

Concept and Countermeasures of Building up China(Yichang) Three Gorges Logistics Center

XIE Wuzhou¹⁺ and WANG Zhen²

College of Economics and Management China Three Gorges University Yichang 443002, China

Abstract. Gezhouba Project and Three Gorges Project make Yichang “World Electricity City”. However, when taking logistics into account, these two projects become the barrier of the development of Yangtze River shipping logistics. The limited lock throughput capacity of these two dams is far from the needed capacity because of the growing freight, becoming the bottleneck of Yangtze River shipping logistics. Hence, how to break the bottleneck and improve the logistics efficiency become the crucial issues in terms of the development of logistics the Three Gorges Area in Yichang. This paper analyzes the necessity and feasibility of building the logistic center in Three Gorges area and puts forward the preliminary thoughts and measures of establishing regional logistic center by taking advantages of both dams and surrounding regions.

Keywords: Two dams in three gorges area; regional logistic centre; concept ; countermeasures

1. Introduction (Use “Header 1” Style)

Yichang, as the site of Three Gorges Dam and Gezhouba Dam projects, is well-known around the world due to these two large hydraulic engineering projects. These two projects brought to Yichang tremendous development opportunities, making Yichang the “World Electricity City”. The Three Gorges project has been completed at present and the two dams has boosted the local economic benefits tremendously. However, confined freight capacity has impeded the possibility that the two dams become the efficient shipping logistics of Yangtze River Golden Watercourse. Breakthrough the barrier, dredging the channels for logistics, making full use of this golden watercourse have become the critical issues for Yichang’s future development and moreover the exchanges and communication between the west and east of Yangtze River economic regions.

Currently, the country has paid high attention to the logistic issues: CPPCC (Chinese People's Political Consultative Conference) held " Three Gorges Logistic Center Establishment Summit Forum" in Yichang in November 2008. Premier Wen Jiabao’s speech and the report from Jia qinglin have also explicitly mentioned the establishment of the Three Gorges logistic center. How to take the advantages of the current transportation framework, build the logistic channels and improve the logistic efficiency are of vital importance theoretically and practically. This paper analyzes the necessity and feasibility of building the logistic center in Three Gorges area and puts forward the preliminary thoughts of establishing regional logistic centers.

2. The Necessity of Building the Regional Logistic Center around Three Gorges and Gezhouba Dam Area

2.1. Building the logistic center to promote the coordinated development of all regions

The main reason of economic gap between the central and western regions and the eastern region of China is the industrial hierarchical Structure. The major industries in central and western regions are the

⁺ Corresponding author.
E-mail address: xiewuzhou1@sina.com.

production of agricultural products, energy sources and raw materials with few added values and they don't have a close relationship with the consumer market, so that the economic growth in these areas is rather difficult. Exploring the possibility of developing the modern technology of logistic industry such as information and networking will enable to narrow down the development gap between central and western regions and eastern region by improving the traditional industrial structure and promoting the level of industry. Yichang plays a significant role in the strategy of "the rise of central China" and "Western Development" and meanwhile it is the centre site of Three Gorges Project, building the logistic center in Yichang will further benefit the golden watercourses and develop the logistic industry along Yangtze River, improve the logistic that connecting central, western and eastern regions and lower the transportation cost, change the backwards industrial structure of western area and promote the investment in Yangtze River basin and boost the pace of development.

2.2. Building logistic center is important for accelerating the speed of transshipment through land transportation and improving the transportation efficiency along yangtze golden watercourse

The key of making a smooth Yangtze River is the development of logistics industry in Yichang. Because of the limited lock throughput capacity, bypassing-dam transshipment will become a prospective and long-term mode of shipping and a strategic task for Yichang. According to the current situation, the infrastructure of bypassing-dam transshipment in Yichang still has room for improvement and the logistic function has not yet well-developed, so it is rather difficult to realize transshipment with speed guaranteed. In recent years, detention of large amount of ships in the upstream of Three Gorges Dam has not exceptional, which not only bring about tremendous economic losses but also may exert adverse political influence. The Three Gorges Project is a crucial project, so is the development of logistics industry around this area. bypassing-dam transshipment has brought attention and become the focus of all level of related departments. It is urgent to promote the development of bypassing-dam transshipment. Hence, we need to establish a long-term and efficient mechanism of bypassing-dam transshipment as soon as possible to satisfy the increasing needs of transshipment through land transportation and thus contribute to the Yangtze River basin and even the national economic development.

