

Water Resource Management and Inclusive Democracy: a Case Study of the Environmental NGO Movement and its Role in Shiga Prefecture

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Introduction

Today, the new role of local residents and environmental NGOs in fighting poverty or environmental preservation is becoming increasingly important not only on a local but also on a global scale. Even in the international conferences of the United Nations, such as the "International Conference about Population and Development" (Cairo, 1994.9), the "U.N. Social Development Summit" (Copenhagen, 1995.3), the "U.N. World Conference on Women" (Beijing, 1995.9) and so on, the importance of the role of NGO is pointed out repeatedly.

The situation of NGOs in Japan is following global trends, but with some unique features to this country. The Law to Promote Specified Nonprofit Activities was enacted in March, 1998, doing away with the old highly restrictive system for establishing a juridical person, making the establishment of NGOs considerably easier. However, there is no provision for a clear-cut tax deduction system applying to donations to NPOs and NGOs. Another aspect in Japan is the rise of the so-called direct claim movement (in effect, the use of public referendums) to reassess or halt often grandiose and ineffective public works projects. Some examples are the referendums on the Nagara River Estuary Dam (January, 1992) and the Yoshino River Dam (June, 1999). Some positive results of these citizen actions include the revision of the River Law (June, 1997) regulating river construction nationwide. Also, citizens' participation in municipal affairs, until now almost nonexistent apart from elections, has become, in principle anyway, easier. There is also a modest movement in the direction of reassessing or even halting some public works projects such as dams, etc. At present, approximately 280 public works projects are under review, for possible cancellation.

This general trend is described by Professor Friedman as a sort of 'development of inclusive democracy asking for alternative development'. Professor Salamon describes this same phenomenon as a "Global Associational Revolution".(Friedmann, 1992; Salamon, 1997) The rise of such citizens' movements shows that conventional development priority social systems are no longer responsive to the demands of residents and are failing to meet real present needs. There is growing recognition of this, but no clear solutions as yet. Through experiments and movements in quest of alternative social systems or development models, people everywhere, acting as citizens of a free democratic society, are groping for answers.

In this paper, I want to consider the meaning of citizens' movements in the field of environmental preservation, and their role in the development of inclusive democracy, taking as a specific example the experience of the environmental NGO movement of Shiga Prefecture, in connection with water-resources management and the preservation of Lake Biwa.

The Features of Japanese NPO/NGOs, and Scope of this Discussion

The definitions used for NGO/NPOs here are partly according to Salamon (1997) as stated below. My definition has also incorporated Friedman's viewpoint, in which the advocacy function and alternative development efforts of NGOs are considered as important.

Definition: A spontaneous movement organization striving to realize a demand of residents through democratic procedures and lawful means, independently of civil administration or political party. However, when the interests of administration and those of residents are in agreement, this does not preclude accepting support of administration or carrying out common action.

Next, I will discuss the scope and the features of Japanese NPOs as defined above and according to the report of the Economic Planning Agency and Yamauch. (EPA, 1997; Yamauch, 1999) According to the first nationwide investigation of the EPA performed in 1996, the total number of NPOs of Japan was estimated at about 90,000 organizations (85,786 to be precise). By area of activity, 37% were social welfare

groups, 17% education, culture, and sport groups, 17% community groups, 10% environmental-preservation groups, 5% health and medical groups, and 5% international exchange/cooperation groups. Furthermore, according to the international comparison investigation of 22 nations of Salamon *et al.* (1998), the number of NPO workers in Japan is around 2,140,000 persons, and this figure amounts to 3.5% of the total employment (excepting agriculture). The ordinary expenditure of NPO is 195,600 million dollars (1995), and forms 4.5% of GDP. When seen in relation to total employment, Japan was in 12th place among 22 nations. Also, according to Yamauch (1999), the followings are pointed out as features of NPOs in his book:

- (1) The per-year expenditure scale of NPOs shows that 80% had a budget of under one million yen (approx. 9200 USD) and on these, 35% were under one hundred thousand yen (approx. 920 USD). Only ten percent or less operated out of an exclusive office. As can be seen, there are a great many very small organizations in Japan.
- (2) Income structure has a high dependence on membership fee income, and there is little contribution from the private sector. In comparison with Germany, the rate of public assistance is small, and the rate of private sector contribution is small as compared with the United States. The main reason for this discrepancy with the United States lies in the fact that contributions to NPOs are not tax-deductible under the Japanese taxation system.

Next, I will describe NPO of Shiga Prefecture, and environmental organizations' present condition. In the investigation of Shiga Prefecture performed as part of the above-cited investigation in 1996 of the EPA, NPOs within the prefecture numbered 1,773 organizations (September, 1996). When the number of organizations of NPO per 10,000 populations is considered, Shiga Prefecture has 13.8, more than twice as many as the national average of 6.8. If only environmental NGO are examined, there are 74 environmental NGO organizations in Shiga Prefecture, and this represents 1.75% of the national total of 4,227. Although the number of organizations of environmental NGOs is 0.34 per 10,000 populations in the national average, in Shiga Prefecture, it is 0.57 and this is 1.6 times of the national average, 8th among the nation's 47 prefectures.

Although Japan is already an advanced NGO state on a simple numerical scale, from a relative scale or terms of the content and scope of NGO activity, we are really more in the mid to lower range among countries. Regarding Shiga Prefecture, within Japan, it is one of more advanced prefectures in terms of total number of NGOs, and is one of the more advanced prefectures in terms of environmental NGOs, although hardly at the top of the class in Japan.

