

# **4 The impact of the Sloping Land Conversion Program on rural area in China: a case study in Yulin District**

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## **1. Introduction**

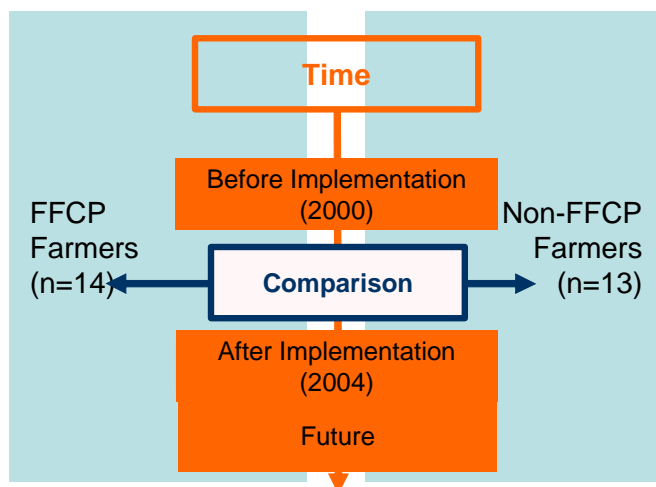
With the launch of the Six Major Forest Policy, China's forest policy has two trends: protect existing forest resources and create forest by plantation on farmland or devastated land. As mentioned in chapter 3, the Natural Forest Conservation Policy which mainly implements in the state-owned forest area represents the former. Latter one is conversion from farmland to forestland, in other words create forestland. As has been mentioned in the previous chapter, it is evident that the Sloping Land Conversion Program (SLCP) is the most influential policy concerning China's forestry at present and is one of the world's largest land-conservation programs (WWF 2003). Over the past few years, a considerable number of studies have been made on SLCP, which include several recent articles arguing that China's rural society and farmers have been influenced to some extent by the development of SLCP (Zuo 2002, Seki and Xiang 2003, Grant 2003, Xu Z *et.al* 2004). What is left in uninvestigated is, however, is to examine the process in which SLCP contributed to the diversification of the farmers' income and to illustrate the correlation between the influences of SLCP at a rural level and regional economic growth. Thus, the objective of this chapter is to elaborate on SLCP's impacts on the society of a rural area and the transformation in farmers' livelihoods.

## **2. Materials and methods**

To substantiate SLCP's effects on a rural area, this study attempts two types of field research: research at the administrative district (City) level and that at the village level. The former approach was applied in Yulin City in Shaanxi Province. The latter was carried out in Y Village in Mizhi County of Yulin City.

Our research uses the methods as follows. In the district level research, we basically conducted literature study, especially using the collection of statistical data. In the village level, we mainly relied upon structured interviews with the officials of the Mizhi Forest Bureau, the staff of the Village Committee and the householders in the village by using questionnaires. We also collected the socio-economical data of 27 households, which were randomly extracted from 226 households interviewed in Y village. In principle, interviews were conducted with the householders. In case of their absence, their spouses were instead interviewed. This field research run from July 29 to August 27, 2004, in Y village, Mizhi County, Yulin City, Shaanxi Province. All photographs in this chapter were taken by the authors in August unless there is any note.

This chapter consists of four parts. First, Section 3 analyzes the process of executing SLCP by focusing upon its area and investment and explores a key for the sustainable implementation of the project. Next, Section 4 depicts the characteristics of the recent economic growth and the implementation of SLCP in Yulin.



**Figure 4.1.** Conceptual diagram of research in the Y village

Then, Section 5 makes two types of comparison: the income of the households which have been participating in SLCP (SLCP participants) and that of the households which have not (non-participants), the income of households in 2000 (before the start of SLCP) and in 2004 (after the implementation of SLCP), in order to make out the impact of SLCP in the village level (Figure4.1). Finally, Section 6 discusses the correlation between the implementation of SLCP and the economic growth in Yulin City.

### 3. Implementation of SLCP

#### 3.1. General description of SLCP

Sloping Land Conversion Program (SLCP), called ‘Tui Geng Huan Lin’ in Chinese, aims not only to improve watershed conditions and to conserve natural resources, but also to promote rural development by providing subsidies for households who lost their farmland. SLCP is conducted by the households who have made a contract with the County Forest Bureau or Town Government. It targets, three types of farmland and devastated land as shown in Box 4.1.

