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Assessment on Effectiveness of Integrated Village Training Approach and its Limitation

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**The project for Community Vitalization and Afforestation in Middle Shire
(COVAMS)**

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1. SUMMARY

The purpose of this paper is to review PRODEFI Approach (Integrated Training Approach under COVAMS project) in its effectiveness and efficiency in accordance with the project purpose and the mission. Accordingly, the purpose of the project and its mission as well as the approach are clarified in the second and third sections. After the clarification, the result of the activities implemented for the seven target villages and the reaction of the villagers towards the activity are figured out in fourth and fifth sections. In the sixth and seventh sections, the result is analyzed in the effectiveness and efficiency of the approach in accordance with the project purpose and its mission. Finally, a suggestion as to the way forward of the project in the approach is made in the eighth section.

In conclusion, “Integrated Training Approach” to some degree is effective and efficient when a target area is limited like a village. However, it is found that it is not efficient to apply to a wider area like the Middle Shire area because the approach requires lots of time to deal with a village. The issue of siltation in the Shire River is an urgent matter to the Nation. Dissemination of effective solution to the problem should be achieved rapidly and widely. Hence, it is considerably necessary that the project should try to suit to the approach by modifying or making adjustment.

Integrated Training Approach has shown its effectiveness in a community vitalization with a result that 2,668 villagers participated in training courses and 550 people of those have practiced at least one technology of the training theme. Looking at the most practiced theme “Contour Ridging”, the number reached to 206 farmers which is 32% of the total households of 638 in the seven villages.

On the other hand, the number of the PIU members who devoted their time to the project activities was eleven (11). Assuming each PIU becomes capable to apply the approach to a village every year, the total number of villages goes up to 50 villages at the end of the project period of 5 years. This means that it will require another 15 years to cover the whole area of the two TAs. Moreover, the Middle Shire area is much wider and the area of the two TAs is only 3.5% of the Middle Shire. This means that though the approach is good, but it takes longer time.

Therefore, it is important and necessary that the project should try to demonstrate more efficient approach which enables to cover whole Middle Shire area in a reasonable time by modifying or adjusting the present approach.

2. THE PURPOSE OF COVAMS PROJECT

The purpose of the project for Community Vitalization and Afforestation in Middle Shire (herein after COVAMS project) is that the targeted villagers come to implement productive activities including tree growing with consideration of forest conservation and rehabilitation, in order to secure power supply to the nation and water supply for the nearest city by conserving the environment in the Middle Shire.

Middle Shire area is considered one of the most important areas in this country. It is because 98% of the electric power of the country is generated on the Shire River. Besides, the second largest city Blantyre is supplying water to its habitants, getting the water from the same Shire River.

Nonetheless, those facilities have been disturbed by tremendous volume of siltation in the Shire River from time to time in their operations. The silt comes from Middle Shire catchment area directly and indirectly through its tributaries. Soil erosion is the direct cause of the siltation and it has been happening everywhere in the catchment because of devastation of environment of the area through tree cutting for supply of firewood and burning charcoal. In addition, population growth of the area also accelerates the occurrence of the soil erosion through opening up of new gardens with poor farming practices.

In order to minimize the disturbance from siltation, sustainable tree utilization with consideration of soil conservation and improvement of farming methods to prevent soil erosion in the gardens should be practiced by the farmers in the area.

However, it may be difficult to persuade the farmers to collaborate with government in order to achieve the aim of soil erosion prevention measures. Because the farmers are struggling in their livelihood; lack of money, shortage of food, diseases etc. Hence the mission of the project is to demonstrate an effective and efficient approach in order to attract their attention to soil conservation.

3. INTEGRATED TRAINING APPROACH

To complete the project mission, the project introduced an Integrated Training Approach, known as PRODEFI Approach which was developed by one of the JICA's project in Senegal. Because the project believes that the Integrated Training Approach has a potential in its logic to lead the farmers to take an action on soil conservation.

The approach aims at capacity development of a village community for village development. The feature of Integrated Training Approach is that a project provides training for the villagers, according to the villagers' needs focusing mainly on productive activities, without any provision of inputs except training materials. This is the first step. After conducting the training, reaction of the villagers will be monitored and the project will decide the second step. The second step sometimes is to provide further technical training or support in an area that the villagers are unable to conquer by themselves, when strong commitment of the villagers is observed.

