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NGOs in EIA

The role of environmental non-governmental organisations in the environmental impact assessment process in Japan

Jehong Ryu, James Daniel Walmsley, Paul Slinn and Sachihiko Harashina

The enactment of EIA law in Japan in 1999 has been particularly significant for environmental NGOs, and for public participation in EIA. This research used a case study to analyse the activities the environmental NGOs in an EIA for land reclamation on the Awase Tidal Flats, Okinawa City. The NGOs appeared to have well developed technical expertise in gathering reliable data on conservation issues. However, their knowledge of the activities of other NGOs, and their awareness of the procedural steps and timing constraints of the EIA procedure, severely compromised their ability to contribute effectively to the EIA. To improve the involvement of environmental NGOs in EIA, the formation of networks with other local, national and international environmental NGOs can enable more efficient use of scarce human and financial resources and expert knowledge.

Keywords: NGOs; EIA; Japan

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ON THE 12TH OF JUNE 1997, the Japanese Diet passed the Environmental Impact Assessment (EIA) Law,¹ which was then fully implemented two years later, on the 12th of June 1999.

The enactment of the EIA law has had a crucial significance, in particular, on the activities of environmental non governmental organisations (NGOs). Previously, Cabinet Decision EIA (termed *Kakugi-Asesu* in Japan) was recommended in guidelines but limited the participants in the EIA process on the basis of their area of residence (Harashina, 2000). By contrast, the EIA law provides the opportunity of participation to everybody who has an interest in environmental conservation (EIA law, Articles 8 and 18).

There has been limited research into the role of environmental NGOs in Japan in general and, specifically, since the EIA law was enacted in 1999. However, Japanese civil society in general has in the past been regarded as weak and ineffectual (van Wolferen, 1993) though, more recently, it has been suggested (Hirata, 2002) that this has begun to change. This is not reflected in a recent report by the OECD (2003), which notes that environmental NGOs remain weak in terms of membership, staff and resources, lack representation on consultative bodies and have limited recognition within the legal system.

It was widely expected that environmental NGOs would begin to participate much more actively in the EIA process in light of the greater opportunity for

participation afforded by the new law. For example, Aoyama (1997) reported on NGOs' support of an EIA that was carried out by a local resident's organisation, parallel to the developer's formal EIA in a redevelopment project in Tokyo. Further, Ryu and Harashina (1999) demonstrated the effectiveness of NGOs' offering local environment information based on their long observation of activities at a waste landfill project proposed at the Fujimae tidal flats, Japan.

O-kubo (1997), whilst evaluating the EIA process in Japan, recommended a number of improvements, such as the facilitation of enhanced participatory procedures, highlighting the importance of the role that environmental NGOs play in the EIA process. Most research to date has emphasised the necessity of improvement of participatory procedures in the EIA system.

Research has not, however, explored how the participation of environmental NGOs has changed since the enactment of the EIA law, or investigated the actual role such organisations play in the EIA process. Therefore, in this research, through the use of a case study, the aim is to further understanding of the role of environmental NGOs and suggest ways in which their involvement might be strengthened in the future.

Hypothetical role of NGOs in EIA

Role of environmental NGOs in civil society

Environmental NGOs (Yamamura, 1998) are often said to be advocates of activities such as introducing environmental policies and provision of information related to environmental issues. At a more general level, Fowler (1996) describes two critical ways in which NGOs can enhance legitimacy, and hence democracy, in civil society. First, NGOs can make the political process more inclusive, increasing the level of engagement of citizens interested, and able, to participate in the political system, and secondly, by making representatives of government more accountable for their behaviour and performance.

In discussing the development of environmental movements in the USA, Weber (2000), identifies four broad ideological perspectives — preservation, conservation, contemporary and grass roots ecosystem management (GREM) — that have arisen progressively through time and that govern their actions. Each of these perspectives has endured and continues to co-exist and play a part in the overall effectiveness of the NGO community.

Yamamura describes the roles of environmental NGOs in global environmental issues as:

- to take action on behalf of, and for the benefit of, the earth, human beings and the nation;
- to provide citizens with expert knowledge and information, which are obtained from their activities; and

- to advocate more sustainable policy options when government or public bodies propose the implementation of unsustainable policies.
- From this, it could be expected that the common roles of environmental NGOs are:
- To advocate more sustainable alternatives at the stage of policy making or decision making where the benefit of the earth, human being, and nation may not necessarily take priority over that of a government or a public or private enterprise (the role of proponent of a policy or project).
- To provide citizens with expert knowledge and information obtained from their research activities, in order to facilitate participation in, and improve understanding of, environmental issues among the public (the role of providers of information).
- To monitor government proposals and the activities of enterprise for the degree to which the impact the proposal might have on the environment is considered (the role of watchdog).
- To urge other actors, such as government or enterprise, to facilitate environmental NGOs in the performance of these roles appropriately (the role of a pressure group).

Hesp (1995) applied a case study approach to evaluate the involvement of NGOs in the formulation of a national nature conservation plan, a golf course development, and a waste management plan in Singapore. Hesp, however, does not discuss the details of the method adopted for the case study.

