

Involving Local People at the Yatsu Higata Tidal Flat Tokyo Bay

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THE CONTEXT

Ecological Profile

Yatsu Higata is a tidal mudflat site (higata is a word for tidal flat in Japanese) located in the deepest northern end of the Tokyo Bay. Geographical co-ordinates of the site are 35°41'N 140°00'E. The climate of the area is temperate with the average precipitation of 1,289 mm and an mean annual temperature is 14.7°C. Its wetland type under the Ramsar categories is tidal mudflat and 36ha of 40ha is mudflat and the rest consists of small sections of reedbeds along the bank. Because the surrounding area has been reclaimed, it looks like an artificial pond. But in fact it is still connected to the Tokyo Bay with two narrow channels, which allow inflow and outflow of tides.

Environmental Value of the Site

Yatsu Higata is one of the few remaining tidal flats left in the Tokyo Bay, where over 90% of tidal flats have been lost. Therefore, it has a comparatively critical role as a staging and wintering site for migratory waterbirds. However, because it is small in area and at high tide the site becomes completely submerged so the birds have to move to other parts of Tokyo Bay. Thus the site has to be considered as an integral part of the tidal flats of the Bay.

It is especially an important for shorebirds in the East Asia-Australasian Flyway. Monitoring of shorebird populations is conducted extensively by managing authorities of the site, conservation groups and individuals. Species which exceed the criteria of the Shorebird Reserve Network and its maximum numbers between 1988 and 1996 are: Black-winged Stilt *Himantopus himantopus* (34), Grey Plover *Pluvialis squatarola* (403), Kentish Plover *Charadrius alexandrinus* (1,424), Lesser Sand Plover *Charadrius mongolus* (372), Bar-tailed Godwit *Limosa lapponica* (458), Whimbrel *Numenius phaeopus* (894), Ruddy Turnstone *Arenaria interpres* (134), Sanderling *Calidris alba* (52), Dunlin *Calidris alpina* (4,000).

Other waterbirds of notable numbers between 1992 and 1996 are: Great Egret *Egretta alba* (240), Little Egret *Egretta garzetta* (230), Spotbill Duck *Anas poecilorrhyncha* (177), Green-winged Teal *Anas crecca* (257), European Wigeon *Anas penelope* (607), Pintail *Anas acuta* (3,197), Common Shoveller *Anas clypeata* (50), European Pochard *Aythya ferina* (125), Black-headed Gull *Larus ridibundus* (8,375), Black-tailed Gull *Larus crassirostris* (1,046).

Human-Environment Relationship

There was salt pan operation on the coast a hundred years ago and the area was later acquired

by a private company to create a recreational beach. Then part of it, including the present-day Yatsu Higata, was sold to the Ministries of Interior and of Transport and Communications for construction of a flood channel. However, the project was never realised. There was some fishing and aquaculture of seaweed and clams off the coast, but the fishing co-operative gave up its fishing rights in 1970 making way for reclamation.

Much of its surrounding area was reclaimed for an industrial estate and residential area in the 1970s by the Prefecture of Chiba, but Yatsu Higata remained in tact since it was a state property. At present, the site is a conservation area and is used for educational purposes. Reclamation is still under way for the remaining tidal flats of Tokyo Bay and Sanbanze tidal flat, which is only a few kilometres away and is under an EIA process.

Table 1. History Of Land Ownership and Management Practices

1889	Ownership: private owner. It was part of a large contiguous tidal flat and salt pans were created. Later, due to repeated damage caused by typhoons, the salt pan operation closed.
1925	Ownership: A private company, Keisei Railways. The Keisei bought 74.8ha of salt pans which included Yatsu Higata. A part of it (30ha) became a recreational beach for clam harvesting.
1940	Ownership: Ministry of Interior and Ministry of Transport and Communications. The ministries acquired 49.6 ha which included Yatsu Higata to construct canal for flood control of the River Tone.
1955	Ownership: Ministry of Finance. The plan for the canal had been suspended and finally terminated. In accordance with this change of land use, the ownership has been transferred to the Ministry of Finance.
1966	Ownership: Ministry of Finance. The Prefecture of Chiba planned to reclaim the area.
1970	Fishing co-operative of Narashino gives up its fishing rights.
1971-74	Surrounding area of Yatsu Higata reclaimed. Many conservation groups were formed in this period.
1982	A motorway which runs above the south-west corner of the Yatsu Higata was completed.
1984	The Narashino Area Public Welfare Facility Construction Project was adopted which decided to preserve Yatsu Higata in a natural state.
1988	The area was designated as National Wildlife Protection Area (41.2ha), of which 40.1ha was given a Special Protection Area status.
1989	Ownership: Environment Agency. The ownership was transferred from Ministry of Finance to Environment Agency.
1993	The site was designated as a Ramsar site.
1994	The Yatsu Higata Nature Observation Centre by the Environment Corporation and Narashino City was completed.
1996	Yatsu Higata joined the East Asia Australasia Flyway Shorebird Reserve Network.