The training must be conducted, complying with five principles which are; 1) Meet the residents' demand and needs, 2) Utilize local instructors and resources, 3) take place within a village, 4) open to everyone, and 5) can be repeated to encourage many residents to participate (COVAMS Guidelines, ver.1, 2008). In other words, the approach tries to ensure practicability of the technology and equal opportunity for learning to all the villagers.

By ensuring these points and sufficing the villagers' needs as much as possible in form of training, the Integrated Training Approach expects to develop a trust between the project and villagers so that the good relationship facilitates the villagers' understanding and implementation of whatever information or knowledge the project brings to them.

Hence, it can be said that there is coherence between Integrated Training Approach and the project purpose.

4. RESULT OF IMPLEMENTATION OF THE INTEGRATED TRAINING APPROACH

It can hardly be said that the project granted all the requested themes for training from the villagers, nonetheless, an enormous number of villagers (2,668) participated in the training courses. It means that many villagers had an eagerness to learn something to improve their livelihood and repeatedly participated in the training in different courses. It can be concluded that the Integrated Training Approach gratified the villagers' needs in terms of provision of learning opportunity.

The project target areas are two Traditional Authority (TA) Kapeni and Kuntaja. The project selected 4 villages according to the criteria set (COVAMS working paper No.1, Procedure to village Selection 2008), which are; Zwanya, Mtema, Chiwalo and Kamwendo in TA Kapeni and 3villages; Chuma, Tambala and Chitawira in TA Kuntaja, in total 7 villages. The numbers of households in each village are 68, 210, 71 and 95 for TA Kapeni, and 90, 51 and 53 for TA Kuntaja respectively.

The project started implementation of training in March 2008 with two villages which are Zwanya and Chuma as preceding villages in order to gain experiences with the approach and to make adjustment in its procedures. After experiencing the implementation of the training with the two villages, the project gradually started implementation of training with remaining 5 villages from June 2008.

Annex 1 shows the record of training implemented from March 2008 to August 2009 in each village. Six to Seven themes of training and several topics for each theme were conducted in each village. The number of training conducted for a village was in a range of 11 to 19. This number includes repetition of the same topic and serial topic in the same training theme. The trainers of most training sessions were Project Implementation Unit (PIU) members who are extension officers from Forestry, Agriculture and Community development departments.

When the project conducted training needs survey, the villagers requested more training themes such as goat rearing, piggery, chicken rearing, milking, mushroom culturing, pottery and so on. Those animal related training themes were not yet done because the project faced difficulty to design training courses without more details of their problems like difficulty in disease control, feeding, improvement of the breeding. The project tried to obtain those details but no clear answer was replied. Another problem was difficulty of finding trainers. On the other hand, there was a tendency that

the PIU members wanted to conduct training courses which they can be the trainers. With these reasons, all the villages came to receive almost the same training themes although those training themes were requested by the villages.

The number of participants differs from one training to another, depending on the interest of the villagers. Small scale business management attracted many people because it was the first training in all the villages. Training for Contour ridging attracted the most people amongst the training followed by Tree growing and Bee Keeping. The number of the participants reflects the degree of their concerns. In this sense, it can be said that villagers have a great concern as to soil conservation and tree growing; in other words, improvement of maize yield and firewood production. This tendency correlates with the result of baseline survey in those target villages (COVAMS, 2009, Baseline survey analysis report).

5. REACTION OF THE VILLAGERS AFTER IMPLEMENTATION OF THE TRAINING

Most of the training themes were practiced by many participants in most of the villages. The most practiced theme was Soil conservation related such as Contour ridging and Gully Control, followed by Bee keeping. The number of people who practiced Contour ridging reached 206 households in five villages although almost none of farmers practiced in two villages. Bee keeping stimulated many villages after one of the villages realized their income from honey selling which they harvested from their bee hives. We can then conclude that the Integrated Training Approach has vitalized the villages by optimizing local resources. However, had it not been for PIUs' great commitment and effort in the training implementation and its follow ups in the fields, it could not have realized such results.

Small scale business management

There aren't many ideas for practicing in small scale business management training, because it can hardly stand alone without actual business activity. Mtema village however, they practiced what they learnt through the training for revolving fund management. Besides, beekeeping group of Chiwalo village requested financial management training to plan how to utilize their earnings from honey selling.

