Seminar in the MNS Secretariat, Kuala Lumpur.

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Box 1: The Kapar Declaration – The Future of Kapar Ash Ponds.

REFERENCE

Bakewell, D. (compiler) 2009. Kapar Power Station Waterbirds Report 2008. Kuala Lumpur: MNSBird Conservation Council. (MNS-BCC Waterbirds Group Report No.1)

East Asian-Australasian Flyway Partnership, 2015. Nine major migratory flyways of waterbirds map. EAAFP Information Brochure November 2015.

APPENDIX (CD enclosed with this publication)

1. Seminar Programme
2. Keynote presentation slides
3. Presentation 1 slides
4. Presentation 2 slides
5. Seminar photos



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To promote the conservation of Malaysia's natural heritage

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