

PARTICIPATORY TOOLS FOR COMMUNITY LEVEL

An important part of project planning is implemented with the target group at regional or community level, in order to arrange the project to the requirements, realities and interests of the people, to integrate their knowledge and to motivate them to actively participate in the planned measures. In this planning process at local level dealing with climate change should also be discussed. Here the following questions are helpful:

- Has the population observed climatic changes in recent decades and years? If yes, what effects do they have?
- Does the population already have knowledge or awareness of climate change and its effects?
- Do the scientific analyses on climate change coincide with the events and trends that have been observed, respectively can be observed at local level? If not, what could be the causes for this?
- What adaptation capacities (strengths and resources) do individual persons and the community have?
- What adaptation measures are the most important for the village community? If measures have already been prioritised in previous planning steps: Do these match the reality and requirements at a local level? What do the planned measures mean for the population?
- How can the population be persuaded to actively participate in the adaptation to climate change?



With participative analysis and planning instruments the results of climate proofing already worked out at community level within the framework of a workshop can be checked and specified in greater detail. On the other hand, a risk assessment and a selection of adaptation measures can also be implemented at local level at the beginning of the planning process. In any case at community level, too, the risk assessment is a very important instrument

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for raising awareness and further educating people. It should therefore be designed as participatively as possible and allow sufficient time to earn the acceptance and commitment of the people for the identified measures. In the analysis the way the term „climate change“ is dealt with should be made dependent on what knowledge the target group already possesses. In some regions the people already possess this knowledge (for instance in parts of Peru and India), but in others they do not. There it is easier to begin with the current existing climate risks (for instance due to hurricanes/cyclones, floods, droughts) and climate changes that have already been experienced (for instance in precipitation patterns), and then first introduce forecasts for the future in a second step.

Welthungerhilfe has broad-based know-how in participative analysis and planning methods. This is for instance presented in Volume 3 of its “Guidelines: Outcome and impact orientation in the projects and programmes of Welthungerhilfe” (Welthungerhilfe 2008). Other organisations have already adapted participative methods to the special requirement of risk assessment for extreme weather events and climate change. In the following eight particularly suitable instruments for risk assessment at village level are presented. Five of them are based on the presentation in the CARE manual Climate Vulnerability and Capacity Analysis (CVCA) from 2009, and the other three are based on the description in the Welthungerhilfe guidelines for impact orientation.²¹

Figure D-1: Participative tools for risk assessment at community level

Area	Tool	Source
Identifying the effects on climate change and initial indications of vulnerability	Hazard map	CARE (2009), p. 33-34
	Timeline	CARE (2009), p. 37-38; Welthungerhilfe (2008), p. 37-39
	Trend analysis	Welthungerhilfe (2008), p. 40-41
Intensifying risk analysis with a focus on vulnerability factors and existing strengths/ resources	Vulnerability matrix	CARE (2009), p. 39-40
	Resource map	Welthungerhilfe (2008), p. 35-36
	Transect	Welthungerhilfe (2008), p. 33-34
	Seasonal calendar	CARE (2009), p. 35-36; Welthungerhilfe (2008), p. 42-43
Analysis of institutions and actors	Venn diagram	CARE (2009), p. 41-42; Welthungerhilfe (2008), p. 53-54

The tools can be combined with each other and/or with other analysis methods. The visual and discussion results should be documented for both the village community and also for those responsible for project planning. They are then incorporated in the respective planning processes.²²

²¹ CARE and Welthungerhilfe in turn provide references to the sources they used for each instrument. Further interesting references on risk assessment with regard to climate change are, for instance OECD (2009), p. 158-162; Red Cross/ Red Crescent (2007); Tearfund (2009) and GTZ (2004). In addition there is the Internet-based instrument Community-based Risk Screening Tool – Adaptation & Livelihoods (CRISTAL) from IISD/IUCN et al. <http://www.cristaltool.org/> (English, Spanish and French)

²² See Welthungerhilfe (2008) volume III on participative planning methods.