##### **Box 4.1. Types of land targeted by SLCP**

- a. Farmland where soil erosion is severe (mainly the farmland with a slope of more than 25 degrees)
- b. Farmland where desertification or alkalinity is severe
- c. Farmland located in an ecologically important area; where the capacity of farming production is low and unstable
- d. Devastated land where soil erosion is severe

These types of targeted land are planned to be converted into forest or grass field by planting it with trees or grasses. Three kinds of subsidies: cash, food, and seedling are given to the households who have converted their farmland depending on the area of converted farmland (Table 4.1).

**Table 4.1.** Total amount of subsidies: cash, food and seedlings

	Cash	Food	Seedlings
Farmland along the Yellow River	300 RMB	2250kg	750 RMB
Farmland along the Yangtze River	300 RMB	1500kg	750 RMB
Devastated Land	—	—	750 RMB

Source: SLCP Regulations 2003. RMB=RenMinBi=yuan.

The households who have converted their farmland are responsible for planting trees or grasses in devastated land around the village. Converted forest/grass land is classified into two types according to the degree of importance of its conservation: ecological forest/grass land and economic forest/grass land. Ecological forest is those where soil erosion and desertification are severe, particularly those on both side of a river and those around a dam or a lake. Economic forest is the forest where farmers can obtain income from non-timber forest products, e.g. fruits, mushrooms. According to the SLCP Regulations, farmers receive subsidies for ecological forest for 8 years, and for economic forest for 5 years. The Forest Bureau regulates that the proportion of ecological forest and economic forest is 80/20 per cent in every administrative unit.

In both types of forests, land ownership is guaranteed during the contract period, and the ownership of planted trees/grasses also belongs to the households who have land ownership. It is prohibited to cut down planted trees during the period of compensation.

### 3.2. Plan of the policy and state financial expenditure associated with SLCP

During 2001-2010, the period of SLCP, a total of 32 million hectares of land are planed to be converted to forestland/grassland. The total planned area of farmland, 14.67 million ha, is 13 per cent of the whole farmland in China. After the completion of SLCP, 75 per cent of the sloping farmland along the upper stream of the Yangtze River and the Yellow River will be converted into forest/grass land and 46 per cent of farmland under desertification will be converted.

**Table 4.2.** Areas where SLCP was planned and implemented

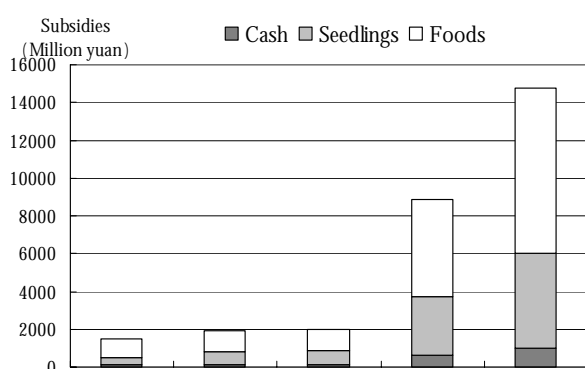
Year	Province	County	Farmland		Devastated Land		Total
			Plan	Implemented	Plan	Implemented	
1999	3	N.A.	381	397	66	70	467
2000	17	188	377	428	468	478	906
2001	20	224	356	420	492	563	983
2002	25	1580	2,267	1,975	2,662	2,157	4,132
2003	N.A.	N.A.	2,640	2,233	3,333	3,333	5,567
2004	23	N.A.	667	659	3,331	3,078	3,737
Total				6,113		9,679	15,792
Planed Area				14,667		17,333	32,000

Source: China Green Post, Lou 2004. Unit=1000ha

By the end of 2004, SLCP has been implemented in more than 2000 counties across 25 out of the country's 31 provinces, autonomous regions, and municipalities (Figure 4.1), and currently has enrolled some 15million farmers (Xu et.al 2004). 6.1 million hectare of farmland and 9.7 million ha of devastated land have already been converted to forest or grass field (Table 4.2).



**Figure 4.1.** Areas in China where SLCP was carried out



Source: China Forestry Report, 2004.

**Figure 4.2.** Breakdown of the investment in subsidies

The Central Government of China is planning RMB 337 billion (RenMinBi=yuan) for the completion of SLCP. By the end of 2003, RMB 39,454 million was injected into SLCP. Of this total amount, 36,642 million RMB was the investment by the Central Government of China. In 2003, 22,599 million RMB, the investment in SLCP occupied 66 percent of the total national investment in forestry, and of this investment, 14,750 RMB was subsidies for the households who converted their farmlands (Figure 4.2.).