More general texts discuss the issues surrounding the study of pressure groups, of which NGOs are a subgroup. Baggott (1995) considers the case study to be the main method of investigation used by those studying pressure groups. Whilst there is nothing inherently wrong with the use of case studies, Baggott warns that they can never prove anything — evidence gathered in case studies can either be used to support generalisations that are established by other means, or to focus attention on such generalisations. Rawcliffe (1998, page 32), commenting on the pattern of studying pressure groups, states, "... perhaps, most fundamentally, conventional ... analysis has failed to convey the dynamism of the environmental movement in terms of its values, organisational forms and wider impact". This paper acknowledges this failure, and attempts to address these concerns.

Role of environmental NGOs in the EIA process

A number of commentators have made comments on the theoretical role of NGOs in EIA, and the benefits of encouraging such involvement (see, for example, Sheate and Atkinson, 1995, Sheate, 1996, Haeuber, 1992, Eckman, 1996). The survey also revealed that there appears to have been little in the way of primary research into the actual involvement of NGOs in practice.

Tsuji (2001) used a case study as the basis for exploring the role of NGOs and other interest groups in

an EIA exercise for a proposed landfill project on the Fujimae Tidal Flat, Japan. The method adopted, although not explicitly detailed, appears to be a record of events surrounding the EIA. More specifically, it details how the EIA report described impacts on migratory birds and tidal flat biodiversity, coupled with the results of independent surveys, and the comments made by various interested parties on the EIA report, and the actions of NGOs, government officials and the academic community.

When the general role of environmental NGOs mentioned above is compared to the EIA process, particularly in terms of public participation in EIA, the potential role of environmental NGOs in the EIA process might be:

- As providers of information: to provide the proponent of the project and other interested parties with their version of expert knowledge and environmental information obtained from the activities of the environmental NGOs in the location where the project is being proposed. Sheate (1996) and Sheate and Atkinson (1995) also consider this a significant benefit of enabling early NGO participation in the EIA process.
- As watchdogs: to monitor the EIA process, for example, reviewing whether or not proponents conduct adequate baseline surveys of existing environmental conditions, the robustness of any predictions of impacts on the environment, and the evaluation of significant environmental impacts. Sheate and Atkinson (1995) specifically discuss the importance of this role, for example, NGOs can play a crucial part in the review of documentation, alert authorities to certain issues pre and post development, ensure relevant legal requirements are complied with (thus reducing the likelihood of a legal challenge). Eckman (1996) has carried out in-depth research into the vital role that NGOs can play in the monitoring of any project, post development.
- As pressure groups: to urge the decision maker of the project to conduct the EIA properly and to the standard required by legislation. This is particularly important in cases where an EIA is supposedly being undertaken correctly, but detailed

investigations reveal serious deficiencies in the quality of the baseline surveys and subsequent sections of the resulting environmental impact statement (EIS), thus undermining the entire EIA process.

In this paper, through the use of a case study, we evaluate the actual activities of environmental NGOs in relation to these three hypothetical roles in the EIA process.

Reclamation at Awase tidal flats, Okinawa

A reclamation project at the Awase tidal flats was selected as case study because:

- it is the first reclamation project in a marine area under central government jurisdiction to be subject to the EIA law; and
- the site of the proposed project is very important for migrant shorebirds, for which environmental NGOs have been active as advocates, in particular, in terms of surveying existing bird populations (see, for example, Yamashiro, 1999)

From this case study, we can identify how environmental NGOs engaged in the EIA process and, from this, suggest means by which their participation might become both more effective to the process, and more beneficial to the project concerned, in the future.

Overview of project

The Awase tidal flats are located in the Okinawa City area, in the Okinawa Prefecture (see Figure 1),² which is about 1,500 km southwest of Tokyo, the capital city of Japan. The tidal flats form part of the coastline around Nakagusuku Bay, which is the second largest bay in Japan.

The origins of this proposal are in 1987, when Okinawa City agreed on three draft options of a reclamation proposal (A plan: 340 hectares, B plan: 219 hectares, C plan: 292 hectares) at the Awase tidal flats. Subsequently, Okinawa City presented a more specific reclamation proposal with an area of 240 hectares in 1989. However, there were some requests from two resident groups to conserve an area of the beach along the coastline. In response, Okinawa City accepted the resident groups' requests in order to obtain the consent of local residents. This proposal was then placed in the Port and Harbour Plan of Nakagusuku Bay in Okinawa Prefecture in 1995.

The purpose of the project was to make Okinawa City a core city of the Okinawa Prefecture, providing employment, accommodation, leisure facilities, and academic services, through utilising dredged material resulting from maintenance of the special free trading area in Shinkou (which means new harbour) district next to Awase tidal flats. The scale of

The potential role of environmental NGOs in the EIA process might be as providers of information, as watchdogs and as pressure groups: using a case study, the actual activities of NGOs are evaluated in relation to these roles

