

Trainer's Guide Participatory Methods of Training for Effective Content Delivery

for the trainers of forest, fisheries and media sectors



Imprint

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ISBN 978-81-933282-3-1

December 2016

Published by:

**Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH**

Indo-German Biodiversity Programme

A-2/18, Safdarjung Enclave

New Delhi 110029, India

T +91-11-4949 5353

E biodiv.india@giz.de

W <http://www.indo-germanbiodiversity.com>

GIZ is a German government-owned not-for-profit enterprise supporting sustainable development.

This Trainer's Guide has been developed under the Human Capacity Development component of the project 'Conservation and Sustainable Management of Existing and Potential Coastal and Marine Protected Areas (CMPA)', under the Indo-German Biodiversity Programme. The CMPA Project has been commissioned by the German Federal Ministry for Environment, Nature Conservation, Building and Nuclear Safety (BMUB) with the funds provided under the International Climate Initiative (IKI). The CMPA Project is being implemented in selected coastal states in India and focuses on capacity developed of the key stakeholders in the forest, fisheries and media sectors.

With the guidance of:

Dr. Konrad Uebelhoer, Director, Indo-German Biodiversity Programme, GIZ India

Dr. J. Michael Vakily, Team Leader, CMPA Project, Indo-German Biodiversity Programme, GIZ India

Dr. V. B. Mathur, Director, Wildlife Institute of India

Written by:

Dr. Neeraj Khara, Senior Technical Expert, Indo-German Biodiversity Programme, GIZ India

Dr. K. Sivakumar, Scientist E, Wildlife Institute of India

Dr. Pradeep Mehta, Research and Programme Manager, Earthwatch Institute India

Text and editing contributions from:

Mr. Luke Mendes, Writer, Filmmaker and Media Trainer, Mumbai; Ms Atiya Anis, Communications Expert, Indo-German Biodiversity Programme, GIZ India; Mr. Ajay Rastogi, Ecoserve Uttarakhand and Ms Martina Hoft [connectedness to nature]

Text in the sections 2 and 3 of this trainer's guide is adapted from a GIZ publication The Trainer's Guide: Participatory Training Methods. Text in the section 4 has been developed with support from the Earthwatch Institute India.

Designed by:

Aspire Design, New Delhi

Disclaimer:

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Trainer's Guide
Participatory Methods of
Training for Effective
Content Delivery

for the trainers of forest, fisheries and media sectors

Supporting Training Institutions in Capacity Development for
Coastal and Marine Protected Area Management

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Preface and Acknowledgements

This trainer's guide has been designed to facilitate trainers and experts of forest, fisheries and media sectors in delivering their courses and sessions effectively through the use of participatory methods. This guide serves as a compendium of selected participatory training methods, which are innovative, have been tested for their effectiveness, and are easy to be applied. The concept and outline of this Training Resource Material were conceived and developed with many rounds of review, revision and editing during 2013-16. We would like to thank all those who contributed to establishing the framework, developing the content, conducting a pilot test and revising and publishing this material.

This trainer's guide, in its current version, has been developed on the basis of the trainings implemented by the project for forest, fisheries and media audience during 2013-16. We would like to thank the co-organizers, master trainers and participants of these trainings for their valuable contribution to the customization of participatory training methods.

We are especially thankful to the management and faculty of the Wildlife Institute of India (WII) Dehradun, the Indira Gandhi National Forest Academy (IGNFA), Xavier Institute of Communications (XIC) Mumbai, St Xaviers' College Mumbai, St Pauls Institute of Communication Education (SPICE), Department of Communication, Journalism and Public Relations, Gujarat University, and the Earthwatch Institute India, who supported in testing, review and revision of this trainers guide on a continuous basis.

We are thankful to the Human Capacity Development, Good Financial Governance team of GIZ at Bonn for permitting the authors to use and adapt the text of training methods from their publication *The Trainer's Guide: Participatory Training Methods* in sections 1 and 2 of this trainer's guide. We are also thankful to the Earthwatch Institute for sharing their experiences and expertise in designing and pilot testing of the coastal expeditions, and also providing text to be adapted for Section 4 of this document.

