

〈研究論文〉

The Changes of Forestry Trade Development in Western Fujian and the Influences on Ecological Environment*

Lianfang WANG[†]
Jing LIU[‡]

Abstract: The special mountain terrain in Western Fujian created a rich forest resources, and derived the forestry trade as the main way for the survival and development. With the society changes, forestry trade in western Fujian occurred changes from prosperity to decline, from blindness to orderliness, and forest ecosystem also experienced a interconversion between the balance and imbalance. The forestry trade development brought great changes to the ecological environment in Western Fujian. At the same time, from the ecological environment changes caused by development of forestry trade in Western Fujian, we can also learn the experiences from the interaction between ecology and society.

Key Words: Western Fujian; Longyan; Forestry Trade; Ecological Environment

Western Fujian is known as Longyan area which is located in the southwest of Fujian Province and is 150 kilometers apart from the sea channel. As the region is located in the Tropic of Cancer, the climate is mild and it is like spring all the year around. The mountain soil is red soil and yellow soil for the most part and it is suitable for plant growth particularly, so there is very rich of forest resources in this region. For a long time, Western Fujian has always been one of the three major forest areas in Fujian Province, of which five counties (districts) are listed as national forestry emphasis counties. In the rich forest resources, there are 38 kinds of rare plants

listed as national key protection, accounted for 49% of rare plant varieties in Fujian, so Western Fujian is called the green "treasure bowl"¹. For the region is located in the mountains, more mountain and less field is the basic ecological condition restriction. Because of the restriction, farmers in Western Fujian began to focus on and used the rich forest resources very early. The forestry trade development in Western Fujian has experienced the changes from prosperity to decline, and of the forestry development changes has led to the ecological environment changes in this region. This paper analyzes the characteristics of forestry

* Fund Project: the soft science project of Science and Technology Department of Fujian Province in 2017 year: <Study on the Effective Utilization and Advantages Keeping of Ecological Resources in Western Fujian Under the Green Development Concept >(2017 R 0078); Project of Central Soviet Area Research Institute of LongYan University in 2015 year: <Study on the Soviet Society Under the Dimension of Ecological Change in Western Fujian>(LS 2015023)

[†] Associate professor of the College of Marxism LongYan University, Post doctoral research in the School of History and Culture, Shandong University.

[‡] Lecturer of Hebei Software Institute.

development from the changes of forestry trade in Western Fujian and discusses the influences on the local ecological environment.

1. Development and Changes of Forestry Trade in Western Fujian

The forestry trade mainly concentrated on the exploit of forest resources and the related handicraft industry, such as Chinese fir, saw board, local paper and other related industries. As early as the Ming and Qing Dynasties, by the unique forest resources, forestry trade has appeared a scene of prosperity in Western Fujian. In the early 20th century, the forestry trade developed rapidly in Western Fujian under the stimulus of market demand. The description of the forestry trade, Changting county “connected many areas by the Ting river, and the merchants were in an endless stream”, in the Tingzhou municipal “the merchants from Anhui bought the mountain and southands of wood were cut down every time”. “Fir, books paper, and part of Yanshi Huanglian paper were transported by Jiulong river from Wanan and Baisha, and were sold in Punan and Shima. It is an economic system and known as the “Wenheguan Consortium”². With the rapid development of forestry trade, Western Fujian area gradually formed the corresponding commercial gangs, such as wood gang, and local paper gang, they spread to the areas such as Guangdong, Jiangxi, Hubei, Hebei, Jiangsu and so on, then built the guild hall.

In the 1920s, the forestry trade of Western Fujian entered the prosperous period. There are many places where the wood is rich, including 18 villages in Changting county, 68 villages in Liancheng county, 92 villages in Wu Ping county, 42 villages in Shanghang county, 46 villages in Yongding county, 43 villages in

Longyan county, 16 villages in Zhangping county, 16 villages in Ninghua county, 29 villages in Qingliu county, 47 villages in Mingxi county, which is widely distributed. The wood that these places produced was more than 1.5 million annually³. However, since the 1930s, due to the political turmoil in Western Fujian, “the old verdant forest area become the place that the bandits gethered”, and coupled with the loss of timber overseas market, as the same time the domestic market was excluded by the imported building materials such as foreign wood and plum and so on, then the market of the wood in Western Fujian became tighter. Forestry trade entered the decline period with an annual output of nearly a million trees yet.