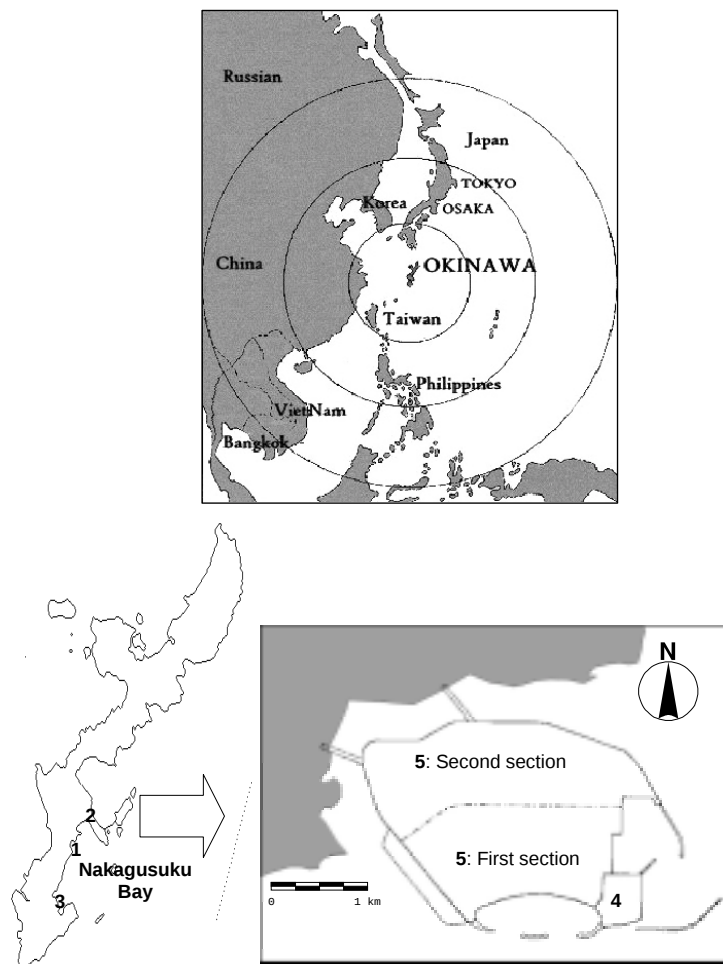


Figure 1. Location of Awase Tidal Flats, Okinawa Island, and map of Okinawa Prefecture and Awase reclamation project

- Key:
- 1: Awase Tidal Flats
 - 2: Shinkou District
 - 3: Sashiki Tidal Flats
 - 4: Reclamation by Okinawa Prefecture
 - 5: Reclamation by Okinawa Development Agency

this project finally became about 187 hectares, of which 178 hectares were to be reclaimed by Okinawa Development Agency, a central government body, and about nine hectares by Okinawa Prefecture (that is, there were, in essence, two proponents, one responsible for 178 hectares and the other for nine hectares). Following completion of the proposed reclamation project, the intention was to develop the area to enable the city of Okinawa to become a core city of Okinawa Island.

Overview of EIA process

Prior to the enactment of the EIA law in 1999, EIA procedures³ were followed on the basis of Cabinet Decision EIA provision. After the EIA law was implemented, the EIA procedures related to this project had to meet the requirements of the law. In effect, the introduction of the EIA law was not retrospective.

The initial EIA investigations were conducted over a six-year period, from 1993 to 1998. The proponent then presented a draft EIS to the public in March 1999 (prior to the enactment of the EIA law);

it was made available for a 30-day presentation period. During the presentation period, there were two explanatory meetings that were intended to provide the public with a better understanding of the purpose of project. Less than 50 local residents and members of environmental NGOs attended each explanatory meeting.

The main comment from local residents was the concerns for the safety of traffic and waste issues during the operation of the project as well as during construction. Thirteen opinions from six local residents were submitted, according to the EIA procedure. Opinions varied, ranging from support of the project to opposition to it. Most opinions were in opposition to the project, because of concerns about environmental destruction, and in particular, the possible impact on endangered species in Nakagusuku Bay.

Following the two explanatory meetings and the 30-day presentation period, the proponent, made revisions to the draft EIS, with reference to the opinions of the governor of Okinawa Prefecture on the 12th of October 1999. The final EIS was made public

in March 2000 (after the enactment of the EIA law). No further opportunity was allowed for residents to comment on the final EIS, despite the provision to enable changes between the draft EIS and the final EIS to be checked. Under normal circumstances, the EIA procedure finishes at this point.

However, as this project was part of a large reclamation project, it required an additional procedure under Reclamation Law.⁴ At this stage, there was no particular opinion from the Environment Agency⁵ or the local residents. The proponent finally had permission for reclamation granted by December 2000.

Methodology

A case study approach was adopted to determine the role of NGOs in the EIA process in Japan. The method used was:

- detailed literature review for research related to the field of NGOs and EIA;
- examination of documentary sources relating to the proposed land reclamation project;
- unstructured interviews with representatives of the Okinawa Prefecture and the Okinawa Development Agency, the proponents of the project;
- examination of other documentation relevant to the proposed project, including searches of local and national newspapers, magazines, and other media, as well as international academic journals and conference symposiums;
- unstructured interviews with representatives of seven local and two national NGOs and academic researchers and experts; and
- meticulous attention to the dates on which certain activities took place, so that the overall picture could be determined, and relationships among events established.

