

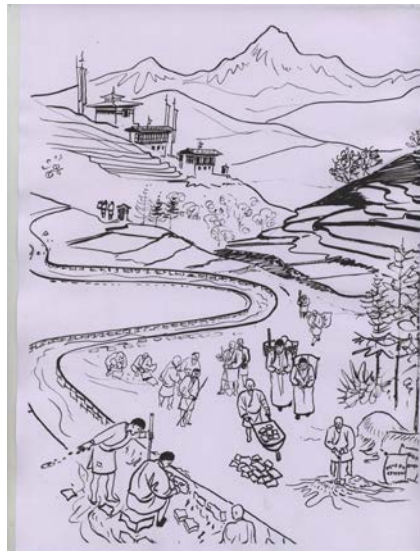


Engineering Division  
Department of Agriculture  
Ministry of Agriculture and Forests  
Royal Government of Bhutan

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**TRAINING MANUAL**  
**OPERATION AND MAINTENANCE OF IRRIGATION SCHEME BY WATER USER**  
**ASSOCIATIONS AND BENEFICIARIES**

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Developed with TA support from SNV-Bhutan



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## ACRONYMS AND GLOSSARY

### Acronyms

|      |                                      |
|------|--------------------------------------|
| BoD  | Board of Directors                   |
| EC   | Executive Committee                  |
| GA   | General Assembly                     |
| MoAF | Ministry of Agriculture and Forests  |
| NIP  | National Irrigation Policy           |
| RGoB | Royal Government of Bhutan           |
| SNV  | Netherlands Development Organisation |
| WUAs | Water User Associations              |

### Glossary

|                    |   |
|--------------------|---|
| Chhuzhing          | Wetland   |
| Chiwog             | Village   |
| Dzongkhag          | District  |
| Geog               | Block under a district consisting of several villages |
| Gup                | Elected Head of the Block                             |
| Kamzhing           | Dryland   |
| Tshogdu / Tshogde: | Decision Making Body                                  |

## ACKNOWLEDGEMENT

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The Manual will serve as a guide and also as a resource material for the WUAs members, Extension staff and the farming beneficiaries to further strengthen in operation, management and allocation of water resource for increased productions under both normal and varied climatic variations.

Tenzin Dhendup  
Director General

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# 1. INTRODUCTION

## 1.1 Background

Community managed irrigation water supply system can play significant role in efficient and effective management and use of irrigation water by the beneficiaries. However, the existing practice of Water User Associations (WUAs) is based on conventional irrigation system and agricultural practice mainly focused on Paddy plantation which is a seasonal crop. Therefore, in general, management of irrigation water and water use efficiency is still low in the country. The investments in irrigation is still largely subsidised by the government, wherein beneficiaries contribute labour for renovation and maintenance. Shortage of household manpower in rural areas is another challenge towards making adequate labour contribution for irrigation development and maintenance. The existing irrigation procedural manuals devised in 1993 (total of nine modules), though are still applicable, many sections are outdated and required revision in the context of the revised National Irrigation Policy (2012) and Cooperative (Amendment) Act of Bhutan, 2009. In this context, a good operation and maintenance manual for training WUAs is critical to increased water efficiency for need based distribution to enhance productivity and production in line with climate smart agriculture.

## 1.2 About the Manual

The development of O&M Manual is initiated as a collaborative activity between Netherlands Development Organisation (SNV) and the Engineering Division (Irrigation Section) of the Department of Agriculture, Ministry of Agriculture and Forests. The National Irrigation Policy (NIP), 2012 remains the basis for revising/updating the existing Procedural Modules of 1993. The development of manual is also a part of water resources management under Climate Smart Agriculture project of the SNV. The manual has been designed in close participatory consultation undertaken with various stakeholders: members of selected WUAs, the beneficiaries of irrigation water, and the government officials involved in supporting the development of irrigation schemes in the country.

The manual is divided into three sections. Part I provides step-wise guide (training strategies) to the trainer with detailed methodologies, objectives, materials required, the timeframe and the technical steps for each session of the training. Part II contains predesigned contents to be used during training strategies such as predesigned flip charts and pictures. Part III is the extended guideline for the trainers relevant to the topics under part I. The training package (Part I) is broken down into stepwise modules as follows:

1. Module 1: Awareness on Generalities
2. Module 2: Irrigation Operation and Maintenance, and Beneficiaries' Role.
3. Module 3: Formation of WUAs or Alternative Institution.
4. Module 4: Scheme Maintenance Fund and Banking.
5. Module 5: Monitoring and Reporting.
6. Module 6: Conflict Management.
7. Module 7: Constitution and By-laws Formulation.
8. Module 8: Sustainability

### 1.3 Scope of the Manual

Considering the diversity of knowledge and skills required for WUAs for management of water source, water resources and irrigation infrastructure, the manual serves as facilitation tools to enable participatory learning and generate outputs deemed necessary for smooth and efficient operation of irrigation schemes by WUAs / beneficiaries. This would ensure that the outputs from the training sessions are incorporated in their operations and maintenance plan (or in their by-laws), thereby building strong ownership by WUAs

The manual is not intended to be the sole reference or guideline for WUAs. It is intended to focus on building understanding, knowledge and skills within the WUAs members in terms of their organisational structures, legal and financial matters and on the technical issues relevant to operation and maintenance of irrigation schemes and water management in line with climate smart agriculture. It would therefore be responsibility of the trainer (facilitator) to make sure that the contents and the level of detail is made appropriate during the training sessions, focussed more towards members' participation in generating their own outputs, that would form the integral part of their operations and management.

### 1.4 Purpose of this Training Manual

This manual is intended as a resource for the trainers or facilitators as they prepare and deliver the trainings. It does not contain any handouts to the WUAs members. The approach is to provide the trainer / facilitator with relevant and appropriate materials and a step wise guide to facilitate the sessions.

The purposes of this manual therefore are:

1. To broaden trainers understanding of their roles and the ways wherein they in best possible ways make the participants understand and educate on the effective and efficient operation and management of irrigation schemes by WUAs committee members and beneficiaries.
2. To help the trainer to be an effective facilitator and equip with necessary tools to act as resource person.
3. To support the agencies and officials supporting the development of irrigation in the country for imparting proper and appropriate skills and knowledge to the WUAs committee members and beneficiaries for sustained ownership of the schemes.

### 1.5 Objectives of the Training

With training of WUAs, it is anticipated that the WUA members will have enhanced skill and knowledge on irrigation water schemes and its management, leading to effective operations and efficient use of irrigation water to contribute to the goal of climate smart agriculture, i.e. to sustainably increase agricultural productivity and incomes; and adapting and building resilience to climate change. The objective of the training is:

***Institutional and individual capacity building of the irrigation water user association (committee members and the beneficiaries) including the other stakeholders involved in support, development, and strengthening of irrigation scheme operation, maintenance and management by the beneficiaries.***

## 1.6 Target Group

The training is targeted for the beneficiaries of irrigation schemes, including the committee members or any form of WUAs committee members. As awareness and sensitization on policy, advantages of forming WUAs, working modalities of WUAs, devising system of scheme maintenance fund, understanding on routine and minor maintenance works, working out fair distribution and supply system, and understanding the importance of extended use of irrigation water are core elements of the trainings in the manual, the training can also be targeted to persons / officials involved in strengthening the functionality of WUAs or for those involved in supervision and monitoring of WUAs and irrigation schemes.

## 1.7 Schedule of the Training

For support and monitoring agencies and officials, the training can be delivered at any time of the year. For the beneficiaries of irrigation schemes, appropriate time would be just before actual start of construction or renovation of irrigation schemes. The training will lead to formation of WUAs or any other similar forms of institutions. Such institutions would then have better ownership of the schemes and would add value to quality of construction and at the same, encourage greater participation of the beneficiaries, both during pre and post construction period.

## 1.8 Training Materials

The training sessions require chart papers and marker pens. The flip charts as under Part II of this manual are the predesigned training material to be available with the facilitator. Additionally the facilitator need to prepare (on chart papers) the tables to be used during training as provided under training strategies 5, 6, 7, 8, 9, 10, 11, 12, and 13. In these pre-designed charts, write down only the headings. The cases / examples provided in the tables are just illustrative to be used during the training but appropriate ones to the situation and context has to be filled in the tables.

### **Note to the facilitator:**

- The outputs of the training need to be recorded on chart papers sequentially, to be used for incorporation into the constitution and by-laws of the WUA.
- Maintain time indicated for each training strategy.
- Assist group works so that beneficiaries produce desired outputs.
- All outputs (in tabular form) need to be assimilated after the training to formulate annual working calendar for the beneficiaries / WUA.
- Use energizers and ice breakers in-between the training strategies wherever required.

## 2. PART I: TRAINING MODULES

### 2.1 Module 1: Awareness on Generalities



#### Training Strategy 1: Introduction to Objectives and Training Sessions

##### Learning Objectives

By the end of this session, the participants will be familiar with the objectives and the topics of the training for entire three days.

##### Key Learning Points

- Understand the purpose and objectives of the training sessions
- Get sensitized on the importance of the training for effective and efficient operation and maintenance of irrigation schemes

##### Note to the Trainer

- Understand clearly the purpose and objectives of the trainings (as detailed in this manual under 1.5).
- Keep Flip Chart 1 and 2 ready for presentation

##### Methodology(ies)

- Lecture
- Information sharing
- Participatory learning and discussion

##### Materials Required

- Flip chart

##### Time Required

- 30 minutes

##### Technical Steps

- ✓ Begin the training session with a welcome to the participants and introduce yourself. Ask the participants to introduce themselves if the group is small (about 20 numbers). For larger group, ask few members to introduce and ask them to explain the reasons for attending the training.
- ✓ Give an overview of the training sessions for three days using "Flip Chart 1: Introduction to Training Sessions". Explain each session briefly.
- ✓ Time and again mention that such three days training is aimed at improving the overall operation and management of the irrigation schemes by the beneficiaries for effective and efficient utilisation of irrigation water to enhance productivity and production; and to minimise negative impacts on environment.
- ✓ Ask the participant if they clearly understood the sessions and cross-check with few participants (Ask what they understood out of the sessions for three days?).
- ✓ Explain and relate the participants' understandings of the training sessions to the overall objectives of the training using "Flip Chart 2: Objectives of the Training".
- ✓ Mention that the training is also intended to provide simple skills to the participants to generate participatory outputs in future in terms of activities that beneficiaries / committee members would undertake for irrigation scheme management.
- ✓ Mention that lack of proper ownership of the scheme by the beneficiaries would lead to un-sustained use leading to early damages and inefficient use of irrigation water.





## Training Strategy 2: Awareness on Policy and Acts

### Learning Objectives

By the end of this session, the participants need to be aware of the existing policy and acts associated with water and irrigation including that for the environment.

### Key Learning Points

- All beneficiaries and participants are aware and abide by the national policy and acts for their routine operation and maintenance of the irrigation schemes.

### Note to the Trainer

- Read thoroughly the abstract from various policies that are associated with irrigation and water (section 4.1)
- Keep Flip Chart 3, 4, 5, 6 and 7 ready for presentation

### Methodology(ies)

- Lecture
- Brainstorming
- Information sharing
- Participatory learning and discussion

### Materials Required

- Flip chart
- Chart papers and marker pens

### Time Required

- 90 minutes

### Technical Steps

- ✓ At first ask the participants what they know regarding policy and acts on irrigation and water use? Brainstorm for a while.
- ✓ Explain that the existing national policy and acts associated with water, environment and irrigation is essential to be known by all as it implicates irrigation scheme management by the beneficiaries.
- ✓ Using flip charts (sequentially from 3 to 7), provide awareness to the participants on the policy and acts. For each flip chart, make elaborated and clear explanation of key points as under section 4.1.
- ✓ For example, first show flip chart 3 to the participants. Ask what they see and what does it depicts. It is to educate participants that for renovation of irrigation channel, the beneficiaries have to contribute free labour as per the national irrigation policy 2012. Use information on National Irrigation Policy 2012, provided under section 4.1 and explain each clearly to the participants.
- ✓ Do the same sequentially for the remaining flip charts (i.e. ask what it depicts and clearly explain the policy for each as under section 4.1)
  - **Note:** Flip chart no. 4 depicts that in case of water scarcity, drinking and sanitation water is the priority. Water for irrigation, hydropower and industries shall be considered based on national and local priorities (Bhutan Water Policy 2003). Flip chart no. 5 in accordance to Water Act of Bhutan, 2011 shows that water from an irrigation channel is allocated through mutual understanding or in accordance with existing practices, depending on the size of land holdings and the quantity of water in the channel, and in accordance to the constitution and by-laws of the relevant Water Users' Association or the beneficiaries. Flip chart 6 shows that water source protection is the responsibility of the government as well the beneficiaries and the water supply management is the responsibility of the WUAs or beneficiaries. While these are the core message from the flip charts, facilitator have to explain clearly all information as provided under section 4.1 relevant to each policy.
- ✓ After awareness on each policy or act, encourage participants to seek any clarification so that they are well aware of the policies and acts.

