China Vetiver Network

Project Progress Report (No.1)

Project Title: Poverty Reduction and Resource Protection in a Guangxi Province Minority Area
Project Number: No KED 20066066
Report Period: January – June 2007

Supported by KED/EED，the project titled Vetiver and Agroforestry Technology for Rural Poverty Alleviation and Natural Resource Protection in Minority Mountains of Guangxi Province of China has launched. The project aims at helping local farmers develop economic trees for 48700 seedlings and 40 mini-irrigation systems. Meanwhile, vetiver system and agroforestry technology will be introduced and over 3 million vetiver tillers will be planted in order to conserve nature resources and provide farmers with multiple products and materials. Besides, various training courses will be organized and different publications will be produced and widely distributed to extend the project.

1. The organization and mobilization

On 4 January 2007, a group from China Vetiver Network went to the project site to start the project. They were welcomed by local authorities, communities, and the governments. At first, they visited the Agriculture Environmental Monitoring Station of Guillin City. During the meeting, China Vetiver Network introduced the process of the project application and the approved project components, met the directors of the Agricultural Bureau of Guilin City.

On 6 January 2007 a team consisting of China Vetiver Network and the Agriculture Environmental Monitoring Station went to Longshen County, where they met the directors of Agricultural Bureau of Longshen County. Besides, directors from related technical stations of the county also participated in the meeting. The Director of the Agriculture Bureau Mr. Wei introduced general information on the county and the development plan of the county. He said that the county is situated at the border area covered by mountains. The traffic problem often restricts economy development. In the afternoon all of the participants went to Sishui Township where they investigated present land use patterns, talked to farmers and governmental officials.

Later on 7 January 2007, the team visited a Zaomi pear garden that was established by the local government in 2002 in a nearby Piaoli Township. It covered 1122 Mu (about 74 hectors). It produced high profit for 4000-5000Yuan/Mu/yr (about US$7692-9615/hactor/yr). Through few years efforts, farmers grasped basic technology and the garden is enlarged from a valley plain to slope land. Now farmers established their own nursery to cultivate tree seedlings.

During the visit scientists, government officials, villager leaders, and farmers discussed the project components. They all expressed high enthusiasm in the implementation of the project.

Originally, farmers there plant rice on the small pieces of valley plain, and soybean or

sweet potato, or corn on the upland. Following economic reform, farmers became interested in economic tree production when they got information from nearby villages. Recently, they planted some trees in small scale, but caused by lack of technology some of them could not grow up or could not produce high profit. For example, some orange trees suffered from disease and have to be cleaned. Some pear trees could not bear fruit caused by wrong verity which was not suitable to local climate. All of these influenced farmer's activity in further development.

On the other hand, farmers realized the importance of technical trainings that forms one of our most essential components of our project. Some officials complained that farmers in some area are difficult to learn and accept new technology. They just wish to get bumper harvest without inputting big labor or technology. It is not easy to teach farmers to grasp technology or to accept new technology, because the farmers have less education, while the technical training has been very weak particularly in the recent years since national economy reform.

Through discussion and field visitations most farmers and village leaders do not hesitate with planting Loquat because Loquat is easy to cultivate and fruit ripens just at the tourism season. On the contrary, some farmers are not interested in planting pear trees because the Fenshui pear trees (one variety of pear trees) planted in their village often has second bloom that influenced production. They wish to plant waxberry because it is easy to cultivate.

At the end of the visit agreement was signed between cooperators. The project got multiple supports from local cooperators, from Guilin City to Longshen County, the Township, and the villages. During one week visit, over 10 leaders from different authorities involved in the field visit and discussions. Many farmers were visited at their families or in the field. The Director of the Longshen County Agricultural Bureau Mr. Wei Zhikai and the Director of Sishui Township Government Mr. Lu Anyang acted as the team leader for the whole visitation.

