



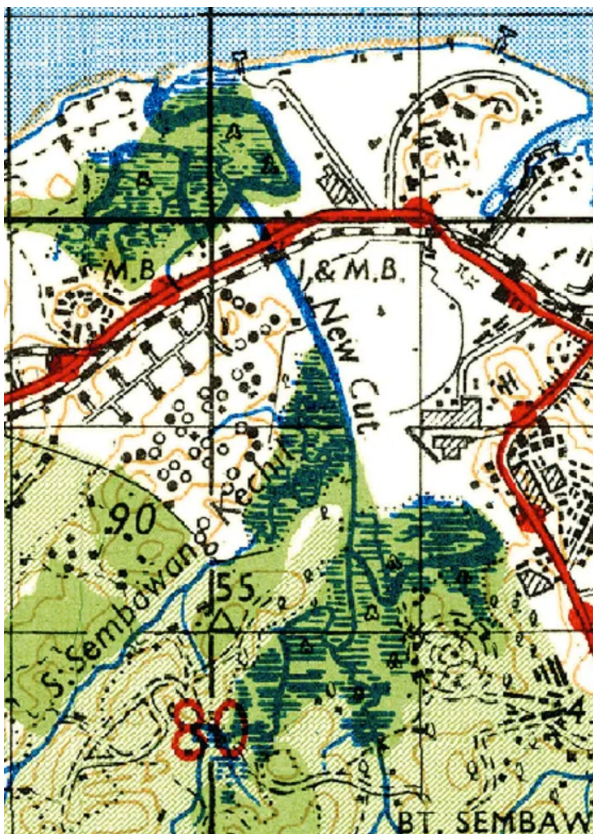
OUR CONSERVATION STORY

Senoko

by Nature Society Singapore

Pre-development

In Franklin and Jackson's Plan of Singapore (1830), Senoko was referred to as the "River Simko" or Sungei Senoko in Malay. What is known as Sungei Sembawang today is a result of the merging of Sungei Sembawang and Sungei Senoko. In the 1920s, a long canal, called the "New Cut" brought the two rivers together. Later in 1970s, the swamps around Sungei Senoko was reclaimed to create an industrial area. Sungei Senoko was also canalized and straightened and was then known as Sungei Sembawang, although mouth of the river is that of Sungei Senoko. In 1985-1986, canalisation of Sungei Sembawang further destroyed the remaining mangroves.¹

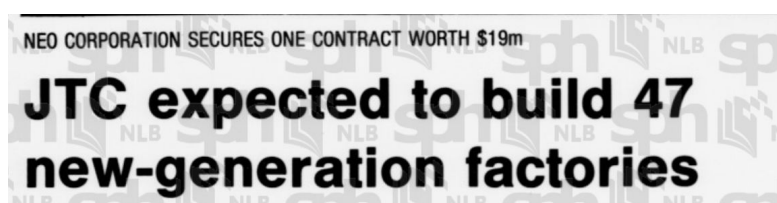


Sungei Senoko in the 1945 map of Singapore
(Source: <https://libmaps.nus.edu.sg/>)



Sungei Senoko in the 1987 map of Singapore (Source: <https://libmaps.nus.edu.sg/>)

On 10 January 1990, it was reported that Jurong Town Corporation (JTC) would be building factories at Senoko South.



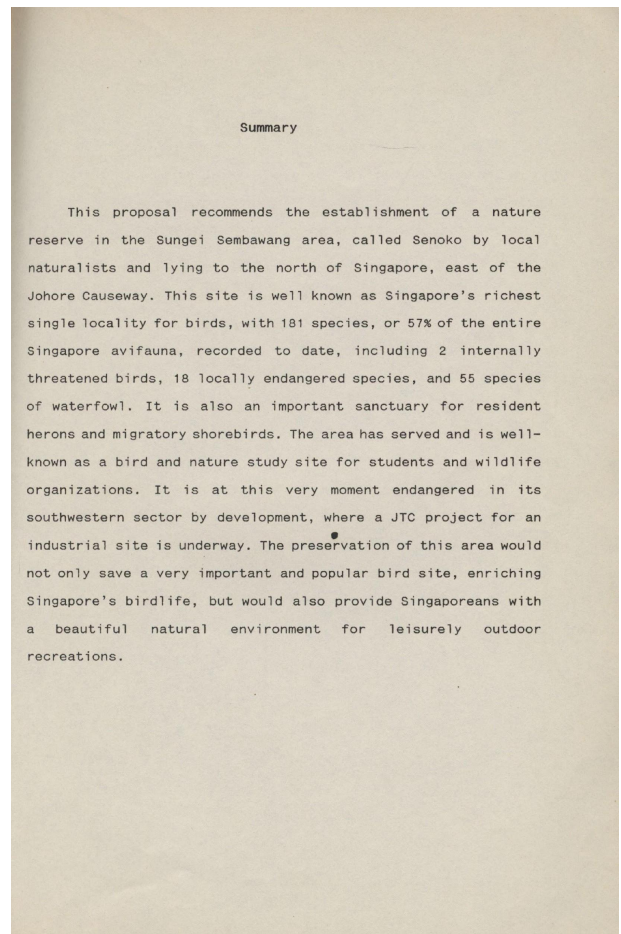
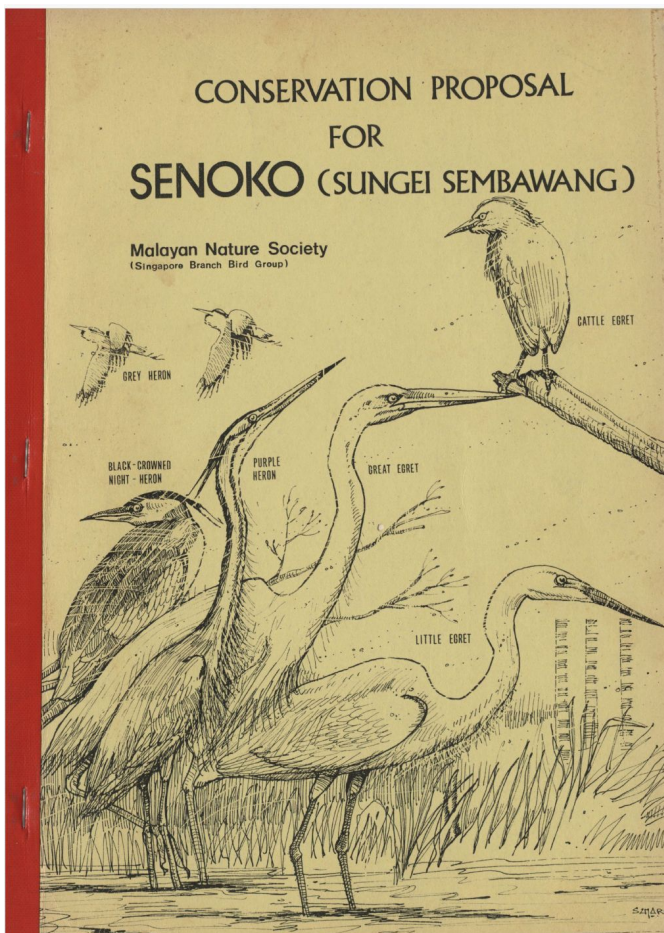
The Business Times, 20 January 1990 (Source: NewspaperSG)

¹ https://habitatnews.nus.edu.sg/heritage/sembawang/sgsemb_senoko.html

The Conservation Proposal

Conservation Proposal for Senoko (Sungei Sembawang) was written and published in 1990. It was published by Mr Lim Kim Seng (Bird Group), illustrated by Mr Sutari bin Supari, in consultation with Prof P.N Avadhani (Singapore Branch Chairman), Mr Clive Briffett (Bird Group Chairman), Mr Richard Hale, Dr Ho Hua Chew, Mr Lim Kim Keang (Bird Group Secretary), Dr Rexon Ngim, Mr R. Subharaj, and Mr Sutari bin Supari.

The habitats in Senoko included mangrove, brackish and freshwater ponds, grassland, reedbeds, scrub, secondary forest, orchard, riverine vegetation and rubber plantation. Various habitats provided different types of food source to support different life forms.