The aim of the literature review was to learn about the activities and key roles of environmental NGOs. The main sources for the literature survey were newspaper articles from the database of the *Ryukyu Shimpō* and the *Okinawa Times*, which are popular daily newspapers in the Okinawa Prefecture. More general surveys were undertaken of relevant publications and journal articles. Following the literature review, a number of interviews were carried out with representatives from key organisations, namely the environmental NGOs, the project proponents, and officers of the Environmental Policy Section in Okinawa Prefecture.

The NGOs interviewed were: Okinawa Environmental NGOs Network; Wild Bird Society of Okinawa; Ryukyu Wetland Study Group; Association of the Citizens Bringing-up an Environmental Self-governing Body; Association of Playing in Awase Tidal Flats; World Wildlife Fund Japan (WWFJ); and Wild Bird Society of Japan. Five of these were local groups and two were national. It was from

among the local groups that the Association to Save the Awase Tidal Flats was created to co-ordinate a common approach to the land reclamation proposal.

Throughout the interviews with these bodies, views about the EIA process, the actions of the other bodies associated with the EIA process, and the project itself were actively sought. From the written and oral materials acquired from the literature survey and the interviews, the activities of each body were identified according to the time scale. The activities of each body between 1987 and 2001 were examined, to determine what each body had been undertaking and when, and the subsequent roles in the overall process each played, both before and after the EIA was completed.

Analysis of the collected materials was undertaken in an effort to clarify the activities of environmental NGOs, to illustrate their roles and identify any networks and co-operation among them that had occurred, with respect to this EIA. In particular, in the analysis of the roles of environmental NGOs, the following criteria were applied.

The role of watchdog:

- Whether or not the environmental NGOs monitored the EIA process and the EIA report.
- Whether or not the environmental NGOs attended explanatory meetings, the environmental monitoring and investigating committee,⁶ and any other public meetings related to the reclamation project.
- Whether or not any monitoring activities undertaken by the environmental NGOs were carried out properly, in light of the relevant EIA procedures.

The role of provider of information:

- Whether or not the environmental NGOs provided local environmental information collected by their own survey activities to the project proponents as well as residents and other interested bodies.
- Whether or not the environmental NGOs' information was correctly provided, according to the EIA procedures.

The role of pressure group:

- Whether or not the environmental NGOs acted as a pressure group to ensure the EIA was conducted properly.
- Whether, and, if so, how, the environmental NGOs activities as a pressure group, influenced other bodies.

On the evaluation of the role of watchdog and provider of information, more specific criteria were needed to distinguish between them, because of dependence on the environmental NGOs' comments on the EIA process that had already been provided. Therefore, comments regarding the authenticity of EIA data were regarded as relevant to the role of

watchdog. Likewise, comments related to their own surveys were regarded as relating to the role of provider of information.

Results

Activities of environmental NGOs

To understand precisely what the environmental NGOs' had undertaken in relation to the proposed project, their activities were divided into three stages: pre-EIA; EIA; and post-EIA. The environmental NGOs' activities were revealed as follows.

At the pre-EIA stage, there were two environmental NGOs, the Wild Bird Society of Okinawa and the Ryukyu Wetland Study Group, that had conducted survey activities. Interviews with the representatives of these two organisations revealed that the Wild Bird Society of Okinawa had surveyed populations of migrant birds at the Awase tidal flats, whereas Ryukyu Wetland Study Group had surveyed benthic communities of the Sasiki tidal flats, adjacent to the Awase tidal flats.

At the EIA stage, the Ryukyu Wetland Study Group expressed some doubts about the draft EIS. These arose principally as a result of the draft EIS claiming that only very few shellfish were present in the area concerned. In light of these doubts, Ryukyu Wetland Study Group surveyed shellfish populations, in terms of shellfish types and abundance, in the Awase tidal flats area. On the basis of the survey results, it asked a member of Okinawa Prefectural Assembly to make an enquiry to the governor of Okinawa Prefecture about the authenticity of the draft EIS with respect to the section on shellfish. During the same period, the Wild Bird Society of Okinawa continued to undertake its annual observations of migrant birds around the Awase tidal flats.

At the post-EIA stage, 11 representatives from both non-environmental and environmental NGOs set up the Association to Save the Awase Tidal Flats (ASATF), which worked to focus the environmental NGOs' activities. In particular, ASATF requested the Prefectural Assembly and the governor of Okinawa Prefecture to perform the EIA again, during

the review period under the Reclamation law. Also, ASATF held meetings with local residents to facilitate further discussion of the Awase tidal flats.

Following the proponent being granted permission to reclaim Awase tidal flats, ASATF conducted a petition, collecting signatures to demand a local referendum ordinance. The purpose of the referendum was to use it as a means to determine whether local residents were in favour of the project or not. At the same time, ASATF continued to request to the governor of Okinawa Prefecture that the EIA be conducted again.

Network amongst the environmental NGOs

Evidence gathered suggested that there were two types of network functioning amongst the environmental NGOs — one of communication and co-ordination among local environmental NGOs, and another among environmental NGOs at the local and national level.

The networks amongst the local environmental NGOs first appeared in August 2000, at the time of the review period under the Reclamation law. At this time, Ryukyu Wetland Study Group and the Organisation of Playing in Awase Tidal Flats played key roles in linking with other environmental NGOs in Okinawa Prefecture. This initial network also made a written representation to the project proponents regarding the inadequacy of EIA.