Modern times, Chinese economy has also been a certain development even be given the aggression and oppression by the capitalist countries. The timber market demand growthed rapidly due to the domestic and international economic stimulus. According to <China Economic Book> “Chinese mainland building materials probably were from Fujian”. Thus “the main goods that the merchants in the upper reaches of Minjiang River upstream sold was wood”⁴. Most of the timber industry in Fujian originated from the rich forest resources in Western Fujian, and the forestry trade here became prosperous. In the early years of the Republic of China, the timber market was extremely active at the peak of timber industry in Changting, Liancheng, Shanghang, Yongding and Wuping counties of Western Fujian. Only Liancheng and Wuping two counties, the annual output of the wood was more than 1 million. the output of the whole forest zone is as high as more than 4 million yuan⁵.

With the rapid development of forestry trade, the exploit and utilization of forest resources in Western Fujian is more serious. In Shanghai, the timber

merchants of Fujian "set up woodern factory and woodern industry for oprating and trading along the Huangpu River bank, from the east to the south of the city. Among them the big merchants owned thirty of them. We can see the prosperity development of the timber industry at that time. Most income of people in Western Fujian was from the forestry trade, forestry developed rapidly and the timber output rose sharply by the influence of this trade environment. The forestry trade continued to develop and progress. In the mountainous areas of Western Fujian, the tree species that constitute forest resources such as pine, camphor, phoebe, padauk, lacquer, vernicia fordii, Eucalyptus, vertebrae, beech, boxwood and so on, without manual intervention, cutting and growing freely, but the Chinese fir was more easy to plant which is cultivated artificially.

In the early years of the Republic China, the decline of the timber industry in Tingjiang River Basin was not serious, and it did not affect the sustainable development of the timber industry in Fujian. However, after the Republic of China the timber industry was declining. After the founding of new China, the new changes have taken place in forestry resources of Western Fujian. The establishment of the new China means that China entered the period which is development first from turbulent period, in the view of people in Western Fujian then the development should be started from the advantaged resources. The forestry resources as advantaged resouce in the local areas became the optimistic development capital. In the era of lacking of ecological awareness, the emergence of deforestation are naturally. Therefore, in recent decades, Western Fujian has achieved some economic development results, but at the same time, such as the utilizing way the climate change the pest incidence and so on caused the seriouse bad consequences of forest resouces. Until

now, after more than ten years of improvement and protection, the forest ecosystem in Western Fujian has been restored gradually. The ecosysem is not good as before, but the improvement and protection already made a great contribution to the ecological environment in Western Fujian.

2. Characteristics of Forestry Trade Development in Western Fujian

With the advantaged forest resources, the forestry trade development promotes the economy development rapidly in Western Fujian. Meanwhile, the development of forestry trade also has its own characteristics.

First, the forestry has been exploited without thinking. The economy in Western Fujian developed rapidly in modern China, but at the same time, because of the lacking of ecological consciousness, the exploitation and utilization of forest resources was obviously predatory exploiting. The average population density in Western Fujian is far lower than that of Fujian Province. With much land and few people, but more mountain and less arable and the poor quality of arable land in Western Fujian, so per capita arable land is very less. The local literature often portrayed the land of Western Fujian as "narrow soil and less land", or "barren soil". As a result, the population pressure in Western Fujian is still rather serious for the land. It was the enormous pressure of the land that the local people turned their attention to the mountain forest and began to make predatory exploiting. The vast wood land not only provides a lot of wood for people, but also provides a wide variety of forest products, such as tea-oil tree, fordii, turpentine, dried bamboo shoots medicine and so on. In addition, the banmboo forest prospering all over the mountain provides enough paper materials for the

farmers of Western Fujian. In the situation that the cultivated land can not meet the needs of the peasants in Western Fujian, then the forest resources have become an important economic source of the peasants, and various reckless development methods have also appeared.