Tree growing

So many people participated in tree growing training and they constructed a communal nursery in each village in order to raise tree seedlings. Unfortunately most of the villages failed at the stage of raising seedlings except for two villages. This consequence attributes to that the trainers on this subject did not give them an option of individual activity for raising seedlings. Moreover, the tree growing training had started from the early stage of the training implementation. It was possible that the villagers were still measuring how much of commitment they could give to this activity, whilst trust had not yet been developed between them and PIU members.

Vegetable growing

The project management was a little skeptical in the villagers' intension on vegetable growing training, because those who requested this subject were mostly vegetable growers. Moreover, the requested kinds of vegetables were not always new to them. Their intention, therefore, could be getting inputs rather than knowledge. However, a few villages came to request focused training contents like how to sow seeds to improve its germination and how to grow new kinds of vegetables. Besides, some of them sold

the harvest to continue their activity, investing the income for the next season. The total number of the farmers who continued to practice vegetable growing after the training was 78 farmers.

Soil conservation

Contour ridging activities were practiced by 206 farmers and conserved about 50ha of cultivation land. Additionally, one agro forestry species “Gliricidia” was introduced to the farmers in order to improve soil structure by incorporating it into the soil. The project distributed 59,230 seedlings of the species to those who practiced contour ridging and most of them were planted by the farmers. Besides, the same farmers received Veteiver grass for making strips in their fields to minimize run-off water and soil erosion. Most of the distributed grass was planted in the same 50ha for every contour marker ridge, and some of the villages even established Vetiver nursery in the village for further distribution to the villagers in the future.

After the training on this subject, the PIUs dedicated their time and effort to make follow up of the training to the farmers. The PIUs used to arrive at the field at around five o'clock in the morning and gave technical support to those practicing contour ridging. This PIUs' commitment made their relationship solid. There is an episode that those farmers who were practicing the contour ridging expressed their sincere feeling to the PIUs; saying that “the COVAMS PIUs were different from other extension officers because we could see their strong commitment.” The farmers also benefited from this activity by increasing their maize harvest two times to five times of their previous harvest. Many farmers expressed their willingness of further expansion of conservation area.

Beekeeping

Beekeeping activity was practiced by around 160 farmers in 6 villages. Some of the villages did not request the beekeeping training at the beginning but after hearing that Chiwalo village made MK20,000 with the beekeeping, they requested for the beekeeping training. Chiwalo village which realized good income is now trying to increase their bee hives using the money. Additionally, some of the individual farmers also have started to make their own bee hives. Besides, the members of the groups started to understand the conservation of the tree growing areas in order to be successful in beekeeping business, and they are working to maintain the environment at the bee hive hang areas. The last village also has requested to have beekeeping training at last.

Fish culture

Fish culture training was done in Chuma village only. The twelve participants dug out a fish pond by themselves. Moreover, the village applied to an external fund to construct another fish pond and it was granted. The trained villagers under the COVAMS project gave supervision to the construction of the other fish pond. The village has started to harvest matured fish and fingerlings already. Three members of the group got motivated to construct their own fish ponds and have started its construction and renovation of the old one after seeing the harvest of fingerlings and matured ones. Now a few villagers from the next village have requested fish pond construction training.

Gully control

After the first round of the training focused on small scale check dam construction, PIUs reported that some people in some villages practiced the technology in their fields or their homestead. However, when the project demonstrated one medium scale check dam with stones and poles, other villages also were interested in how to construct the check dam. 4 villages in total, requested for the medium scale check dam construction training and they collected necessary quantity of stones for the training by themselves. The total number of people who practiced in the follow up training reached to 121 farmers although it was only villages from TA Kapeni.

6. CONTRIBUTION TO THE PROJECT PURPOSE

The contribution of the approach to the project purpose should be measured from the view points of number of people who practice in productive activities and soil conservation, the sustainability of the activities as well as the efficiency of the implementation of training courses.

(Practice of productive activities)

Around 550 people, out of 2,668 people is a grand total of participants in whole training courses, who practiced or have been practicing the learnt knowledge. It gives 20% of the total participants who have practiced at least one of the themes. The most practiced theme was Contour ridging with 206 households. When comparing this number to the total households in the seven target villages of around 638 households, it gives 32% of total households.

As mentioned previously, the project does not provide any inputs for the participants to start business or activities except training materials. The materials remain in the village but it is up to the participants on how to use them after the training. In spite of this condition, many of the participants utilized the outcome of the training courses like vegetable gardens and beehives. Moreover, they extended the exercise which they were taught during the training and completed in their fields, such as fish pond and Contour ridging.