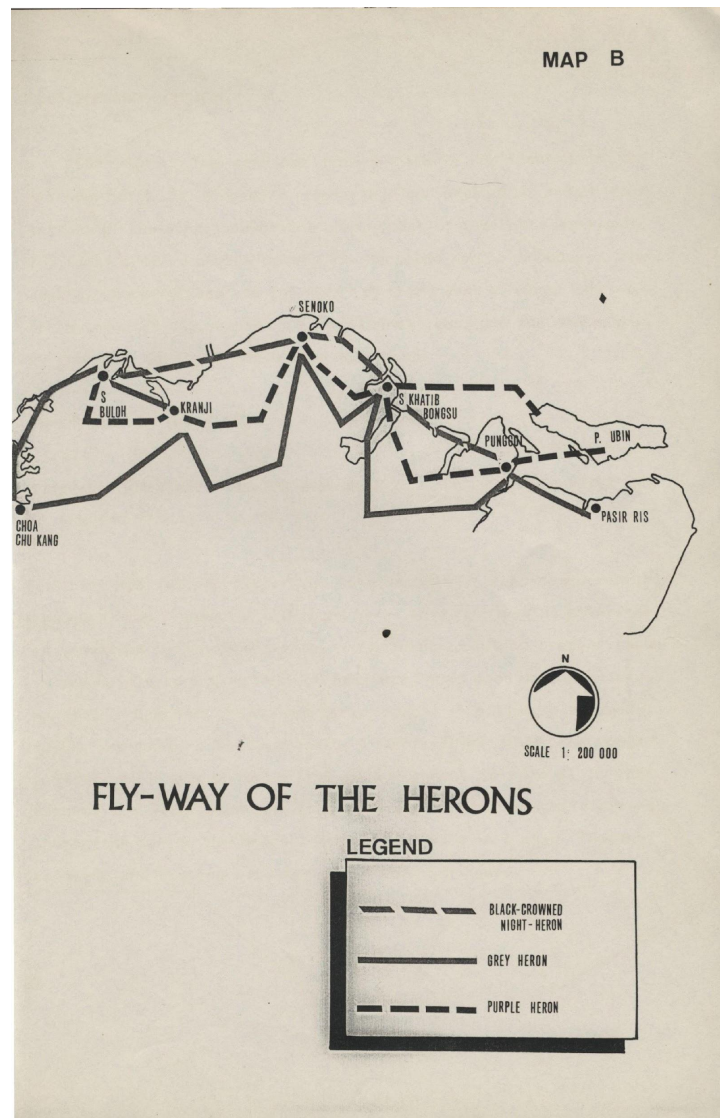


Conservation Proposal for Senoko (Sungei Sembawang), published in 1990 (Source: Nature Society Singapore)

Key Conservation Factors

Senoko is well known as Singapore’s richest single locality for birds. 181 species, which was 57% of the entire Singapore’s avifauna then, were recorded. Of these, 2 nationally threatened birds, 18 locally endangered species and 55 species of waterfowls were amongst the list. It is important for resident herons and migratory shorebirds.

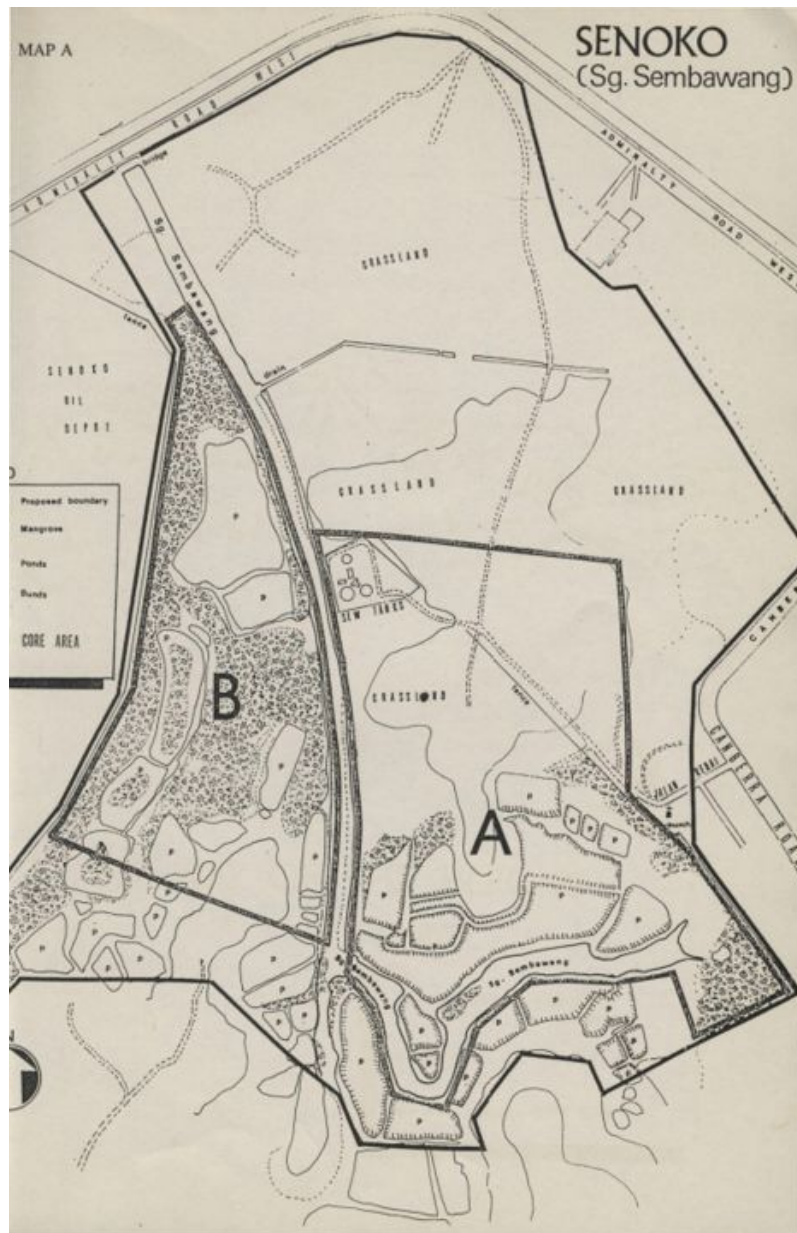
Lying in between Sungei Buloh/Kranji and Pasir Ris, Grey Herons, Purple Herons, Black-crowned Night-herons were sighted to be using Senoko as a stop-over between these sites. Senoko also served to reduce the load of each site for feeding and roosting.



Flyway of the Herons (Source: Nature Society Singapore)

Proposed Nature Reserve

Area A has the largest pond and concentration of birds. It has been proposed to have hides to allow visitors to view the birds. Area B consists of mangrove and secondary forest. While part of the mangrove was already destroyed by reclamation, the remaining mangrove was still substantial and viable for birds as a roosting and breeding ground. Other parts of the proposal includes a buffer zone and amenities such as visitor centre and car park.



Proposed nature reserve (Source: Nature Society Singapore)

Stakeholder Engagements

On 3 October 1990, the Conservation Proposal was sent to then-Minister BG Lee Hsien Loong of Ministry of Trade and Industry (MTI) and then-Minister Mr S. Dhanabalan of Ministry of National Development (MND), to appeal to stop the reclamation along the mangrove and forest wedge.

MALAYAN NATURE SOCIETY

(Singapore Branch)
c/o Department of Botany,
National University of Singapore,
Lower Kent Ridge Road,
Singapore 0511.

BG (RES) Lee Hsien Loong
Minister of Trade and Industry
Ministry of Trade and Industry 3 October 1990

Dear Minister,

Ref: Conservation Proposal for Senoko

Enclosed is a copy of our Conservation Proposal for Senoko submitted for your consideration. The site is highly important for the density and variety as well the many rarities of birdlife that it harbours. It is right now endangered by a JTC project in its south-western sector. We appeal to you to halt the reclamation going in the northern direction, along the mangrove and forest wedge on the western side of Sungei Sembawang, to allow a reprieve for this proposal to be properly assessed. We are keen to provide you or your representative with a guided tour of the area if required.

We look forward to your decision. Thank you.

Yours sincerely,



Dr. Ho Hua Chew [Tel:7726098(o)/4571196(h)]

Co-ordinator, Bird Conservation Committee
Malayan Nature Society (Singapore Branch)

CC:

First Deputy Prime Minister
Minister of National Development
Ambassador-at-Large
JTC, URA, HDB

MALAYAN NATURE SOCIETY

(Singapore Branch)
c/o Department of Botany,
National University of Singapore,
Lower Kent Ridge Road,
Singapore 0511.

Mr. S. Dhanabalan
Minister of National Development
Ministry of National Development 3 October 1990

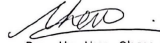
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Yours sincerely,



Dr. Ho Hua Chew [Tel:7726098(o)/4571196(h)]

Co-ordinator, Bird Conservation Committee
Malayan Nature Society (Singapore Branch)

CC:

First Deputy Prime Minister
Minister of Trade and Industry
Ambassador-at-Large
JTC, URA, HDB, PRD

Cover letters from MNSSB, enclosing the conservation proposal to MTI and MND (Source: Nature Society Singapore)

On 12 December 1990, MTI responded and indicated that Area A was still largely undeveloped and that "the Government is supportive of your proposal to preserve this as a bird sanctuary". It was also believed that birds in Area B had migrated to Area A.

MTI 35/1-001 Pt 3

21 Dec 90



FAX: 3209260

MINISTRY OF TRADE & INDUSTRY
8 Shenton Way #48-01
Treasury Building
Singapore 0106
REPUBLIC OF SINGAPORE
Telephone: 2259911
Cable Add: TRADE INDUSTRY, SINGAPORE
Telex: MTI RS24702

Dr Ho Hua Chew
Coordinator,
Bird Conservation Committee
Malayan Nature Society
(Singapore Branch)

Dear Dr Ho

CONSERVATION OF SENOKO AREA AS BIRD SANCTUARY

1. Thank you for your letter to the Minister for Trade and Industry dated 3 Oct 90 proposing that the Senoko area around Sungei Sembawang be preserved as a bird sanctuary. We have referred your letter to the Ministries of National Development and the Environment.
2. The area delineated in your proposal was divided into Areas A and B on the eastern and western banks of Sungei Sembawang respectively. Area A, the larger site, remains undeveloped. The Government is supportive of your proposal to preserve this as a bird sanctuary. We will give you a fuller response after our study is completed.
3. Area B, the smaller site on the western bank of Sungei Sembawang, has already been substantially cleared by JTC for its industrial development. Jurong Bird Park's officers have investigated and found that there were no signs of nesting birds in the area. They think that any birds feeding within this area are likely to have migrated to the neighbouring undeveloped Area A. In light of this, Government has decided to proceed with the development of this area for industry. However, Jurong Bird Park will be advising Jurong Town Corporation on how to minimise interference to birds in the affected and neighbouring areas.
4. I thank you for bringing this matter to our attention.