The scope of this paper is limited to discussing the efforts of environmental NGO in connection with water-resources development and the protection of nature of Shiga Prefecture. If the various efforts of environmental NGO of postwar Shiga Prefecture are surveyed, roughly two big waves can be perceived, one in the 70s, the so-called 'reformist local government period', and the other from 1987 onwards.

The first wave consisted mainly of the Synthetic Detergent Banishment Movement, which coincided with a prefectural government election, and the Lake Biwa Environmental Right Lawsuit which criticized and attempted to halt the Lake Biwa Comprehensive Development Project. This all took place against the backdrop of the conservatives/reformists confrontation of the 70s known as "Kakushin-jichitai no Jidai" or so-called reformist local government period.

The second wave made its appearance after the passing of the so-called 'Resort Law' in 1987. This law set off a storm of recreational facilities development projects, and was generally (but shortsightedly, as subsequent events proved) praised in Japan, as a trump card in the industrial structure conversion and regional economy activation schemes. This period also saw the inception of a series of huge public works, some related to resort development and some not, such as dams, airports, expressways and golf-courses everywhere, big amusement parks like Disneyland in the US, etc. There are many aspects of the environmental movement in Shiga, and many problems with the environment. These include environmental education efforts, garbage and waste clean-up campaigns (often involving local governments, labor unions, schools, etc.), industrial waste disposal, a dioxin problem, nuclear power plant

problems, some modest efforts towards lakeshore, inland pond and riverine biotope restoration and more. But for the scope of this paper, I wish to focus on the above first wave only.

Eutrophication of Lake Biwa --- Lake Biwa Environmental Right Lawsuit and the Synthetic Detergent Banishment Movement

Lake Biwa Environmental Right Lawsuit

Serious environmental problems in Lake Biwa began appearing one after another from 1969 onwards. At first, it was "foul-smelling water", then there appeared freshwater red tides in 1973 and have continued almost every year since. And in 1987, the toxic plankton known in Japanese as "aoko" (*Microcystis aeruginosa*) was first detected in the south basin of the lake. In 1996, it was also detected in the much larger and more important north basin, the main portion of the lake. People had a sense of impending crisis seeing such problems appear in the lake, and many workers, government officials, fishermen, farmers, residents, and scholars started trying to deal with the problems in various ways. Notable among those investigations and efforts was the so-called "sekken undo" or soap campaign. Focusing on domestic waste water, housewives began campaigns to reduce the amount of the detergent used, and suspicious eyes were turned on synthetic detergents or the orthophosphate which is contained in such detergents. The following paragraph describes these details. (Suzuki, 1992; Ikemi (1982) and Biwako Kaigi, 1999).

But even as eutrophication became a steadily increasing problem, and some people were trying to deal with it, the National government's large scale development plan for Lake Biwa was, mostly unnoticed, steadily taking shape. Under the postwar high-speed economic growth, many human beings had moved into the lower drainage basin of the Kansai bloc, which includes Osaka, Kobe, and Kyoto, and the demand for city water and water for industrial use had increased rapidly. (See Table 1.) The rate of increase of industrial water demand from 1966 to 70 reached the remarkable annual rate of 5.99%. The business world at the time was convinced that the reservation of water for industrial use required for industrialization was a life-and-death matter, and demanded new water-resources development of the government. (Ikemi, 1982).

Table 1 Lake Biwa -Yodo River Basin Industrial Water Supply: Actual and Estimated Demand

Annual Growth Rate (Geometric Mean)	Period	Source	Average Daily Volume (10000 t/day)
5.21% (Estimate)	1965-1985	Broad Area Water Use Primary Plan	553 ~ 1526
3.31% (Estimate)	1970-1985	Broad Area Water Use Secondary Plan	778 ~ 1268
5.99% (Actual)	1966-1970	Ikemi, 1982	500 ~ 631
-3.05% (Actual)	1970-1977	Ikemi, 1982	631 ~ 508

In order to respond to this demand not only in the Biwa basin but nationwide, the government passed a new law in 1961 with which they established Water Resources Development Public Corp (referred to hereafter as the WRDPC). This was intended to become a water-resources development promoting mechanism, to remedy the problems inherent in the previous system, basically a conventional Japanese vertical administrative system in which water for agricultural use was only controlled by Ministry of Agriculture, Forestry, and Fishery (MAFF), water for industrial use only by the Ministry of International Trade and Industry (MITI), and city water only by the Ministry of Health and Welfare (MHW). And, very importantly, this law transferred the right of river management from the prefectural governments to the WRDPC. Based on this law, the new WRDPC immediately began planning a grand water-resources development project for the entire Lake Biwa and Yodo River basin system, which became known for short as the "full plan". According to the "full plan" proposal, for example, the water-for-industrial-use demand in the Kansai bloc was projected to increase at an annual rate of 5.21%, and to provide for the increase in total water demand, including this industrial water, a further 40 ton/sec of fresh water from Lake Biwa