For implementing the risk assessment at community level the usual guiding principles for participative analysis and planning processes apply, such as good preparation and agreement/coordination with the local contact persons, balanced gender participation, moderation which creates trust and the ability to deal with any conflicts which arise if necessary (see CARE 2009, p. 30-32). The moderators should know the available forecasts for climate change for the project area, to be able to deal with any possible differences regarding local perception if necessary, and allow information to enter the discussion.

The required materials are generally as follows: flipchart, pens, stones and other local materials, adhesive tape and if necessary coloured paper. A camera for taking photos and a laptop are useful for documentation. Beverages and snacks can be offered in accordance with requirements.

On the following pages the above-mentioned tools are presented in the following sequence.

Tool: Hazard Map

Objectives

- To become familiar with the community, and to see how the place is perceived by different groups within the community.
- To identify important livelihoods resources in the community, and who has access and control over them.
- To identify areas and resources at risk from climate hazards.
- To analyse changes in hazards and planning for risk reduction.

How to facilitate

Duration: approx. 90 minutes (45 minutes for the map, and 45 for discussion)

Procedure:

1. Explain to the participants that you would like to build a map of their community.
2. Choose a suitable place (ground, floor, paper) and medium (sticks, stones, seeds, pencils, chalk) for the map. If the map is made on the ground or floor, the note taker will then have to copy the map on a flipchart or in his/her notebook. A photo can also be helpful.
3. First, build the community map. Ask the community members to identify a landmark in the community.
4. Put a mark or a stone to stand for the landmark.
Note: The facilitator should help the participants get started but let them draw the map by themselves.
5. Ask the community members to draw the boundaries of the community.

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6. Ask community members to draw the location of settled areas as well as critical facilities and resources in the community. This should include houses (the map doesn't need to show every house, but the general area where houses are located), facilities such as churches/ mosques, health clinics, schools, and resources such as forested areas and water bodies.
7. When the community members have agreed that the map is representative of their community, begin the second step: identifying the hazards.
8. Ask the community members to identify the areas at risk from different types of hazards. These should include:
 - Natural disasters (floods, landslides, etc.)
 - Socio-political issues such as conflict or redistribution of land, etc.

Hazards mentioned that are not location-specific should be noted on the report (e.g. earthquakes, hurricanes/cyclones, drought, and health risk like malaria or cholera).

Results and Discussion

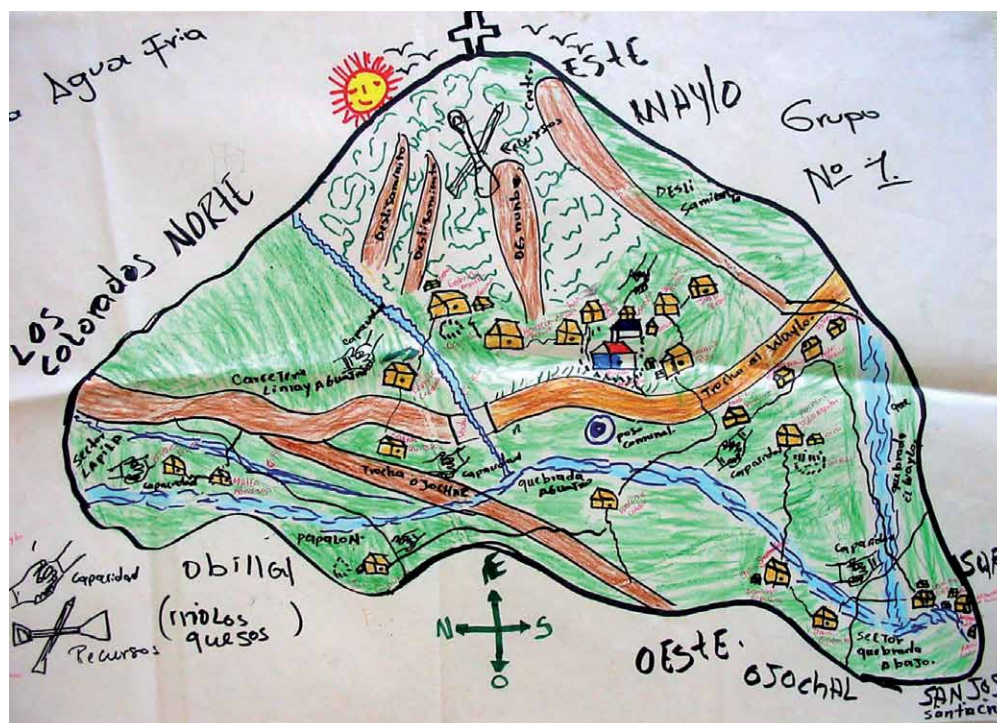
When the map is complete, ask the group members the following questions:

- Who has access to the resources shown on the map? Who controls this access?
- What are the impacts of the hazards identified?
- Are the hazards different now than they were 10/20/30 years ago (depending on age of participants)? How?
- Are there places in the community that are safe from the hazards?
- Are these safe places used to protect from hazards (e.g. to store food and inputs, or to shelter livestock)?
- Who are the members of the community who are most at risk from the different hazards? Why?
- How do people in the community currently cope with the impacts of the specific hazards identified? Are the current coping strategies working? Are they sustainable?

Communicating Climate Change

During the discussion, note any observations by communities that may be in line with the meteorological data that is available for the region, and communicate this information in order to validate their observations. This can provide an opening to present the predicted future trends for the particular hazards that have been identified.

Figure D-2: The landslide hazard illustrated in a participative hazard map from Nicaragua



Source: Welthungerhilfe

Tool: Timeline

Objectives

- To get an insight into past hazards, changes in their nature, intensity and behaviour.
- To make people aware of trends and changes over time.
- To evaluate extent of risk analysis, planning and investment for the future.

How to facilitate

Duration: approx. 75 minutes (45 minutes for the timeline, and 30 minutes for the discussion)

Procedure:

1. The facilitator should consult with the group to decide on a table format or a graphical line format.
2. Ask people if they can recall major events in the community such as:
 - major hazards and their effects
 - changes in land use (crops, forest cover, houses etc.)

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- changes in land tenure
- changes in food security and nutrition
- changes in administration and organization
- major political events

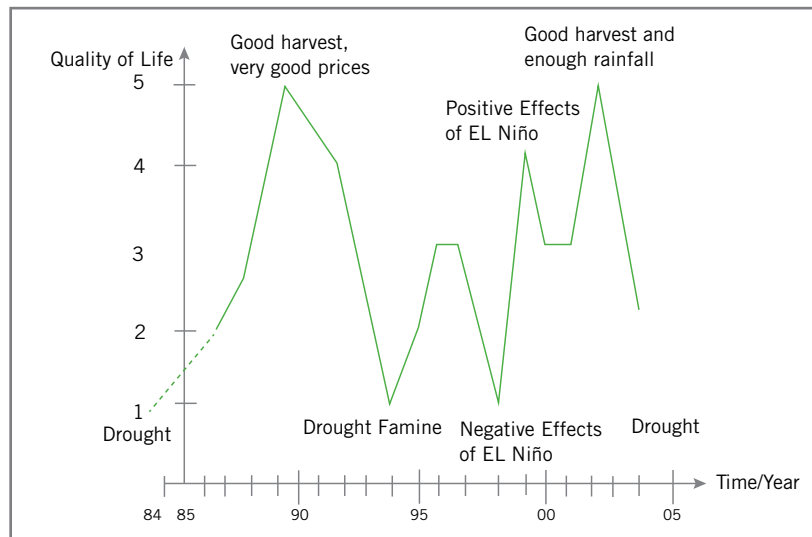
3. The facilitator can write the stories down on a blackboard or large sheets of paper in chronological order.
4. Periodically run back through the events already reported to prompt recall and help the informant to fill in gaps. Just concentrate on key events.

Communicating climate change

The results can be used as a basis for discussing to what extent a development can be observed during weather-related disasters in the past (above all increasing or decreasing frequency and intensity, for instance droughts or landslides). If yes, can the causes be discussed (for instance settlement in risk area, climate change) and can attention be drawn to probably future developments.

Note: It must be kept in mind that there may be a bias in the timeline as events in recent memory are more likely to be noted.