However, this network initially lacked influence, until the proponent had permission to reclaim the Awase tidal flats, by which time it was too late. After this permission was granted, the network of environmental NGOs grew, the ASATF was established, and the network was strengthened. Co-operation amongst the local environmental NGOs mainly involved sending written opinions requesting the EIA again under the joint ASATF signature, and conducting a petition to collect signatures demanding a local referendum ordinance.

Subsequent to the formation of the local network, the local environmental NGOs established a network with two national environmental NGOs — the Japan Wetland Network (JAWAN) and the WWFJ. This network was built upon individual contacts within each organisation communicating with other individuals, rather than the establishment of more formal linkages between the organisations themselves.

The Ryukyu Wetland Study Group had previously been in contact with WWFJ, who had provided financial support for surveying benthic communities of the Sasiki tidal flats, adjacent to the Awase tidal flats between 1998 and 1999. However, the first correspondence with national environmental NGOs regarding the Awase tidal flats and the proposed reclamation scheme did not take place until October 2000. At that time, national environmental NGOs held an international wetland symposium in Okinawa to raise awareness in Japan and beyond of the proposal to reclaim the Awase tidal flats.

Following the proponent being granted permission to reclaim Awase tidal flats, the local NGOs conducted a petition to demand a local referendum ordinance to determine whether local residents were in favour of the project or not

Following the symposium, the national environmental NGOs acted together with the local ones, for example, to allow the local environmental NGOs to meet with the Minister of the Environment. The national environmental NGOs also facilitated visits by the local environmental NGOs to the Ministry of Land, Infrastructure and Transport and the Ministry of the Environment, for them to ask for reconsideration of the project. In summary, the main support from national environmental NGOs was to make local issues known broadly to central government.

Evaluation of the role of watchdog

First of all, as a watchdog with regard to the conduct of the EIA, the environmental NGOs commented on the draft EIS and pointed out that the results of the additional survey carried out by the proponent were not included in the final EIS.

There were 13 opinions from six local residents about the draft EIS. Among them, the Wild Bird Society of Okinawa was the only environmental NGO; it commented (Okinawa Development Agency, 2000):

“*Scartelaos histophorus* [a type of fish], which is a critically endangered species, and lives in the Nakagusuku Bay, is on the verge of extinction as a result of reclamation of the Shinkou district next to the Awase tidal flats. Only nine *S. Histophorus* were observed at present, although more than tens of thousands of them lived there before the reclamation of the Shinkou district. Therefore, the reclamation of the Awase tidal flats will bring about the extinction of *S. Histophorus*, and must not be done.”

The proponents' response was (Okinawa Development Agency, 2000):

270 *S. Histophorus* were observed at the Shinkou district. When the reclamation of the Awase tidal flats is finished, the present sandy tidal flats will remain, and also artificial tidal flats will be developed for the *S. Histophorus* according to experts' advice. Therefore, it is thought that the habitat for *S. Histophorus* will be conserved.”

From the comment and reply between the Wild Bird Society of Okinawa and the proponents, however, it is clear that the existing habitat of *S. Histophorus* had already become seriously damaged. It is therefore thought that the concerns about the habitat loss of *S. Histophorus* were justified, and that the threat to *S. Histophorus* was real. This confirms the environmental NGO's role as watchdog.

The proponents carried out an additional benthic survey between December 1999 and March 2000. However, they did not include the results in the final EIS. Therefore, the environmental NGOs pointed out, as watchdog, that the results of the additional

survey were not reflected in the final EIS. Although these results were made public subsequently, it was clear from the results of the interviews that this omission damaged the proponents credibility with local residents.

The environmental NGOs' participation at both the explanatory meetings and at the environmental monitoring and investigating committee for the relocation of *Pseudodichotomosiphon constrictus* (a type of seaweed), which is also a threatened species, were examined in order to understand the role of a watchdog in terms of monitoring the information provided by the proponents.

Two explanatory meetings were held on the 24th and 28th of April 1999. During an interview with the Environmental Policy Section of Okinawa Prefecture, it was revealed that only a small number of members of the Okinawa Environmental Network attended the explanatory meetings. However, Fujii, the representative of the Ryukyu Wetland Study Group, reported that the environmental NGOs as an observer were very active in the environmental monitoring and investigating committee considering relocation of *P. constrictus* and marine plants.

It is difficult to say with any certainty that environmental NGOs actively participated as a watchdog, because of the small number who attended the explanatory meetings and the comments from only one environmental NGO to the draft EIS. However, it is clear that the environmental NGOs were actively monitoring the environmental monitoring and investigating committee for the relocation of *P. constrictus* and marine plants.

Evaluation of the role of provider of information

The Ryukyu Wetland Study Group and the Wild Bird Society of Okinawa carried out their own separate surveys at the Awase tidal flats.

The Ryukyu Wetland Study Group surveyed the species abundance and population levels of shellfish between June and September 1999, because it considered that too few species and numbers were reported in the draft EIS. Although the proponents identified 18 species of shellfish in the draft EIS, the Ryukyu Wetland Study Group identified 72 difference species, or four times as many. Subsequently they collated them with the results from a Science Report produced by WWFJ, the “Red book of tidal flats”.

