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# MONOBE RIVER BASIN MANAGEMENT AND MYSELF

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**Abstract:** Revitalization of river by citizen's participation is becoming popular in many regions around the world. Monobe river flowing in Kochi prefecture where the author is living is not exceptional either. Monobe river had been "forgotten" by people in the region for a long time. As revitalization of the river with private initiative, which is becoming famous as "Monobe river approach" is being introduced, people's concerns towards the river have been gradually enhanced. Among some active participants, however, there are concerns such as "The number of newcomers is insufficient" or "River conditions may be worsened up to the point of no return unless we speedup revitalization activities." Reflecting myself, I had never been interested in the river for the first six years in Kochi though I had looked at the river almost every day. However, I am now being actively involved with river vitalization activities. By analyzing the short personal history of the relationship between Monobe river and myself, therefore, there is a possibility to identify some clues that an "off-person" with no interest becomes an "on-person" regarding the revitalization. Through this analysis and experiences of various events afterwards, the author could obtain different perspective and find that a fundamental reason for the limited dissemination in Monobe river seems to lie in the relationship between the core members and people in the region. In this paper, thus, an attempt is made 1) to identify characteristics of Monobe river approach, 2) to summarize the relational history between the river and myself and 3) to discuss some means to change the conventional relationship into new one.

**KEYWORDS:** Monobe river, river management, risk management, co-creator

## 1. INTRODUCTION

Revitalization of river by citizen's participation is becoming popular in many regions around the world. Monobe river flowing in Kochi prefecture where I am living is not exceptional either. Monobe river had been "forgotten" by people in the region for a long time. As revitalization of the river with private initiative, which is becoming famous as "Monobe river approach" is being introduced, people's concerns towards the river have been gradually enhanced.

Among some active participants, however, there are concerns such as "The number of newcomers is insufficient" or "River conditions may be worsened

up to the point of no return unless we speedup revitalization activities." For example, among students of Kochi University where Monobe river is flowing beside, their concerns towards the river are generally very low.

Reflecting myself, I had never been interested in the river for the first six years in Kochi though I had looked at the river almost every day. However, I am now being actively involved with river vitalization activities. By analyzing the short personal history of the relationship between Monobe river and myself, therefore, there is a possibility to identify some clues that an "off-person" with no interest becomes an "on-person" regarding the revitalization.

Through this analysis and experiences of various

events afterwards, the author could obtain different perspective and find that a fundamental reason for the limited dissemination in Monobe river seems to lie in the relationship between the core members and people in the region. The core members are the producer, and the other people are the customer. This relationship should be changed to solve the environmental risk problem in Monobe river basin. In this paper, thus, an attempt is made 1) to identify characteristics of Monobe river approach, 2) to summarize the relational history between the river and myself and to analyze reasons that I could be changed from “off” to “on,” and 3) to discuss some means to change the producer-customer relationship into co-creators.

## **2. OVERVIEW OF MONOPBE RIVER APPROACH**

The source of Monobe river lies in Mt. Shiraga, and its length is approximately 71km. Monobe river and its basin have six characteristics. First, the river had been a clean river described as “a river full of sweetfish” in old days. Second, since the river has a very steep slope among first class rivers which are controlled by the central government, it is suitable to hydropower generation. The water stored at dams is usually discharged in such a manner that hydropower generation is maximized. Third, the river basin has Kacho plain field with the area of 3,500ha, which is the largest farm belt in the prefecture. Thus, the river provides a large amount of 15.5ton per second of agricultural water during irrigation period. Fourth, in the river the maintaining flow rate, the minimum flow rate for underwater creatures to be alive, have not been actually set. Fifth, partly due to the second, third, and fourth characteristics, the river water has been facing serious problems such as frequent occurrence of water shortage and the river mouth blockage, murky waters caused by mountain fire and

soil accumulated at dams, and water quality deterioration caused by untreated sewage and industrial effluent. Sixth, the river is recently facing even more serious problems. Many big typhoons attacked the river in between fall in 2004 and 2006. Mountain slopes were collapsed, and more than 100 million cubic meter of soil ran down in upstream of Monobe river. Whenever it rains heavily, thus, murky waters continue flowing for a much longer period such as a month. As a result, fish catches were fallen to virtually zero in 2006. Furthermore, the number of deer is increasing explosively due to global warming effects, and they are eating tree barks and vegetation in the mountain. This is causing deforestation, which may bring about another mountainside collapse and depletion regional water resources. The river can be called “a river of ordeal.”