- ✓ Now use Flip Chart no. 7 which have specific clauses regarding the irrigation (from Water Act of Bhutan, 2011) and explain it so that beneficiaries are well aware of it. It is suggested to provide handouts of this flip chart contents to participants, if possible.
- ✓ Conclude the session emphasising that as per the policy, the ownership of the irrigation schemes actually lies with the beneficiaries and there are a lot of responsibilities on the part of the beneficiaries for regular operation and management of irrigation schemes.

## 2.2 Module 2: Irrigation Operation and Maintenance, and Beneficiaries' Roles



### Training Strategy 3: Identification of Problems

#### Learning Objectives

By the end of this session, all participants will be aware of the generic as well the gender based key challenges / problems in relation to their irrigation scheme and water use.

#### Key Learning Points

- The core problems/ challenges in relation to their irrigation scheme are identified.
- All beneficiaries understand that the problems / challenges in relation to irrigation operation and management could be different for women and men.

#### Note to the Trainer

- The session is intended not only to identify generic problems but also to see if there are gender related problems in irrigation scheme operation and management.
- Identified problems are key to assess at later stage of trainings, the appropriate measures as the responsibilities of the beneficiaries.
- The session can also be used for traditional or local schemes, as the beneficiaries would have had problems in routine maintenance and management of these schemes.

#### Methodology(ies)

- Lecture
- Group discussion
- Participatory learning and discussion

#### Materials Required

- Chart papers and marker pens

#### Time Required

- 90 minutes

#### Technical Steps

- ✓ Divide participants into groups by gender (not larger than 10 people in a group).
- ✓ Provide chart papers and marker pens to the individual groups.
- ✓ Explain that it is a group work and they have to make interactive discussion within the group to identify all problems / challenges associated with irrigation scheme and its operation and management by them, so far experienced. As the training is to be delivered just before construction or renovation of the scheme, the problems would be as experienced for old scheme or traditional scheme operation and management by beneficiaries. Additionally the anticipated problem in operation and management of renovated or newly constructed schemes is also to be included, if possible.
- ✓ With discussion amongst each group, ask the group to list down all constraints / challenges in the chart paper.
- ✓ Invite a group member to make presentation in plenary.
- ✓ For each group presentation, facilitate and invite discussion and comments from other participants. Facilitate to identify any differentiated challenges particularly associated with men or women.

- ✓ For each presentation, facilitate and ask which problems they think would be the responsibilities of the beneficiaries to resolve on their own, without any external support. Using marker pen, distinctly circle these problems.
- ✓ After completion of presentation by all groups and circling of identified problems from the list, stick all the chart papers on the wall for further reference at later stage.
- ✓ Close the session making emphasis that the problems could be gender sensitive, if any. Emphasize that there is requirement for many stakeholders to intervene to resolve them, such as the Government (Ministry, Dzongkhags, Geogs) and the beneficiaries as well. The circled ones are some problems that can be resolved by the beneficiaries.



## Training Strategy 4: Maintenance Types and Beneficiaries Roles

### Learning Objectives

By the end of this session, the participants will be aware of minor maintenance tasks associated with routine maintenance of irrigation scheme. At the same time, the participant would be well informed on the differentiated roles and responsibilities of the government and the beneficiaries.

### Key Learning Points

- Know the minor maintenance tasks to be carried out by beneficiaries.
- Make a clear differentiation between the roles and responsibilities of the government and the beneficiaries

### Note to the Trainer

- The session is intended to educate beneficiaries on minor maintenance tasks for irrigation maintenance. At the same, the session is intended to educate beneficiaries on roles and responsibilities of the government and the beneficiaries.

### Methodology(ies)

- Lecture
- Information sharing
- Brainstorming

### Materials Required

- Flip charts
- Chart papers and marker pens

### Time Required

- 45 minutes

### Technical Steps

- ✓ Make a short brainstorming session by asking what tasks would be carried out by the beneficiaries as routine maintenance of irrigation scheme. Use blank chart paper and marker pen to list down the tasks mentioned by the beneficiaries.
- ✓ Using flip chart 8 (List of minor maintenance tasks), read and explain the tasks anticipated from the beneficiaries. Mention that such minor maintenance tasks actually are the sole responsibilities of the beneficiaries.
- ✓ Invite participants to seek clarification on the tasks listed in the flip chart, if any.
- ✓ Now use flip chart no. 9 (differentiated roles of the Government and beneficiaries). Explain the roles and responsibilities each have (the government at central department, Dzongkhags, Geogs and that of the beneficiaries).
- ✓ Close the session asking few of the beneficiaries to tell once again the tasks that beneficiaries need to undertake for routine operation and maintenance of their scheme.



## Training Strategy 5: Water Distribution and Supply System

### Learning Objectives

By the end of this session, the beneficiaries will have a clear defined layout and plan for water distribution and supply, including that for extended use, if any.

### Key Learning Points

- Know how to make a layout map and devise supply and distribution system for irrigation water.
- Know how to minimise losses of water and make efficient and effective use and supply.
- Know how to make negotiation and agreement on the timing of the distribution.

### Note to the Trainer

- The session is to build upon the most suitable supply and distribution system as identified by the beneficiaries.
- The trainer will facilitate and help beneficiaries to make a concrete supply and distribution system, as far as possible for 12 months (if irrigation water is used for other extended purposes). Even if water is not used in other seasons other than paddy cultivation, tasks to maintain the scheme in these seasons need to be identified and finalised so that beneficiaries maintain the scheme throughout the year.

### Methodology(ies)

- Group discussion
- Participatory learning

### Materials Required

- Chart papers and marker pens

### Time Required

- 80 minutes

### Technical Steps

- ✓ The participants are to be divided into groups for group work. In small irrigation schemes, all beneficiaries need to work together in a single group. For larger irrigation schemes, the beneficiaries need to be divided into groups in accordance to geographical area and in accordance to the most suitable groups that would manage the scheme throughout the length of the channel.
- ✓ Provide chart paper and markers pens and ask the group to make the layout (map) of their irrigation channel and also indicate the main distribution points (outlets) throughout the channel. The distribution outlets would be ones to be used for distribution of water. Adjacent to the outlet, the group need to write the name of adjacent land owner, in order to identify the location of the outlets. Note: If not applicable to make distribution map, skip this group work and go to the next step below.
- ✓ Invite a group member from each group to present the distribution sketch map and invite others for comment to make amendments and agreement on the distribution system.
- ✓ Using pre-designed chart as below, ask the beneficiaries to indicate main purposes for using irrigation water including those for extended use. Facilitator is to note the purposes, and accordingly the season / timing on using water for that particular purpose on the chart paper. For each purpose (e.g. paddy) ask the beneficiaries to mentioned main tasks that would be undertaken during that period (season). The tasks are those pertaining to routine operation and management of irrigation schemes and not for agricultural tasks (i.e. not for paddy cultivation or vegetable cultivation activities). Similarly, for each task, ask who would be responsible and note it down on the chart paper. Do similarly for next purpose on using irrigation water. Note that the cases in the table (such as paddy cultivation, seasonal vegetables cultivation etc are just an examples). The appropriate purpose for using irrigation water by the beneficiaries has to

be identified and noted. If water is not used in other seasons, than just identify the tasks to be carried out (including responsible persons) as in serial no. 5 in table below, so that the beneficiaries have roles to maintain the scheme throughout the year.

| Purpose for using irrigation water      | Season / Timing | Core Activities to be undertaken | Persons Responsible |
|---|-----------------|----------------------------------|---------------------|
| 1. Paddy cultivation                    |                 |                                  |                     |
| 2. e.g Seasonal Vegetable cultivation   |                 |                                  |                     |
| 3. e.g Off-season vegetable cultivation |                 |                                  |                     |
| 4. e.g For orchard irrigation           |                 |                                  |                     |
| 5. All other seasons                    |                 |                                  |                     |

- ✓ Facilitator: The group could also discuss on the water use efficiency system such as half day supply, supply to needy ones (neighbour) on having sufficient water etc. Whatever discussed and finalised has to be noted by the facilitator (on separate chart papers) to be attached to the constitution and by-laws, at later stage.
- ✓ Close the session stating that now we have clear system on effectively managing and using irrigation water for different purposes. The activities (tasks) identified through this session therefore are the responsibilities of the beneficiaries and would be part of their annual working calendar.



## Training Strategy 6: Catchment Management and Beneficiaries Roles

### Learning Objectives

By the end of this session, the beneficiaries should be aware on the importance of catchment management (sustained conservation) in order to have sufficient quantity of water throughout all seasons.

### Key Learning Points

- Understand the importance of catchment management.
- Know the roles of the beneficiaries for catchment management for sustained availability of water for irrigation use.

### Note to the Trainer

- The session needs to educate beneficiaries on key issues required to be undertaken by the beneficiaries for proper catchment management.
- The session should identify clear roles of the beneficiaries in catchment management that would be incorporated into their working calendar.

### Methodology(ies)

- Group discussion
- Participatory learning

### Materials Required

- Chart papers and marker pens

### Time Required

- 20 minutes

### Technical Steps

- ✓ Use Flip Chart no. 10 to highlight usual tasks associated with catchment management. Mention that such tasks are general and all of these may not be applicable to the context of irrigation source. The picture shows some people planting trees, others doing fencing, a group of people as WUAs committee members and another group as government officials. Explain that the purpose of catchment conservation and protection are: to protect source for sustained use of water, control landslides, control and repair channel damages at the source amongst others. Therefore, many stakeholders as in the picture

(i.e. beneficiaries, WUA committee members and the government officials) have respective roles and responsibilities.

- ✓ Using a predesigned table as below, ask the participants and note all the activities that beneficiaries would carry out for catchment conservation. Finalise the timing for the activities and the persons responsible to undertake the tasks (such as all beneficiaries or just water guard or committee members etc).

| Tasks for catchment management                   | Season / Timing | Responsible Persons |
|--|-----------------|---------------------|
| 1. e.g. Clearing the source blockage             |                 |                     |
| 2. e.g. Planting trees around the catchment area |                 |                     |

- ✓ Close the session emphasizing that tasks identified and agreed by the beneficiaries would be incorporated into their annual working calendar so that the beneficiaries organise to execute the tasks as agreed.

## 2.3 Module 3: Formation of WUAs or Alternative Institution



### Training Strategy 7: Identification of Solutions and the Responsible

#### Learning Objectives

By the end of this session, the beneficiaries should be familiar with their roles in irrigation operation and maintenance and understand that formation of WUAs or instituting any alternative measures are essential.

#### Key Learning Points

- Identify the appropriate solutions / measures for scheme operation and maintenance, within the capacity of the beneficiaries
- Beneficiaries understand the significance of formation of WUAs or any other alternative institution for resolving the problems and for smooth operation and maintenance of their irrigation scheme.

#### Note to the Trainer

- Undertake this session only if there are core problems identified and circled in training strategy no. 3. Otherwise skip the session and move to next training strategy.
- The session is not intended to enforce beneficiaries to form WUAs. Reviewing their problems as mentioned under training strategy 3, and reflecting the roles of the beneficiaries as made aware under training strategy 4, the beneficiaries need to make their own decision and institute a system on operation and maintenance of scheme.

#### Methodology(ies)

- Lecture
- Information sharing
- Participatory learning and discussion

#### Materials Required

- Chart Papers and marker pens

#### Time Required

- 50 minutes

#### Technical Steps

- ✓ Start the session with brief review of the problems identified by the beneficiaries under training strategy 3.
- ✓ Use predesigned chart paper as in table below.
- ✓ List down the constraints (earlier circled) that beneficiaries identified would be their responsibilities to resolve. For each problem, generate discussion to identify appropriate solutions, person responsible and the timing (frequency of the tasks to be undertaken).

The identified solutions are those that could be executed by the beneficiaries, and not by external agencies.

| Key Constraints | Identified Solution (activity) | Responsible Person | Frequency of tasks required |
|-----------------|--------------------------------|--------------------|-----------------------------|
| 1.              |                                |                    | e.g. Daily                  |
| 2.              |                                |                    | Occasional / very rare      |

- ✓ Further invite interactive discussion amongst the participants to see if formation of water user association or any alternative system would be required to execute these solutions / measures. Agreement to form WUAs or alternative institution would be undertaken in next session.
- ✓ Close the session emphasizing the importance of forming WUAs or any other alternative institution for executing tasks as identified in this session and by earlier sessions on minor maintenance tasks, water distribution, and catchment management.