(Soil conservation activities)

Soil conservation related activities are Contour ridging, Grass strips with Vetiver grass, Gliricidia (agro-forestry species) planting and gully control. The project supplied Vetiver grass and Gliricidia seedlings for the participants to practice in their fields. Those who practiced Contour ridging planted the Vetiver grass in their fields without wasting the materials. Considering the percentage of practiced participants of 32%, it can be assessed that the approach contributed quite effectively to the purpose.

On the other hand, tree growing was not really successful in the training at the beginning. Most of the villages failed to raise the seedlings by themselves. However, as the training went on and the villagers saw the commitment of the PIU members, the villagers became more cooperative even in the tree growing activity like Gliricidia planting. Most of them who practiced the Contour ridging planted Gliricidia in their conserved gardens.

Gully control technologies also attracted the villagers in such way that they requested additional training for further technology in medium scale gully with stones prepared for themselves.

It proved that villagers are willing to do something for themselves to improve their livelihood even just by being given an opportunity to learn as far as the contents of the training are reflected in their needs.

(Sustainability)

Considering the points that the project did not promise and provide any inputs for the participants after the training, it can be expected that the activities will be sustained by many farmers. In fact, the number of people who practice tends to increase in many of the activities even in the second year such as soil conservation, fish farming and beekeeping.

(Efficiency)

Annex 3 shows annual cost for implementation of the training courses including follow-ups and monitoring after the training by PIU members. The total amount of those cost was MK6,278,624.92. On the other hand, the total number of training courses in the period of one year was 109 training courses. The cost for each training course with training materials including the cost of fuel for follow-ups and monitoring by the PIU members was MK57,602 and the cost for each participant was figured out as MK2,353 which is equivalent to about US\$17 (MK140/US\$). It could be reduced to US\$15 per person if the Gliricidia seedlings were raised by the villagers.

Putting the result of the three points together, it can be concluded that the project demonstrated effective approach.

7. LIMITATION OF INTEGRATED TRAINING APPROACH

The result of the activity in the 7 villages for a year convinces us that the approach is effectively worked towards the project purpose. This result was achieved with fulltime commitment by the 11 PIU members who conducted the training courses and gave follow ups to the action taken by farmers. However, it would take for 560 years to reach all of the villages in the Middle shire area with this Integrated Training Approach if the number of the PIU members was maintained. In other words, if the number of the PIUs can be increased to about 1200, the whole of the Middle Shire areas would be covered in 5 years.

In the first year, eleven PIU members were assigned to the seven villages to apply the Integrated Training Approach. It was observed that all the PIUs were fully occupied with the activities under the project. It was maybe because they were unfamiliar with the approach. After gaining experiences on how to operate the project activities including the implementation of training and its follow ups, it can be expected that the PIU members would be able to expand the number of villages about double (14) in a year from the following years. It means that the project would be able to target another 50 to 60 villages within the remaining project period.

Table 1 shows an estimation of the target areas.

Table 1: Estimated area, population, households in the target area

TA	Target Area	Target Population	Target Households
Kapeni	110km ²	48,000	11,500H/H
Kuntaja	150km ²	36,000	8,600H/H

Source: The authors estimated the figures through the following method;

Target Areas are estimated through a map of the areas, obtained from National statistical Office. Target population is estimated from the total population of each TA, multiplied the percentage of the target area in the total area of each TA. The number of Target households was estimated by multiplying average households size (4.2) of the Blantyre rural district to the estimated target population.

The total population and average household size were obtained from Preliminary report of 2008 Population and Housing Census of Malawi.

If a village consists of 100 households, the area of 30 villages in TA Kapeni shares only 26% of Kapeni target area, while area of 20 villages in TA Kuntaja shares only 23% of whole Kuntaja target area. Taking 25% as an average of the share in each TA, it will take for another 15 years to reach the last village of the target areas. Moreover, the

Middle Shire area is much wider with the total area of 7350km² (JICA, 2001: Final report for the master plan study on watershed rehabilitation in Middle Shire in Malawi). That is 28 folds scale of the two TAs' area. The share of the 50 villages is just only 0.9% of whole Middle Shire area. Thinking of the whole Middle Shire area, if the number of the PIU members is maintained, it would take another 560 years. In case the government or other organization can increase the number of PIUs, then around 1200 PIUs are required so that it can reach to the last village of the Middle Shire area in 5 years.