Yours faithfully,

LAI SECK KHUI
DEPUTY SECRETARY
for PERMANENT SECRETARY
MINISTRY OF TRADE AND INDUSTRY



On 6 March 1991, MNSSB thanked MTI for considering the proposal and provided an updated survey of Area B. MNSSB also proposed to convene a meeting to discuss further.

MALAYAN NATURE SOCIETY

(Singapore Branch)
c/o Department of Botany,
National University of Singapore,
Lower Kent Ridge Road,
Singapore 0511.

B.G. Lee Hsien Loong
Minister of Trade and Industry
8 Shenton Way #48-01
Treasury Building
Singapore

6 March 1991

Dear Minister,

Conservation of Area B of Senoko as Bird Sanctuary

Thank you for your letter of Dec 21, 1990, informing our Society that JTC will be proceeding with its development in Core Area B (as demarcated in the sketch-map in our Proposal submitted earlier). We would like, however, to make an appeal to you to preserve whatever is left of Area B for the following considerations:

1. Despite the fact that 30% to 40% of Area B is already reclaimed, a large part of the original mangroves as well as the palm forest, which is rare in Singapore, is still untouched.
2. The MNS Bird Group has made an updated survey of Area B and had recorded a total of 53 species of birds using the area, a significant number of which are birds that are dependent on the mangrove habitat for survival. This does not exhaust all that can be found within this locality.
3. A significant number of species that are found feeding in Area A resort to the mangroves in Area B for roosting, such as the Black-crowned Night Heron, a group of which has taken refuge here after the disturbance (fogging) of their heronry at Yishun/Khatib last year.
4. There are 7 endangered species recorded within Area B and these are: the Magpie Robin, the Straw-headed Bulbul, the Plain Sunbird, the Ruddy Kingfisher, the Mangrove Whistler, the Copper-throated Sunbird and the White-chested Babbler.
5. In the mangrove that remains, a pair of the rare White-chested Babbler was recorded in our updated survey. Another pair was recorded in the palm forest prior to the survey. This makes Area B ornithologically important for at least two pairs of this rare species have its residence here.

We would like to thank you for giving us your consideration and would appreciate it if we could meet with your Ministry to discuss this matter further. Thank you.

CC: Prime Minister
Minister of National Development
Minister of Environment
JTC, URA

Yours faithfully,


Dr. Ho Hua Chew
Chairman
MNS Conservation Committee

Stakeholder Engagements

Jurong Town Corporation (JTC) engagement: In a meeting on June 1991 with JTC, Nature Society (Singapore) (NSS) expressed concerns regarding JTC's plan for a pipeline running through the area along Sungei Sembawang. It was stressed that the pipeline should run along the western edge of the mangrove (what we have labelled as Core Area B in the Conservation Proposal) to the west of the Sungei Sembawang and it was agreed.

Urban Redevelopment Agency (URA) engagement: In a meeting on 9 July 1991, regarding the tentative housing plan for the area, it was highlighted that the developments should avoid the core areas to the east (Area A) and west (Area B) of Sg Sembawang.

Restricted

17 July 1991

Malayan Nature Society (Singapore Branch)

Conservation Committee: Progress Report 2

1. Bukit Timah Reserve

The Telecom building on top is already rearing above the tree-top level. A letter drafted by Clive on this matter was sent to NPB at the early stage of its construction. Unfortunately, members came to know about this development only after the building was constructed. According to NPB, the site is outside the boundary of the Reserve. The visitor centre at the gate is almost completed.

2. Central Catchment Area

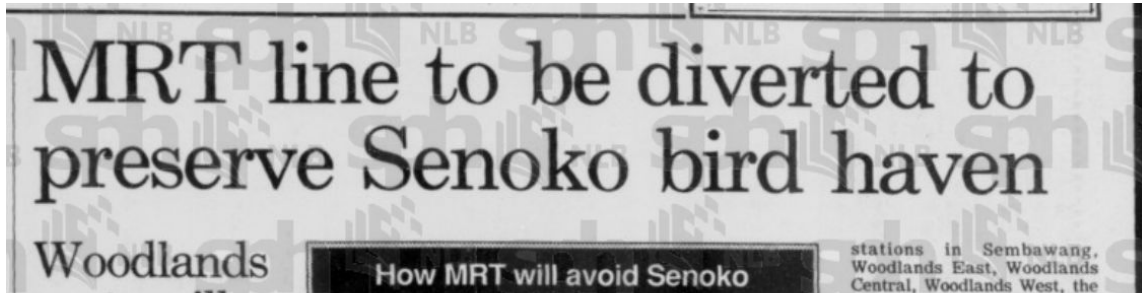
It is established through a reliable source that the total amount of land area involved in the Golf Course Project at Lower Peirce is 123.8 hectares. Clive is finalising the draft of the letter to MND. SBC has expressed an interest in doing a feature on golf courses in relation to nature conservation. They have contacted Peter Ng.

3. Senoko

The Chairman of JTC was shown around Senoko on a Sunday in June 1991. Evelyn Lim-Eng, Clive Briffett and R. Subharaj were present. The Chairman was impressed according to some members. A meeting was held on 9 July 1991 with Mr. Wong Chiew Yii of URA concerning Senoko, during which it was learnt that the remaining part of area B together with a portion of land already reclaimed to the south plus the pond area in A inclusive of a narrow stretch along the eastern side of Sungei Sembawang will be preserved. Please see map attached. There is a plan for the pipeline to be constructed along the western boundary of area B. This is yet to be finalised by URA with the other authorities concerned. An HDB estate with 27,000 units is planned for the grassland and parkland falling outside the proposed area. Mr. Wong has requested a written statement of the Committee's position on the URA proposal unveiled. The HDB Plan may be initiated in 5 years time. MNS members present: Ho Hua Chew and Lim Kim Keang.

Stakeholder Engagements

SMRT Corporation engagement: In June 1991, the SMRT also announced in The Straits Times that the new MRT line would be diverted to to avoid intrusion into the core nature areas proposed.



The Straits Times, 20 June 1991 (Source: NewspaperSG)

URA's Masterplan: Living the Next Lap: In September 1991, Senoko was also designated as a nature park/bird sanctuary

Request to Manage Senoko

A request to manage Senoko was sent to Mr S. Dhanabalan, then-Minister of National Development, on 13 July 1992.

The Nature Society (Singapore)

Registered Address
c/o Botany Dept, National University of Singapore
Lower Kent Ridge Road, Singapore 0511

Mr. S. Dhanabalan
Minister of National Development
Singapore

13 July 1992

Dear Mr. Dhanabalan,

Ref: A Request for NSS to Manage Senoko

From the URA Master Plan (Living the Next Lap) exhibited in 1991, we understand that several of the nature sites designated in our Master Plan are earmarked for wildlife parks or sanctuaries, such as Senoko, Khatib Bongsu, Kranji Marshes, Mandai Mangroves, parts of Pulau Ubin, etc. We would like to request that our Society be given an opportunity to manage Senoko.

Our Society has grown and become more mature and established, with a membership of about 1400 to date. There are also now a bigger pool of active and dedicated members who would like to get involved in a more committed way to nature conservation. We are at this stage ready and prepared to take on a heavier burden of responsibility for nature conservation than we have hitherto ventured. We see our possible involvement in wildlife management as an important stage in our endeavour to conserve as well as to promote in a deeper and broader way an appreciative awareness for nature in Singapore.

So far we have submitted, apart from the Sungei Buloh proposal, to your Ministry detailed conservation proposal for the following important sites: Marina South, Senoko, Khatib Bongsu, Kranji Marshes, Kent Ridge and Pulau Ubin. We would like to show our commitment to these proposals by volunteering to manage Senoko for a start. We are offering our services because we believe that we are in a good position to venture into wildlife management, having obtained the necessary field knowledge and experience over many years.

If given the opportunity, we will carry out the following plans:

1. To cover the cost of management, we will start a Nature Conservancy Fund through a series of fund-raising campaigns and activities, such as bird race, donation drive, etc. This will be an on-going affair. Sources at home and abroad will be tapped. At this stage, we have reliable feedback that many companies, local as well as multi-national, are keen to donate for the cause of nature conservation, especially if the project is concrete and viable. In Hong Kong, for example, a bird race could raise a million or more for the cause of conservation. We believe that this can also be achieved for Singapore.

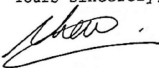
2. We will mount a management system to be run by full-time wardens. The emphasis will be on local participation. These wardens are to be professionally trained. Foreign wildlife management professionals from relevant countries will be consulted.
3. Facilities, such as visitor centre, hide, trail, etc., will be developed to make visits to the site more attractive.
4. Educational programmes and activities for school children as well as the larger public, such as talks, slide-shows and guided tours, will be initiated on a regular basis.
5. Research projects on the various aspects of the ecology and natural history of the area will be carried out. The emphasis will be on participation by students and staff of the junior colleges and tertiary institutions.
6. We will publish a series of guide books and pamphlets on Senoko as well as the other areas earmarked for wildlife parks or sanctuaries in the URA Master Plan.