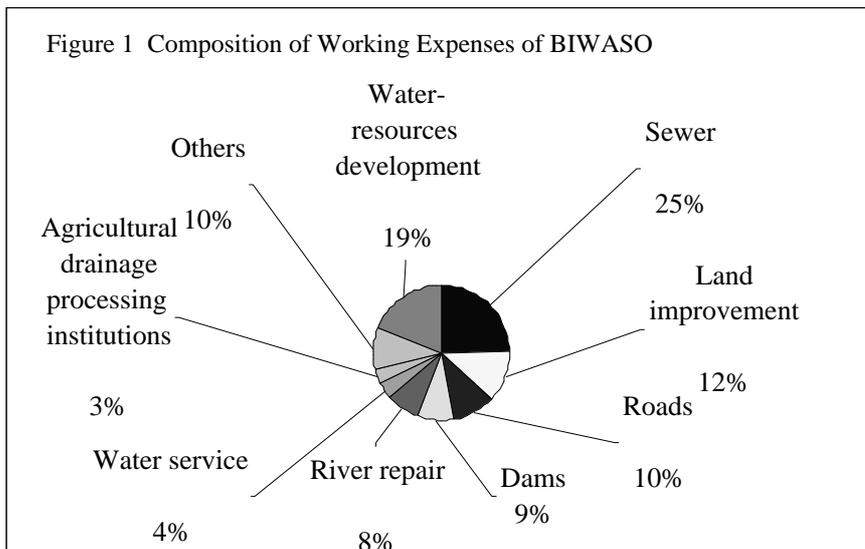
would be required. A water volume of 1 t/s from Lake Biwa can provide the drinking water supply for about 200,000 people. So, 40 t/s would be enough for approximately 8 million. To assure such a supply, it was planned that the shore of Lake Biwa should be dammed with concrete levees wherever necessary, so the water level could be regulated within a range of 1.4 m above and 2 m below the Biwako Basic Surface Water Level (B.S.L.). In a political compromise, although the plan still states 2 m below B.S.L., in actual practice this is limited to 1.5 m below B.S.L.

During the planning stages, the Shiga Prefectural Government basing itself on its right to management of Lake Biwa, objected to some aspects of this plan. The prefectural government claimed that it agreed with water-resources development of Lake Biwa on Shiga Prefecture in exchange for 17 other regional development projects, such as road construction, sewer construction, agricultural land improvement, etc., which the Prefecture wanted in order to further its intention of transforming rapidly into an inland industrial prefecture from an agricultural prefecture. A political agreement was reached between Minister of Construction, and the Governors of Osaka, Hyogo and Shiga Prefecture in March, 1972. The Special Measures Act for the Comprehensive Development of Lake Biwa bill passed the National Diet, with the draft proposal fundamentally unchanged in June, 1972, although in response to citizens' movements' the urban lower reaches of the basin, there was some wording inserted to the effect that environmental preservation should also be sufficiently considered. While a concrete individual building plan had not been deliberated in the National Diet, it was recognized as a matter of fact by the cabinet meeting in secrecy in December of the same year. Before final determination of this building plan, there was no environmental assessment performed, nor was there any participation by the public, nor any presentation of concrete information to residents either.

This peculiar plan that mixed water-resources development and regional development was called the "Lake Biwa Comprehensive Development Project", and more commonly by the abbreviated "BIWASO". The final total expenditure for "BIWASO" came to about 2.3 trillion yen (approx. 22 billion USD) at present values. The construction period was originally planned to be for ten, was extended for ten more years in

March, 1982 and further re-extended for five years in December, 1991, so it was performed over a 25 year period in the end, and became the longest-lasting and largest public works project in the history of Shiga Prefecture.

As the contents of such a large-scale development plan gradually became known to elements of the public, many residents, workers, government officials



and scholars felt misgivings and began to question many aspects of the plan. An opposition movement was born. The following points in particular were deemed problematic:

- (1) Excessive prediction of water demand.
- (2) Various environmental and water supply problems related to the projected potential 1.5 m water level fall.
- (3) Construction of a huge basin-wide waste water treatment system with only four main plants, instead of smaller, more local facilities.
- (4) The creation of an artificial island mainly for one of those treatment plants. (73ha area)

- (5) Construction of lakeside levees and the Konan road construction. (length:14km,width:15m)
- (6) Dredging the Seta River and Southern Lake.

In the view of the opposition, these six points in particular were seen as deleterious to water quality, and leading to wide scale destruction of the lakeshore ecosystem, and the scenic beauty of the lake region, both immediately and over the long term.

Table 2 The Main Points at Issue in the Lake Biwa Environmental Right Lawsuit

Point at Issue	Plaintiff	Defendant
Prediction of Water Demand	Excessive as compared with the actual figures.	Required since it is predicted to increase in the future.
Water Level Drop	Maximum water level drop of 1.5m and a high incidence of once in several years would have serious impact on ecosystem and water quality.	Incidence of maximum drop predicted at once in 10 years. No serious impact on ecosystem.
Basin-Wide Sewage Treatment System	-Factory effluent and domestic sewage should be separated and processed. -Decentralized system, with more but smaller treatment plants is superior to centralized system in environmental efficiency. ("Too big, too late") -A sewage treatment plant can remove neither heavy metals nor organic compounds completely. -In the present condition of concentration regulation, it is not effective in curtailment of a corruption substance. -Forecast demand for sewage treatment is excessive.	Since the advanced treatment is used, system is satisfactory.
Artificial Island	-There is no need for it and making reclamation of Lake Biwa. -An enclosed water area is formed and it becomes an unnecessary pollution source. -Reclamation area is excessive.	For sewage treatment plant construction is difficult, so artificial island is unavoidable.
Construction of Lake Levees and Kogan Road (including maintenance road for management)	-Large area of reed belts, which have bio-filter purification capability, are destroyed by construction and water quality and fisheries severely impacted. -Another route should be considered, if a road is required. -Construction route does not consider ecosystem preservation. - The exhaust gas of traffic is dispersed into the lake.	-The purification capability of the reed belts is not high. -It is indispensable water-resources development and management. -In order to minimize impact on farmland, construction route unavoidably concentrates on the lakefront.
Dredging the Seta River and Southern Lake	-Pollutants accumulated on the bottom of the lake dispersed by dredging. -Processing of large quantities of sludge is difficult, and becomes cause of environmental destruction.	-It is an required for water-resources development, and there are no alternatives. -Sludge can be used for the planned reclamation of the Karasuma peninsula.

