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## Checklists

## Checklist of constraints on participation of target groups

A number of factors militate against the measures devised to promote systematic participation by target groups. The obstacles to participation can usually be overcome, but extension work has to take account of them from the outset, so that ways and means can be found to eliminate them. When we aim to achieve target group participation, we have to bear in mind the following areas of influence:

### Factors influencing Effects and interrelations participation

- |                     |                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Physical/biological | Climate, weather, soil composition and cropping dates, etc., affect participation in meetings (poor road conditions, heavy work on poor soils).                                                                                                                                                                                                                                                   |
| Economic            | Poor land tenure conditions, limited land ownership and availability of other production factors are typical of small farmers. Since they are in a position of dependence, participation often makes them fear social sanctions, loss of credit opportunities and of marketing their harvest.                                                                                                     |
| Political           | Rural elites, parties and bureaucracies stand in the way of participation. Instructions are issued by national or provincial centres. Nothing can be done about central planning. Provision for decentralised decision making is deliberately circumvented.                                                                                                                                       |
| Social              | Family/clan structure, group relations, rules of inheritance, social stratification, class structure and different forms of settlement make participation more difficult to achieve. Because target groups do not own certain production factors and because more prosperous groups exercise control, their chances of participating in decisions are reduced.                                    |
| Cultural            | Values and norms of a particular society, target group or sub-group; division of labour between the sexes, looking to the future, communal work and the role of women and other sub-groups in decision making affect whether women are even allowed to leave the house, whether it is the men who make decisions on food cropping, competition between families in place of communal labour, etc. |

## Historical

An appeal for participation is often greeted with mistrust, because of relations with national or state-run institutions, experience of government powers and the extension organisation, traditional rivalry between town and country or recommendations that proved to be of no benefit.

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**Compiled by:**

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**Checklist of weaknesses in extension work**

In 1975 the FAO carried out a comparative survey in eight countries in East Africa to try to establish where weak links occur in extension. Similarly, experts taking part in extension seminars run by DSE and GTZ have taken stock of the situation on a number of occasions.

The following list of identified weaknesses acts as a warning signal. With the help of this list we can ask the following questions wherever extension work is being carried out:

- (1) Is this weakness likely to occur or does it already exist in the planned project?
- (2) What is the cause?
- (3) What effects will it have?
- (4) What is the best way of remedying the situation, and how can it be accomplished?

Wherever weaknesses are found, these four questions reveal the priorities to be pursued.

**Weaknesses:**

- lack of trained personnel?
- poor opportunities for marketing agricultural produce at adequate prices?
- inadequate transport facilities?
- communication difficulties?
- lack of credit programmes for small farmers?
- inadequate supply of inputs?
- rapid turnover of extension staff?
- poor administrative support (rooms, materials)?
- too many local languages – resulting in problems with written materials?
- too dependent on foreign donors?

- no understanding of the extension concept or no extension concept at all?
- ratio of farmers to field advisers too high?
- no extension work directed towards women?
- problems of land ownership?
- poorly defined extension targets?
- inadequate job description for extension staff?
- lack of a personnel and programme policy?
- no annual extension plan?
- no instructions, brochures, materials for advisers?
- little idea about further training for extension personnel?
- little effort to survey the farming systems of small farmers?
- insufficient awareness on the part of economic planners of the tasks, importance and problems of extension work, especially regarding field advisers?
- no monitoring and evaluation system?
- inadequate exchange of information between research and extension?
- no specially trained senior staff to assist field advisers (supervision)?
- lack of supplementary services and/or problems of coordination with extension?
- past developments unfavourable, poor image of extension?
- hierarchical and control-oriented extension organisation?
- directive behaviour on the part of field advisers?
- duties unconnected with extension and role conflict in field advisers?

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## Checklist of features of successful development work and extension

In this paper we present a whole range of points that can be used to establish the state of a project. They can be applied at the stage of the feasibility study, operational planning and ongoing evaluation.

### Important general conditions

- (1) The development aid and extension measures have not created any economic, social and political inequalities. The living conditions of those receiving development aid have at least not deteriorated.
- (2) The measures as planned and implemented did not exceed the economic capacity of the farm, household and family. The effects were positive, not just as abstract data but as tangible, microeconomic benefits.
- (3) The innovations were technically fully developed and capable of being applied under the given conditions – even if farmers used them wrongly or in a different way.
- (4) The development aid measures were socially acceptable, i.e. the offer of help was compatible with the existing social organisation and gave rise to a self-sustaining spread of innovations.
- (5) The administration was able to cope with the organisation of development aid measures and to implement them. There were enough staff and materials available. There were also links, horizontal and vertical channels of communication, to exchange information with back-up institutions at all levels.
- (6) The target groups were able to comprehend the proposed innovations (mainly devised with their cooperation). They had the necessary technical knowhow, the capacity to take in information and were able to see the main interrelations.
- (7) The planned improvements often related to existing endeavours by the population itself. Thus the advisers and experts found a way of lending support to efforts already being made by the people and mobilising them. They took into account existing social relations, groupings and interests.

**Features specific to extension**

- (1) The advisers were able to concentrate on extension and did not have to undertake unrelated work. Thus, instead of just receiving and carrying out orders, the members of the target group had the opportunity of genuine dialogue with the advisers.
- (2) The advisers had not only received technical training but had been instructed in methodology.
- (3) Training was not conceived as a single act of instruction for advisers; it was continued as an integral part of practical work (on-the-job training, in-service training).
- (4) Advisers were given regular, planned support in technical matters and methodology by people inside and outside the development organisation (supervision). The object of this supervision was not primarily to check on advisers but to create a supportive relationship with the aim of improving operations.
- (5) The aims of extension were clearly defined and all advisers were aware of them.
- (6) It was made absolutely clear how advisers in different subject areas and/or different organisations were to work together and how their work was to be coordinated (unambiguous job descriptions).
- (7) The satisfactory work situation was reflected in the stability of personnel; there was little turnover of staff.
- (8) The extension organisation used its own experts, or brought in outside experts, to guide the communication processes, supervise campaigns and carry out continuous evaluation of social and economic developments.
- (9) The authoritarian approach was slowly but surely transformed into leadership based on partnership.
- (10) Extension work was frequently organised towards a specific target, which was attained in the scheduled period.
- (11) This target was felt by the target group to be a real need and a direct contribution to improving their situation.
- (12) The advisers and extension organisation have found ways of playing down their contribution to improvements in order to underline the role of

the target group. Thus the extension partners can feel proud of acting independently and taking responsibility.

- (13) The advisers are in touch with agricultural and social research and in case of doubt can make enquiries. They can therefore always check to see whether recommendations are sufficiently developed to be put into practice.

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## Checklist for information gathering in the situation analysis

This list is intended to serve as an example only. It has to be evaluated and used selectively in relation to specific problems. → G 1 shows how a data plan for the situation analysis can be made from this check list.

### 1. Subject of survey: project environment

#### (1) Basic physical and demographic data

- geo-climatic conditions and their change over time;
- population, settlement, migration patterns, distance to markets and administrative units;
- land use and attitude of the population to agricultural production;
- production methods, means of production and how and where they are made;
- type and structure of employment.

#### (2) Production and income generation

- production factors: soil, climate, water, seed, fertiliser, draught animals, tools, fuel, labour, etc.;
- economic factors: transport, storage, processing and marketing, credit, prices, levies and taxes;
- social and institutional factors: ownership and land tenure conditions, farm size, structure of labour, organisation of activities in the household and on the farm, multi-farm cooperation, labour obligations and prohibitions, division of labour on the basis of sex and age;
- organisational factors: cooperatives, service institutions, general administration, education and level of training;
- off-farm sources of income: migrant labour, seasonal wage labour, sale of tools, equipment, household articles, clothes, etc.

**(3) The use of products**

- crops are used for: food, cash, animal keeping, subsistence, sale at markets, social obligations, storage, seed;
- use of cash income: consumer goods and food, house building, bride price, investment in agriculture, capital assets, taxes, education.

**2. Subject of survey: dynamic of the social system****(1) Level of know-how in the target groups**

- technical knowledge of plant and animal production: soil, plant breeding, etc.;
- economic know-how: elasticity of production, labour input, farm organisation, credit, etc.;
- knowledge of politics: agricultural policy, influence of the administration in general, influence and power structure of formal and informal leaders;
- general level of education: literacy, formal and informal socialisation, learning processes.

**(2) Social structure and decision-making behaviour**

- family structure: roles, obligations, participation in certain activities;
- family relationships and friendships: mutual dependence and help, hierarchies, communal work, etc.;
- social structure in larger units (villages): group formation, influential individuals, systems of values and norms, etc.

**(3) Socio-cultural characteristics**

- aspects of life influenced by religion: production methods, cropping systems, land use, etc.
- traditional and modern laws: processes for conflict solving;

- systems of values: "decent" behaviour, dealing with things in the "right" way, etc.;
- an idea of the connection between cause and effect (see also: level of know-how);
- certain behaviour patterns rooted in the social system, and their sphere of influence: validity for persons of the target group, sanctions, alternatives, degree of tolerance, etc.

**(4) Structures of communication and the spread of innovations**

- informal channels of communication: meeting places, gatherings, markets, migrant labour;
- formal communication channels: newspaper, magazines, brochures, radio, folk groups, etc.;
- spread of innovations: innovations already adopted, inhibiting and driving forces, effects on social and economic processes, etc.

**3. Subject of survey: project organisation**

- (1) Methods of financing: microeconomic and macroeconomic, credit, etc.
- (2) Composition of the project: establishing independent research and extension departments, media departments, etc.
- (3) Structure of the organisation: relation to the target groups, management, guidelines for decision making, areas of responsibility and communication within the organisation, planning procedures, etc.
- (4) Equipment and staff: the personnel required, materials, buildings, etc.
- (5) Integration in existing organisations: changes in organisational structure, intervention in existing areas of responsibility, etc.

**4. Subject of survey: complementary institutions**

- (1) Research and training: applicability of research in the locality, relevance to small farmers' systems, qualifications of trained staff, motivation to work in the agricultural sector, etc.

- (2) Farmers' associations: cooperatives or self-help organisations or informal groupings.
- (3) Marketing facilities: capable of handling the produce of small farmers – small quantities, poor infrastructure, etc.
- (4) Credit: traditional savings groups, rotating credit systems, bank finance, etc., and their appropriateness for small farms.
- (5) Administrative/political institutions: participation in setting the aims and implementing the project; willingness to cooperate, financial and personnel/material support, cooperation with the target groups, etc.

#### 5. Subject of survey: participation

- (1) The extent to which the target or sub-groups can be reached and mobilised: communication channels, how to address them (dialects, level of education, behaviour of advisers, etc.).
- (2) Risk situation of the target groups: dependence on physical or social factors (landlords, traders, etc.).
- (3) Specific obstacles for target groups: political or social barriers, economic barriers, motivation and level of know-how.
- (4) Social and political ability to articulate their own interests and problems.
- (5) Willingness and ability of participating organisations to involve target groups: methods of participation, schedules and locations, areas of responsibility, etc.

#### 6. Subject of survey: target groups' scope for action

- (1) The connection between the whole process (the content of extension and measures) and the social and individual abilities of the target groups.
- (2) Ecological compatibility: the possibility of integrating innovations in traditional cropping systems, the reliability of recommendations.
- (3) Socio-cultural suitability: benefit to the target groups, increasing their ability to take action, reduction of constraints, relative freedom from conflict, etc.
- (4) Political and legal acceptability: land tenure system, autonomy of the relevant groups, etc.

- (5) Link with traditional forms of organisation: extended family groups, mutual neighbourhood help, etc.
- (6) Taking account of all members of the target group: women, men, young people, etc.
- (7) Effects on sub-groups and other associations in the existing social system.

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### Checklist of assumptions about the extent and speed of the diffusion of innovations

During feasibility studies or the ongoing planning of extension measures, certain assumptions are made about the speed with which innovations spread. These studies must make a special point of listing and examining the following issues:

- (1) Is the extension organisation able to convey the innovations to the target group?
- (2) In what way were the target or sub-groups involved in formulating the measures? Is there any competition between targets?
- (3) What relations currently exist between advisers and target groups?
- (4) Are the target groups already familiar with the innovations in principle?
- (5) What changes in behaviour and learning processes are called for by the innovations? To determine their complexity, list the changes that will be necessary.
- (6) What material or social risk is involved in the innovation or package of innovations?
- (7) What are the benefits of the innovation in material, social or personal terms (for example reduction of workload)?
- (8) Have the consequences of changes in the division of labour (social and between the sexes) been discussed with the target groups?
- (9) What are the predictions of the speed of dissemination based on (adoption rate)?

The reader is referred to → F 6 for criteria to evaluate innovations.

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## Checklist for evaluating innovations

In feasibility studies or continuous planning, priority is often given to collecting data for an economic evaluation. But this is only one of many aspects. An extension-oriented situation analysis or operational plan must, if it is to follow the procedure we recommend, answer the following questions with the use of empirical evidence wherever possible:

- (1) Can the measures help to reduce existing inequalities (or at least not make them worse)?
- (2) Are they beneficial at both microeconomic and macroeconomic levels, and can they be financed within the project?
- (3) Are they technically feasible with the given target group, i. e.
  - does the target group have the necessary tools and equipment,
  - the required know-how and the practical skills to cope with the measures,
  - or can these preconditions be created?
- (4) What is the current method of problem solving? What methods are being used and why? What insights, what learning processes, what adaptation are called for as the target group moves towards adoption of the innovation?
- (5) Are the measures socially acceptable, i. e. do they fit the existing system of norms and values in a particular culture?
- (6) Who is affected directly and indirectly by an innovation?
  - What reactions do we expect if an innovation is adopted?
  - What reactions are likely in the case of failure?
- (7) Can the measures be coped with organisationally?
  - Are the financial and human resources available?
  - Are the institutions/organisations/firms who will have to supply the production inputs both informed and equal to this task?