### 3.3. The advantage of sustainable implementation of SLCP

Apart from its sheer size, SLCP differs from most other water and soil conservation, or even other forestry programs in China for a couple of reasons. First of all, the Central Government stated that the program aims not only to conserve soil and water in China's ecological fragile areas, but also to restructure the rural economy so that participating farmers can gradually shift into more environmentally and economically sustainable activities such as livestock breeding and off-farm work (SFA 2003). As such, it is interesting for its integration of environmental goals and poverty reduction. Secondly, the program directly engages millions of rural households as core agents of project implementation, being essentially a public payment scheme for environmental services. Fifteen million farmers have participated in the program in the first years alone, and leaders have estimated that upon completion SLCP will affect 40-60million rural households (Xu *et al.*, 2004).

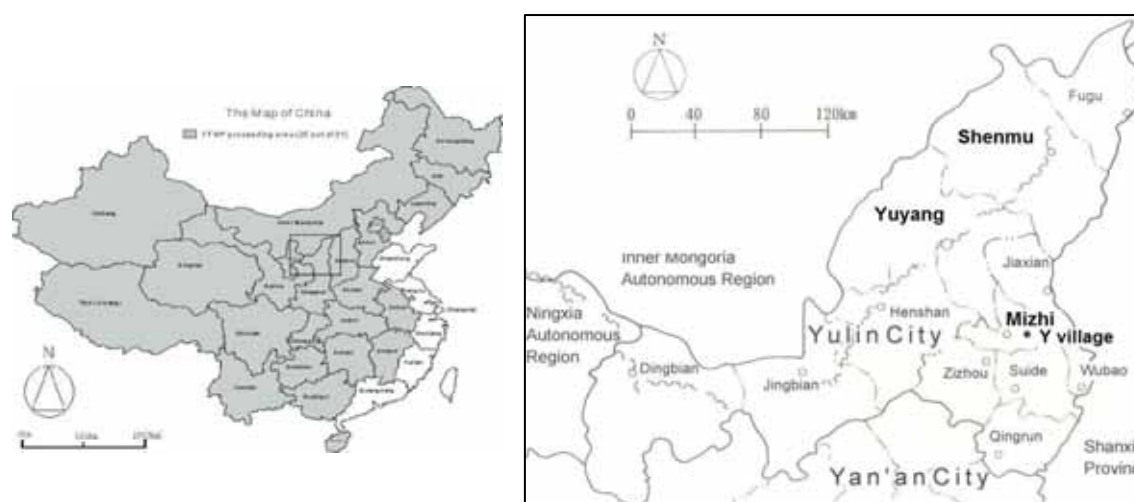
Through the period of the People's Republic of China, numerous attempts have been made to restore natural resources thoroughly. By these efforts, including an afforestation campaign called "public mobilization" (Hirano 2002), the area of forests have been favorably increased. But the campaign provoked a great deal of controversy over the inefficiency of afforestation attempted by the Central Government. Although billions of seedlings have been planted, little attention has been paid to the care of the planted trees. It was officially pointed out by the Central Government that only less than 30per cent of the trees, which had been planted since the country's foundation, remained in 1978 (Peoples' Daily, 1978).

These previous mistakes of afforestation attempts by the "public mobilization" offer us the clue to sustainable implementation of SLCP. After the expiration of 5-8 years subsidies period, farmers have to live on without relying on cropping in SLCP land, or otherwise farmers may start cultivation again in their sloping farmland. It is fair to say that the sustainable implementation of SLCP depends on how the farmers can diversify their livelihood. There is a general agreement about this among scholars. This chapter tries to examine the case study of a village in Shaanxi Province to find out how the farmers' income has been changed by the implementation of SLCP.

## 4. Results and findings: district level

### 4.1. General conditions of the district

Yulin City is the one of the administrative district (city) which is located in the northern part of Shaanxi Province, surrounded by Shanxi Province, Inner Mongolia Autonomous Region, and Ningxia Autonomous Region (Figure 4.3). The area of Yulin is consisted of 12 counties, and geographically divided into two parts by rainfall and topography. Northern area of Yulin is the area where annual precipitation is less than 400mm per year. Southern area of Yulin, where annual precipitation is around 450mm per year, is located in the northern part of Loess Plateau spread out northeast of China.



**Figure 4.3.** Map of Yulin and Mizhi county

According to the statistics of 1999, Yulin city has a population of 3,290,000 and of the 85per cent of 3,290,000 live in rural area (Table 4.3). Characteristics of the northern Yulin are low population density and

high city population. On the other hand, southern Yulin is characterized by high population density and high rural population.