2.3. Building logistic center is required for connecting the logistic between southwest region and central china

The mainstream of Yangtze River runs through east and west, effectively connecting the economic zones of southwest, central China and east China and the main branch links the south and north region, which is the main structure of our country's "T" type development strategy. Its shipping capacity, key transportation hub and transportation function are irreplaceable. Yichang connects the line of Yangtze River and the region of southwest, becoming eastern entrance to the Three Gorges. Although the railway and expressway from Yichang to southwest region is under construction, we cannot ignore the high transportation cost due to the mountains along the Three Gorges, which is much more than the cost of water transportation. For a long time, Yichang has been renowned as "Throat between Sichuan and Hubei", playing an important role in connecting the southwest region and central and east of China. Building the modern logistic center in Yichang means increasing the investment in hardware facilities of water, land, aviation and railway transportation, practically forming a new pattern that the highway is the major framework, railway is the artery, water transportation is the channel, aviation is corridor, with harbor and station combined, thus solving the problem of logistic obstruct and practically realizing the smooth flow of goods. This will not only contribute to the development of Yichang, but also is an effective way to connect the transportation between southwest and central China.

2.4. Building logistic center is important for solving the industrial hollowing in three gorges reservoir region.

According to development priority zones in our country's the "Eleventh Five-year Plan", Three Gorges reservoir region belongs to the "limited development zones", which means that this area has the historical responsibility to preserve the region's ecological environment and maintain a healthy Yangtze River. It only allows moderate development and characteristic industry. The people in these regions are facing a dilemma

of protecting the environment as well as developing the industries. It has become a practical urgent issue to solve the industrial hollowing in Three Gorges reservoir region, and help migrants from Three Gorges area moving forwards to a more steady life and gradually becoming wealthy, thus ensure this project of vital and lasting importance to maintain prolonged stability.

Modern comprehensive logistics have the ability to integrate the factors of production, promoting the circulation and development among people, material, messages, funds and technology. It has been proved by practice that the logistic development will tremendously contribute to the flexible trade exchanges, economic development and increase in employment. It is important for Three Gorges reservoir region to develop ecological agriculture, tourism and logistic industry, realizing scientific and sustainable development and building a resource-conserving and environment-friendly society. There are also abundant mineral resources and agricultural resources in Three Gorges reservoir regions. The construction of Three Gorges modern logistics center is conducive to selling the mineral resources and agricultural products of the reservoir area to all parts of the country in the fastest, the most economical and the safest way, transferring the resource advantages of the reservoir area into economic advantages. Meanwhile, the construction of the logistics center will also help to accelerate the development of service industries such as reloading, allocation, distribution, processing, catering , bringing a number of new economic growth point to ease the reservoir industrial "hollowing out" and to promote the sustainable and healthy economic development of the reservoir area.

3. Feasibility of Building Up a Regional Logistics Center Around Gezhouba Dam and Three Gorges Dam

3.1. Unique location advantage

Situated at the junction of the mid-and upper-reaches of Yangtze River, Yichang controls the Sichuan province upward, stretches to the Jing-xiang area downward, it is connected with Hunan and Guangdong provinces in the north and with the central plains of China, connected with Wuhan in the east and with Chongqing in the west, is celebrated as the "gateway to Three Gorges", and the "strategic passage to Sichuan, Hubei". Yichang is the starting point of implementing the national western development strategy along the center line into the west, and the centre of China's central hinterland connecting the west with the east, as well as the south with the north, especially, both Three Gorges Dam and Gezhouba Dam are in Yichang city, while the current contradiction between the transport capacity of Three Gorges ship lock and the demand for its volume is becoming increasingly prominent (according to experts' predicts, by 2020 the transport quantity passing the dam will reach 137.52 million tons, of which the downward transport quantity will reach 83.5 million tons. The one-way transport quantity passing the double lock of Three Gorges is designed to be 50 million tons, while the actual capacity of only 3,500 tons simply can not meet the needs of continuous and rapid growth of water transport demand, especially when water flow surpasses the limit of the locks, or in the improper run durations such as sand flushing of the hub, emergency repair and planned suspended repair of the locks, the contradiction will be sharper.) Therefore, bypassing-dam transshipment will be the long-term passing form. This will cause a large number of logistics to gather in Yichang, thus both sides of Three Gorges dam and the section below Yichang Gezhouba Dam will become an important logistics hub in the Yangtze River.