For best organization, mobilization and implementation, it was decided that Prof. Mo Shihua from Agriculture Environmental Monitoring Station of Guillin City and Mr. Zhang Xinsheng, Deputy Director of the station, would be responsible for the project implementation and monitoring. They would frequently go the project site to deal with the routine work, in cooperation with county, township government, and two villages officials.

A little later the following work were finished:

A) The township Government prepared an official Red Head Document to announce the project and to request all related leaders to actively participate in the project. A Project Leading Group was organized (see attachment No.1).

B) The Implementation Group responsible for the village organization, implementation, and monitoring was established in the two villages respectively (see attachment No. 2 and No.3). All of the Groups contained women members.

C) Mr. Jiang Deming from County Agriculture Bureau was responsible for the project, including tree seedling allocation and management.

D) Mr. Ying Qiyou from Township Government People's Congress was responsible for routine guidance.

E) Mr. Biweijun from Township Agriculture Extension Center was appointed for technology service.

F) Mr. Qing Wusheng from County Agriculture Bureau was responsible for Zhou Jia Village project management.

G) Mr. Shi Xianda from County Agriculture Carder School was responsible for Ba Tai Village project management.

Prof. Mo Sihua from Guilin Agriculture Environment Monitoring Station will be specially responsible to the project implementation. Mr. Mo participated in the World Bank project in 1989 titled Red Soil Development Project that involved in 5 provinces in southern China and lasted over 10 years and firstly introduced vetiver to China.

