Learning from the Experience of Japanese Dam Project EIA

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Abstract

Since 1997 in Japan, 177 EIAs have been conducted so far across 13 EIA sectors, seven of which dealt with large scale dam projects. The paper introduces these 7 dam projects, focusing on two of them as important showcases for piloting a referendum by citizens at the local government levels. Review of one of the flow of EIA's procedures was undertaken to find out if EIA enhanced public participation in decision making in the river management.

1. Introduction—What Does EIA mean in a Dam Project?

Japan established the national level EIA law in 1997, which is the last among the OECD member countries at that time. It has been ten years since the full enforcement of the law. We have gained certain experiences to review the cases and extract lessons from them. According to the Ministry of Environment's survey in March 2008, the EIA was applied to 177 projects. Among the 13 types of projects such as express ways, airports and so forth required to implement the EIA, regarding river projects, 7 dam projects were implemented as of June 2009.

Since early 1990's in Japan there have been growing numbers of severe protests and public opinions against dam construction plans because of environmental destruction. In the past, there were no legal procedures for citizens to participate in the planning process of a dam project.

In 1996 the River Deliberation Committee of the Ministry of Construction (at that time) issued two reports: 1) the "Basic Direction for the Future River Management towards the Society in the 21st Century" in June and 2) the "Future River Administration System Based on Socio Economic Changes" in December. They recommended the Minister to promote comprehensive river management for flood control, water use rights and environmental conservation in conjunction with the community. The Ministry responded to the recommendation and amended the River Law in 1997, which became the biggest change since the River Law's establishment in 1896 (flood control) and its amendment in 1964 (water use rights). The 1997 amendment focused on addressing environmental conservation and public participation in the decision making process of the Japanese river management system.

However, it gives the public only limited participation in the dam project planning process. The river management administrators are required to make a 100 year policy called "Fundamental River Management Policy"*[1] (FRMP hereafter) for each river system without public participation first. And secondly based on FRMP they are required to make a 20 to 30 year plan called "River Improvement Plan" (RIP hereafter), reflecting stakeholders' opinions, if they thought it is necessary to do so. Ohno (2008) points out "the lack of opportunities for local residents to discuss the adequacy of FRMP". He also point out that RIP's "inappropriate public hearing does not match regional social condition" – the hearing is no more

[1] FRMP defines the hypothetic flood discharge which determines flood control measure such as dams and levies.

than perfunctory participation. The EIA law was established in the same year as the amendment and was expected as another opportunity for public participation as part of legal procedures.

2. Framework and goal of the Study

There have been many studies on public participation in river management and EIA/SEA, which are done independently in Japan. However, not enough studies have been done so far specifically on the EIA's of dam projects. To analyze all 7 large dam projects done so far, a review of administrative documents published by the Ministry of the Environment, the Ministry of Land, Infrastructure and Transport (former Ministry of Construction, MLIT hereafter), and Japan Water Agency, was undertaken.

There has been significant anti-dam movement by each local citizen groups and some experts against these projects, documented through media reports, websites and citizen group information[2].Out of these we took a close look at two dam projects. Because local people have not been given the possibility to constructively participate during the decision making process in the river management, they had to resolve to "last chance" methods to stop the projects. In both regions, local citizen groups tried to stop development through a referendum at each local government level.

So this study focused on the public participation during the dam project EIA, reviewing other public participation measures, to see if EIA enhances public participation in decision making in the river management.

3. Application of EIA for Dam Projects

3-1. Declining Water Use Demand

All projects (**Table 1**) have been facing one common trend: Declining water demand due to nation wide slow economic growth and the end of population growth.

Case 1 and 2 were cancelled after EIA processes started or finished when local governments as drinking and industrial water suppliers withdrew from the projects due to lack of new water demand - in both cases reasons that were not directly related to EIA. **Case 3** was planed as flood control and drinking water supply dam in 1992 and became one of the last water resource development projects of Japan Water Agency when the Japanese government made JWA stop the new development and become the water supply facility management agency in 2002. Although its EIA process finished in 2004, in early 2009 new information was revealed to the public (See foot note 2) and extra proceeding began.