## Training Strategy 8: Identification of Key Responsible Persons and their Roles

### Learning Objectives

- By the end of this session, the beneficiaries arrive at a decision and organise to form WUAs or establish an alternative institute to operate and maintain irrigation scheme by the beneficiaries.

### Key Learning Points

- Understand the significance in forming WUAs or alternative institution to resolve problems associated with irrigation scheme operation and maintenance and to fulfil the tasks identified for the beneficiaries.
- Arrive at the decision to form WUAs or alternative institution.
- Define roles and responsibilities of the committee members.

### Note to the Trainer

- The establishment of WUAs or an alternative traditional institute as desired by the beneficiaries is to be facilitated.
- The session should facilitate formation of WUAs or alternative institution wherein the key responsible (such as committee members) are listed and their roles and responsibilities are defined.

### Methodology(ies)

- Lecture
- Information sharing
- Participatory learning and discussion

### Materials Required

- Flip Chart
- Chart Papers and marker pens

### Time Required

- 100 minutes

### Technical Steps

- ✓ Mention that formal WUAs would comprise of the committee members. We need to define their roles and responsibilities and also define roles and responsibilities of the beneficiaries. It also requires formulating by-laws in accordance to the policy and acts and drawing an annual work plan.
- ✓ Tell participants to reflect on tasks identified by earlier sessions and provide about 10 minutes time for the participants to discuss amongst themselves whether WUAs or alternative form of institution would be required to be formed. Note: In most scenarios, forming WUAs is anticipated and if not, beneficiaries would suggest continuing with the

traditional practice. In the latter, it is required to revisit the traditional practice and strengthen the practice with incorporation of the tasks identified by the beneficiaries in the earlier sessions. In either of the decision, the subsequent sessions would facilitate formation of WUAs or strengthening the alternative institution of irrigation scheme operation and maintenance.

- ✓ After the discussion is completed, take consensus of the majority of the participants. Mention that the subsequent sessions would help beneficiaries to form WUAs or alternative system (as decided) through consensus of the majority.
- ✓ Now use flip chart no. 11 to explain the key tasks that would be handled by the beneficiaries and some of the requirements for WUAs (or alternative system of management) to function effectively and efficiently.
- ✓ Use a pre-designed chart paper as below and marker pen. Ask the beneficiaries what key responsible persons would form the organisational structure of the association (such as committee members, chairperson, secretary, water guards, accountant, audit committee, other Tshogpas and any other if suggested). Note and list them down as suggested by the beneficiaries. It is only to indicate their designation (such as accountant, chairperson, water guards, secretary etc.) and not nominate the person. The persons have to be nominated and elected at a later stage. Also ask and finalised the term period after which they will be re-elected.

| No | Key Responsible / Committee Members                | Term (Period) |
|----|--|---------------|
| 1  | e.g. Chairperson (1 head)                          | e.g 1 year    |
| 2  | e.g. Secretary cum accountant (1 head)             |               |
| 3  | e.g. Water Guards (7 persons)                      |               |
| 4  | e.g. Other executive members (3 persons)- Tshogpas |               |
| 5  | e.g. Audit Committee (2 persons)                   |               |

- ✓ Based on the listed category of key responsible identified, divide the beneficiaries into groups making a mix of gender. The number of groups has to be equivalent to number of key responsible identified. If too many responsible persons are identified, each group can be assigned to work for two – three responsible persons.
- ✓ In a group work, each group is asked to define roles and responsibilities of key responsible as assigned to each group. Inform the group that they also have think of the tasks identified in earlier sessions, to be assigned to the key responsible persons, if any. For example, if beneficiaries identified that committee members would comprise of chairperson, secretary, account etc, then one group will define roles and responsibilities for chairperson, another group will work on secretary's roles and responsibilities and another one on accountants.
- ✓ Invite group leader to present the roles and responsibilities as identified by the group members. Invite other members to comment on each presentation, so as to make amendments and agreement on roles and responsibilities of the key responsible persons.
- ✓ Close the session mentioning that these roles and responsibilities will form part of their by-laws, in accordance to which the key responsible person will execute the tasks associated with routine operation and maintenance of irrigation scheme.



## 2.4 Module 4: Scheme Maintenance Fund and Banking



### Training Strategy 9: Scheme Maintenance Fund Accumulation

#### Learning Objectives

By the end of this session, the beneficiaries shall realise the significance and volume of scheme maintenance fund to be generated for smooth operation and maintenance of irrigation scheme by beneficiaries

#### Key Learning Points

- Know the activities and purposes for which beneficiaries' generated scheme maintenance fund is required.
- Understand the volume of scheme maintenance fund to be generated and required.
- Identify means to generate scheme maintenance fund

#### Note to the Trainer

- Making beneficiaries realise the importance of scheme maintenance fund, and motivate them to generate sufficient fund.

#### Methodology(ies)

- Lecture
- Participatory learning and discussion
- Brainstorming

#### Materials Required

- Chart Papers and marker pens

#### Time Required

- 60 minutes

#### Technical Steps

- ✓ Brainstorm if scheme maintenance fund is required and for what purposes. Mention that the main objective of generating scheme maintenance fund is to meet costs for minor maintenance and to meet emergency requirements, when as fund may always not be available with the government.
- ✓ Use pre-designed table as below. Ask participants to think on the activities as identified by earlier sessions or any other activities that incurs costs. Note down these activities. In discussion with the participants, make projection for required annual costs for each activity. (Note: The table is just an example. Some association may decide not to provide salary to the committee members and the water guards. Instead they may have other means such as by means of giving grains etc. In such cases, cost projections are not required but note them down below the table).

| Activity to be undertaken by beneficiaries | Projected Annual costs (Ngultrum) |
|--|-----------------------------------|
| 1. e.g. Annual minor maintenance           |                                   |
| 2. e.g. Salary to water guards             |                                   |
| 3. e.g. Salary to committee members        |                                   |

- ✓ In second instance, ask the participants to discuss on how they would generate the above fund from the beneficiaries. Probe them with ideas: fund can be collected as annual membership fees from all beneficiaries; additionally fund can also be collected as additional fee based on acreage of Chhuzhing cultivated; fee also can be collected for other usage (vegetables, orchard, farms etc).
- ✓ Use pre-designed table as below. In consultation with the participants, devise the fund accumulation system (source) and project agreed annual collection for each.
- ✓ Further explain that certain percentage of the fund is required to be maintained for emergency needs. Ask participants to discuss and finalise amount of reserve fund to be maintained at all times (which means the minimum amount of fund to be available at all

times). The scheme maintenance fund is promising if it is increasing every year. Therefore projection in the table is for the first year. The fund is anticipated to grow every year, as all fund accumulated may not be used every year.

| <b>Fund Accumulation System</b>  | <b>Projected Annual Collection (Nu.)</b> |
|--|--|
| 1. e.g Annual membership fee   |  |
| 2. e.g Fee based on acreage (Chhuzhing)  |  |
| 3. e.g Fee for extended use (orchard owners)   |  |
| 4. e.g Fee for extended use (vegetable growers)  |  |
| 5. e.g. Lumpsum fee for landlords from outside the Geog inclusive of labour contribution costs |  |
| 6. Fines and penalties   |  |
| <b>Total (sum all above)</b>   | <b>Nu.</b>                               |
| Reserved Fund  | Nu.                                      |

- ✓ Note that for each fund collection system, the criteria also have to be noted. For example, if it is membership fees, then how much to be collected and on what criteria, meaning either based on acreage of land / or equal for every member etc has to be noted.
- ✓ Close the session endorsing that the fund collection system will be incorporated into their constitution and by-laws and it is anticipated that the beneficiaries will continuously contribute to generate and increase the scheme maintenance fund. Also state that it is now agreement on the part of the beneficiaries to provide incentives (through means as identified in this session) to the responsible persons (committee members, water guards etc).



## **Training Strategy 10: Accounting and Banking**

### **Learning Objectives**

By the end of this session, the beneficiaries shall devise a system of banking and accounting and know the importance of maintaining transparency regarding scheme maintenance fund.

### **Key Learning Points**

- Know that banking and maintaining proper account is vital for transparency.

### **Note to the Trainer**

- Through this session, it is intended to formulate accounting system for better transparency
- Through lecture, emphasize and explain why transparency is important i.e. to have checks and balances to minimize corruption. For this, good records are to be maintained properly and presented to all beneficiaries regularly (at least once a year).

### **Methodology(ies)**

- Brainstorming
- Participatory learning and discussion

### **Materials Required**

- Chart Papers and marker pens

### **Time Required**

- 30 minutes

## Technical Steps

- ✓ Use a pre-designed chart paper to document the outcome of this session with the following table:

| Accounting and Banking  | Responsible and Timing (wherever applicable)   |
|---|--|
| 1. e.g. Accounting (maintain account)   | e.g. Account and timing would be often or daily or monthly   |
| 2. Banking<br>2.1 Bank account name<br>2.2 Making Deposits<br>2.3 Making withdrawals  | ..... Irrigation Tshogpa or Detshen<br>Accountant (moment fund is accumulated)<br>Joint signatory of whom? |
| 3. Fund / fee collection<br>3.1 Responsible<br>3.2 Timing for fund collection <ul style="list-style-type: none"> <li>• Annual membership fee</li> <li>• Fee based on acreage</li> </ul> | e.g. accountant<br>e.g. may be during general assembly   |
| 4. Decision on fund utilisation   | e.g. Majority decision at General Assembly   |
| 5. Present accounts to all beneficiaries  | e.g. Most probably during GA   |

- ✓ If accountant as key responsible person is identified in earlier session, it is her / his responsibility to maintain accounts. If accountant is not identified, ask the participants to decide on how the accounts shall be maintained (who would be responsible?).
- ✓ In second step, ask who would be responsible for banking. There are two things here. Who would be responsible for making deposits and for withdrawals? Note: Probe the session stating that to avoid misuse of fund, account in the name of WUAs or the group with withdrawal authority as joint signatory of two – three committee members would be better.
- ✓ In third step, invite participants to decide on the person responsible for collection of fund and fees. Ask participants to decide on the timing (date and month) for collection of fund (fees).
- ✓ In fourth step, ask who can decide to use the fund and for what purposes? (e.g. majority decision in assembly participated by all beneficiaries or decision only by the committee members)
- ✓ In fifth step, ask the participants to decide on the timing for presentation of the accounts to all beneficiaries (e.g. yearly or half yearly etc). Also ask them to indicate the time (date and month) for presentation. Most appropriate would be during the general assembly.
- ✓ Close the session endorsing that accounting and banking system as decided by the participants is final and fund collection and utilisation hereafter would be based on the decided system.

## 2.5 Module 5: Monitoring and Reporting



### Training Strategy 11: Monitoring and Reporting

#### Learning Objectives

By the end of this session, the beneficiaries will be familiar with the system of participatory monitoring and reporting (by the beneficiaries) to Geog and Dzongkhag administrations.

#### Key Learning Points

- Understand the importance and purpose of monitoring and reporting.

- Understand participatory or beneficiaries based monitoring and reporting system.
- Identify necessary elements of routine monitoring and prepare the checklist for the same.

### Note to the Trainer

- This session should institute a system on monitoring and reporting at the level of beneficiaries, and not at the level of the Geog or Dzongkhags.

### Methodology(ies)

- Lecture
- Information sharing
- Participatory learning and discussion

### Materials Required

- Flip chart
- Chart Papers and marker pens

### Time Required

- 50 minutes

### Technical Steps

- ✓ Ask the participants to express their opinion on significance of monitoring and reporting and what value would it add to irrigation water users / beneficiaries? Brainstorm and make discussion for few minutes. At the end, facilitator needs to draw conclusions to the following points regarding significance of monitoring and reporting:

- Builds ownership of how the system is performing and serving the members,
- Supports decision making by identifying areas which are performing well and others which are not performing well,
- Supports accountability and transparency by making data available for the committee and members,
- Helps to know what action is making an impact and whether changes are required,
- Enables the Geog and Dzongkhag administration to make better decisions because data is available to inform the decision making process.