Figure 2 Lakeshore Area changed artificially by BIWASO, including Artificial Island and Kogan Road (about 200 ha here in total)

In order to challenge the necessity itself of such a plan, NGOs and residents in Osaka took the lead and the Lake Biwa Env't Rights Lawsuit was filed in March, 1976. The total number of plaintiffs amounted to 1,186 (after various disqualification



maneuvers, the number was reduced to 1,089) and they came from all the prefectures of the Kansai area. The plaintiffs had the option of administrative litigation (“Gyosei Soshō” in Japanese, or litigation against government acts plaintiffs deem illegal) but all legal precedent suggested such a suit would be dismissed out of hand. So they opted, on legal advice, to file a civil action (“Minji Soshō”) against the government, and based it on both environmental rights, and personal human rights on which the BIWASO project would infringe.

In the end, their legal action was rejected, although the legal proceedings went on for 13 years. However, this trial became the de facto stage of a substantial environmental assessment of the project by residents, and although they lost, their action was not without subsequent influence. The government gradually began to recognize the importance of ecosystem preservation of Lake Biwa, with the lakeshore reed belts preservation as a specific target. So this trial had an important influence on the establishment of the Reed Belt Preservation Ordinance of Shiga Prefecture in 1992, which became the first piece of legislation in Japan aimed at ecosystem preservation.

Two things bear special mention here. First, the extraordinary efforts of Professor Norio Suzuki of Shiga University as a witness for the plaintiffs in a long and difficult trial and under many restrictions. Second, the projected increase in water demand which was the greatest basis for this and other large-scale water-resources development projects failed to materialize, and in fact, in 1971 and afterwards, due to the

increase in recycling and other efficiency measures, demand of water for industrial use actually fell sharply. (See Table 1.)

Synthetic Detergent Banishment Movement

At about the same time, in Shiga Prefecture, in response to the worsening eutrophication of the lake, a movement to ban the use of phosphate-containing detergents began. In those days, domestic waste water accounted for 48% of the total amount of phosphate discharge and 33% of the total nitrogen discharge. And synthetic detergents accounted for 18.2% of that total phosphate discharge. (1975 figures).

Domestic waste water with synthetic detergent containing orthophosphate is not only a problem for eutrophication, but also could be injurious to people’s health. For both those reasons, it became a matter of concern for the people of Shiga Prefecture, especially housewives. It was also becoming a problem internationally. According to an article that appeared in the Asahi Newspaper on November 5, 1970, for example, in the United States, in Chicago, a group opposing pollution was actively trying to get the use of synthetic detergents forbidden, since the orthophosphate contained in them polluted the river and the lake. The city of Chicago revised regulations setting the allowable percentage at 8.7% or less, to take effect from February 1, 1971, and from June 30, 1972, phosphate content was to be extensively forbidden.

In Shiga Prefecture, environmental concerns began to have an effect on the political scene as well. In 1974, as the movements against the BIWASO and to ban phosphate-containing detergents began to develop, Shiga prefecture held an election for prefectural governor. The incumbent Mr. Nozaki, who had not received official political endorsement of any party but was conservative, and the challenger, Mr. Takemura, who also did not receive political endorsement by any party but was reformist, contested this election. As part of his campaign, Mr. Takemura appealed for the necessity of preservation of Lake Biwa,