The plans outlined here are intended to be carried out in stages, depending of course upon the level of success in our drive for funding.

We will be happy to provide a detailed management plan for Senoko, if what we have propose here is agreeable to you.

Thank you.

Yours sincerely,



Dr. Ho Hua Chew
Chairman, Conservation Committee.
Tel. 7726098 (office)
Fax. 7779514

CC: CEO, URA
Patron

Letter to request for NSS to manage Senoko was sent to Mr S. Dhanabalan, then-Minister of National Development (Source: Nature Society Singapore)

On 6 Oct 1992, then-Minister of National Development, Richard Hu, replied and offered 23 hectares to be managed by NSS.



Ministry of National Development
5 Maxwell Road #21/22-00 Tower Block MND Complex Singapore 0105
REPUBLIC OF SINGAPORE
Telephone No. 22212111 Telex: NATDEV RS 34369 Facsimile: 3226254

CONFIDENTIAL

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Your Ref: CONFIDENTIAL

Our Ref: ND 311/19-8 Vol 3

DID: 3226202
FAX: 3226272

6 Oct 92

Dr Ho Hua Chew
Chairman
Conservation Committee
The Nature Society (Singapore)
c/o Botany Department
National University of Singapore
Lower Kent Ridge Road
Singapore 0511

Dear Dr Ho

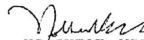
A REQUEST FOR NSS TO MANAGE SENOKO NATURE SITE

Please refer to your letter of 13 Jul 92 to Mr S Dhanabalan, on NSS' proposal to develop and manage a nature site at Senoko as a bird sanctuary.

2 The Urban Redevelopment Authority has informed us that it is currently working out the landuse plans for the Senoko area. Your Society would be pleased to know that the plan includes keeping some 23 ha of the Senoko nature area as nature area within a town park. This site consists of large ponds and patches of mangrove swamps. However, the boundary of the proposed park has not been finalised. We have taken note of NSS' offer to manage the nature site as a bird sanctuary and have asked the Parks & Recreation Department (PRD) to keep in touch with you, at a later date, when the boundary for the nature site is finalised.

3 As you are aware, PRD is currently developing the Sungei Buloh Bird Sanctuary. The PRD's managing agent, the Jurong Bird Park, has started liaising with NSS and other institutions and individuals on a proposed volunteer guides service. We look forward to NSS' participation, such as encouraging its members to serve as volunteer guides to conduct tours for the bird sanctuary.

Yours sincerely


HO CHEOK SUN
DEPUTY SECRETARY/DIRECTOR (INFRASTRUCTURE)
for PERMANENT SECRETARY
(NATIONAL DEVELOPMENT)

cc Dr Chua Sian Eng
Commissioner, Parks & Recreation

CEO & CP, URA
(Attn: Mr Wong Chiew Yii)

651:3331-920810

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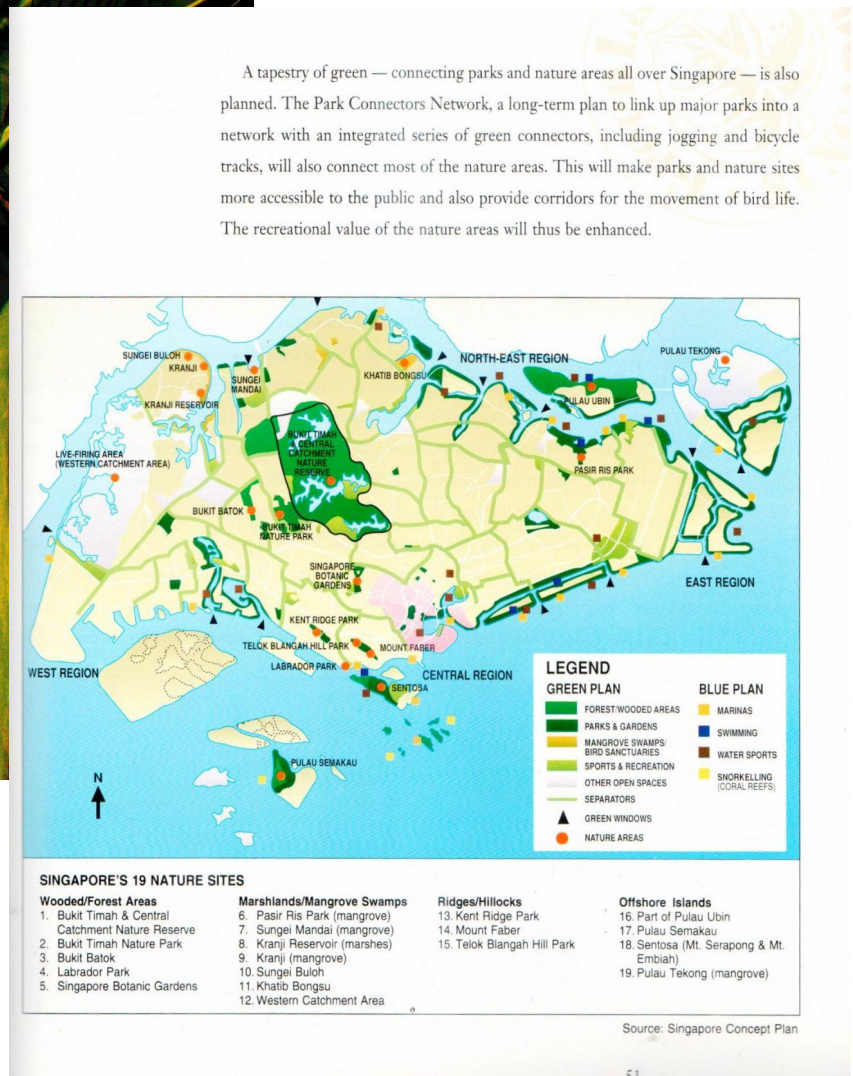
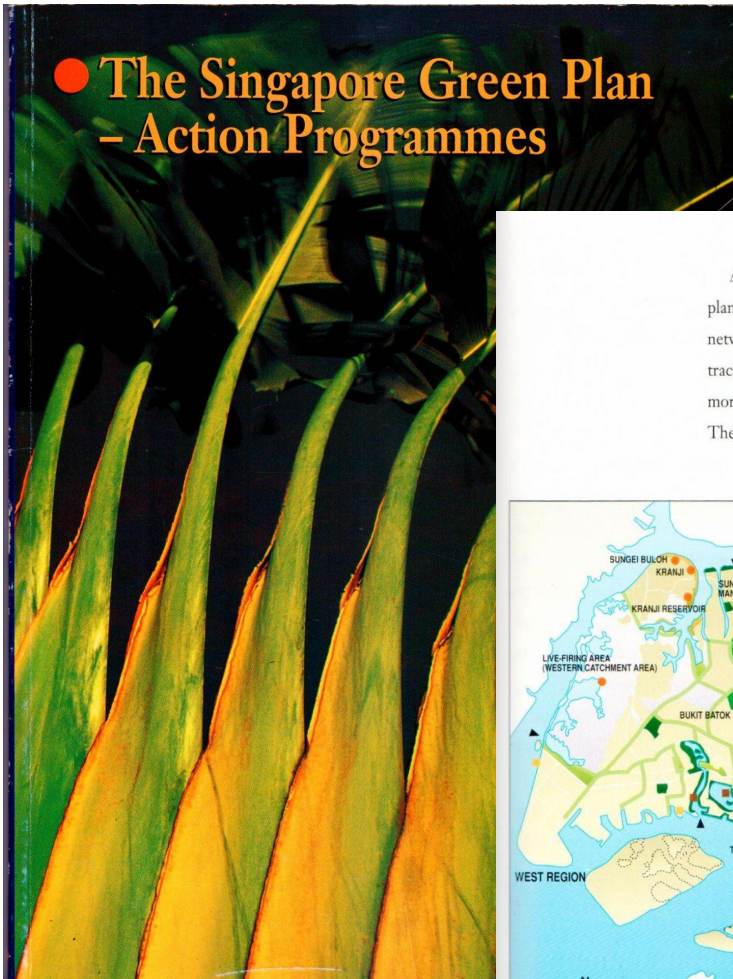
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Letter to request for NSS to manage Senoko was sent to Mr S. Dhanabalan, then-Minister of National Development (Source: Nature Society Singapore)

Subsequently, a separate discussion was held to re-look at the boundaries to cover the more important habitats to make sure the right boundaries are included. Dr Ho Hua Chew led a guided walk with Park Recreation Department (PRD) staff to identify the important boundaries in Senoko in January 1993. However, the discussion went cold for one year. During this year, there was also a change of minister for MND.

The Singapore Green Plan - Action Programmes 1993

However, in the release of this SGP in November 1993, it was noted that Senoko was left out as a nature site.