- ✓ Using a pre-designed chart paper (with table as below), the facilitator is to extract information relevant to monitoring and reporting as indicated by the beneficiaries.

| Monitoring Tasks by the beneficiaries          | Responsible Person | Frequency of monitoring | Reporting to whom                               | Frequency of reporting |
|--|--------------------|-------------------------|---|------------------------|
| 1. e.g. Check source condition                 | Water guards       | Once every month        | Committee members                               | Once every month       |
| 2. e.g. Check overall condition of the channel | Water Guards       | Once every two months   | Committee members                               | Once every two months  |
| 3. e.g. Check channel and report regularly     | Committee members  | Quarterly               | Geog administration (Gup and extension officer) | Quarterly              |

- ✓ Getting consensus and agreement from majority of the beneficiaries on above devised system of monitoring and reporting, close the session indicating that the instituted monitoring and reporting is now the tasks of the responsible persons (to be executed in accordance to the timelines defined).

## 2.6 Module 6: Conflict Management



### Training Strategy 12: Conflict Resolution

#### Learning Objectives

By the end of this session, the beneficiaries will have insight into the usual conflicts associated with irrigation and know means to resolve them within the capacity of the beneficiaries.

#### Key Learning Points

- Know the usual conflicts associated with irrigation.
- Know different ways how to deal with the conflicts.
- Identify conflict resolution authority beyond the capacity of the beneficiaries.

#### Note to the Trainer

- Beneficiaries (mainly the WUAs or other committee members) need to deal with conflict situations (within the members or with other organisations).
- There are different side of the conflicts and roles played by different people. The best way to make beneficiaries understand is by the role play.

#### Methodology(ies)

- Role Play
- Participatory learning and discussion

#### Materials Required

- Chart Papers and marker pens

#### Time Required

- 60 minutes

#### Technical Steps

- ✓ Show Flip Chart 12. Ask participants what it depicts? Ask them if such similar disputes are experienced or could be anticipated with regards to irrigation scheme operation and management by the beneficiaries.
- ✓ Invite participants to do a role play of conflicting situation. Explain the situation: Farmers at the beginning of the channel take maximum water and not enough water is left for farmers from lower or end of the channel.
- ✓ For the role play divide the participants into the following groups of both men and women and assign the tasks:
  - 1) A group of farmers situated at the beginning of the channel using maximum water.
  - 2) A group of farmers situated at the end of the channel having no sufficient water and have to start quarrel with the farmers from the beginning of the channel.
  - 3) A group of farmers as the WUAs committee member or management members trying to resolve the problem. This group have to join the play after sometime when two other groups have quarrelled for a while.
  - 4) Remaining participants remain as the observers.
- ✓ Introduce the groups to each other and ask the group now to make a role play in real situation (manage the time).
- ✓ After the role play is over, ask each group how it was to play that role and how she/he felt about it. Get similar opinion from the conflict resolution group. Ask comments from the observers on the role play and how the conflict was resolved.
- ✓ Thereafter, invite stepwise discussion in plenary as follows
  - 1) Discuss what can be learnt from different sides of the conflicts (farmers from beginning and end of channel)
  - 2) Ask how the conflict resolution group solved the problem and what can be learnt from it?

- 3) Ask participants if they know other ways to resolve the conflicts? Amongst them, which could be applied to resolve conflicts associated with irrigation?
- ✓ Using the pre-designed table as below, ask participants who would be responsible to resolve conflicts at various levels

| No. | Conflicts Levels                            | Responsible to Resolve      |
|-----|---|-----------------------------|
| 1   | e.g. Within the beneficiaries               | e.g. WUAs committee members |
| 2   | e.g. Within the WUAs committee members      | e.g. Gup                    |
| 3   | e.g. Between different WUAs / beneficiaries | e.g. Gup                    |
| 4   | Any other level of conflicts, if any        |                             |

- ✓ Close the session stating that conflict resolution authorities as identified shall be entrusted with responsibilities to resolve conflicts, if any, and the same shall be incorporated into their by-laws.

## 2.7 Module 7: Constitution and By-Laws Formulation

The formulation of constitution and by-laws incurs incorporating all significant outputs of the training. Therefore this module shall focus only on extracting certain additional (missing) vital information required to be assimilated into constitution and by-laws.

Note: The facilitator has the additional tasks to help the WUAs or beneficiaries to assimilate outputs and formulate constitution and by-laws. As such separate forum is required at later stage for few hours to further discuss the assimilated constitution and by-laws and make endorsement by all beneficiaries.

Note to facilitator: Use the step wise guide and format (after the training) for development of constitution and by-laws as provided under section 4.2.



### Training Strategy 13: Annual Working Calendar

#### Learning Objectives

By the end of this session, the beneficiaries shall know how to make an annual working calendar based on which the tasks would be executed by the beneficiaries and the elected committee members / responsible persons.

#### Key Learning Points

- Know that annual working calendar is required for smooth and timely execution of tasks by the beneficiaries and the committee members / responsible.

#### Note to the Trainer

- The session is intended to provide simple skills to the beneficiaries to enable them formulate their annual working calendar, without any external support.
- It would be the added tasks of the facilitator to assimilate all outputs (defining the tasks and the timelines) to form first annual working calendar. The same needs to be attached to the constitution and by-laws. Use format provided under section 4.2 to make the annual working calendar.

#### Methodology (ies)

- Lecture
- Information sharing

#### Materials Required

- None

#### Time Required

- 30 minutes

## Technical Steps

- ✓ Use a predesigned chart paper with the table as below to train and explain beneficiaries how an annual working calendar could be formulated. Do not write the examples in advance. Use the outputs obtained from earlier sessions in discussion with participants to fill in the table. Do this for 5 – 6 examples.

| <b>Administrative and Financial Tasks</b> |   |   |  |   |
|---|---|---|--|---|
| <b>Sl. No</b>                             | <b>Activities to be undertaken by the beneficiaries including the committee members and other responsible persons</b> | <b>Timing if applicable (dd/mm) and seasons</b> | <b>Person Responsible to Coordinate and Organise</b> | <b>Persons Responsible to do the tasks / to participate (i.e. Who: Committee members or all beneficiaries or other identified responsible persons such as water guards etc)</b> |
| 1   | e.g. General Assembly (GA)  | March   | Chairperson  | All beneficiaries   |
| 3   | General Meeting of Committee members (regular)  | Monthly   | Chairperson  | WUAs committee members  |
| 4.  | Auditing of the scheme maintenance fund   |   |  |   |
| 5.  | Present audited accounts to the Committee members   |   |  |   |
| 6.  | Present audited accounts to the Beneficiaries   |   |  |   |
| 7.  | Make annual working calendar  | March   | Chairperson  | All beneficiaries (during GA)   |

| <b>Activities in accordance of use of water</b> |                        |   |                            |
|---|------------------------|---|----------------------------|
| <b>Purpose for using irrigation water</b>       | <b>Season / Timing</b> | <b>Core Activities to be undertaken</b> | <b>Persons Responsible</b> |
| 1. Paddy cultivation                            |                        |   |                            |
| 2. Seasonal Vegetable cultivation               |                        |   |                            |
| 3. Off-season vegetable cultivation             |                        |   |                            |
| 4. For orchard irrigation                       |                        |   |                            |
| 5. All other seasons                            |                        |   |                            |

- ✓ Explain that similarly the tasks identified for beneficiaries, committee members, other from all earlier sessions has to be added to the above table, to make it comprehensive annual working calendar for a year. The annual working calendar does not reflect any special / emergency tasks.
- ✓ Ask if the participants understood and know how to formulate an annual working calendar.
- ✓ Inform the participants that the facilitator shall assimilate all outputs to develop first annual working calendar. The same would be attached to the constitution and by-laws.
- ✓ Close the session informing that the beneficiaries need to revisit the annual working calendar every year and make a new one, based on which all tasks needs to be executed.



## Training Strategy 14: Formulation of Constitution and By-laws

### Learning Objectives

By the end of this session, the beneficiaries shall provide other missing information deemed necessary for formulation of constitution and by-laws.

### Key Learning Points

- Know the strategic steps in formulation of constitution and by-laws.
- Identify and finalised required elements for clauses under constitution and by-laws.

### Note to the Trainer

- The session is intended to educate participants on steps for development of constitution and by-laws.
- The facilitator need to document outputs using chart papers as all information collected would be required for development of constitution and by-laws.

### Methodology(ies)

- Lecture
- Participatory learning and discussion

### Materials Required

- Chart Papers and marker pens

### Time Required

- 120 minutes

### Technical Steps

- ✓ Inform the participants there are more information required to fulfil comprehensive formulation of constitution and by-laws.
- ✓ Use blank chart papers to extract and note down such information, in discussion with the beneficiaries for the issues / clauses as listed below. Use extended guide questions under section 4.2 for each of these clauses to collect desired information, required in accordance to constitution and by-laws format.
  1. Name of the Association.
  2. Postal Address and date of establishment.
  3. Setting objectives for the association.
  4. Eligibility criteria for committee members.
  5. Resignation of WUAs committee members.
  6. Removal and suspension of WUAs committee members.
  7. Meeting (regular and special) for WUAs committee members.
  8. Quorum for decision making for WUAs committee members.
  9. Eligibility criteria for membership.
  10. Admission to membership.
  11. Duties and responsibilities of members (beneficiaries).
  12. Termination (voluntary withdrawal, and expulsion and suspension of members).
  13. Meetings (regular meeting for beneficiaries i.e. General Assembly).
  14. Roles and Responsibilities of General Assembly.
  15. Quorum for GA and decision making in meeting participated by all beneficiaries.
  16. Finalise system of labour contribution i.e. based on acreage of land (Chhuzing / Kamzhing for irrigation water users) or any other.
  17. Finalise exemption on fees and labour contribution if any.
  18. Finalise Penalties for members
    - For absentees on meetings / general assembly.
    - For failure to make timely labour contribution.
    - For water thefts.
    - For failure to make timely fee and other decided fund contribution.
    - Any other clauses as provided in the guide
  19. Fines and Penalties for WUAs committee members



- For responsible persons / committee members not executing roles and responsibilities (including that for water guards).
  - For any misuse of fund by the responsible persons.
  - For other clauses as provided in the guide
20. Clauses for dissolution of the association
21. Election procedure
22. Amendments and changes to the constitution and by-laws
- ✓ Close the session mentioning that all outputs would be incorporated into their constitution and by-laws and would be presented and discussed once again in a separate forum participated by all beneficiaries.



## **Training Strategy 15: Nomination and Election of Key Responsible Persons**

### **Learning Objectives**

By the end of this session, the beneficiaries would elect all key responsible persons / committee members (both women and men).

### **Key Learning Points**

- Know the steps in nomination of the persons in accordance to the capacity and relevancy of tasks to be assigned
- Understand the procedure for election of key responsible / committee members.

### **Note to the Trainer**

- The election should be based on agreed quorum for decision making (i.e. type of majority decided for any decision making).

### **Methodology(ies)**

- Lecture
- Brainstorming
- Participatory discussion

### **Materials Required**

- Chart Papers and marker pens

### **Time Required**

- 120 minutes

### **Technical Steps**

- ✓ Use blank chart papers and marker pen to note down key responsible persons as indicated and identified through the earlier sessions and ask for nominations for each (e.g. nominations for chairperson, secretary, account, other Tshogpas, water guards etc). Explain that the nomination has to be based on the capacity of the person to undertake tasks as defined in the roles and responsibilities.
- ✓ Undertake election for each key person amongst the nominated by method agreed upon by the beneficiaries (i.e. simple majority by raising hand, or secret ballot or by ticking against the name / serial number of each person).
- ✓ Declare the result of the election.
- ✓ In a paper, write down the election procedure, date, venue and the results of the election. Take signatory from all participants as endorsement of the results. Explain that the election procedure shall be detailed under constitution and by-laws and the signed result shall be attached to the by-laws.
- ✓ Close the session, congratulating the newly elected responsible persons / committee members, and stating that the elected ones will now shoulder the main responsibilities of the association. The smooth operation and maintenance of irrigation channel would depend upon their dedication, hard work and sincerity to execute tasks that would be defined in the by-laws and in the annual working calendar.

## 2.8 Module 8: Sustainability



### Training Strategy 16: Dependency and Sustainability

#### Learning Objectives

By the end of this session, the beneficiaries shall know the problems in dependency and recognise the importance of being self-reliance.

#### Key Learning Points

- Know the usual problems in being dependent on the external agencies.
- Realise the importance of being self-reliant for routine operation and maintenance of irrigation scheme.

#### Note to the Trainer

- The session is a closing session intended to make beneficiaries aware that being dependent on the government and external agencies at all times is not conducive and self-reliance for regular operation and maintenance of the irrigation schemes is essential.
- Use role play followed by illustration to explain the session objectives and contents.