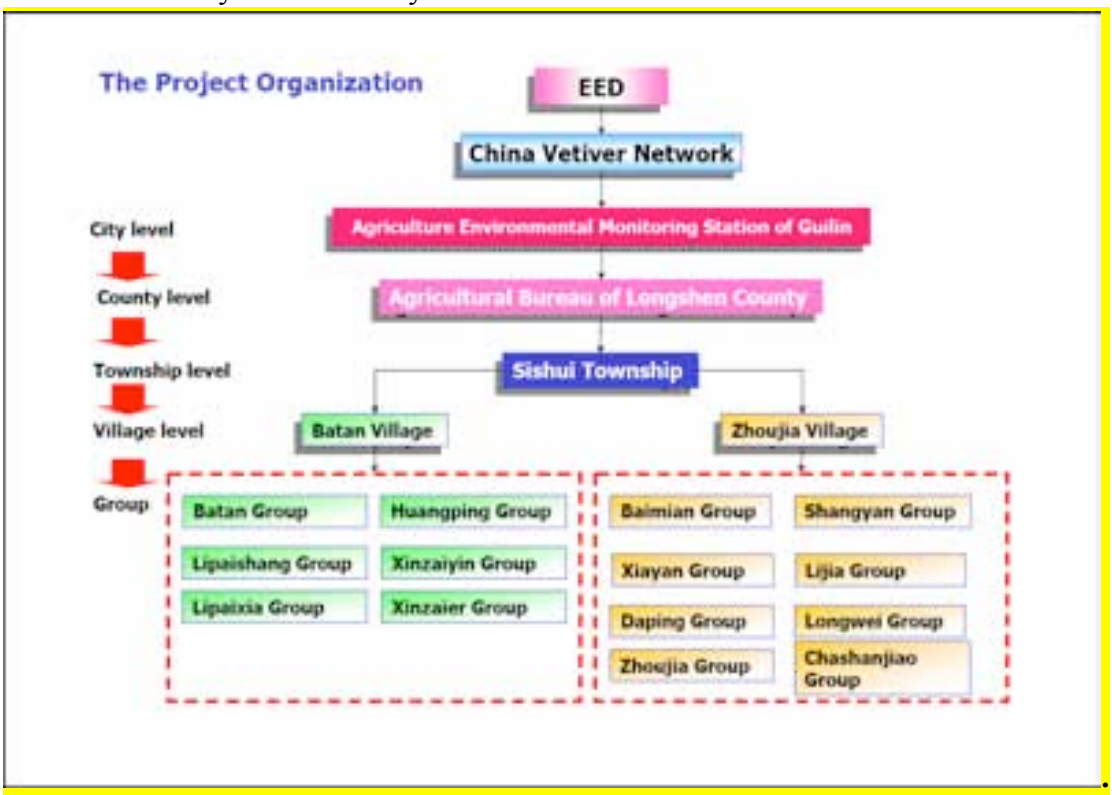

Fig. 1 The project organization

2. The planting of economic trees

Through the organization, most of the officials and villagers understood the project goals and main components. After the organization was finished comprehensive mobilization was carried out. Two Leading Group meetings were held to discuss the details of project mobilization and implementation. Then through field or family visitation and the organization of small meetings all farmers were encouraged to participate in the project. Almost all of the families wish to participate in the project. By discussion and selection totaling 157 families were selected.

During visitation and discussion, farmers suggested to adjust tree species from original 4 species to 5 species, i.e. one species of waxberry was selected. The planting area of peach and plum has decreased. The main reason for the adjustment was that waxberry has little disease and is easy to cultivate, while farmers suffered from the orange trees in the recent years, which was completely damaged caused by disease.

At the same time Tree Planting Regulation was prepared by Longshen County Agriculture Bureau and distributed to all of the project farmers.

On 5-6 February 2007, 7 groups consisting of 32 officials from the city, county, township, and the villages went to the field to investigate the land preparation and the holes to see if the size of planting hole met with the regulation of 1m x 1m square with 80 cm deep. It was required that totaling 66 Mu of land to be re-prepared.

On 8-9 February 2007, the fruit tree expert Mr. Liu Shichang presented lectures on Tree Planting in two villages respectively accompanied by field demonstration. Totaling 62 families with 98 persons in Batan Village and 108 families with 143 persons in Zhoujia Village attended the training courses respectively.

On 9-11 February 2007, all of the tree seedlings were distributed to farmers. Up to 15 February 2007 the whole tree planting was finished. Altogether 26552 economic trees were planted (Table 1) .

Table 1. Comparisons of original plan and the actual completed tasks

Species	Original plan			Completed		
	Area (Mu)	Sedlings per Mu	Total seedlings	Area (Mu)	Seedlings per Mu	Total seedlings
Peach & plum	100	50	5000	7.4	50	368
Pear	160	76	12160	103.7	80	8296
Loquat	180	53	9540	272.5	55	14988
Waxberry	0		0	58	50	2900
Total	440		26700	441.6		26552

15 Mu = 1 ha

To ensue the planting quality, a group investigated the two villages on 6-7 March and found that some problems existed:

- Some roots of tree seedlings were covered by soil too thin led to some roots explored to the air.
- Some seedling should be further pruned against water evaporation.

The group required related farmers to solve this problem immediately to guarantee the tree survival. Up to mid March 95% of the tree seedlings started to grow. Later, routine field management including fertilizer and insecticides application was followed.

3. Vetive grass planting

During the first visit in January 2007, scientists from China Vetiver Network briefly introduced the characteristics and application of vetiver grass. The government officials, village leaders and master farmers felt quite fresh because they never heard of vetiver. It generates great interests among them. For example, they said that some farmers raise fish around their family houses and the grass can be used as fish food. Besides, there are certain numbers of cattle and goat in the project villages, while vetiver can be used as green fodder.

When we introduced the application of vetiver for infrastructure protection, local officials

have high interests. They told us that the road construction has been carried out almost every year and several village roads are in construction that usually caused serious erosion problem, because there are no any conservation measures caused by lacking of funds. About 80% of roads were constructed by stone and sands suffering from erosion. They hope to use vetiver to protect theses road slopes. In addition, vetiver technology can be used in many nearby area and has great potential.

In this area, the lowest temperature was –4.8℃, the accumulated temperature of ≥10℃ is 5650.5, the average altitude is 700 m above sea level, and the mean annual rainfall is 1546 mm ranging from 1500 to 2400 caused by different altitude and landform. Most of the rainfall accumulated in from April to July. In September there is usually Autumn Drought that influences crop production. All of these background factors are suitable for vetiver grass growth, while vetiver grass can play important role in water erosion control and helping ground water recharge to protect drought.

