

## Chapter 17

# **Approaches to the Rehabilitation and Socioeconomic Development of Mountain Regions Affected by Construction of the Three Gorges Reservoir on Chang Jiang River, P.R. China**

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## **INTRODUCTION**

Migration is an important aspect of a population's geographical distribution. The territorial mobility of people can be divided into two kinds—voluntary and involuntary—according to the main reason for movement. Voluntary movement is always for obtaining better living or working conditions, and it is spontaneous social behaviour. In moving, migrants themselves bear the loss and benefits of migration, while the duty of the government is mainly to manage and guide it. Involuntary migration is not normally desired by the migrants themselves. Instead migrants are forced to move. In modern society, the latter type of migration is principally due to acquisition of lands for infrastructural development like dams, roads, and other construction projects, as well as projects for environmental protection. Engineering projects (especially large dams) result in large numbers of involuntary out-migrants, and the government has to resettle them as a part of the overall project. This paper discusses some policies regarding resettlement of displaced people due to construction of the Three Gorges reservoir in the Changjiang area of China.

It was decided by the Chinese government in 1992 to implement a key water control project in Three Gorges Changjiang . It is the biggest water control project in the world, being constructed in the neighbouring region of Chongqing city and Hubei province that link the western mountain and eastern hill and plain regions together through the river. This project will be finished in 17 years. This great project will not only have significant benefits in terms of flood prevention, electricity generation, and inland shipping business but also will have negative consequences such as displacement of millions of people due to submergence of a large area under the Three Gorges' reservoir. The Chinese government adopted different strategic policies to take care of these displaced people.

### **CHARACTERISTICS OF WATER CONSERVATION ENGINEERING PROJECTS AND TERRITORIAL MOBILITY IN MOUNTAIN REGIONS**

Dams are normally built in mountain areas. The residents living in the area to be submerged because of reservoir formation need to move to different places with proper arrangements. The Three Gorges' water conservation engineering project affects 600 km of the Changjiang River and its tributary. Its reservoir area will be 1,084 sq.km, of which a land area of 632 sq.km belonging to 20 counties of Hebei province and Chongqing city will be submerged. The reservoir will wholly or partly flood 13 towns and 116 cities. The Three Gorges' reservoir will lead to displacement of large numbers of people, and the task for managing these people's resettlement is challenging. We present some aspects of this challenge.

#### **Phasewise inundation**

According to the plan for the Three Gorges' engineering project, after starting construction in 1994, the first main stream damming was done in 1997, and water storage will begin in 2003 to the water level of 135m, to 156m in 2006, and the project will be completed in 2009 with the normal water retaining level of the Three Gorges' reservoir of 175m.

The people living within the reservoir area must leave their original residences and move into new residences before the times mentioned above. Moving affected people from the project area must be synchronised with or proceed in advance of reaching planned water levels.

#### **Regionalisation**

The water storage of Three Gorges affects 20 counties with a total area of 58,000 sq. km and population of 19.4 million people. Among them, 14.8 million are engaged in agriculture. This region, like other mountain

areas of China, is characterised by inaccessibility and isolation. The local residents live by agricultural production, their educational level is low, and the economy is backward. Some areas depend on financial subsidies from the government. Most displaced people want to move to neighbouring areas due to various traditional and economic reasons.

## **Compensation**

Whether they are part of a national public sector or a local industrial enterprise, the displaced people will lose in production, living conditions, and fixed assets due to the dam construction. They should get adequate compensation, develop their earning/living opportunities, and acquire assets. This kind of compensation is always according to the original value or recovery cost of original functions. Some affected people with limited private property and poor housing conditions will obtain less compensation than others. It is difficult for them to maintain the original living standard. They need more care and help from government and society. The total compensation for people affected by the Three Gorges reservoir is RMB 40 billion yuan (unchanged price of May 1993), including arrangements to settle rural people, construction of cities and towns, reconstruction of factories and enterprises, reconstruction and reformation of special projects for environmental protection, and so on.

## **SEVERAL ASPECTS NEEDING CORRECT TREATMENT**

Water conservation engineering infrastructure is built to promote economic and social progress, and the Three Gorges' water conservation engineering project is very important for the social stability and economic development of Changjiang midstream and downstream regions. However, the people sacrificing in the process need to be duly compensated.

## **Compensation and employment insurance**

The chief task of the rehabilitation programme of Three Gorges' engineering construction project is to ensure compensation and jobs for the affected people. Apart from planning a broad framework and assessment of required resources and measures, the strategy should link the provision of such facilities with the construction schedule of the project. This will help in timely provision of compensation. An investigation made in 1993 shows that about 847,500 people, 129 cities, and 31,000 ha of cultivated land and fruit orchard are under the flood line. Plans have already been prepared for resettlement of 1,130,000 people and shifting of buildings of 12 cities and towns and 114 market towns. Different methods are combined to accomplish the goals.

## **Environmental protection**

Three Gorges' reservoir is located in a canyon belt with many hills, and the land used for agriculture is limited. The average land resource owned by one person in the reservoir region is less than one-third the national average. The average amount of cultivated land is even less, and the exploitable arable land is quite limited. Over half the land suffers from different degrees of soil erosion. The land for constructing cities and towns is unstable and prone to heavy geological disasters like landslides, debris flow, and collapse. Building cities and constructing infrastructure and transportation networks are difficult. The natural environment is very fragile.

