

Chapter 13

Adoption of techniques on individual farms and Horizontal dissemination

13.1 Objectives and procedural outline

13.1.1 Objectives

The adoption of techniques by individual farms is the phase that follows the initial development on the group farmland. In order to achieve an integrated management of a watershed with the participation of farmers, the conservation and environment-friendly farming techniques need to be disseminated among the individual farmers as well. The effect of watershed conservation will be limited if these techniques are only adopted on the group farmlands.

“Horizontal dissemination” means that the community groups developed by the project play an important role in transferring knowledge and techniques to their neighbors, other farmers, other communities and in the future to other watersheds. This process would be complemented by both public and private extension services.

From the viewpoint of community development, it is important to develop a social network among the different farmers, groups and communities establishing a variety of interconnections, such as exchanges of work and experiences among farmers, a purchase and sales chain for products and services, and the joint planning of fairs and events.

Figure 13-1 illustrates the theoretical course for achieving such a social network. On the other hand, it should be mentioned that the goal of watershed conservation cannot be achieved by only changing the agricultural and livestock farming methods on farmlands. An integrated management of the watershed is needed whereby other land uses, such as forests, bodies of water, and residential and industrial zones, are also made adequate and existing regulations on protected areas, if any, are complied with.

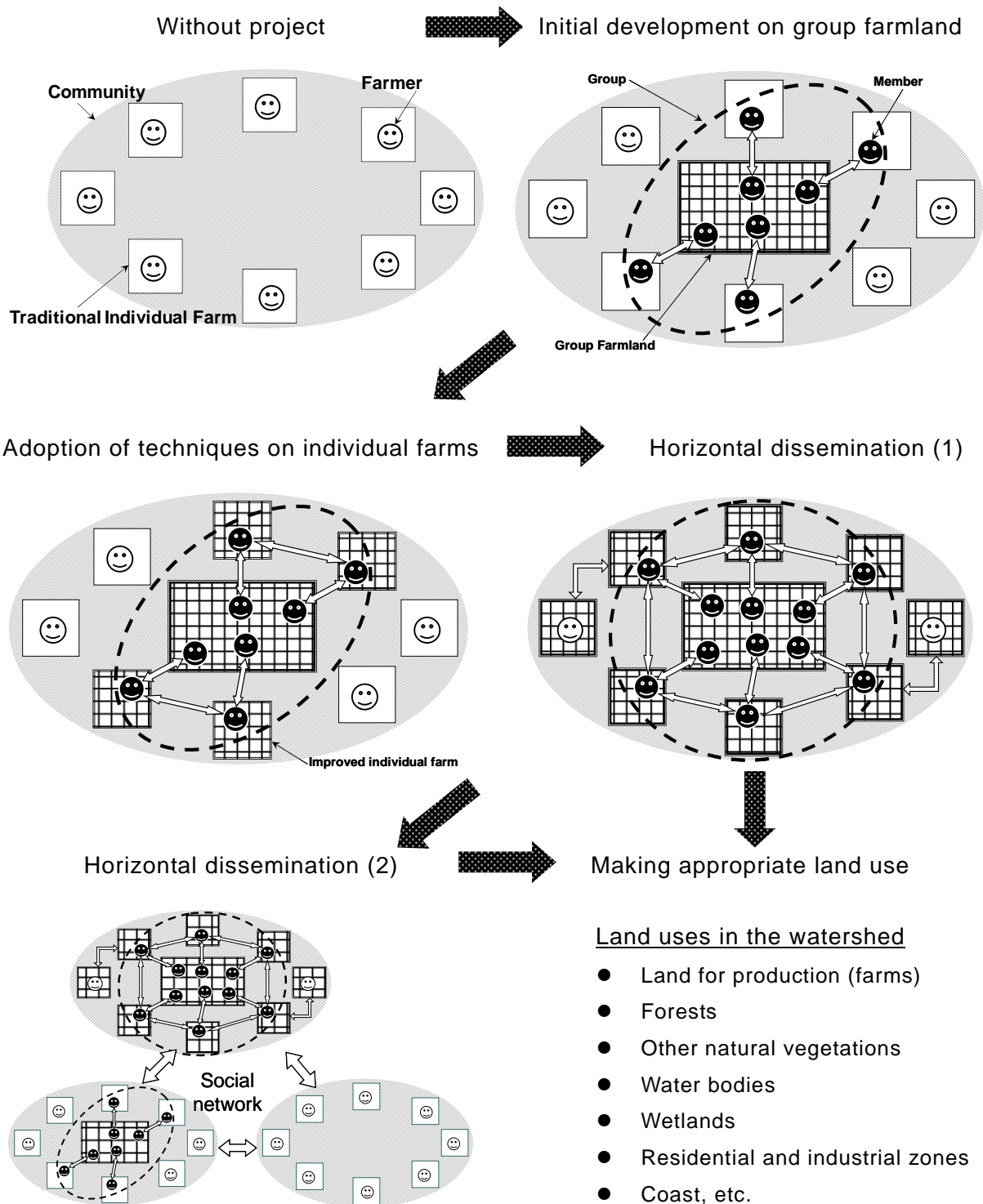


Figure 13-1 Thoritical chart of watershed conservation combined with community development

13.1.2 Procedural outline