The results of these combined studies revealed that 14 species of shellfish were critically endangered, endangered or vulnerable. However, only one type of shellfish classified as an endangered species was referred to in the draft EIS. As a result, the proponents identified more than 210 species of shellfish, 25 of which were classified as endangered.

The Wild Bird Society of Okinawa had undertaken surveys of the number of migrant birds such as plovers and snipe in the vicinity of the main islands of Okinawa, Miyako Island and Ishigaki Island. In particular, through the establishment of 23 observation

points on the main island of Okinawa, it had observed migrant birds from March 1996 to May 1999. Also, at the Awase, Mankou, and Onaga tidal flats, where large numbers of migrant birds visit, the Wild Bird Society of Okinawa had taken observations of migrant bird numbers almost once a month.

The next stage of the research was to explore how the environmental NGOs utilised the results of their own surveys, and how information was shared and exploited amongst the other interested bodies.

The Ryukyu Wetland Study Group provided the results of their own survey to a member of Okinawa Prefectural Assembly and the *Okinawa Times* in December 1999. As the draft EIS had already been submitted at this point, this option was chosen to ensure that the findings were included in discussions. Comparative data was provided, which enabled other bodies to more easily interpret the data contained within the original EIS.

The late involvement of Ryukyu Wetland Study Group meant that it could not provide this key local environmental data for the proponents according to the EIA procedures, and so needed to find an alternative means of getting its survey results considered. The evidence obtained for this case study indicated that the provision of the survey results to the member of Okinawa Prefectural Assembly and the *Okinawa Times* had the eventual effect of prompting the proponents to carry out much more comprehensive surveys of the shellfish populations, despite occurring outside the EIA procedure.

The Wild Bird Society of Okinawa presented the results of their annual observations of migrant birds to the *Journal of the Bird Society of Japan*. This confirms the local significance of Awase tidal flats as a habitat for migratory birds:

“There were no tidal flats where over one thousand migrant birds visited in Okinawa Prefecture. The greatest numbers of migrant birds were observed at Awase tidal flats, but the number of migrant birds was only 877.” (Yamashiro, 1999).

However, the Wild Bird Society of Okinawa did not provide these results for the proponents according to the EIA procedure, just as the Ryukyu Wetland Study Group had also failed to do.

The environmental NGOs did not play the role of providers of information, in terms of providing their own survey results to the proponents in the EIA process. However, it is considered that the provision of their survey results for the other bodies was important, enabling them to make judgements more easily about the data contained in the draft EIS.

Evaluation of the role of pressure group

The environmental NGOs appealed directly and indirectly to the decision-maker of the project, not only regarding the inadequacy of the EIA, but also

the inappropriateness of the project itself. It was August 2000 when nine local environmental NGOs, including the Wild Bird Society of Okinawa and the Ryukyu Wetland Study Group, acting together, sent their first written opinion, directly requiring the EIA to be conducted again, to the decision-maker.

The time when they handed in their written opinion coincided with the review of the final EIS at the decision-making stage under reclamation law. This meant that the EIA procedure had already finished. Following this, the network of environmental NGOs sent a petition to the proponents requiring that the project be reconsidered, and the EIA conducted again. This petition was sent on eleven separate occasions between August 2000 and July 2001.

The environmental NGOs sent petitions to the Environmental Policy Section of Okinawa Prefecture and the Okinawa Prefectural Assembly, to press the proponents on both the inadequacy of the EIA and the inappropriateness of the project itself. Also, with the co-operation of JAWAN and WWFJ, the local environmental NGOs visited both the Ministry of the Environment and the Ministry of Land, Infrastructure and Transport in December 2000 to request reconsideration of the project. However, on the very same day that the environmental NGOs visited the two ministries, the Minister of Land, Infrastructure and Transport issued permission for reclamation with regard to the site proposed in the EIA (nine hectares). Also, the following day, the governor of Okinawa Prefecture issued the permission for reclamation to Okinawa Development Agency (178 hectares).

Despite this, the local and national environmental NGOs, such as ASATF, WWFJ and JAWAN, revisited the Ministry of Environment to ask it to present its views on the reclamation of Awase tidal flats in terms of conservation of the route of the migrant birds. They also appealed to the Association of the Members of Diet for Checking Public Projects and the Lawyers' Association of Japan to press proponents and to make widely known the inappropriateness of the project. Moreover, the environmental NGOs started to conduct a petition, collecting the signatures of those residents' who opposed the project, after the permission of reclamation was issued.

Although the environmental NGOs obtained 10000 signatures (over five times the number required), the Okinawa City Assembly rejected the petition to invoke a local referendum ordinance on the land reclamation scheme

The purpose of this campaign was for the environmental NGOs to request the enactment of a local referendum to gauge the views of local residents of the project. At least 1800 signatures⁷ are required to invoke a local referendum ordinance. In this campaign, in which ASATF played a key role, approximately 10,000 signatures were obtained between April and May 2001 — over five times the number required. The signatures were then submitted to the mayor of Okinawa City. The Okinawa City Assembly, however, rejected the petition, with eight in favour and 28 against.

