

COMPARATIVE STUDY ON RESETTLEMENT SCHEMES APPLIED FOR TWO DAM CONSTRUCTION PROJECTS IN INDONESIA

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1 INTRODUCTION

We recently observe much more arguments about validity of dam construction in many regions and countries in the world. It appears that many people have become suspicious over dam construction on the basis of environmental conservation as well as protection for indigenous people and culture. The Involuntary resettlement of residents from inundation area has become the most critical and difficult problem. Dam constructors have been criticized because of massive relocation of residents caused by dam construction projects. However, there still exists many needs for dams in particular in the developing world, where increase of hydropower generation and expansion of irrigated agriculture have utmost importance.

The World Commission on Dams (WCD) published its only and final report "Dams and Development" in November 2000 after two and half years' of preparation process (WCD, 2000). The Dams and Sustainable Development session in the Third World Water Forum (held in March 2003 at Kyoto, Japan) mentioned "the recent World Commission on Dams (WCD) report, which reviews past dam projects and proposes a new approach to planning, has elicited strong reactions, both for and against. Some see the report as a new development paradigm, wishing to see it implemented in full. Others perceive it as unbalanced, overstating the benefits relative to the social-environmental costs. Several institutions claim that the proposed criteria and guidelines are not applicable in many situations and require further elaboration. Beyond these positions, many recognize that the WCD report made an important contribution and support its core values and strategic priorities. "

It appears, however, that the WCD has failed to propose a set of practical guidelines. The executive summary of the report, in fact, mentioned that the report was "not intended as a blueprint". At the final WCD Forum held in Cape Town, on 25-27 February 2001, former WCD chair, Professor Kadar Asmal, stated, "Our guidelines offer guidance - not a regulatory framework. They are not laws to be obeyed rigidly. They are guidelines, with a small 'g'."(WCD, 2001).

It is apparent that we still need solid modalities to deal with the very delicate issue of resettlement due to dam construction projects. Examining the proposed modality from the viewpoints of experiences gained in the past sounds a rational approach. More post-project reviews should be carried out, in this connection, to learn lessons from the past for the future. This study aims at (a) finding out if existing policy of organizations constructing dams, for involuntary resettlement issue of dam construction projects, is really instrumental to mitigate impacts and have resettlers re-establish their livelihood flawlessly after relocation, and (b) identifying the elements in compensation scheme which are essential to have a success in resettlement.

2 CASES EXAMINED

This study was conducted through comparative analysis on the Saguling and Kotapanjang dam construction projects in Indonesia, in the Java and Sumatra island respectively. The National Power Company (PLN) constructed these dams for hydropower generation in early 1980's and mid 1990's respectively. The number of resettlers for these projects amounted respectively to 3,000 and 4,500 families (Nakayama, et. al., 2000).

The Saguling dam is located in the Citarum river system of the heavily populated Java island. The Citarum river originates in the Bandung Plain and flows into Java Sea with catchment area of 6,590 sq. km. and average annual rainfall of 2,232 mm. (PLN, 1990). It is the largest among the rivers in the west Java and it ranks third among the major rivers on Java. The dam site is situated only 30 k.m. away from the city of Bandung, which is the third largest city in Indonesia and is within the catchment of the dam. The construction of the Saguling dam was commenced in 1983 and the dam was completed in 1987. The purpose of the dam was to generate power to meet increasing demands from Java. The Saguling dam has power generation capacity of 700 MW. The Saguling dam was planned and constructed by the Indonesian National State Electric Company (Perusahaan Umum Listrik Negara - PLN) with loans provided by the World Bank and OECF (Overseas Economic Cooperation Funds) of Japan. The Saguling dam project was, owing to the funding by the World Bank, among initial projects in Indonesia for which serious attention was paid about their impacts on environment.

The Kotapanjang Hydro-Electric Power Plant (HEPP) of 114 MW and associated transmission lines were constructed in the central part of the Sumatra Island, to meet the increasing demand of regional electrification in West Sumatra and Riau Provinces of Indonesia. It was partly funded by the Japan's ODA loan to Indonesian. The Kotapanjang reservoir covering 12,400 ha was expected to have enormous influence on the area. It was thus needed to pay sufficient attention to social and environmental impacts. The project commenced construction in 1991 and started operation in 1998.

3 SUCCESSFUL AND FAILED CASES?

The Saguling case may be known as a success rather than failure among those involved in overseas development aid. For example, the World Bank, one of the funding sources for the Saguling dam, regards the resettlement scheme for Saguling dam project as highly successful (Costa-Pierce, 1997), particularly because development of aquaculture in the reservoir created jobs for resettlers and gave them better income than before (as mentioned below). On the other hand, the resettlement scheme implemented for the Kotapanjang dam project has been criticized both by Indonesian and Japanese NGO's.