As explained in Chapter 12, the groups are periodically evaluated using sustainability (maturity) indicators to determine the social, environmental and economic aspects of their development. When a group has been found to be sufficiently mature according to the established criteria (see Table 13-1), the group may proceed to the phase of adopting the techniques on individual farms. In general, it takes a group two or three complete farm-years after beginning to work as a group, to reach this level of maturity, although this will vary greatly among the groups.

The development of individual farms with the project's assistance will take at least another one or two farm-years before changes can be seen on the farm from adopting environment-friendly farming and conservation techniques. Therefore, even though it is difficult to predict the rate at which the groups will mature, it is important to clearly program when to begin and end the assistance to individual farms in relation to the project's entire period.

Horizontal dissemination outside the groups is a continuous and almost none-ending process because it means spreading the environmental culture, knowledge and techniques, not only to neighbors and other communities in the same watershed, but also to other watersheds and to the coming generations. Within the framework of a project, a group can begin activities in horizontal dissemination once it reaches the "third stage: developing a social network" (see Chapter 8). Each project should establish, however, its own goal of "how far" and "for how long" it wants to expand its coverage and increase its beneficiaries.

13.2 Methodology of assistance for the members' individual farms

13.2.1 Evaluation of the maturity of groups

The groups need to become sufficiently mature to be able to guarantee the effectiveness and continuity of the activities to be introduced on members' individual farms. For this reason, the groups are evaluated using the sustainability indicators to see which groups fulfill the minimum requirements to proceed to the next stage (Table 13-1). Immature groups should not proceed to the next stage.