To balance the imperatives of these variables and their interrelations, a well-assessed integrated approach is needed which could rehabilitate and environmentally sustain the total uprooted economy—including agriculture, factories, and market systems.

## **Mobility, resettlement, and socioeconomic development**

Three Gorges' reservoir is located inland. Expectations are that the total direct and indirect costs of the project will be more than compensated by the gains. However, to facilitate this, rehabilitation and opportunities for the migrant population, rehabilitated industries, and protection of the environment will be essential. The essential steps needed to address these issues will have to be properly synchronised in terms of scale and timing.

## **Education for migrants**

The displacement of people caused by Three Gorges' reservoir will de-link the people from their well-adapted economic resources, social life, and known earning options. Restoration of all these variables is difficult and challenging. To help people adapt to new situations, education of various types will be helpful. Education should help harness the benefits of new opportunities.

## **Building new townships**

Building townships and promoting industrialisation have to be the major components of the resettlement programme. The Three Gorges' project offers unique opportunities for well-planned townships with new infrastructure, modern facilities, and use of new scientific and technological means. Civic facilities, employment opportunities, and links to major market centres should be emphasised. The goals of the resettlement townships should be to promote economic prosperity and social stability using modern approaches.

## **GOVERNMENT HELP AND POLICY SUPPORT**

Besides people's own efforts and resettlement budget, the government's action in terms of support and incentives at different levels is essential in rehabilitating the displaced people and industries. This should be treated as a national task to induce all-round support.

### **Formulation of enforcement plan**

The government has prepared detailed planning and implementation reports related to practically every aspect of the change, from settlement of migrants and their compensation and related investment to environmental protection. Regular planning and monitoring reports on different issues are to be submitted by counties and other relevant agencies.

### **Financial support for rehabilitation and resettlement programmes**

The Three Gorges' project requires investment of 40 billion RMB yuan (at May 1993 prices). The general company 'Chinese Three Gorges Construction Project' is a legal entity responsible for managing funds and arrangements for expenditure. To implement the project, the Chinese government collects funds from multiple sources, including national financing, special bonds, and so on. With the strong support of the central government, the investment requirements of the Three Gorges' project have been satisfied. To carry out work related to preventing geological disasters, protecting the environment, and pollution control of Three Gorges, the central government has arranged professional funds for construction. In promoting structural adjustment of the enterprise, the Bank of China arranged professional loan funds of 1.5 billion RMB yuan each year for 5 years from 1997 to 2001.

### **Preferential tax-expenditure policy**

Flexible taxation and revenue collection policies help rehabilitate people and industry. Accordingly, provisions like tax holidays for specific periods for specific activities are integrated components of resettlement schemes. These concessions also cover loan repayment schemes.

### **Promoting industrial structural adjustment**

The Three Gorges project offers a unique opportunity to restructure old industries and promote new industries that better fit the current situation, where environmental protection, response to market forces, and private incentives are given high priority.

## **Support and co-operation between counterpart organisations**

China's policy of developed areas (especially in the east) helping poorer areas (in the west) gets a unique place in the Three Gorges' Project area. As a part of rehabilitation and development programmes, co-operation from developed areas addresses the issues of employment promotion. Numerous famous enterprises at home and abroad have settled in Three Gorges, including the Wahaha Group of Hangzhou, Huiyuan Group of Beijing, Haier Group of Qingdao, White Cat Group of Shanghai, Changcai Group of Jiangsu, Geli Group of Guangdong, Chundu Group of Henan, and so on. The settlement of these famous and excellent enterprises in Three Gorges will not only support the rehabilitation project but also exploit the new market for the enterprises themselves. There are many complementarities between developed and underdeveloped areas, which will be harnessed under the Three Gorges' Rehabilitation Plan focused on new scientific technologies and market-driven processes.

## **Resettlement of rural migrants**

The rural, displaced people of Three Gorges reservoir account for over 40% of the total migrants. Considering environmental protection needs and the limited cultivated land of Three Gorges' reservoir, it is quite difficult to resettle all the people within the project area. The Chinese government therefore took a different approach to this problem. Apart from settling some people in the project area, people are also encouraged and supported to migrate to areas outside the project. Arrangements for 125,000 displaced people from Three Gorges' Reservoir are mentioned in the plan. The Government has planned arrangements for 70,000 displaced people in other provinces; including Sichuan, Shandong, Jiangsu, Zhejiang, Guangdong, Fujian, Shanghai, Anhui, Hunan, and Hubei. The resettlement of migrants from the Three Gorges' area has received the sympathetic attention of various governments, which provide help to these people according to the local situations. Many displaced people have moved safely, have settled in new places, and are engaged in normal production activities. The government is helping migrants to fit into their new situations through education, training, and so on.

## **EMPHASIS ON NEW OPPORTUNITIES**

Rehabilitation, though supported by the Government, is not the responsibility of the state alone. The migrants too have to make their own efforts with state help. This implies a focus on new enterprises. Although Three Gorges Reservoir is located inland and the level of economic development is not high, the area has special characteristics and

advantages for developing very efficient ecological agriculture, diversity of biological resources, hydropower, and tourism. There is enough labour, a convenient watercourse of the Changjiang, and so on. Based on these special features and comparative advantages of the Three Gorges' reservoir area, the displaced people are encouraged to individually invest in businesses and set up enterprises and construct new secondary and tertiary industries. Farmers are also helped to develop special ecological agriculture such as planting high quality fruit trees, special vegetables, herbs, aquaculture, and so on. The state has to provide financial, technical, and legal support for this change.

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