About 90% of the land in the project area covered by mountains, while ＞15° slope accounts for 87.2%. Many of them ＞30° . As a result once the soil was disturbed erosion should be very serious. Vetiver can play an important role in erosion control.

Talking about the vetiver handicraft, women have much interests because it can help them grasp a new technology and to generate profit using spare time. However, because there is no vetiver before in the mountains they did not know how to use vetiver to produce handicraft. Through discussion it is proposed that three Thai technicians to be invited to the project site to teach woman farmers, but it needs extra funding, since Thailand did excellent job under the support by the King and the Princess.

Since the comprehensive training has not organized people still know very little about vetiver technology. It needs time for them to understand and accept the technology. In the past, most farmers are accustomed to cleaning weeds while never heard of planting grass.

On 10-11 March trucks with vetiver seedling arrived at the villages. Prof. Wang and Dr. Zhao from China Vetiver Network demonstrated vetiver planting technology to local people hand by hand. After that all of the vetiver planting materials totaling 1500000 tillers were distributed and planted in few days. On 22-24 March the officials investigated the planting quality.

4. Women participation

During the whole visitation we emphasized the importance of women participation, not only involving in the implementation but also the design. The Vice Director of the Township Government and directors from the villages all participated in the process and expressed their high enthusiasm in implementing the project. Besides, they raised questions concerning project components. The most worry for them was the pear tree planting. Because the *Fenshui Pear* planted few year ago did not produce high profit, the farmers simply think all kinds of pear trees may not suitable in their villages. To solve this problem technician explained that the pear tree has many varieties. They have different characteristics. Some varities may be suitable to the local climate.

5. The preparation for the systematical training and irrigation system

The main tasks for the following season will be systematical training and irrigation system establishment. Through visits local information on economic trees were collected from Guilin city, to Longshen County and the township. The multiple training and extension materials are in preparation. Now the booklets *Vetiver Grass: The Hedge against Erosion* was translated from English into Chinese by Prof. Xiong Guoyan in Guangdong province and *Loquat Cultivation* is in edition process by Prof. Lu Shengluan in Jiangxi Province respectively. The first issue of Vetiver Newsletter was produced and distributed in both project area and outside the area. The newsletter introduced the function of vetiver grass, the 4th International conference on vetiver, and an announcement of the project.

During the visits the classrooms were selected. Besides, Agriculture Environmental Monitoring Station of Guillin City has nominated local trainers for specific training titles. The time for the systematical training was tentatively arranged in late September 2007.

Regarding to the irrigation system, field investigation will be conducted to select locations for the water ponds. The design will be prepared based on the local landform.

6. Conclusion

Through joint effort from the multiple institutions, the project entered an excellent initiation and obtained a good progress, although we met many difficulties. For example, we got the first fund on 24 Jan. 2007, but it was the Spring Festival on 18 Fe. 2007. We had to finish tree planting in just 20 days, otherwise, the planting had to be delayed for one year. The time was extremely tight. To solve this problem, China Vetiver network traveled to the project site just after the New Year with their own money, while the local institutions also started the work with their fund in order to guarantee tree seedlings could be bought, transported, and planted before Spring Festival. Now both economic trees and vetiver grow well (see pictures below). The following work will certainly be started and completed on time.