Table 13-1 Example of requirements to start the assistance for individual farms

Sub-Aspect	Indicator	Level 1	Level 2	Level 3	Level 4	Level 5
S 1. Basic Attitude	S1.1. The group fulfills its commitments with responsibility and punctuality.	Most of the members do not fulfill their responsibility in the group work.	Half of the members fulfill their responsibility in the group work with the project.	Most of the members fulfill their responsibility in the group work with the project.	All the members fulfill their responsibility in the group work chosen by the project.	All the members fulfill their responsibility in the group work chosen by themselves.
	S1.2. The group resolves its internal conflicts.	The group doesn't even try to resolve its conflicts.	The group initiates an attempt to resolve its conflicts.	The group resolves its conflicts with the help of the project.	The group resolves its conflicts by itself.	The group can minimize and resolve its conflicts through good communication.
	S1.3 The group guarantees gender equality.	Female members do not try to, or cannot, state their opinions.	Female members state their opinions, but they are not taken into account in the group decisions.	Female members state their opinions and sometimes they are taken into account in the group decisions.	Female members state their opinions and they are taken into account in the group decisions.	The group respects all the opinions according to their content without regard to gender.
S 2. Group Administration	S2.1. The board of directors functions continuously and follows the rule.	The group cannot form its board of directors.	The group has a board of directors, but it is not functioning.	The group has a board of directors, but only some of the directors fulfill their role	The group has a board of directors and all the directors fulfill their roles.	The group periodically replaces its directors transferring the responsibilities to new directors.
	S2.2. The group keeps its tools, materials and facilities under good control.	The group does not control its tools, materials and facilities.	Some members begin to control their tools, materials and facilities with the help of the project.	Half of the members control their tools, materials and facilities by their own initiative.	Most of the members control their tools, materials and facilities by their own initiative.	By itself, the group controls its tools, materials and facilities in an organized manner.
	S2.3. The group leads its monthly meetings to decide on its activities with the project.	The group does not hold any meeting for deciding on its activities.	The group holds irregular monthly meetings led by the project.	The group holds regular monthly meetings led by the project.	The group begins to lead its monthly meetings while practicing with the project.	By itself, the group leads its monthly meetings monitoring, evaluating and deciding on its activities.
ENV 1. Management of sustainable planning, conservation and farm production	ENV1.1. The group makes its FUP and/or AAP.	The group does not plan any of its activities.	The group has planning of activities in an initial manner.	The group has its FUP agreed upon and the members begin an AAP based on the FUP.	With the help of the project, the group can review, create and modify its FUP and AAP.	By itself, the group can review, create and modify its FUP and AAP.
	ENV1.2. The group implements actions that conform to the FUP and/or AAP.	The group takes action without any reference to the FUP and AAP.	The group takes some actions which conform to the FUP and AAP, and can adjust its direction and pace in the case of lacking conformity.	With the help of the project, the group implements the actions which conform to the FUP and AAP, but cannot achieve the desired outcome.	With the help of the project, the group implements the actions which conform to the FUP and AAP, and achieves the desired outcome.	By itself, the group implements the actions which conform to the FUP and AAP, and achieves the desired outcome.
	ENV1.3. The group is capable of the techniques learned on the group farmland. (see annex form)	The group practices several techniques, but not master them.	By itself, the group masters 25% to 50% of the techniques that were introduced by the project.	By itself, the group masters 50% to 75% of the techniques that were introduced by the project.	By itself, the group masters 75% to 95% of the techniques that were introduced by the project.	By itself, the group masters over 95% of the techniques that were introduced by the project.
	ENV1.4. The group keeps a farming record.	The group does not keep a farming record.	The group keeps a farming record for some crops with the help of the project.	With the help of the project, the group keeps a farming record on almost all the crops.	The group can keep a farming record on some crops without the help of the project.	By itself, the group keeps a farming record on almost all the crops.
	ENV1.5. The group cares for the planted trees.	The group does not take care of the planted trees.	With the help of the project, the group gives irregular and insufficient care to the planted trees.	By itself, the group gives irregular and insufficient care to the planted trees.	By itself, the group takes constant care of the planted trees, but the trees do not achieve the 80% of survival rate.	By itself, the group takes constant care of the planted trees, which achieve the 80% of survival rate.
ECO 1. Economic Management by the Group	ECO1.1. The group creates income through the sale of products and services.	The group does not sell any products or services.	With the help of the project, the group has income from irregular sales.	By itself, the group has income from irregular sales.	With the help of the project, the group has constant income from planned sales.	By itself, the group has constant income from planned sales.
	ECO1.2. The group keeps a bookkeeping record.	The group does not keep a bookkeeping record.	By following the project's instructions, the group begins to keep a bookkeeping record.	With the help of the project, the group regularly and correctly keeps its bookkeeping record.	By itself, the group regularly and correctly keeps its bookkeeping record, but lacks periodical confirmation among the members.	By itself, the group regularly and correctly keeps its bookkeeping record and carries out periodical confirmation among the members.
	ECO1.3 The group uses its income to reinvest.	The group depends on the project for almost all of its needed inputs.	By itself, the group can reproduce and/or obtain some of the inputs needed for crops.	The group reinvests part of the group profit to buy some necessary inputs.	By itself, the group can obtain 75% of the necessary inputs.	By itself, the group can obtain almost all of the necessary inputs.
	ECO1.4. The group obtains outside funds.	The group has no experience or knowledge about applying for outside funds.	The group has knowledge about different alternatives available for outside funds.	With the help of the project, the group can prepare the application for outside funds.	The group has the experience of applying for outside funds with the help of the project.	By itself, the group can prepare the application for outside funds.

The colored boxes indicate the minimum requirements to be fulfilled by the group. Every project should establish these criteria according to its policy.

13.2.2 General modality of assistance

Once a group has qualified for receiving assistance on individual farms, the projects begins to give assistance in the following order:

- Design the assistance method and explain it to the groups;
- Decide on the beneficiaries and object farms;
- Create and approve a farmland use plan;
- Provide outside contribution and the beneficiary's own contribution;
- Implement and supervise the activities.