3.2. Solid transportation infrastructure

In recent years, the development of traffic construction in Yichang is rapid. Within the city there have been a Jiaozuo-Liuzhou railway running from north to south, a Yichang-Wanzhou railway, a riverine express railway (under construction) and a Shiyan-Yichang railway (under construction), as well as Shanghai-Chengdu and Shanghai-Chongqing Expressway. Meanwhile, the dam head of the two reservoir areas of Yangtze River golden waterway is in Yichang, its potential of water transport is great, and a series of traffic engineering projects including the reconstruction and extension of Three Gorges Airport will make a high standard, high-level, modern, three-dimensional integrated transport system become a reality in Yichang,. Yichang is zooming from a "traffic node city" to a "regional transport hub city ", and it has laid a solid logistics channel foundation for the construction of Three Gorges modern logistics center.

3.3. Vast economic hinterland

Yichang has a vast economic hinterland of which direct and indirect radiation areas cover Hubei, Hunan, Chongqing, Sichuan, Yunnan, and a part of Guizhou. Taking the 2007's data as example, there are 11 above-prefecture-level cities within a radius of 200 kilometers of Yichang, its population accounts for 2.67% of the country, and its GDP accounts for 1.73% of the country; In recent years, the social economy of Yichang city has developed sustainably and healthily, and its comprehensive strength has continuously increased, its comprehensive economic strength has become one of the top 100 cities in the country. In 2010, the GDP and the total industrial output of Yichang exceeded the 150 billion yuan mark respectively. Yichang's major economic indicators including gross national product, fiscal revenue and foreign trade export rank second in Hubei province, its social and economic development potential has been enhanced. In the next 5-10 years, with the improvement of the traffic environment, the formation of "regional transport hub city", the planning position as the vice provincial cities of Hubei Province and the world famous hydroelectricity tourism city, Yichang's economic radiation will be significantly enhanced.

3.4. Good opportunity for development

The card of "the hydroelectricity capital of the world, the heart of China's power," has become the best regional marketing brand for Yichang, the great brand effect and the promoting function of Three Gorges Project have helped to occupy a central position in its respective region even a strategic position in the Yangtze River Economy-zone. Three gorges Project has become a trigger project in the growth pole of the Yangtze River Economy-zone, its overall efficiency will affect the central and eastern parts of China as well as the eastern Sichuan and other regions which accounting for 1 / 5 of the land area, 1 / 3 of the population, 40% of the economy aggregate. Three gorges Project draws a huge domestic and international flow of people, logistics, capital and information technology as well as domestic and international large enterprise groups and consortiums to Yichang, forming the biggest social and economic development opportunity for Yichang. Since Yichang is situated in the transition zone between the eastern areas and western underdeveloped areas, and at the interface of the eastern technical advantages and the western resources advantages, with these locational advantages, it plays a pivotal and delivering role of connecting areas of all directions, maintaining exchanges among all parts, from the location on the truck to take the contact to maintain four exchanges, coordinating the southeast coast, supporting the western development, and developing the mid-and upper-reaches of Yangtze River to some extent. In addition, the implementation of the national western development strategy and the strategy of rise of central China, will make Yichang one of the regions in China receiving infrastructure investment of the highest density in the next ten years, also an important base to undertake the industrial transfer from the developed countries and the eastern coast, all these provide a new opportunity to the construction of Three Gorges logistics Centre.

3.5. Huge logistics demands

Statistics from "The Yangtze River navigational management conference 2008" show that in 2007 the cargo of Yangtze River exceeded 1.1 billion tons for the first time, its size ranks first in rivers of the world. With the establishment and storing water of Three Gorges Project, the 600-kilometer-long Yangtze River water areas up the dam has become a high-speed water channel, and the Yangtze River water transport industry has entered a golden age of rapid development. In accordance with the research results from Three Gorges shipping seminar of Chinese Academy of Science, by 2030 the transport quantity passing the dams of Three Gorges will reach 248 million tons, and its bypassing-dam transshipment cargo volume will reach 198 million tons. While the annual transport quantity passing the double lock of Three Gorges is only designed to be 50 million tons, the contradiction between it and the volume has become increasingly prominent. Therefore, bypassing-dam transshipment will be the long-term passing form. This will cause a large number of logistics to gather in Yichang city, thus both sides of Three Gorges dam and the section below Yichang Gezhouba Dam will become an important logistics hub in the Yangtze River. In addition, with the construction of the Yichang-Wanzhou Railway and the Shiyan-Yichang Railway, as well as the Shanghai-Chengdu and Shanghai and Chongqing highway and other projects, the channels from Yichang to the southwest and to northwest will be fully formed, Yichang will become the junction of the north-south main railway artery and the east-west main railway artery as well as an important node in the national high-speed

road network. It can be predicted that a large number of materials from the Southwest, the Northwest, the East China, the Central China and other regions will gather in Yichang.