The City of Narashino, in which the entire Yatsu Higata is located, is a predominantly urban city with a population of 153,000. Over 70% of residents work in the services sector, while only 0.7% are in the agricultural sector. Access to the site is readily available with two railway lines running close to the site and there is a motorway running above one corner of

the site. It is less than an hour from central Tokyo.

Japan has three tiers of governments: state government, prefecture government, and city government and each has its own elected diet (parliament) or assembly. The Environment Agency is a state agency and is the principal office responsible for implementing agreements reached under the Ramsar Convention. The governments of the prefecture of Chiba and City of Narashino (where Yatsu Higata is located) are also involved in management.

Generally speaking, the Japanese government, from national to local level, is weary of people's participation in management. Instead, they traditionally set up commissions or committees made up of experts and sometimes representatives of local communities appointed by the head of the government and regard this as a way to reflect opinions of local communities.

Internationally important wetlands or Ramsar sites are mostly designated as a Special Protection Area of the National Wildlife Protection Area (NWPA) by Environment Agency and the management of NWPA is devolved to Chiba prefecture. Before designating a NWPA, the Secretary of Environment Agency or the Governor of the prefecture has to hold a public hearing. A Wildlife Protection Programme Plan of Wildlife Protection Areas in the prefecture is prepared by the nature conservation office of the prefecture government and reviewed by a Nature Conservation Commission of the prefecture.

The Environment Agency has been traditionally dependent on commissions in the past but in recent years commissions have been actively trying to involve the public by holding public hearings in various locations throughout Japan and encouraging people to send comments by fax and e-mail. They have also set up a Japanese national Ramsar committee in 1996 with national wetland conservation groups represented along with other ministries and agencies related to Ramsar Convention and wetland conservation.

Narashino City used to be reluctant to involve local communities when it was insisting on a reclamation project and opposing the designation of a NWPA. However, once the area was designated and an education centre was constructed, the city started to make conscious effort to involve local people. The city designated June 10 as Yatsu Higata Day in 1997 to make it an opportunity for the broader public to participate, and a ceremony and various activities were held at the Nature Observation Centre. There are a number of nature conservation groups which are quite active in expressing their opinions on the conservation of Yatsu Higata and they have collected and submitted petitions to the City Council, for example.

INVOLVEMENT OF STAKEHOLDERS

Stakeholders can be grouped into three main groups: the first group includes the managing authorities of the site, the second is organised environmental groups and the third is local residents.

Managing authorities

The site is a state property and it has three types of legal conservation designations, which means that the following branches of government are involved in management.

Table 2. Conservation Designations and Managing Authorities

Name of designation	Area(ha)	Managing authorities
National Wildlife Protection Area (NWP)	41.1	Environment Agency, Chiba Prefecture
Ramsar site	40.1	Environment Agency
Narashino Green Area (Yatsu Higata Park)	21.9	Narashino City

The NWP and the Ramsar site nearly overlap and Narashino Green Area contains some 16.2 ha of tidal flat of Yatsu Higata. Narashino City became responsible for the management of the Yatsu Higata Nature Observation Centre.

Environmental Groups

This is an area where many conservation groups were formed between 1971 and 1982 to protect Yatsu Higata from a proposed reclamation project, and they remain very active to date. The groups which are based in Narashino City or Chiba Prefecture are:

1. Chiba chapter of Wild Bird Society of Japan (WBSJ Chiba,);
2. Wild Bird Society of Chiba (WBS Chiba);
3. Yatsu Higata Protection Study Group (YHPSG);
4. Yatsu Higata Environment Beautification Committee (YHEBC);
5. Association for Protection of Tidal Flats of Chiba (APTFC); and
6. Friends of Yatsu Higata (FoYH).

There two national conservation organisations involved in Yatsu Higata include the Wild Bird Society of Japan (WBSJ) and the Japanese Society for Preservation of Birds (JSPB). They are well organised and some of them have newsletters for residents near Yatsu Higata as well as for their members.