Through reviewing the activities of the environmental NGOs, it is apparent that they acted too late in the process to maximise their potential influence. In spite of this, the petition campaign is considered to have had a substantial influence on the citizens of Okinawa in terms of improving their level of awareness of environmental issues. The proponents decided to delay the reclamation project to the end of 2001, although they were planning to initiate reclaiming the Awase tidal flats from August 2001.

The causes of the delay to project and of additional surveys by proponents are diverse, but, with the evidence collected, it is possible to contend that one of the main causes is that public opinion changed, as a result of the provision of information by the environmental NGOs. In conclusion, the petition campaign, initiated by the environmental NGOs, had a profound influence on the proponents and prompted them into considering in more detail the impact of their development on the environment.

Conclusions

To make suggestions for a more effective EIA system, it is necessary to examine the problems that were recorded in terms of both the participation of the environmental NGOs in the EIA process, and also the practical aspects of the EIA process, as dictated by the proponents.

In terms of the participatory aspects of the environmental NGOs in the EIA process, two problems were apparent. First, the environmental NGOs should provide local environmental information acquired through their activities to the proponent, according to the EIA procedure, within the timeframes specified in the legislation. In this case, however, almost all the environmental NGOs, except for the Wild Bird Society of Okinawa, missed the deadline for providing environmental information.

It would appear that a lack of understanding of the EIA system as well as a lack of awareness of the timeframes involved in the process reduced the ability of the environmental NGOs to participate effectively in the EIA. Secondly, it is thought that the environmental NGOs should form networks at an early stage, in order to collate information and co-ordinate scarce human and financial resources.

From the case study, it was apparent that

co-operation and networking between the local and national environmental NGOs did occur, as well as amongst the local environmental NGOs. In this case, however, the timing of networking among the environmental NGOs was late on in the EIA process and, as a result, their role of watchdog and provider of information was severely limited. Considering that the EIA had interdisciplinary aspects, and, as with any NGO, the environmental NGOs have very limited financial and human resources, it is of vital importance that they should network among themselves at an early stage to maximise their contribution and role in EIA.

In terms of the practical aspects of the EIA process as driven by the proponents, insufficient openness with important information in both the draft EIS and final EIS was seen to be a major problem. This contrasts with many other systems of EIA, which make clear provision for public access to the information contained in the EIS.

For example, Mr Fuji of the Association to Save the Awase Tidal Flats reported that, when residents attending the explanatory meeting asked the proponents if it was possible to photocopy the draft EIS, the proponents replied: "If you photocopy ten to twenty sheets, we will accept your request". When the environmental NGOs asked to borrow a copy of the draft EIS, the proponents refused their request. Moreover, according to Mr Hanawa, who visited the proponent's office to read the draft EIS, "it was put in the corner of the office of the Okinawa Development Agency, and the place was so crowded that he could not read it carefully and comfortably".

In fact, the volumes of the draft and the final EIS are approximately 1000 pages, and contain complex concepts, such as mathematical formulation and modelling. As a result, it was very difficult for residents or any other interested persons to read and understand the key environmental impacts likely to arise from the proposed development.

In light of this limited public availability of both the draft and the final EIS, and the use of complex information and terminology, incomprehensible to the layperson, it is vital that steps are made in the future to overcome these problems. By behaving in a more open, transparent and honest manner, proponents could provide concerned environmental NGOs and local residents with the information they require, and, as a result, gain a much greater level of trust and accountability with such stakeholders.

Through a case study, this research attempted to clarify the role and participation of environmental NGOs in the EIA process, focusing mainly on their activities related to participatory aspects rather than technical aspects. As a result of this research, the following conclusions can be drawn.

First, it is difficult to confirm that the environmental NGOs fully accomplished the three hypothetical roles that were set up at the beginning of this case study. In particular, the role as a provider of information, in terms of providing their own survey

results for the proponents in the EIA process, was inadequate. The main reason for this lack of provision of information appeared to be a lack of awareness amongst the environmental NGOs of the timeframes involved with the EIA procedure, because of a lack of understanding of the system.

Secondly, it was revealed that the proponent, who has to consider mandatory procedural requirements as most important, subsequently does not take seriously comments made outside the EIA procedure. Therefore, it is desirable that, in future, environmental NGOs begin to co-ordinate their efforts and information at an early stage in the EIA process, to provide their accumulated information for the proponents according to the procedures and timeframes prescribed by the EIA law.

Finally, it was shown that the proponents' practice of the EIA process was deficient in some areas. A particular problem appeared to be an unwillingness to have a transparent and open approach to the availability of EIA documentation. In future, proponents should provide such documentation, not only for environmental NGOs but also for local residents, and any other interested parties, in order to obtain more local environmental information, to gain greater respect amongst the community, and to achieve a greater level of accountability. This is one of the principles central to the new EIA law (Articles 8 and 18 refer explicitly to allowing the participation of anyone who has an interest in environmental conservation), however, it remains to be seen whether this principle can be applied in practice.