It should be noted that the recognition in the above may contradict with the fact that in the "most successfully resettled" village of the Saguling case 60.0 % of resettlers find the living condition became better after relocation and 65.0 % of resettlers feel happy about relocation, while in the village of the same sort of Kotapanjang case case 70.7 % of resettlers find the living condition became better after relocation and 97.7 % of resettlers feel happy about relocation. It implies that resettlers feel happier in the "failed" Kotapanjang case criticized by NGO's as compared with the "successful" Saguling case advocated by the funding institute. It sounds safe to assume that successful cases, with similar degree of success, exist in both cases. Therefore, one case should not be regarded much inferior to the other in terms of performance of the resettlement schemes applied.

4 LESSONS FROM “SUCCESSFUL VILLAGES”

The field surveys revealed that in both cases the “successful villages” managed to re-establish livelihood of the people by promoting aquaculture, while the ways and means employed are very different. In the Saguling case, aquaculture on the reservoir by floating net cages was practiced (Manatunge, et. al., 2001), while fishes are cultured in relatively small fish ponds in the residential area of the village in the Kotapanjang case.

Aquaculture development in a reservoir (by dam construction) was in fact for the first time planned and implemented in the Saguling reservoir within Indonesia as an instrument of creating jobs for resettlers. Such a plan was developed because: (a) providing resettlers with farmlands of same or more productivity was impossible in the very crowded Java Island, (b) small scale aquaculture within farmlands had long been practiced in the region of the Saguling project, (c) farmers were thus assumed to have fundamental knowledge about fish farming, and (d) the near-by big city of Bandung could be a big market for cultured fishes. In nutshell, aquaculture was regarded as the major instrument for rehabilitation of resettlers’ livelihood. It was well reflected (if not perfectly) in the planning stage of the Saguling Dam project.

On the other hand, fishing in the river used to be practiced by some resettlers before relocation in the Kotapanjang case. The Kotapanjang project area is fairly close to such large cities as Pekanbaru and Padan as markets of fishes. Fish farming by ponds was a new development for the region and it was not regarded as the major vehicle for creation of employment for resettlers. Rubber plantation was supposed to be predominant agricultural activity after relocation. It is signified by the fact that only a few villages relocated to places with good access to water, while some villages decided their destinations even knowing the fact that availability of water for domestic consumption may be experienced in the destination. Not surprisingly, fish farming by ponds may not be carried out in such villages and people experiment fish farming on the reservoir, while it is less successful than the Saguling case due to several reasons.

It sounds safe to assume that fish farming had a large potential for the Kotapanjang area, while it was not regarded as the major instrument for rehabilitating livelihood of resettlers in the planning stage of resettlement and that the potential failed to be fully explored. The resettlement plan elaborated for the Kotapanjang area apparently put emphasis on non-aquaculture activities as vehicles for rehabilitation of livelihood.

5 LARGE DIFFERENCE AMONG VILLAGES

Very diversified results were observed in the Kotapanjang case from one village to another. For example, in the least successful case, only 18.6 % of resettlers in that particular village find that the living condition became better after relocation and 23.1 % of resettlers feel happy about relocation. A question to be asked is what made such a big difference among villages within the Kotapanjang area in terms of perception by resettlers. In this unsuccessful case, resettlers relied on traditional agriculture by rubber plantation and failed to secure a success. It ought to be noted that the compensation for resettlers of the Kotapanjang case was in general more generous than ordinary land-for-land practice as stipulated in guidelines of some funding organizations (World Bank, 1990). That is, both farmland and house were given to resettlers at new location free of charge, in addition to monetary compensation for the assets they used to have. Such a generous scheme was not applied for resettlers in the Saguling case and they were just given monetary compensation for the assets they used to possess (Nakayama, 1998). Nevertheless, many resettlers failed to reestablish livelihood by rubber plantation in the Kotapanjang case. The reason of such failure should be identified, so that a better methodology may be applied for projects of the same nature in the future.

Following aspects seem instrumental in failure of the Kotapanjang case: (a) lack of ownership by resettlers in rubber plantation development, and (b) improper choice by resettlers of

destination for relocation. Resettlers were entitled to receive rubber plantation with “productive” rubber trees. However, the rubber trees they found (after relocation) in their farmlands were not mature enough to sustain their livelihood. It is clearly a breach to the contract between the village people and the implementation body of the dam construction project. Question to be asked is if this “turn key method”, like construction of a factory, is the best method for resettlers. This method was chosen mainly because resettlers may secure income by rubber trees just after relocation.