**Figure 4.4.** Northern Yulin (Shenmu, taken in December 2003)



**Figure 4.5.** Aerial photo in Southern Yulin (Mizhi: taken in December 2003)

These characteristics is due to geographical differences between north and south. In northern Yulin, irrigation system had developed in lowland along the river, and stock farming had developed in rural area as a result of desertification, (Figure 4.4). Furthermore, northern Yulin is also rich in mineral resources such as coal, crude oil and natural gas. On the other hand, southern Yulin is a typical agricultural area relying on rainwater (Figure 4.5).

**Table 4.3.** General socio-economical condition in Yulin City

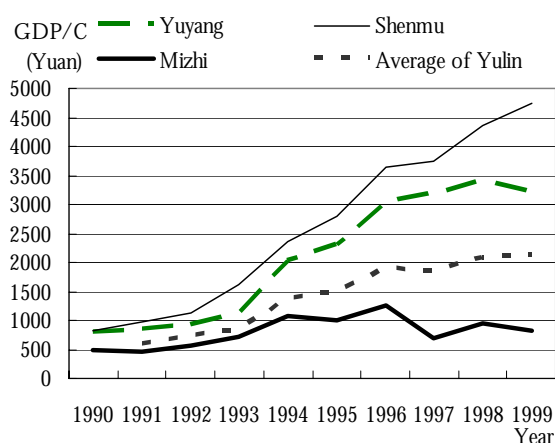
County	Population (1000)	Population in City area	Population in Rural area	Ratio of city population	Area (km <sup>2</sup> )	Density (Person/km <sup>2</sup> )
Yuyang	428	130	298	30.4%	7,035	60.9
Shenmu	361	87	274	24.1%	7,635	47.3
Fugu	216	36	179	16.8%	3,212	67.2
Henshan	324	28	297	8.5%	4,081	79.4
Jingbian	274	31	242	11.5%	5,088	53.9
Dingbian	300	35	266	11.6%	6,920	43.4
Suide	345	45	300	13.1%	1,878	183.7
Mizhi	207	24	183	11.6%	1,212	171.0
Jiaxian	246	20	226	8.1%	2,144	114.8
Wubao	77	12	65	15.0%	428	179.4
Qingjian	208	20	188	9.4%	1,881	110.4
Zizhou	309	25	284	8.0%	2,042	151.3
Total Yulin	3296	492	2804	14.9%	43,556	75.7

Source: Shaanxi Statistical Yearbook.2000.

■ Northern Yulin □ Southern Yulin

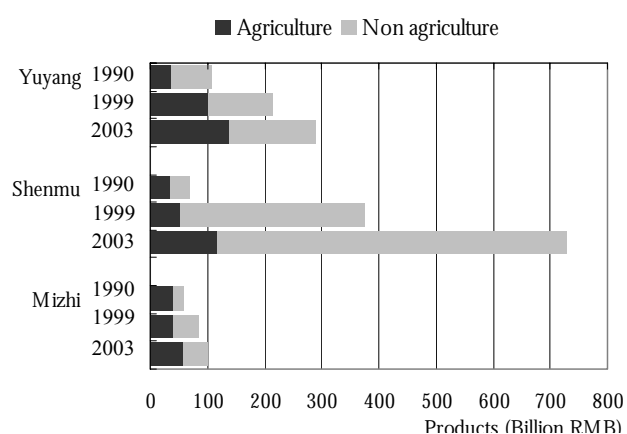
## 4.2. Economic growth in Yulin

Figure 4.6 shows the economic growth in the counties of northern Yulin (Shenmu, Yuyang) and southern Yulin (Mizhi) in the 1990s. In 1990, GDP per capita of these counties were 790RMB of Yuyang, 831RMB of Shenmu, 493RMB of Mizhi. As the figure shows, the figure jumped 3216, 4755, 816 RMB in 1999. The gap between Shenmu and Mizhi had been widened from 1.69 to 5.84 times, and the differences between rich counties and poor counties in Yulin had been widened through 1990s.



Source: Shaanxi Statistical Yearbook. 1991-2000.

**Figure 4.6.** GDP growths in each area of Yulin (1990-1999)



Source: Shaanxi Statistical Yearbook. 1991-2004..