#### Methodology(ies)

- Lecture

#### Materials Required

- Flip Chart

#### Time Required

- 60 minutes

#### Technical Steps

- ✓ Use a role play : The River Code as follows:
  - Invite three numbers of beneficiaries as volunteer for the role play. Rest would remain as the observers.
  - Draw two lines on the floor fairly wide to represent the bank of the river. Strings could be used in place of drawing lines.
  - Put some stones or papers to represent stepping stones in the river and similarly place a larger stone or a large paper to represent a small island in the middle of the river.
  - Explain the scenario of the role play to three volunteers only. Others should not know the scenario. The scenario of the role play is: Two people come to the river in hurry and look for the space to cross the river. The current is very strong and they are both afraid to make any move. The third person comes along and sees their difficulty. He leads them up the river and shows them the stepping stones. He encourages them to step on the stones but both are afraid. He then agrees to help them to cross the river. He carries first person on his back and starts crossing the river by stepping the stone. As he reaches the island, he gets tired and drops the person to rest for a while. He then decides to go back and bring the second person. He refugees to carry the second person on the back and rather provides him hand to hold and help cross the river. They start crossing the river holding the hand. As these two people reaches half way through the stepping stones, the first person starts further crossing the river stepping on the stones and manages on his/her own. When the third and second person reaches the island, the second person immediately starts further crossing the river by stepping on the stones, leaving behind the third person on the island. The first and second persons having crossed the river were extremely pleased and they completely forgot the third person, sitting alone on the island. The third person tries to call them but they do not notice his frantic gesture for help.

- ✓ Decoding the Role Play: Now ask the participants the following questions and brainstorm with them for a while to get their opinion:
  - What did you see happening and what do you understand out of the role play?
  - What different approaches were used to help two men cross the river?
  - What could each person represent in real life in your community?
  - Why does this happen?
- ✓ Explain the following: The play involves three characters – first two are farmers and the third one is the external support agency (service provider / government). In the first instances, the service provider provides everything to the farmers (like supporting for entire irrigation construction and renovation etc). This is where the third person agrees to carry the first person on the back. However, after sometimes the service provider gets tired of continuing and helping all the times (as the first farmer is left on the island). This happens when the support is not available to help the farmer. In the second instance, as no further support is available, the third person empowers the second person (farmer) by guiding him through the river (by holding hands) and clearly showing the stepping stones that farmer need to use to get to the other side. This time the farmer is slower in crossing but manages and learns to cross the river. Thereafter, both the farmers now can cross the river without any help from the service provider and can also help others to cross the river. This shows that if people start doing things on their own instead of relying on service provider (for supply driven solutions), the dependency would not remain in the community and self-reliance is the best solutions.
- ✓ Close the session emphasizing that through this training for three days, there is a great expectation that the beneficiaries now have been empowered to take the responsibilities of their irrigation schemes as in the case of two farmers now being able to cross the river on their own.
- ✓ Closing the three day training programme, thank all participants for their participation and making valuable contribution to the sessions that helped generate many decisive outputs as the responsive roles and responsibilities of the beneficiaries of irrigation scheme



## Training Strategy 17: Evaluation Tools

Provided below are some of the evaluation tools. The facilitator need to design appropriate material and evaluate the training programme every day at the end of the day.

### Evaluation grid

List all the training activities (sessions) of the day in a left-hand column on a chart paper. Draw columns to the right, headed with evaluation questions, typically: Was this valuable/not valuable/ don't know or happy, sad/ neutral face symbols. The best would be to use face symbols of happy, confused, bored and sad. Invite the group to take marker pens and place a dot against each question in the appropriate column for them. You could share the final result and ask what they notice about this feedback.

### Flips with questions

Put up separate chart papers in different parts of the room each with different open questions such as what for you was the most valuable part of the workshop? What did you find least useful? What could have been done differently? What did you think of the facilitation/ pace/ style of the workshop? What will you do differently as a result of this workshop? Invite the group to circulate around the room and write their responses.

## Pie chart

A variation of the evaluation grid (above), but using a pie chart with each segment as a different session or aspect of the workshop. Invite people to put a dot in each segment, the nearer to the centre, the more positive their response. Similarly, you could share with the group what's come out and ask what they notice.

## 3. PART II: ADDED TRAINING CONTENTS

### 3.1 Flip Chart 1: Introduction to Training Sessions

Introduction to the Programme for Three Days and the Training Sessions

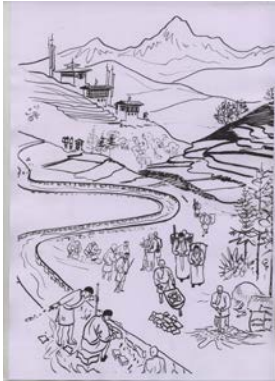
| Days  | Sessions   | Approx. Time |
|-------|--|--------------|
| Day 1 | 1. Introduction to the Objectives and the Training Sessions  | 30 minutes   |
|       | 2. Awareness on Policy and Acts                              | 90 minutes   |
|       | 3. Identification of Problems                                | 90 minutes   |
|       | 4. Maintenance Types and Beneficiaries' Roles                | 45 minutes   |
|       | 5. Water Distribution and Supply System                      | 80 minutes   |
|       | 6. Catchment Management and Beneficiaries' Roles             | 20 minutes   |
| Day 2 | 7. Identification of Solutions and the Responsible           | 50 minutes   |
|       | 8. Identification of Key Responsible Persons and their Roles | 100 minutes  |
|       | 9. Scheme Maintenance Fund Accumulation                      | 60 minutes   |
|       | 10. Accounting and Banking                                   | 30 minutes   |
|       | 11. Monitoring and Reporting                                 | 50 minutes   |
|       | 12. Conflicts Resolution                                     | 60 minutes   |
| Day 3 | 13. Annual Working Calendar                                  | 30 minutes   |
|       | 14. Formulation of Constitution and By-laws                  | 120 minutes  |
|       | 15. Nomination and Election of Responsible Persons           | 120 minutes  |
|       | 16. Dependency and Self-Reliance                             | 60 minutes   |

### 3.2 Flip Chart 2: Objectives of the Training

The Objective of the Training is:

**Institutional and individual capacity building of the irrigation water user association (committee members and the beneficiaries) including other stakeholders involved in support, development, and strengthening of irrigation scheme operation, maintenance and management by the beneficiaries.**

### 3.3 Flip Chart 3: Illustration to reflect National Irrigation Policy, 2012



The illustration represents the roles of the beneficiaries for routine maintenance of the irrigation schemes (Picture: channel renovation by beneficiaries, in accordance to NIP 2012).

### 3.4 Flip Chart 4: Illustration to reflect Bhutan Water Policy, 2003



The illustration represents one source of water being extracted for many different uses (such as for irrigation, hydro-power, drinking water). The policy on the priority of water in such instances is to be emphasised here in accordance to Bhutan Water Policy 2003.

### 3.5 Flip Chart 5: Illustration to reflect Water Act of Bhutan, 2011



The illustration shows well manage irrigation, supplied to paddy field and well managed by the beneficiaries in accordance to Water Act of Bhutan 2011.

### 3.6 Flip Chart 6: Illustration to reflect Water Act of Bhutan 2011



The illustration shows that catchment management is the responsibilities of many stakeholders including the beneficiaries of irrigation water, in accordance to Water Act of Bhutan 2011. The picture shows beneficiaries undertaking trees plantation, other doing fencing, a group as committee members and another group as government / external agency officials.

### 3.7 Flip Chart 7: Specific Requirements for Irrigation Water Use

Specific requirements for irrigation water use (From Water Act of Bhutan, 2011)

1. Water from an irrigation channel shall be allocated either through mutual understanding or in accordance with existing practices, depending on the size of land holdings and the quantity of water in the channel, and subject to the constitution and bye-laws of the relevant Water Users' Association.
2. Labour contribution by the beneficiaries of an irrigation channel shall depend on the size of their land holding.
3. Alignment of an irrigation channel for a newly terraced plot shall be made in such a manner as not to affect or harm other plots.
4. Water shall flow in adjacent plots as per established practice. If a new plot is terraced nearer to the water source, water for the old plot shall flow through the new plot provided there is no other way of bringing water to the old plot. If the water is not sufficient, the new plot shall not get water.
5. Blocking or otherwise altering an irrigation channel flowing through one's property shall not be allowed without the consent of the users of that channel, even where the channel is not required by the property owner.
6. If there is sufficient water and capacity in the irrigation channels, the existing beneficiaries shall provide access to a new user or to an existing user that requires additional water, including a user who wants to convert kamzhing to chhuzhing.
7. A new user of an irrigation channel shall enter into an agreement with the beneficiaries of the channel before taking water from the channel. In the absence of such an agreement, a new user cannot claim water from the channel.
8. A new user shall compensate the former beneficiaries for the private investments made, if any, for water infrastructure and shall also contribute towards the maintenance costs of the infrastructure.
9. If the water resource for irrigation is deemed insufficient, a water user shall not initiate any activities that would require additional water, including conversion of kamzhing to chhuzhing.
10. A water user acting in contravention of sub section shall have no right to claim compensation for non-availability of water.
11. For the benefit of landed property, renovation of existing irrigation channels and embankments can be done on existing alignment in consultation with Water Users Associations.
12. Existing irrigation channels passing through ones landed property cannot be made small and blocked even if not required by the owner.
13. If water has not flown through old irrigation channels and no repair has been done on the embankments for the last five years then renovation and repairs on the existing alignment will be treated as new construction.

#### Water Users' Associations

Any group of beneficiaries using a particular water source for their water supply needs may form a Water Users' Association to maintain the water source and to manage water supply services. A Water Users' Association shall be registered with the Competent Authorities within six months from the date of its formation

The functions of a water users' association shall be:

- a) To maintain a water source and protect it against vandalism and other damages.
- b) To coordinate and oversee the activities and management of water supply service by its members so as :
  - To foster a sense of ownership among the users; and
  - To ensure sustainability of such service.

### 3.8 Flip Chart 8: List of Minor Maintenance Tasks

|   |
|---|
| <p><b><u>Preventive Maintenance</u></b> (planned and regular tasks to maintain and keep channel in good conditions)</p> <ul style="list-style-type: none"> <li>• Clearing canals / pipes of vegetation</li> <li>• Clearing sediments</li> <li>• Network and distribution and inspection</li> <li>• Catchment conservation</li> <li>• Review and monitoring the condition of the channel</li> </ul> <p><b><u>Reactive maintenance</u></b></p> <ul style="list-style-type: none"> <li>• Repairing minor damage to the canal embankment, gates and intake structures</li> <li>• Flash flood control</li> <li>• Tail drainage management</li> <li>• Labour and fund contribution as required for above</li> </ul> |
|---|

### 3.9 Flip chart 9: Differentiated Roles and Responsibilities of the Government and the Beneficiaries

Key Roles of the Various Stakeholders (extract from national Irrigation Policy 2012)

|   |  |
|---|--|
| Ministry of Agriculture and Forests             | <ul style="list-style-type: none"> <li>• Lead and coordinate irrigation policy formulation and strategic planning at the RNR sector level</li> <li>• Facilitate sourcing, soliciting and mobilization of funds for irrigation development</li> </ul>   |
| Department of Agriculture, Engineering Division | <ul style="list-style-type: none"> <li>• Plan and coordinate implementation of the irrigation programme</li> <li>• Plan and implement all large irrigation schemes including those that the Dzongkhags do not have the capacity for.</li> <li>• Provide technical support to Dzongkhags for irrigation development</li> <li>• Monitor and evaluate irrigation programme and NIP at the national level</li> <li>• Issue Environmental Clearance for construction of irrigation schemes</li> </ul>   |
| RNR Research and Development Centres /RIWaM     | <ul style="list-style-type: none"> <li>• Planning and development of all large irrigation schemes and centrally executed irrigation projects in the region</li> <li>• Provide technical support to Dzongkhags for irrigation development</li> <li>• Provide training to Dzongkhags based on the capacity building needs assessment</li> <li>• Monitor and evaluate irrigation programme and NIP at the regional level</li> <li>• Submit quarterly progress reports to the Department</li> </ul>  |
| Dzongkhag Agriculture Sector                    | <ul style="list-style-type: none"> <li>• Overall coordination of the irrigation programme in the Dzongkhag</li> <li>• Facilitate and provide technical backstopping in identification and appraisal of irrigation programme in the Dzongkhag</li> <li>• Take lead coordination role in preliminary investigations and multi-disciplinary feasibility studies</li> <li>• Facilitate registration of WUAs</li> <li>• Monitor and evaluate the irrigation programme in the Dzongkhag</li> <li>• Compile and submit quarterly progress reports to the Department</li> </ul>  |
| Dzongkhag Engineering Sector                    | <ul style="list-style-type: none"> <li>• Responsible for irrigation engineering services in the Dzongkhag</li> <li>• Provide technical inputs in preliminary investigations and multi-disciplinary feasibility studies</li> <li>• Carry out detailed survey, design, drawings, estimates and bill of quantities of feasible irrigation schemes</li> <li>• Tendering and contract administration of new irrigation constructions</li> <li>• Constructions supervision and quality control</li> <li>• Facilitate outsourcing of irrigation engineering services to private sector in the Dzongkhag</li> <li>• Monitor and evaluate irrigation construction programmes</li> </ul> |
| Geog Agriculture Extension Officer              | <ul style="list-style-type: none"> <li>• Assist communities in identification of irrigation schemes for construction/renovation</li> <li>• Liaise with the GT in planning, execution and monitoring of irrigation schemes</li> <li>• Implement and monitor NIP and its Procedural Manual</li> </ul>  |

