

Environmental Preservation Activities by Local Citizens in Kitakyushu: The case of the NPO Kitakyushu Biotope Network Research Group

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Background

1-1 Some facts on the city of Kitakyushu

The City of Kitakyushu is one of Japan's most important industrial cities located in the northern part of Kyushu, which is the most western island of Japan. In the north, it is bordered to the Genkainada Sea, in the east to the Seto Inland Sea. Kitakyushu covers a land area of about 480km². It has been formed in 1963 through the unification of 5 cities: Kokura, Yahata, Moji, Tobata and Wakamatsu. After the unification, these 5 cities have each become the wards of Kitakyushu, with Kokura as the center ward. In 1974, the Kokura ward has been split into Kokura North and Kokura South; the Yahata ward has been split into Yahata East and Yahata West.

The industrialization of Kitakyushu has started in 1901 with the foundation of the state owned Yahata Iron and Steel Works. Since 1901, the Yahata Iron and Steel Works has been leading the steel industry worldwide for over more than 100 years as one of the biggest in its kind, and it has prospered as an important industrial base in Japan. The location of the steel plant was in the east corner of the so-called Dokai bay. The Yahata Steel plant is the symbol of Kitakyushu's industrial history. The industrial area has been spread along the Dokai bay and northern seashore on landfills won on the sea. At first, the residential area has spread in the flat plains between the industrial area and the southern mountainous area of the city. In a later phase the residential area has widely spread out into the suburban area as well.

Rapid economic developments were characterized by remarkable pollution of the air and the Dokai bay due to location of industries in the center of the city. Now, these environmental pollutions all belong to the past, and Kitakyushu is shifting towards an environmental city based on its industrial heritage as former manufacture city. At the moment, the zero emission project of the Ecotown, an industrial area with recycling related industries is the symbol of that. The main industry is changing from heavy steel and chemical industries towards environmental sounded industries.

Together with the industrialization of the city, the population had increased from about 50,000 people in 1900, till more than 1 million at the end of the 20th century. In 1980 the population reached about 1,060,000 people, but due to changes of its industrial structure, the population decreased with about 60,000 people.

Another problem is the decrease of the population in the city center and an increase of the population in the outskirts of the city. For the periods 1975-1985 and 1985-1995, we found that there was an increase of the population in the suburbs of Kitakyushu as well as in the neighboring cities. The population increased especially in the southern and in the western areas. The main reason for the shift of the population towards the suburbs is expensive land prices in the city center. This caused the development of residential areas in the suburbs on cheaper land. Besides of that, the use of the car has become a necessity and this resulted then in the increase of traffic jams. Still another problem is the aging of population in the inner city.

Many natural areas have been lost as result of the expansion of the industrial and especially the residential areas. There are mainly two reasons for the loss of many natural areas and the decrease of biodiversity;

- 1) Expansion of the city (urban developments), mostly related to the sprawling of residential area in the suburban area.

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- 2) The change of lifestyle in the so-called “satoyama” areas. Lifestyle in the satoyama areas was related close to agriculture and forestry. There was a good balance between human activities in a rich natural surrounding.

Satoyama (sato = village + yama = mountain) refers not only to forests but also to rice paddies, waterways, levees between fields, and ponds. These areas are different from places deep in the mountains where nature has remained untouched. People are living in and around the satoyama closely together with nature as they cut trees and tend to their fields.

1-2 Participation of local citizens in nature preservation

Concerning the preservation of nature, the role and participation of local citizens has become an important issue in recent years. In the city of Kitakyushu, many grassroots organizations are active in the field of environmental related matters. Most of them are related to environmental problems affected by our daily lifestyle, such as waste collection, especially along rivers and seashores, forest protection, etc. among the most known.

Environmental Activities undertaken by local citizens in the Wakamatsu Ward The case of the NPO Kitakyushu Biotope Network Research Group

Environmental grassroots organizations are very active in the Wakamatsu ward. In January 2003, 6 of these environmental grassroots organizations have come together and created the Wakamatsu Environment Network.

The 6 groups belonging to the Wakamatsu Environment Network are:

- NPO Kitakyushu Town Planning Support (urban planning and housing)
- NPO Kitakyushu Biotope Network Research Group (urban biotope network)
- Environmental Citizens Wakamatsu (general environmental problems)
- Green Group Hibiki (tree planting)
- Sustainable Energy Research Group (renewable energy)
- Wakamatsu Sustainable Agriculture System Research Group (agriculture)

At the end of 2003, the Wakamatsu Cosmos Group (general environmental problems) has joined the above-mentioned 6 groups. Below, the activities of the NPO Kitakyushu Biotope Network Research Group (under: NPO KBN) will be described more in detail.