Despite these ordeals, people never give up with sturdy spirits. In 2004, Monobe river approach generated a “miracle.” In 2004, due to efforts such as development of artificial spawning bed, more than two million natural sweetfish were returned to the river and swam to the upstream. Against large mountainside collapses and deforestation caused by an increasing number of deer, people are patiently attempting to restore damaged sites.

## **3. CHARACTERISTICS OF MONOBE RIVER APPROACH**

In this chapter an attempt is made to briefly discuss characteristics of Monobe river approach. Their characteristics are summarized on the viewpoints of management functions as follows.

1) Planning:

- Pioneer of environmental fisheries cooperatives
- Clean stream conservation plan aiming at the global optimum for true happiness

2) Organizing:

- A collection of active private organizations

supported by governments

- A group full of excellent experts in various fields and their appropriate role sharing

- Honest opinion exchange in flat structured organization

3) Leading:

- Leaders pursuing public interest with reason and loving people and nature with sincerity

- Atmosphere of respecting each other

- Sturdy spirits challenging repeated ordeals

4) Controlling

- Petition and policy proposal based on scientific observation and analysis of site conditions

The Monobe river approach was initiated by Mr. Iwagami, the former representative of Monobe river fisheries cooperative. In 1991 the cooperatives drastically changed the direction of their activities into a) earning income with “honest work” of stabilizing fish catches, which the cooperative is fundamentally supposed to do, on the basis of understanding by people in the region, b) recognizing that conservation of river environment assisted by the whole river basin is essential to do the honest work, c) positioning the river and river fish as the common asset in the river basin, and d) becoming an “engine” of environmental conservation activities. It is a moment when the cooperative made a first step towards environmental fisheries cooperativs.

A milestone for development of Monobe river approach was establishment of “Association of forest and water in Monobe river for the 21<sup>st</sup> century” in 2001. Herein this association is referred to as “21<sup>st</sup> century,” which its members use most frequently.

Here the author summarizes characteristics of “21<sup>st</sup> century” in five items. First, it consists of private organizations in different sectors: forest cooperatives and power company in “the mountain sector,” fisheries cooperatives in the river sector,

agricultural cooperatives, irrigation association, and city board of trade in “the land sector,” and fisheries cooperative in the marine sector. It means that Monobe river management with private initiative was clearly defined. Second, the association was successfully building mutual cooperation systems among competing organizations with respect to water use by setting their common benefit: strengthening water resources. Third, the association becomes a gold mine of attractive people. It is Mr. Sakamoto, the former secretary general of “The association of forest and green in Kochi prefecture,” together with Mr. Iwagami who proposed the vision of “21<sup>st</sup> century,” asked various governmental offices for their support, and realized the vision. Around these leaders who pursue public interest with reason and loving people and nature with sincerity, many people with similar characteristics to them have been joining “21<sup>st</sup> century.” Fourth, the association vision of “strengthening water resources and aiming at the global optimum in the region” is steadily developed and succeeded. Following “21<sup>st</sup> century,” Kochi prefecture established a cross functional group of “Team of thinking about tomorrow of Monobe river” to pursue global optimum in the basin in 2003. In spring in 2008, Mr. Ueno, the secretary general of “Land improvement organization along Yamada weir,” succeeded Mr. Iwagami and became the second representative of “21<sup>st</sup> century.” Accession of Mr. Ueno from the agricultural sector competing against the river sector with respect to water use is an epoch-making and desirable event because it may raise concerns of people in agricultural sector towards the river.

Fifth, an engine to cooperate each other to achieve a common benefit in the region lies in good old memory as “river children” shared by many members. Actually some of them are still active river children chasing sweetfish! They share the strong passion of “we definitely want to leave this rich

natural environment in Kochi we had enjoyed in our childhood days for our children.” The author felt envy when he watched Mr. Ueno explaining pleasantly his own fishing style developed in his childhood days with gestures. Mr. Tsuneishi, a cheerleader of “21st century” describes Kochi style as “When I want to eat shellfish, sweetfish, or river shrimp, I can just go to the rocky shore or river and do fishing. Then thanking these precious presents from the nature, we have and enjoy them gratefully with all family members.”

## **4. MONOBE RIVER AND MYSELF**

### **4.1 Monobe river and myself**

Monobe river is facing new ordeals of appearance of murky river waters for a longer period and deforestation caused by an increasing number of deer. To overcome these ordeals, new participants are needed. It is useful to study a method of changing people with no or little interest in Monobe river into people with much interest, that is, a method of changing “off-people” into “on-people.”