We are thankful to Mr. Kumaran Sathasivam (Palladium Documentation, Chennai) for helping us with the copy editing and proof reading of this resource material. The first author is also thankful to the colleagues at the Indo-German Biodiversity Programme for all the support in technical, administrative and operational matters: Ms Atiya Anis, Mr. Sanjay Nikalje, Mr. P. D. Francis, Ms Madhuri Negi, Ms Clara Mokry, Ms Pratishtha Chhetri and Mr. Sarthi Gupta.

The overall framework of the CMPA project comes from a long-standing cooperation between India and Germany on environmental conservation and biodiversity conservation issues. We are thankful for the overall guidance to the CMPA project received from Dr. Amita Prasad, Additional Secretary, MoEFCC and Dr. J. R. Bhatt, Advisor, MoEFCC. This guidance was invaluable and provided the very foundation for the capacity development measures being implemented for the forest, fisheries and media sectors in this project. This work would not have been possible without the encouragement and support from Dr. Konrad Uebelhör, Director, Indo-German Biodiversity Programme, Dr. Michael Vakily, Team Leader of the CMPA project, and Dr. V B Mathur, Director of Wildlife Institute of India who shaped and steered a truly participatory approach for capacity development in the CMPA project.

- Dr. Neeraj Khara, GIZ India

- Dr. K. Sivakumar, Wildlife Institute of India

- Dr. Pradeep Mehta, Earthwatch Institute India



Trainer's guide navigator

This trainer's guide facilitates the trainers and faculty members in delivering their courses effectively through enhanced learning of the participants.

This guide serves as a compendium of selected participatory training methods, which are innovative, have been tested for their effectiveness, and are easy to be applied. The training methods can be customized to suit the learning objectives, audience, time availability, resource availability and other factors. It is also possible to include new case studies, relevant reading material or training activities as they become available.

The guide consists of four sections:

Section 1: Capacity Development and Participatory Training Methods

This section provides an overview of the concept of capacity development and the philosophy behind developing a guide for facilitating trainers in delivery the contents of their training using participatory training methods.

Section 2: Fundamental concepts of training and learning and the role of the trainer

This section provides interesting reading for various training and learning concepts that will serve as a quick refresher for the trainers. The purpose of this section is to draw close linkages between concepts and the practical implications of such concepts used by the trainers. This section provides an overview of the concepts of learning, characteristics of adult learners, framing learning outcomes and an insight into the need to use more participatory methods while delivering the contents of this curriculum.

Section 3: A journey through a selection of training methods

This section provides a comprehensive list and an overview of various training methods that can be used by the trainers— either in the original form or after adaptation as necessary to suit the specific group of participants. There is an attempt to elaborate a few selected training methods and approaches in this section. These are the methods that were found to be effective in not only delivering the contents of this curriculum but also brought in a change of perspective and attitude among the media students. Some of these methods are: Baseline expectations, connectedness to nature, simulation games, role play, and coastal expedition. Sketches, photos from the pilot testing and video clips (in the online version of this guide) will help the trainers simulate the overall training.

Section 4: Planning, organizing and implementing coastal expeditions

Field expeditions are an important tool of experiential learning for all kinds of participants. But organizing a successful field expedition needs some planning, and some rules to be followed so that the success is maximized.

This section serves as a guide to planning and organizing coastal and marine expeditions.



SECTION 1

Capacity Development and Participatory Training Methods

This section provides an overview of the concept of capacity development and the philosophy behind developing a guide for facilitating trainers in delivery the contents of their training using participatory training methods.