As such, the Integrated Training Approach requires lots of years or PIU members to cover the whole Middle Shire area despite the mitigation of siltation in Shire River being an urgent matter. Hence, the project should find more efficient way forward to achieve the mitigation of soil erosion in the Middle Shire area.

8. NECESSITY OF ADJUSTMENT AND THE WAY FORWARD OF THE APPROACH

As mentioned previously, the Middle Shire area is wide while the Integrated Village Training Approach requires a lot of time for a village. To achieve the project mission, it is necessary to improve the approach time-wisely in the area expansion.

Observed strong commitment of the farmers in soil conservation activities indicates that there is a possibility to achieve the project purpose, even though the project's focus is provision of the training in the soil conservation from the onset of the intervention to a village. However, the principle as to implementation of the training should be maintained so that farmers' spontaneous action will be encouraged and sustainability of their activity will be secured.

Building solid relationship of mutual trust between the project and the target farmers is one of the key issues in Integrated Village Training Approach so that the farmers will come to adopt whatever activities the project or the government introduces. It had been conceived that it was important to build the solid relationship, especially to achieve the mitigation of siltation in the Shire River, since the problem has been remaining unsolved.

However, the farmers showed their strong interest in Contour ridging, despite it was just a beginning of the intervention in form of training by the project. The project analyzes this phenomenon as they conceive that implementation of the soil conservation activities gives them benefit in improvement of maize harvest.

The analysis gives the project a hypothesis that the farmers may adopt the technologies of soil conservation and implement them in their gardens even though the project provides them only specified training on soil conservation. Specifying the training theme will allow the PIUs to allocate the time for increasing the number of villages instead of concentrating on one village. Besides, it would be possible to utilize village human resources as trainers to conduct training for the fellow villagers when contents of the training become simple, although it is necessary to give the future trainers "Training of Trainers" as to soil conservation.

The shift of the approach may improve the efficiency of expansion of target villages so that the project mission will be effectively achieved.

ANNEX 1

The record of the training implemented in each village (Mar. 2008~Sept. 2009)

Village name	Theme of training	Month / Year	Number of times	Participants
Zwanya	Small scale business management	Mar. 08	2	60
		Sept. 08	1	22
	Irrigated vegetable growing	May. 08	1	17
	Tree growing	Jun. 08	1	19
		Jul. 08	2	37
		Oct. 08	1	15
	Contour ridging	Aug. 08	2	54
	Bee keeping	Aug. 08	1	7
		Sept. 08	1	15
		Feb. 08	1	16
		Mar. 08	1	15
	Gully control	Oct. 08	1	9
		Aug. 09	1	31
	Agro-forestry species utilization	Aug. 09	1	14
	Total		17	331
Chuma	Small scale business management	Mar. 08	2	74
		Jul. 08	1	17
		Aug. 08	1	15
		Oct. 08	1	8
	Fish farming	Apr. 08	1	17
		Jan. 09	1	8
		Jun. 09	1	11
	Tree growing	May. 08	1	30
		Jul. 08	1	16
		Aug. 08	1	30
	Integrated vegetable growing	Jun.08	1	19
		Jun. 09	1	30
	Contour ridging	Aug. 08	1	15
	Gully control	Oct. 08	1	22
	Total		15	312
Mtema	Small scale business management	Jun. 08	1	36
		Jul. 08	1	
		Aug. 08	1	
	Contour ridging	Aug. 08	1	69
		Sept. 08	1	47
	Tree growing	Aug. 08	1	40
		Oct. 08	1	56
	Bee keeping	Aug. 08	1	36
		Sept. 08	1	86
		Apr. 09	1	30
		Jun. 09	1	72
	Irrigated vegetable growing	Aug. 08	1	37
	Gully control	Oct. 08	1	37
		Mar. 09	1	40
Agro-forestry species utilization	Jul. 09	1	37	
	Total		15	660