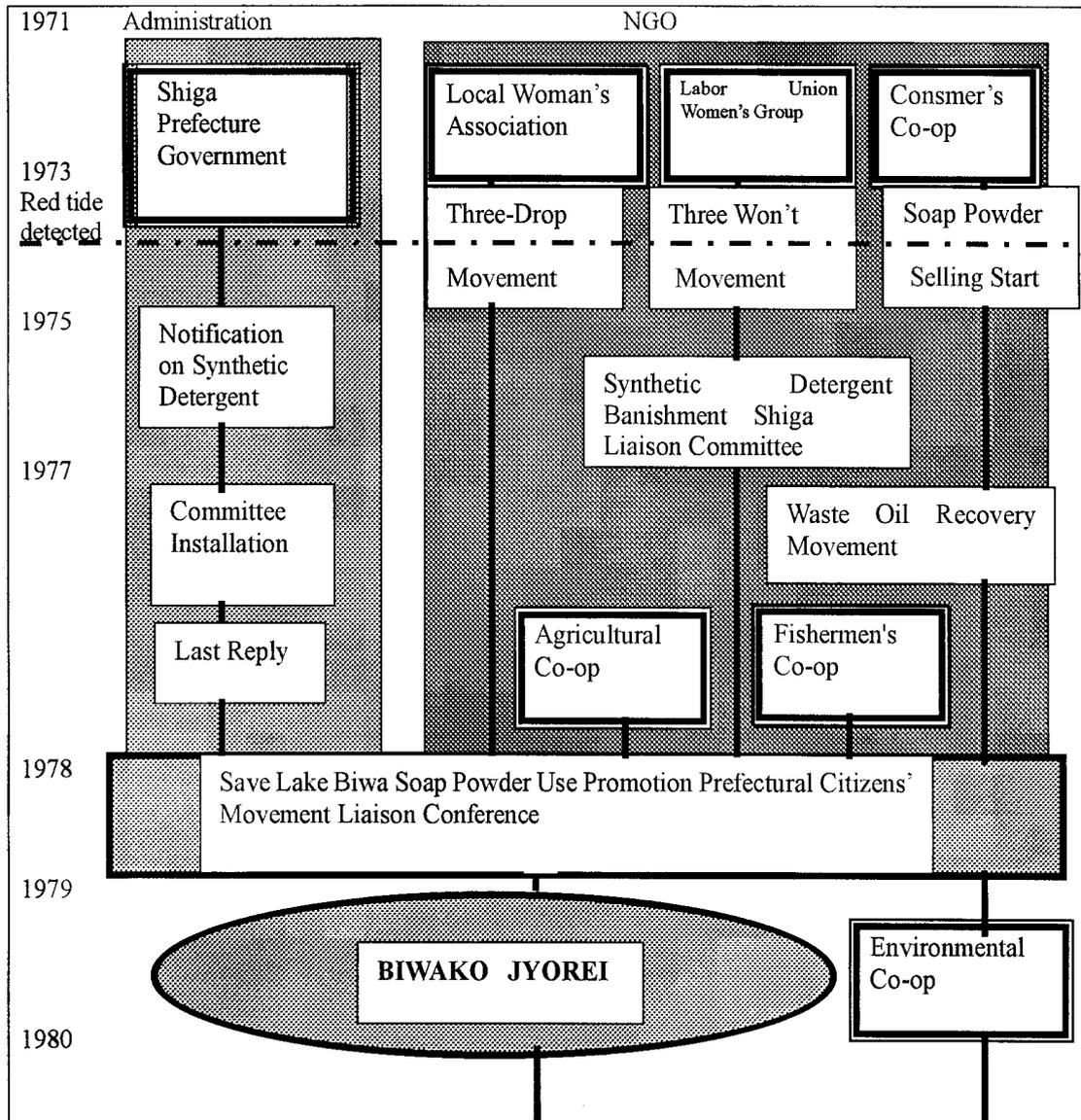
and for a review of the BIWASO plan, including such points as enforcement of environmental assessment requirements and scientific reexamination of projected down-stream water demand. Partly as a result of this position and his support for the movement to ban synthetic detergents, Mr. Takemura won that election. (At that time, he became the 8th reformist governor in the whole country, and Osaka, Kyoto and Shiga, the three prefectures most closely connected with Lake Biwa and the Yodo River, all had a reformist governor).

However, Mr. Takemura, on his first day as governor, December 8, 1974, stated, in regard to the BIWASO super-project, "There is no need to change the 40 t/s increase in water supply", in effect making clear that he was giving up any reexamination of the necessity for the BIWASO super-project itself. Moreover, although a committee was created to consider the plan for the artificial island construction and its influence on the environment, one of the aspects of the BIWASO super-project that had been highly criticized by NGOs, the committee was not able to reach any clear conclusion, and in its final report, basically just presented the arguments both pro and con. As a result, there was no meaningful environmental assessment of the project carried out, and in the absence of any opposition from Governor Takemura, the BIWASO super-project went ahead.

Although Mr. Takemura failed in bringing about any meaningful reexamination of BIWASO, he tackled the issue of banishment of synthetic detergent much more positively. The prefectural area Women's Organization Liaison Committee started the so-called "Three-Drop" Movement to reduce the amount of the kitchen synthetic detergent used at a time from five drops to three. They also began, in 1971, to cooperatively purchase soap powder, as a pollution-preventing alternative to synthetic detergents. Also, another NPO, the women's group of the association of labor unions of Shiga Prefecture started cooperative purchasing of soap powder, and initiated in 1972, with regard to synthetic detergents, the "Three Won't" Movement, with the slogan that they "Won't buy", "Won't use" and "Won't use as gifts". These two movements took the lead in promoting a shift away from synthetic detergents, and the soap powder use movement spread. These efforts lead to the creation of "The Synthetic Detergent Banishment Shiga Liaison Committee for the Clean Water of Lake Biwa and Healthy Life" in 1975. Study groups on the problem were formed, negotiations carried out with local governments, and negotiations with retailers were also pursued. In August 1978, the prefectural government also joined this citizen based synthetic detergent ban movement, which then was called the "Save Lake Biwa Soap Powder Use Promotion Prefectural Citizens' Movement". In the first prefecture/citizens general meeting establishing this NPO, a goal was set of raising the rate of soap powder use in the prefecture from around 10% to 50% or more. There were also calls for the enactment of prefectural regulation of synthetic detergent sales and use.

In response to this situation, Shiga Prefecture concentrated its efforts on sewage treatment plant construction, with advanced processing enabling massive removal of Nitrogen compounds and Phosphates. In 1978, only 26% of the whole country and barely 3.4% of Shiga Prefecture was connected to sewage lines, making the prefecture third worst in the country. On the other hand, though, the Shiga Prefectural government was the first in the nation to decide that the regulation of nitrogen and phosphates had to be an essential part of sewage treatment. Not only did the prefecture go beyond national legislation by adding N and P controls to industrial waste water regulations, but it also took the further step of also attempting to control these substances in

Table 3 Diagram of "Sekken Undo"



domestic waste water. The prefectural ordinance enacted for this purpose, the Lake Biwa Eutrophication Prevention Regulation (common name, BIWAKO JYOREI) bill added regulation not only to factory effluent but also imposed some on domestic sewage. It established regulation values for factory effluent, to be determined by concentration regulation method. A new type of regulation was devised to control excessive nutrients in waste water at the source by forbidding the domestic use of phosphate containing detergents.