1.1 Capacity Development for Sustainable and Effective Management of Coastal and Marine Protected Areas (MPAs)

Capacity development for sustainable and effective management of coastal and marine biodiversity and protected areas

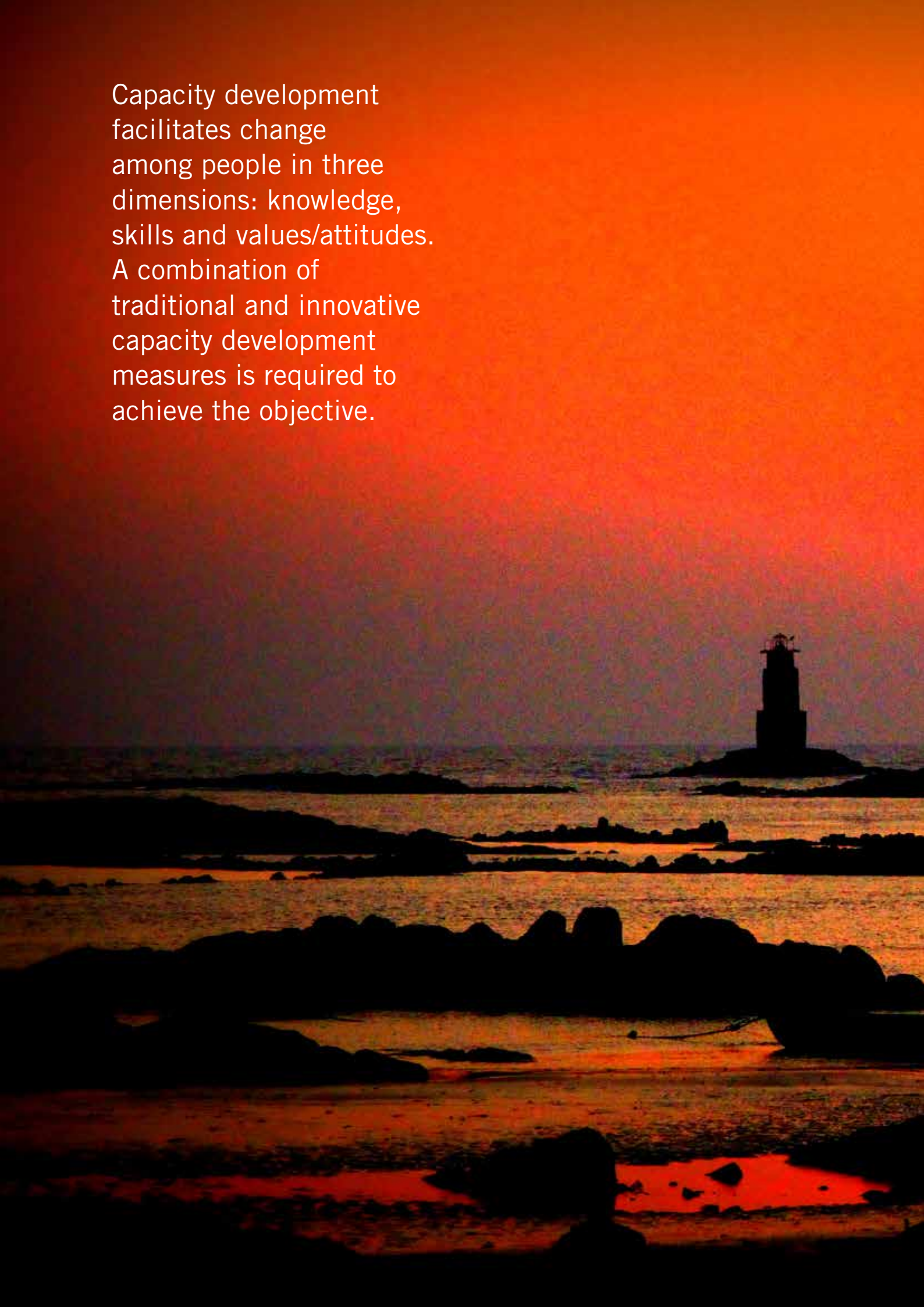
In coastal areas, a major determinant of well-being and livelihood security is the availability of marine and coastal biodiversity resources and access to these resources. Loss of biodiversity and the resulting loss of ecosystem services, therefore, have far-reaching impacts on livelihoods and the overall well-being of coastal communities.

A holistic capacity development system for the MPA managers, addressing their knowledge, skills and values, is key to developing approaches for sustainable and effective management of coastal and marine biodiversity. Effective engagement of the media is another important factors in achieving higher levels of public awareness and support for managing coastal and marine biodiversity. Facilitating holistic and sustainable capacity development measures for media professionals as well as students via media training institutions, therefore, is key in ensuring community participation in conservation efforts.