Table 1. EIA Applied Dam Projects

Case	River / Dam	Promoter	Place	reservoir area(ha)	Class	Plan	Scoping	EIS
1	Takahashi/Estuary Barrage	Chugoku RDB, MLIT	Okayama	100	1	1968	1999	Cancelled
2	Tone/Tokura	JWA	Gumma	200	1	1982	1999	2002
3	Chikugo/Koishiwaragawa	JWA	Fukuoka	120	1	1992	2002	2004
4	Harai/Irahara	Fukuoka	Fukuoka	122	1	1974	1999	2005
5	Toyokawa/Shitara	Chubu RDB, MLIT	Aichi	297	1	1961	2004	2007
6	Hijikawa/Yamatosaka	Shikoku RDB, MLIT	Ehime	76	2	1986	2005	2008
7	Kuzuryu/Asuwagawa	Kinki RDB, MLIT	Fukui	94	2	1967	2007	Prep

MLIT: Ministry of Land, Infrastructure and Transport

RDB: Regional Development Bureau

JWA: Japan Water Agency

Class 1: EIA is mandatory. Reservoir area is 100 ha or larger

Class 2: Application of EIA is judged by each project. Reservoir area is 75-100 ha

[2] "Habitat of *Aphanothece Sacrum* was Exempted from EIA on Vague Evidences" and other 21 articles in "Feature: Koishiwaragawa Dam", February 26-June 30, 2009 Nishinippon Newspaper http://www.nishinippon.co.jp/nnp/feature/article1/, "Violence of Dam", Atsuko Masano, Weekly Kinyobi, No. 731 Dec. 12, 2008, pages 11-18, and the leaflet "We Don't Want Dams" by Citizen Network of Water Resource Development Issues, Oct. 25, 2006, and

Case 4, a multiple-purpose (drinking water and flood control) dam since 1974, went through project evaluation in 2006 by the Evaluation Bureau of the Ministry of Public Management, Home Affairs, Posts and Telecommunications. The Bureau concluded that water demand estimate did not align with numbers on population growth and recent water supply performance and that more appropriate estimate should be sought for the future. However it stated that it is not necessary to revise the estimate immediately. Thus the promoter decided to continue the project without further need assessment. EIA process, finished in 2005, was a year before this evaluation. The evaluation system started in 2002 as an administrative reform but it is executed irrelevant to EIA. Whether it turned out a ceremonial event or not is worth questioning. **Case 5** was originally planned as a hydropower dam in the 1960's but changed to a multiple-purpose (drinking water, irrigation and flood control) dam in the 1970's and legally finalized so in 2001. And in 2006 between the scoping and draft EIS process the purpose was changed again due to less new water demand from local governments. But the promoter only changed the budget share allocation (less local governments and more MLIT), kept the size of the project and finished the EIA process. **Case 6,** originally multiple-purpose dam, has undergone several rounds of discussions and even faced cancellation by the ruling parties in 2000 as no consensus could be reached about its use among the local government bodies. After drinking and irrigation water purposes were cancelled, it became a flood control dam. Detail on EIA process will be mentioned in Chapter 4. **Case 7** was started as a multiple-purpose (drinking, irrigation and industry water and flood control) dam around the 80's but in 2007 purpose became exclusive to a flood control. Its EIA process is now being undertaken.