Here the author does a case study of him for the following two reasons. First, the author had been a typical “off-person” but now an “on-person” who is fascinated with the river. Second, to become an “on-person” may necessitate way of life. In fact, the author decided to change it. Such change of way of life and its process may be difficult to be interviewed because they can be very personal matters. Thus, an attempt is made to indentify the changing process of himself from the viewpoints of the third party.

### **4.2 Why have I had no interest in the river?**

A fundamental reason for no interest is considered that my mind was still facing to Tokyo although I was first happy to come and live in Kochi. I had been living in the “capsule” which is made of “value systems of Tokyo.” This capsule was maintained and

strengthened through frequent business trips to Tokyo. The capsule was also partly made of values of Hokkaido, my home island. I always had been judging that the nature in Kochi was “inferior” to majestic nature in Hokkaido. My viewpoints of looking at nature in Kochi lacked honesty and humbleness. Under such situations, my initial dream of demonstrating attractiveness in Kochi to the world was disappearing.

### **4.3 Why could I become “on”?**

“Why don’t you look up at the sky?” Following an advice by a friend of mine, I was surprised with a countless number of stars. Though the ground with little road lighting may be “a country of darkness,” the sky was full of treasure. Honestly speaking, I felt attracted with Kochi for the first time. At that moment, I decided to open my heart to the others and know people and nature in the region.

In spring of 2005, shortly after my life style change, I decided to change the curriculum of environmental management for junior students at my university. I decided to emphasize understanding the current conditions and problems in Monobe river basin management and discussing their solutions with people in the region. I asked Mr. Sakamoto and Mr. Iwagami for their cooperation.

In a series of lectures given by active participants in the river basin management including Mr. Sakamoto and Mr. Iwagami, I first learned that Monobe river basin has been suffering from serious problems in. At the same time, I felt proud of these people who have been implementing pioneering attempts such as development of artificial spawning bed to increase the number of sweetfish. Until I had lectures, I had been feeling that Monobe river is “a tiny tiny river” as compared with big rivers in Hokkaido. After the lectures, however, I found Monobe river basin a very attractive basin with highly packed nature of mountain, river, land, and

sea. In this view, I found rivers in Hokkaido sparse.

When I exchanged Japanese sake cups with these lectures after the series of lectures, I felt united with these lecturers. Exchanging sake may release myself from my capsule and encourage me to open myself to the others. After this drinking party, I have been attending many drinking parties and enjoying exchange of sake cups.

Then I started learning more about Monobe river with my students. Here the author would like to introduce one unforgettable scene. It is a scene that Mr. Kusume, a former executive director of Monobe river fisheries cooperative, was opening the blocked river mouth with a shovel car sedulously in the cold midnight in January 2008. To protect sweetfish as well as other underwater creatures, he repeats this operation several dozens times a year. When my students and I looked at the moment when piled-up soil was removed and the river water started flowing down to the sea, we shouted with joy. Mr. Kusume operating the shovel car with complete control looked a reliable “grand-pa of sweetfish.” We shoot a video of his operation to open the blocked river mouth.

The above scene is just one example. Whenever I felt peoples’ kindness to care others and passion for protecting nature, I felt like returning a favour to these people and making a contribution to solving problems in the river basin. After opening my heart to the others, I have been trying to find and fulfill my responsibilities and share pleasures of achievements each other. Then, Monobe river released myself from “my capsule life” made of my old values and became “my important place.”

Through this analysis and experiences of various events afterwards, the author could obtain different perspective for new Monobe river approach. In the following sections, the author would like to discuss new approaches. First, in the next section, its necessity of changing the relationship between the

core members and other people is discussed from the viewpoint of risk management.

## **5. DISCUSSIONS OF NECESSITY OF NEW APPROACH FROM RISK MANAGEMENT VIEWPOINTS**

In this section necessity of new approach to increase “on-person” is discussed from the viewpoints of risk management. These viewpoints are important because an issue of increasing “on-person” can be interpreted as a problem of how “off-person” can be motivated to take risk.

The author would like to start from discussions of business of profit company. Based on the philosophy of “market in,” the producer continuously or often even “greedily” pursues frontier of customer’s satisfaction: comfort and/or convenience. The customer buys the service from the producer. A principle of management of profit organization is to generate profit by taking risks efficiently.

From viewpoints of risk management, selling services mean taking all risks associated with producing services. Buying services mean avoiding taking the above-mentioned risks by asking the producer to do so through paying risk management fee. This practice has divided people into the producer and the customer.