Village name	Theme of training	Month / Year	Number of times	Participants
Chiwalo	Small scale business management	Jun. 08	1	35
		Jul. 08	1	36
		Aug. 08	1	33
		Jun. 09	1	23
	Tree growing	Jul. 08	1	23
		Aug. 08	1	35
		Sept. 08	2	33
	Contour ridging	Aug. 08	1	26
		Sept. 08	1	8
	Bee keeping	Aug. 08	1	10
		Sept. 08	1	41
		Oct. 08	1	23
		Feb. 09	1	27
		May. 09	1	25
	Vegetable growing	Oct. 08	1	22
	Gully control	Oct. 08	1	24
Feb. 09		1	33	
Agro-forestry species utilization	Aug. 09	1	26	
	Total		19	483
Kamwendo	Small scale business management	Jul. 08	2	58
	Tree growing	Jul. 08	2	50
		Aug. 08	1	38
		Oct. 08	1	36
	Contour ridging	Aug. 08	1	30
		Sept. 08	2	47
	Bee keeping	Sept. 08	1	21
		Feb. 09	1	67
		Mar. 09	1	20
		Apr. 09	1	29
	Vegetable growing	Mar. 09	2	30
	Gully control	Oct. 08	1	32
Sept. 09		1	27	
Agro-forestry species utilization	Aug. 09	1	17	
	Total		18	502
Chitawira	Small scale business management	Jun. 08	1	24
		Aug. 08	1	16
	Irrigated vegetable growing	Jul. 08	1	16
	Tree growing	Jul. 08	1	14
		Aug. 08	1	12
	Contour ridging	Aug. 08	1	26
	Bee keeping	Aug. 08	1	13
		Oct. 08	1	19
		May. 09	1	14
		Jul. 09	1	10
	Gully control	Oct. 08	1	6
	Total		11	170

Village name	Theme of training	Month / Year	Number of times	Participants
Tambala	Tree Growing	Jul. 08	2	31
	Small scale business management	Jul. 08	1	25
		Aug. 08	1	16
	Irrigated Vegetable growing	Jul. 08	1	23
	Contour ridging	Aug. 08	1	23
		Sept. 08	1	17
	Bee keeping	Aug. 08	1	14
		Oct. 08	1	13
		Jun. 09	1	13
		Jul.09	1	14
	Stove making	Sept. 08	2	12
Gully Control	Oct. 08	1	10	
	Total		14	211

ANNEX 2

Situation of practicing after the training

Village	Training theme	Practice situation
Zwanya	Tree growing	A communal tree nursery was constructed and tried to raise Eucalyptus seedlings but it failed because of inadequate care.
	Irrigated Vegetable growing	A demonstration plot was established. Very few people worked for it and the group members had a poor harvest but somehow sold the harvest and earned MK700.
	Contour ridging	51 households conserved their land with contour ridges and Vetiver strips as well as Gliricidia planting.
	Bee Keeping	Two Bee hives were made and hang during the training. The group members are waiting for its harvest. The number of farmers in the group is 15.
	Gully Control	After the training, the village headman requested to the project to give them medium scale check dam construction training. And they collected necessary quantity of stones and one check dam was constructed. 31 farmers participated in this training.
	Agro forestry	Trimming for coppicing of Grilicidia was done by the farmers who planted the species.
Mtema	Small scale business	After the training, a group started a revolving fund, using some money which they had previously together with some

	management	additional contributions from each member.
	Tree growing	A communal tree nursery was constructed and tried to raise Eucalyptus seedlings as well as some other species. But because of inadequate knowledge on seedling management, especially Eucalyptus, it failed.
	Irrigated Vegetable growing	Many of the participants have already been growing vegetables for commercial purpose. The purpose of the training was to improve skills in raising seedlings and pest control.
	Contour ridging	71 households conserved their land in the same manner with Zuwanya village.
	Bee Keeping	Seven bee hives were made and hang during the training. The training participants formed four groups to take care of the Bee hives and all of them are anticipating their harvest. 72 farmers are joining to the beekeeping and 5 individuals are preparing their own bee hives.
	Gully Control	After the first training, the villagers requested to make more check dams although its scale is relatively small. They collected stones and four check dams were constructed. The number of participants in this training was 41 farmers.
	Agro forestry	Trimming for coppicing of Grilicidia was done by the farmers who planted the species.
Chiwalo	Tree growing	A communal tree nursery was constructed and seedlings of Eucalyptus (192), Gliricidia (56) and Albezia (112) were raised. Out planting for those tree species was done.
	Irrigated Vegetable growing	After seeing the germination rate of Eucalyptus, they realized the benefit of learning how to sow seeds properly. Hence, they requested for particularly how to sow seeds. They also made a group field for Tomatoes and Cabbages and sold the harvest of Tomatoes. The earnings was MK7,332. They are going to invest the income for purchasing vegetable seeds for next season.
	Contour ridging	37 households conserved their land in the same manner with Zuwanya village.
	Bee Keeping	Four Bee hives were made and hang during the training. 109 bottles with 200g each of honey were harvested out of two bee hives and sold for MK200 each bottle. MK21,800 was realized. After the business, they requested to the