|                                 |   |
|---------------------------------|---|
|                                 | <ul style="list-style-type: none"> <li>• Coordinate skill development activities for farmers and WUA members</li> <li>• Take lead role in preliminary investigations and multi-disciplinary feasibility studies</li> <li>• Facilitate the drafting and finalization of WUA Constitution &amp; By-laws by WUA</li> <li>• Facilitate registration of WUAs</li> <li>• Compile and submit monthly progress reports to the Dzongkhag</li> <li>• Create and maintain an inventory of irrigation schemes of the geog</li> <li>• Monitor and evaluate the irrigation programme</li> <li>• Assist in the day-to-day supervision of irrigation construction and renovation works</li> </ul> |
| Geog Tshogde / Local Government | <ul style="list-style-type: none"> <li>• Plan, mobilize funds and implement irrigation projects in accordance with NIP, Guidelines and its Procedural Manuals</li> <li>• Coordinate with DAO, DE and EA for planning and implementation of irrigation projects</li> <li>• Day to day monitoring of irrigation projects</li> <li>• Formation and strengthening of WUAs</li> <li>• Registration of WUA as a cooperative</li> </ul>  |
| Beneficiaries                   | <ul style="list-style-type: none"> <li>• Labour contribution by the beneficiaries for irrigation renovation and construction based on the size of the land holding</li> <li>• Alignment of an irrigation channel for a newly terraced plot</li> <li>• To maintain a water source and protect it against vandalism and other damages.</li> <li>• To coordinate and oversee the activities and management of water supply service by its members</li> <li>• To execute all tasks and responsibilities as identified by the beneficiaries / WUAs or alternative institution</li> </ul>   |

### 3.10 Flip Chart 10: Usual tasks for Catchment Management

Usual Tasks for the Beneficiaries for Catchment Conservation

- Undertake plantation around the catchment area
- Undertake fencing of the catchment area
- Control open grazing by the animals
- Control illegal harvest of water from the source
- Maintenance of structures at the source
- Maintenance of drainage ways
- Maintenance of gully control structures (prevent erosion)
- Maintain surface flow downstream
- Maintain social forest
- Manage pastureland, if any in the vicinity

### 3.11 Flip Chart 11: Some of the key requirements for WUAs or any alternative institution

- To maintain a water source and protect it against vandalism and other damages.
- To coordinate and oversee the activities and management of water supply service by its members
- Undertake minor maintenance tasks
- Devise scheme maintenance fund accumulation, banking and accounting for the same
- Make a system of incentives to the responsible persons
- Formulate constitution and by-laws
- Undertake review and regular monitoring of the irrigation channel and report on the same to the Geog administration and agriculture officer
- Undertake dispute resolution within the beneficiaries
- Make annual working calendar



### 3.12 Flip Chart 12: Illustration of Usual Conflict in Irrigation



Illustration of the farmers with usual conflicts in irrigation (farmers quarrelling)

## 4. PART III: POLICY AND PROCEDURAL GUIDELINES

### 4.1 Abstracts from National Policies and Acts

#### An Abstract from National Irrigation Policy 2012

The National Irrigation Policy of Bhutan (2010) is based on the following principles:

- i) Community participation for irrigation development to instil a sense of ownership of irrigation schemes;
- ii) Equitable allocation of available water ;
- iii) Diversification of irrigation for crops grown on both *Chhuzhing* and *Kamzhing*;
- iv) Assured irrigation water supply for *Chhuzhing* cultivation and protection of prime agriculture land;
- v) Optimal utilisation of alternate water resources for irrigation;
- vi) Enhance water management and productivity;
- vii) Environmental responsibility in irrigation and drainage;
- viii) Revitalised institutional arrangements for improved irrigation services delivery
- ix) Inter-sectoral planning and management of water resources based on Integrated Water Resources Management principles;

Specific Policy Statement is:

|                    |   |
|--------------------|---|
| Policy objective 3 | <p>To pursue new approaches to sustainable irrigation infrastructure development and maintenance:</p> <ol style="list-style-type: none"> <li>1. The cost of all new irrigation scheme constructions shall be borne by RGoB and implemented by the project executing agency of the RGoB</li> <li>2. For renovation of schemes, the project executing agency of the RGoB shall provide wages for skilled labour, materials, and their transportation to construction sites. The unskilled labour shall be provided by the beneficiaries based on the principle of equity and; depending on their capacity to contribute and fund available for their scheme</li> <li>3. Routine maintenance shall be taken up by WUA</li> </ol> |
|--------------------|---|

#### An Abstract from Bhutan Water Policy 2003

The policy focuses on conservation of water resources and integrated water resources management. It also emphasizes that water allocation to the agriculture sector must be compatible with the objective of food security. It stresses on achieving efficiency in irrigation through applied and adaptive research. The Policy also suggests pricing policies to serve as an economic instrument to enhance efficiency of water use.

When water resources are not sufficient either in quantity or quality to meet every legitimate demand, water for drinking and sanitation for human survival shall be the primary priority. Water for irrigation, hydropower generation, industrial use, recreation, and other uses shall be considered based on national and local priorities.

All forms of water resources shall be protected. Pollution impairs water quality, and hence reduces the water resource base. Such practices shall be prevented or modified in order to protect water resources. This is particularly important for drinking water supply. Forests and soil are conserved and protected for many reasons, which include regulation of runoff, reduced erosion, biodiversity, wood supply, recreation etc. Watersheds' essential role as a sustainable source of water shall be protected.

### **An Abstract from Water Act of Bhutan 2011**

The Act specifies that irrigation water will be managed under the coordination of the Ministry of Agriculture and Forests as the Competent Authority. Water management will be organised on an integrated river basin level to achieve economic efficiency, social equity and environmental sustainability. It further stresses that irrigation schemes will be managed by self-governing rules and regulations of WUAs, and that WUAs have to be registered with the Competent Authority. The specific requirements for irrigation water users are as provided in Flip Chart no. 7, used in training strategy on policy and acts.

In dealing with applications under preceding sections, the Commission shall observe the following order of priorities for water use:

- i. water for drinking and sanitation;
- ii. water for agriculture;
- iii. water for energy;
- iv. water for industry;
- v. water for tourism and recreation; and
- vi. water for other uses

### **An Abstract from National Forest Policy**

#### **Watershed management**

The Department of Forests has the primary responsibility for planning and coordination for Watershed Management, although responsibilities for specific land management aspects are spread across many agencies, including agriculture and livestock as well as Dzongkhags, Geogs, municipalities, private farmers and other land users. This has created a situation where there are uncertainties and overlaps in responsibilities and roles

The **Forestry & Nature Conservation Act of Bhutan (1995)** prohibits blocking, storing or diverting any river, stream, irrigation channel, waterfall, underground water source or any other water source or water course. The Act also prohibits disposing garbage or other waste material, and polluting any water source or water course. Further, the Act restricts felling of timber and extracting timber within 100 feet of the bank or edge of any river, stream, water course, or water source.

## **4.2 Guideline for Constitution and By-laws Formulation**

The guideline provided below is replication of Guide published by Department of Agricultural marketing and Cooperatives, and SNV-Bhutan, 2013

### **A. General Information**

#### **1. Name**

What is the name of the WUAs or alternative institution?

#### **2. Date of establishment, address and area of operation**

- When was the WUAs or alternative institution established? *dd/mm/yyyy*
- Where is the office of the WUAs or alternative institution located?
- What is its postal address?
- What is the area to which the WUAs or alternative institution will be confined?

### 3. Objectives

- What is the purpose of the WUAs or alternative institution?
- Why was the WUAs or alternative institution formed? What are the goals and objectives?  
For example:
  - To undertake minor maintenance of irrigation channel
  - For sustainable maintenance and use of irrigation water efficiently and effectively
  - To systematically plan and execute tasks for irrigation scheme operation and maintenance
  - To have proper monitoring and reporting system
  - To generate scheme maintenance fund for minor maintenance and emergency needs
  - To provide equal and judicious water to all members etc

### 4. Activities/Services

- In this section provide only the brief summary of the activities.
- What activities will the WUAs or alternative institution undertake/be engaged in?
- What services if any will the WUAs or alternative institution provide?
- Use information from flip chart 8 and outputs from training strategy no. 4 to summarise above required information.

## B. Organisational Structure

- How is the WUAs or alternative institution organised? What is the overall governance structure? *Every WUAs or alternative institution needs to have a General Assembly (GA), a committee or responsible persons for each tasks identified.* Explain the identified committee members.
- Besides the mandatory organs and committees, are there any other committees that are formed? If yes, how many committees? What committees are there? For each committee, what is its key function?
- Who/which organ / responsible person monitors and supervises the work of the WUAs or alternative institution and the beneficiaries and how is this being done?
- Explain here that the organisation would function in accordance to the annual working calendar (attached to the constitution and by-laws).

### 5. Composition Executive Committee / Responsible Persons

- How many members does the EC consist of? *The executive committee elects from its members a Chairperson, a Secretary, and a Treasurer.*
- How are these office bearers elected?
- Insert following table here:

| No | Key Responsible / Committee Members                | Term (Period) |
|----|--|---------------|
| 1  | e.g. Chairperson (1 head)                          | e.g 1 year    |
| 2  | e.g. Secretary cum accountant (1 head)             |               |
| 3  | e.g. Water Guards (7 persons)                      |               |
| 4  | e.g. Other executive members (3 persons)- Tshogpas |               |
| 5  | e.g. Audit Committee (2 persons)                   |               |

### 6. Eligibility criteria for Executive Committee / Responsible Persons

- What are the eligibility criteria that the beneficiaries should meet to become members of the EC?

### 7. Election procedures for Executive Committee / Responsible Persons

- How will eligible members be proposed as candidates?
- What is the election process?
- What is the minimum percentage of votes required to elect candidates for the committee members?

### 8. Resignation, removal or suspension of Executive Committee / Responsible Persons

#### 8.1 Resignation:

*A member of the EC may resign subject to one month's written notice.*

- Are there any other formalities a member of the EC has to fulfil when she/he wishes to resign?
- What happens in case of resignation of a member of the EC in terms of her/his replacement until a new member is elected?

## **8.2 Removal and suspension:**

*A member of the WUA can be removed for the following reasons: insolvency, incapacity, insanity, refusal to perform the duties of the office or failure to abide by the code of conduct. A member of the WUA can be suspended for accusation of fraud or financial malpractice brought by a member.*

- Are there other circumstances under which a member of the WUA can be removed? What about suspension?
- What are the procedures to be followed in case of removal? What about suspension?
- Who/which organ makes the decision about removal and suspension of a member from the EC? If the decision to remove or suspend an EC member is to be determined by casting votes, what is the minimum of votes cast required? Is this minimum number of votes required the same or different as for decision-making about any other issues?
- What happens in case of removal and suspension of a member of the EC? How will the removed or suspended member be replaced?
- Can a member who has been removed from the EC still be a member of association or the alternative institution? If not, does the member have right to any entitlements? If a member who has been removed from the EC eligible for future elections of the EC/BoD?

## **9. Roles and responsibilities of elected committee members of WUAs**

- What are the roles and responsibilities of the EC / responsible persons?
- What are the specific roles and responsibilities of particular positions within the EC / other responsible persons? *E.g. what are the functions of the Chairperson, Secretary, Treasurer, water guards etc?*

## **10. Meetings**

- How regularly does the EC meet in a year?
- What about special EC meetings? Who can ask for a special meeting to be held? What are the formalities?
- Who calls EC meetings (regular and special)? *Special meetings may be called by the chairperson or by majority of its members.* What are the formalities? *E.g. in terms of notice to be given, date, time, venue, agenda and other information to be shared, ways of communication.*
- What are the procedures for reporting on EC meetings (regular and special)? How will the proceedings of such meetings be recorded? *E.g. through minutes.* Who will be responsible? How and when will it be shared with the members?