The NPO Kitakyushu Biotope Network Research Group (NPO KBN)

The Kitakyushu Biotope Network Research Group (NPO KBN) has been found in July 2001. Members of the research group consist of university professors, company people, local government people, local citizens, students, etc. There are about 20 core members. At the end of June 2003 the Kitakyushu Biotope Network Research Group (KBN) has become a Non Profit Organization (NPO). The NPO KBN's main purpose is to work on issues of environmental protection, mainly dealing with preservation and or restoration of nature in the urban and suburban area as well as dealing with topics on environmental education.

Improvement of the environmental cannot only be realized on a scientific level any longer, but through participation (partnership) of local government, industries, research institutes and local grassroots environment citizens' organizations.

Description of Wakamatsu Ward

Up to now, nearly all the activities of the NPO KBN have been taking place in the city of Kitakyushu and mainly in the area of the Wakamatsu ward. In former times, the Wakamatsu ward was an island, and still these days Wakamatsu ward is surrounded by water. In the north by the Hibikinada Sea, in the south and east by the Dokai bay, in the west by the Onga River, and in the south west by the Egawa River. Wakamatsu can be divided into 6 zones each with its own characteristic.

- 1) The old center of the ward is situated in the east zone.
- 2) An old industrial area along the Dokai bay in the south.
- 3) A new residential area and academic zone, the so-called Kitakyushu Science and Research Park in the west.
- 4) In the north, the Wakamatsu seashore area where currently a new hub port is under construction and

where the so-called Ecotown, a new industrial area where mostly industries related to recycle techniques are located.

- 5) The zone geographically located in the center of Wakamatsu has a rich abundant nature, and can be split up in a western and eastern part. The western part is mainly occupied by agricultural activities.
- 6) The eastern part has plenty of beautiful mountains with the Ishimine and Takato Mountain as the highest ones.

Three of Kitakyushu's recently undertaken new urban developments, such as the new hub port, the Kitakyushu Science and Research Park, and the Ecotown project, which are important for the economic development of the city are located in the Wakamatsu ward.

Description of environmental activities

The NPO KBN's nature preservation activities can be divided into 4 sections:

- 1) The forest and bamboo forest preservation
- 2) River and seashore protection
- 3) Agriculture activities for children
- 4) The Biotope Project in the Kitakyushu Science and Research Park.

1) Forest and Bamboo Forest Preservation (thinning of bamboo forests)

Kitakyushu with a 1400ha area of bamboo forests is the city with the largest area of bamboo forests in Japan. Bamboo had played a crucial role in the lifestyle of former times, bamboo material had been used as a natural source for fire making, also it has been used as material for daily life products and utensils, and bamboo shoots were and are still a very loved food by Japanese people. However, the change from an agricultural society into an industrial society, which means changes in life style, has resulted in the fact that most of the bamboo forests are not maintained any longer by the local people. Because there is no real demand for bamboo material in recent years, the bamboo forests have not been thinned out. Bamboo trees are fast growing and there is a widespread growth of bamboo forests, which causes devastating problems for the surrounding forests, the bamboo forests itself and the surrounding agriculture land. The only way to solve these problems is by thinning out of the bamboo forests. Since there is no demand for bamboo material and the high loan costs in Japan makes it difficult to cut the bamboo trees as well, so the NPO KBN came up with the idea of cutting the trees by local citizens on a voluntary base. Since November 2001 several environmental activities have been held around thinning out of bamboo forests. The main purpose for these activities was to make the citizens and local government aware of the problems and to find out again ways where bamboo material could be used. Bamboo charcoal was one of the products made, but there is just too much bamboo to make it all in charcoal.

Since 2004, every second Saturday of the month, a group of local citizens have started to thin out bamboo forests in the area around the Kitakyushu Science and Research Park. The cut bamboos are chipped and these chips are used for soil making products. By way of cutting bamboo trees and use the bamboo material for soil making, forests can be protected from a further infiltration of bamboo trees, and bamboo forests can be maintained. Finally, the bamboo material of the cut trees can be used as a natural resource. The lasting problem is in how far local citizens are able and willing to participate in this newly started project?

- Bamboo Forest Preservation Project (November 11, 2001) (130 participants)
- Bamboo Design Workshop (From 19 to 22 August 2002) (48 participants)
- Bamboo Forest Preservation, International Collaboration (November 23, 2002) (55 participants)
- Bamboo Forest Preservation Project (March 9, 2003) (50 participants)
- Wakamatsu Forest Protection Legend (since 2004, every second Saturday of the month)

2) River and Seashore Environmental Activities

As already is mentioned above, the Wakamatsu ward is surround by the sea and two rivers. The northern beach of Wakamatsu is very beautiful and has an abundant nature. The Egawa River in the south with a total length of about 8 kilometer is a quiet unique river. The river connects the mouth of the Onga River in the west and the Dokai bay in the east. Seawater flows from the west side from the Onga River and from the east side from the Dokai bay into the Egawa River.

