

# Nongovernmental Educational Activities for Environmental Protection

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## 1. Background of Activities

In recent year the deterioration of our water environment has become a serious problem. The chief factor in this deterioration is domestic drainage, and measures against it should be taken immediately.

Although industrial drainage is regulated by law, there are no regulations for domestic drainage. The only possible measure right now is the cooperative activities of each family to improve the environment. An enlightened movement (environmental education) can be expected to lead to practical activities in cleaning up domestic drainage.

Considering what is easy for adults and children to take part in, we have held "Waterside Classes" as a part of environmental education.

## 2. How to promote activities

Conditions necessary to promote "Waterside Classes" in a community are: (1) the establishment of a methodology, (2) the training of leaders (promoters), and (3) the preparation of teaching materials. These items are explained below.

### 1) Establishment of a methodology

In order to hold learner-friendly classes for children, we prepared a "walking rally" program.

In this program, we set several check points on 2 – 3 km stretches along rivers and seashores. The participants (parents and children) answer the question at each check point and the winner is determined by the number of correct answers and the speed of doing the course. This program has the following characteristics: (1) even children can concentrate on playing this game because it emphasizes both competition (rally) and cooperation (group activities, including biological observations), and (2) the participants can study environmental problem through interesting games.

### 2) Training of leaders (promoters)

Since 1985, we have trained the leaders of "Waterside Classes" by holding a short course for them on teaching "how to operate waterside classes."

People working in public health centers and local governments, teachers of elementary, junior high and senior high schools and community leaders can take this course. 236 applicants have already taken it. The course attaches great importance to field investigations, with particular emphasis on practical training and trial classes of waterside studies (how to set check points) based on "Act for Simple Water Analysis Based on Aquatic Life" legislated by the Environmental Agency.

### 3) Preparation of teaching materials

What is necessary to hold waterside classes is teaching material for biological observations. We prepared and used our own textbook titled "A Textbook for Local Waterside Classes—Aquatic Life in Hiroshima Prefecture" (for riverside classes, 28 pages).

Furthermore, we voluntarily made a video tape titled "Water Studies through Aquatic Life" in order to explain the method of examining water by studying aquatic life and life indices. This video tape is used at the orientation and review of "Waterside Classes."

### 3. Practical Activities

The total number of "Waterside Classes" held by our organization between 1984 and 1989 was 66 with the participation of 3,494 local community members.

Although the basic program of "Waterside Classes" is the walking rally; as was mentioned above, the practical contents varies depending on the places and the purposes of sponsors. The concept of "Waterside Classes" is classified into the following three categories.

#### 1) "Waterside Class" as an event

Meeting for field activities held under the joint auspices of our association and the prefectural board of education is a good example of this type of "Waterside Classes." (We have sponsored this meeting since 1984.)

It is a yearly festival held in Miyajima during the summer vacation. The participants can commune with nature through camping and the curricula (including cutters and yachts) which vary with each course. Since 1984, a "Waterside Class" has been included in the curriculum.

There are also some "Waterside Classes" included in local community or health festivals as one of their events.

Because such a wide range of participants take part in this type of "Waterside Class", it is difficult to find a direct relation between this class and activities to improve the water environment in a specific region. This is a common disadvantage in this type of "Waterside Classes." We have to admit that a "Waterside Class" held as an event is a transient environmental education.

#### 2) "Waterside Classes" with local characteristics

An example of these classes was a course called "Biology of Local Life" held in Higashi Hiroshima City from 1986 to 1987. Higashi Hiroshima developed as a city when Hiroshima University was transferred there. The Kurose River (first-class river) in this city was so heavily contaminated with domestic drainage that Higashi Hiroshima City held a series of "Waterside Classes" of the event type in 1984 and 1985, as one of the measures to improve the local water environment.

Some participants proposed plans for advanced classes, including the field work on tributary streams, as well as classroom study. As a result of a meeting by the representatives of community health service associations, we started to send teachers to the requesting communities for biological observations.

We honored 7 requests over a 2 year-period. The participants observed and learned not only about the aquatic life in their local river but also about the life in the irrigation ponds in their neighborhood.