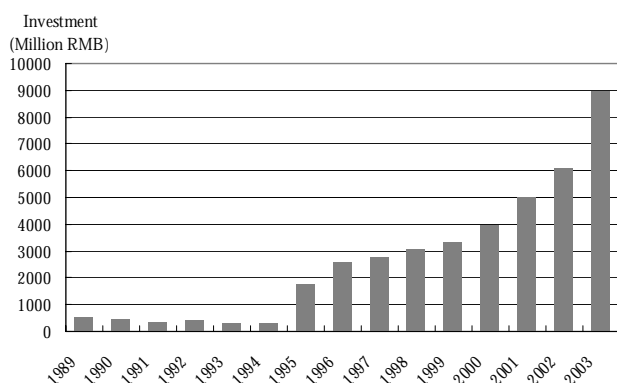
**Figure 4.7.** GDP growths in each area of Yulin (1990-2003)

**Table 4.4.** Breakdown of GDP growths in each county of Yulin (1990-2003)

County	Year	Agricultural GDP	Nonagricultural GDP	Total GDP	Ratio of change
Yuyang	1990	369 (34%)	722 (66%)	1,092	
	1999	1,008 (47%)	1,137 (53%)	2,145	1.96
	2003	1,375 (47%)	1,522 (53%)	2,897	1.35
Shenmu	1990	340 (50%)	345 (50%)	684	
	1999	541 (14%)	3,217 (86%)	3,758	5.49
	2003	1,153 (16%)	6,137 (84%)	7,290	1.94
Mizhi	1990	405 (69%)	186 (31%)	591	
	1999	397 (48%)	439 (52%)	836	1.41
	2003	578 (58%)	420 (42%)	998	1.19

Source: Shaanxi Statistical Yearbook. 1991-2004. GDP=1RMB per capita

Figure 4.7 and table 4.4 shows details of economic growth in Yuyang, Shenmu, and Mizhi. It is clear that, increase of agricultural GDP had contributed to economic growth in Yuyang. In Shenmu, increase of nonagricultural GDP had also contributed to its economic growth. In contrast, in Mizhi although agricultural GDP was at its highest in 1990, it had increased only by 40 per cent from 1990 to 1999. After 13years both of agricultural GDP and nonagricultural GDP are ranked the lowest of three counties in 2003.



Source: Shaanxi Statistical Yearbook. 2004.

**Figure 4.8.** National investment in Yulin city

This leads the question, what was the trigger for economic growth in northern Yulin? Figure 4.8 illustrates the national investment in Yulin economy. As this bar chart indicates, national investment started to show sharp increase from 1995, and there was another upturn from 2000 to 2003. Table 4.5 show the development of natural resources production in Yulin, and it tells us the backgrounds of the investment. The production of coal, crude oil and natural gas increased tremendously in the last five years: coal by 1080%, crude oil by 538% and natural gas by 394%.

**Table 4.5.** Development of natural resources in Yulin city

Year	Coal (1000t)	Crude oil (1000t)	Natural gas (million m <sup>3</sup> )
1999	6,630	520	1,257
2000	16,400	890	2,110
2001	40,000	2,520	3,440
2002	57,120	3,300	4,040
2003	71,680	2,800	4,950

Source: Uno 2004:237

From these data and the economic growth in the whole of China, we can speculate the mechanism of economic growth in Yulin as follows. The government-led investment which centered in natural resources started in the mid of 1990s, in order to meet the increased demand of energy occurred in the whole of China. And the “Go West” campaign which started in 1999 accelerated the investment in Yulin. As a result, the investment in these natural resources have been brought economic growth to northern Yulin, however, they do not existed equally in the whole of Yulin city, but only in the northern Yulin.

### 4.3. Implementation of SLCP in Yulin

In Yulin City, SLCP started from in 1999. According to Yulin SLCP regulation, Yulin Forest Bureau regulated three types of land as subject of SLCP (Box 4.2). Because more than half of farmlands in Yulin are facing desertification or cultivated on the slope, the government of Yulin City is planning that 68per cent of farmland in whole Yulin should be target of SLCP, the rate of targeted farmland is swelled to 79per cent in Mizhi County (Table 4.6). It is expected that about two million farmers will lose their farmland after the completion of SLCP in Yulin City.

#### **Box 4.2. SLCP target lands in Yulin**

- a. More than six degrees sloping farmland
- b. Farmland under desertification
- c. Devastated land



By May 2003, 153,5300 ha farmland and 181,2800 ha devastated land had already been converted to forest or grassland in Yulin City (Table 4.7). These farmlands where SLCP have already implemented are 13per cent of whole farmlands in Yulin. It is safe to estimate that certain farmers in Yulin have already been influenced on their agricultural livelihoods by the implementation of SLCP. In the following section, that the method of implementation of SLCP and how the implementation of SLCP influenced on households' livelihoods strategy is discussed, referring to village level research.