- (8) Will it be possible to spread the innovation with the active participation of the target group?
- (9) Will it be possible to use existing groups and communication networks in the population to spread the innovation?
- (10) Is the way of communicating the measures (the methodology and the content) adapted to the level of comprehension of the target group?
- (11) Is the proposed measure understood by the population as an answer to a perceived problem?

→ F 5 gives information on checking important assumptions about the extent and speed of the dissemination of innovations.

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## Checklist for selecting contact farmers

Contact farmers are used when innovations undergo practical testing in field trials. In addition to this function, they are the partners of advisers, and in this capacity they pass on information and techniques to other farmers. As representatives of the target groups, contact farmers see that the wishes, proposals and criticisms of the farmers are taken into consideration when extension measures and programmes are formulated.

When contact farmers are chosen, the following conditions should be fulfilled:

### Relation to the target group

- The selected farmers must not be different socially or economically from the target group.
- Contact farmers must be identified in every target group.
- Contact farmers must be integrated in the target group in terms of caste, family, religion, tribe, etc.
- They must have the same basic agricultural practices and the same level of production factors as the farmers in target groups.
- Innovative farmers who have moved into the area are not usually integrated and are therefore unsuitable as contact farmers.

### Status

- Contact farmers should have sufficient status in the target group to help counter the sanctions that could be applied when somewhat unconventional innovations are tested.
- It is a great advantage if the contact farmers have sufficient status for the target group to accept their role in testing innovations.
- Great care is necessary if people are brought in from outside the village society, even for setting up field trials.

### Communication

- The farm should be suitably located to give easy access to the maximum number of target group members.

- Contact farmers should always be socially integrated and outgoing personalities.
- They must be willing to establish and maintain communication with farmers and institutions.

#### Know-how and skills

- A good formal education is an advantage but must not be a condition.
- More important than formal education is the willingness and ability to take in new ideas and information.
- They must have the ability to carry out trials and interviews correctly (time, content, observations).
- Contact farmers must be capable of advising farmers and giving them factually correct information and advice at the right time. They must also be in a position to interpret farmers' reactions correctly.
- An important precondition of selection is the willingness to undergo further training, either by means of courses, training by the adviser or with the aid of brochures and information circulars.

#### Personal characteristics

- Contact farmers must not be motivated simply by personal advantage, such as the cost-free provision of operating funds or transport.
- The development aid organisation should be able to rely on agreements being kept.
- Contact farmers should always behave in solidarity with the members of their target groups.

#### Selection procedure

- (1) The field advisers are the people who are most likely to know suitable individuals. The field advisers should be told about the requirements at a seminar.
- (2) The field advisers and the representatives of the target group organisations jointly nominate suitable individuals. If necessary, a brief sociometric survey should be undertaken (→ E 4).

- (3) The people chosen by this preliminary selection procedure undergo training to prepare them for their role as contact farmers.
- (4) There must be no element of compulsion when individuals are selected. It must be made quite clear to the contact farmers that their new role will entail extra work. Not until this point is a final decision made regarding who will participate in the programme.
- (5) The contact farmers should be suitably recompensed for significant costs in terms of time or money that they incur by working for the extension organisation. But it is imperative not to give the impression that contact farmers enjoy special privileges.
- (6) Contact farmers require constant, careful back-up in the form of:
  - preparatory courses;
  - regular training;
  - participation in advisers' discussions;
  - visits by advisers and specialists;
  - brochures and books.

See also the information given in → C 6 and → E 4.

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## Points for the field adviser to bear in mind when forming village committees

### Introduction

The keywords and information in this paper can be regarded by the adviser as examples when he is called on to form village committees. They have to be explained to the target groups in great detail. There is little point in expecting functionaries to take charge of newly created committees unless they have been trained and are supervised (→ D 4).

### 1. What is a committee?

A committee is a group of people who are elected by the village with the agreement of the village head. The villagers select these individuals because they are considered capable of representing the interests of the whole village in the community and in dealings with the outside world. The committee endeavours to improve the living conditions of all the men, women and children in the village.

### 2. What should be the functions of the committee?

It is the job of the committee to examine critically the situation of the village and its inhabitants and to consider which of its problems could be solved by the village itself.

- What problems exist in the village?
- Are the houses in good repair?
- Is enough food produced?
- Is enough clean drinking water available?
- Are the children well fed and healthy?
- Are there any schools?
- Are the women overworked?
- Is there adequate health care?
- What would we like to change in the village?
- What can we do about it ourselves?

### 3. How does a committee work?

- The chairman calls a meeting for a specific purpose (at least once a month) and draws up an agenda with the functionaries.
- The village committee invites other individuals to take part in the discussions, if it is deemed necessary, e. g. the field adviser, the domestic science adviser, the local party chairman, the health inspector, the teacher, etc.
- The committee may first discuss a problem and then propose a solution. If, for example, a new plant disease has been spotted, the adviser is called on to suggest remedies.
- For his part, the adviser will introduce new methods to the committee members, tell them about opening times of markets, give out posters, etc.

### 4. Duties of the committee members

#### Chairperson

- he or she is the spokesperson of the committee;
- convenes the meeting;
- invites guests and introduces them;
- ensures that all the participants have a chance to speak;
- makes the final decision if opinions are divided;
- makes sure that the areas of responsibility for adopted measures are clearly defined;
- sees that decisions are minuted;
- represents the village committee on the higher level committee;
- can be removed by ballot at a village meeting, if he fails to carry out his duties.

#### Secretary

- minutes the decisions of the committee and reads them out at the next meeting;

- keeps minutes, letters, brochures, etc., in files and makes them available to the villagers if they wish to inspect them;
- tells all committee members about deadlines and any information received, and if there is a noticeboard in the village he is in charge.

#### Treasurer

- administers money being paid out and received (cash book);
- issues receipts and records outgoings;
- has payments authorised by the committee;
- opens a bank account and administers it;
- must at any time be able to inform the committee of the current balances and the flow of monies;
- draws up the balance sheet at the end of the year.

#### Duties of all committee members

- to inform the villagers about decisions;
- to advise and train the villagers;
- to discuss current problems with the villagers;
- to support decisions taken by the committee, even if they do not personally agree with them;
- to help the field advisers and other field staff to carry out development programmes.

### 5. The behaviour of advisers towards village committees

- Committee members should always be treated politely and with respect by the adviser.
- If an adviser wants to say something at a committee meeting, he must ask the chairperson for permission to speak.

- If an adviser introduces a new extension programme at a meeting, he must prepare himself carefully and, where appropriate, hand out brochures.
- If he comes across resistance at meetings, he must never use pressure. He must take objections seriously, try to understand the reasons for them and deal with them objectively.
- When measures are to be implemented in the village, he must always inform the committee in advance about content, location and timing.
- The adviser can only expect help with his extension work if he succeeds in building up trust and friendly relations with the committee members.

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## Points to bear in mind when preparing and conducting individual extension talks

**Basic principles and advice:**

- (1) On account of the high time input, individual extension work has to be planned particularly carefully. Wherever possible, the farmer or his wife should be informed in advance about the adviser's visit. A visit to another farmer should also be planned in advance or another activity held in reserve in case the extension talk has to be called off for reasons of sickness, bereavement, celebrations or family matters.
- (2) The relationship between the adviser and farmer may suffer if an appointment is arranged and then not kept. If this happens for reasons beyond the control of the adviser, he should try to tell the farmer as soon as possible why he did not appear. An apology after the event is better than simply not turning up or offering no word of explanation.
- (3) The adviser must prepare carefully for every single extension visit and take note of the following points:
  - He should recapitulate previous visits. What questions and problems were addressed? What solutions were worked out?
  - What questions can be anticipated? What solutions can the adviser propose?
  - What written materials and extension aids must he bring with him?
  - What practical demonstrations could be required?
- (4) The adviser must pay due regard to tradition during extension visits, for example addressing words of greeting, typical courtesies, prayers, eating and drinking. The adviser must be very careful about accepting presents, since both acceptance and refusal can be problematic. Requests to attend drinking sessions should if possible be refused.
- (5) The adviser must be careful about how he uses information that he collects during extension talks. He must not give people the impression that he passes on rumour and gossip.
- (6) He should make brief notes of his discussion to remind himself of action to be taken and further visits to be made.

- (7) If the adviser makes promises that he cannot keep, like sending extension materials or negotiating credit, the effects can be disastrous. The basis of trust is destroyed, which is particularly serious in the case of contact farmers or representatives of the target group organisations.

### Techniques of conversation management

- (1) The adviser must create an atmosphere in which the farmer does not feel he is there to beg favours or to receive orders.
  - (2) The adviser must not behave submissively or arrogantly.
  - (3) It is often not customary in traditional societies to restrict discussion to practical issues. On the other hand, time is at a premium for the adviser, who must therefore try to find a middle way.
  - (4) The adviser should listen attentively, not lecture the farmers; he should not constantly interrupt or give the impression that he knows best.
  - (5) Discussions should never begin with criticism; if he detects resistance, he should never try to overcome it with complete and final solutions. He should try to find the causes of problems by asking searching questions and then work out ways of solving the problems with the farmers.
  - (6) The adviser should never encroach on the private lives of farmers or taboo subjects. If he makes this mistake, the value of future extension discussions will be reduced, or they may not be possible at all.
  - (7) The farmer seeking advice should always have the feeling during a discussion that the adviser is genuinely interested in his problem and in finding a solution. But the adviser must be careful not to take the side of the farmer, especially when the issues are not his responsibility and beyond his power to decide. He must pass on problems to the appropriate level if he cannot find solutions himself.
  - (8) The adviser should not decide on a particular solution immediately but must give his client the opportunity to discuss and weigh up the solutions with his family, the group or at village level.
  - (9) All extension talks should be concluded on a positive note. Even if the discussion has not produced a solution, it is nevertheless important to decide how to carry on working towards a solution.
- E 5 and → F 10 give further information on extension talks.

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## The advisory process: questions for guidance

### Making contact and initial assessment of the situation

Contact is made either because farmers approach the adviser or the adviser himself takes the initiative.

When the adviser first makes contact, he must make every effort to establish good relations. By means of discussion ("active listening"), observation and investigation, he gets an initial impression of the situation and problems.

From the point of view of the adviser, extension is a process consisting of four main phases (situation analysis, planning, implementation and evaluation of results). Sometimes phases or parts of the extension process have to be repeated.

### Situation analysis

- (1) Have the basic data relevant to the situation been collected (household, family/people, farm, social environment)?
- (2) How does the adviser see the situation and future developments, what basic problems are responsible for the given situation and what are the causes of these problems?
- (3) How do the people affected by the problems see their own situation and future development, to what extent do they understand basic problems and causes, and what aims or scope for action do they have and what difficulties (obstacles) do they see?

### Problems

- (4) What solutions and scope for action exist and what can actually be achieved?
- (5) What advantages, disadvantages and consequences would the various alternatives have for population, and in what way would they have to change their behaviour?
- (6) How can the population be actively drawn into the extension process, will colleagues also be involved and what should the extension approach be (extension concept)?

**Implementation (and decisions by the extension partners)**

- (7) Is the whole target group included in the extension process, and are they being taught in a manner that is appropriate to their situation which often means using a phased, gradual approach to appreciate the problems and their causes in the current circumstances, the probable developments, the action they could take and its consequences?
- (8) Is it made clear that the decision is theirs and that they bear the consequences?
- (9) Once one of the alternatives has been selected (decision), is the approach worked out jointly in such detail that the chosen path can actually be followed, and will implementation require the adviser's follow-up?

**Evaluation of results** (intermediate evaluation for each phase is also very useful)

- (10) Is the adviser able to recognise differences between the actual extension process and the planned process (and if the deviations are significant, to record them), and are conclusions drawn from this appraisal for the case in hand, and possibly also for future extension endeavours?

**Source:**

Peter DENZINGER: Organisationsfragen der landwirtschaftlichen Officialberatung. In: Bericht über Landwirtschaft 59, pp. 93 – 104.

**Compiled by:**

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**Checklist for preparing and running a meeting during a campaign****1. Planning**

- What information is to be communicated?
- Is a meeting a suitable method?
- What other methods could be used?
- What are the reasons for and against a mass meeting?
- Are the measures:
  - of direct appeal to the target group?
  - unattractive?
  - useful only in the long term?
- Are the target groups involved in formulating the information and drawing up the programmes?
- Has the right time been chosen for the meeting?
- How is participation by the target group being achieved:
  - early invitation;
  - influential individuals passing on information;
  - announcement in the media;
  - inviting popular speakers;
  - attractive events (music, theatre, lotteries with prizes)?
- Is there enough money to finance the programme?
- Is participation by local decision makers guaranteed?
- Have the messages in the various speeches been coordinated?
- Have the transport problems been solved?

## 2. Duties of the participants

### The extension service

- informing radio stations;
- informing the chairmen of all village committees, village heads and party functionaries about the meeting;
- preparation of equipment and visual material for a demonstration;
- providing leaflets and loudspeakers;
- coordinating leaflets and loudspeaker announcements;
- preparing the speech to be given by a senior adviser;
- organising field advisers to marshal the crowd;
- distributing leaflets.