3-2. Referendum in Two Projects

Case 5 and **Case 6** faced referendums by local citizen groups at each local government level. The difference is that both referendums have been plugged in at different timing with EIA application, one after, and the other before as shown in **Table 2**

Table 2. Case 5 (Shitara Dam) Timeline of Main Evens

May. 1990	MLIT noticed the Toyokawa Water Resource Development Basic Plan.
Oct. 1998	MLIT followed the decision by the Evaluation Committee of the Chube RDB to continue the project.
Dec. 1999	MLIT made Toyokawa River FRMP.
Nov. 2001	MLIT decided Toyokawa River RIP after public hearing in 12 places.
Nov. 2004	**EIA (-Jun. 2007)**
Apr. 2006	MLIT revised the Water Resource Development Bacic Plan and RIP.
Aug. 2008	**Local citizens in Shitara Town submitted the referendum bill.**
Oct. 2008	MLIT revised the Shitara Dam Basic Plan based in Specified Multi-Purpose Dam Law.
Nov. 2008	Shitara Town Assembly rejected the citizens' referendum bill.

Table 3. Case 6 (Yamatosaka Dam) Timeline of Main Evens

Aug. 1994	MLIT noticed the original Yamatosaka Dam plan.
Aug. 2000	The ruling parties at the time recommended to cancel the 233 public works including Yamatosaka.
Oct. 2000	Ehime Prefecture Governor asked the Minster to continue the project.
Nov. 2000	MLIT followed the decision by the Evaluation Committee of the Shikoku RDB to continue the project.
May. 2001	MLIT noticed the revised Yamatosaka Dam Basic Plan based on the Specified Multi-Purpose Dam Law.
Nov. 2001	**Local citizens in Ozu City submitted the referendum bill.**
Nov. 2001	MLIT followed the decision by Evaluation Committee of the Shikoku RDB to continue the project and excluded water supply from the plan.
Dec. 2001	Ozu City Assembly rejected the citizens' referendum bill.
Oct. 2004	MLIT made the Hijikawa River FRMP.
Feb. 2004	MLIT held public meetings in 5 places on the Hijikawa River RIP draft.
May. 2004	MLIT made the Hijikawa River RIP
Aug. 2005	**EIA (-2008)**

and **Table 3**.

In spite of the citizens' effort, referendums were not incorporated in both cases. The Japanese Local Government Law requires signatures by more than one fiftieth of the constituents for submitting the referendum bill, which was reached respectively. And the local assembly needs to pass the bill for constituents to implement a referendum, which was not incorporated. Both assemblies rejected the respective bill, which is very common in Japan. Referendum system is a direct democracy measure to enhance public participation through voting on specific matters. But it is a well known fact that local government assemblies tend to reject passing the bill on specific projects because using referendum on decision making means admitting their malfunction, which leads to self-denial. These two cases were no exceptions.

Most of EIA applied projects were originally planed when Japan was enjoying the rapid economic growth and there was no public participation rules built in the related laws of the projects. In the meanwhile, population growth has reached the peak and Japan is facing an increasingly aging society with fewer children, changing the demand situation (social and economic needs) significantly.

As mentioned earlier, in 1996 the River Deliberation Committee, reviewing past changes and anticipating the social and economic changes toward the 21st century, recommended promotion of comprehensive river management in its report. And permanent monitoring of the societal demands and adjustments are required throughout the planning process.

However, there is no compulsory public participation rules built in evaluating and adjustment systems yet. It would be desirable to have thorough need assessment with public participation in these systems before EIA so as not to waste resources invested in EIA.

4. Public Comments and Responds in EIA

As we discussed in Chapter 1, 2 and 3, public participation in decision making on the river management remains difficult. Thus the analysis focused on public comments made during the EIA process of **Case 5** and **Case 6** to see if they had specific comments on the decision making process, particularly with regard to expectations on the EIA process becoming another chance to influence the project and river management.

