

DAM-BUILDING DECISION INSTITUTION IN CHINA AND INTEGRATED MANAGEMENT OF WATERSHED

Chen Lihui

Yunnan Institute of Geography, Yunnan University, 20Xuefu Road,

kunming, 650223,P.R.China.

chenlih@km169.net;chenlih273@sohu.com

Abstract

Dam-building is one of important activities of watershed development. More and More peoples realize the negative impacts of dam-building to the ecosystem of watershed since last decades. But, it is not so easy to slow the paces of dam-building, though some negative impacts is obvious and many people stand out to oppose. This paper aims to analysis the problem of integrated management of Lancang-Mekong watershed from the view of dam-building decision institution in china. Firstly, the trends of dam-building in the world are reviewed. It shows that multiple participants in dam-building decision-institution. Secondly, it lists the conflicts of integrated management of lancang-Mekong watershed. Dam-building on the upper reach arouse the attention both of riparian countries and different interest groups, which hold different views on the topic of dam-building. Thirdly, the relationship of the interest groups on the basis of the dam-building decision institution in china is further discussed. It shows that traditional decision-institution is not benefit to the integrated management of watershed, and the attitudes of different interest groups are also lack of sincerity of cooperation. Finally, it puts forward that attitudes and decision institution are main obstacles of integrated management and should be changed step by step.

Keywords: Lancang_Mekong, Dam-building, Decision institution in China, integrated management of watershed

1 TRENDS OF DAM-BUILDING IN THE WORLD

Dam-building is till one of important activities of watershed development. More and More peoples realize the negative impacts of dam-building to the ecosystem of watershed since last decades. Developed countries slow the paces of dam-building due to following reason: 1 the technology advance make it more possibility for using other energy source, such as nuclear, solar, wind, tide etc. 2 little sites remained for hydropower of rivers in developed countries for most of suitable sites are dammed already. 3 decision of dam-building are more under consideration of multiple-purpose than before.

Table1. Participants in dam building in developed country

Time	Main participants
Before WWII	Engineer
After WWII	engineer economist
Anaphase of 70's	engineer economist EIA report
Anaphase of 80's	engineer economist environmentalist and sociologist
Early 90's	engineer economist environmentalist and sociologist people effected
Middle of 90's	engineer economist environmentalist and sociologist people effected NGOs
Beginning of 21 century?	engineer economist environmentalist and sociologist people effected NGOs+ approved by public

Source: Robert Goodland, Environmental Sustainability in the Hydro Industry, in: Large Dams-learning from the past, looking at the future. Gland, Switzerland: The World Conservation Union (IUCN) & the World Bank Group. Workshop proceedings, Published by IUCN, 1997.4.

2 DAM-BUILDING ON LANCANG-MEKONG AND THE CONFLICTS RELATED

Liutongjian, Jiaqing, Wulonglong, Tuoba, Huangdeng, Miaowei, Gongguoqiao, Xiaowan, Manwan, Dachaoshan, Nuozaadu, Jinghong, Ganlangba, Mengsong 14 dams are planned to be built on mainstream, of which 8 dams are located on the lower reaches of Lancang and 2 of them are finished and 3 of them are under construction. It arouses the anxious and opposes from the lower reaches of Lancang-Mekong. Due to the international nature of the Lancang-Mekong and great variations along the long river in terms of natural resources, Conflicting issues demonstrate the different goals of the actors, formed according to their national interests and sovereignty requirements. In general, the upstream countries mostly concern with hydropower development, while the downstream countries pay more attention to irrigation, flooding control, navigation and fishery needs.

Besides, against voices from the riparian countries, different interest groups within a country hold different views on dam-building. Many people against the dam-building for large area inundated, which including the rich paddy field, nature reserve area, road, town, infrastructures, valuable culture relic remains, the declined quality of the water in dam and the kinds of local fish, the malversation, landslide around the dam, and endless problem from the resettlement. All above shows both the positive and negative effects of dam-building to people and people's attitudes to each other..

Table 2.Examples of different views to dam among the riparian countries

ISSUES	CONFLICTS/DIFFERENT VIEWS TO DAM	
	LOWER REACHES	UPPER REACHES
REGULATION OF THE FLOW	1.Harmful to fishery 2.Caused more serious flooding and dry disaster	1.Benefit to flooding control after finishing Xiaowan dam 2.Benefit to the navigation
SEDIMENTATION	1.Will reduce 2.Do harmful to the fishery and agriculture	1.The sedimentation not only comes from china, but also from other highland of lower reaches. 2.Sedimentation is not good for navigation
FISHERY	Mainly effected by dam of upper reaches	1.Do more harm to local fish than that of lower reaches. 2.Effected by many factors: Commercial fishery increasing, water quality which is main caused by irrigation, increased consumption for the increasing population of local, and dam-building.
ENERGY NEEDS	Energy department seems are not same attitude with other departments	Both china and the riparian countries should find suitable source to meet the energy needs.