At that time, a nationwide effluent standard for N and P simply did not exist. Therefore, the BIWAKO JYOREI became epoch-making legislation in Japan for the control of factory effluent. In Japan, it is rare indeed when local level regulation is more encompassing or higher than national standards, and it is known as "YOKODASHI". And in fact, five years after the enactment of the BIWAKO JYOREI ordinance, the national Water Pollution Control Law was also revised in 1985, incorporating regulation standards for N and P in factory effluent.

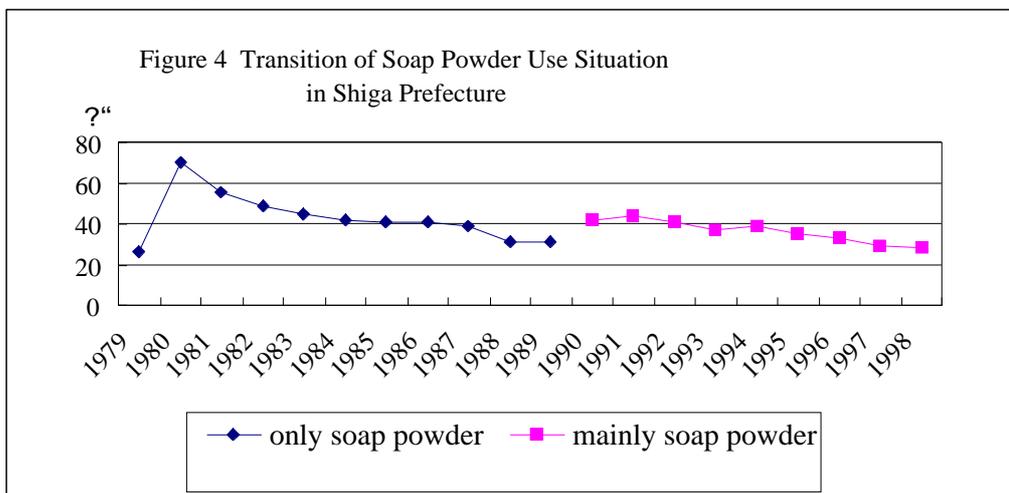
However, there was considerable opposition to BIWAKO JYOREI from both ordinary citizens and the industrial establishment. On the one side, some NPOs asserted that the regulations proposal had not dealt with phosphorus-free synthetic detergents, disregarding evidence of their toxicity. The industrial establishment, on the other hand, objected, claiming among other things, that "soap has organic nutrient

pollution potential larger than that of synthetic detergent, and the causal relationship of eutrophication and orthophosphates is scientifically unknown". However, the regulations proposal passed the prefectural legislature, in October, 1979, under the powerful leadership of the all-party organization of governor Takemura.

Ideally, especially if N and P are the main contributors to water pollution, legislation on a national level would be most effective. However, given the situation at the time with the conservative stance of the national government, the worsening water quality of the lake, and the convergence of public activism and a regional reformist movement reaching power at prefectural levels, the enactment of the BIWAKO JYOREI was timely and had great political significance. But this ordinance, though significant politically, did not however have a major environmental impact, considering subsequent trends of synthetic detergent use and in the water quality levels of Lake Biwa are seen. See Fig. 4.

This story of the BIWAKO JYOREI is, in Japan, a rare example of how a citizen-originated movement can actually reach and influence the decision-making levels of government, and provides a good example of partnership between people and government in the field of environmental preservation not only of Lake Biwa but nationwide. These events in Shiga Prefecture influenced other prefectures facing similar lake environmental degradation problems, and even (rare for Japan) have been connected to the revision of the national Water Pollution Control Law in 1985. It is a notable example, given the prevailing situation at the time, where the actions of ordinary citizens, the residents of Shiga Prefecture, moved environmental administration or environmental policy of Japan as a whole.

However, reality has tarnished the glory of BIWAKO JYOREI. The industrial world's successful development of phosphorus-free synthetic detergents made the regulations of the BIWAKO JYOREI much less meaningful, especially if we consider the target of this movement which produced the BIWAKO JYOREI as not only to stop domestic use of phosphate-containing detergents, but also to stop the use of high-toxicity synthetic detergent in general. We have to consider this movement as still on-going. The rate of use of synthetic detergent remains high (See Fig. 4.), and whether the power of civic movement of Shiga Prefecture can rise up to the level of 70's civic movement as to banish all synthetic detergents is problematic, especially because there are so many factors involved in the degradation of the lake's water quality, especially because of public works in Japan. People realize that there is no one simple answer, but tackling all the problems at once seems too difficult, especially when there are powerful forces involved and even lack of agreement on which areas need the most attention.