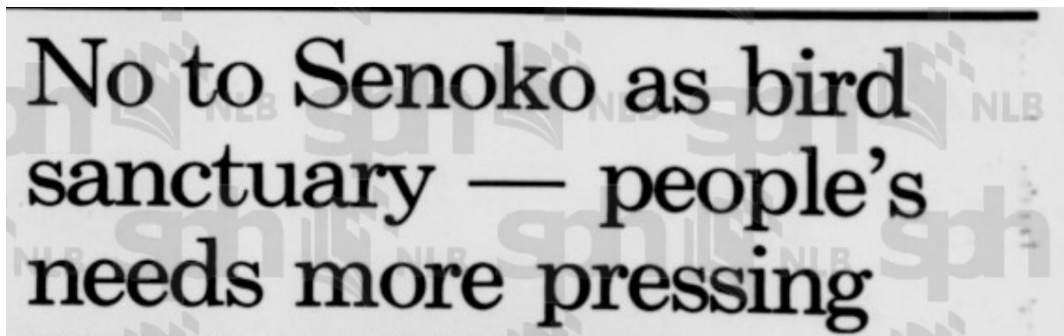
Nature sites marked in the Singapore Green Plan 1992 (Source: The Singapore Green Plan - Action Programmes)

News Came

On 18 Mar 1994, during the Budget debate, then-Acting Minister of National Development, Lim Hng Hiang shared:

*'If we were to keep 168 hectares of land for a bird habitat, it would mean taking away housing for 17,000 housing units. So if the Nature Society of Singapore can give me a petition to take out 17,000 applications of upgraders from my waiting list, then we will keep the Senoko land and keep it for the birds. But with the pressing needs of Singaporeans, I think Singaporean's needs come before birds.'*²

On 19 Mar 1994, Straits Times reported that Senoko will be cleared for industrial development and public housing.



No to Senoko as bird
sanctuary — people's
needs more pressing

The Straits Times, 19 March 1994 (Source: NewspaperSG)

After the announcement on parliament, a series of letters were published in The Straits Times between NSS and the Ministry of National Development (MND). In this correspondence, Dr Ho urged that preserving some part of the Senoko marshes would avoid having to 'recreate' nature later and to keep at one pond as a transitional refuge until the nearby parks are made more suitable for birds. MND corresponded and emphasised that it was a deliberate decision made after balancing the overall national land-use needs. It was also commented that Senoko was largely not natural based on its history. Dr Ho then called for a compromise to have 'one large, integrated green area at the proposed nature park, instead of small and scattered, non-ecological green areas.

Nature can co-exist with development

Letter by Dr Ho Hua Chew of Nature Society (Singapore) on The Straits Times, 28 March 1994 (Source: NewspaperSG)

Nature conservation: Govt taking balanced approach

Letter by Ms Rubinah Karyeo for Permanent Secretary, Ministry of National Development on The Straits Times, 13 April 1994 (Source: NewspaperSG)

Growth and nature conservation: Why can't there be compromise?

Letter by Dr Ho Hua Chew of Nature Society (Singapore) on The Straits Times, 19 April 1994 (Source: NewspaperSG)

Forming the Friends of Senoko

On 24 May 1994, Friends of Senoko was formed. While most were members of NSS, this group was formed out of personal capacity.

Many high profile public figures and professional, such as law professor Lye Lin Heng, architect Robert Powell, playwright Kuo Pao Kun, urban specialist Malone-Lee Lai Choo, NUS lecturer Lily Kong, artist Susie Lingham, NMP Kanwaljit Soin, lecturer and author Ivan Polunin, biology professor Peter Ng, law professor Koh Kheng Lian, architect Tay Kheng Soon, winner of 1994 Woman of the Year award and chairman of the National Book Development Council Mrs Hedwig Anuar etc, were recruited as representatives/supporters of the 'The Friends of Senoko'.

Friends of Senoko

Declaration of Commitment as Representatives

We, the undersigned, agree to the following:

1. We agree to be representatives of the Friends of Senoko.
2. We agree that the signatures in support of the appeal are to be sought from friends, sympathisers, supporters and any members of the public.
3. We agree that the appeal with the supporting signatures is to be sent to the Minister of National Development with copies to the Prime Minister and perhaps the President.
4. We agree that the appeal is to be made public through the relevant mass media when it is submitted to the Minister of National Development. The total number of signatures obtained is also to be made public.
5. We agree that our names in our personal capacity can be cited to promote the appeal to any potential signatories (e.g. cited in promotional leaflets).
6. We agree that our names in our personal capacity can be cited in the covering letter of the appeal to be sent to the relevant authorities. (Representatives may of course withdraw from such commitment if he or she finds the content of the covering letter not acceptable for some reason or other).

Name	Signature	Name	Signature
16. ILSA SHARP		24. LEONG CHING CHING	
17. ANDREW TAY TECK LEE		25. LYNETTE THOMAS	
18. GOH YUE YUN		26. KUO PAO KUN	
19. LYE LIN HENG		27. IVAN LIN	
20. Kee Teo Yong, Kenneth		28. HEDWIG ANUAR	
21. ROBERT POWELL		29. Koh Chuan Poh (William)	
22. TINA Chung		30. Amy Tsang	
23. Cheryl Tang		31. JAMALUDDIN OMAR	
		32. Ken Fou	
		33. KASSIM OTHMAN	

Co-ordinator: Ho Hua Chew Tel: 7726098 (office) 4571196 (home)

Declaration of commitment as the Friends of Senoko (Source: Nature Society Singapore)



The writer Lim Kim Seng and fellow birdwatcher brother bin Seng.

It was a cool, misty Sunday morning in November 1975 when my brother, Kim Chiah, and I were introduced to a large area of mangrove, brackish and freshwater ponds, secondary forest, cultivation and grassland in northern Singapore, known as Senoko.

It was also our first outing with the Malayan Nature Society (MNS) since joining as student members in June. We were very determined to attend as previous outings were either too far from our home or started too early.

We had woken up early and walked all the way from our Ulu Sembawang home, about 3 km away. We reached the Jalan Kechil meeting point at 7.20 am, 10 minutes early, and waited impatiently for the other participants to turn up. At 7.30 am sharp, a sky-blue station wagon chug close and stopped.

A tall, bespectacled, young man with a friendly smile got out and greeted us. We found out shortly that he was our leader for the day, Dr Ng Soon Chye, the then chairman of the MNS Bird Study Group.

I had expected someone much older and sterner-looking! He was even more surprised when Kim Chiah (I was too shy to approach them) walked over and asked him if he were Ng Soon Chye, and told him that we were joining him for the trip. I don't think Soon Chye expected two boys in shorts and slippers — one aged 15 and the other, 12 — to turn up on their own for a bird outing!

Together with Mr Wang Hung Pau and Mr Lim Kim Keang, the present chairman of the Nature Society (Singapore) Bird Group, the five of us (such was the size of bird outings then) headed into the woods that hid the Senoko ponds from the road. After a brisk walk through dense secondary growth, we emerged to see a mangrove-lined bund surrounding two huge brackish ponds.

Kim Chiah and I soon regretted coming in shorts. The dense growth of sea-hollies with their prickly spines

Falling in love with SENOK



A serene bird, the Yellow Bittern likes to hide in reeds and tall grass.

The news that Senoko — a premier birdwatching site — would not be preserved as a nature reserve was met with disbelief by Singapore birdwatchers, not least among them LIM KIM SENG. This engineer recalls the first visit he and his brother made to the area more than 18 years ago.



A clump of Nipah Palm stands in the centre of the main pond, the leaves are used for atap roofing, its fruit, atap chi, is edible.

set on stout leaves made walking on the overgrown bund very uncomfortable.

There were also rampaging armies of *hormigas*, red ants yielding a painful bite, the ever-present swarms of mosquitoes and the numerous mud lobster mounds which threatened to send us on an unscheduled swim.

But these discomforts were promptly forgotten as we were soon mesmerised by the natural wonders of Senoko. All those things which we had only then read about in books now came alive on this our first trip to a mangrove area. A crab scurrying nervously down the bund occupied us until Soon Chye pointed out a bird perching on a dead tree.

When our turn at the binoculars came (we did not have any at that time), both of us blurted out "Little Green Heron!" almost in unison. Moments later, a Collared Kingfisher and a Black-naped Oriole were seen on a mangrove and again we called out their names without any hesitation.

A smile on Soon Chye's face and the surprised looks from his companions let on that they were impressed with these two boys, who had a fair

bit of knowledge thanks to their library books and *kampung* upbringing.

STUMPED BY EGRETS

When we saw the graceful white egrets feeding in the pond we were stumped. We couldn't identify them and Soon Chye taught us to study their size, beak and leg colour. He also brought out a newly-published bird guide — Ben King's "A Field Guide to the Birds of South-east Asia". Using this book, we identified the birds as Great Egrets, winter visitors from North Asia.

As we walked round the bund of the biggest pond, we saw our first waders — three Common Greenshanks feeding on the edge of the water. A large size, green legs and upturned beak distinguish the Greenshank. This wader, like the Great Egret, was also new to us.

Two large muckskippers also came into view, skipping across the water. Behind them was a foraging Dog-faced Watersnake, a harmless fish-eating snake of brackish waters. A Brahminy Kite, resplendent in its chestnut and creamy white hues, soared in the sky, uttering its call-like call which scared

a Common Sandpiper.

We turned back at the end of the bund, which was marked by a clump of niphah. It was getting warm and we were soaked with perspiration. I was not bothered despite getting my feet all muddy and scratched by sea-hollies. I could tell that my brother was enjoying himself thoroughly too. Our bird list for the day was 30 species.

This was the beginning of my 18-year romance with Senoko and her wonderful birds. My brother and I went to Senoko regularly after that November morning, sometimes with our schoolmates, brother and cousins but mostly on our own.

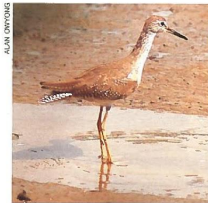
AROUND THE PONDS

Senoko in the late '70s was made up of a series of brackish prawn ponds surrounded by mature mangroves, mostly *api-api* and *tuta-butu*, which also clothed the upper reaches of the Sungai Sembawang.