3 DECISION INSTITUTION IN CHINA

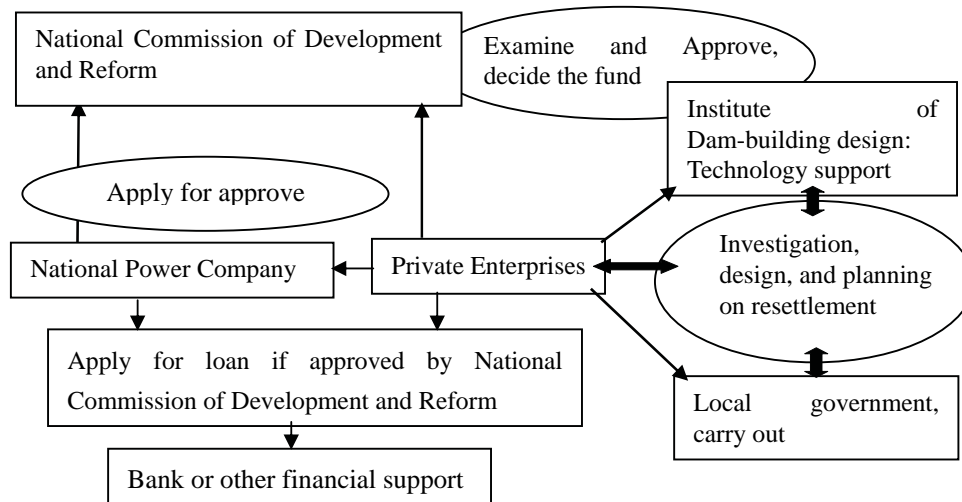


Fig. Decision institution of Large Dam-building in China

Different size of dam should be permitted by different level of government. Dam which are above 200,000 kW capacities should be permitted by the national level. The National Electric Power Company is in charge of the examination and approval the large reservoir for the purpose of hydropower, and also reported in Commission of Development and Reform. The procedures are as following:

Firstly, Engineering institution is consigned to do feasibility study of dam by owner, which is including investigation of site choose and inundated area, evaluation of the cost, environment assessment, and resettlement scheme of dam. And the local government in charge of the aspect work on resettlement under the technology support of Engineering institution.

Then, the owner will give a report to National Electric Power Company and Commission of Development and Reform for examined and approve, and check the cost.

Finally, if the program is permitted, the owner could apply for the loan from the bank to start the project or financial supported by other investor.

Because the projects usually could change the local dramatically, for example, to increase the local income from duty, to promote the infrastructure condition and facilitate the local industry development, almost all departments of the local government consider the projects of large dam as an important matter and will support to assure the project succeed. Obviously, the above procedure shows that the traditional decision institution is lack of the participants of other interest groups and the electric power government is more power than other government. Meanwhile, the owner and electric power company usually is not with responsibility for problems caused by the dam-building which is mentioned above. The local government is in charge of resettlements schema and environment restoration around the dam with certain finance, which is planned before. So, the company and local government often takes a long time to discuss the local cost for the different attitudes and views to the followed problems. Whether or no, more and more large dam are under construction or planned in order to meet the various needs, not only the trans-boundary river, but also the national river. Obviously, traditional decision institution is not benefit to give a reasonable choice of dam-building.

Actually, new trends show the gradual changes of dam-building decision institution year after year. More and more resettlements pay attention to their right instead of support the dam project regardless of loss. Scientists and the public are concern for the environment and social problem than before. Many media gives reports on the dam-building problem. New regulation, policy and rules on environment and resettlement are more reasonable and strict than the past. Even the prime minister asked to think over carefully and decide scientifically on Salween dam.

4 INTEGRATED MANAGEMENT OF WATERSHED

Integrated management of watershed should focus on the following three aspects: 1) Emphasize inter-relationship among concerned regions for the integration of watershed, especial the upper reaches and the lower reaches; 2) Emphasize the interaction of all factors within the watershed area. one kind of resource exploited will leads to the changes of other factors, and the sustainability of the aqua-ecosystem should be taken into consideration in the development process; 3)Emphasize the participant of the public, and the different interest groups in the decision process, because people who live in the area take key role in resources management, and also should share the interests or suffer the problem in the region.

From above analysis, we found that traditional decision-institution is not benefit to the integrated management of watershed, and the attitudes of different interest groups are also lack of sincerity of cooperation. So, in order to facilitate the regional sustainable development, attitudes and decision institution are main obstacles of integrated management and should be changed from the beginning of information exchange and promote step by step.