Local Residents

Residents of apartment blocks near Yatsu Higata are highly aware of Yatsu Higata and although they may not be members of environmental groups listed above, they have worked closely with some of the groups above in collecting petitions and organising public meetings.

Others who have stakes in the area are research institutes such as Yamashina Ornithological Institute and students of Toho University. There are also individual bird watchers and photographers.

Stakes related to Ecological Character of Yatsu Higata

The site is owned by the state and there is not anyone whose life is dependent on extraction of resources from the site, so present interests and concerns are primarily maintenance of ecological characters of the site for conservation purpose. These are: management of wastes deposited on the tidal flat, changes in water quality, changes in sediment type.

Wastes from household and construction sites used to be dumped illegally into the tidal flat. This has stopped now but as the site is connected with two channels to the Tokyo Bay, wastes still flow into the site with tides and requires removal manually.

There used to be an influx of fresh water from households and this made the water of Yatsu Higata brackish. Since 1990, a public sewer has been installed and this led to the reduction of volume of fresh water into the site. The salinity seemed to have risen over time in eastern part as algae and oysters started to appear. Blue tide, which is a body of water depleted in oxygen, occurs in Tokyo Bay occasionally and consequently a large number of fish and shellfish die. Spread of this Blue Tide into the site is of concern.

The sediment type of Yatsu Higata has changed from mud to sand on the eastern part due to the high speed of the flow of River Yatsu. Mud is being carried away from the site and the surface has hardened and there seem to be less benthic animals in that part. Odours are released from a southern end of the site along the motorway in summer and water tends to stagnate here and organic matter is being accumulated.

Since waterbirds that are found on Yatsu Higata move to and from other tidal flats of the Tokyo Bay for feeding and roosting, conservation and designation of these areas as Ramsar wetlands is being sought by many groups. Sanbanze is one of such area with tidal flats and shallow sea area of 1,200 ha and is only a few kilometre from Yatsu Higata. It is facing a reclamation project which will eliminate two thirds of it.

Stakes related to Human Uses of the Yatsu Higata

Human uses of the site are also concerns. Bird watching, population monitoring of birds, a training course for volunteers for interpretation are being conducted by various groups. There is no more fishing industry on the site nor extractive recreational activities such as collection of clams. Feeding birds by the public has caused more gulls to flock and, as a result, smaller shorebirds are being chased and displaced by the gulls. Some researchers are wishing to enter the site for research and teachers of schools are also wishing to go into the tidal flat for educational purpose.

Roles in Management and Involvement of Local Communities

Preparation of Management Plan: Legally each of three separate designations for Yatsu Higata requires different combinations of three government offices to fulfil its management obligations as indicated before. However, since the purposes of their management are the same in conserving the site, they have decided to co-ordinate their activities by convening joint meetings since 1994. In 1996, the Environment Agency set up an expert panel with the participation of Chiba Prefecture and Narashino City, in order to prepare a management plan jointly. Some of environmental groups expressed their wish to attend this meeting but it was not granted. However, results of the meetings are being communicated in another meeting of local environmental groups, convened by Narashino City and the city has acted as a mediator.

Removal of Deposited Wastes: It was Mr. Morita, the founder of Yatsu Higata Protection Study Group (Study Group), who started collecting wastes in 1974. Later in 1978 some housewives who lived nearby started to help the Study Group occasionally and in 1981 they formed the Yatsu Higata Environment Beautification Committee (YHEBC) to work on a regular basis. Some members of the Study Group formed a separate group, Friends of Yatsu Higata (FoYH) in 1982 to carry out regular removal. Initially, all of city, prefecture and national governments refused to handle the wastes recovered from the site. But these groups persisted in waste removal and in lobbying the government, and other environmental groups

joined the effort at times. Currently three environmental groups (Study Group, YHEBC, FoYH) continue to collect waste regularly (weekly or monthly depending on the group) and the Narashino City collects the removed wastes.

Monitoring of Water Quality: The three governments conducted a survey of water quality as part of an environmental survey in 1995 and the results are being analysed in the Expert Panel set up by Environment Agency. Members of Wild Bird Society of Chiba formed a new group, Yatsu Higata Survey Team, to monitor water quality monthly since 1993.