(attachments in pdf)

Group discussion at Environmental Station

Observe pear tree at Batai Village

Meeting at the County Agri. Bureau

Visiting farmers family

Investigate arbutus tree

The woman Director discussing with farmers

Investigate pear seedlings

Discussion in the Zhoujia village

Discussion with Village Group

Discussion with farmers

Talking to farmers

Children welcome the project team

Field survey on the implementation of vetiver and agroforestry project

A group from China Vetiver Network visited the project site on 4-7 June 2007. A field survey was conducted, accompanied by officials of Guilin City, Longshen County, and Sishui Township Government. This trip was organized to investigate the project implementation in the first few months and to get ready for the next project implementation. At first Mr. Qin, an official of County Agriculture Bureau and responsible for the project implementation in Zhoujia Village, led the group to investigate economic tree planting in Zhoujia Village. People were pleased to see that economic trees and vetiver grass all grew up. Both trees and the grass had new leaves and shoots. Vetiver grass formed a hedge at the edge of the terraces. After 80 days since planting, vetiver grass reaches 80-11- cm in average, with the maximum of 140 cm. Few tillers start to produce splits. The only problem is that weeds need to be cleaned to ensure vetiver grass grow well. Then little fertilizer needs to be applied amounting 10-15 kg/km hedge.

Besides, to increase early profit farmers inter-copped Lohanguo Siraitia, a medicine liana plant, formed one agroforestry system: fruit tree-medicine-vetiver hedge. In this way farmers can get early profit. They planted Lohanguo for 60-120 plants each Mu (15 Mu = 1 hector), that can produce 6000-8000 fruits, generating 2500 - 4000 Yuan (about UD$5000-USD8000/ha/yr). At the same time the terrace land can be fully used and covered and erosion be reduced.

Later the group visited Batan Village. The farmers planted vetiver on the new road embankment to fix the slope and control erosion. One picture showed that few meters vetiver hedge stopped soil collapsing on the cut above the road. However, the slope below the vetiver hedge slide. The picture showed that vetiver grass could play an important role in slop stabilization just 3 months after planting. The highway administration wish to test vetiver in larger area. However, there still exist problem. The vetiver was planted in in-correct spacing, i.e. the row space was to narrow (usually should be 2 m), while the distance between clumps in a row was too far. Such planting should influence the function of slope stabilization.

Another key goal of the trip was to prepare an international vetiver handicraft training course. In the recent years, China Vetiver Network pay more attention to agricultural development through introduction of vetiver system to farmers and local governmental officials and help farmer to cultivate high quality economic trees with vetiver contour hedges, at same time to conserve water and soil. The present EED/KED supporting project titled Poverty Reduction and Resource Protection in a Guangxi Province Minority Area has implemented in Longshen of Guangxi province of China since the beginning of 2007.

However, since the benefit from erosion control may not be obviously showed in a short time, some farmers are less interested in vetiver. To solve this problem we need to help farmers earn direct income from vetiver pruning, which can be achieved in just 3 months after planting.

Thailand did an excellent job in this field supported by The King of Thailand, Department of Industrial Promotion of Royal Thai Government, and Office of the Royal Development Projects Board. To help people from other countries to grasp vetiver handicraft technology, Thailand and The Vetiver Network (international) organized international training courses in November 2000 and October 2005 in Thailand respectively. Unfortunately, caused by langue problem no Chinese farmers could attend the course. To solve this problem, it is planned that three woman Thai technicians (including one Thai-Chinese translator) will be invited as trainers to train Chinese farmers on vetiver handicraft in Longshen of Guangxi Province, the project sites.

During the visit, the Group asked local people to get ready to organize such training course. On one hand, vetiver grass should be well managed in order that the grass can grow well and produce long leaves.

On the other hand, most prospective participants should be selected. Through discussion, the local officials realized that such training course can not only help farmers get direct income from selling vetiver handicrafts, but also can promote fruit marketing because at present farmers sell fruits without any package, that influence tourists to buy fruits since fruits can not be well kept during the travel. Therefore, farmers should be very happy to participate in the training because it can bring them both direct and indirect profit. To ensure the training course to be more successful, The participants should be:

- Woman with age 20-45.
- Persons who plant and manage vetiver grass well should have priority.
- The participants should have enough time to participate in the training course from the beginning to the end and should follow the working timetable.
- Minority women will have priority. At least 55% should be minorities.
- People who have already planted fruit trees and will produce fruits and wish to use vetiver to produce fruit-basket may have priority.
- People who already have handicraft experience will have priority.