1) Designing the method of assistance and explaining it to the groups

The project team should establish the method for giving assistance to individual farms before undertaking the first farm. It would be very recommendable to prepare an Initiation Guide for the groups, which is explained in the table below:

Table 13-2 Content of the Initiation Guide for individual farms

Index	Basic Content
Beginning	Objective of assistance to individual farms; Steps for developing
Requirements for becoming a beneficiary	Land availability; mastery of techniques, farmer's own contribution to the activities.
Group's responsibilities	Approval of FUP; Supervision and mutual support
Operational rules	Eligible activities; eligible material; budget; period; Adequate use of material support in accordance with the FUP.
Project's responsibilities	Create the FUP; provide material support; Technical assistance as needed; Monitoring

During the session of explaining to the group, the Initiation Guide is distributed to each interested member and the extension worker should clarify any questions that the members might have. At the end, a form for the list of individual beneficiaries (see Annex) is given to the group so that the members can decide on the potential beneficiaries among themselves - normally within a period of 1 to 2 weeks .

2) Deciding on the beneficiaries and object farms

Basically, the group makes the decision on which members and farms will be benefited and then gives the list of potential beneficiaries to the project's extension worker. The extension worker analyzes each applicant to see if he/she fulfills the following requirements:

1. Is an active member of the group with the endorsement of responsibility by the group directors;
2. Has an adequate mastery of the techniques he/she wishes to introduce on his/her farm;
3. Is willing to make his/her own contribution in kind;
4. Has land that can be farmed.

The definition of "active member" is left in the hands of the group. However, the level of technical mastery shall be decided by the extension worker based on his/her constant observation during the regular assistance. The amount or percentage of contribution given by the beneficiary should be decided by each project, but it would be recommendable that it be the same as, or greater than, the external support he/she expects to receive from the project.

Regarding the availability of land, there will be no complications if the farmer has his/her own farm(s) with ownership, possessory, usage or lease rights. In case some of the beneficiary members do not have their own land, other alternatives will need to be considered, such as working as partners with other members on the same land or developing the techniques in the yards around their houses.

It is important to know some fundamental information through an interview with the potential beneficiaries in order to make easier the work of following steps. Such information may include: means of access, distance, estimated size of farm, slope, current land use, conflicts on the land, etc.

Finally, an agreement is drawn up between the group and the project clearly establishing who the beneficiaries and the object farms are, and a copy of the list of approved beneficiaries is kept by both sides.

3) Creating and approving a farmland use plan

Each selected beneficiary should create a farmland use plan (FUP) with the help of the project. When

a beneficiary works on several separated pieces of land, it would be recommendable to select one farmland or farming unit, unless the project permits the support of all the separate farmlands of one beneficiary.

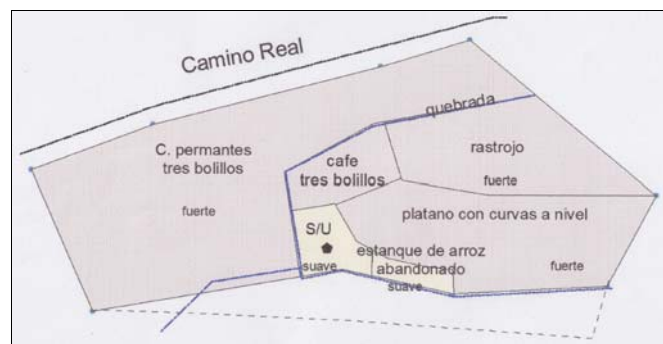
See Chapter 7 for the method of creating the FUP. Each beneficiary should make a drawing of the farm to help making the surveyed farm map (see Figure 13-2). Regarding Element (4) of the FUP objectives, namely, “Work Schedule and Estimate of Necessary Resources”, the operational rules established by each project should be followed.

The activities that will be carried out on the individual farms should include the conservation and environment-friendly farming techniques that were learned on the group farmland or in other technical training sessions. Also, regarding the crops to be grown, it is important for the member to agree on a group business and to try and increase the production of the crops they agreed upon for their business. The members should refrain from only growing small quantities of various crops on their own farms.

Once the FUP’s have been made for all the beneficiaries, the group should approve them. The extension worker should remind the members again that the development of activities on individual farms is also part of the group activities. If the regulations in effect in a certain area require that the FUP be presented to and approved by the authorities, the project team can help in this process.