Sustainability of capacity development plans and programmes on coastal and marine biodiversity and MPA management can only be ensured when training institutions to integrate coastal and marine biodiversity and protected area management-relevant issues, into the existing curriculum and equips the faculty members and training experts with the latest and innovative training approaches and methodologies.

Capacity development is the process of developing capacities of individuals and shaping joint learning processes such that the individuals are enabled to achieve sustainable results within their own system of reference.

Capacity development facilitates change among people in three dimensions: knowledge, skills and values/attitudes. A combination of traditional and innovative capacity development measures is required to achieve the objective.



1.2 Why learn new participatory training methods

Traditional training methods are widely used to transfer information, facts and knowledge from trainer to the learner, but they are not always able to maximize the outcome for the participant's learning.

In a participatory training, learning occurs through active involvement of the trainees and it is learners who develop the answers themselves.

The participatory methods of training help the trainer in:

- Increasing the relevance of the content for the participants, because the methods enable adaptation of the content based on the feedback of participants. Especially when the audiences are experienced field practitioners, they bring a variety of knowledge into the classroom.
- Increasing the inclusiveness of participants, by integrating the learning needs of different audiences. Different people learn differently – some need more visual stimuli, some are focused on listening and others have a more action-oriented learning style. In turn everybody can benefit from a more holistic learning experience, when different senses are stimulated.
- The participants are encouraged to use examples that are relevant to their own work. This enables the participants to use the training methods efficiently and effectively into their sphere of work. This enhances the impact and sustainability of the training efforts.



SECTION 2

Fundamental concepts of training and learning and the role of the trainer¹

This section provides an interesting reading into various training and learning concepts that will serve as a quick refresher for the trainers. The purpose of this section is to draw close linkages between the concepts and the practical implications of such concepts to the trainers. This section provides an overview of the concepts of learning, characteristics of adult learners and framing learning outcomes and an insight into the need to practice more participatory methods while delivering the contents of this curriculum.

¹ The text of this section is adapted from a GIZ publication, *The Trainer's Guide: Participatory Training Methods*.



2.1 How we learn

During the earlier periods of evolution the human brain learned a lot by tasting, smelling and touching. But these are not the major channels of learning for today's adult. More relevant are what we hear (on the radio, from neighbours, from colleagues and trainers) and what we see (on television, on the Internet, in newspapers—but we also observe our parents and our neighbours or see what a trainer has presented.

The message for today's trainer is obvious: talk less and visualize as much as possible!

Learning Outcomes:

PG 1. } outline concepts and issues, related
SU4 1. } managing coastal and marine biodiversity
UG 1. } and demonstrate the importance of reporting
by the media for sustainable management
of MPAs.

PG 2. } Use and organize scientific information
available from different sources for developing
media products.

SU4 2. } Write/develop media products that reflect sound knowledge...
PG 3. } Appreciate the educational role of media
regarding coastal biodiversity management
issues, challenges and conservation efforts.
SU4 3. } Be open to acquiring new knowledge.....
UG 2. }

2.1.1 What we remember

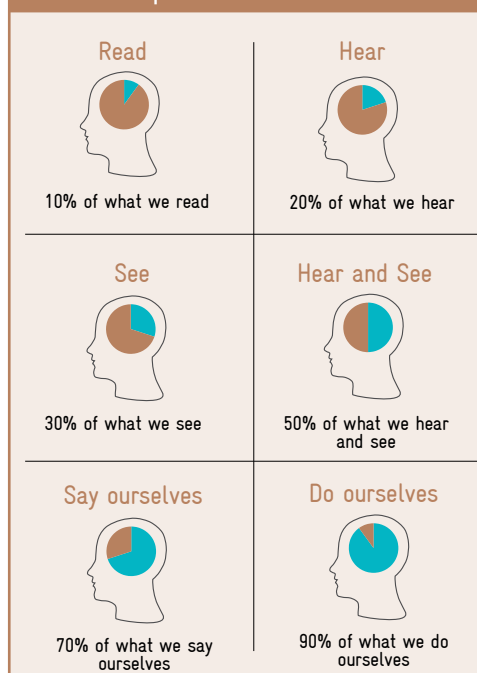
Learning is one aspect, remembering is another. Of course adults remember parts of texts that they have read. But they remember on average only 10 per cent of text-based information. For example, do you remember the second line in the newspaper you read last Tuesday?