Besides, the preparation of the training course should be processed in advance. For example: Production of training materials. It is expected that the training course can be organized in late October 2007.

During the visit, China Vetiver Network checked the distribution of fertilizers, discussed next step of the project, i.e. the construction of mini-irrigation systems. Request the local government to prepare detailed design based on the field survey on landform and land use patterns. Also, it is inquired that all original bills should be well kept.

Vetiver up to 140cm in 80 days

Vetiver hedges established

Vetiver protects fish pond

Vetiver stopped slope slide.

Vetiver protected Loquet- Lohanguo AF system

Slope was tentatively fixed in 80 days

China Vetiver Network

Poverty Reduction and Resource Protection Project Continued

During this period from Jan. to June 2008, the major task was to continuously establish vetiver protected economic trees. As early as at the end of 2007, the mobilization was carried out in order to encourage more farmers to participate in the project. The Village Committee of Zhoujia and Batan organized meetings and visited farmers' families. They distributed project publications, encouraged farmers to actively participate in the project, and discussed detailed planting plan with farmers. Meanwhile farmers started land preparation, digging tree holes, and applying manures. It was required that 25-40 kg of cattle manure should be applied for each pit. All the work was done seriously to guarantee quality. It was planned that the economic trees would be planted just after Spring Festival.

1. The icy weather caused great difficulty

Since 3 Jan. 2008 a serious cold weather hit southern China including Guilin city the project site. In Guilin, the snow and icy-rain weather lasted for 40 days with temperature of -4 ℃～-1℃.

Fig. 1-2 Air-photo of Guilin taken on 3 February 2008.

The land was covered by both snow and ice particles (Fig.1 and 2). The roads were blocked. Farmers had difficulties with food, water, cloth, and electricity supply. Some trees and even houses were damaged or destroyed. Some tree seeding that was ordered for the project planting in 2008 was injured. Based on the investigation on 6 March the land preparation was completed only 87.13%. No any tree seedlings were

planted by 14 March, compared with that in 2007 all of the trees were planted by mid February. As a result, the tree planting process had to be postponed.

On 23 January 2008 the director of Guilin Agriculture Environmental Protection Station and his colleagues visited Longshen the project county and organized meeting of which leaders from the City, County, Township, and Villages participated. They discussed measures to be taken against the cold weather. Following the continued cold weather, they visited the project site again on 18 Funerary, 6-7, 12-13, and 25-31 March respectively.

According to original plan the land preparation should be finished by the end of January 2008 and planting would be implemented after the Spring Festival (7 February 2008). Owing to the cold weather the tree pits were dug for only 50% until 15 January. Meantime, since the ordered tree seedling were injured from the disaster the project had to find new seedlings. To solve problem, a group of China Vetiver Network visited the project site on 11-14 March and held meetings with local partners. The meeting covered 3 main topics:

(1) Planting trees as early as possible

All available tree seedlings should be transported and distributed to farmers to plant immediately. The remaining gap should be bridged outside Guangxi Province. According to communication with Jiangxi institutions, it was suggested that the director of Agriculture Bureau of Longshen County and his colleagues should go to Jiangxi Province immediately to buy Nanfen Orange tree seedlings that were finally transported to Longshen on 27 March 2008 and finished the planting in mid April.

(2) Arrange vetiver planting

In the spring of 2007 almost all of the farmers did not want to plant vetiver and deemed it as weeds. However through one year's implementation of the project farmers have great interests in vetiver planting especially after vetiver handicraft training held later last year. Many farmers, technicians and government officials wish to get vetiver planting materials. A new problem appeared that it was difficult to meet all the requirements. Through discussion, the meeting decided that:

- The grass should be firstly used for economic tree protection as originally designed of the project;
- Then a nursery should be established for vetiver handicraft production;

If there are still tillers it can be distributed to other demanders.