### Farmers' representatives

- inviting the local population to take part;
- preparing the meeting place (setting up benches and chairs, providing drinking water, sanitary facilities, etc.);
- crowd control;
- preparing the speech of the farmers' chosen representative;
- inviting local dancers and musicians.

### Traditional and modern functionaries and dignitaries

- information gathering and inviting the people via existing organisational networks (parties, administration, clubs);
- preparation of speeches;
- help with transport and finance.

### Complementary institutions (credit, marketing, etc.)

- provision of information material;
- help with transport;
- help with finance;
- preparation of speeches.

## 3. Implementation (example of how a meeting could be organised)

9.00 Everyone sets out for the meeting

9.30 Local dances by various groups

9.45 Prayers

9.50 Opening speech by the head of the local administration

10.00 Main speaker (minister, member of parliament, etc.)

10.30 Speech and demonstration by the extension service

11.00 Acknowledgment of outstanding farmers' representatives

11.15 Local dances and music

11.30 Speech by a representative of the farmers

11.45 Lottery with prizes

12.00 End of meeting

When running a meeting attention must be paid to the following:

- keeping to the schedule;
- speeches to be easily understood;
- programme items to be of limited duration and closely coordinated;
- people given the opportunity to ask questions after every speech;

- observing the reactions of the participants;
- using any aids and resources available.

#### 4. Follow-up measures

Analysis of the results of the meeting by means of:

- weekly discussions with advisers;
- target group organisations;
- evaluation department;
- identifying the need for supplementary measures, like field days, group demonstrations, further training programmes for target group functionaries, use of the media;
- any changes necessary in further meetings during the current campaign.

#### Compiled by:

Gerhard PAYR, Rolf SÜLZER

## Checklist for using media

When media are used, they must be adapted to the situation of the target group. In each individual case we have to decide how best to adapt the media and the message.

The checklist below consists of groups of questions and individual questions that have to be worked through in the project. They help to reveal the facts of the situation. The best method is to take several sheets of paper, write at the top which of the media is being checked, for example "slides", and then go through the list, noting answers and problems. The five groups of questions deal with "aims", "general conditions", "rationalisation effects", "adaptation to target groups" and "situations".

### Group 1. Aims

- Has the content been clearly delineated and how does it relate to the aims of the whole project?
- Should the attention of people in the target group be drawn to any particular facts?
- Is the object of the media input to mobilise and motivate?
- Are the media being used as a means of stimulating activity on the part of the target group?
- Is the aim to show processes and events over time?
- Is the intention to give concrete help to solve problems?
- Do certain innovations require technical or social back-up?
- Do the objectives of the media input seem operationally feasible, and will we be able to check that they have been achieved?

### Group 2. General conditions for the use of media

- Are the conditions satisfactory in terms of organisation, time, finance and personnel?
- Are there enough media staff, equipment and materials available to reach the members of the target group?

- Do all the people in the target group have radios or access to radios?
- Is special building work necessary before information media can be used (rooms, seats, etc.)?
- Can the planned media be easily transported to other locations?
- Are technical facilities available for use by media staff at each location?
- What is the quality of the repair and servicing facilities?
- Are there any special requirements regarding storage (dust, heat, humidity, etc.)?
- Are there any special requirements regarding the production of media aids (experts and foreign teams necessary, or can they be produced without outside help)?
- Is electricity necessary?
- How complicated is equipment to operate? Are experts needed?
- Are already available media facilities being fully utilised?
- Who decides on the use of media (who controls access to media)?
- How much and what kind of pre-testing is necessary?
- Is the media service connected organisationally or through its personnel with the target group?
- Can the target group influence the content and the input of media?
- What is the level of training and qualifications of the staff using media?

### Group 3. Rationalisation effects created by the use of media

- Can the media be reproduced (how often)?
- How long and how safely can the material be stored (under what conditions)?
- Are the materials always available (for which individuals, under what conditions)?

- Is repetition possible (for the same target group, at the same place)?
- What are the costs of equipment and materials (total and per head of the target group)?
- What are the costs of producing films, slides, broadcasts, etc. (total and per head of the target group)?
- What costs are created by the dissemination process (personnel, transport, etc.)?
- How big is the target group?
- Do the members of the target group really have enough in common to be reached by a single means of communication?
- Are the people in the target group already in touch with each other (through cooperatives, self-help groups, village communities, etc.)?
- Are there already multipliers who can be approached to spread the message among the target group?
- Are existing multipliers being supplied with supplementary information (individuals or institutions, e. g. branches of cooperatives, hospitals, etc.)?
- Have tests shown that the planned media are useful and effective? Have the right methods and messages been chosen for communication, i. e. does the target group talk about them?
- In summary: are the media really more cost-effective, and is the learning effect greater than the use of manpower alone?

### Group 4. Adaptation to the target group and to problems

- What are the criteria for determining the content?
- What methods have been used to test the material in the target group (with what results)?
- How is the media input evaluated (the methodology and the content; what are the criteria of success or failure)?
- Have the best methods of communication been chosen, bearing in mind the target group and their problems (give reasons)?

- Are moving pictures necessary?
- Is it necessary to use colours?
- How faithfully is reality reproduced?
- Is the target group able to form opinions about the messages?
- Are their opinions noted and taken into account when the media are used again?
- Has the material been specifically developed or appropriately adapted for the recipients and local conditions?
- Is the training of the media staff relevant to the problems and the situation?
- Is the content concrete or abstract?
- Do the solutions shown to the target group really correspond to their scope for action, given their material, psychological, social and political constraints?
- How and where is information about the know-how, the practical skills and the motivation of the target groups stored (who is it available to) (→ C 2)?
- How do communicators and members of the target group work together (place, individuals, topics)?
- How is an information unit produced? What is the production process in detail?

#### Group 5. Adaptation to various situations

- Does the use of media depend on the seasons (technically or in terms of the content)?
- Can the information be easily adapted to new situations?
- Is the use of media tied to instructors?
- How are language barriers overcome (several dialects in a small area)?
- Can the media be adjusted and adapted (after the first time they are used in the field)?

- What transport is required?
- Can the media materials be reproduced at local level (in local studios, by existing staff, etc.)?

#### Bibliography:

Rolf SÜLZER: Medienstrategien und Entwicklungspolitik. Anwendungsbezogene Forderungen für Medienprojekte im ländlichen Raum. In: Rundfunk und Fernsehen, 28, 1980, pp. 55 – 69.

Rolf SÜLZER: Information Systems for Propagating Rural Innovations in African Countries. Audiovision Workshop 1979, pp. 55 – 79 and Appendix I – XII.

#### Compiled by:

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**Presentation and structure:  
examples and suggestions**

## Data plan for the situation analysis – sub-section extension

Discussion of methods	Reason for and use of data	Method of data collection <sup>3</sup>	Accuracy <sup>4</sup>	Survey carried out by:	Timing
Subject of survey <sup>1</sup>					
B 1 Level of know-how in the target groups	Point of contact for extension measures, creating demonstration programmes and media input.	Group discussion, interviews and observation, tests using pictures, evaluation of secondary material.	If no new crops, etc., are introduced, a good knowledge of traditional methods is essential for making improvements.	Trained experts for group discussion and observation. Trained interviewers for surveys in larger agricultural regions.	Essential before deciding on extension measures.
1.1 Technical knowledge of plant and animal production					
1.4. General level of education, formal and informal socialisation, learning processes <sup>2</sup>	Basis for creating extension aids and deciding on extension methods, especially group work.	Tests using pictures and texts, observation of group behaviour, intensive discussion with individuals and personal accounts of lives, secondary material.	A general assessment is sufficient at the beginning. It must be made more specific as tests and measures are carried out.	Trained experts. During implementation advisers carry out this job with the help of already formulated criteria for observation.	Essential before deciding on extension measures especially when using contact farmers; continuous.

1 The subjects of the survey are taken from paper → F 4.

2 Socialisation is the process of learning how to relate to people, animals and things; behaviour patterns are formed.

3 The choice of methods of data collection also depends on the quality of the secondary material.

4 Accuracy largely determines the time, personnel and financial requirements. Limited finance has a direct effect on the practical design of the survey.

Compiled by:

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## Suggested structure of feasibility studies for extension

We can only create the right conditions for successful extension work and problem solving by target groups if we can answer the following questions as early as the feasibility study stage:

### 1. Detailed identification of problems:

- the circle of individuals (and groups) who have the problem and who are aware of it (politicians, experts and organisations, small farmers and their families, large-scale farmers);
- description of the undesirable existing situation, i.e. concrete, if possible quantifiable details of the current scope for action and the use of resources by the target population;
- deciding what the target situation should be, i.e. analysis of the developments in living conditions and specifying objective targets (resource potential) and subjective targets (desirable from the point of view of the population); discussion of "unrealistic" expectations and aims;
- definition of obstacles (physical and/or economic, cultural, social, political barriers) that stand in the way of target attainment.

### 2. Discussion of general conditions

- details of the methods of problem identification: people involved, method of enquiry, discussions with politicians, local sponsoring institutions, target groups;
- definition of who is **affected directly or indirectly** by the problem (for example traders, large-scale farmers, institutions);
- estimating the urgency of the problem and stating the reasons for giving priority;
- analysis of solutions already tried (resources, the people involved, the degree of success).

### 3. Formulation of basic solutions

- demonstrating how the obstacles identified can be systematically tackled;
- description of who can profit from the proposed solutions and how;
- discussion of possible reactions by other groups or of changes in the ecological system; discussion of anticipated new problems.

### 4. Deciding the extension methods

- levels of discussion with the target groups;
- methods of communication in extension work;
- participation of target groups in decisions;
- coordinating the approach with everyone concerned (politicians, authorities, development aid organisations) to ensure agreement and active support;
- deciding the methods of monitoring and control.

### 5. Drafting the extension concept

- reasons why the extension approach will be conducive to a largely independent (autonomous) and rapid spread of innovations; changes in the behaviour of the defined target group;
- exploiting and systematically influencing the existing scope for action of the population;
- methods of actively involving the target population in planning and above all in the final drawing up of programmes.

**Compiled by:**

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## Excerpt from a card index of terms

We can learn much about a culture, perception, thinking and actions from how a language is used to describe and to differentiate between concepts. Thus it is advisable for all foreigners to note the major terms in the local language in their specialist areas and to compile a card index of these expressions. They should do this even if they are unable or unwilling to acquire a thorough knowledge of the language. The following example is taken from an index of terms relating to social organisations in Yemen.

ain, pl. ayyan  is the head of a production unit; but in the plural the word refers to village elders, heads of extended families.	bayt  also refers to such an extended family but refers more to the place, is often used as a name and is a kind of honorary title of an extended family (badanah).
'aquil, pl. 'oqual  is the chairman of a village; he is elected by the meeting of ayyan who as heads of extended families represent them.	qebar  is the word used to denote the "important people" in the settlement; it is not a family relationship.
badanah  means members of a tribe, who live in one place (extended family). It is an association of core families (asrat).	shaykh, pl. mashaykh  denotes the leader of a tribe, tribal area or sub-tribe; but it is also the most common term used for "leader" in general. (For example, shaykh al qaryah = leader of the village; shaykh as-suq = responsible for running the market properly).

**Compiled by:**

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### Example of a routine report form for a target group organisation

Target group organisation ..... Extension territory .....  
Place ..... Field adviser .....

1. Comments on the current extension programme:

1.1. The majority of farmers find the current extension work:

- satisfactory
- satisfactory in some aspects only
- totally unsatisfactory

1.2. Reasons for dissatisfaction with extension:

.....  
 .....  
 .....  
 .....

1.3. Suggested improvements:

.....  
 .....  
 .....

2. Other suggestions, wishes, complaints, problems of target group organisations:

Date .....  
Signature of the target group representative

**Note:** This report should be given to the senior field adviser every month. A copy remains with the target group organisation.

**Compiled by:**

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## Example of a circular on the introduction of improved weeding

### The context

In close cooperation with field advisers, target groups and research stations, a project developed and tested improved weeding techniques. A newly developed hoe was shown to be superior in all respects to the traditional hoe, so that its introduction in large numbers was included in the extension programme. The field advisers were prepared at a two-day course for the campaign to introduce new weeding methods. We now reproduce the brochure that was issued to help advisers to carry out extension discussions and demonstrations.

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No. 21

Extension circular

March 1980

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### Introduction of a new weeding hoe

#### (1) Reasons for introducing the new hoe

One of the greatest problems experienced by our farmers is coping with the peak in labour demand caused by keeping the fields free of weeds. Many farmers get behind in this work, resulting in fields full of weeds, poor and retarded crops and little benefit from the use of fertiliser. The low yields mean a shortfall in food production and a lack of profitability in cash-crop cultivation.

Techniques must therefore be found that enable farmers to keep up to schedule with their husbandry. The new hoe is one such tool. After being successfully tested by selected farmers, it is now going to be introduced on a wide scale.

#### (2) What are the advantages of the new hoe?

- With the new hoe, farmers can save 40% of the time spent using the traditional hoe.
- The work is less tiring, since the new hoe is only half the weight of the conventional hoe.
- Work in the fields is therefore much easier, especially for women and children.

- The hoe will last 2 – 3 years, because it is made of a particularly tough material that can still be worked by the local blacksmiths.
- Despite being made of better material, the hoe does not cost more than the traditional hoe.

(3) What are the general points to note in weed control?

- Hoeing should be started when the weeds are 2 cm high; while weeds are still low the work is easy and quick.
- Schoolchildren can help with weeding.
- Weeding has to be repeated until the crops can suppress weed growth.
- Cut weeds should be used as soil cover.