People remember what they hear (in particular, when they hear the same thing on more than one occasion—like advertising slogans on the radio). However they remember much more when they see it (thus, an advertisement on television is more expensive than the one on radio). It is best when they see and hear it!

It is interesting to note that people remember content even better when they say it themselves. We therefore need methods that get participants to speak (and not only absorb what someone else has said and forget it).

Finally, adults remember best what they both say and do! Thus, a facilitator should find ways to stimulate participants to deal practically with the topic under discussion by simulating real-life situations of coastal and marine areas or by taking the participants to sites where they can experience the dynamics of an ecosystem and its biodiversity and understand the issues through experiential learning. If the participants can explain the issues to someone else, the chances are extremely high that they will really remember the newly acquired information.

FIGURE 1 | How Adults Learn



2.1.2 Characteristics of adult learners

1. Adult learners are autonomous and self-directed, i.e., they make their own decisions about when to learn and what to learn.
2. They have accumulated a foundation of life experience and knowledge. They are not starting from zero: relevant information has already been acquired via their work experience, their families, their education, etc., which can now be combined with the new information you are about to present.
3. They are goal oriented (if there was no overall goal, they would not be at the training/course).
4. They are relevance oriented, i.e., they want to know why they are learning the new material.
5. Many ask for practical applications, i.e., they focus on the aspects of a lesson that are useful to them in their professional context.
6. Like everybody, they need to be treated with respect.

2.1.3 Types of learners

Whilst there are some general characteristics that are common to all adult learners, each individual is unique—and has her/his preferred learning approach. The table here outlines the four types of learners: (1) activists, (2) reflectors, (3) theorists and (4) pragmatists. They display their respective likes and dislikes in the learning environment.

Style	Likes	Dislikes
Activities	Doing and experiencing. Enjoy games. practical activities. anything that is energetic and involving.	Sitting around for too long; working alone; theorizing; having to listen to others droning on.
Reflectors	Time to think: observe, take it all in first. Love to watch others, need some solitude and above all, time.	Being hurled into activity, having no time to think; crammed timetables, lack of privacy, no time to prepare.
Theorists	Knowing where something fits into overall ideas and concepts, analysis and logic. being stretched. abstract concepts. structure and clarity.	Frivolity, mindless fun, wasting time, not being able to question and express scepticism, lack of proper agenda, timetable and structure.
Pragmatists	Practical problem solving. relevance to the real world: learning to answer the question "How can I apply this to my own situation?"	Anything airy-fairy or theoretical. learning that makes too many references to the past or future and avoids drawing attention to NOW.

Source: Rogers (2001:24)

Think about what type of learners your participants are. Do not be surprised to find you have a mix of all of them, with some having preference for a particular style. Not everyone will fit neatly into a box!

As trainers we sometimes tend to plan our training sessions in a way that reflects our own learning styles. This may not always be appropriate. Keep in mind the different learning styles of your clients when planning. Also, if you find out at the beginning of the course that there is a great degree of divergence between the type of learner that you have in the course and the training methods you had planned to use and you would like to adapt yourself and your sessions to suit your target participants, it is not very difficult to do so. Try and use the methods described in the following sections, and you will be able to utilize your existing material and the allotted time to implement adapted training methods.



Training components are not
designed to make the trainer happy.

It's about the participants.

2.2 The participatory approach

2.2.1 Participation

To 'participate' means to join in, to take part, to involve oneself with. 'Participation' in social and educational science is an umbrella term. It has often to do with involving people in projects, policy reviews or ideas to encourage decision making and self-empowerment.