Meanwhile, because of the invasion of foreign capitalism in modern China, the invaders not only plundered the original material and wealth, but also plundered the economic development. Any progress in capitalist society can not be separated from the nature of plunder. After the invasion, the development of forestry trade in West Fujian has experienced the economic plunder of foreign capitalism. Camphor wood is one of the main forest species in West Fujian. At the end of Qing Dynasty, the commercial activities of British and Japanese merchants became more and more frequent in China, and the purchase of camphor increased considerably. In the disparity period of economic development, "the villagers cut camphor countless" in order to get more benefits. "since thirty-two years of Guangxu period to the first year of Xuantong in Qing dynasty, the camphor which could be made for camphor balls were all cut"⁶, resulting in the camphor forest destroyed situation. Except camphor, such as Phoebe Nees, Tungoil tree, Tallow trees and so on in the upper reaches of mountain also have gradually disappeared.

Second, the blind development of forestry trade, and the spontaneous disorder of material exchange. By the stimulates of forestry trade development, the forest owners and the timber merchants cut the forest competitively. The late Qing dynasty, Customs and taxation department of Fujian has the report that trees are less and less and will be more less quickly because of the less supplement for the felled trees, and there are not the wood which size accord with market demand

along the stream nearby. Since the timber merchants entered into Western Fujian, they developed forest resources seriously. Whether the adult trees or young saplings were cut down, and many of the original trees were cut down and form the mountain into "bare hills". The decrease of forest resources naturally restricts the further sustainable development of forestry.

Modern China was in a semi feudal and semi colonial state, and the forestry trade was also in the stage of petty dealer stage. At that time, the various heavy feudal exploitation and exorbitant tax from government has caused tremendous pressure to the local people. As small producers the local people had to only pursue immediate interests and they could not take long-term ecological benefits into account. therefore the commodity production is carried out under anarchy. The development of forestry trade is on the basis of spontaneous completion of local people in the pursuit of personal interests and spontaneous, which leads to the material exchange between human and nature is only acquisition of human beings without return to nature. For example, there was a team called "shed people" who were the hobos for obtaining the interest of forest trade and running from neighborhood regions or local people. They build a hangar in the mountains and living" there. Because the "shed men" were in the miserable situation and poor living settled place. In fact, the emergence of this new force was more destructive than the local people.

Third, the development of forestry trade was accompanied by the emergence of social problems. Forestry trade and multifarious taxes of government and local forces coexist. At the end of the Qing Dynasty, in addition to pay the taxes for outside along the wood transportation, the wood merchants had to bear the raft tax, guns tax, paving stone road tax and other various

burden. In the Republic of China, the warlord made more and more warfare to fight for power and causing various tax levies named for the protection but extortion, which brought greater pressure for the wood merchants. The establishment of the Kuomintang government in Nanjing worsened living situation of wood merchants. Before 1934, except paying duties, special tax, the wood merchants must be assessed to pay more than 60 kinds of local taxes. All taxes and levies aggravated the pressure of wood merchants and hindered the forestry trade development.

Moreover, the development of forestry trade is accompanied by serious traffic problems. The characteristics of mountainous area has created two major circulation routes for goods. One of them was road from Zhangzhou to Longyan, but before New China bandits appeared in this road without poor public security, and the merchants lose wealth and goods frequently. The other one is waterway from Shantou through Chaozhou, gathered at Fengshi then through Kansi to Longyan. This route spent half month to go through shipping and shouldering. With the development of forestry trade, the backwardness of transportation in Western Fujian has gradually become visible. Wood transported mostly by water to weave a raft drifting down the river. But in autumn and winter the river becomes shallow and the raft can not be carried, thus affecting the timber trade development, causing serious damage of wood merchants. Traffic problems have become more and more obviously in the process of forestry trade, which limited the expansion of forestry trade and the timber market.