**Table 4.6.** SLCP planning in Yulin City

Farmland	Yulin		Mizhi	
	Farmland	SLCP Area	Farmland	SLCP Area
25deg>	330.6	320.1	14	14
15-25deg	283.5	246.7	29.3	29.3
6-15deg	204	159.1	5.3	5.3
Desertification	116.7	74.1	0	0
Total	934.8	800	48.7	48.7
Total Area of Farmland	1168	—	61.9	—

Source: The document from the SLCP department of Yulin Forest Bureau. Unit=1000ha

**Table 4.7.** Actual implementation area of SLCP in Yulin City

	Total	Farmland(1,000ha)			Devastated Land(1000ha)		
		Forest	Grass	Total	Forest	Grass	Total
1999	48.41	18.70	5.83	24.53	16.26	7.62	23.88
2000	8.47	6.47	1.20	7.67	0.64	0.16	0.80
2001	11.40	3.27	1.40	4.67	5.39	1.35	6.73
2002	N.A.	N.A.	N.A.	53.33	N.A.	N.A.	N.A.
By May 2003	334.81	N.A.	N.A.	153.53	N.A.	N.A.	181.28

Source: The document from the SLCP department of Yulin Forest Bureau.

## 5. Results and findings: village level

### 5.1. General Condition in Y village

Y village is a small village on the Loess Plateau, located 20km southeast from central Mizhi. Running through the village, a small stream named Xiaohe has encroached a canyon on the both sides of which people built and live in the house called *Yaotong*, which is peculiar to the Loess Plateau. Xiaohe empties into Wudinghe which runs from north to south in Yulin City, and flows into the Yellow River. The canyon attains heights of 200 meters, and most slope of canyon is cultivated from the bottom to the top (Figure 4.9). The characteristic of the Loess Plateau is its soil. In a lot of cases, the particles of soil in the Loess Plateau are silt loam soil which is more minute than those of normal soil. Therefore, the land without vegetation is susceptible to soil erosion by rain and wind. In Y Village, most of land is subjected to topsoil erosion or gully erosion (Figure 4.10).

According to a national census conducted in 1999, 1153 people and 259 households are living in the village. There is 166 ha farmland out of 375 ha whole land of the village. More than sixty per cent of the farmland is sloping farmland, twenty per cent of it is terraced field constructed in the 1960-70s and the remaining ten per cent is irrigated farmland (Figure 4.11, 4.12, 4.13). Almost of all households engages farming in their farmland with cropping corn, potato, soybean and foxtail millet.

**Table 4.8.** Land in Y village

	Land area	Farmland area
Area	375.00	166.00
Area/Family	1.45	0.64
Area/capita	0.33	0.14

Source: Fukao2000, our interview with households



**Figure 4.9.** Panorama of Y village



**Figure 4.10.** Mountain path with soil erosion in Y village



**Figure 4.11.** sloping farmland in Y village



**Figure. 4.12.** Terraced field in Y village



**Figure 4.13.** Irrigated farmland in Y village

An average of farmland area is 0.64 ha per households and every household has four or five small lots in the village, because these farmlands were divided up evenly among village households in the early 1980s by the land reform. Off farm works in the village are limited to a few types such as running small store (three households in the village), crop broker (one in the village) or cab driver (three in the village).

## 5.2. Implementation of SLCP in the village

According to the interview with an official of the Mizhi Forestry Bureau, the calendar of SLCP can be described as below in Box 4.3. In Y village, SLCP started in 2002, and by August 2004, about 70 of 259 households have been participating in SLCP. 40 ha of 166 ha farmland has been already converted into forest or grass field. It is estimated that more farmlands are going to be converted in near future, because Mizhi Forest Bureau plans to keep the pace of implementation of SLCP in each village of the county.

### Box 4.3. The calendar of SLCP in Y village

February: Annual responsible area of each town is decided by the Mizhi County Forest Bureau.

Top of March: Town government decides responsible area of each village.

Middle of March: Responsible area is distributed to farmers by the lead of the Villagers' Committee.

End of March-April: Tree and grass is planted by farmers

August-October: Planted tree and grass are investigated by the Mizhi County Forest Bureau

One of the staff of the Village Committee explained that the subsidies in the form of cash, food and seedlings have not been distributed completely. All 14 SLCP participants claimed that they did not receive cash even after they went through the investigation by the Forestry Bureau. And five of them said they did not received food, either. As the seedling aids, they received material in kind, not in cash. Of five species identified to be distributed in Y village, three were for the ecological forest: Chinese arborvitae (*Platycladus orientalis*), Pea tree (*Caragana psammophyla*) and Chinese pine (*Pinus tabulaeformis*); and two for the economic forest: Chinese jujube (*Zizyphus jujuba*) and Chinese apple (*Malus pumila*).