(drawing)



(surveyed map)

Figure 13-2 Comparison between drawing and surveyed map of an individual farm

4) Providing outside contribution and the beneficiary's own contribution

In order to encourage the adoption of conservation and environment-friendly techniques on the individual farms, many farmers will need a certain initial investment made by the project in the form of material supplies and technical follow-up. At the same time, the beneficiaries should also provide their own contribution in the form of materials and labor.

Every project should decide on the type of support (donation or loan, with or without repetition) to be given, the eligible material according to its guidelines, and the budgetary limit according to the average size of the individual farms and the foreseen price of the material. In the case of Alhajuella Project, the support provided to individual farms was restricted to material that was difficult to obtain in the communities (seeds, seedlings, PVC pipes, screens, plastic sheets, etc.) and was given as a one-time donation. No financing was given to pay for day labor, fuel, tools for individual use or animals not promoted by the project. The maximum amount was set at \$100 per beneficiary plus up to 10% for contingencies.

Based on the approved FUP, the beneficiary and the extension worker estimate the amount of material needed, calculate its cost (without including labor) and divide the cost between "outside contribution" and "the group's own contribution". The project takes responsibility to obtain the material marked for outside contribution, and the beneficiary should sign the corresponding page of the FUP at the moment of receiving the material from the extension worker (see Figure 13-3). It is important to keep an updated list of suppliers and unit prices for the different materials.

In general, the material requested by individual farms varies greatly, and some special varieties of seeds or quality-guaranteed seeds may be difficult to obtain opportunely in the area of the project. In such case, the extension worker should consult with the beneficiary on the possibility of replacing it with other material or to obtain seeds that are not of the highest quality, but which are acceptable and near to the community. Also, the acquisition and delivery of some types of crop inputs should be carefully planned so that they coincide with the proper planting season.

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Uso futuro

Nombre de parcela	Area (m ²)	Pendiente	Técnica de conservación	Rubros a desarrollar
citricos	670,511	suave	tres bolillos/ curvas a nivel	naranjas
cultivos anuales	743.040	media	curva a nivel	platano, ñampi, ñame, yuca
Bosque secundario int	4010,449	suave		

Material	Cantidad	Precio U (B/.)	Costo (B/.)	Aporte del beneficiario	Aporte externo	Apoyo material por Proyecto Alhajueta
platano	30 sem	0,50	15,00	15,00		
yuca	25 estacas	0,15	3,75	3,75		
ñampi	10 sem	0,20	2,00	2,00		
balo	200 estacas	0,25	50,00	50,00		
ñame	15 sem	0,20	3,00	3,00		
caña de azucar	25 sem	0,25	6,25	6,25		
coco	15 palma	1,00	15,00	15,00		
alambre de pua	2 rollo	25,00	50,00		50,00	50,00
naranja mejorada	12 plant	5,00	60,00		60,00	60,00
TOTAL			205,00	95,00	110,00	110,00

Cronograma (Primer Año =2010)

Actividad	Enero	Febrero	Marzo	Abril	Mayo	Junio	Julio	Agosto	Sep.	Oct.	Nov.	Dic.
citricos									limpieza, siembra, utilizar tec. de cons.			
cultivos anuales								limpieza, siembra, utilizar tecnicas de conservacion				
cerca de proteccion									cortar postes, iniciar el cercado			

Cronograma (Segundo Año =2011)

Actividad	Enero	Febrero	Marzo	Abril	Mayo	Junio	Julio	Agosto	Sep.	Oct.	Nov.	Dic.
citricos	limpieza de cultivos, cuidado y mantenimiento											
cultivos anuales	limpieza de cultivos, cuidado y mantenimiento, cosecha y siembra de algunos rubros											

Cronograma (Tercer Año =2012)

Actividad	Enero	Febrero	Marzo	Abril	Mayo	Junio	Julio	Agosto	Sep.	Oct.	Nov.	Dic.
citricos	limpieza de cultivos, cuidado y mantenimiento, cosecha											
cultivos anuales	limpieza de cultivos, cuidado y mantenimiento, cosecha y siembra de algunos rubros											

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Figure 13-3 Example of a FUP for individual farm (page of inputs and schedule)

5) Implementing and supervising the activities

It is the responsibility of the group members to share the work of developing activities on individual farms. When any member needs technical instruction, other members who have better mastery of such technique should give assistance. The role of the project's extension worker is limited to giving momentary assistance as needed.

Each beneficiary shall have a determined period of time for implementing the FUP on his/her own farm before informing the group about the results. In the case of Alhajuela Project, the implementation period was for 9 months, although in fact the full development of the adopted techniques could take many more years.