By implementing this methodology, the ownership in rehabilitating livelihood became less visible in the mind of village people. Once their argument with the local authority (which is responsible for planting rubber trees) faced an impasse, few corrective measures were taken by resettlers and the farmland (for rubber trees) remain unproductive even at present. The ownership of the resettlers for rehabilitation of their livelihood could have been more visible, if the resettlement scheme had been tailored with due emphasis on this aspect (Nakayama, et. al., 2002). The importance of ownership in economic development of developing nations has been stressed in many occasions by donor countries and aid organizations (World Bank, 1999). Nevertheless this particular issue is still not sufficiently integrated into planning and implementation of economic development projects, as signified by the Kotapanjang project, which was co-funded by the Japanese Yen loan.

While breach to the contract should have no excuse, a better method could have been employed to foster ownership within the village people. Having them grow rubber trees by themselves, with monetary compensation to sustain their livelihood for the duration of five years (for a rubber tree to become productive) could have been, for example, a viable option.

6 CONCLUSIONS

The outcome of the study suggests that the performance of resettlement in the Kotapanjang case is not inferior to that in the Saguling case, as long as “success stories” are concerned. To say the least, the former should not be seen as formidably hopeless, as perceived by some of those involved in development aid operation in Japan. It does not imply that the Kotapanjang case is free from problems. This case apparently have many problems associated with resettlement. In some villages, the situation is alarming and a plan to mitigate the impacts experienced by the resettlers should be elaborated.

Regarding the ways and means of rehabilitating livelihood, the resettlement scheme should have, as a matter of principle, provisions for creating alternative employment opportunities. It is in particular the case in the developing world with high growth of population. Regarding the Indonesian cases, aquaculture was potentially a viable option for both, while it was given due priority and attention only in the Saguling case. Lack of provision in the Kotapanjang case resulted in limited success observed only in a couple of villages. Possibilities in other villages, which suffer from more hardships due to the nature of the site (e.g. availability of water even for drinking) should be given more attentions.

It sounds safe to conclude that the major problem observed in some village in the Kotapanjang case seems to stem from lack or weak ownership in the mind of resettlers, in the context of rehabilitating livelihood after relocation. On the other hand, ownership is quite visible in the mind of resettlers in “successful” villages of the Kotapanjang case. It seems also the case with the “successful” villages of the Saguling case. The issue of ownership should be given due emphasis and attention in developing resettlement scheme for future dam construction projects. The resettlement plan should be tailored, for the future projects of the same nature, so that the mind of ownership should be promoted among resettlers. Otherwise, only limited motivation may be found in the resettlers to cope with resettlement, which is very hard to overcome for many of them, for hopefully a better livelihood than in the past.

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REFERENCES

Costa-Pierce, B. A, 1997. From Farmers to Fishers - Developing Reservoir Aquaculture for People Displaced by Dams. World Bank Technical Paper No. 369., World Bank, Washington D.C.

Nakayama, M., 1998. Post-project Review on Environmental Impact Assessment Methodology Applied for Saguling Dam for Involuntary Resettlement, International Journal of Water Resources Development., 14 (2), 217-229

Nakayama, M., Yoshida, T., Gunawan, B., 2000. Improvement of Compensation System for Involuntary Resettlers of Dam Construction Projects, Water Resources Journal, September 2000, 80-93

Nakayama, M., Fujikura, R. Mori, K., 2002. Consequences of confused "environmental ownership" within donor country, unpublished manuscript

Manatunge, J., Contreras-Moreno, N., Nakayama, M., Yoshida, T., 2001. Securing ownership in aquaculture development by alternative technology: a case study of the Saguling Reservoir, West Java.. International Journal of Water Resources Development, 17 (4), 611-631

PLN, 1990. Proyek Pusat Listrik Tenaga Air Cirata, Perusahaan Umum Listrik Negara (PLN), 1990, Jakarta [in Indonesian]

WCD, 2000. Dams and Development, World Commission on Dams, 16 November 2000, Cape Town

WCD, 2001. Final WCD Forum Report, Responses, Discussions and Outcomes, The World Commission on Dams, <http://www.dams.org/>.

World Bank, 1990. Operational Directive 4.30 "Involuntary Resettlement", World Bank, Washington D.C.

World Bank. 1999. World Bank Supports New Partnership for Capacity Building in Africa, News Release No. 99/2200/AFR, May 21, 1999, World Bank, Washington D.C.