Moreover, the movement which resulted in the BIWAKO JYOREI coincided with the calls for a ten-year extension of the BIWASO super-project, which was supposed to last only ten years, according to the original plan. The big changes in water demand, especially the fall of water-for-industrial-use demand, had become clear by that time. (See Table 1.) It was the best opportunity to re-examine the necessity and the objectives of the BIWASO, including such factors as the maximum allowable water level fluctuation (which has such a crucial impact on the lakeshore ecosystem), and it was a chance to change BIWASO into

mainly a ecosystem preservation plan. But, the more the synthetic detergent problem took center stage, the less the big fundamental problems of the BIWASO super-project attracted people's concern or attention. It should be mentioned in passing that the reformist governor Mr. Takemura, in the middle of his third term, resigned to become a member of the conservatives party in the National Diet, and became Minister of Finance in the conservative government after that. Basically, he left having established the BIWAKO JYOREI to deal with the problem of synthetic detergents, but left the BIWASO super-project essentially untouched. Comparing the negative impact which the BIWASO super-project had on Lake Biwa with the positive influence which the synthetic detergent banishment movement had on the lake, we dare to say that the negative influence which BIWASO had was clearly larger than the positive effect of the synthetic detergent banishment movement.

In spite of the efforts of the Prefectural administration and of prefectural citizens, the water quality of Lake Biwa is getting worse or leveling off at best, and there is no actual hope of any significant improvement in the present situation. For example, for lakes and marshes that are sources of drinking water, the national water quality standard specified as ideal to prevent eutrophication is 0.2mg/ l T-N and 0.01mg/l T-P. But the actual values for southern Lake Biwa in 1995 were 0.42mg/l T-N and 0.021mg/l T-P. Even worse, the quality of water discharged from the basin-wide sewer disposal plants, whose advanced processing represents the most outstanding and capital intensive enterprise in the whole BIWASO super-project, shows values of 5.8mg/l T-N and 0.07mg/l T-P, almost 30 times over the national ideal standard for nitrogen and seven times that of phosphate. In short, the sewer treatment plant is in fact one of the pollution sources under the existing conditions. This teaches us the limitations of the water purification achievable by centralized approach of the BIWASO sewage treatment system. Further lessons ought to include the need to go beyond the BIWASO system and incorporate more radical policies to improve water quality. These include, preservation and restoration of the lakeshore ecosystem (for its bio-filter role), and regulation of total emissions of N and P (as opposed to standards based on concentration per unit of volume. Moreover, we should design a new policy to stimulate the fishing industry, which would not only stimulate local business, but by the harvesting of fish, N and P nutrients would be removed from the lake.

Present and Future Objectives of the Environmental NGO Movement in Shiga Prefecture

Three functions and roles of Shiga Environmental NGOs

Even now, the situation with water pollution of Lake Biwa and ongoing environmental degradation is not improved. Aggravation of water quality is serious and the influence of global warming is also appearing. And, although public works dam construction is being reconsidered at the national level, due in large part to the efforts of environmental NGOs, all of eight dam projects in Shiga Prefecture have not been touched. The Lake Biwa Resort Necklace scheme, though dormant, is still in effect. Moreover, we are only beginning to understand the problems of ecosystem destruction due to artificial water level fluctuations (as a result of human use), which was a fundamental problem of the BIWASO super-project.

It can be said that the following three functions and roles of Environmental NGOs of Shiga Prefecture evolved through various efforts carried out up till now.

The first role and function is as a counter-balance to the forces of environmental degradation. We can call this "defensive function for human and natural rights". This activity is the starting point of environmental NGOs, and they often fade away once their objective is either achieved or defeated. Some examples of this with environmental NGOs of Shiga Prefecture are the anti-golf course campaign, the movement against the artificial island construction of the BIWASO super-project, the movement against Biwako Airport construction, etc. Although they have various weak points, in some cases environmental NGOs were successful in stopping or postponing development projects, establishing some deterrent power to wasteful and destructive development. Prefectural public opinion is affected by the activities of environmental NGOs of Shiga Prefecture.

The second function or role that NGOs ideally play could be described as that of combining with local government to further local autonomy in a country notorious for centralization of power, and furthering the

ideal of democracy which got its start in the postwar period. We can call this the "supporting local autonomy function". This function can be realized when an NGO transcends merely local immediate concerns (the so-called NIMBY or Not In My Back Yard factor), and positions the role of the individual movement within bigger public responsibility. The efforts of environmental NGOs of Shiga Prefecture, which, working in tandem with the Prefectural government, helped to get the BIWAKO JYOREI enacted, could be considered an example of this function. This function will be needed increasingly from now on in order to achieve much-needed cooperation between local administration and such citizens' movements, leading to the evolution, from a simple opposition movement, to a continuing constructive movement. Another example of this function is the campaign for freedom of information, which resulted in access to municipal information in Hino-cho, site of the projected Biwako Airport. As a result of the opposition movement against Biwako Airport plan in Hino-cho, a Freedom of Information Ordinance was enacted in September, 1999 by the municipality of Hino-cho.

The third function or role is developing, presenting and advocating alternatives leading toward a sustainable recycling type society, and building greater citizens' participation in municipal affairs. We can call this "Presenting alternatives function". Put differently, it is a supplementary or compensatory function working through inclusive democracy to contribute to the solution of problems which either cannot be fully dealt with by market mechanism and governmental administration alone, or are actually being exacerbated because of "Market Failure" and/or "Government Failure". An example of these "Failures" in Japan is the problem of the so-called "iron-triangle", or collusive relationship web among the bureaucracy, the construction industry and the political establishment. This powerful triangular relationship is known variously in Japan as the "Sei-Kan-Zai Yuchaku" (politico-bureaucratic-industrial relationship), the "Public Works Complex" and the "Doken Kokka" (Civil Engineering and Construction State). (See Wolferen, 1996; McCormack, 1986).