In order to guarantee the adequate use of the material supplied to the farmers, there needs to be a system of mutual inspection where the beneficiaries check the quality and quantity of the material at the moment of receiving it, and the other members supervise to see that the material is used adequately without being lost, sold or used for other purposes. The extension worker shall monitor the individual farms by making random inspections (see Annex for the report form), so long as no irregularities have been detected and reported to the project. If some inadequate use of the delivered material should be discovered, all the members of the group shall lose their status as beneficiaries.

13.2.3 Verifying the results

In contrast to the activities on the group farmland, the development of activities on the individual farms is not monitored periodically, but only sporadically by the project's extension worker. The inspection results are analyzed from the following perspectives:

- Fulfillment of the FUP (techniques applied, crops grown, compliance with the work schedule, accomplishment of goals);
- Contribution to the group's solidarity and its environmental business;
- Creativity in applying and assimilating the techniques;
- Demonstrative effect of the farm to other inhabitants of the community.

13.3 Methodology of diffusion for distant and/or small communities

13.3.1 Necessity and characteristics of the diffusion for distant and/or small communities

In order for watershed management to be more effective, there need to be methods for promoting environmentally friendly activities in small or distant communities where there often are still many farmers who continue to practice the traditional slash-and-burn farming and who have hardly ever received any assistance from outside.

One option is the direct dissemination of techniques to individual farmers without forming groups (when it is difficult to form a group with a certina number of members due to the small size of the community) by using the school gardens as a demonstration plot where the conservation and environmentally friendly farming techniques can be introduced. Most people in small communities are in contact with the community school. This scheme can also be used for distant communities that are difficult to access.

13.3.2 General steps

Generally the inhabitants of small and distant communities are reticent to participate in activites promoted by people from outside their community, therefore one strategy is to begin activities with the students. Later, as you win the trust of the students' parents, you can include them in the activities also, and then continue to expand outward to other adults from the community. The steps to this process are shown below:

(Step 1) Select the object communities.

(Step 2) Plan and implement the first visit to the communities and their schools.

(Step 3) Explain the objective of the activities to the teachers and reach an agreement with them on the activities to be carried out.

(Step 4) Carry out the environmental education activities for the students (talks, puppet theater, etc.).

(Step 5) Support the establishment of school gardens using organic farming. Promote and include the participation of the parents of the students.

(paso 6) Give talks to create environmental awareness among the parents using material that is very easy to understand.

(paso 7) Take the participants (students and parents) on a visit to one of the group farmlands organized by the project.

(paso 8) Disseminate the techniques on the individual farms of the students' parents and other adults.

13.3.3 Modality of assistance

1) Approaching the community and environmental education of students

The Project personnel uses the school as the point for approaching the community and always maintains a proper attitude toward the teachers and the students' parents as explained in Chapter 4. The environmental education activities that are implemented are very basic with a relatively simple format. The purpose is to introduce the idea of environmental conservation to them and at the same time create relationships of trust with both the students and their parents.

2) Establishing the school garden and demonstrating the techniques

The project's technical personnel (extension workers) first reaches an agreement with the teachers and the Parent's Association regarding the creation and use of a school garden. In contrast to the "group farmland", a school garden covers a smaller area, the crops are short-cycle type and limited in variety, and the harvests are used in the students' school meals.

The conservation and environmentally friendly farming techniques are selected according to the condition of the land, the expectations of the teachers and parents, and their necessity as perceived by the extension worker. The following are some of the more commonly used techniques: contour planting, land barriers, organic fertilizer, and natural insect repellent. The amount of labor available from the community needs to be taken into account also, because at this stage there is still no commitment whether or not the students' parents will constantly support the school garden.

As the school garden begins to develop, the parents are approached and encouraged to participate, practice and learn the techniques that are demonstrated. A careful programing is needed to make maximum use of the limited number of visits made to the community in order to achieve a good technical transfer to the adults. The investments made in school gardens by the project is normally less than that made in group farmlands, the reason being that the school gardens do not need the costs of

building a meeting room, storage shed, kitchen, or providing basic tools.

3) Creating environmental awareness in parents

Parallel to developing the school garden, it is important to hold activities for creating environmental awareness of the adults, through talks or tours (please refer to Chapter 9). The mentality of the inhabitants, which generally is more reserved, needs to be taken into consideration. Organizing a tour to visit other group farmlands with greater experience or maturity is very beneficial because it allows the participants to directly experience the positive changes achieved by other farmers.