Figure D-3: Example of open content timeline



Source: Welthungerhilfe, Guidelines Outcome and Impact Orientation, Part III, page 38

Tool: Trend analysis

Objectives

- Determining climatic changes and their effects over a period of time.
- Creating awareness amongst the group for this trend.
- Revealing different points of view within a community.

How to facilitate

Duration: 3-4 hours

Procedure:

1. Stipulate what aspects are to be discussed. With regard to climate change, depending on requirements aspects can be chosen which can be directly or indirectly related to climate changes: for instance harvest, availability of water, damage caused by cyclones/ floods, precipitation patterns, health situation, food situation, deforestation. The aspects can, for instance, be derived from using a timeline.
2. Stipulate the timelines during which the development is to be evaluated.
3. The aspects which are to be discussed should be inserted into the first column of a prepared matrix. With the help of a scale from 0 to 5 (0= poor characteristic, 5 = very good characteristic) each aspect is evaluated over the timeline (approach per row). The reasons for the evaluation must also be documented.
4. The people participating in the debate subsequently discuss the results of the analysis. Here an attempt is made to establish interrelationships.

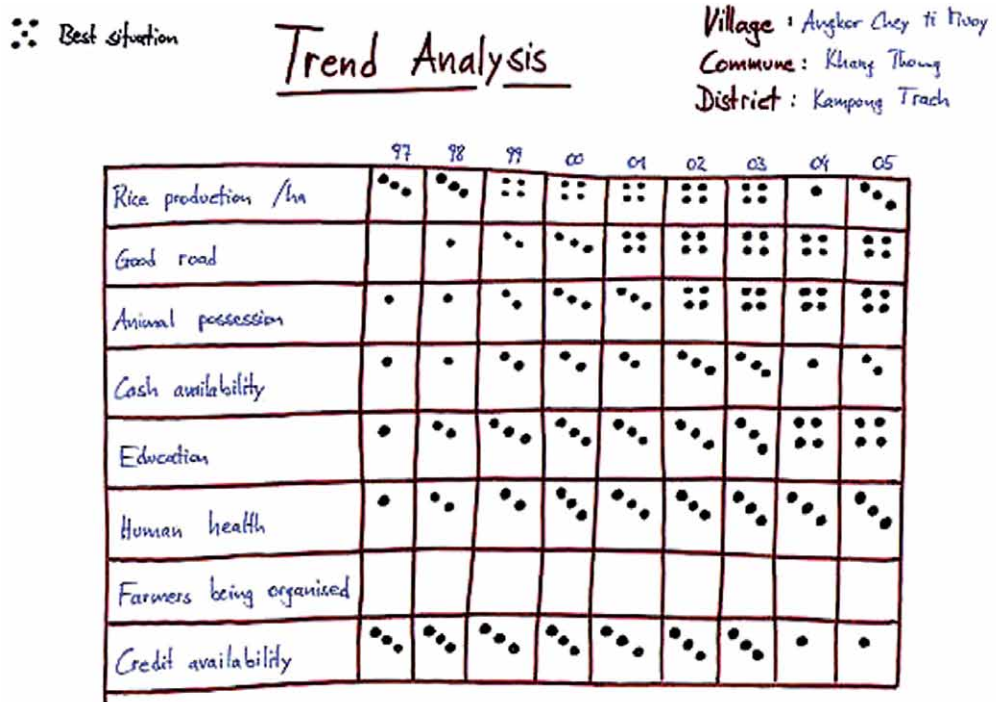
The instrument can also be used parallel by different social groups. It is then helpful to investigate different perceptions of the same aspect (for instance, different trends amongst the women and men).

Communicating climate change

If climate change is already an important issue for the population, different aspects can be directly chosen which people see in connection with changes in climate. If there is no conscious awareness of climate change, in general important groups of issues can be selected for the population (for instance, health, animal husbandry, food situation, etc.) and the influences of weather and possible climate trends can be addressed in the course of the evaluation and discussion. This can culminate in a debate about climate change, but it can also become apparent that attention should focus on other phenomena, such as non-sustainable use of land or population growth.