This core was bordered by cultivation, misty coconut groves and fruit orchards, to the west of the river. South of the ponds were some freshwater ones for the rearing of food fish like the Soon Hock and other grass



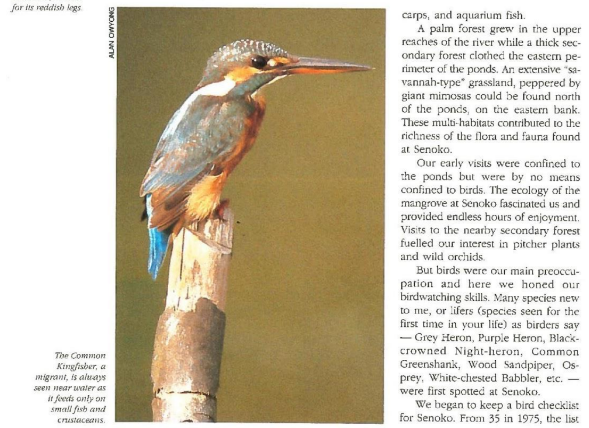
Birds of Pacific Golden Plovers, Greenshanks, Marsh Sandpipers wading in Senoko.



Red-billed Noddy, named for its reddish legs.



The common migrant Heron Sandpipers originates from Central Asia.



The Common Kingfisher, a migrant, is always seen near water as it feeds only on small fish and crustaceans.

carps, and aquarium fish.

A palm forest grew in the upper reaches of the river while a thick secondary forest clothed the eastern perimeter of the ponds. An extensive "savannah-type" grassland, peppered by giant mimosas could be found north of the ponds, on the eastern bank. These multi-habitats contributed to the richness of the flora and fauna found at Senoko.

Our early visits were confined to the ponds but were by no means confined to birds. The ecology of the mangrove at Senoko fascinated us and provided endless hours of enjoyment. Visits to the nearby secondary forest fuelled our interest in pitcher plants and wild orchids.

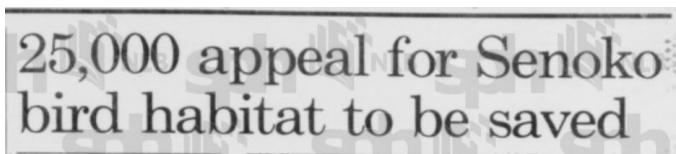
But birds were our main preoccupation and here we honed our birdwatching skills. Many species new to me, or Iifers (species seen for the first time in your life) as birders say — Grey Heron, Purple Heron, Black-crowned Night-heron, Common Greenshank, Wood Sandpiper, Osprey, White-chested Babbler, etc. — were first spotted at Senoko.

We began to keep a bird checklist for Senoko. From 35 in 1975, the list

The Petition

The Friends of Senoko conducted and coordinated a petition on a national level. The petition called for 70 hectares, or 40% of the 168 hectares of Senoko to be kept as a nature park.

The petition obtained more than 25,000 signatures to retain Senoko as a bird sanctuary. Volunteers went to public park, shopping area, libraries, months were spent to get the physical signatures. A copy was also sent to the Prime Minister Office. A collection of 25,000 signatures was regarded as a tremendous collection. It was indicative of a very significantly strong support for nature conservation at that time, given that the campaign was conducted on the ground without the aid of the social/digital media.



The Straits Times, 22 October 1994 (Source: NewspaperSG)

Sent to NSS members

Save Senoko Signature Campaign

Dear NSS Member,

A group of people, comprising some NSS members in their own personal capacity together with some members of other NGOs and the public, has mounted a signature campaign to save the core areas of Senoko, as proposed by the Nature Society. This is in response to the invitation announced in Parliament by the Minister of National Development (The Straits Times, March 19, 1994).

Senoko as you know is a 5-star site in the Nature Society's Master Plan and is also designated a "nature park" cum "bird sanctuary" in the URA Master Plan. It is the richest bird site in Singapore in terms of the number of species recorded. It has also a viable patch of riverine palm forest, the last of its kind outside the Central Catchment Area. The area has been a popular venue for excursions for the Nature Society and members of the public since the early 70s.

We are appealing to the relevant authorities to preserve about 70 hectares of the original habitat, constituting only about 40% of the original Nature Society's proposal. This would be a compromise and integration between nature and development at Senoko.

This is the final effort to save Senoko.

You can play your part by collecting signatures from citizens and permanent residents in Singapore on the form attached. The signatures collected will provide vital feedback to the relevant authorities for land-use planning in Senoko and other areas as well.

For more information on Senoko, read the article on Senoko in the latest issue of Nature Watch and the past two issues of the Nature News. The article and the accompanying beautiful photos in Nature Watch are most helpful for the purpose of getting your signatures.

We look forward to your support. Save Senoko!

Yours sincerely,

Co-ordinators

Ho Hua Chew
Betty L. Khoo
Evelyn Lim-Eng
Lim Kim Keang
Lim Kim Seng
Koh Kheng Lian
Amy Tsang

LETTERS

A plea for Senoko

Dear fellow nature lovers,

Too few people understand the importance of Senoko and this has prompted me, a student of Senoko's natural history for 18 years, to write this note, in the hope that NSS members would better appreciate what Senoko means to Singapore.

Senoko's best merit is its bird diversity, which at 196 species and still growing, is second to none in the country. This richness is a function of its variety of habitats, ranging from mangrove, mudflats and scrub to freshwater and brackish ponds, grasslands and mixed woodlands, the rural nature of its surroundings and its geographic location. Despite the clearance of land on its western and southern borders to make way for industrial estates, roads and the MRT line, associated disturbances and habitat degradation, Senoko is still worth preserving.

During the recent Bird Census at Senoko on March 20, a total of 83 species was recorded in just three hours - more than any other site that day and despite a two-hour downpour! You can't achieve this feat anywhere else in Singapore!

Senoko's other merits include its rating as one of the top three wetland sites in Singapore (the other two being Khatib Bongsu and Sungei Buloh), its still intact riverine palm forest and mangrove, the presence of 20 locally threatened residents and two internationally endangered waterbirds, and lastly its position as a major link in the Northern Coastal Flyway (NCF) for resident waterfowl.

The latter point is unknown to most people and deserves elaboration. Senoko is just one of a series of sites lying along Singapore's northern coastline which are utilised by resident waterfowl, especially the Grey, Purple and Black-crowned Night-herons, to feed, roost and breed. It starts at Sungei Buloh in the west and ends at Pasir Ris in the east with a small extension leading offshore towards the islands of Pulau Ubin and Pulau Tekong.

The traffic flow is both ways and occurs daily. The destruction of any site within this NCF would increase pressure for food and space at the remaining sites as well as create intensified competition, stress and mortality among surviving birds. Further pressure on the sites in the NCF may ultimately cause a sudden crash in the waterfowl population and their eventual extinction in Singapore if this trend is not arrested.

The last twelve months brought very depressing news for Senoko. Firstly, it was left out as one of the 18 designated nature areas in the Singapore Green Plan by the Environment Ministry in March 1993. In March 1994, the Ministry of National Development released a press statement saying that Senoko will not be preserved as a nature area because the land there has been set aside for development into an HDB estate, in effect putting it as a birds versus man issue. Can't man co-exist in harmony with nature? Or is nature conservation in Singapore just a catch phrase? Is this going to be the final coup de grace for Senoko?

I hope all NSS members who are concerned about the conservation of our few remaining nature sites will join me in a formal appeal to the Government to save Senoko, Singapore's richest bird site. If you are still unconvinced and want to see Senoko's wildlife for yourself, you are always welcome to contact me for a guided tour (weekends only).

Yours,
Lim Kim Seng (signed), a faithful friend of Senoko (since 1975)

Nature News May-June 1994

Page 7

Plea and letters to save Senoko were sent to NSS members, dated May - June 1994 (Source: Nature Society Singapore)

It is also unfortunate that the NSS' copy of the petition cannot be found.