## **11. Quorum for Decision Making**

- What is the quorum required for EC meetings (regular and special)? In other words, what is the minimum number of committee members who should be present at a meeting so that this can take place and have the right to make any decisions? The minimum should be 51% majority for any decision making.
- What happens when the quorum is not met? What actions will be taken?

## **12. Term of office**

- The members of the legally prescribed committees are elected for \_\_\_ years. For any other committee that is formed: How long is the term of office of the Committee members?
- The members of the legally prescribed committees can stand for re-election on any number of occasions (or not) and can they cannot be elected for more than \_\_\_ consecutive terms.
- For any other committee that is formed: Is re-election of the same member possible? If yes, for how many terms?

## **C. Membership**

### **13. Eligibility criteria for membership**

*For example for primary cooperatives, a person has to meet certain conditions so as to qualify for consideration as a member: Bhutanese citizenship, minimum age of majority, not currently serving a sentence for a crime, presence in the Geog where the cooperative is located unless agreed otherwise.*

What criteria would be required to be the members of WUAs or alternative institution? e.g. having Chhuzhing and Kamshing, residing in the village (geog), adherence to contribute labour and fees, or all HHs irrespective of any criteria etc.

### **14. Admission to membership**

- What are the conditions for admission to membership? Are there any financial conditions a person wishing to become a member should fulfil? *For example: contributions to be made in*

*terms of shares, membership and any other fees. Are there any other conditions? For example: sign a form whereby the new member commits to abide by the Constitution and by-laws.*

- What are the procedures to be followed for admission? How will people wishing to join the group as members be admitted to the WUAs or alternative institution?
- Are there any other formalities to be completed? *For example: fill in a simple application form for membership.*
- When can a new member join? Are there certain periods in the year during which a new member cannot join?
- Which organ makes the decision about granting or refusal of membership?

#### **15. Duties and responsibilities of members**

- What are the roles and responsibilities of the members (beneficiaries)? *For example, the obligation to actively participate in all the activities and meetings of their association.*
- What formalities does a member need to complete when s/he is not able to fulfil her/his obligations? *For example: informing the Executive Committee/Board of Directors one day in advance if a member cannot attend a General Assembly meeting.*
- What are considered valid reasons for members not being able to fulfil their obligations? *For example: serious sickness of an immediate family member, attending funerals, attending school Parents and Teachers meetings, etc.*
- What are the consequences if a member does not fulfil her/his obligations? *For example, a member can be suspended or expelled if s/he violates the provisions of the by-laws of her/his cooperative. Or a member has to pay a certain amount as fine in case s/he does not pay the membership fee on time.*

#### **16. Termination of membership**

*The reasons for termination include voluntary withdrawal and expulsion.*

##### **16.1 Voluntary withdrawal:**

- What are the procedures to be followed when a member wishes to withdraw from membership? *Besides having to give thirty days notice to the Board of Directors, are there other formalities to be completed?*
- What are the entitlements when a member voluntarily withdraws from membership? *For example: receive the paid-up shares.*

##### **16.2 Expulsion and suspension:**

*Provide reasons for which a member can be removed. State the decision about removal. A member removed shall forfeit all her/his rights and claims including contributions and fees paid to the WUAs or alternative institution.*

- Are there other circumstances under which a member can be expelled from the WUAs or alternative institution? Under what circumstances can a member be suspended?
- What are the procedures to be followed in case of suspension?
- Which organ makes the decision about suspension? If the decision to suspend a member is to be determined by casting votes, what is the minimum of votes cast required? Is this minimum number of votes required the same or different as for decision-making about any other issues?
- What process of redress will be available to the expelled or suspended member?
- Is a member who has been expelled eligible for future re-entry as a group member? If so what are the requirements?

### **D. General Assembly**

#### **17. Meetings**

- How regularly does the GA meet in a year? *At what period(s)? Make reference to the month(s) in the Bhutanese calendar and take into account the seasonal calendar (to avoid that meetings fall in peak seasons).*
- When will the first GA meeting be held?
- What about special GA meetings? Is there a minimum quorum required (minimum number of members who ask for such meeting) to call for a special GA meeting? What are the formalities?
- What are the procedures for calling GA meetings (regular and special)?
- Who calls GA meetings (regular and special)? How will the members be informed about GA meetings? How much time notice should be given prior to GA meetings?

- What information should be shared with the members together with the invitation? *E.g. date, time and venue of the meeting, agenda of the meeting, any report to be reviewed/approved by the members, etc.* In what form should this information be shared?
- What are the procedures for reporting on GA meetings (regular and special)?
- How will the proceedings of the GA meetings be recorded? *E.g. through minutes.* Who will be responsible? How and when will it be shared with all members?

### **18. Roles and responsibilities**

What roles and responsibilities does the GA have?

### **19. Quorum**

- What is the quorum required for GA meetings (regular and special)? In other words, what is the minimum number of members who should be present at a GA meeting so that this can take place and have the right to make any decisions
- What happens when the quorum is not realised? What actions will be taken?

### **20. Decision-making**

- How will decisions be taken by members who are present at GA meetings (regular and special)?
- Do all members have equal voting rights? How many votes does each member have?
- What is the number of votes necessary to reach a decision (*what percentage of the majority*)? The minimum in terms of majority is 51 % of the beneficiaries.
- Is this number of votes necessary to reach a decision different for different types of matters that are brought up to the GA for decision-making?
- What are the voting rules and procedures?

## **E. Resource Management**

Note: The information for this section has to be extracted from the banking and accounting output generated from the training using the table as provided below. The table need not be inserted here in relevant sub-sections.

### **21. Source of funds and use of fund**

- How will the WUAs / alternative institution generate funds in addition to share capital contributions, membership fees, fines? *For example, through donations, subsidies, loans, interest on deposits in the bank, savings from its members, etc.*
- What are the procedures to be followed to raise such funds? Especially for loans *for example, who has the authority to decide whether and how much to borrow externally?*
- Who will be responsible for raising funds?
- What are the different Funds that will be created? Will there be any Fund created besides the maintenance fund? *For example, Welfare Fund for members/non-members with special provisions for the poor and disadvantaged.* Who has the authority to create such voluntary Fund?
- What is the size (volume) that the different Funds have to reach before annual allocations to these Funds can be stopped?
- Who/which organ has decision-making power about the use of funds?
- Insert the following table here:

| <b>Fund Accumulation System</b>  | <b>Projected Annual Collection (Nu.)</b> |
|--|--|
| 1. e.g Annual membership fee   |  |
| 2. e.g Fee based on acreage (Chhuzhing)  |  |
| 3. e.g Fee for extended use (orchard owners)   |  |
| 4. e.g Fee for extended use (vegetable growers)  |  |
| 5. e.g. Lumpsum fee for landlords from outside the Geog inclusive of labour contribution costs |  |
| 6. e.g Fines and Penalties   |  |
| <b>Total (sum all above)</b>   | <b>Nu.</b>                               |
| Reserved Fund  | Nu.                                      |

### **22. Accounting /record keeping system**

- How will the accounts and financial records be maintained?
- Who will be responsible for maintaining the accounts? Who will be responsible for keeping and maintaining books of accounts and other financial records? Who can have access to them?

- What is the period and starting month of the association financial year?
- Who will operate the bank account(s)? Who will act as co-signatory on the operations of the bank account(s)?
- Who/which organ authorises the financial transactions? What is the maximum ceiling per month or per year for approval of operational costs by the committee? What is the maximum ceiling for disbursement of operational expenses by the chair (if there is a chair or any other responsible person)?
- Insert the following table here:

| <b>Accounting and Banking</b>   | <b>Responsible and Timing (wherever applicable)</b>  |
|---|--|
| 1. e.g. Accounting (maintain account)   | e.g. Account and timing would be often or daily or monthly   |
| 2. Banking<br>2.1 Bank account name<br>2.2 Making Deposits<br>2.3 Making withdrawals  | ..... Irrigation Tshogpa or Detshen<br>Accountant (moment fund is accumulated)<br>Joint signatory of whom? |
| 3. Fund / fee collection<br>3.1 Responsible<br>3.2 Timing for fund collection <ul style="list-style-type: none"> <li>• Annual membership fee</li> <li>• Fee based on acreage</li> </ul> | e.g. accountant  |
| 4. Decision on fund utilisation   | e.g. Majority decision at General Assembly   |
| 5. Present accounts to all beneficiaries  | e.g. Most probably during general Assembly   |

### **23. Auditing requirements**

- What needs to be audited, only finance or finance and management?
- What are the procedures with regard to audit? Who will be responsible for what?
- How will the findings of the audit be made available to all members?

### **24. Labour contribution system**

- Who contributes and how much per year?
- On what criteria the labour contribution is fixed? E.g. based on acreage or equal for all members etc

### **25. Exemption on labour contribution and fees**

- Who are exempted from the labour contribution and fees?
- On what criteria the labour contribution and fees exemption is based?

## **F. Fines and Penalties**

### **26. Members not complying with the Constitution and by-laws**

- Under what circumstances can members who are not complying with the Constitution and by-laws be subject to fines and penalties? What fines and penalties are put in place in such circumstances? *For example, what fines and penalties are put in place when members are not fulfilling their roles and responsibilities as per the by-laws (such as not paying their membership fees on time, not attending meetings, not contributing labour, without a valid reason, etc)?*
- What are the procedures for imposing fines and penalties? Which organ has the authority to make such decision?
- Who collects the fines and monetary penalties?
- What will be the sanction in case a member fails to pay or abide by the fine or penalty?
- What are the procedures if the concerned member disagrees with the fine or penalty imposed?
- How is the money collected as fines and monetary penalties going to be utilised?
- The penalties system generated through the training has to be incorporated here.

### **27. Committee / Responsible Persons not complying with the Constitution and by-laws**

- Under what circumstances can committee members who are not complying with the Constitution and by-laws is subject to fines and penalties?
- What fines and penalties are put in place in such circumstances? *For example, what fines and penalties are put in place when EC members are not fulfilling their roles and responsibilities as per the by-laws (such as not giving the required notice to all members for GA meetings, etc)?*
- What are the procedures for imposing fines and penalties? Which organ has the authority to make such decision?

- Who collects the fines and monetary penalties?
- What will be the sanction in case an EC member fails to pay or abide by the fine or penalty?
- What are the procedures if the concerned EC member disagrees with the fine or penalty imposed?
- How is the money collected as fines and monetary penalties going to be utilised?

#### **F. Settlement of Disputes**

- How will disputes be solved (amongst the members, between different WUAs, within the committee members or responsible persons)?
- Who are the authorities to resolve disputes for the beneficiaries (e.g. committee members / Gup / Dzongkhag Administration) and the process.
- Insert the following table here:\

| <b>No.</b> | <b>Conflicts Levels</b>                     | <b>Responsible to Resolve</b> |
|------------|---|-------------------------------|
| 1          | e.g. Within the beneficiaries               | e.g. WUAs committee members   |
| 2          | e.g. Within the WUAs committee members      | e.g. Gup                      |
| 3          | e.g. Between different WUAs / beneficiaries | e.g. Gup                      |

#### **G. Dissolution**

- How would the WUAs or alternative institution be liquidated? Who would be responsible for the liquidation?
- In case of involuntary dissolution of a WUAs or alternative institution, the Chairperson and the committee will be required to clear all outstanding issues and dues. What happens with the resources of the WUAs or alternative institution (e.g. assets, funds) in case of dissolution? *For example, how will the assets be distributed?*

#### **H. Amendments and Changes to the Constitutions and By-laws**

- What are the procedures to be followed to make amendments and changes to the Constitution and by-laws?
- How will amendments and changes be proposed/recommended? By whom/which organ?
- The GA can amend and make changes to the Constitution and by-laws. What is the minimum number of votes of the members present required for approval (provided enough members are present to constitute the required quorum)? *For example three-fourth of votes cast; two-thirds of votes cast? Is this minimum number of votes required the same or different as for decision-making about any other issues?*

#### **I. Signatory and Endorsement**

Note that the Constitution and By-laws has to be endorsed by the committee members with legal stamps and their signatory (along with the date). At the same, it has to be agreed, signed and endorsed by all the beneficiaries (with detail of each beneficiary as Name, House number, village, Geog).

#### **J. Attachments to the Constitution and By-laws**

The following additional information generated through the training has to be attached to the constitution and by-laws:

1. Water supply and distribution sketch maps (scanned copy). Take pictures of the sketch maps and insert here.
2. Write up on the agreed incentive system to the committee members / responsible persons including water guards
3. Sheet on declaration of results of first election, signed by all beneficiaries.
4. Assimilated first annual working calendar (as in format provided on next page)



Annual Working Calendar for \_\_\_\_\_ WUAs (name of the association).