Monitoring of Bird Population: The Environment Agency counts twice a month to collect data for the management of a National Wildlife Protection Area and the Narashino City counts two times a month to provide information for the visitors to the Centre. WBS Chiba and APTFC counts jointly three times a year and there are other organisations and individuals who conduct counts regularly and in some cases, there are data sets of regular counts for more than 20 years.

Bird Watching and Nature Observation Visits: Bird watching and nature observation visits are organised by numerous groups. The Nature Observation Centre has a monthly visit programme and WBS Chiba, APTFC, WBSJ Tokyo jointly organise visits once a month and WBSJ Chiba has a separate monthly visit programme. JSPB has a bird watching class targeted at children

Training of Volunteers: The Nature Observation Centre started a training course for volunteers to acquire skills necessary to become a voluntary leader of nature observation visits in 1995. The course is held twice a year with a capacity of 20 people each time. Attendants of the course are both residents of Narashino City and from outside. So far, 240 people have completed the course. After the course, many of them help voluntarily visitors to the centre by teaching how to use binoculars or organising games for the visitors.

The Yatsu Higata Nature Observation Centre

In the process of designing an institution for conservation, education and public awareness for Yatsu Higata, the Environment Corporation, which is a government agency and jointly financed the project of Yatsu Higata Park with Narashino City, convened meetings of the Committee for the Basic Plan of Common Welfare Facility Design. Two of national NGOs, WBSJ and JSPB, were represented at the committee but local environmental groups were not represented and instead, they were consulted in separate meetings.

The Yatsu Higata Nature Observation Centre was inaugurated in 1994 and it is managed by the Environment Department of the city. Three officers of the Environment Department of the city are seconded to the centre. After the opening of the centre, local groups were more actively involved. Narashino City set up the Yatsu Higata Nature Observation Centre Management Discussion Group. Participants of the Discussion Group are defined by a regulatory code (an internal memorandum) of the Environment Department of the city and appointed by the mayor of the city. Five categories of participants are defined as: 1. representatives of environmental groups (three groups), 2. NWPA managing officer, 3. a president of the Environment Commission of the city and a president of the Nature Conservation Commission of the city, and 4. an academic expert. The fifth category is further divided into three types: 5-1. a president of the PTA of a local primary school, 5-2. president of the Tyou-kai (a voluntary association of an area of the city), and 5-3. citizens of the city

(six persons).

The objective of the Discussion Group is for Narashino City to consult users of the centre and residents of the city about its programmes and in particular, about developing an environmental education programme from their points of view. Apart from the academic expert, the other participants are residents of the city.

The Environment Conservation Exchange

Environmental groups have been consulted about environmental concerns before but they were ad hoc meetings. In 1996, Narashino City initiated an establishment of the Yatsu Higata Environment Conservation Exchange. The Exchange was defined by an internal memorandum of the Environment Department of the city and it stipulated to involve environmental groups who have been involved in conservation of Yatsu Higata. In effect, the six local environmental groups and two national NGOs listed in the section of the stakeholders have been active in the conservation of the Yatsu Higata are represented.

The purpose of the Exchange is to foster co-operation between managing authorities and environmental groups in conservation of the site and to develop an environmental education programme. The Exchange meets four times a year. Although the Discussion Group is charged with similar tasks, the depth of knowledge about the ecosystem of the site and conservation experiences are better amongst the environmental groups and to take advantage of them, a separate mechanism has been set up.

Factors Promoting the Involvement of Local Communities

First of all, it has to be remembered that, in the case of Yatsu Higata, local communities were involved spontaneously rather than at the instigation of managing authorities. Local people decided to form environmental groups because the large-scale and rapid loss of nature alarmed them. The existence of dedicated environmental groups and their effective communications in public awareness involved more local people into these groups and in activities such as collecting petitions.

Local government, in this case Narashino City, decided to involve local communities because they realised that without support of local environmental groups, the Nature Observation Centre will not be able to sustain the support of a larger public or be effective in public awareness and education. They also recognised the value of the experiences over long time.

Local environmental groups and members of local communities agreed to become members of the Discussion Group or the Exchange because they recognise it is ultimately the managing authorities who have the legal rights to take conservation measures such as issuing permits for entry for waste removal or controlling algae blooms. They also saw potential of the Nature Observation Centre to educate the public and raise awareness of wetland values. Finally, they are turning to the Nature Observation Centre to find expertise they do not have, such as that related to benthic animals.