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Figure D-4: Trend analysis



Source: Welthungerhilfe, Guidelines Outcome and Impact Orientation, Part III, p. 41

Tool: Vulnerability matrix

Objectives

- To determine the hazards that have the most serious impact on important livelihood resources
- To determine which livelihood resources are most vulnerable
- To identify coping strategies currently used to address the hazards identified

How to facilitate

Duration: approx. 90 minutes (45 minutes for the matrix, and 45 minutes for the discussion)

Procedure:

1. Prepare a matrix in advance. This can be done on the ground or on flip chart paper.
2. Ask the group to identify their most important livelihood resources. These do not have to be resources that they currently have, but those that they consider to be most important in achieving well-being. They may create a long list of resources. You may want to organize the list based on the different categories of resources – human, social, physical, natural and financial.

3. Ask the group to identify the four resources that they consider to be MOST important in achieving well-being. List these priority resources down the left side of the matrix on the vertical. Use symbols if this will help participants to better understand.
4. Then ask the group to identify the greatest hazards to their livelihoods. Hazards may be natural or man-made. Do not limit the discussion to only climate-related hazards, but you may want to prompt the group if they are not identifying environmental hazards.

Note: It is important to be specific in the hazards, and to ensure that the issues identified are actually hazards. Participants may identify conditions such as “food insecurity” as hazards. It is up to the facilitator to ask the group to break down these conditions to determine if they are caused by hazards (e.g. food insecurity may be the result of a drought, which is a hazard). Similarly, some groups may identify scarcity of resources, such as “lack of money”, as a hazard. In this case, it should be determined whether the lack of a resource is the result of a hazard, or in some cases, whether the resource should be added to the list of priority resources identified in the previous step.
5. The four most important hazards should be listed horizontally across the top of the matrix, again using symbols if necessary.
6. Ask the community to decide on a scoring system for the hazards against the livelihoods resources, identifying significant, medium, low and no hazard. The scoring system should be as follows:
 - 3 = significant impact on the resource
 - 2 = medium impact on the resource
 - 1 = low impact on the resource
 - 0 = no impact on the resource

You can use stones, symbols or different colours of markers. Ensure that all members of the group understand the scoring system.
7. Ask the participants to decide on the degree of impact that each of the hazards has on each of the resources. This will involve coming to consensus as a group. The note taker should note key points of discussion that lead to the scores assigned, and any disagreements on the scores.

Communicating climate change

When the matrix is complete, ask the group members the following questions:

- What coping strategies are currently used to deal with the hazards identified? Are they working?
- Are there different strategies that you would like to adopt which would reduce the impact of hazards on your livelihoods?
- What resources do you have that would help you to adopt these new strategies?
- What are the constraints to adopting these new strategies?

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Figure D-5: Vulnerability Matrix

Bansa +	human disease	animal disease	drought	floods*	erratic rain*
animals	2	3	3	3	1
food reserves	3	3	2	3	3
well-fed + children	3	3	3	2	2
kids going to school (clothes, shoes)	3	2	2	3	1
♀ engaged in income gen	3	2	1	2	2

Source: Care, Climate Vulnerability and Capacity Analysis Handbook, 2009

Tool: Resource maps

Objectives

- Recording resources in a community (existence, access and use of infrastructure, locations of water supplies, land distribution, markets, hospitals, etc., topographic peculiarities from the point of view of the target group).
- Discussions with the target groups on aspects of their living situation, and in doing so recording different perceptions.
- Identifying vulnerability of resources to climate changes and recording the population's awareness of climate change.

How to facilitate

Duration: 2-3 hours

Procedure:

1. Identify groups which are to participate in drawing up maps. For instance, parallel to these maps can be drawn up together with men and women, young and old people, and hence different perceptions and problems can be addressed.
2. Define the borders of a map together with the groups (for instance the borders of a water catchment area or borders of a community, etc.).
3. Subsequently have the group sketch roads, houses, fields, etc. on the maps. At the same time provide support with questions.
4. Discussion of results and more detailed scrutinising of important aspects, for instance use of land, locations of water supplies, etc., depending on the prime focus of the project.