The main characteristic of this type of "Waterside Class" is that the members of local communities come to regard the pollution of water as their own local problem.

#### 3) How to maintain environmental activities through "Waterside Classes"

A "Waterside Class" studying the Sanna River in Numakuma Town has been held since 1984. It was one example of a continuing "Waterside Class" having a direct relation with activities to improve the local water environment.

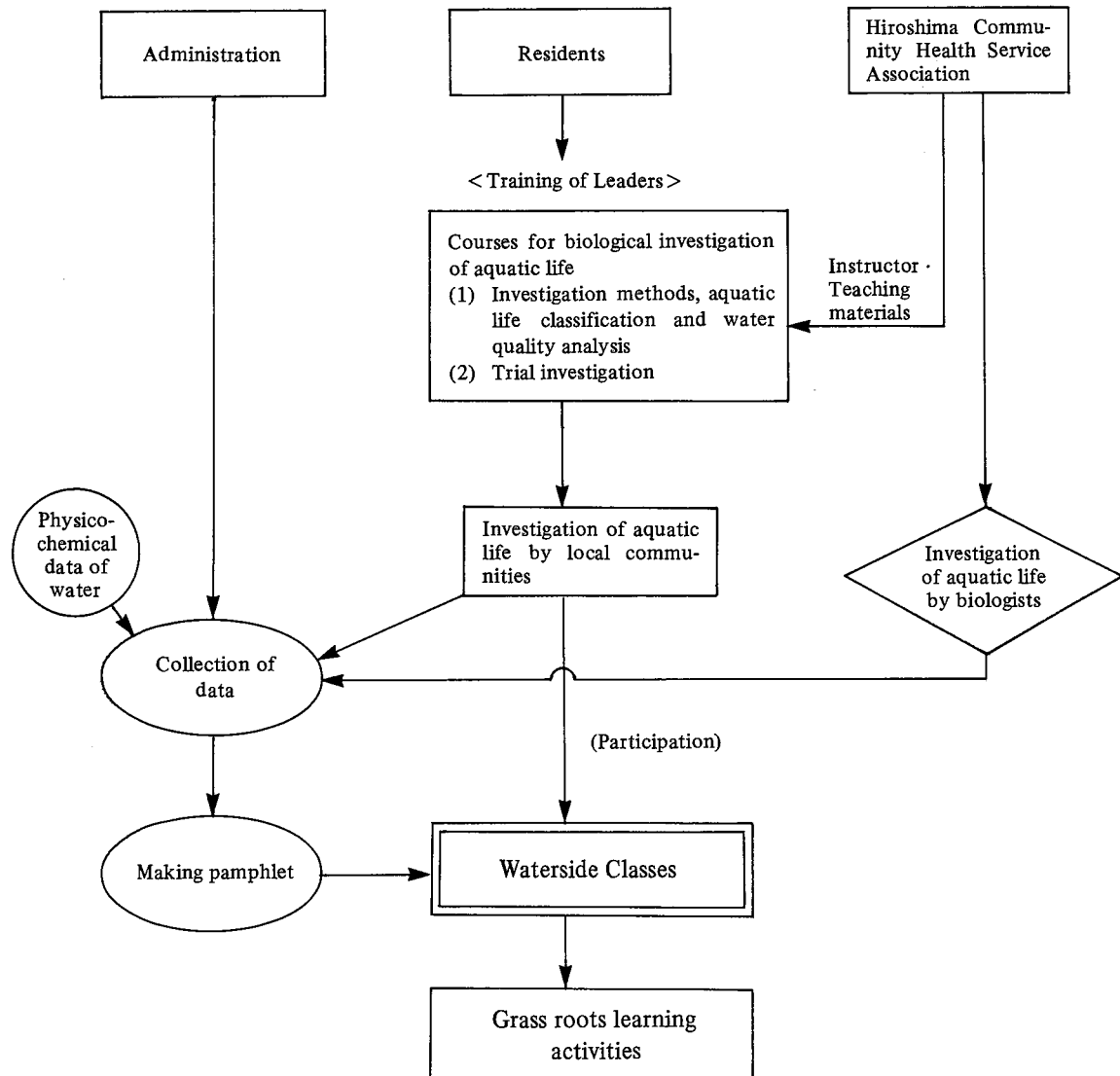
The town uses the water of the Sanna as service water. However, the river basin is surrounded by houses, and because of the absence of a sewerage in this area, the contamination of water by domestic drainage has progressed rapidly.