As a result we found out that in **Case 5,** 58 out of 322 (18%) public comments on scoping were negative comments including demanding cancellation of the project, questioning the necessity of the project and asking for alternatives and reconsideration. 53 out of 542 (9%) public comments on draft EIS were negative. For example, "It should not be allowed to build a dam, knowing the place is a habitat of Nekogiki, a valuable animal species protected by the government". "The purpose of building the dam is not clear. You should let the public discuss pros and cons of the project." The Ministry responded, "Nekogiki can be relocated" and "EIA process is implemented by the law to assess the environmental impact". The latter response sounds puzzling and meaningless. But it is typical interpretation of the Japanese EIA Law meaning, "The law is designed to only consider the environmental impact but does not affect proceeding of the project." and repeated in responses to public comments seeking for cancellation and alternatives of the project. In **Case 6,** 11 out of 111 (10%) participants during scoping, and 25 out of 169 (15%) participants during draft EIS, were negative comments. For example, "It should be cancelled because there are 24 rare and endangered species at the site and the project is environmentally destructive", the Ministry only referred to the law as in **Case** 5.

Figure 1. Flow of Case 6 (Yamatosaka Dam) EIA

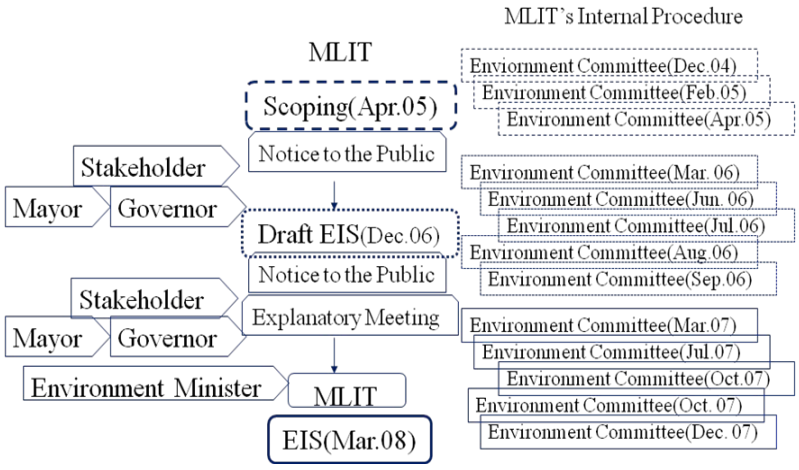

Figure 1 shows the flow of EIA on **Case 6**. As indicated in the left side**,** the public could only submit comments only during producing scoping and draft EIS and attend and ask questions in the explanatory meeting held in two places for draft EIS during entire process. And MLIT's responses to public comments on scoping were disclosed to the public 9 months later in writing. And the responses on draft EIS were disclosed in writing 2 months later. Responses in writing and with time lag make mutual understanding and communication extremely difficult.

The right side of **Figure 1** shows the flow of MLIT's internal committee as an advisory body composed of experts appointed by MLIT. The public could only sit and observe. The committee met 13 times and had MLIT explain environmental information and EIA process repeatedly. If experts needed such time and explanation from MLIT, how could the public, without these, participate and influence the decision making?

5. Conclusion and Future Challenge

Through the study on EIA on dam projects, we learned that due to the change of social needs, especially drinking water demand, two dam projects were cancelled and most of the rest went through revisions of plans. While the public participation system in the river management is not properly installed, in 2 cases out of 7 dam projects, citizens chose to submit referendum bills to get involved themselves more. But in both cases they were rejected by the local assemblies. EIA could have become another way for the public to participate in river management. However, with poor participation opportunities and methodology, it is hard to say that EIA became a useful measure to enhance public participation in decision making in the river management.

In order to have meaningful public participation in EIA, we recommend permanent monitoring of the societal demands done throughout the planning process. And it has to be coordinated in the way thorough need assessment comes prior to EIA. And face to face repeated mutual communication between the river management administrators and the public starting earlier stage of the process should be a compulsory procedure. We need further study to find out methodology to enhance public participation in the river management.

Reference

Ohno Tomohiro (2008)"Public participation reexamined: critical investigation on the planning process of the River Improvement Plan", Multi-level Environmental Governance for Sustainable Development Discussion Paper, Japan