Some of the most important issues are:


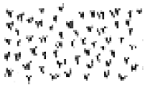





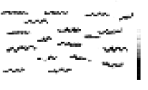



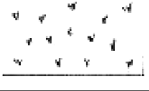
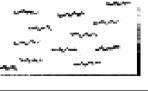



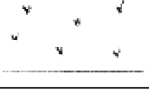
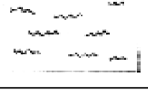



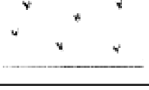
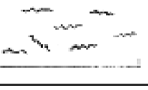
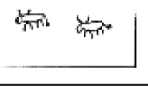
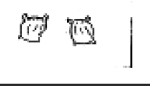
- What resources are abundant and what resources are scarce?
- What resources are severely threatened by climatic or social changes and what resources are slightly or not at all threatened?
- What differences are there regarding access of individual households or social groups to land?
- Who makes decisions regarding access to land, water, forest, etc.?
- Where do the people get their water and firewood from and who collects this?

The instrument can also be used for comparing the situation at a previous point in time and the current situation. For drawing up a historic map, the current point in time is usually assumed and the question posed: „how is a specific resource used today“. Subsequently the question is posed: „what was the situation regarding this resource at a certain time in the past“. Here the interviewed group frequently defines the period of time as „before“. The comparison of the two maps serves as the basis for a discussion of the changes in the resources over time.

Communicating climate change

With this instrument climate change is initially not in the foreground. However, it enables knowledge to be gained regarding two important aspects: (a) regarding people's dependency on resources which are vulnerable to the effects of climate change, and (b) on the population's degree of awareness of climate change and existing adaptation strategies. In addition, the discussion on resources can be used to explain vulnerabilities and strengths of specific resources with regard to climate change and to discuss adaptation options.

Figure D-6: Resource maps

	FOREST	AGRI LANDS	WATER	LIVESTOCK	YIELD
1940					
1950					
1970					
1985					
1989					

Source: Welthungerhilfe, Guidelines Outcome and Impact Orientation, Part III, p. 36

Tool: Transect (cross-sectional sketch)

Objectives

- Collect information, above all on natural spatial conditions (natural resources, use of land).
- Get to know practices and local technology, incl. regarding adaptation to climate change.

How to facilitate

Duration: 2-3 hours

Procedure:

1. Initially the route for an inspection of the village is determined together with the local counterparts (orientation help is in particular provided by uses of land, difficult situations, etc.).
2. Follow the previously defined route. Record all important features along the route, such as use of land, building development, etc. Discuss changes in characteristics with the counterparts. Repeatedly ask about resources, problems, use of land, animal husbandry, who lives in the respective sections, etc. Include questions about changes due to climate change and tried-and-tested adaptation techniques.
3. After following the defined route, draw up a cross-sectional sketch (transect) of the route and enter noted features in it.
4. Discuss the result, determine interrelationships.


Communicating climate change

The instrument can be implemented either climate change-independently or climate change-specifically. In the first case the route is determined in accordance with points which are typical for the village or points which are regarded as important by the people who are responsible for resources. While following the route the question of whether there are any changes and possible effects of climate change is repeatedly asked. This approach is above all adopted if the importance of climate change is not yet clear and first has to be determined.

Alternatively the route can be chosen together with the persons who are responsible for resources at the points (presumably) particularly affected by climate change if effects on resources are basically expected from climate change, and these are to be more specifically detailed.

Figure D-7: Transect

A Transect of Dobang Kunda



Type of Land	Arable	Settlements	Arable	Arable	Hilly (not arable)
Soil type	Sandy-loamy	Sandy	Loamy, sandy-loamy	Sandy-loamy	
Type of trees	Palm trees, mahogany, mango and banana	Mango, jackfruits and pawpaw	Baobab, mango	Baobab, mango, palm tree	Jambakatang, Keno, etc.
Farming Practice	Vegetable production, agro-forestry	Settlement (tree planting)	Crop rotation, ridges across slope to check erosion bushes	Crop rotation, formation of ridges across slope to check erosion bushes	None
Crop types grown	Vegetables, banana, mangoes, sorghum, millet (late and early)	Settlement	Maize, sorghum, late and early millet	Sesame, ground-nut	None
Pests and disease occurrence	Birds, insects	Malaria, diarrhoea, skin infections, measles, tetanus	Weaver birds, aphids	Birds, aphids	

Source: IIED, From input to Impact (modified)

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Tool: Seasonal calendar

Objectives

- To identify periods of stress, hazards, diseases, hunger, debt, vulnerability, etc.
- To understand livelihoods and coping strategies.
- To analyse changes in seasonal activities.
- To evaluate use of climate information for planning.