3. The Impact on the Ecological Environment from Forestry Development in Western Fujian

The variety of products, production area and quantity of products in West Fujian have been greatly developed since 1920s, and the commodity economy in mountain areas has shown an view of active development. However, the development of commodity economy in this period was at the cost of the destruction of the ecological balance and the deterioration of the ecological environment in the mountains. Among them, the development of two major industries tea and wood has the greatest impact on the ecological environment in mountain areas. The forestry trade development in Western Fujian has experienced a period from flourishing to declining, and the forest resources have been overexploitation and ecological rehabilitation. The ecological environment problems caused by the forestry trade development are also obvious in Western Fujian.

First, the rapid development of forestry trade makes forest ecosystems evidently deteriorated, and the ecological service function and ecological products output of forest resources in Western Fujian decreased significantly. The ecological products supply is provided by the normal forest ecosystem. Once the area of forest is too small, the ecological products will become scarce, even turning to zero. The decrease of forest number will lead to ecological crisis, and decreased in windbreak and soil fixation, dust absorption and the species diversity decrease and so on. The disorderly and uncontrolled exploitation of forest resources led to less and less forest conservation, which can not fix the sand, a large amount of sediment in the rainy season was flushed into river reaches. The waterway was silted up, forming the downstream jams.

In 1958, the soil erosion area is 170.38 km²

accounting for 0.89% of the total land area in Western Fujian; In 1987, the soil erosion area expanded to 1795.77 km² (1379 km² of mountain), 9.54 times more than that in 1958 year; The annual sediment loss in the whole area amounts to 12 million tons equivalent to an annual loss of 80 thousand acres of arable land, and the nutrient loss is even more amazing. Calculated according to the amount of nitrogen in plough layer 0.115%, annual loss of pure nitrogen was 13.8 thousand tons and the equivalent of 83.6 thousand tons of oxygen bicarbonate. It equaled 66.2% of the nitrogen fertilizer inputs in 1987. According to forestry census data in 1983; the ratio of coniferous forest to broadleaf forest is 10: 1. The young plantations of total forest accounted for 71.5%, and the mid-aged plantations accounted for 5.9%, the mature forest is only 22.6%; because the existing broad-leaved forest area of forest was so small and mature forest was low proportion that the forest soil and water conservation capacity decreased⁷.

Second, the forestry development has led to a great increase of original forest felling, but due to the lack of ecological awareness, local residents was cutting more and planting less, which resulted in a large area of forest destruction. A large number of mountain surface exposed outside. On the one hand, this formed a longitudinal section of the landslide, on the other hand which formed irreversible destruction of the ecosystem due to the mountain soil texture, which is unable to grow new trees. Because of the geographical distribution of more mountains and hills in Western Fujian, coupled with unreasonable deforestation and the mode of economic development, soil erosion is much more serious, and it is one of the most serious soil erosion areas in Fujian province. Changting county was the most serious particularly, which was one of the most serious soil erosion counties in the red soil region of southern

China. In 1940s, Changting county set up a water and soil conservation organization, which is one of the three key experimental areas for soil and water conservation in China together with Tianshui city of Gansu Province, Changan city of Shanxi province. According to the remote sensing survey in 1985, the soil erosion area in Western Fujian 3.747 million mu, accounting for 13.13% of territory area, of which less erosion was 2.513 million mu accounting for 67.07%; Moderate erosion was 673 thousand mu, accounting for 17.96%; the strength erosion was 425 thousand mu, accounting for 11.34%; the pole strength erosion was 136 thousand mu, accounting for 2.63%. soil erosion area of Changting county was 1.462 million mu, accounting for the territory area was up to 31.5%⁸.

According to statistics in 2011, from 2000 to 2011 year the total soil erosion control area in Western Fujian was 2.965 million mu, of which 1.63 million mu was completely controled. The area of soil and water loss in Changting county dropped to 476.9 thousand mu, and reduced nearly 1 million mu from 1.462 million mu in 1985, of which the strength erosion area reduced 135.7 thousand mu than that in 1999. In the first half of 2012, the whole region controled soil erosion areas 460.99 thousand mu by forest and grass measures, accounting for 102.4% of the planning tasks 450 thousand mu⁹. The agricultural production conditions in the controlled areas have been remarkably improved, and the characteristic industries have been developing rapidly, which is beneficial to promote the local agricultural production, the income increase of farmers and the development of rural economy.