(4) How should the hoe be introduced?

- From now on every field adviser must keep the demonstration hoe with him (tying it to his bicycle with the hoe end pointing backwards).
- The first step is to train all contact farmers by means of a demonstration if they are unfamiliar with the new hoe.
- After the training session, the contact farmers are given a free hoe by the adviser, so that they can carry out their own demonstrations. They can buy more hoes at the standard price of 20 Escudos.
- The contact farmers must be encouraged not to use any other hoe when weeding.
- At first, the field advisers must help the contact farmers at demonstrations and observe the reactions of the farmers.
- The advisers must show the hoe to the farmers during the current programme of demonstrations at field days.
- The new hoes are recommended with the help of the film vehicle, the radio and posters.
- Local blacksmiths have already been shown how to repair the new hoe at a training session in the village crafts school.

(5) How can farmers get the new hoe?

- The hoes are obtainable at all the distribution outlets of cooperatives.
- The cash price is 20 Escudos, which is normally not beyond the means of the farmers.
- For this reason hoes are only available on credit if bulk orders are placed by village committees. At least 10 hoes have to be ordered. The credit applications are checked by the field adviser and passed on to the credit inspector who issues a letter of credit. This is given by the adviser to the village committee, who can then get the hoes from the cooperatives. The price of a hoe bought on credit is 24 Escudos.

(6) Possible difficulties

Even though the hoe has been tested for more than a year, unforeseen problems might occur. All field advisers must therefore note the reactions of the people using the new hoe and report positive and negative observations at their weekly discussions or inform their immediate superiors straight away.

**Compiled by:**

Gerhard PAYR, Rolf SÜLZER

### Example of calculating the time needed for demonstrating a portable spray

Mistakes are often made when the time required for a job has to be estimated. People usually underestimate the time to be spent on development measures, resulting in unrealistic programmes and targets that are impossible to achieve. Consequently, field advisers and the benefit of their experience should be included in the planning process.

The following example draws on the method described in → E 7; it gives a detailed breakdown of the demonstration and draws attention to problems of time input.

Activity	Time spent (minutes)
1. Contact farmer passes invitation to a group of 10 – 15 farmers:	
– journey to the village by bicycle	30
– the contact farmer announces the object of the demonstration and arranges the time, place and participants	30
– return journey	30
Subtotal	90
2. Carrying out a demonstration	
– journey to the demonstration	30
– preparation of equipment	15
– explaining how it works	30
– preparing the insecticide solution	15
– demonstration of spraying	15
– participants operate the equipment	45
– discussion and information	30
– return journey	30
Subtotal	210
Total 1 and 2	300

If there are no contact farmers, the adviser must inform the farmers individually. This could obviously take much more time. Noticeboards should only be used when extension has been successfully introduced and the level of literacy is high.

The breakdown shows clearly how much time is spent on individual activities. If 300 farmers per adviser are supposed to adopt the portable spray, the problem of time becomes obvious.

Rationalisation can be achieved by:

- demonstrating to a larger group;
- the adviser carrying out the first demonstration only; further demonstrations and explanations are then given by the contact farmers;
- linking demonstrations to extension discussion or other events;
- handing out simply and clearly illustrated leaflets.

Bottlenecks are caused by the fact that many demonstrations are tied to specific seasons and have therefore to be accomplished in a short period of time.

**Compiled by:**

Gerhard PAYR, Rolf SÜLZER

### Example of the personnel requirements of a regional agricultural administration in Malawi

The following information is taken from the "Management Unit Liwonde", Malawi 1979. It undertakes the planning, implementation and evaluation of eight rural development projects with a total of about 1.1 million people.

	Qualifications		
	No. of management staff	No. of technical staff	No. of field and auxiliary staff
1. Manager of the regional administration	1		
2. Head of the Extension Services department	1		
- farm economics	1		
- plant protection		1	
- wildlife control		1	
- animal husbandry	1	1	2
- special crops	2	2	
- domestic science	1		
- stores management	1		
- extension aids		1	5
- training and further training	1	2	
- forestry	1	1	
- marketing	1	1	
- credit	1		
3. Head of the rural services department	1		
- rural institutions	1	1	
- evaluation	1	3	52
- land development	2	4	
- experimentation	1		
4. Head of the finance department	1		
- book keeping	1	2	7
- credit accounting	1	1	4
5. Head of the department of administration	1		
- personnel		1	1
- transport (including drivers)		1	27
- stores		1	1
- registry		1	3
- administrative staff of the department			17
- auxiliary staff of the department			11
Total required	22	25	130

**Compiled by:**

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### Three examples of structuring work programmes for field advisers

#### Example of a weekly programme for field advisers

week: . . .

month: . . .

Project: . . . . . Extension territory . . . . . Field adviser: . . . . . year: . . .

Day	Location (village)	Duties	Notes	Comments on implementation: (fill in after completion of work)
Mon. 1.11.	Village 1  Village 2	1. Hold a village meeting: – explain the new maize seed – fix dates for issuing seed – announce when the film vehicle will arrive to demonstrate cropping maize and groundnuts  – collect credit applications	Fix date with village committee	– no meeting in village 1 because of funeral, meeting postponed to Saturday morning – credit office had handed out the wrong applications – all committee functionaries informed about film show
Tues. 2.11.	Village 3	as above	ethnic problems in village 3	– Moslems in village 3 did not attend meeting. Spoke with religious leader and informed him about the programme
Wed. 3.11.	Village 5  Village 6	1. Village meeting: – repair of embankments – dates for exchanging seed – bulk order for fertiliser – announcement of the film vehicle 2. Selection of 2 demonstration plots	Villages 5 and 6 grow mainly rainfed rice	– seed requirement village 5: 2 400 kg village 6: 3 850 kg – position of demonstration plots: see sketch enclosed – dates of film show announced
Thurs 4.11.	Village 7	1. Group discussion with local leaders: – explanation of current extension programme – arranging a village meeting for the following week – announcing when the film vehicle will arrive to demonstrate cropping maize and groundnuts	No committees in villages 7 and 8, traditional leaders are against committees	– local leaders agree to found committees – village meeting on 9.11. agreed – date of film show announced – a local trader is selling poor quality maize seed
Fri. 5.11.	Field office	1. Programming 2. Training for the programmes		– applications filled in for internal inspection – no notebooks available
Sat. 6.11.	Village 1  Advisor's house	1. Village meeting, planned as on Monday 2. Training the committee functionaries 3. Administrative work	For villages 1 – 6	– seed requirements: 3 050 kg – all committees were represented



Example of a monthly programme for field advisers

Project: ..... Extension territory: ..... Field adviser: .....  
 Month: .....  
 Year: .....

Measures	In cooperation with	Target (indicator)	Notes	Week				Complementary measures
				1	2	3	4	
1. Programming and further training seminar	Plant production specialists		Every Friday					
2. Introduction of a new maize variety								
- seminar for committee functionaries	Senior adviser	200 farmers should adopt	In week after training of functionaries					Announce date on the radio and notice-boards
- village meeting	Functionaries and village head	1 x 1 x						
- use of film vehicle	Audio-visual specialists	2 shows	select film and slides					Deliver seed on 15th Prepare credit cards
- seed distribution	Credit/marketing personnel	4000 kg 200 small loans	Issue at stores					
- group extension, cropping	Plant production specialists		Extension via committees					

Example of an annual programme for field advisers

Project: ..... Extension territory: ..... Field adviser: .....  
 Year: .....

Measures	In cooperation with	Target (indicator)	J	A	S	O	N	D	J	F	M	A	M	J	Notes
1. Introduction of new variety of maize		Adoption by 40% of the target population													Innovation was demonstrated in the previous year
- seminar for committee functionaries	Senior adviser														About 20 people, once a month Every second month Once a month
- village meetings	Committee functionaries														
- use of film vehicle	Audio-visual specialists														Check availability
- provision of seed	Credit/marketing organisation Specialists	5000 kg seed													
- group extension work on cropping	Specialists	1 per village													Including monitoring
- laying out demonstration plots	Village committees	3 per week													
- field day	Specialists	1 model barn per village													Combine with other activities
- group extension on harvest															
2. Promoting mixed cropping of groundnuts	Research station	3 demonstration plots per village													Benefits proved by field trials
3.															
4.															
5.															
List the measures for all extension activities, as in 1!															
8. Further training															
- 1 week course	Regional training centre														With examination After programming
- 1 day per week	Senior adviser														
9. Holiday															

Compiled by:  
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## Instructional material for creating awareness and for training in the central region of Togo

Following the mobile picture method, we use pictures and shapes that can be moved around the board. To avoid trouble with wind, we use a folding metal board, instead of the common felt board, and the pictures are held on by magnets.

### 1. Examples of picture series: awareness creation Kabyé

This series of pictures is used at the beginning of the annual programme. It is a problem analysis in picture form. It does not indicate solutions but is intended to make people think! Basic information is then given in the subsequent series: "circulation of nutrients" and "soil fertility". It is not until this stage that solutions are proposed!

#### Description of picture series

#### Aims of the pictures:

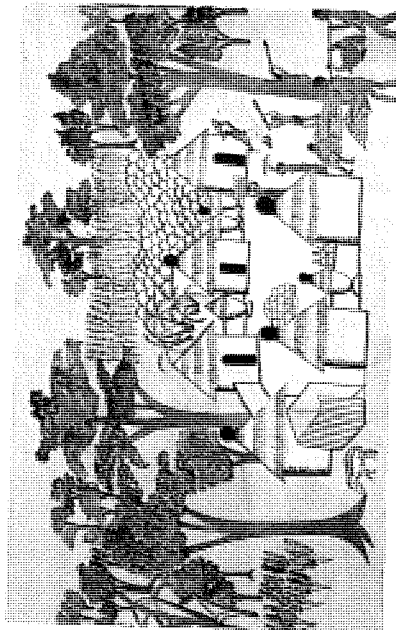
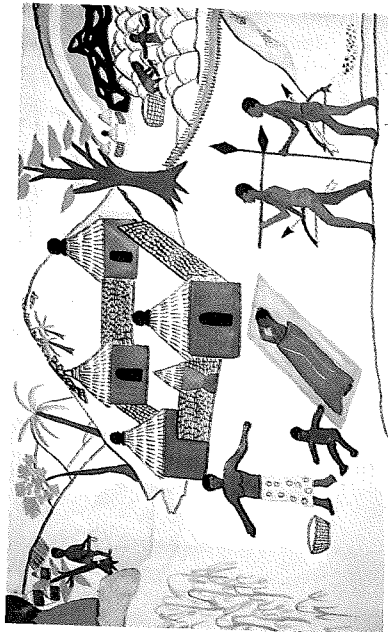
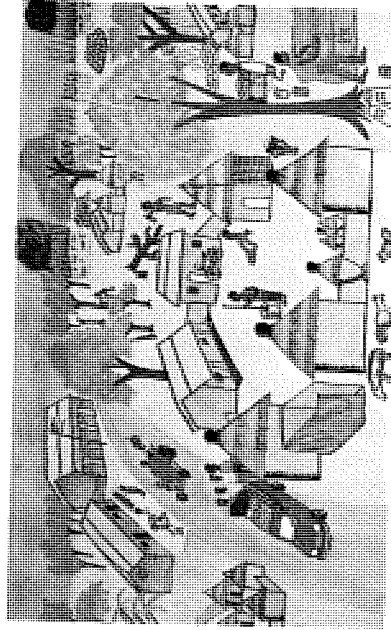
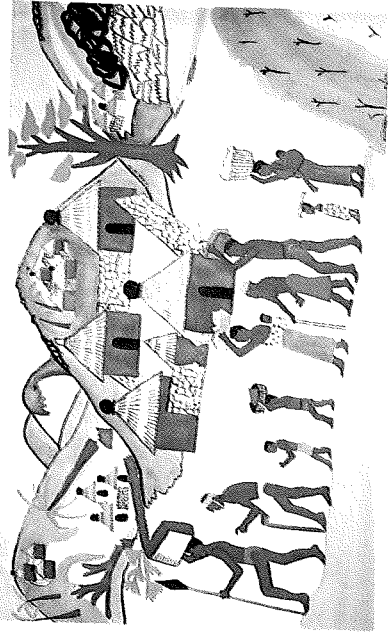
After taking part in training, every participant should be aware that:

- there is only a limited amount of arable land available for each family, each village;
- the environment is changed by the activities of man;
- people can control this change;
- the environment determines men's lives.

#### Picture 1:

The Kabyé family in their place of birth

- poor harvest of maize and sorgho;
- the men return empty-handed from hunting;
- malnutrition and sickness;
- little vegetation;
- shortage of water;



Pictures 1 – 4:

- uncontrolled bush fires;
- life has become very difficult.

Picture 2:

The Kabyé family leave their place of birth

- only sparse vegetation;
- all the trees have been felled;
- more uncontrolled bush fires;
- harvest failure;
- the family has to leave the village.

Picture 3:

The Kabyé family has settled in the central region

- dense vegetation;
- fields close to the house;
- good harvest;
- enough water;
- enough wood.

Picture 4:

The same Kabyé village years later

- improved infrastructure
- increased population;
- fields a long way from the house;
- cropping near the house only possible with mineral fertiliser;

- water shortage;
- young people leave for the towns.

How will life go on?

Will the family have to move away again?

## 2. Example of picture series: creating an agro-forest system

These pictures show how an agro-forest system should be established. This is a series of technical pictures and therefore proposes solutions to some of the problems in the central region.

### Description of picture series

The following is a translation of the text for field advisers that accompanies the pictures.