(3) Careful management for trees planted last year

Under the hitting of the cold winter some trees planted last year were damaged. To ensure these trees grow well careful management should be needed. Livestock manure in early summer or green manure from vetiver leaves can be used in summer or autumn.

At last, all of the tree planting was finished in mid April. Totally 131 families in 19 Village Groups of the 2 Villages (Table 1) participated in the project and 19515 seedlings were planted (Table 2) that was less than planned (22000) that was caused by the higher price of seedlings and transportation from outside Guangxi Province. Besides, the species of fruit trees also changed a little caused the shortage of local seedlings from the cold weather.

Regarding to vetiver planting it was processed smoothly according to the schedule. Prof. Wang went to Jiangxi Province on 10 March 2008 and arranged vetiver seedlings. On 15 March all the vetiver seedlings were transported to the project site and finished planting in the following few days.

2. Recent situation of the plantations

2.1 On 5-6 June 2008 a field observation was carried out to monitor the plantations. It showed:

- ✧ Most loquat trees planted by 16 March 2008 had 1-3 new shoots which contained 4-6 leaves for each shoot.
- ✧ The pear trees planted by 26 March 2008 had 1-3 new shoots.
- ✧ Waxberry trees planted by 16 March 2008 kept green.
- ✧ About 75% Nanfeng Orange trees planted on 28 March had new shoots, while the remaining just started to grow with few wilted.

Table 1 Families participating in the project in 2008

Village	Village Group (131*)	
Batan (103)	Huangping shang（17）	Laozhai（8）
	Huangping xia（4）	Xinzhaiyi（3）
	Lipai（18）	Xinzhaier（8）
	Banchong（5）	Sanzhaiyi（14）
	Hekou（4）	Sanzhaier（6）
	Batan（5）	Sanzhaisan (11)
Zhoujia (28)	Chashanjiao（3）	Xincun（3）
	Longwei（9）	Zhoujia (4)
	Maozhai（3）	Lijia (4)
	Shuiyin（2）	

* figures indicating number of families.

Table 2 Comparisons of original plan and the actual completed tasks

Species	Original Plan			Completed		
	Area (Mu)	Seedlings per Mu	Total seedlings	Area (Mu)	Seedlings per Mu	Total seedlings
Peach& plum	100	50	5000	0	0	0
Pear	140	76	10640	42.4	76	3222
Loquat	120	53	6360	77.7	53	4118
Waxberry	0			27.5	50	1375
Nanfeng Orange	0			216.0	50	10800
Total	360		22000	363.6		19515

2.2 General speaking, all of the trees planted in 2008 grow well but there are some problems:

- Some of the trees had less new shoots caused by lacking of chemical fertilizers. Although farm manure was applied it needs longer time to discomposed and provide nutrients to trees.
- Some places around the tree roots are depressed, leading to submerging which influenced tree growth.
- The growth of some Nanfeng Orange was limited possibly caused by the damage during long distance transportation.

2.3 Besides, all of the trees planted in 2007 grow well, loquat trees in particular. Some well growing trees are 2m high. Few of them start to bear fruits. It is expected most of the loquat trees can bear fruits next year and can generate primary profit.

2.4 The vetiver grass planted in 2008 had a height for 0.8-1.0m. The vetiver panted in 2007 also grow well and started tillering. However, the tillering of vetiver growth is not as good as that planted last year. Some of the grass have yellow leaves and is also possibly affected by water submerging.

To sum up, careful management is required to ensure both trees and vetiver grass in good condition.

3. Progress in vetiver handicraft

The vetiver handicraft training course organized last year generated great enthusiasm among farmers. They felt that the handicraft can generate direct income and may change their life. They well kept vetiver handicrafts produced at the course for exhibition purpose. After the course the trainees continued their work at their homes. When the treated grass was used off they went to the field to cut the grass and treated them voluntarily.

Later through discussion they formally registered Women's Vetiver Community on 26 November 2007. Total 27 women participated in the Community and each person contributed 100 Yuan. They planned to produce handicrafts in late summer and sell them on the market. Since the plastic bags were prohibited in the market by authority the vetiver products may have more potential for the market.