A participatory approach to group events such as training courses and workshops aims at motivating the group members to play an active role in the learning process.

Active participants get more enjoyment out of the training. They learn more, and for them the outcome is much more sustainable. There are six principles involved in achieving effective participation:

1. self-regulation (rather than demanding discipline from participants only)
2. participation and cooperation (allow participants to contribute)
3. challenge orientation (rather than provide run-of-the-mill solutions)
4. dynamic visualization² (as an alternative to static visualization)
5. facilitation (rather than top-down teaching)
6. continuous evaluation (as opposed to end-of-the-course feedback only).

The first step is to engage the attention of the participants. This is followed by stimulating interaction within the group. Ideally, a trainer provides a setting, atmosphere and learning process, which lead the participants to establish small working groups, discuss with each other, interact, evaluate, improve and finally try out solutions. Then they come back to the larger group, where they re-evaluate solutions. Reflection on the results can help participants integrate the new information gained from the group work and leads to ownership of the knowledge generated. This process is not only effective for the training context but can be used in any democratic decision-making process.

Essentially, the participatory approach is much more than just a 'technique.' People who believe in enabling participants to become active and responsible take them more seriously and help them find sustainable solutions.

Thus, participatory trainers subscribe to humanistic values and democratic ideas. Encouraging participants to express themselves in a structured way (for example, using dynamic visualization techniques) and to elucidate what they mean and/or want often helps overcome centralistic ideas where only the one in power decides 'what is best for all.' In a totalitarian state, children

² Dynamic visualization encourages participants to express verbally on the subject at hand, thus shifting the positions of 'knower' and 'listener'.

2.2.2 The learning atmosphere

Sometimes participants may enter a training course with trepidation or anxiety. It is our responsibility as a trainer to create an atmosphere in which everybody feels welcome, relaxed, accepted and respected. Start out by sharing some information about yourself and invite your participants to do the same. This should also address the expectations each participant has of the training activity at hand.

This 'breaking the ice' is a key aspect of creating an environment that is conducive to learning. Getting clarity and agreement on basic ground rules (allowing people to speak without interruption, punctuality, etc.) is also essential at the outset. See the section on icebreakers in this Guide to get ideas on some interesting and useful icebreakers.

Clear, feasible and relevant learning objectives help give the participants a clear overview of how the training will unfold and help them see how the training may help them in the days' activity as well as in their lives outside the training program. Techniques such as small group work help bring voices and ideas to the forefront without singling out individuals, particularly those who might be shy to voice their opinions.

By making sure that your training is well planned, with activities sequenced from very easy to most difficult, you will help your learners feel confident in each session as the training progresses.

Finally, with variety being the spice of life, you can accommodate different learning styles by using a mixed bag of activities, techniques and methodologies. These will be explored in greater depth subsequently in this handbook.

(in schools) and adults (in public) are not encouraged to think critically. With participatory methods, it is possible to initiate efficient and effective bottom-up processes. When people get a chance for real participation, they are ready to take real responsibility.

Experience has shown that participatory approaches can unify even the most heterogeneous groups: men and women, old and young, participants from different sectors, functional groups, regions or countries. If participation reaches 'the heart and the head,' people are able to decentralize—i.e., to include those on the fringes in the broader framework.

Ideas do not travel from mind to mind—i.e., they cannot be downloaded as from a USB stick, they must be actively shared. People have ideas. One person may have more ideas than others. In fact, the world is full of ideas. Since they do not simply travel 'from mind to mind,' this process may have to be facilitated.

A good trainer is a facilitator on a joint learning journey. The task is not primarily to impart facts to the participants, rather to make their ideas visible and comprehensible. You may ask the plenary group to work first in smaller subgroups and to present their results, you may be surprised to find that the small groups come up with smart answers and solutions themselves; you don't have to 'teach' them. Of course, you may supplement their ideas with specific additional information, as appropriate, such as new regulations, and finally provide a handout with a summary of your topic. But the art of facilitation is to involve everybody, to identify and enable the sharing of the knowledge in the room. Participation is not always easy to achieve—however, the results of participatory processes are better in quality and more sustainable when applied in the field.