The series consists of the following pictures:

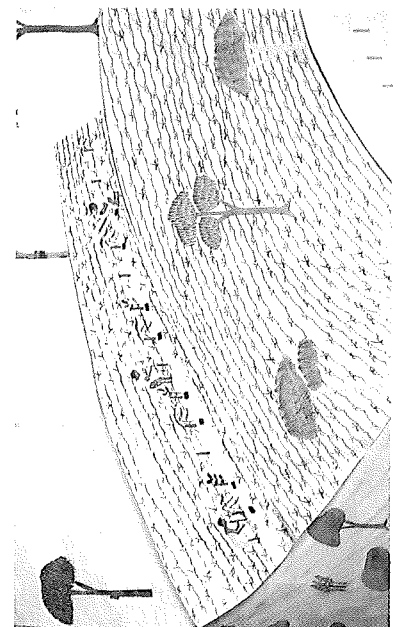
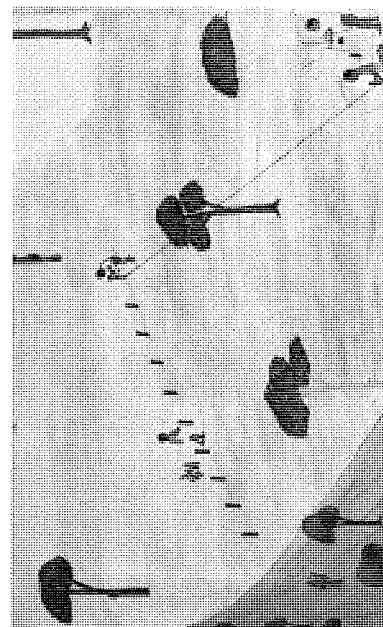
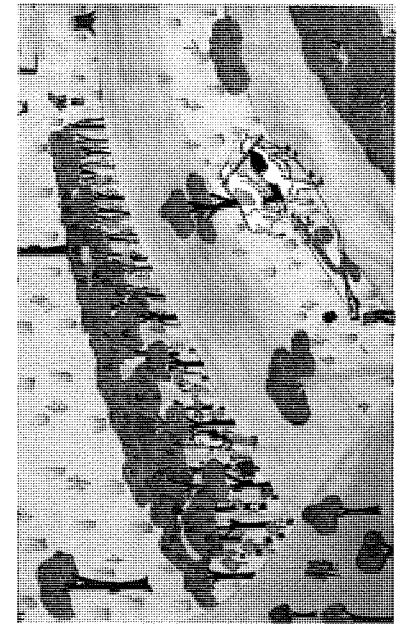
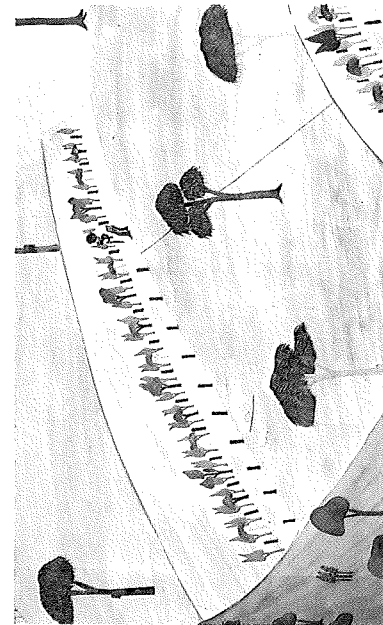
- |                                                    |                                       |
|----------------------------------------------------|---------------------------------------|
| 1. Marking out contour lines                       | 2. Preparing planting holes           |
| 3. Distribution of varieties of tree along the row | 4. Planting and sowing                |
| 5. Protection of trees                             | 6. Phased creation of strips of trees |
| 7. The final agro-forest system                    |                                       |

Pictures 1, 4, 6 and 7 are reproduced here.

### Aims of the pictures:

After training, every participant should know:

- what a contour line is and how it is marked out;
- that it is essential to cultivate along the contour lines;
- why and how a large planting hole is made;
- how a tree is planted correctly;
- that trees can also be sown;
- that cowpeas should be sown between the trees;
- how trees are protected from fire and animal damage;
- how a strip of trees is created in phases;
- what the advantages of a completed agro-forest system are.



Pictures 1, 4, 6 and 7:

## Points to be explained

## Picture 1: Marking out contour lines

- What is a contour line?
- when marking out, begin with the lower side of the field
- mark out the other contour lines parallel to the lowest contour line
- the maximum distance between the lines is 38 m (depending on the slope)
- the distance between trees in the row is 2 or 4 m.
- a pole is driven into the ground where the tree is to be planted.

## Questions put to the farmers:

Why cultivate on the contour lines?

Answers:

- to prevent erosion
- to help water to drain away

After the explanation the adviser uses a dumpy level to show how a contour line is marked out.

## Picture 2: Preparation of planting holes

- there are three way of planting trees:

## 1. Planting trees that have been raised in tree nurseries, e. g.

- Cassia siamea
- Neem
- Kapok
- Acacia auriciliformis
- Tamarind
- Acacia albida
- Leucaena

## Points to be explained

## 2. Direct sowing, e. g.

- Parkia
- Butyrospermum
- Cowpea
- Leucaena
- Blighia

## 3. Direct planting (transplanting), e. g.

- Teak
- The preparation of planting holes is the same whether trees are planted or sown
- The planting hole is made 40 cm x 40 cm one month before planting or sowing.
- It is immediately filled in with good soil and heaped up in a mound 10 cm high. The mound is marked with a stick.

## Questions put to the farmers

Why must the planting hole be made in this way?

Answers:

- the soft soil allows more rapid root growth
- it is easier for water to soak into the soil
- the soil settles over the month and the mound disappears but without forming a hollow
- a hollow must be avoided to prevent the tree becoming waterlogged in the rainy season

## Points to be explained

## Questions put to the farmers

- the soil must be allowed to settle for a month so that the young roots are not damaged.

## Picture 3: Distribution of species along the row

- at least three different varieties of tree should be planted in any row of trees
- they should be distributed evenly along the row
- trees with the same characteristics should not be planted side by side (e. g. trees with large crowns or trees that grow slowly, etc.)

Why should trees be mixed when they are planted out?

Answers:

- to avoid big gaps when they are felled
- to prevent too much shade
- to prevent the spread of disease.

## Picture 4a: Planting

- remove the stick and make a hole the size of the root bale
- carefully remove the plastic sack by cutting vertically with a razor blade or knife
- do not damage the root bale
- when planted, the top of the roots must be level with the ground

## Points to be explained

## Questions put to the farmers

- press the soil round the roots so that it will not sink later
- put cut weeds round the tree to form a layer of mulch
- finally, the pole is driven into the ground 20 cm from the young tree.

Why is it important to plant the tree at the right level in the soil?

Answers:

- too high would mean that some of the roots are out of the ground. The plant can quickly dry out.
- too deep in the soil would mean that the trunk is covered and it would quickly rot.

Why is mulching important?

Answers:

- to retain moisture
- to suppress weed growth

## Picture 4b: Direct sowing

- The farmer himself collects seed for sowing trees
- The farmer must take the seed of a strong, healthy tree of normal proportions
- *Butyrospermum* is sown immediately after being harvested because its ability to germinate quickly declines

## Points to be explained:

- The area round the planting hole is cleared of weeds
- 2 – 3 seeds are put into each hole near the stick
- The seeds are set 3 cm below the surface of the soil
- The different species are sown alternately

## Picture 4c: Direct sowing of cowpeas

- Cowpeas are sown with 2 – 3 seeds in each hole
- Cowpeas are sown every 80 cm in rows of trees 4 m apart. Thus there are 4 seed holes between every two trees.
- Where the distance between trees is 2 m, a single planting hole is made between every pair of trees.
- If cowpeas are sown in a fallow, a 60 cm strip must be weeded.

## Questions put to the farmers:

Why should cowpeas be sown?  
Answers:

- to mark the rows of trees
- as a food and fodder crop.

## Picture 5: Protection of trees

- Weeding round the trees is carried out at the same time as crops are weeded.
- The whole row must be protected by a cleared fire strip.

## Points to be explained:

- Each tree must be protected from animal damage by a fence (e.g. sorgho stems, branches, palm twigs) or by smearing them with dung.

## Questions put to the farmers:

Are there other ways of protecting trees?

## Picture 6: Phased creation of strips of trees

- The farmer can plant with the following distances between the rows:
  - one row
  - two rows with 2 m or 4 m
  - three rows with 2 m or 4 m
  - four rows with 2 m
  - five rows with 2 m
- Every year he can add one or more rows to build up a strip of trees.
- Where there is more than one row, the trees in alternate rows are staggered so that they are opposite the gaps.
- Marking out, preparing the planting holes and protection are the same in all cases.

How many trees can be planted in a 50 m row with intervals between the trees of 2 m (4 m)?

## Picture 7: The final agro-forest system

- The strip of trees is 8 m wide
- The distance between strips is 30 m.
- Each strip consists of at least three different species



## Points to be explained:

- The trees can be pruned or thinned out if they encroach on crops
- The surface roots can be chopped off if they encroach on crops
- A dense strip of trees (2 m intervals, 2 m between the rows) produces firewood, poles and fodder from the fourth year onwards.
- Thinning out and loss of trees means that the final distance between trees is likely to be 4 x 4 m.

## Questions put to the farmers:

What are the advantages of a strip of trees?

Answers:

- a) economic
  - firewood
  - fruit
  - building timber
  - wood for tools and equipment
  - fodder
- b) ecological
  - raises soil fertility by increasing mineral salts and organic matter

**Source:**

Ingo BINNEWERG: Landwirtschaftliche Beratung, Strategie, Inhalt, Methode, Mittel. Central Region Togo, Sokodé, 1986.

**Photographs:**

Ingo BINNEWERG

**Compiled by:**

Ingo BINNEWERG

## Instructional material for creating awareness and for training from the agricultural extension project Nyabisindu, Rwanda

After the CFSME system (→ A 8) had been declared the national extension system in Rwanda, the GTZ project "Agricultural Extension Project Nyabisindu" also adopted the basic principles of this extension approach. The felt picture method, as most important extension and training aid, was also introduced in Nyabisindu. If we compare the examples from Kibuye given in → D 6 with the pictures produced in Nyabisindu, we notice a number of differences about the Nyabisindu pictures:

- The drawings are bolder and therefore recognisable at a greater distance.
- The order in which the pictures are shown is prescribed, and since they are numbered they are easier to use.
- The text for the Animateur is more rigorously structured. In particular, he is explicitly required to ask many prescribed questions (ask instead of tell!).
- In the last section of the brochure that accompanies the pictures, concrete proposals are made for practical training after initial instruction with pictures.
- At the end of the session the participants are given a leaflet to take home as a reminder. It contains small single-colour reproductions of all the pictures and some keywords in the local language.

As an example of the packs of instructional material, we reproduce the picture series: "Erosion and the creation of erosion control lines".

**1. The brochure for advisers/training personnel****Structure**

- A. Introduction to the topic
- B. What is erosion?
- C. Erosion control lines as a basic solution
- D. Making terraces step by step



- E. Summary of the course
- F. Elements of practical training

A. Introduction to the topic

Word of welcome:

Thank participants for coming and say how glad you are that they are showing an interest in the topic.

? What are the observable signs of erosion and what effect is it having on our hills?

? What are we doing to overcome the problem?

▶ THE GROUP ANSWERS

? Erosion control is an important job, but for whom?

▶ THE GROUP ANSWERS

The government and the project are making enormous efforts to control erosion. They provide the communities with workers for measuring and staking out the land and a considerable amount of technical equipment for the Umuganda (the weekly half-day "voluntary" community work for everyone). It costs a great deal but is worthwhile if the population takes an effective part in the various erosion control measures.

But, if the active participation of the people is to be achieved, they must be convinced of the need for and the effectiveness of such measures. This is the aim of today's course.

In today's training session, we are going to show you that it is possible to halt erosion and its damaging effects completely on the hills and on your farms.

? Wouldn't you be pleased if you never had erosion problems again?

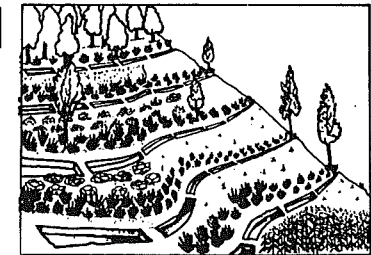
1



Degraded and abandoned hill. CATASTROPHE

? Is your soil threatened by a catastrophe like this?

2



- Hill completely protected against erosion. Obviously a simple ditch on the hillside cannot solve the problem of erosion. So we have to take a variety of steps in the erosion control programme. All these measures can be carried out by the farmers themselves.

Some thoughts on the nature of erosion

B What is erosion?

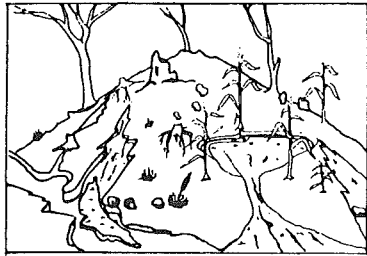
- What did some of you say about erosion at the beginning? We will take your ideas and proposals a stage further:
- What causes erosion?
- What different kinds of erosion are there?
- What methods can we use to combat erosion?
- Pause for thought

CAUSES OF EROSION

? What happens when a field is eroded?

▶ THE GROUP ANSWERS

3



The soil on your land is washed away. Every year there is less and less soil left. Water carries the soil and plant nutrients down the hillside. When they get to the bottom they are washed away by streams and lost. The plant stands suffer as a consequence and produce less and less. Ultimately, all that is left is badly degraded fields and rocky terrain.