How to facilitate

Duration: approx. 75 minutes (30 minutes for the calendar, and 45 minutes for discussion)

Procedure:

1. Use the ground or large sheets of paper. Mark off the months of the year on the horizontal axis.
2. Explain to the participants that you would like to develop a calendar to show key events and activities that occur during the year.
3. Ask people to list seasons, events, conditions, etc., and arrange these along the vertical axis. The list should include:
 - Holidays and festivals
 - Rainy season, planting and harvest seasons
 - Periods of food scarcity
 - Times of temporary migration
 - Timing of hazards such as cyclones, droughts and floods
 - When common seasonal illnesses occur
 - etc.
4. When the key events have been listed, plot the timing of them in the table based on agreement among the participants. The note taker should note any events for which the group has difficulty deciding on timing.

Results and Discussion

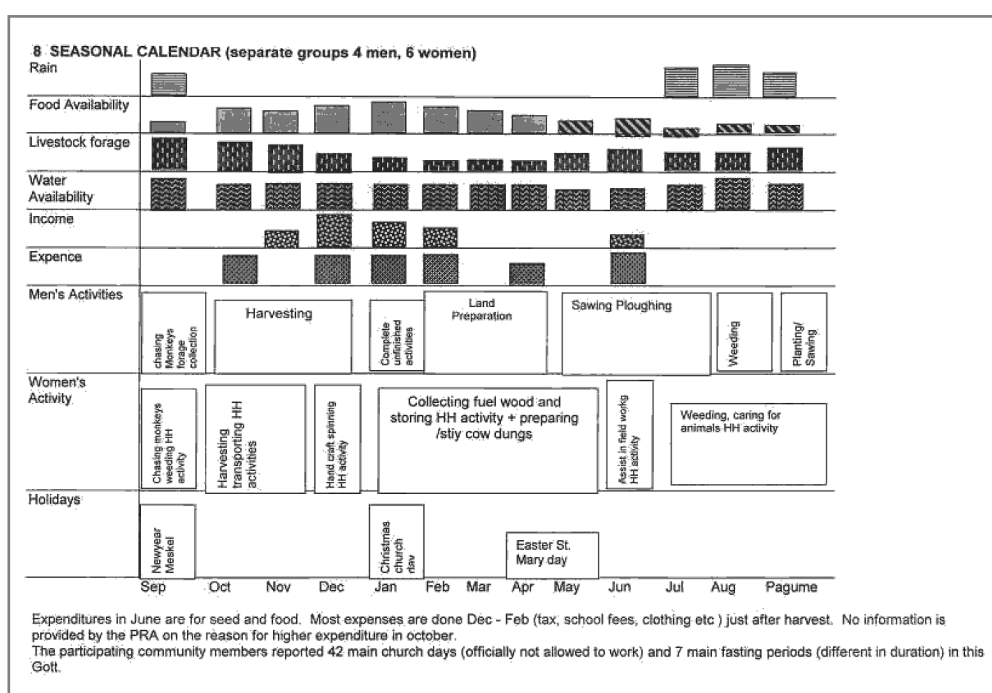
When the calendar is complete, ask the group members the following questions:

- What are the most important livelihood strategies employed at different points of the year?
- What are current strategies to cope during the difficult times? Are they working?
- Are there any differences in the timing of seasons and events as compared to 10/20/30 years ago?
- Have livelihood/coping strategies changed based on the changing seasons or events?
- How are decisions made on timing of livelihood strategies?

Communicating Climate Change

When discussing coping strategies and changes, there may be opportunities to examine whether existing coping strategies are working in the context of the changing environment and/or to identify innovative strategies that have emerged as a result of the changes. It can provide an opening to discuss the need for new strategies in the context of climate change, and to introduce the concept of adaptation.