4. Overall Concept of Building Up the Regional Logistics Center Around Three Gorges and The Two Dams

4.1. Overall layout of the logistics center

To arrange the stationing around the traffic pattern of breaking the navigation bottleneck of the two dams of Three Gorges, provide services to the appreciation and efficiency increasing of the shipping and the logistics of the Yangtze River (in particular, the two dam area), as well as to the urban logistics development keeping Yichang as the center, in accordance with the split Pattern of "one line, three circles, five points " to arrange the project. Particularly, the "one line" means to station the logistics centers along the line of Yangtze River around the center of the two dams; the "three circles" means logistics circle on the dam, the logistics circle under the dam and the urban logistics circle; the "five points", namely Taipingxi Port Logistics Park, Maoping Port Logistics Park, Yichang Railway East Station Logistics Park, Yunchi - Three Gorges Airport Logistics Park and Zhicheng Port Logistics Park.

4.2. Development positioning of the five logistics parks

Taipingxi Port Logistics Park: A railway-highway-water combined multi-modal transfer center on the dam head of Three Gorges Reservoir Area relying on Taipingxi port, the highway from Taipingxi to Yichang-Badong express, Taipingxi freight station on Shiyang-Yichang Railway, focusing on the services for coal transfer, automotive warehousing logistics and RO/RO operation, Jiangbei (container, Ro-Ro ship) on-dam transit center of bypassing-dam transshipment project, reservoir area distribution, circulation and processing center of agricultural products, the mineral and building materials transit distribution service center in Three Gorges area, Chongqing on-dam warehousing and distribution base for finished cars, and the logistics information and integrated business services center in Three Gorges area. It is also the base on which on-dam shipping logistics companies, road transport logistics companies and warehousing companies gather.

Maoping Port Logistics Park: A Jiangnan bypassing-dam transshipment center and a passenger transit service center, both with the basis of Maoping Port and Jiangnan bypassing-dam expressway, and with the hinterland of Three Gorges reservoir area, the largest agricultural products distribution center, the Ro-Ro Ship transit base and the bulk cargo transshipment base on the south bank of Three Gorges Dam.

Yichang Railway East Station Logistics Park: An integrated Service logistics park which relying on railway, the Yangtze River shipping, expressways, Three Gorges Airport, focusing on Yichang modern trade logistics center, Three Gorges food logistics center and the agricultural products trade center, as well as the radiating the eastern part of Chengdu, the western part of Hubei and the southern part of Hunan.

Yunchi-Three Gorges Airport Logistics Park: A railway-highway-water -combined multi-modal transport integrated logistics park which relying on the Yunchi deepwater port, Three Gorges Airport and the Zhijiang Tianjiahe River Port, providing services to Yichang's industry as well as bulk import and export, an international air logistics center in Three Gorges region, a bulk goods distribution center radiating the eastern part of Chengdu, the western part of Hubei and the southern part of Hunan.

Zhicheng Port Logistics Park: A modern port logistics park with the basis of Jiaozuo-Zhicheng Railway and Zhicheng Port, with the main content of railway-water multi-modal transport (transport coal from north to south, transport phosphorus from west to east), coal distribution, bulk storage and transit shipment.

5. Suggestions of Building up a Regional Logistics Center which around Three Gorges and the Two Dams

5.1. Make a success of investigation and analysis, scientific and rational planning

Three gorges logistics center is of a large-scale integrated logistics center bearing tremendous influence on Three Gorges region taking Yichang as the center, it will have a far-reaching and strong impact on the smoothness of the Yangtze River golden waterway, the long-term efficiency of Three Gorges bypassing-dam

logistics, as well as the economy of the reservoir area and the vast hinterland of the Yangtze River upper reaches. Therefore, we must make a success of investigation and analysis, comprehensively consider the economic trends of the Yangtze River upper reaches especially Chongqing and Sichuan, to do a comprehensive survey on the types, the volume, the flow direction and other factors of future logistics, to map out plan for the logistics center on the basis of systematic analysis, to make reasonable arrangements for the location, layout, facilities, equipment and other capabilities of the future logistics center. So as to have the planning and construction of Three Gorges Logistic Centers not only in line with actual needs, but also meet needs of future development.