? Can you explain why the water in the rivers is brown?

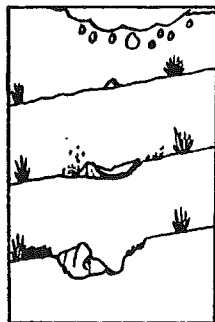
▶ ...

? What effect does rain have on the soil?

▶ ...

The top layer of soil is exposed to the rain and, if it is in good condition, it will retain water and provide many nutrients for plant growth. In the case of poor soil, there is no protection and it is therefore more vulnerable.

4

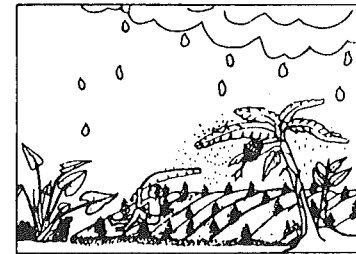


Erosion begins with raindrops. A good soil (fertilised, well-tilled and covered by plants) absorbs large amounts of water. On poor, bare soil heavy raindrops cause the particles of soil to move. This is not a problem on level ground, but on a slope the small particles are moved downwards, leaving small holes behind.

? How do you think rocks get bigger?

▶ ...

5



If we want to avoid these harmful effects of erosion, we should protect the soil with trees, plants and mulching. The leaves of plants and mulch reduce the force of raindrops and disperse them. If there is no erosion control, the surface water collects on the hill until it becomes quite deep and then flows with increasing speed down the hill. At first it takes only fine particles of soil with it, but in the end it causes great damage.

? What measures can we take to cover the soil and therefore to protect it?

▶ ...

Let's look at picture 5 again.

Although there are limits, we can increase the capacity of the soil to retain water if we create thick, permanent soil cover. Because of their roots, plants enable water to penetrate the soil more easily than where it is bare or has not been cultivated.

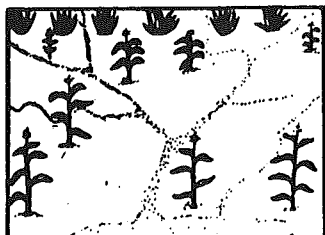
Water that runs off destroys the soil!

TYPES OF EROSION

? What types of erosion are you familiar with?

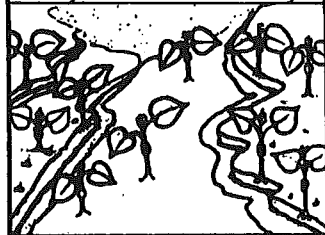


6



- Droplet erosion  
at the beginning erosion is only slight, but it washes away fine particles of soil over a wide area.

7



- Gully erosion  
the water flows freely down the hillside, collects and then flows at high speed. It now washes away large amounts of soil, even large clods. Even small channels can cause heavy soil loss and they quickly turn into deep gullies.

Let's look at picture 3 again:

The small channels are getting deeper and deeper until they finally turn into deep gullies. The state of these gullies gets increasingly serious, especially on broad hillsides. The result is a great loss of soil and therefore of cropping land. Progressive gully erosion can lead to landslides.

C Basic structure: erosion protection lines

? What line protection methods do you know?

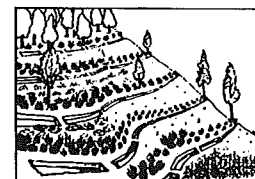


- contour lines  
setting up contour line protection is not a problem, since surveying and staking out is done by trained teams. It is important not to disturb them in their work, especially when fields are being surveyed. It is advisable to start digging as soon as the stakes are in place, and it is even better if erosion control hedges are planted straightaway.



- broken lines of ditches

2/8



- Although they are usually dug as part of Umuganda, every farmer should know how to dig them.

? Is everyone familiar with the dimensions?

The soil is piled up above the ditch and immediately planted with deep-rooting grasses, hedges or trees.

- PLANTED LINES AND HEDGES

? What are the main objectives?



- Planted contour lines and hedges are an effective barrier against water trickling down the hillside.
- They stop the fine particles of soil carried by the water.
- They strengthen the embankments and ditches.
- As well as offering erosion protection, they provide a certain amount of fodder, timber and firewood, mulching material, etc.

? Which plants are used?



The plants used are:

VETIVERI  
URUBINGO  
SETARIYA  
IGIKARANKA  
LESENA

? What are the characteristics of these plants?

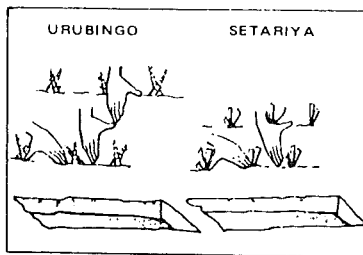
► ...

It is important to point out that Setariya is planted in double rows, is very useful protection against droplet erosion, but that it ages fairly quickly and has therefore to be renewed regularly. Pennisetum, that is very effective on steep slopes, has to be carefully controlled and pruned because it tends to exhaust the soil at the expense of other crops nearby. Leucaena, planted as hedges on the contour lines, is not only very effective erosion control but is also another source of good fodder for cattle. Finally Vetiva and Themeda provide a constant supply of mulching material for the farm.

? How do we establish protection lines planted with grass?

► ...

10



If it is a question of protection lines only or lines in combination with ditches, deep-rooted grasses are planted 20 cm from the edge of the embankment as follows:

Pennisetum:  
40 cm between the lines and 20 cm intervals in the line.

Setaria:  
20 cm between the lines and 20 cm intervals in the line.

It goes without saying that weeding is essential and weed control must be continued.

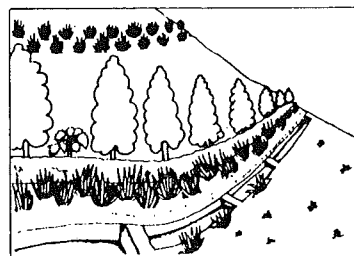
Establishing hedges

Hedges and care of hedges are the subject of a training session that we shall be offering shortly. At this point we would like to make two suggestions:

? Can you remember any plants that are used in hedges? What are they?

► ...

11

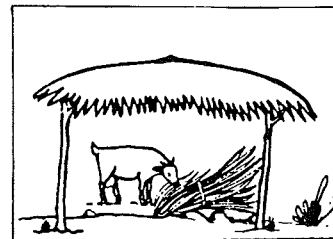


Here is a complete hedge!  
It is ideal for combating erosion. But there are various alternatives as well:  
a) double row of Setaria with ditches  
b) ditches protected by rows of Setaria and trees  
c) double row of Setaria with trees  
d) Leucaena hedges with trees

? Is there any further benefit to the farmer?

► ...

12 Example:



Let us recall what we discussed earlier  
It is obvious that a hedge takes up a lot of space, but it is also very productive!

- fodder
- timber for building
- mulching material
- fruit
- firewood
- etc.

To reinforce erosion control measures, we will undoubtedly have to plant trees in addition to deep-rooting grasses.

? Have you already planted trees? Which ones? Why?



Bearing in mind the special significance of trees in erosion control, we would like to recommend the topics "Choice of location and varieties for reforestation" and "Integrated Reforestation". On another occasion we shall speak about maintaining erosion protection lines or, put another way, about maintaining the whole erosion control system. Instead of drawing conclusions, we want to draw your attention to future events: during the campaign to combat erosion, a lot of digging will be carried out by the Umuganda, especially on large-scale pastures and on fallow land. But work that has been started in the fields is often not completed or the stakes are destroyed by a few obstinate farmers, ditches are rarely dug, and planting hedges, trees and grass as reinforcement is as good as useless under these circumstances. However, we hope that this course can convince you and get you to take the initiative, so that the major problems of erosion can be solved once and for all.

#### D Phased creation of terraces

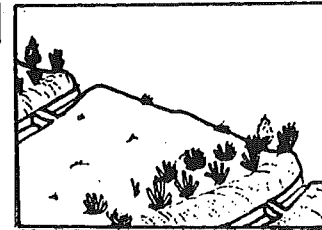
? Why do we need terraces? Can you remember everything we have discussed so far?



? Can someone tell us how a terrace is made?



13



The slope is interrupted by ditches and/or lines of planted grasses, hedges or appropriate trees. This stops water run-off.



The small amount of soil washed down the plot is stopped by the hedges and ditches. Gradually the lower part of the plot becomes higher and raises the level of the embankment.

We recommend tilling the soil across the slope. The ditches must be cleared out properly, especially in the early stages.



After a few years the result is:

- no more erosion;
- no steeply sloping land; the land has been levelled;
- work is much easier on horizontal terraces.

Do not forget to protect the edges of the ditches and to reinforce the embankments, that can sometimes be very high, with both deep-rooted grasses and the appropriate trees.

? Anyone getting to this stage has achieved a great deal, hasn't he? He deserves a lot of praise, doesn't he?

#### E Quick revision (5 – 10 minutes)

- a) The instructor shows all the pictures again, one after the other. He no longer makes any comment, it is left to the group to pick out what they would like to deal with in more depth. The instructor only corrects farmers if there are serious errors in their contributions.
- b) There are many things we could mention in the context of erosion control. We definitely want to talk about other methods in later training sessions, so

that we can help you in your future efforts to control erosion. For the present, we recommend you to go to your "Moniteur Agricole" or your "Community Agronomist" with all questions concerning the implementation of the various measures.

#### F Practical training

- After any theoretical training session, all the participants should go with their instructor to a farmer from the cell. At his farm they can continue discussions or demonstrate and apply topics that have been dealt with in training.
- A recommended selection of topics for this practical training:
  - the process of erosion, discussion of the effect of mulching and multi-storey ground cover as soil protection measures;
  - defining different sorts of erosion;
  - deciding on plant species to be used;
  - planting reinforcing grasses and trees;
  - planting a Leucaena hedge with trees.

#### 2. The pictures used on the course

The pictures are 26 x 38 cm or half size. They are drawn in black and white, duplicated on a photocopier and made stiffer by sticking two sheets together. Sawdust is stuck to the reverse side, so that they can be fixed on the felt board, and they are coloured by hand with water colours and then covered with a thin film of clear varnish for protection. The full set of coloured pictures is reproduced on the following pages.

#### 3. The leaflet for participants

When the training session is over, all the participants are given a leaflet folded down the middle to make four pages. It is printed in green, brown or black and reproduces the most important pictures in small format with just a few keywords from the text in the local language. This leaflet is shown on the two previous pages. It should act as a reminder and should also encourage further discussion of the topic in the family or with neighbours.

#### Source:

Projet Agro Pastoral de Nyabisindu, Division Vulgarisation-Formation: L'érosion et l'installation des lignes anti-érosives (Traduction du texte de formation en Kinyarwanda), Nyabisindu, Feb. 1984

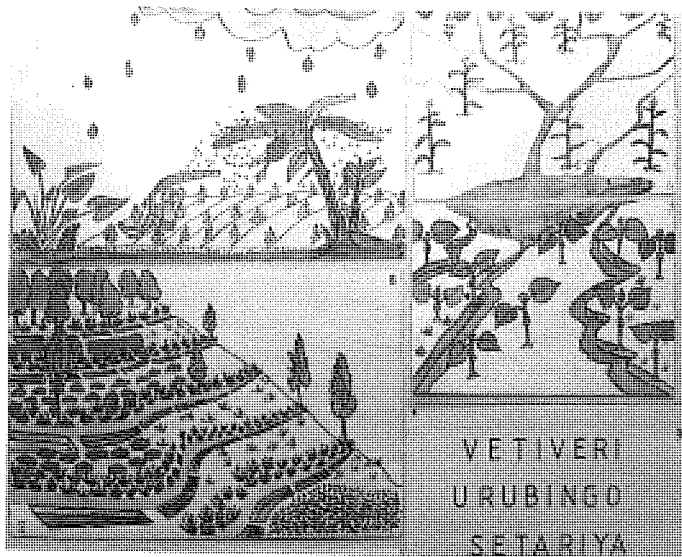
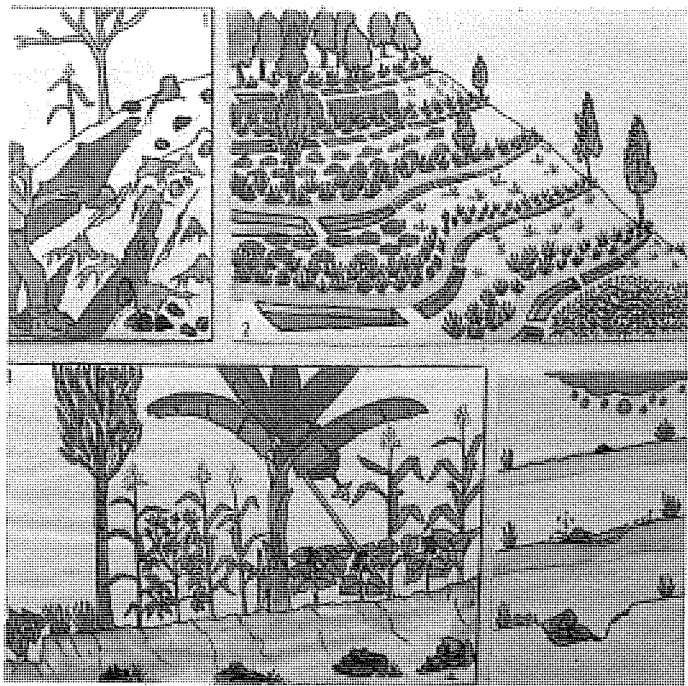
#### Photographs:

Volker HOFFMANN

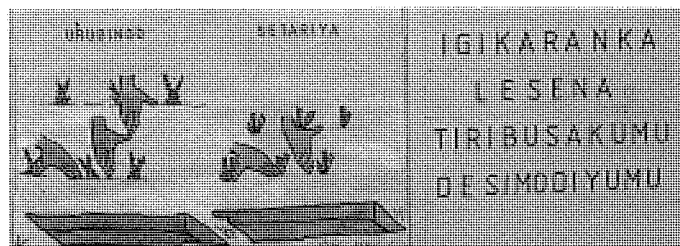
#### Compiled by:

Volker HOFFMANN

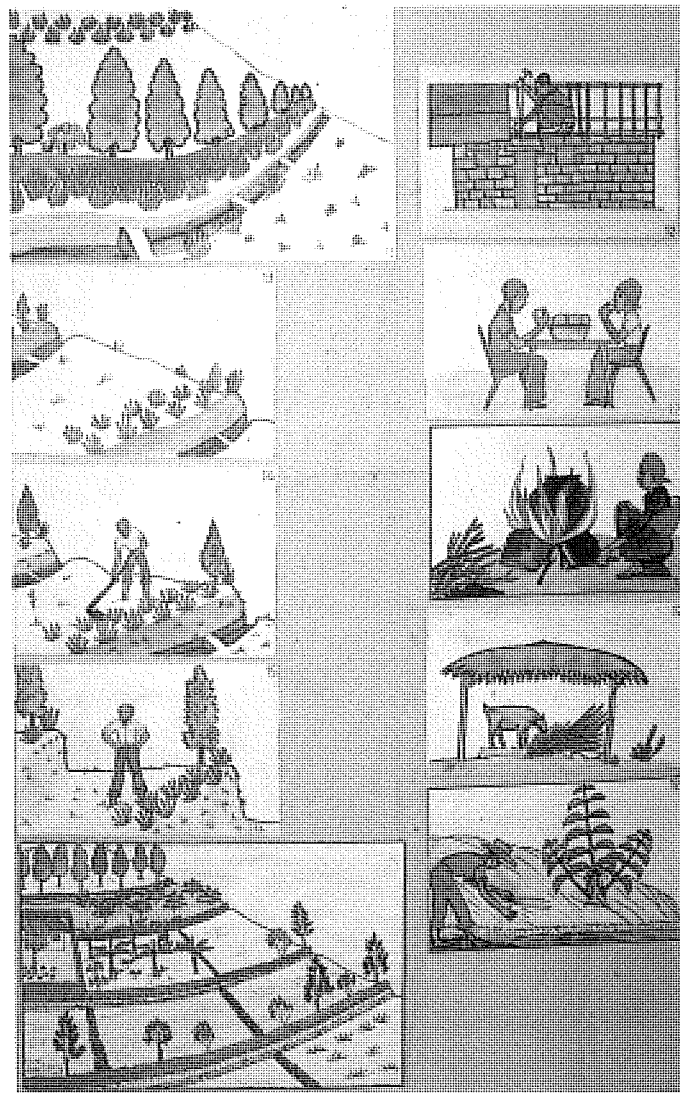




VETIVERI  
URUBINGO  
SETARIYA



IGIKARANKA  
LESENA  
TIRIBUSAKUMU  
DESIMODIYUMU



- KURWANYA ISULI MU BISAMBU BYAME/ IBYATSI BYI-NSHI LIMWE NA LIMWE NI UGUTA IGIHE KUKO IBYO BYA-TSI NABYO BIBA BIFASHE UBUTAKA.

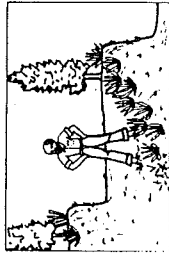
TIWIHATE KURUSHAHO IMILIMA IHINGWA KUKO ALIYO ITWARWA N'ISULI CYANE.

- NIDUKORA RERO NEZA UMULIMO WO KURWANYA ISULI TUZAGERA KU MILIMA MWIZA IRAMBITSE.

AMATERASI



- Ahagaliika isuli
- Yongera umusururo
- Yoroshya akazi k'umuhinzi



Mugire umwete !

K 9.448

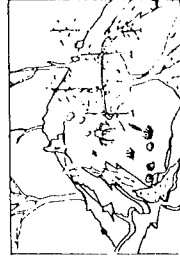
ISULI NO GUTUNGANYA IMILINGOTI



Igice cyo kwigisha no kwamamaza ubuhinzi

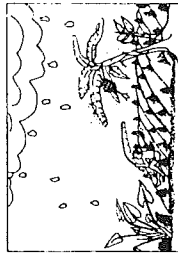
Gashyamba 1984

- ISULI N'ICYAGO CYAYO



Amazi adatangirwa atwara ubutaka !

- UBULYO BWO KURWANYA ISULI



- Gutera ibiti
- Isaso
- Ibihingwa hose kandi buri ghe

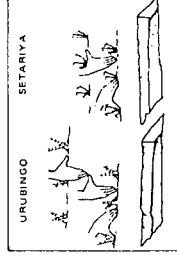
- IBIBABI BY'IBITI N'ISASO BIGABANYA UMUREGO W'IBITONYANGA



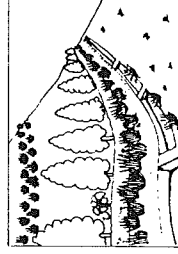
- Imilingoti myiza:
  - Itangura amazi ashoka
  - Ihagahiye ubutaka bwo hejuru bugenda
- Ubwatsi n'ibindi biterwa ku milingoti

- IBYATSI BIK'ESHWA :
  - URUBINGO
  - SETARIYA
  - LESENA
  - VETIVERI
  - TEMEDA

- Twatera duta nk'URUBINGO cyangwa SETARIYA ?

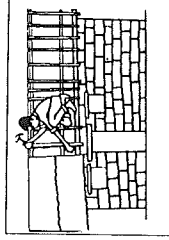


- UBWATSI N'IBINDI BITERWA KU MILINGOTI BIFITE AKAMARO CYANE

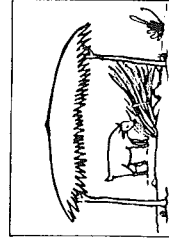


- Ibiti bicanwa
- Ibiti byo kubakisha
- Isaso
- Kugaburira amatungo
- Imbuto zibibwa

Urugero :



Urugero :





## **Instructional material for creating awareness and for training from GRAAP, Burkina Faso**

In → D 7 we briefly described the group called GRAAP and the pedagogic concept it recommends (majeutics). Now we present an example of its educational series of felt pictures.

A training pack in several parts was developed by GRAAP at the request of the "Ministry of the environment and tourism" in Ouagadougou, Burkina Faso. The title is "Living in a green environment". We have reproduced the accompanying text of the first analysis for the Animateur, the pictures themselves and the "reminder" poster.

### **Living in a green environment**

#### **First analysis: changes in our environment**

The training pack called "Living in a green environment" examines three broad topics:

1. The changes in our environment
2. We need trees to live
3. Being master of our village territory

Investigating each of these topics requires several meetings. If we really want to apply GRAAP's pedagogic approach, we must ensure that as many participants as possible have a chance to speak, i. e. all categories: men, women, young people, old people, immigrants to the area, foreigners, etc.

Thus two, three or four meetings may be necessary to examine each topic. The number depends on the problems addressed and the course of discussions in the groups.

The examination of topics 2 and 3 is followed by other topics that involve basic training in biology and geography (No. 1: The life of trees, No. 3: The circulation of water, No. 4: Life in the soil).

These topics enable the Animateur to define the know-how of the participants, add to it, perhaps to correct it and to develop it further.

Again several meetings are necessary for each of these topics if we are to ensure that the participants express their views on their own know-how and take in and utilise new information.

Thanks to this basic training, the villagers will have a better understanding of phenomena around them, and they will thus be in a better position to control their lives. The first analysis dealt with in the text for the Animateur is primarily intended to create awareness. In keeping with the pedagogic method advocated by GRAAP, it comprises three important steps:

### 1. Seeing the situation clearly:

- a) questions put to homogeneous groups to make them more aware, announcing and discussing the answers in the plenary meeting;
- b) comparing the environment in the past with today.

### 2. Thinking about the situation

- a) the consequences for the people, animals and the environment today and tomorrow;
- b) the causes: how this situation comes about. What are we responsible for? What powers do we have as villagers?

### 3. Acting to change the situation

- a) What can we do ourselves here and now?
  - everyone for himself?
  - all working together?
- b) What can we do at a later stage (start planning now)?
  - everyone for himself?
  - all together?

This first investigation can be the subject of two or three meetings in quick succession (within one week if possible). For example, one meeting on the questions to raise the level of awareness and the comparison of answers and one meeting on thinking about the situation and taking action.

### Questions to create awareness of problems

Since our pedagogic approach puts emphasis on stimulating the subject to respond, this first stage is extremely important.

- The participants are divided into small homogeneous groups of no more than ten people with one person in charge.
- The groups are sufficiently far apart for them not to disturb each other during discussions.
- Each group is asked to nominate one member who will report back to the plenary meeting later.
- Each separate group is given half or three quarters of an hour to think and discuss (more time if required) before they all come together again.

At first, the villagers will certainly not be used to working in this way. The Animateur might encounter difficulties until the idea of several groups to discuss the same theme is accepted. The Animateur should therefore explain the reasoning behind this method very clearly. He should also not feel discouraged if the groups are rather chaotic on the first few occasions or if the groups' answers are not reported back satisfactorily, etc.. Like all new things, this method of working has to be learned, and only then will people be able to discover the advantages and benefit to be derived from this method.

By using this method the villagers can express themselves straight away, and they are therefore directly involved in the investigation of their own lives. As many people as possible are encouraged to speak, because every person in each group is called on to express his opinion and to answer the questions from his personal angle. In this way it is impossible for one or two influential individuals to dominate discussions, for example the village head or the chairman of a cooperative. By creating sub-groups, particular categories (women, men, young people, foreigners) can say what they see and think; they can express their opinions without having to fear reprisals. Finally, the spokesman or spokesmen report back not as individuals but on behalf of the group.

Thus perceptions of situations become truer reflections of reality, more global, and the discussions that follow in the plenary meeting are much richer in ideas, observations and exchanges of experience.

When a person of influence has spoken in a group, we frequently find that no one dares to contradict him, even though they may not agree with what has been said and everyone simply repeats: "What he has just said is precisely what I wanted to say too."

When the villagers have grown accustomed to discussing the issues in subgroups, we find that exactly the opposite occurs. There is a kind of competition between groups; each one wants to contribute the best, the most interesting answers in the discussion in the plenary meeting.

The people involved are put in a position where they investigate, where they research. So a group dynamic evolves that stimulates them to take an active part, makes them attentive and receptive.

People who would not normally speak in public now do so, different views emerge, explanations are requested. A process of self-development is set in train that will enable the group to deal with its problems and difficulties independently.

#### First topic to be examined: The changes in our environment

##### Questions to stimulate awareness:

1. In what ways have the soil, the vegetation and animals changed since our grandparents' days?
2. Are these changes to our advantage or disadvantage? If they are good, in what way? If they are bad, in what way?

##### Reports to the plenary meeting:

According to the answers from the sub-groups, we now begin to stick the corresponding pictures onto the felt board.

##### Discussion and use of the pictures:

If they have not identified enough changes, the participants can be encouraged to think more deeply by specific questions:

- How is the soil changing?
- How are the trees changing?
- How are the animals changing?
- How is the village changing?
- How are the villagers changing?
- How is the climate changing?

- What environmental changes are occurring in the lives of the villagers?
- How is this happening? What are people trying to achieve by acting in this way?
- Did we have certain customs, rites, prohibitions in our community that applied to the soil, plants and animals?
- What were these prohibitions?
- How were these customs kept alive?

Two boards should be used; on the first board (envelope 1a)

- |                                                           |                                                                  |
|-----------------------------------------------------------|------------------------------------------------------------------|
| - Put the picture depicting the past in a line at the top | - Put the pictures depicting the present in a line at the bottom |
| Thick forest                                              | Treeless savanna                                                 |
| Intact monkey bread tree                                  | Half-dead monkey bread tree                                      |
| Humid valley with rice                                    | Dry, flat terrain                                                |
| A fine field of millet                                    | A poor field of millet                                           |
| Wild animals                                              |                                                                  |
| Herds of fat animals                                      | Herds of lean animals                                            |
| Small village                                             | Large village with two quarters                                  |
| Treeless savanna                                          |                                                                  |
| Woman stripping branches from a tree near her house       | Woman with a small bundle of wood on her head                    |
| Large cloud over the forest                               | Small cloud over the savanna                                     |
|                                                           | Pile of wood by the roadside                                     |
|                                                           | Bicycle loaded with wood                                         |
|                                                           | Donkey cart with wood                                            |
|                                                           | Lorry with wood                                                  |

The soil priest ("chef de terre") is sacrificing an animal. This picture should be placed under the picture of the forest.

### Pause for thought

#### 1. The consequences

What are the consequences of these changes for the villagers?

- for the men?
- for the women?
- for young girls?
- for the young men?
- for the children?
- for the old people?

What effects do these changes have on the animals belonging to the village?

What effects do these changes have on the soil and the crops?

What effects do these changes have on the water in the stream, the water in the well?

Are we satisfied with the current situation? Why?

If there are more changes of the same kind, what will happen? What will our village look like tomorrow?

We are proud of what our parents have handed down to us. Will our children be as proud of what we hand down to them?

As the discussion develops, we show the interrelations that are revealed by the pictures already on the felt board.