**Figure 4.14.** Planted seedlings (*Platycladus orientalis*: August 2004)



**Figure 4.15.** Provided food subsidies (August 2004)

### 5.3. Households comparison between SLCP participants and non-participants

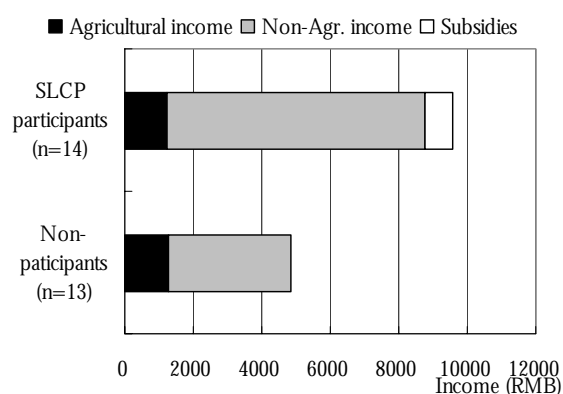
Bearing in mind, the basic information about the extracted 27 households in Table 4.9, let us compare the livelihoods in 2004 concerning information of reveals some interesting points about the transformation in their livelihoods resulted by SLCP. It, the livelihoods in 2000 with in 2004, and the livelihoods of the SLCP participants and non-participants will be compared in order to capture the influences.

**Table 4.9.** Basic information of the participants

Households	Age of householder	Number of household	Number of child	Area of farmland (ha)
SLCP participants (n=14)	47.4	4.7	2.6	0.88
Non-participants (n=13)	45.8	3.6	1.6	0.40

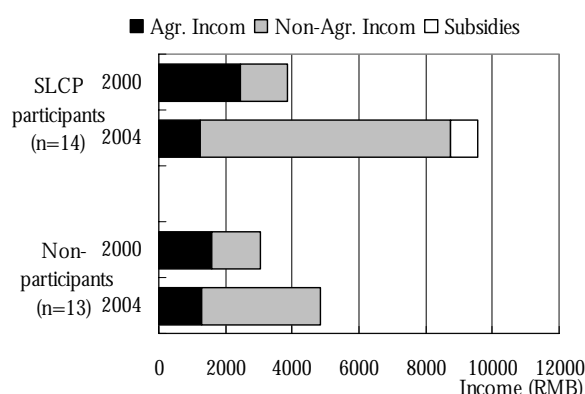
Source: Result of the interview with the householders

Figure 4.16 shows that the average of gross income in 2000 of the SLCP participants and non-participants. And Figure 4.17 indicates the average of gross income in 2000 and in 2004 of the SLCP participants and non-participants.



Source: Our survey data in 2004.

**Figure 4.16.** Income of the households participating and not participating in SLCP, 2004



Source: Our survey data in 2004.

**Figure 4.17.** Income of the households participating and not participating in SLCP, 2000

First, compared the income of the SLCP participants and non-participants in 2004, there are two times differences (Figure 4.16). Though the chart shows little differences in agricultural income between participants and non-participants, differences of nonagricultural income make a contribution to the differences of total income. Next, compared the before with the after, gap of income between the SLCP participants and non-participants has been widen. Among the SLCP participants, income has doubled in four years, especially nonagricultural income has jumped from 1448 RMB in 2000 to 7559 RMB in 2004.

The reason of the increase of nonagricultural income in the SLCP participants is revealed in the Table 4.10. This table which shows the number of migrant workers in the SLCP and non-participants tells us that after the launch of SLCP in Y village, the number of migrant workers in the SLCP participants recorded steep rise. In fact, the income by migrant works occupied more than 70per cent of nonagricultural income in both households in 2004.

**Table 4.10.** The first year of migrant works

Year	SLCP participants	non-participants
Before 1998	2	4
1998	1	1
1999	2	0
2000	0	1
2001	0	2
2002	5	1
2003	12	1
2004	2	0
Total	24	10

Source: The result of the interview with the householders. Unit=person.

**Table 4.11.** The variety of migrant workers

Year	Manual labor	Others
Before 1998	5	1
1998	0	2
1999	1	1
2000	1	0
2001	2	0
2002	3	3
2003	5	8
2004	1	1
Total	18	16

Source: The result of the interview with the householders. Unit=person.

Moreover, Table 4.11 shows the variety of the first migrant works of the villagers. It tells us that before start of SLCP, manual labor were main migrant works in the village such as mining, construction works, however, after the implementation of SLCP the variety of migrant works have been diversified. Besides, the characteristic of migrant works in the village is that more than 50per cent of villagers are working in the district of Yulin City. Note, that the economic growth in Yulin directly made a great impact on the migrant works of the villagers, furthermore the difference of opportunities and diversification of migrant works have affected on the gap between income of the participants and that of non-participants during four years.