4) Disseminating the techniques to individual farms

Once you consider that the adult population is becoming conscientious of introducing good conservation and farming practices, the project can begin giving assistance on individual farms according to the modality described in section 13.2. Since the beneficiaries of small and/or distant communities are not formed in groups and as a result do not need to fulfill the minimum requirements of group maturity (as group members do) before receiving assistance on their individual farms, care is needed in choosing the proper moment to initiate this assistance in order to avoid creating feelings of unfairness among other community groups.

13.4 Methodology for horizontal dissemination outside the groups

When a group is functioning adequately and reaches the stage of “developing a social network” (see Chapter 8), it is considered to be ready to begin activities for horizontal dissemination outside the group. However, it is unlikely that a community group would begin this activity voluntarily by its own volition without outside assistance. Several methods are presented below for encouraging the groups toward developing horizontal dissemination in different ways.

13.4.1 Dissemination to neighboring farmers

1) Increasing group membership

Usually only a certain percentage of community inhabitants become part of a community group. It is

always possible to increase the number of group members by inviting other people from the community or neighboring areas.

First, the extension worker advises the group on what a suitable membership goal would be for the group, by taking into consideration the characteristics of the group activity, the population of the community, the size of the group farmland, the requirements for obtaining legal status, etc. In order to keep the group active and dynamic, it would be recommendable to include women, men, youth, adults and older adults equally in the group. Also, when a person joins the group, it is important to also invite the other members of her/his family.

Each group should make continuous effort to accomplish its membership goal. Project personnel can support them in the following manner:

- Invite the neighboring farmers to group activities, preferably to some type of organized event (work exchange, lecture, workshop, tour, fair, etc.);
- Hold environmental education events to involve the school's parents association;
- Hold exchanges with other existing community organizations (water committee, health committee, etc.)

When it is difficult to form a group with a certain number of members due to the small number of inhabitants of a community, it would be recommendable to have the farmers join the closest organized group. From the point of view of horizontal dissemination, it would be important to have some members of the organized groups participate in these activities by accompanying the extension worker.

In order for a group to be attractive to others, it is important to show them the group's achievements and benefits in a visible and tangible manner.

2) Creating new groups

In the context of "horizontal dissemination", creating new groups is not the same as the formation of groups by the project team (see Chapter 6 for the latter process), rather it signifies the voluntary initiative of the organized groups to work in other communities where the farmers are still not organized.

The extension worker can encourage an organized community group to function as a “promoter group” and to hold tours or exchanges in the neighboring communities making full use of the various ties (family, cultural or economic ties) that unite neighboring communities.

When non-organized farmers show interest in forming a group, a promotional meeting and the subsequent PRA are held with the promoter group acting as facilitator. It should be explained to the newly interested persons, however, that at this stage of horizontal dissemination the project will not be able to invest in them, and that they can only receive technical transfer from the promoter group, unless, of course, there is another project or other mechanism for giving assistance and incentives to the new group.

13.4.2 Creating a social network

1) Strategic exchanges

When a group reaches the stage of “developing a social network”, it should begin to hold exchanges with other groups without the project’s support. At this stage, the primary objective of exchanges is no longer to share the heavy labor or to transfer techniques, rather it is to create a sales chain, broaden a market, consolidate collective businesses, as well as to keep good social relationships among the groups.

In this sense, each exchange event should be more strategically planned by inviting those groups that are socially and economically important to each other, and not necessarily the closest groups. The cost of transportation, food and other necessities are covered by the groups themselves. The project personnel can give instructions to the groups on how to organize and prepare for an exchange event, the procedures for making sales and related rules. This activity could also take the form of a fair presenting the products from various groups.

The groups will be able to function on their own only when there is a social network connecting them to each other and backed by constant communication and movement of people, products and information.

2) Establishing an upper level association

One option for making a formal social network among the groups is to establish an upper level association involving various groups, which would act as an entity for collective decision-making and implementing agreed upon actions. This process requires a great deal of consultation, therefore if the groups show such initiative, the project personnel can offer them the professional support they would need.