"Waterside Classes" were held in 1984 and 1985 under the joint auspices of Numakuma Town and the local community organization for public health service in order to enlighten the members of the local community on environmental protection. In 1988 these classes were regarded as a part of local measures to improve domestic drainage. The activities were based on the flow chart in Figure 1. The basic concept was to require the complete participation of the members of the local community from the early stages of the program.

Hiroshima Community Health Service Association holds a short course called "Easy Water Analysis based on Aquatic Life" for the leaders of local communities. These trained leaders investigate the environmental conditions of each local section. They examine the water with the assistance of biologists from our association, and the physicochemical data of the water was obtained by public health centers. We made a "Water Pollution Map" based on these investigation results. Using this map in the classes, we tried to arouse the participants' interest in the deteriorated condition of the Sanna and appealed to them to cooperate with us in the activities to protect the environment from contamination by domestic drainage.

These activities motivated local community leaders and public servants in the town to hold meetings based on “the grass roots learning movement for the improvement of domestic drainage” in each local section.

Figure.1 A Flow Chart for the Improvement of Sanna Water

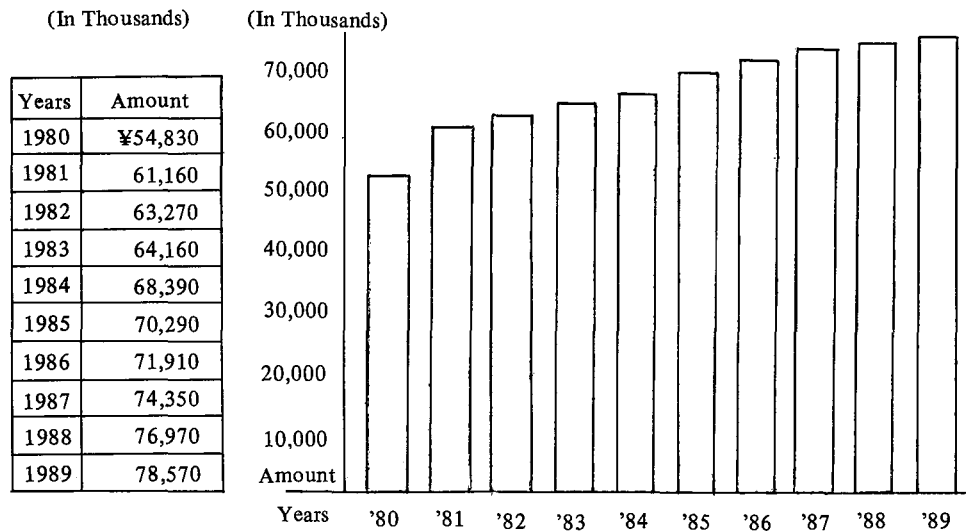


#### 4. Aspects of leadership training and network formation

Trained leaders are indispensable to develop the movement to protect the water environment, and at the same time we have to consider the formation of networks for the leaders.

Our association consists of branches of the “Public Health Promotion Council” in each prefectural community which independently develop public health activities. In 1957, community units promoting movements to improve the environment and public health (insecticide movement against mosquitoes and flies) got together and established this private association. As shown in Figure 2, this nongovernmental community health service association has gone through several structural changes since it was founded.

Chart) Transition of the Amount of Raised Money and the Situation of its Distribution (for the past 10 years)



## 5. Conclusion

The contamination of the Seto Inland Sea is mainly caused by domestic drainage. What is necessary to improve this water environment is not only governmental support but also widespread organizational community activities.

The approach from the following three standpoints should be considered important to make local community organizations effective: (1) contents of activities, (2) training of leaders, (4) fund-raising. We consider the training of leaders as the most important part of our activities to activate these organizations and local communities. We hope that the organizations, including governmental bodies, have gained a better understanding of the threat to the environment that is caused by domestic drainage as a result of our efforts and will continue to support us.