## 6. Conclusion: correlation between implementation of SLCP and economic growth

Overall, the Sloping Land Conservation Policy is welcome initiative to increase and diversify nonagricultural income, especially the livelihood strategy of the SLCP participants in a case study in Y village. In more depth, we can presume that there happened following transformation on the society of the village and farmer's livelihoods. After the implementation of SLCP, the SLCP participants could have time to do by conversion of their farmland. About the time, the government-led investment which centered in natural resources started in the mid of 1990s, in order to meet the increased demand of energy occurred in the whole of China. And the "Go West" campaign which started in 1999 accelerated the investment in Yulin and the economic growth produced a large amount of employment in the district of Yulin City. Foregoing correlation between economic growth in Yulin and implementation of SLCP brought great impact on the society of a rural area and farmer's livelihoods.

From this case study, we may conclude that as far as economic growth goes on, the SLCP farmers can diversify their livelihood. However we would point out that Yulin has been lucky to be rich in mineral resources, there should be lots of areas where it is hard to find a way to economic growth in China. Therefore, it will become major issue for the sustainable implementation of SLCP to figure out the SLCP's impact in underdeveloped area and to guarantee expansion of employment and diversification of farmers' income in underdeveloped area for the future.

## Acknowledgement

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## References

- China Green Post 2003. The report of the National Forestry Activity Congress: The Six Major Forestry Projects. (Chinese) In the China Green Post 27 September, 2003. China Green Post, Beijing, China.
- China forestry bureau 2004. China forestry report. 2003. (Chinese) China Forestry Publishing House. Beijing, China.
- Fukao Y. 2000. *Kodokogen no mura: Mizu, tsuchi, hito no ryushutu/saisei heno kokoromi.* (Japanese ) In Kojima R et al. The structure of contemporary China. Pp.267-310. University of Tokyo Press. Tokyo, Japan.
- Grant A. 2003. A study of the implementation of China's Sloping Land Conservation Policy 'Tui Geng Huan Lin': a case study in Hanyuan County, Sichuan Province. In *Forests, Trees and Livelihoods*. 2003, vol.13, pp.331-343. Academic Publishers. London. U.K.
- Hirano Y. 2002. On the large-scale forestation organized by the Government and the participation of local people in the People's Republic of China. (Japanese) In *Research bulletins of the Hokkaido University Forests*. Vol.59 No.2. pp.67-98. Sapporo, Japan.
- Lou Y. 2004. Big adjustment of SLCP. (Chinese) In *Caijing* No.101-102. pp.69-71. Beijing, China.
- National Bureau of Statistics of China. 2004. China statistical yearbook. 2004. (Chinese) China Statistical Publisher. Beijing, China.
- National Bureau of Statistics of China. 1989-2004. Shaanxi statistical yearbook. 1989-2004. (Chinese) China Statistical Publisher. Beijing, China.
- People's Daily. 1978. *Yao zai quanguo dada tichangyixia zhishu zaolin.* (Chinese) January 14, 1978. People's Daily, Beijing, China.
- Seki Y and Xiang H. 2003. The SLCP and local people in the poverty area in China. (Japanese) In Yorimitsu. R et al. *From destruction to regeneration of the forest in Asia* pp.149-210. Economical Review. Tokyo, Japan.
- SFA (State Forestry Administration of P.R. China) 2003. Master plan for the Sloping Land Conversion Program. China Forestry Publishing House. Beijing, China.
- Uno K. 2004. The economy and development in northern Shaanxi: The indication of economy of west China. (Japanese) In *Bunkaronshu* No.25. pp.127-169. Waseda University Press, Tokyo, Japan.
- Sun X, Cheng N, White A.R., West A, Katsigiris E. 2004. China's forest product import trends 1997-2002. *Forest Trends*. Washington.D.C, U.S.A.
- Xu Z, Bennett M.T, Tao R, Xu J. 2004. China's Sloping Land Conversion Program four years on: current situation pending issues. In *International forest review-special issue "forestry in China-policy consumption in forestry's newest superpower"*. pp. 317-326. *Forest Trends*. Washington D.C. U.S.A.  
([http://www.forest-trends.org/documents/publications/ifr\\_dec-2004\\_final.pdf](http://www.forest-trends.org/documents/publications/ifr_dec-2004_final.pdf))
- Zuo T. 2002. The implementation of the Sloping Land Conversion Program. (Chinese) In *Implementing the Natural Forest Conservation Program and the Sloping Land Conversion Program: Lessons and policy implications*. China Forestry Publishing House. Beijing, China.