They hope to construct simple roadside shops where farmers can sell handicrafts and at the same time to disseminate vetiver technology in order to raise people's awareness in water conservation. This will need about 100000 Yuan RMB (about EU€ 10000).

4. Preparation of irrigations system construction

In 2008 there will be 18 irr1gations should be constructed. The preparation should be started as early as possible. It is proposed that this year the selection of the water pond site should be more related to tree planting, i.e. the major bigger ponds will be situated on the upper location of bigger economic tree plantations, supplemented by few small ponds to guarantee tree growth well. At the place where near villagers' houses the irrigation pond construction should consider drink purpose for people and livestock as well.

5. The continuing of technical trainings

In Addition to vetiver handicraft training course, many other trainings were organized involving soil conservation; vetiver planting and its application in soil conservation and sustainable farming; and the cultivation of different fruit trees. These trainings should be organized continuously. For example we should introduce farmers and local officials to use vetiver to protect rural roads and small hydraulic power. In 2008, two issues of Vetiver Newsletters were produced and distributed. The publication will be continued and two more issues will be produced

6. Impact of the project

The project generated great impact in the country and in the world. Many people wish to launch similar projects in their own area. The followings are some examples. It would be appreciated if these proposals could be accepted and supported by EED.

6.1 Discussed with our colleagues in Sichuan Province and in Chengdu City a project proposal on the application of vetiver system to protect farmland and rural infrastructure after the awful earthquake and during the reconstruction process was prepared and submitted to EED on 26 May 2008. Now the reconstruction is in process and farmers started to recover production. It would be most appreciated if the proposal could be approved by EED so that we can start the project as early as possible.

6.2 When our project information was disseminated to Hunan Province, a group from the Provincial Agriculture Academy went to Cili County, the proposed project site, that is located in the northwest of Hunan province and it is a minority county with mainly Tujia nationality. A field investigation was carried out and wide discussion with local farmers and officials was conducted. In September 2007 a project proposal titled Chinese Vetiver and Agroforestry Technology Project in Wuling Mountainous was prepared and sent to China Vetiver Network (attached). It would be appreciated if it is worth supporting.

6.3 In 2007, when our project information distributed to Fujian Province it generated huge interests in Provincial Water and Soil Conservation Office, Nanping Prefecture Water and Soil Conservation Office. A project proposal titled Vetiver and Agroforestry Technology for Water and Soil Conservation and Poverty Reduction was prepared May 2008 and sent to China Vetiver Network.

6.4 Farmers in Anhui Province of Dabie Mountains submitted a project proposal titled The Application of Vetiver in Agroforestry in Tianxianhe Basin. The project hopes to use vetiver to establish hedges to stabilize terrace and slope land in order to improve micro-ecology, to raise tea bush production and the quality of tea. Besides, they wish to invite Guangxi handicraft trainees as trainers to help them learn vetiver handicraft. It is worth considering. In this way vetiver handicraft may lead to a development of big business when more farmers grasp vetiver handicraft technology.

6.5 Influence in the world: The project information and the progress, including the International Vetiver Handicraft Training Course, disseminated to the world through web site of The Vetiver Network International (TVNI) and The Newsletter of The Vetiver Network of Pacific Rim. The handicraft training course started a new method for international extension of handicraft training. In the past, although TVNI and Thailand organized trainings, the number of trainee was usually very limited.

In addition, caused by language problem it is almost impossible for real farmers to participate in the course because no farmers can speak English. On the contrary, for the training course organized last year over 20 REAL farmers attended the course. During the course farmers came from one village, which is better for them to communicate and learn each other. At the same time, since the course was held in situ and based on local conditions and materials farmer can easily continue their work after the course.

Discussion on nature disaster

Vetiver preparation

Vetiver to be transported

Waxberry planted

Loquate planted

Pear tree planted

Vetiver planted