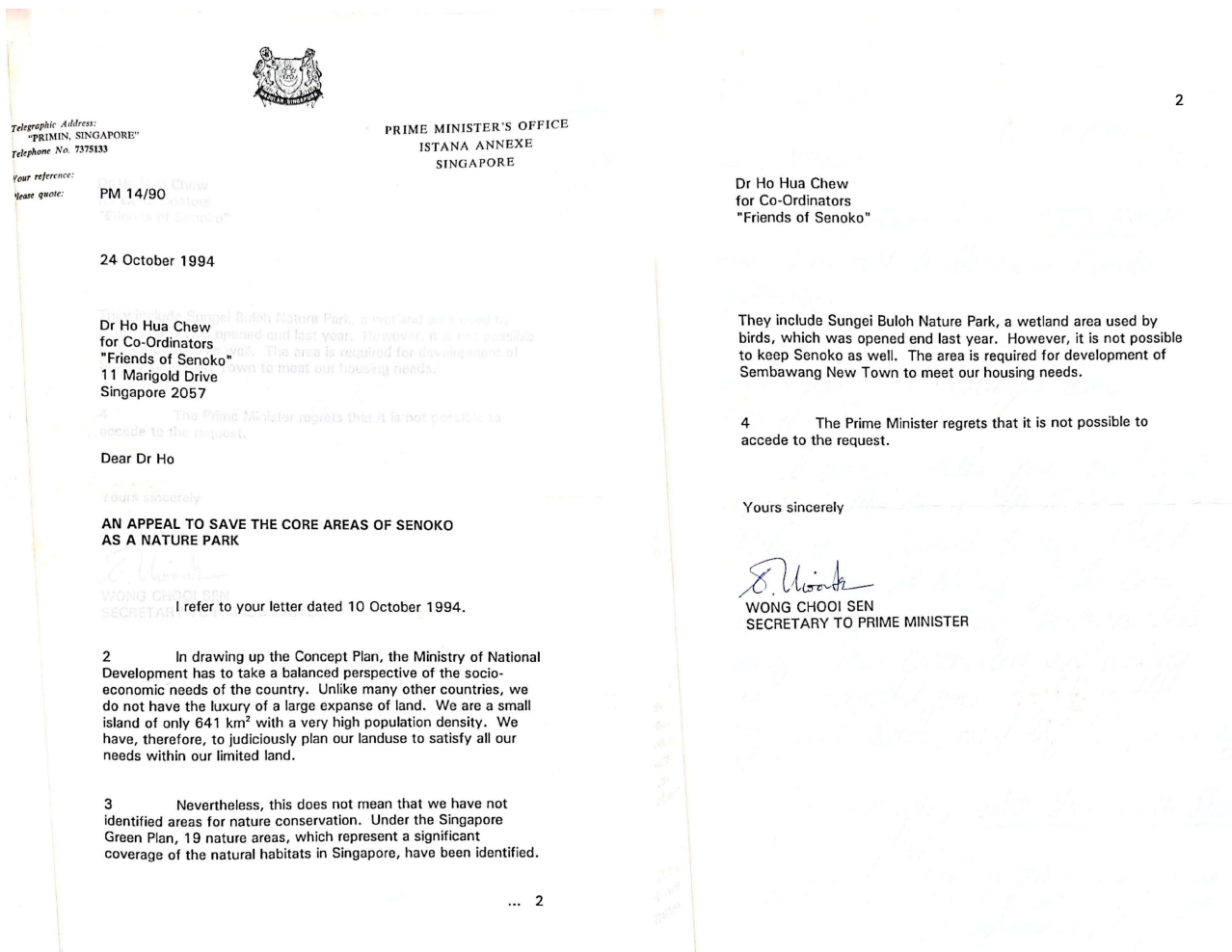
Outcome of Petition

On 24 October 1994, it was announced in The Straits Times that while the petition was being under studied, chances of conserving senoko were low. Nominated Member of Parliament Kanwaljit Soin urged policymakers to consider both the needs of the environment and the economic development. She also argued that the 70 hectares site requested would only support 5,000 flats, and not the 17,000 flats given by MND.



The Straits Times, 24 October 1994 (Source: NewspaperSG)

On the same day, NSS also received a letter from the Prime Minister Office, stating that it was not possible to accede to the request to conserve Senoko.



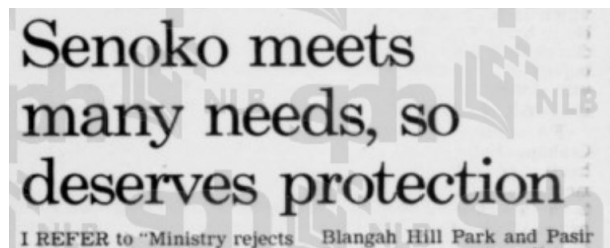
Letter from the Prime Minister Office, dated 24 October 1994 (Source: Nature Society Singapore)

On 12 November 1994, it was officially announced that the petition was being rejected by the ministry, citing that conserving the 70 hectares would mean the loss of 6,000 flats and 20 hectares of industrial land. The MND spokesperson also explained that the decision was made after consulting a work group made up of representatives from both public and private sectors.



The Straits Times, 12 November 1994
(Source: NewspaperSG)

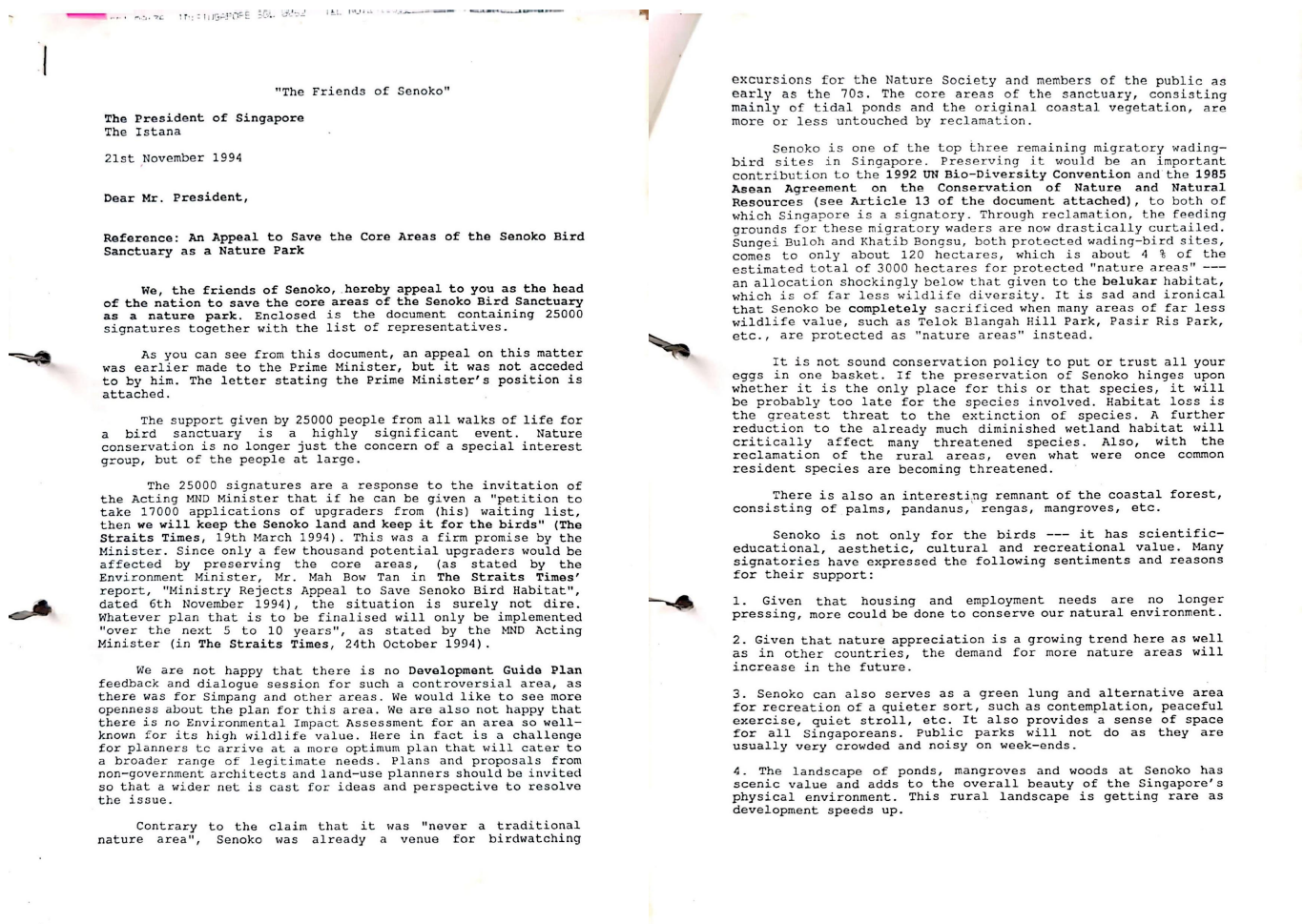
NSS launched an appeal to keep Senoko over the next few months, but to not much avail.



Dr Ho's letter to The Straits Times as a Friend of
Senoko, 16 November 1994 (Source:
NewspaperSG)

Last Bid of Appeal

A letter was also written to the Istana on 21 November 1994, enclosing the petition containing 25,000 signatures, after "the invitation of the acting MND Minister". It also mentioned that preserving Senoko would be an important contribution to the 1992 UN Biodiversity Convention of Nature and Natural Resources. It appealed for landfill work to be stopped and offered to conduct a site visit to showcase the value of the place.



Pages 1 and 2 of the letter from Friends of Senoko to Istana on 21 November 1994 (Source: Nature Society Singapore)

5. Preserving Senoko with the traditional aqua-culture ponds and activity serves also to keep intact a part of our cultural heritage. From a broader perspective, the resettled farmers' roots to the land and to the nation would not then be completely erased. Some representatives have frequently encountered ex-farmers and their families visiting or having picnics at their abandoned farmlands on Sundays. These people have sentimental ties to the rural landscape and would also, together with other Singaporeans, appreciate that some of these places be preserved.

The diversity of needs that Senoko can promote, now and in the future, are important enough to demand its immediate protection before it is too late. Senoko will contribute significantly to making Singapore a model green city.

At the moment, land-fill work is encroaching rapidly the core areas of the sanctuary. We would like to request that the land-fill work be stopped while this appeal is under your consideration.

We will happy to show you the sights at Senoko so that you can have a better picture of the value of the sanctuary.

Thank you.