Appendix 1. Awase Flats reclamation timing and key events

Date	Event
March 1987	Okinawa City settled on the drafts of reclamation proposal (A plan: 340ha, B plan: 219ha, C plan: 292ha)
March 1989	Okinawa City presented a more specific reclamation proposal (scale of reclamation: 240ha)
October 1989	Two residents groups (Association for the Realisation of Awase Revival and Association of Awase Bizuru) requested to conserve an area of the beach along the coastline
February 1990	
March 1990	
May 1991	Okinawa City accepted resident groups' request
November 1995	The reclamation proposal was placed in the Port and Harbour Plan of Nakagusuku Bay in Okinawa Prefecture
1993–1998	Proponents (Okinawa Development Agency and Okinawa Prefecture) conducted the EIA
1996–1999	The Wild Bird Society of Okinawa (established in 1973) observed migrant birds at the main land of Okinawa, Mayako island and Ishigaki island. After that, it presented the results of its annual observation of migrant birds to the Journal of Bird Society of Japan in 1999
1998–1999	The Ryukyu Wetland Study Group (established in 1997) surveyed the marine creature at the Sasiki tidal flats next to the Awase tidal flats
March–May 1999	Presentation of the draft EIS
April 1999	Holding two explanatory meetings Number of residents in attendance: 24th, 30; 28th, 50
June–September 1999	The Ryukyu Wetland Study Group surveyed the species abundance and population level of shellfish because it thought that too few species and numbers were reported in the draft EIS
October 1999	The governor of Okinawa Prefecture commented on the draft EIS
November 1999	Presentation of the revised draft EIS
December 1999	The Ryukyu Wetland Study Group provided the result of shellfish survey to a member of Okinawa Prefectural Assembly and the Okinawa Times
December 1999–March 2000	Proponents carried out an additional survey with regard to marine creatures
February 2000	The first environmental monitoring and investigating committee was held
March–April 2000	Presentation of the final EIS
May 2000	The proponents submitted application for reclamation to the Ministry of Land, Infrastructure and Transport
October 2000	JAWAN hosted international wetland symposium in Okinawa, WWFJ and local NGOs co-operated with JAWAN
December 2000	JAWAN, WWFJ and local NGOs visited both the Ministry of the Environment and the Ministry of Land, Infrastructure and Transport to request reconsideration of the project
December 2000	Minister of Land, Infrastructure and Transport issued permission for reclamation
January 2001	11 representatives from both non-environmental and environmental NGOs set up the Association to Save the Awase Tidal Flats (ASATF)
April–May 2001	ASATF carried out signature-collecting campaign to request the enactment of a local referendum to gauge the views of local residents of the project
June 2001	The second environmental monitoring and investigating committee was held
July 2001	Okinawa City Assembly rejected the enactment of a local referendum with eight in favour and 28 against
July 2001	The third environmental monitoring and investigating committee was held
July 2001	The proponents decided to delay the reclamation project to experiment with the relocation of <i>P. constrictus</i>
October 2002	Installation of pollution preventing fence to commence the shore-protection work
December 2002	Shore-protection work commenced to carry out the reclamation project.

Notes

1. The English translation of the EIA law is available at <<http://www.env.go.jp>>, last accessed 28 July 2004. Click English at the top of the page.
2. Okinawa Prefecture includes the main Okinawa island (population 1,198,840; 1,201 km²), which is denoted by the entire region shown in Figure 1. Okinawa City is a municipality on the eastern coast of Okinawa island.
3. The EIA procedure of this project was applied partly with *Kakugi Asesu*, as recommended in government guidance. In particular, in terms of public participation, the regulation of *Kakugi Asesu* was applied. The EIA procedure of *Kakugi Asesu* is as follows: after preparing a draft EIS, the proponent should send it to the relevant prefecture and municipalities and make it public for 30 days (referred to as the presentation period). At this time, a person who lives in a project area can comment on the draft EIS. The period for comment is 45 days (after these procedures, the EIA procedure of this project was transferred to the regulation of the EIA law). Making a summary of the comments and response to them, the proponent shall submit the summary and response to the related prefecture and municipalities. The governor of the prefecture shall make comments in 120 days. In doing so, the governor must consult the related municipalities. After considering those comments, the proponent shall prepare a final EIS by revising the draft EIS. The final EIS will be transmitted to the competent authority and the Ministry of the Environment (for more details regarding these procedures, see Kurasaka, 2002).
4. The Reclamation Law was first enacted in 1921. It was revised in 1973, and EIA documentation became a requirement for the project proponent who submits an application for reclamation permission. Any reclamation project greater than 50 hectares requires EIA. According to reclamation law, when the proponent submits the application for reclamation permission, the final EIS is made public for three weeks. At this time, interested parties can send a written comment to the proponent.
5. The Environment Agency became the Ministry of the Environment (MOE) on the 6th of January 2001. According to the EIA law, the MOE can send its opinions on the final EIS to the competent authority. The competent authority shall consider the comments of the MOE and can, if necessary, require the proponent to revise the EIS within 90 days from the day of receiving the final EIS.
6. The environmental monitoring and investigating committee was established in February 2000. The purpose of this committee was to give advice to the proponent through discussion of the environmental considerations of the wetland and the marine plants around the project area. This committee met regularly from February 2000 to the current date. In this study, environmental NGOs' activities were analysed at the time of the third meeting of this committee.
7. Signatures from one-fiftieth of those who have a right to vote in Okinawa City are required in order to request the enactment of a local referendum ordinance.

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