It is worth recalling here that the rash of resort development based on the ill-considered Resort Law is one of the main factors behind the mountain of non-performing loans left over after the collapse of the bubble economy, and also the ballooning national debt, thus resulting in economic as well as environmental destruction.

Environmental NGOs in Shiga have worked with the nationwide movement calling for a sweeping reassessment of Japan's massive public-works program, easily the largest of all the industrialized nations. They have also initiated referendums on the Biwako Airport project, among others, and worked toward reassessment of the peculiar Japanese system giving priority to construction development. In addition, the environmental NGOs of Shiga Prefecture have advocated weaning the economic structure away from dependence on large-scale public works. And members of environmental NGOs have entered local politics, in several townships even winning the mayor's office. In another example, once decided, public works projects were never reconsidered nor altered, but recently, due in part to the efforts of NGOs, this deplorable situation is beginning to change. At present, approximately 280 public works projects are under review, for possible cancellation. There is also a modest trend towards allowing some citizen participation on relevant committees. However, since most large-sized public works are not halted, let alone opened to revision once they have been decided on, survived, overestimation of the above positive effects should be avoided.

Table 3 Three Functions and The Experience of NGO Movements in Shiga Prefecture

Defensive Function	Anti-artificial inland construction campaign, Anti-golf course campaign, Anti-dam construction campaign, Opposition movement against Biwako Airport
Supporting Function	Synthetic detergent banishment movement, Information Freedom referendum, Direct democracy of Biwako Airport referendum
Presenting Alternative Function	BIWAKO JYOREI campaign and amendment of Water Pollution Control Law (revised Fundamental Law of Environment in 1993), Lake Biwa Environmental Right Lawsuit and establishment of Reed Belt Preservation Ordinance in 1992, Nation-wide public-works reexamination, River Law Revision in 1997, Birth of environmental group's mayors

The Future of the Shiga Environmental NGO Movement

As citizens' movements gradually become recognized socially and their influence increases, it is also clear that new aspects and problems associated with them will continue to arise. These problems could be divided into two groups, one in connection with NGO partnership with administration, and the other in connection with the partnership with a political party or movement.

The phenomenon of NGOs operating in partnership with government is already happening in Shiga Prefecture now, such as by tackling riverine ecosystem restoration with the cooperation of the community, or a joint government-and-people project aimed at restoring, for water quality improvement, one of the "naiko" (series of pond/wetlands large and small that used to line the periphery of Lake Biwa). Another example is the 9th International Conference on the Conservation and Management of Lakes, to be held in Shiga in 2001 with the cooperation of NGOs. The government has also organized, 'from the top' an umbrella organization of NPOs active in Shiga Prefecture (known as the Ohmi Network Center, it is funded by the prefecture and had 614 NPO members by May, 1999). Although establishing the partnership of administration and residents is important and many efforts have been made on the part of environmental NGOs, there are dangers and areas of concern. Citizens' movements, often only with a poor financial base, can find themselves confined within limits set or implied by administration, and they face the risk of losing independence, as a result of over-dependence on the power and financial support of administration. NPO/NGOs will need a substantial financial base in order to prevent this.

As far as partnership with a political party or organization is concerned, traditionally, environmental movements have stayed aloof of politics. But there is often the possibility that an environmental NGO, perhaps too eager to achieve its goals, would enter into partnership with a political group. There is the very real possibility, though, of achieving the political objective but not the environmental one, for a variety of economic, social, and political reasons. The NGO also runs the risk of splintering due to political disagreements unrelated to the original shared environmental objective. Although NGOs can potentially benefit from partnerships with government or with political groups, it is important for them to maintain a certain independence so as to preserve their freedom of action, accommodate the often varying political views of their membership, and avoid the danger of being used, and perhaps then ignored.

Towards an Environmental Era in the 21st century

Environmental NGOs of Shiga Prefecture have begun to explore new territory, such as exchanges or networking on an international scale, or moving towards a more comprehensive alternative approach to environmental problems, instead of narrowly focusing on single issues.

Examples of internationalization include environmental NGOs traveling abroad to inspect or experience first-hand the situation in more environmentally advanced nations like Germany or Denmark, engaging in a continuing independent international exchange with American NGOs regarding revision of U.S. dam policy, and so on. It is hoped that networking with Asian countries and Australia will develop in the near future.

Regarding the evolution of more comprehensive approaches, the environmental movement can and should build on the experience of years of activism to formulate the alternative of a comprehensive environmental-preservation strategy, keeping the vision of a recycling-based sustainable society, based on the efforts of citizens' movements, government and industry, indeed, of society as a whole. (Refer to Kasumigaura, 1995 for one example that is consulted as an alternative of a comprehensive environmental-preservation strategy). In order to for NGOs to preserve their originality and independence, it is imperative to have an alternative and well-formulated comprehensive preservation strategy to provide direction and withstand the pressures of government and/or industry-led development, which by and large does not tend towards the achieving of a sustainable society. The evolution and dissemination by NGOs of such an alternative comprehensive strategy is the key to democratic change of the present, non-sustainable, development-priority Japan social system and to the transition to a sustainable recycling-style society.

The environmental NGO movement of Shiga Prefecture in the 21st century must grow and change to achieve these goals. The recent history of the environmental NGO movement suggests that this is certainly possible and that there is light at the end of tunnel.

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