5.2. Increase policy support, optimize development environment

We should approach the question from a far-reaching strategic point of view, and set forth related supporting policies as soon as possible, to form a favorable policy environment supporting the construction and the development of Three Gorges Logistic Center. First, we must earnestly solve the issues of the land for which the infrastructure construction of Three Gorges Project logistics center required. Second, we must take measures to reduce the land cost of logistics enterprises. Third, we should actively encourage and guide private investment. Fourth, we should establish a competitive tax policy and adjust the policies of reducing or exempting taxes and fees, such as land acquisition fee, arable land use tax, forest resources fee, local income tax and sales tax, so as to reduce them as much as possible. In addition, for the leading logistics enterprises which we should support particularly, we should adopt the same policy of water, electricity and gas prices as for those industrial enterprises, to reduce operating costs and support enterprise development.

5.3. Broaden the financing channels, ensure the project funds

We should encourage financial, insurance, credit guarantees and other institutions to increase support for the logistics industry. We should also guide banks to provide financial supports to those key logistics infrastructure projects and those large-scale, cost-effective key logistics enterprises with great market potential by financial interest subsidies; actively seek various types of funding support for Three Gorges modern logistics center. And to actively apply for the state and Hubei Province financial capital, special funds from Development and Reform Commission, Ministry of Communications and the Ministry of Commerce and other ministries, as well as the low-interest loans from World Bank and China Development Bank and other banks, to speed up the infrastructure construction of Three Gorges modern logistics center. The local governments should adhere to the "not to do everything, but to where", to make bold reforms in terms of raising funds and financing to invest construction projects, so to revitalize existing asset reserve by means of joint ventures and cooperation; we should encourage and guide enterprises to raise funds from the community by issuing stocks or corporate bonds, project financing, reorganization of assets and equity swap, etc.

5.4. Increase the momentum of marketing, enhance the promotion of brands

We must increase the propaganda of Three Gorges Logistic Center, by proper means of to take part in the NPC (National People's Congress) and the CPPCC (National Committee of the Chinese People's Political Consultative Conference), to report to leaderships on the work and to invite the leaders and experts to investigate Yichang, vigorous appeal for more logistics related projects to settle at Yichang Three Gorges Logistic Center. On the other hand, we should improve popularity and reputation of the logistics center through effective planning and publicity by each major media, so as to have goods, capital, technology, personnel and information gather towards the logistics centers, to develop the market relying on the popularity of industry clusters and the overall marketing strategy. We should make full use of the brand of Three Gorges Project to expand the impact of Three Gorges logistics center, make Three Gorges Logistic Center truly become a logistics node on the national map with large radiation effects, to produce more large-scale clusters and radiation effects.

5.5. Introduce and cultivate logistics enterprises, strengthen main market players

Various logistics companies is the implementation main player of the development of logistics, therefore, the construction and development of Three Gorges Logistic Center, we must create a favorable environment to attract a large number of logistics companies to settle here. On the one hand we should actively introduce

first-class third-party logistics companies at home and abroad, to rapidly improve the internationalization and modernization of logistics companies; on the other hand, we should guide storage, transportation, agents, foreign trade, wholesale and other businesses existing in Three Gorges area to take reconstructions according to the requirements of the modern logistics development, and encourage them to rebuild their management, technology and business process according to practical situation, turn to professional, large-scale development, and then encourage some of them to become the third-party logistics companies.

5.6. Strengthen personnel training and introducing, build a strong team of professional personnel

We should according to the requirements of the construction and development of Three Gorges modern logistics center, study and develop a personnel training and introduction plan, train and introduce various types of logistics talent in various ways, to build a strong professional personnel. On the one hand, we should make use of universities and research institutions in the province to train a group of logistics professionals; on the other hand, we should promote logistics companies and universities to run schools jointly, to the training personnel to orders. Third, we should relying on domestic and international logistics developed areas to take effective policy measures, such as setting up government special fund for logistics personnel, to increase the intensity of attracting and introducing high-quality logistics expertise currently needed. Fourth, we should strengthen vocational education and vocational training for the workers and staff to improve the overall quality of logistics practitioners. Fifth, we should implement the brain-borrowing project. In the current situation of high-quality logistics expertise being badly needed, in line with the idea of "not to own, but to use", we should enhance communication and cooperation with research institutes and specialized logistics planning consulting firms, to attract high-quality logistics elite to work for us.

6. References

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