In and along the rivers and also on the beach much garbage is found. In the river and seashore activities, we organized first of all two clean up projects. One was organized along the northern beach of Wakamatsu,

and another was organized for the Egawa River. Most of the garbage on the beach is coming from over the sea but also coming from the nearby Onga River. The garbage coming from the Onga River flows from the upper river down into the Hibikinada Sea and then returns back to the beach of Wakamatsu.

- Clean up of the Northern beach of Wakamatsu (June 9, 2001) (35 participants)
- Clean up of the Egawa River (April 29, 2002) (50 participants)

Another series of three projects have been organized with the aim of rethinking the Egawa River and the Dokai bay. The first project was walking along the Egawa River, the second project was canoeing the Egawa River and the third project was cycling around the Dokai bay. Both the river and bay are geographically located very close to the residential areas in Kitakyushu. However few people are really aware of their presence. The purpose of these three projects was first of all bringing people together and let them check the present condition of the river and bay. In a next series of projects, which are starting this year, we will try to stress the importance of the river and bay in our daily life.

In the 1960's the Dokai bay was one of Japan's most polluted seas, even called "the dead sea", because many not treated industrial wastewaters were drained into the bay. Nearly all fish died and it was not possible to find any living thing in the bay for long time. Wastewater treatment facilities have been introduced and the water quality has improved well. These days many fishes have come back and there is again plenty of life in the bay.

Still many factories are bordered along the bay, so that it is nearly impossible for citizens to access the bay. The purpose of the bicycle event was to bring people close to the bay, and let them be aware of the water quality improvement as well as to show them that the bay also could be used for spending leisure time. All 50 participants received a small camera and were asked to make photos of the bay and surroundings. The photos are shown in a exhibition in several places in the city. The photo exhibition shows to people who did not participate in the project how the bay looks like, hoping that even they once will go to the bay, so that the bay becomes again a part of their life as well.

- Egawa River and Dokai Bay Project
 - Part One: Walking Along the Egawa River (February 15, 2003) (115 participants)
 - Part Two: Egawa River by Cano (May 18, 2003) (72 participants)
 - Part Three: Cycling Event along the Dokai Bay, (September 21, 2003) (50 participants)

3) Agriculture Activities for children. Rice planting and harvesting.

The agriculture activities have been concentrated on mainly rice planting and harvesting. The main purpose of the activities was environmental education for smaller children. Nowadays, most of the children do nearly not have any contact with agriculture in daily life. The same children are planting rice in June, and harvesting in October. The growth period from June to October is an important period in which children can think about what happened with the planted rice. In December, after the harvest period we organized a traditional Japanese event called "Mochi tuki", which means pounding of steamed rice. This event is usually held at the end of the year before New Year's Day.

- Rice Planting and Harvesting by children, (June 15 and October 10, 2002) (80 participants)
- Rice cake "MOCHI" Festival in Kitakyushu Science and Research Park, (December 17, 2002)
- Rice Planting and Harvesting by children, (July 22 and October 19, 2003) (196 participants)
- Rice cake "MOCHI" Festival in Kitakyushu Science and Research Park, (December 18, 2003)

4) Biotope Project in the Kitakyushu Science and Research Park

The Kitakyushu Science and Research Park (KSRP) is located in the western part of the city. The KSRP started in April 2001. Inside the Science and Research Park's are located several universities and research facilities related to environmental and information technologies. The main universities and research facilities are:

- The University of Kitakyushu Department of International Environmental Engineering
- Kyushu Institute of Technology Graduate School of Life Science and Systems Engineering
- Waseda University Graduate School of Information, Production and Systems
- Waseda University Advanced Research Center for Science and Engineering
- Fukuoka University Graduate School of Recycling and Eco-Technology
- Fukuoka Research Center For Recycling Systems
- GMD-Japan Research Laboratory (Germany)
- Cranfield University at Kitakyushu (UK)

Last year a biotope has been realized inside the Science Park, through participation of citizens. The project consists of a temporary parking lot that has been changed into a biotope. It took about 8 months from April until December 2003 to realize this project. Coca-Cola West Japan Company has sponsored the whole project. Once a month, local citizens have come together and worked out not only the planning, but also the realization of the biotope. The shape of the site is triangular and bordered to a small forest. A pond and very small hills have been made. Only rainwater will supply the pond, in the hottest season with less rain it could be possible that the pond will dry up. But in the rainy season of June and July, there will be a humid, wet microclimate in the biotope. Also insects and other small animals living in the adjacent forest, such as lizards, salamanders and frogs will probably come to the biotope as well. The idea is to use the biotope as a place for environmental education and also as a nature regeneration experiment.