2.2.3 Didactic principles for taking an effective participatory approach

1. Ownership and self-organization/self-control

The responsibility for the learning progression of an adult lies not with the trainer, lecturer or training institution but with the individual learner itself. Ownership requires transparency and the development of individual goals for the learning process.

2. Learning guidance

Reflecting on one's competence profile, requires the assistance of experienced trainers, facilitators or coaches who can help design the learning environment, speed, contents, etc.

3. Diversity of perspectives

For learning we need a comparison with other (world) views. Experiencing difference, changing perspectives, embracing new perceptions and even paradigms—all of these contribute to the learning process.

4. Mind-sets as a core issue

It is not only about skills but the underlying attitudes. Soft skills are often as important as, or even more important than, knowledge and facts: knowing one's own strengths and weaknesses is an important starting point for developing new competencies.

5. Room to experience and experiment

Real competencies cannot be simply taught in a mechanized fashion. They develop over time and with experience; a relaxed environment must therefore be created where this can happen.

6. Reflection

Complex developments require a critical consideration of impacts, progress and regression. Learning requires us to sometimes stop, reframe and reflect before we collate and move on.

7. Learning as co-construction

When people engage in real dialogue, exchanges, joint searches and deeper discussions, they build something new together.

2.3 Formulating learning outcomes of the course/sessions

2.3.1 What are learning outcomes?

Learning outcomes are the changes that the course is expected to bring about in the knowledge, skills and attitude of the participants.

2.3.2 Whose learning outcomes?

A key feature of the participatory approach of training methods is that the responsibility of the achievement of learning outcomes rests jointly on the participant and the trainer. This joint responsibility helps shape the way the training is implemented so as to allow participants to express their views and opinions and provide feedback and allow the trainer to adapt the flow of the course.

2.3.3 Why learning outcomes?

Learning outcomes are a guiding light for the participants as well as for the trainer, in terms of both content and training methods, and influence the overall conduct of the course:

- 1. Learning outcomes facilitate content and training methods to be used for specific sessions.**

If a learning outcome is the participants becoming able to 'outline concepts and issues related to managing waste in coastal cities,' then the content will be an overview of the basics of waste management, policies and issues in this area and some good practices.

But if the learning outcome is the participants becoming able to 'outline concepts and issues related to managing waste in coastal cities and demonstrate the importance of media reporting for sustainable waste management in coastal cities,' then the content will be more elaborate than in the previous situation, and the participants will be provided with more hands-on exercises such as role plays, simulation and small work assignments where they can demonstrate that media reports on waste issues can bring about a positive change.

If the learning outcome is a step further, i.e., 'the participants are able to use and organize the scientific information available from different sources for developing media products and to integrate the importance of sustainable waste management into mainstream issues,' then the participants must be



also facilitated to work on special media products, such as films, blogs or news articles, where they research and analyse the issue of waste management, conduct fieldwork and make the media product on the basis of their findings, which will be peer reviewed by a mixed group of experts with waste management and media backgrounds.

- 2. Thinking through learning outcomes helps more efficient planning of the time required for each module/course.** For example, if the learning outcomes are only in the domain of understanding of the issues, then a shorter duration will be sufficient for the course, but if the learning outcome is the participants acquiring skills to develop media products, then a longer duration will become necessary.
- 3. Learning outcomes also guide the feedback and evaluation criteria** and therefore help the course to be more effectively adapted.

2.3.4 How are learning outcomes formulated?

The effectiveness of the learning outcomes depends on how smartly these are formulated. SMART learning outcomes are:

- *Specific*—be as clear as possible (not vague)
- *Measurable*—this makes it easier to know if the objectives have been achieved.
- *Achievable*—be realistic in their expectations (A higher learning outcome needs more time investment from the trainer as well as participants. So if there is less time, the learning outcome must also be toned down accordingly.)
- *Relevant*—related to the overall topic, theme and target group.
- *Timebound*—have a clear time line.

Each course and each module can have two to five learning outcomes that address different dimensions of the individual competencies (e.g., knowledge, skills and attitudes).