Third, the changes in biodiversity of forest ecosystems. Uncontrolled deforestation in the mountain forest caused rapid reductions in the adult forest, and even the arbor seedlings began to decrease gradually.

On the one hand, new arbor seedlings can not follow the planting, on the other hand, soil erosion leads to the difficulty of seedling regeneration, and results the extinction of some arbor species. At the same time, some shrub species in forest ecosystems can not be used and over life growth breeding poisonous and harmful plant species. In the original forest soil, a large number nutrients are consumed by infinite growth shrubs, poisonous and harmful species. In addition the arbor species that have been cut down, some plant species which fail in competition gradually disappear. Accompanied by the decrease of biodiversity, the forest ecosystem arrived subtle changes, which is easy to lose balance.

4. The Experience and Inspiration of Social Development from The Change of Ecological Environment

In human social production activities, economic systems and ecosystems are organically integrated into an ecological economic system by the links of material cycles, energy flows, information transmission and value-added and so on. The contradiction between the unlimited demand of ecological system by human social production and the limited capacity of the productivity and resource renewal by ecological system to meet this demand. The basic contradiction is more and more obvious with the conquering nature step and expanding human economic activities.

First, the ecological environment is closely related to economic development and social change. The first, there is more mountain and less people caused not only much land to farm, but also per amount of capita arable land is small, which constitute the two basic elements which limited the social and economic development of

Western Fujian; The second, a strong contrast between the circulation of commodities demand and lagging of transportation conditions, which hinders the modernization of society and economy in Western Fujian, and also suggests the way out of social and economic development; The third, villages and towns concentrates in the mountain basin and river valley which are divided. The situation not only provides natural conditions for the relatively closed traditional customs of the society in Western Fujian, but also provides the soil for the family power growth.

Second, the impact of ecological environment on the peasants and the economy in West Fujian. The increasingly small-scale peasant economy is the root of the social unrest in West Fujian in the first half of 20th Century, and the social control system established with it has a strong traditional succession. the local clan and gentry forces took an important role in society, and neighbourhood administrative system and vigilante group are the derivatives. The deterioration of social control system was accompanied with the decline of small economies. So we could see such a vicious cycle: the deterioration of the human environment – the impoverishment of small-scale peasant economy – social unresting - further deterioration of the human environment – further impoverishment of small-scale peasant economy. This is the basic feature of rural social and economic development in Western Fujian in the first half of 20th Century¹⁰. It also reflects the close relationship between ecological environment and social economy.

In the first half of 20th Century, the decline of social economy in Western Fujian was the result of the double restriction of local ecological environment and human environment. Compared with the latter, the former is a more long-term restriction. The further evolution

history of society in West Fujian in the latter half of 20th Century could provide us with another powerful evidence. Since 1950s, the economic society development in Western Fujian has reached a certain development space due to the change of the human environment. However, the rural economic structure which is mainly restricted by the ecological environment in history, there is still limited room for development. In fact, by the middle of 1990s, the agricultural population in Western Fujian still accounted for 81.56% of the total population, and the local economy was still in a backward state. Western Fujian is one of the 18 contiguous poor areas in China, with a large area of poverty. There are Shanghang, Wuping, Changting, Liancheng and other 4 counties, 47 townships in this region. Therefore, the impact of the ecological environment on society is enormous, and it can affect the development of local economy and social progress for a long time and a large scale.

Third, in Western Fujian, the basic contradiction of the ecology economic system is also becoming more and more obvious and aggravating with the development of social production. The ecological economic system formed by human economic activities exists above basic contradictions, so the human economic activities also restricted by it. Therefore, human economic activities must face up to this basic contradiction. Our social production development is not only to pursue the economic efficiency, but also emphasizes the ecological benefits, which keep the dynamic balance of ecological economic system in the development of social production, so as to ensure the harmonious operation of ecological economic system. This is also the basic principle should be followed in the exploitation and development of mountain.