Originally people have different “faces.” For example, farmers are called “Hyaku-sho” in Japanese. “Hyaku” means hundred, and “sho” means task. Thus, tasks of farmers are not only growing rice but also cut trees and get branch. They had and enjoyed multiple tasks. As the market economy is developed, efficiency of rice production is pursued. A face of rice production is now only emphasized.

In other field than farmer, as economy is being emphasized as a criterion to represent how well people are living, people are also required to be an effective and efficient producer and be a wise

customer. Other faces than the producer and the customer are paid less attention. As other faces are being lost than the producer and the customer, people have been losing ties with other people.

As many services are created, new types of risks appear and surround us. These risks cannot be solved with the traditional human relationship between the producer and the customer.

One of such examples was an accident that a child died of heat disorder while playing in a daycare center in Ageo-city in 2005. After the accident, there was a discussion that assuring safety is of course important but free nursing is also important. Nishikawa distinguishes between caring and nurturing and defines caring as “making a child stay away from any danger” and “nurturing as encouraging a child to live vividly at each moment by making a small failure and learning from it (Nishikawa, 2006).”

Nishikawa further states that “discussions swings between caring and nursing. This swing is a proof of sound daycare center.” and that “nurturing becomes only possible by officially and unofficially embedding the opportunities in administration of the daycare center for sharing the above-mentioned swing, bringing up worries and problems associated with nurturing from the both staffs and parents, and discussing among parents how the nurturing should be. It is important for parents and staffs to stay close so that they can share a fear of incident.”

In Nishikawa’s comment an important hint is included to deal with a new type of risk. That is importance for parents and staffs to stay close. This close relationship is not the one between the producer and the customer. The both players should be called someone like co-creators.

Environmental conservation activities in Monobe river seem no exception. Core members including myself are working hard such as doing conservation activities, organizing field trips and river festival,

and giving lectures at multiple schools and a university. There is a feeling among core members, however, that the most important message is not really reached to peoples’ hearts in the region: the river basin environment is about to face the crisis.

There must be some room for improvement of core members’ activities in many areas. A fundamental change seems necessary. A fundamental reason for this limited dissemination seems to lie in the relationship between the core members and people in the region. The core members are the producer, and the other people are the customer. This relationship should be changed to solve the environmental risk problem in Monobe river basin.

Reflecting the author’s experiences, he was becoming an “on-person” by co-creators with people in the region through various activities.

Thus, in a following section, some means to change the producer-customer relationship into co-creators are discussed.

## **6. TOWARDS NEW APPROACH**

### **6.1 “Mottainai” (too much loss) to assume that others would have no interest in this issue**

One of the most important objectives for citizens’ activities is to claim rightness of their group. Their rightness is not necessarily right for other people. Missions of citizens’ activities are often difficult for other people to understand. If group members do not have strong confidence that their message is not delivered to other peoples’ heart, they may feel frustrated. It is understandable for them to assume “people would have no interest in our activities, to begin with.”

Before “giving-up,” however, members should think about other peoples’ feelings from broader aspects towards the value the group members appreciate. In Monobe river, main conserving activities are towards increasing the river flow and

thinking about redistribution of water among agriculture, power, and environmental sectors. However, other people may have different interests in the river. For example, some breeders have strong passion to breed their dogs on Monobe riverside.

It is “mottainai” (too much loss) to assume that others would have no interest in this issue

## **6.2 Don't draw “my line” alone to accept others**

As a thesis advisor, the author often has set “the minimum knowledge level” at which each student should have. If this line is set by the student and the author, there is no problem. If this line is only determined by the author and/or even unconsciously, there is a problem. Especially when a student is unfamiliar with that topic, she/he may suffer from not finding a way to reach the line and, to begin with, wonders why this line is set.

The author would like to call the line determined one-sidedly myself and/or unconsciously “my line.”

It should be noted that drawing my line often deprives the student of freedom to think about her/his research topic freely. Some students feel forced to do research instead of being willing to do research. Even when reaching my line is considered an only way for the student to complete the research, “pushing” my line to the student does not necessarily work well.

In citizens' activities, similar situations appear. Unconsciously some leaders of citizens' activities set my line and become eager in helping newcomers to reach the line. If the importance of reaching this line is too much emphasized, however, activities become like educational programs. In such a case, newcomers feel forced to do activities.