Yours sincerely,



Ho Hua Chew
f. "The Friends of Senoko"

Co-ordinators
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Evelyn Eng-Lim
Koh Kheng Lian (Tel. 7723607)
Betty L. Khoo
Lim Kim Keang
Lim Kim Seng
Tan Hang Chong
Amy Tsang
Sunny Yeo

Mailing Address: c/o 11 Marigold Drive
Singapore 2057

Attachments to this letter:

1. Copy of Signature Document with 25000 Signatures.
2. Letter from the Prime Minister.
3. **Conservation Proposal for Senoko** (Malayan Nature Society, S'pore Branch).
4. The Nature Society's **Feedback on the Singapore Green Plan.**
5. **Asean Agreement on the Conservation of Nature and Natural Resources.**
6. **The Straits Times'** Reports for 24th Oct. 1994 & 6th Nov. 1994

On 12 December 1994, the Istana replied, stating that they were unable to accede to the request made.

Istana 27/02/007



ISTANA
SINGAPORE

12 December 94

Dr Ho Hua Chew
f. "Friends of Senoko"
11 Marigold Drive
Singapore 2057

Dear Dr Ho

AN APPEAL TO SAVE THE CORE AREAS OF SENOKO AS A NATURE PARK

I refer to your letter dated 21 Nov 94 to the President.

2. Under the Green Plan, the Government has set aside 19 nature areas covering 5% of the land area of Singapore for nature conservation. Considering our limited land, this is significant testimony to the Government's commitment to nature and biodiversity in Singapore. The 19 nature areas represent a good cross-section of the natural habitats of Singapore. They include Sungei Buloh and Khatib Bongsu, which are wetland areas similar to Senoko.

3. The need for housing now may not be as acute as it was 30 years ago but it is still a pressing need for our people. There are more than 100,000 applicants waiting for an HDB flat and about 50% are first-timers. We cannot dismiss the housing needs of these families.

4. It would be nice if Senoko could be conserved, in addition to Sungei Buloh and Khatib Bongsu. Unfortunately, Singapore's limited land does not allow this luxury. The Government needs to develop Sembawang New Town on the site to meet out housing needs.

5. The President regrets that it is not possible to accede to the request.

Yours sincerely


CHONG IYE HUAT
for PRINCIPAL PRIVATE SECRETARY
TO THE PRESIDENT

Reply from the Istana on 12 December 1994 (Source: Nature Society Singapore)

A letter was also written by the Friends of Senoko to the Prime Minister Office on 14 December 1994.

"The Friends of Senoko"

BG (Res.) Lee Hsien Loong
Deputy Prime Minister and
Minister of Trade and Industry

14 December 1994

Dear BG (Res.) Lee,

Reference: An Appeal to Save 20 Hectares of Senoko On JTC Land
See the sketch-map attached.

We are appealing to you as the Minister of Trade and Industry to save about 20 hectares of Senoko as a nature park.

This portion of Senoko is on the western side of Sungei Sembawang and comes under the purview of Jurong Town Corporation.

The Ministry of National Development has announced that the eastern portion of the Senoko bird sanctuary will be developed for housing. We understand the need for housing, but it would be rather sad that all of Senoko, a valuable part of our natural and cultural heritage, has to be sacrificed for development.


We are making this appeal to you under the following considerations:

1. The area is relatively small and would not be such dent to industrial development if it were to be preserved as a nature park. Our government's task of creating an external wing to our economy should also in a small way be directed at saving some of our natural heritage.
2. Employment needs for Singaporeans are more or less solved. This is indicated by the job-hopping trends and shortage of local workers. Preserving the 20 hectares referred to above as a nature park would benefit more Singaporeans than developing it into factories, which have to be filled up to a large extent with foreigners.
3. Preserving it as a nature park would also provide the future residents of the area with a green lung. All that is required to make the place accessible to the residents on the eastern side is to construct a bridge across Sungei Sembawang. MND has referred to the Sembawang Park as the green lung for the residents of Sembawang New Town (The Straits Times, December 11, 1994). But this hardly adequate, being only about 12.5 hectares in extent. This park is currently serving the residents in the northern Sembawang area and is already very crowded on weekends.
4. The area is beautiful and would provide a scenic backdrop to the HDB flats that are going to be built on the eastern side. Residents in the area would appreciate it to see a chunk of beautiful greenery left intact in their neighbourhood.

5. We envisage the nature park here on the model of Pasir Ris Park where a chunk of mangroves is left intact within a public park, providing a source of fascination to park users. Here, there is a large tidal pond where you can see migrating wading birds. Behind this is a stretch of mangroves, and behind this, an interesting stretch of the original coastal forest --- the last of its kind along the northern coast. This coastal forest is substantial and consists mainly of a variety of palms. An educational botanic walk could be set up here.

We hope you will consider our appeal kindly. Before you make up your mind about the matter, please have a look at the place. Here we will be happy to show you around. Let us know.

Yours sincerely,


Ho Hua Chew
f. "The Friends of Senoko"

Co-ordinators

Ho Hua Chew
Evelyn Eng-Lim (Contact: Tel. 7412036/Fax. 74110871)
Koh Kheng Lian
Betty L. Khoo
Lim Kim Keang
Lim Kim Seng
Tan Hang Chong
Amy Tsang
Sunny Yeo

Mailing Address: c/o K.K.Lim, 177 Jalan Loyang Besar, S'pore 1750

cc: Prime Minister
Minister of National Development
JTC

Letter from Friends of Senoko to Prime Minister Office on 14 December 1994 (Source: Nature Society Singapore)

A reply was received from MTI on 12 January 1995, stating the land area being required for employment needs.

MTI 19/1-01
12 Jan 95



MINISTRY OF TRADE & INDUSTRY
8 Shenton Way #48-01
Treasury Building
Singapore 01096
REPUBLIC OF SINGAPORE
Telephone: 2259911
Cable Add: TRADE INDUSTRY, SINGAPORE
Telec: MTI RS24702

Mr Ho Hua Chew
"The Friends of Senoko"
c/o K.K. Lim
177 Jalan Loyang Besar
Singapore 1750

Dear Mr Ho

APPEAL TO SAVE 20 HECTARES OF SENOKO ON JTC LAND

1. I refer to your letter dated 14 Dec 94 appealing to the Deputy Prime Minister to save 20 ha of bird habitat at Senoko from industrial development.
2. The Ministry of Trade and Industry has looked into your appeal with JTC. However, we regret to inform you that it is not possible to conserve the 20 ha as a nature park.
3. Demand for industrial land and factories in Singapore is very high on the back of strong economic growth. In fact, JTC has to expedite the infrastructural development at Senoko as many companies are waiting to take up land and factories there. The detailed design of the roads and other infrastructural facilities and factories have already been completed. The proposed conservation will also affect the planned regional road linking Seletar Expressway to Admiralty Road West and along which our new water pipes from Johor will be laid.
4. As you know, land in Singapore is limited. There is therefore a need to balance land use amongst competing needs such as industrial, commercial, housing and recreational. This is taken into account when the URA draws up its land use Concept Plan. If JTC gives up the 20 ha Senoko site, it will have to find a replacement site elsewhere to meet the long term projected needs for industrial land. This means that some other needs, such as housing, may have to be sacrificed.
5. The Government understands the need for nature conservation. That is why habitats in Sungei Buloh and Khatib Bongsu similar to the one in Senoko have been conserved. In the Senoko/Sembawang area, adequate park land has been set aside to meet the recreational needs of future residents. There is the

existing 12.5 ha Sembawang Park. In the near future, there will also be a regional park in Woodlands.

6. The employment needs of Singaporeans may have been more or less satisfied. However, we need to sustain this level of employment as companies move towards higher value-added production, which are less labour intensive. The manufacturing sector in Singapore has been and will continue to be a core engine of economic growth. To sustain if not improve our economic growth, which will benefit the whole nation, we will need to keep the sector's share of Singapore's Gross Domestic Product and employment at more than 25%. This means that we will need to have, amongst other things, an adequate supply of industrial facilities to undertake manufacturing activities. This is particularly so in the face of strong regional competition for investment.

7. We hope that Friends of Senoko understands the difficulty of conserving the 20 ha Senoko site in view of the need to balance nature conservation with competing needs like industrial development in land scarce Singapore.

Yours sincerely


Choo Whatt Bin
for Permanent Secretary



Outcome

On 11 December 1994, it was announced that Senoko will be filled and leveled. While each neighbourhood would be provided a park, no parts of Senoko would be retained. Additionally, MND maintained that “Senoko was never a green lung

to begin with and that most of the bird species there are also found in Sungei Buloh and Khatib Bongsu, two areas which the Government has conserved. Mr Lim Kim Seng, one of the authors of the Conservation Proposal, expected up to 13% of Singapore’s birdlife could be lost with the clearance of Senoko.

Senoko bird sanctuary to be levelled soon

New Sembawang estates will be built there

The Straits Times, 11 December 1994 (Source: NewspaperSG)



Senoko in the 1993 map of Singapore before clearance (Source: <https://libmaps.nus.edu.sg/>)



Senoko in the 1998 map of Singapore after clearance (Source: <https://libmaps.nus.edu.sg/>)

Senoko Today

Today, Senoko is now Woodlands East Industrial on the west of Sungei Sembawang, and Sembawang housing estate to the east of the river. The only natural space left is the Sembawang Park connector along Sungei Sembawang.

A physical petition, held over the course of a few months, that resulted in a compilation of 25,000 signatures highlighted an increasing concern for nature conservation amongst Singaporeans. While Senoko may have been lost, this campaign had been successful in waking up the need for nature amongst Singaporeans.