For Period (from – to / year)

All outputs from the trainings have to be assimilated to form the first annual working calendar.

| <b>A. Administrative and Financial Tasks</b> |   |   |  |   |
|--|---|---|--|---|
| <b>Sl. No</b>                                | <b>Activities to be undertaken by the beneficiaries including the committee members and other responsible persons</b> | <b>Timing if applicable (dd/mm) and seasons</b> | <b>Person Responsible to Coordinate and Organise</b> | <b>Persons Responsible to do the tasks / to participate (i.e. Who: Committee members or all beneficiaries or other identified responsible persons such as water guards etc)</b> |
| 1  | e.g. General Assembly (GA)  | March   | Chairperson  | All beneficiaries   |
| 3  | General Meeting of Committee members (regular)  | Monthly   | Chairperson  | WUAs committee members  |
| 4.   | Auditing of the scheme maintenance fund   |   |  |   |
| 5.   | Present audited accounts to the Committee members   |   |  |   |
| 6.   | Present audited accounts to the Beneficiaries   |   |  |   |
| 7.   | Make annual working calendar  | March   | Chairperson  | All beneficiaries (during GA)   |

| <b>B. Tasks to be executed in relation to existing and anticipated constraints / problems</b> |                                       |                           |                                    |  |
|---|---------------------------------------|---------------------------|------------------------------------|--|
| <b>Key Constraints</b>  | <b>Identified Solution (activity)</b> | <b>Responsible Person</b> | <b>Frequency of tasks required</b> |  |
| 1.  |                                       |                           | e.g. Daily                         |  |
| 2.  |                                       |                           | Occasional / very rare             |  |

| <b>C. Tasks for effective and efficient operation and maintenance of scheme</b> |                        |   |                            |
|---|------------------------|---|----------------------------|
| <b>Purpose for using irrigation water</b>                                       | <b>Season / Timing</b> | <b>Core Activities to be undertaken</b> | <b>Persons Responsible</b> |
| 1. Paddy cultivation  |                        |   |                            |
| 2. Seasonal Vegetable cultivation   |                        |   |                            |
| 3. Off-season vegetable cultivation   |                        |   |                            |
| 4. For orchard irrigation   |                        |   |                            |
| 5. All other seasons  |                        |   |                            |

| <b>D. Tasks for Catchment Management</b>        |                        |                            |
|---|------------------------|----------------------------|
| <b>Tasks for catchment management</b>           | <b>Season / Timing</b> | <b>Responsible Persons</b> |
| 1. e.g. Clearing the source blockage            |                        |                            |
| 2. e.g Planting trees around the catchment area |                        |                            |

| <b>E. Tasks for regular monitoring and reporting</b> |                           |                                |   |                               |
|--|---------------------------|--------------------------------|---|-------------------------------|
| <b>Monitoring Tasks by the beneficiaries</b>         | <b>Responsible Person</b> | <b>Frequency of monitoring</b> | <b>Reporting to whom</b>                        | <b>Frequency of reporting</b> |
| 1. e.g. Check source condition                       | Water guards              | Once every month               | Committee members                               | Once every month              |
| 2. e.g. Check overall condition of the channel       | Water Guards              | Once every two months          | Committee members                               | Once every two months         |
| 3. e.g. Check channel and report regularly           | Committee members         | Quarterly                      | Geog administration (Gup and extension officer) | Quarterly                     |

| <b>F. Any other Tasks Identified</b> |                        |                            |
|--------------------------------------|------------------------|----------------------------|
| <b>Tasks</b>                         | <b>Season / Timing</b> | <b>Responsible Persons</b> |
| 1.                                   |                        |                            |
| 2.                                   |                        |                            |

### **4.3 Facilitators Guide**

The Facilitator’s Guide provides a general guide to the trainer.

#### **Introduction to the process of training**

Training is the process of imparting knowledge, skills and competence to an individual or group of people with a view to improving their performance in a particular task or responsibility. In community-based water supply management, key areas requiring attention include:

1. Governance issues: Legal registration, preparation of a constitution and bylaws, election of committee members, compliance to the Water Act 2002 and monitoring.
2. Financial management: The issues of tariff setting, accounting, record keeping and transparency.
3. Operation and Maintenance: Water supply infrastructure is used on a daily basis and requires maintenance to prevent unexpected interruptions to supply.
4. Cross-cutting issues: These are issues related to community-based water supply management which need to be addressed in order to provide better services e.g. gender considerations in governance and water provision; poverty-related issues and accessibility of water by poor and vulnerable households in the community; environmental, sanitation and hygiene issues, etc.

#### **Characteristics of a good trainer**

To be a good trainer you should have the following qualities and attributes:

- Be well organized: Read the trainers guide before training so that you are well prepared and know how to handle your sessions.
- Practice beforehand: Know how to conduct the sessions in the local language. You will have to get used to translating phrases.
- Be friendly: Make everyone feel comfortable and part of the group.
- Be observant: As well as listening closely, pick up information about the situation from non-verbal cues.
- Use open questions: these are questions that encourage people to give their own opinions, rather than a —yes/no or single response. Example —what problems do you have with your water sources? Or —How can you raise money for the new facility? These questions facilitate open discussion. They allow people to express their own ideas and find their own solutions without fear of giving a wrong answer.
- Wait for responses: Give people time to think and come up with an answer. Do not bombard them with more questions.
- Do not rush: Find the pace that people feel comfortable with.
- Do not do all the talking: Remember your job is to ask questions and get participants to do the talking.

- Encourage everyone to contribute: Make eye contact, use hands, walk close to shy people and use names. Try to draw out the silent and control the talkative.
- Use minimal encouragers: – —yes ..... I see .... And then? ..... tell me more. They help to keep the person talking.
- Listen actively: Use eye contact and body language. Praise and encourage but do not over praise.
- Re-phrase: briefly restate what people say in your own words, to make sure you have heard and understood. When you rephrase make sure to do two things – 1) verify with the speaker if you have understood correctly, and 2) see if others want to add something.
- Be gender aware: Encourage women to be active in the discussions.
- Probe: Do not be satisfied with one answer. Ask follow up questions to explore issues and make it clearer – —Why? What else? ... Tell me more. Can you explain further?
- Redirecting is a way of building on one person's answer in order to get others involved in the discussion. Example: —She said ..... what do others think?
- Watch level of participation: Look around and see who is participating and who is left out. Are people still interested?
- Summarize: Restate what people have said in a simple, brief form. This will make it easier for people to contribute.
- Watch the energy level: Look for signs of tiredness or boredom. When people get tired, change the activity, introduce a song, or take a break.
- Be a good time manager: Estimate how much time each activity takes, watch the time and set an appropriate pace for the group;
- Be flexible in planning: Create an atmosphere of flexibility, creativity and experimentation and develop insight into the learning process of the participants while using time efficiently to organize learning situations in a good sequence;
- Be open and self-reflective: Be open to feedback from the participants about the way you work and take time to examine your own attitudes, values and ideas.

### **Tips for the facilitators to ensure active and inclusive participation**

Participation refers to both women and men actively taking part in the decision-making process for decisions that directly affect/concern their lives. Participation is not only about numbers and physical presence but also about active 'quality' participation. Inclusive participation refers to engaging all groups and individuals (women, men, girls, boys, old women and men, etc.), especially the most vulnerable ones like the poor women and men and the disabled women and men.<sup>1</sup>

The role of the facilitator(s) should be limited to facilitating the process, guiding the participants through the process, making them aware of the legal requirements and governance aspects, listening, summarizing the different inputs, ideas and views from participants, seeking consensus among the participants, and keeping records of the discussions.

## **4.5 Ice breakers and Energizers**

These are some of the ice breakers and energizers that can be used in between the sessions:

### **Icebreakers**

#### **Favourite meal**

Purpose: For fun and to encourage communication in forms more than speech.

Ask people to think of their favourite meal and invite them to describe it to the group, miming the actions and making the sounds of eating it. Give a moment for reflection, and then start the go-round with others.

#### **Touch blue**

Purpose: A good energiser to connect/ reconnect a group coming back together.

Ask the group to stand and clear away any obstacles. Explain the rules: when you call "Touch blue!" everyone will rush quickly to something blue or someone wearing blue and touch it. Keep touching it until someone else calls "Touch red!" (or another colour). Continue for a while.

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<sup>1</sup> Department of Agricultural Marketing and Cooperatives, Ministry of Agriculture and Forests, Royal Government of Bhutan (2011), *Governance in Farmers' Groups and Cooperatives*. Bhutan.

### **Wake up in the jungle**

Purpose: To help people wake up, encourage a playful spirit, acknowledge diversity.

Invite everyone silently to think of a jungle animal: what action do you think it makes when it wakes up? What sound does it make? Explain that this activity is a go-round called waking up in the jungle. You will start and one-by-one we will go-round and add one different animal to the jungle. Start the go-round by miming the animal and making its sound. Keep doing it and invite the person next to you to add theirs. Keep them doing it with you. Then invite the next, and so on, building up the noise to a cacophony.

### **Energizers**

#### **Face to face, back to back**

Purpose: To help break down physical and other barriers between participants.

Ask the group to clear away any obstacles. Invite everyone to find a partner and stand face-to-face somewhere in the room. This requires even numbers so you will be the only one without a partner. When you call "back-to-back!" they quickly turn around and stand back-to-back with their partner. Then call "face-to-face!" so they turn back again. You can repeat the calls so the pairs are constantly changing their positions to each other. When you call; "Change!" everyone finds a new partner, including you. The person left over then does the calling. Repeat. Once they're warmed up you might want to add a bit of spice by calling other actions like "nose-to-nose!" or "knee-to-knee!"

#### **Group clap**

Purpose: To experience the phenomenon of individuals coming together as a group, and feeling the group mind.

Invite everyone to stand and silently think of their own rhythm to clap. Check everyone is ready then start the clapping. Keep it going until the individual rhythms fall into a single group rhythm. This nearly always happens. Debrief by asking:

- What happened there?
- Why do you think it happened?
- How do you feel about that?

#### **Group count 1-8**

Purpose: Energiser to help group co-ordination and togetherness.

Ask the group to stand. Explain that this is a number game and each number has an action: One = hands in the air. Two = hands on head. Three = hands on shoulders. Four = hands parallel to floor. Five = hands on hips. Six = hands on knees.

Seven = hands on ankles. Eight = hands on floor.

Practice 1-8 until everyone's got it. Then vary it by calling out numbers at random. You could close by counting 1-8, 2-8, 3-8 and so on until you reach 8.

#### **Group count 1-20**

Purpose: To encourage listening and tuning into the group to complete a task together.

Explain that we'll be counting to 20 in a group. It's more difficult than you might think because only one person can say the next number. If more than one person speaks at the same time, we must all start again. Close your eyes if it will help. Start the counting. Each time the group starts again try to beat the last record.

#### **Group count, leg and arm**

Purpose: To encourage group synchronisation

Invite the group to stand and explain the rules. Everyone raises their right arm together and counts to 10; then raise left arm and count to 10; then lift right leg and count to 10; then lift left leg and count to 10. Back to right arm and count to 9, left arm count to 9 and so on until you get to 1. If there is still energy and enjoyment, you might want to count back up to 10.

#### **Mix up shoes**

Purpose: To encourage quick thinking and action. It can be a good diagnostic activity to see how co-operative or not the group is.

Ask everyone to take off their shoes and put them in the middle of the room. Then ask them to turn their backs or close their eyes while you mix all the shoes around. Now invite them to find their shoes, giving them a time limit, say thirty seconds for a group of 20. On your call, they must find their shoes, get back to their seat and put their shoes back on within the time limit. Encourage the group to help each other. The more people, the better the game is. If the group is small, have them do the exercise blindfold.

**Rainstorm**

Purpose: To create a group sound performance. Requires concentration and teamwork.

Invite the group to stand in a circle. Stand in the middle and explain that we're going to create a rainstorm by copying the actions and sounds that you make. Ask participants to copy the actions and sounds you make when you turn to face them and keep it going until you come round again. Start by rubbing your hands together and turning slowly around to face in turn everyone in the circle. One by one each person then rubs their hands and keeps rubbing as you turn to others. Go around the circle nine times in this order: First, turn around rubbing hands together; go all around. Second: Snap fingers when you get to the first person again. Third: clap hands; Fourth: Slap thighs. Fourth: slap thighs and stamp feet. Fifth, back to slapping thighs. Sixth, back to clapping hands; Seventh: back to snapping fingers; Eighth: back to rubbing palms together. Ninth: turn in silence. Rainstorm is over.