## **6.3 Design the process that people “meet” and discover a problem**

Like the thesis advisor, the leader of citizens' activities should carefully design the process that

students and newcomers “meet” and find a problem. A good example is a method taken by A SEED Japan, an environmental activity group led by young people. To clean the place where “Fuji Rock Festival,” one of the biggest rock concerts in Japan held at the bottom of Mt. Fuji, members of A SEED Japan first cleaned the place by themselves. Soon after these activities, however, members understood that their activities were not solving the garbage problem. In order to make people aware of the problem, thus, the members asked attendants to clean the festival place, bring waste to its entrance, and pile the brought waste there so that all attendants can see how much the garbage is generated in this festival. The members were successfully delivering the garbage problem to attendants.

## **6.4 Don't make Ultraman show - Set “from customer to participants and co-creator” most important criterion**

Whether profit organization or citizens organizes an event, those who attend the event have their own expectations. Thus, the citizen group carefully identifies attendants' expectations. In the entertainment show like “Ultraman show,” children with their parents expect personal excitement of watching a hero character fighting against evil monsters. They also expect to be comfortable and free from any risk on operation of show.

Experiences in “Time of grilling potato for fathers” show, however, that attendants have different expectations. In this event, much discomfort is intentionally given from preparation stage. As involvement by Mr. Nishikawa, the project leader, is limited to the minimum, volunteer staff has to work very hard to organize individual event. The event is also designed such that attendants “enjoy” much discomfort. They have explanations of objectives of this event. As a result, they have to wait in a long line. They do craft works by using knives at

their own responsibility. Since the number of “shichirin,” small traditional Japanese BBQ facility, is limited, attendants are forced to ask other attendants (instead of staff!) whether seats are available or not. Despite much discomfort, more than 12,000 people attend a series of these events.

It seems that people feel “rich” at the moment when they are initiating to tie with other peoples’ heart through asking “Is this seat available?” and receiving answer of “yes.” To tie with others, most attendants do not mind taking risks associated with event operation.

When volunteers are literally willing to solve various constraints is a moment when they become co-creator with Mr. Nishikawa. When attendants ask others about seat availability and have a seat is a moment when those attendants become participants from customers. Most important evaluation criterion to judge citizens’ event is whether attendants become participants and co-creators.

“Shibaten game” was an environmental learning game designed by the author’s team. Shibaten, which is translated as river goblin here, is an imaginary creature originated from Monobe river. From discussions with a teacher at elementary school, it was found that development of a game which students can play for 20 minutes of lunch break would be useful. Because of this time constraint, the author’s team excludes all of educational components, left shibaten, a symbol of rich nature, and employed a game rule familiar and easy to play for students.

### **6.5 Trust sense of others and expect their creative ideas**

The author’s team with our partner in Sapporo city has participated in an event called “Environmental Stand.” This event was held in Sapporo which was more than 700 km away from Kochi. Many environmental groups joined and provided their own

environmental study games for attendants, mainly children.

The author’s team was a little anxious about whether children in Sapporo would enjoy playing out game or not because most of them would encounter “Shibaten” for the first time in their lives. However, our anxiety was soon resolved. Most children had no problems to accept “shibaten” and started enjoying the game. Furthermore, some children “versioned-up” the game by changing the game rule and became more excited. As a result of votes by players, our joint team received the first place of game popularity ranking.

The author’s team has two lessons from this event. The first lesson is importance of trusting sense of children. The message embedded in the shibaten game is simple. Rich nature is about to be gone like shibaten. In each place there is a tradition of imaginary creature like shibaten. Each creature is considered to represent invisible but important relationship between human and the nature. Children living in Sapporo, which is far from Kochi, did not deny this message. Trusting that children in Sapporo must be able to feel our message seemed a key of small success.

The second lesson is pleasance of watching children create their ideas. If the author’s team had provided ordinary type of environmental study game of teaching knowledge in one way, children would have never been excited nor “versioned-up” the game. It seems that the organizer of citizens’ event can be energized by expecting and actually receiving creative ideas from attendants.

These moments of expecting and receiving creative ideas are also moments when the attendant become the participant from the customer and become the co-creator with the organizer.

## **7. CONCLUDING REMARKS**

A fundamental reason for the limited dissemination in Monobe river seems to lie in the relationship between the core members and people in the region. It is important to create the relationship of co-creators. The process that the author was becoming an “on-person” was the one of becoming co-creators. Thus, it is needed for the core members to intentionally design the process of becoming co-creators. Measures to design such a process are “Don’t assume that others would have no interest in this issue,” “Don’t draw “my line” alone to accept others,” “Design the process that people “meet” and discover a problem,” “Don’t make Ultraman show,” and “Trust sense of others and expect their creative ideas.”

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