RESULTS

Main Results of Local Participation for the Wetland Ecosystem

The most obvious change has been the end of illegal dumping of wastes. Awareness about the value of Yatsu Higata has filtered through to a broader public and changed their behaviour. In theory, this should have contributed to the maintenance of the number of shorebirds and other waterbirds using the site, although it is difficult to quantify how much this is so.

Changes of land use from a reclamation project site to conserving and designating for a Ramsar site was a result of environmental groups' direct actions such as petitions to authorities and public meetings, and organised visits to the site have all helped to influence a reverse of land use policy.

Main Results of Local Participation for the People Involved and for Management

The largest benefits for environmental groups and local community is the fact that the Yatsu Higata was saved from reclamation. Construction of Yatsu Higata Nature Observation Centre has also reinforced their own activities, especially public awareness activities by using nature interpretation facilities or using exhibition space of the centre. The number of visitors to the centre has gradually increased since its opening at 5,200 persons in 1994, 54,000 in 1995 and 56,000 in 1996. This includes those visitors who paid an entry fee and not those who come to the site for bird watching and a stroll. Profile of the visitors range from school children to the general public and times of use are fairly spread out (37% during weekdays, 19% on Saturdays, 44% on Sundays). The operation of the centre is financed by the Narashino City and entry fee is a nominal charge.

A minor cost of increased visitors to the centre and the site has been increase in volume of traffic and illegal parking in the residential area nearby. The centre has responded by creating a car park. Setting up of the Environment Conservation Exchange has allowed three management bodies to inform concerned environmental groups of their activities on a regular basis, especially on preparing a management plan. In turn, environmental groups gained an access to information about activities of management authorities.

The exchange also became an opportunity for environmental groups to share opinions with different groups about the conservation of Yatsu Higata since there was no such comprehensive forum before. The Discussion Groups have made visits to other wetland sites to develop education programme and their interest in managing the Nature Conservation Centre as their own facility is rising.

Steps Proposed for the Future

- A management plan needs to be finalised and a technique to control and achieve desired status needs to be identified or developed in the areas of water quality, sediments, and algae blooms.
- Roles and responsibilities between managing authorities and environmental groups and local communities need to be more clearly defined. This discussion could take place in the Environment Conservation Exchange and the Discussion Group. At the same time, accompanying system to support above mentioned responsibilities needs to be developed including commissioning some parts of management to environmental groups and paying for the costs.
- A monitoring design of avifauna should be reviewed and in addition to species and population monitoring, distribution, feeding behaviours and migration studies need to be

developed.

- For the management of wastes by volunteers, entry permits and injury insurance system need to be developed.
- Drafting regulations regarding the use of the tidal flat site is being considered to control negative activities such as feeding of gulls by the public and to give guidance to the entry into the tidal flat for educational use.

The present management structure of having three co-ordinating groups: 1. a group of managing authorities, 2. a forum of environmental groups, and 3. a discussion group of representatives of a local community may be suitable in cases where there are more than one managing authorities are involved and where there is no provision for direct involvement of local communities.

However, a local institution (in this case the Nature Observation Centre) which is represented in all the groups is the key in this process and it has to be staffed adequately to manage many meetings effectively and to work closely with local communities and local environmental groups. Currently the centre has 12 staff members and this includes three officers seconded from the Department of Environment of the city.

RECOMMENDATIONS

In the case of Yatsu Higata, there is more than 25 years of history of local conservation groups and communities actively involved for conservation of the site and this has undoubtedly influenced the fate of the site from for reclamation to designation as a National Wildlife Protection Area and subsequently a Ramsar site. However, a conscious effort in involving local people and local conservation groups are quite recent phenomenon since the establishment of the Yatsu Higata Nature Observation Centre, therefore, recommendations will be based on this experience.

Managing Institution

- A locally based institution dedicated for public awareness and education should be created by a local government.
- The institution should be charged with providing mechanisms for participation by local conservation groups and local communities.
- Such mechanisms should be supported and managed by the institution and the local government financially to ensure long term viability of such mechanisms.
- A local institute should identify local conservation groups and groups of local communities who are concerned with the wetland site.
- The participatory mechanisms should be open for all groups concerned as long as it is a manageable size.
- The institute should be represented at the discussion of a management plan and the institute should communicate the results of such meetings to local communities and local conservation groups, when direct participation of these stakeholders are not possible.

Monitoring and Evaluation

- The managing body should identify ongoing monitoring activities of local conservation groups and communities.
- Results of such monitoring should be considered by the managing authorities in the preparation of a management plan.