		project to give financial management training and done. After the training, they decided to make two more bee hives and bee suit to expand their business. 27 farmers are joining to the beekeeping activity.
	Gully Control	After first small scale check dam training, some people practiced for themselves in their premises. Medium scale check dam construction training was done. After the training, they requested to construct more check dams and they collected tremendous quantity of stones and two more medium scale check dams were constructed involving next village. The number of participants to this activity was around 20 from Chiwalo village and around 10 from the next village Kuchombo village.
	Agro forestry	Trimming for coppicing of Grilicidia was done by the farmers who planted the species.
Kamwendo	Tree growing	A communal tree nursery was constructed and tried to raise seedlings but it failed.
	Irrigated Vegetable growing	A demonstration plot was made apart from individual practice. Onions, Cabbages and Tomatoes were somehow harvested and sold. MK6,040 was made and they are planning to do it again next season.
	Contour ridging	40 households conserved their land in the same manner with Zuwanya village.
	Bee Keeping	Three bee hives were made and hang. The group is anticipating its harvest. Besides, one villager also made two bee hives with his own capital for himself. 22 farmers are joining to the beekeeping business.
	Gully Control	After the training, they requested to have more check dams. They collected stones and two medium scale check dams were constructed. 27 farmers participated in this training.
	Agro forestry	Trimming for coppicing of Grilicidia was done by the farmers who planted the species.
Chuma	Tree growing	A communal tree nursery was constructed and some seedlings were raised. Senna Siamea (539) and Albizia Lebbeck (64) were out planted.
	Irrigated Vegetable growing	Tomatoes, cabbages and maize were planted to learn on pest and disease control. The participants are practicing what they have learnt in their own fields.

	Contour ridging	13 households conserved their land in the same manner with Zuwanya village.
	Fish farming	Twelve households participated in this activity. Those households constructed a fish pond after the training and added another fish pond by accessing external funds (IRAD). They have been managing both fish ponds and harvested some matured fish to sell. MK6,000 was made. Besides, another Two villagers have started to construct their fish pond as well as one villager got fingerlings from the village fish pond.
	Gully Control	After the training, several households practiced the construction of small scale check dam with their own materials.
Chitawira	Tree growing	A communal tree nursery was constructed and tried to raise seedlings but it failed. However, the villagers are taking care of the trees very well, which were out planted at a demonstration plot for riverbank Afforestation initiated by COVAMS project.
	Irrigated Vegetable growing	No practice has been done.
	Contour ridging	No households conserved their land.
	Bee Keeping	Two Bee hives were made and hang. They are managing them well and anticipating its harvest. 10 farmers are joining to the beekeeping business.
	Gully Control	No practice has been done.
Tambala	Tree growing	A communal tree nursery was constructed and tried to raise seedlings but it failed because of poor commitment by the villagers. However, the villagers are taking care of the trees very well, which were out planted at a demonstration plot for riverbank Afforestation initiated by COVAMS project.
	Irrigated Vegetable growing	No practice has been done.
	Contour ridging	16 households constructed marker ridges but most of them did not realign the planting ridges. Only two households conserved their land in the same manner with Zwanya village.

	Bee Keeping	2 Bee hives were made and hang. They are well managing them and anticipating its harvest. 14 farmers are joining to the beekeeping business.
	Gully Control	No practice has been done.
	Stove making	After the training, two households constructed firewood saving stove at their premises. 2 more households constructed the stove afterwards in 2009.

ANNEX 3

Annual cost for conducting training and training materials including follow ups (2008)

Items	Details	Cost
Trainers' fee	Trainers / assistant	263,400.00
Training materials	Beekeeping, Contour ridging, Fish farming, Vegetable growing, Gully control	1,783,761.15
Gliricidia seedlings	Seeds and tubes, Labour fee for rasing seedlings	617,502.50
Vetiver grass	Labour fee, Transportation fee	1,650,000.00
Fuel for motor cycles / maitenance cost	Fuel and oil, Maitenance service fee, spare parts cost, etc	1,963,961.27
	Total	6,278,624.92

Unit: Malawi Kwacha (MK)