Figure D-8: Seasonal calendar



Source: Welthungerhilfe, Guidelines Outcome and Impact Orientation, Part III, page 43

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Tool: Venn Diagram

Objectives

- To understand which institutions are most important to communities.
- To analyse engagement of different groups in local planning processes.
- To evaluate access to services and availability of social safety nets.

How to facilitate

Duration: approx. 90 minutes (1 hour for the diagram, and 30 minutes for the discussion)

Procedure:

1. There are a number of different ways to do the Venn diagram. You can draw and write with a stick on a soft ground or you can work on paper. If you decide to use paper, people should first use a pencil in order to be able to make changes. Another option is to cut circles of different sizes from coloured paper and let participants decide which size of circle represents the different institutions.
2. If people find it difficult to understand this tool, it may be helpful to draw a simple example for them.
3. Ask the participants which organisations/institutions/groups are found in the community and which other ones from elsewhere are working with them. Encourage them to also think about informal groups and community-based organisations.
4. Write down all the institutions that are mentioned and give each organisation a symbol which everybody can understand.
5. Ask the participants to draw a big circle in the centre of the paper or on the ground that represents them.
6. Ask them to discuss for each organisation how important it is for them. The most important ones are then drawn as a big circle and the less important ones as smaller circles. Ask the participants to compare the sizes of the circles and to adjust them so that the sizes of the circles represent the relative importance of the institution, organisation or group.
7. Every organisation/group should be marked with the name or symbol.
8. Ask them to discuss in which way they benefit from the different organisations.
9. The note taker should transcribe the discussion, noting why the different organisations are considered important or less important.
10. Ask them to show the degree of contact/co-operation between themselves and those institutions by distance between the circles. Institutions which they do not have much contact with should be far away from their own big circle. Institutions that are in close contact with the participants and with whom they co-operate most, should be inside their own circle.

Results and Discussion

When the diagram is complete, ask the group members the following questions:

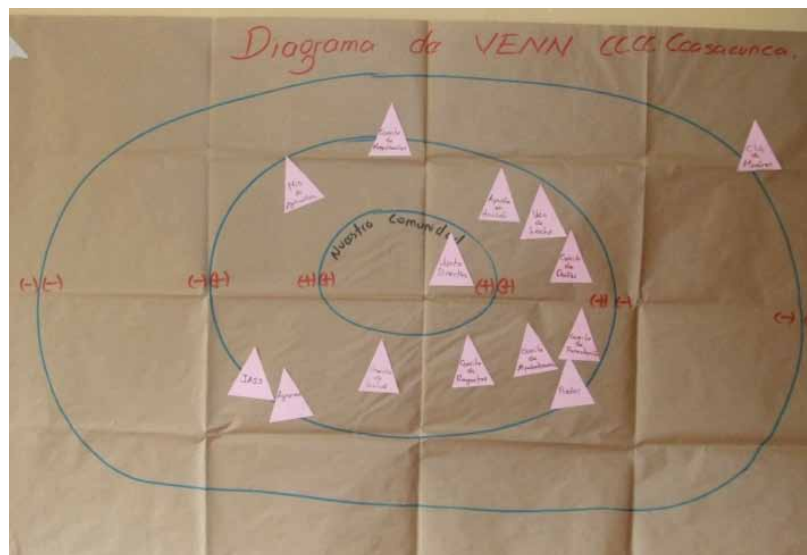
- Are any of the organisations shown only open to membership by men or women? Do any only offer services to men or women?
- Are there any other groups that are excluded from membership or service for the organisations identified?
- Do any of the organisations offer support in times of disasters?
- How do you receive information from the different organisations?
- How do you communicate information to the different organisations?

Communicating climate change

The Venn diagram is basically for understanding the relationships of the village community with other actors. Depending on what impacts climate change is expected to have on the area, additional questions can be included in the discussion, such as:

- Are there organisations which are important for the water supply?
- Are there organisations which influence the use of land in the village?

Figure D-9: Venn Diagram



Source: PREDES, Peru, 2011