#### 2. The causes

What actually causes all these changes?

Are we, the villagers, responsible for any of these changes? If so, how?

When people destroy the vegetation, what happens to the water? What happens to the wind?

And animals, are they responsible for any of these things that have happened? If so, how?

Who else is responsible for all these changes, especially changes in habits and customs?

We now want to classify the causes we have established according to their origins.

What is our share of responsibility as villagers for each of the wider categories?

Who is affected most by these changes in the village? Why?

Who can do something here in the village to make sure these changes turn out to our advantage?

We now use the second board (envelope 1b)

- picture of the little cloud
- man setting fire to a rootstock - bush fire - man chopping down a tree - preparing millet beer - ox team - man setting fire to the base of a tree - woman cooking food - sack of charcoal with charcoal burner - group of children
- millet field furrowed by erosion - a tree with its roots laid bare - dust blowing in the wind
- goats stripping the leaves off a young tree - animals stripping hacked-off branches - herd by a well
- forest clearance with a bulldozer - going to school - various religions - money - journeys - administration

What are the consequences of direct action by the villagers?

What do their actions achieve?

What is the connection with animals?

What comes from outside the village?

#### Action

What causes can we ourselves eliminate? By doing what?

We want to examine all categories of causes and each related picture to find out what can be done in each individual case. We should begin with those categories that directly affect the villagers and ask: what immediate action can we take?

- Each man for himself? How?
- All together? How?

What action can we take later?

- Each man for himself? How?
- All together? How?

If the cooperative or the village community decides reforestation is a possible solution, the following questions should be asked:

Who does the village land belong to?

Who will the new forest belong to?

- the land?
- the trees?

What should be done now to prevent disputed ownership later?

Who will tend the new trees each year? How?

Who will have the use of the timber resulting from reforestation? How?

As the search for solutions continues, the individual pictures showing causes are presented separately and then put back in their place when that part of the discussion is concluded.

**What is the issue? To see better, or to discover?**

- A) The aim of the questions to create awareness is to get the villagers to identify all the changes that they have become aware of in their environment.

In the past there were lots of trees in the bush, and some of them were big trees as well. Wild animals lived in the bush: lions, hyenas, panthers, etc. Now the big trees have disappeared along with the wild animals. There used to be plenty of monkey-bread trees, Néré and Karité trees; there are fewer and fewer nowadays.

It used to rain much more than it does now, the fields produced more, the soil was more fertile. "We used to have a humid valley where we cropped rice; now the bottom of our valley has become like an arid plain."

We have also got far more domestic animals than in the past.

There are far more people living in the village now, we work more fields as well. The number of people in the towns is increasing too and the demand for firewood is growing all the time. To satisfy the demand, traders come and buy wood in our village.

The sacred forests and bushes of our fathers have disappeared and even certain protected trees like the Karité, Néré and Tamarind have been felled. The soil priests ("chef de terre") and the village heads no longer have their former authority. The social organisation that used to hold the village together as a unit is now a thing of the past.

In the old days bush fires were controlled, but in the last few years everybody thinks he has a right to fire the bush just to hunt a rat.

- B) The pause for thought in our investigation gives the villagers a chance to identify the consequences of the changes for people and the environment and then to explore the reasons.

Even if they consider some of the changes to be positive, such as wild animals like lions and hyenas disappearing, many of the changes make life much more difficult for the villagers.

#### 1. The consequences:

The women can no longer find enough firewood for cooking near the village. They are forced to walk for miles through the bush to gather a small bundle of wood that will not last more than two or three days.

It is no longer as easy for them to find flowers, fruits, grains and leaves that they use for making sauces. The few monkey-bread trees that are left in the bush are permanently stripped bare, etc.

It is difficult for the men to find the wooden poles needed for building roofs, barns, sheds, etc. The soils that support fewer and fewer trees become impoverished and dry out, and the millet fields no longer produce the yields of the past.

Rainfall is lower and much less regular. This fact alone causes catastrophes every year in some regions where the villagers cannot harvest enough crops to feed their families for even one or two months.

Domestic animals are insurance against poor years. But overgrazing makes the soil more susceptible to erosion and stripping leaves for fodder in the dry season only accelerates deforestation.

Bush fires destroy the grass and weeds that protect the soil against erosion and enrich it. These fires also destroy some trees, especially young trees, so that the forest cannot regenerate.

Despite some migration to the towns, the rise in population in the villages means that more and more fields have to be cultivated. The soil no longer has time to recover, and it becomes exhausted and impoverished.

Illegal tree felling and the trade in wood increase by the day. The villagers also cut down more and more trees to sell to cover their cash needs: taxes, medicines, etc.

Although the traditional village organisation is now a thing of the past, nothing has replaced it. Everyone does as he pleases. No one cares about the community. Everyone survives as best he can without bothering about other people. The village unit has disappeared for ever.

## 2. The causes

The examination of causes is intended to make the villagers realise that in many cases they cause the problems themselves. They are directly responsible for a number of changes:

cutting down trees, bush fires, increasing numbers of domestic animals, etc.

Other changes are caused by circumstances and pressures that are imposed on the village from outside, e. g.

the school, religions, the administration, money, etc.

They are all instrumental in the disintegration of village structures.

Having experience of school, travel, new religions, young people no longer adhere to traditional ways. Moreover, the customs that used to govern communal life in the village have not been replaced by anything new. The result

is a vacuum in the organisation of the community, and there is no control over individuals, and no one thinks of the common good.

All these developments that are caused by man himself have damaging effects on the environment. Deforestation, firing the bush, etc., mean that nothing is left to combat wind and rain. Thus human destruction is compounded by natural destruction and the soil gets poorer and poorer.

Because man has disrupted the ecological balance that maintains the life of nature, nature is now in the process of destroying itself.

- C) The villagers should discover that they are largely responsible for these developments. For the situation to improve, they cannot wait for other people to come and do things for them. It is their job to find out precisely what they must do to eliminate every single cause of the destruction of their environment.

It is the duty of the Animateur to encourage them to look for the many solutions to the whole complex of causes of this degradation and not simply to stop at reforestation.

For example, these solutions could be:

- stop firing the bush! (form proper organisations to achieve this aim);
- avoid overgrazing and excessive tree felling;
- when a new field is cleared, do not destroy all the root systems;
- dig erosion protection ditches;
- protect natural tree and shrub growth (keep animals, especially goats, under control);
- plant trees for wind protection, by the roadside, round fields and houses, round the village, etc.
- make hay for animal feed in the dry season;
- build improved stoves (more economical use of wood);
- organise themselves, create new village laws to control village life;
- tolerate each other and communicate with each other despite different religions; hold meetings to decide jointly what is to be done to improve life

in the village. For example, the women agree on a rota for brewing millet beer.

– etc.

The villagers must decide with the help of the list of possible solutions what they are going to undertake straight away, each man for himself with his family, or all together (as a cooperative or the whole village).

They must plan what they can do in the long term, either individually or in groups (as a cooperative or the whole village) and try to predict and organise the training required and the material and financial support.

When reforestation is being discussed, it is important to examine in detail and to come to agreement on all issues that could lead to conflict later, e. g. ownership of land, trees, their maintenance and use of timber, etc.

Before planting is begun, these problems must be discussed in detail with everyone concerned and clearly defined solutions found. The villagers will continue to be committed to whatever work is necessary to carry out reforestation, because they are deeply conscious of the fact that the forest will be there for them and their children in years to come.

The pictures illustrate the pieces provided by GRAAP in two envelopes and the "reminder" poster that the Animateur leaves in the village when he has finished the training sessions.

**Source:**

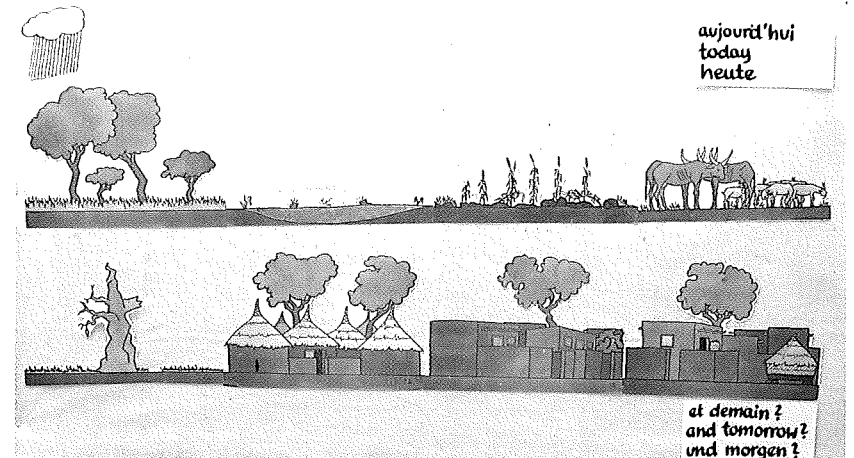
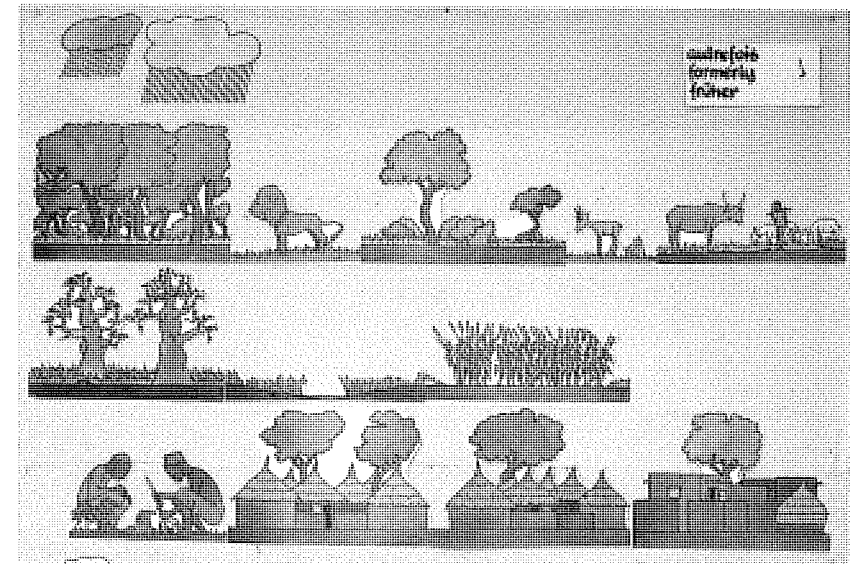
GRAAP: Vivre dans un environnement vert. 1<sup>er</sup> recherche: Les changements dans notre environnement. Bobo-Dioulasso, Burkina Faso, 2nd edition, 1979

**Photographs:**

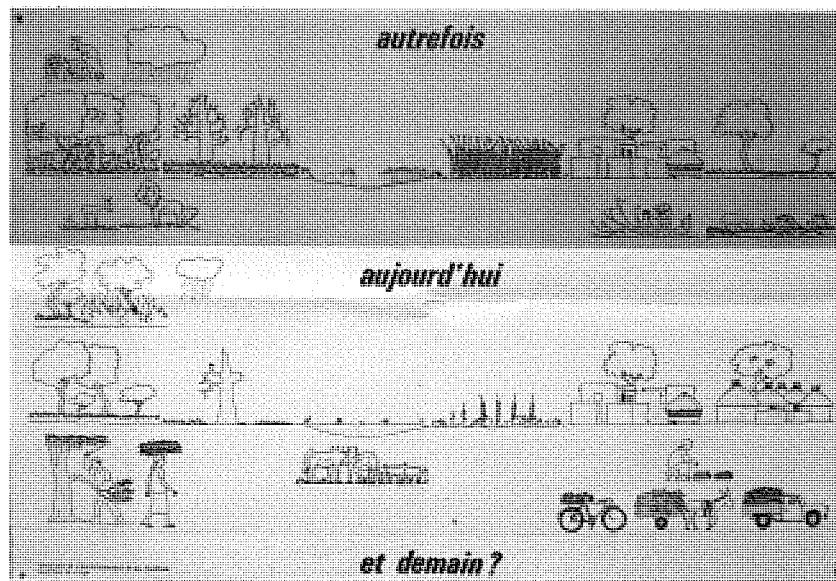
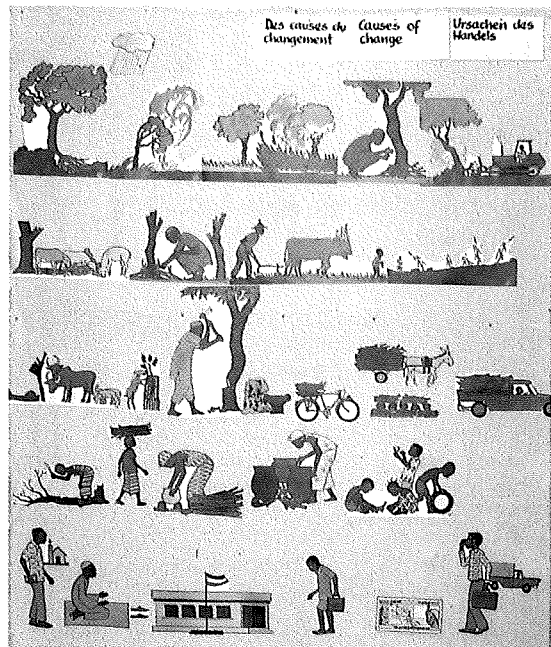
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The Technical Centre for Agricultural and Rural Cooperation (CTA) was established in 1983 at Ede-Wageningen. It operates under the Lomé Convention between member states of the European Community and the ACP states.

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