Fourth, forest is the pillar of natural ecological

system. It has many functions, such as climate adjustment, water conservation, water and soil conservation, wind resistance, sand fixation, pollution prevention, environment beautification and so on. Ancient people have many simple understanding about the important role of forest in agricultural economic ecosystem. This precious cultural heritage is worthy of excavating, summarizing, carrying forward seriously. There are excellent forest production conditions in mountain area of Western Fujian, and the forestry development potential is great, but in modern times because of the blind pursuing of timber economic value, deforestation, adopted the disorderly, it could not play the favorable conditions of the original environment, but also get the opposite result of the ecological environment deterioration will be appeared, which caused all kinds of hazards. Therefore, the central work of developing forestry should be transferred from log production to forest management and protection. Planting tree and conserving forest are not only the central link of the economic development in mountain areas, but are also the key link to protect the ecological environment and restore the ecological balance¹¹.

Annotation:

- 1 Cultural and Historical data Research Committee of Longyan Municipal Committee Fujian province of the Chinese People's Political Consultative Conference(1998): the 75th restricted publication of Longyan, p 23.
- 2 Cultural and Historical data Research Committee of Longyan Municipal Committee Fujian province of the Chinese People's Political Consultative Conference(2006): Cultural and Historical Data of Western Fujian, p 84.
- 3 Dai Yifeng (2004): Regional Economic Development and Social Change-- Taking the Modern Fujian Region As the Center, Yuelu Publishing House, p 280.
- 4 Dai Yifeng (2004): Regional Economic Development and Social Change-- Taking the

- Modern Fujian Region As the Center, Yuelu Publishing House, p 169.
- 5 Dai Yifeng(2004): Regional Economic Development and Social Change-- Taking the Modern Fujian Region As the Center, Yuelu Publishing House, p 252.
 - 6 Dai Yifeng(2004): Regional Economic Development and Social Change-- Taking the Modern Fujian Region As the Center, Yuelu Publishing House, p 170.
 - 7 Qiu Binghao(1990): Economic Research on Western Fujian, China Planning Press, p 85.
 - 8 Standing Committee of Longyan Municipal People's Congress(2012): Compilation of Special Reports on Ecological Longyan Construction in 2012, p 16.
 - 9 Fu Qisheng, Zeng Xianhua(2006): Literature of Revolutionary History in Western Fujian, Memorial Hall of Gutian Conference, p 63.
 - 10 Dai Yifeng(2004): Regional Economic Development and Social Change-- Taking the Modern Fujian Region As the Center, Yuelu Publishing House, p 175.
 - 11 Dai Yifeng(2004): Regional Economic Development and Social Change-- Taking the Modern Fujian Region As the Center, Yuelu Publishing House, p 288.
- 1928-1931).
- Qiu Binghao(1990): Economic Research on Western Fujian, China Planning Press.
- Standing Committee of Longyan Municipal People's Congress(2012): Compilation of Special Reports on Ecological Longyan Construction in 2012.
- Longyan Municipal Committee on Cultural and Historical Data Collection Committee in Fujian Province of the Chinese People's Political Consultative Conference(1982): Cultural and Historical Data of Western Fujian(the 5th).
- Longyan Municipal Committee on Cultural and Historical Data Collection Committee in Fujian Province of the Chinese People's Political Consultative Conference(1987): Cultural and Historical Data of Western Fujian(the 15th).
- Fu Qisheng, Zeng Xianhua(2006): Literature of Revolutionary History in Western Fujian, Memorial Hall of Gutian Conference.
- Statistics Department of Longyan(2009): Glorious course of 60 years-- Development of Longyan since the founding of new China, Statistics Department of Longyan.
- References:**
- Cultural and Historical data Research Committee of Longyan Municipal Committee Fujian province of the Chinese People's Political Consultative Conference (1998): the 75th restricted publication of Longyan.
- Cultural and Historical data Research Committee of Longyan Municipal Committee Fujian province of the Chinese People's Political Consultative Conference (2006): Cultural and Historical Data of Western Fujian (the 8th).
- Dai Yifeng(2004): Regional Economic Development and Social Change-- Taking the Modern Fujian Region As the Center, Yuelu Publishing House.
- Central Archives, Fujian archives(1985): Collection of Revolutionary History Documents of Fujian (Documents of Each County Party Committee from