13.4.3 Applying the extension system to cattle farms (when permitted in the area)

Cattle farms, especially pastures used in extensive cattle farming, require a different type of extension system for watershed conservation because the method of giving assistance to farmer groups is not as viable as it is for agricultural farms. Table 13-3 gives a summary of the applicability of extension processes to cattle farms.

Table 13-3 Extension process for cattle farms

Process	Applicability for cattle farms
Approach to the communities' inhabitants	Yes, at community level
Acquisition of base data	Yes, at community level
Promotional meeting	Yes, at community level
Formation of organized group	No
Participatory Rural Appraisal	Yes, at community level
Creation of initial activity plan	Yes, at individual level
Selection of the directors	No
Establishment of group farmland	No
Establishment of demonstration farm	Yes, at individual level
Creation of FUP for group farmland	Yes, at individual level
Selection and practice of environment-friendly techniques	Yes, at individual level
Special activities for organizational strengthening	No
Awareness creation and environmental education	Yes, at community level
Monthly meeting	No
Semiannual and annual workshops	No
Creation of annual activity plan	Yes, at individual level
Periodical monitoring and evaluation	Yes, at individual level
Special technical training	Yes, at individual level
Management of production process and accounting	Yes, at individual level
Sales of products and services	Yes, at individual level
Reinvestment of own fund	Yes, at individual level
Acquisition of outside funds	Yes, at individual level
Adoption of techniques on individual farms	Yes, at individual level

13.5 Exit strategy

1) Need for an “exit strategy”

In order to achieve the sustainability of the activities promoted by the project, one needs to develop a strategy whereby the groups can continue their activities without any direct help from the relevant institutions. For this reason one needs to develop an “exit strategy” for when the project ends so as to minimize the impact of the end of the project’s assistance as well as to guarantee the sustainability of the developed activities.

2) Designing an “exit strategy”

The exit strategy must focus on capacity development of the groups and creation of the social network which will allow the groups to have access to sources of financing that exist in the area. Furthermore, they will also develop the distribution chain of their products and services, which might support the stability of their activities, and at the same time their experiences will be disseminated for other watershed projects being implemented in the national territory.

In parallel, as the project approaches its end, the relevant institutions in the area should become involved in the extension system in order to support and give follow-up to the activities being developed. Also, a permanent program should be implemented for providing environmental education to youth and adults directed toward improving the environmental quality of the watershed.

In order to achieve these goals, an exit strategy must include “methodological aspects for implementation” and “actors and budget for the follow-up”. An example of exit strategy in the case of Alhajuela Project is shown in the Annex.

13.6 Inputs needed

(Adoption of techniques on individual farms)

Activity	Personnel	Time	Material and cost
Evaluation of maturity of the groups	Extension staff	2 times per year (or more, when needed)	(Nothing special)
Design the assistance method and explain it to the groups	(Design) Proyecto team (Explanation) Extension staff	(Explanation) 0.5 day	Initiation guide for individual farms
Decide on the beneficiaries and object farms	Extension staff	(Group) 1 to 2 weeks (Extension staff) 1 week	List of potential beneficiaries
Create and approve a farmland use plan	Extension staff and each beneficiary, Group	(Creation of FUP) 4 days per farm (Approval) 0.5 day	Tools for survey; Forms of FUP
Provide outside contribution and the beneficiary's own contribution	Extension staff and each beneficiary	(Outside contribution) 1 to several months (Own contribution) 1 to several months	(Outside contribution) Variable according to project (Own contribution) Equivalent or superior to the outside contribution
Implement and supervise the activities	Beneficiary, Group, Extension staff	Up to 1 farming cycle	FUP and monitoring format

(Diffusion for distant and/or small communities)

Activity	Personnel	Time	Material and cost
Approach, Environmental education	Extension staffs (technical and social)	First visit, And 1 to 2 more visits	(see Chapter 9)
Establishment of school garden	Extension staff (technical)	1 school year (1 to 2 visits per month)	Plant inputs and other materials (B/.500 / year)
Awareness creation	Extension staffs (technical and social)	Together with the visits; 1 to 2 days / tour	(see Chapter 9)
Assistance for individual farms	Extension staff (technical)	(see the table before)	(see the table before)

The inputs that are necessary for carrying out horizontal dissemination activities can greatly vary depending on different circumstances, and therefore it is difficult to say what standard inputs would be. It should be remembered that the activities for horizontal dissemination are to be done by the organized groups themselves, and for this reason the investment by the project shall be limited to giving professional advice rather than giving material support.