- Learning outcomes, ideally, should be developed through a participatory process with representatives of the management (to get inputs about the overall purpose and direction of the course), the course director, faculty members, the trainer and a selected set of the potential participants to ensure that the learning outcomes are fully accepted by everyone. The method of developing baseline expectations is detailed in the next section. It is a good practice to evaluate the learning outcomes of the overall course as well as of each module at the end of each module/course.
- Module/ session-specific learning outcomes help answer these question:
 - What should participants know by the end of the session/s? = KNOWLEDGE SESSION
 - What should participants be able to do by the end of the session/s? = SKILL SESSION
 - What should participants be able to demonstrate by the end of the session/s? = ATTITUDE SESSION

2.3.5 Formulation of learning outcomes correctly reflecting the expectations

This is a table with examples of verbs that can be used in learning outcomes.³

Subject knowledge and understanding: recall information, explain in own words	Intellectual skills: analysis, synthesis, evaluation, problem solving	Practical skills: laboratory, workplace, field skills	Transferable/key skills: communication, team-working
Arrange	Apply	Use	Write
List	Calculate	Assemble	Present
Memorize	Classify	Repair	Cooperate
Recall	Complete	Diagnose	Assist
Outline	Design	Organize	Plan
Record	Demonstrate	Make	Empathize
Repeat	Interpret	Navigate	Finish
Reproduce	Solve	Manipulate	Listen
Select	Appraise	Build	Participate
Tabulate	Evaluate	Implement	Challenge
Describe	Analyse	Calibrate	Justify
Express	Synthesize	Record	Persuade
Paraphrase	Compare	Construct	Prioritize
Restate	Contrast	Project manage	Reconcile
Sort	Criticize	Invent	Debate
Review	Diagram	Demonstrate	Contribute
Tell	Discriminate		Be open to
Locate	Question		
Identify	Differentiate		
Illustrate	Test		
Summarize	Categorize		

The exact words will vary according to the subject or programme. The important thing is to use verbs that describe exactly what you expect the students to do.

³ King, G. 2012. *Handbook for the Training of Panel Members for External Quality Assurance Procedures*. ECA Occasional Paper. European Consortium for Accreditation in Higher Education. ISBN/EAN 978-94-90815-00. http://ecahe.eu/wp-content/uploads/2014/01/ECA_Handbook_for_the_Training_of_Panel_Members.pdf

SECTION 3

A journey through a selection of training methods

This section provides a comprehensive list and overview of various training methods that can be used by the trainers– either in the original form or after necessary adaptation to suit a specific group of participants. There is an attempt to elaborate a few selected training methods and approaches in the coloured boxes in this section. There are some methods and approaches that were found to be effective in not only supporting the content delivery but also brought in a change of perspective and attitude among the media students. Some of these pre-module methods are: Baseline expectations, Connectedness to nature and Icebreakers.



...
maine badhanti conversation
management through media.
...
...
...

A background image showing a group of people in a meeting or workshop setting. In the foreground, a woman with dark hair, wearing glasses, a red top, and a purple shawl, is looking towards the right. Behind her, another woman in a purple and white striped shirt is visible. The background is slightly blurred, showing other people and what appears to be a whiteboard or screen with some text.

3.1 Introduction session

3.1.1 Icebreakers

Icebreakers are needed when people are still 'frozen,' i.e., inhibited in their communication. Icebreakers are often used for groups where the people do not know each other very well or are even meeting for the first time. Icebreakers help remove the initial barrier of shyness that people may experience during a first encounter. There are many ways of breaking the ice or raising the energy level in a group.

Icebreakers are often used as 'getting-to-know exercises.' When choosing from the selection below, bear in mind the time available to you and the specific needs and tastes of the group at hand.

3.1.2 Fact or fiction?

Get the participants to write on a piece of paper three things about themselves that are not known to the group. Two are true, and one is not. The participants take turns to read out the three pieces of information. The group then votes on which one is untrue. Often there are surprises, and everyone learns more about the other participants. This works well when the members of the group know each other but do not work together on a day-to-day basis. This is good for smaller groups (in large groups it would take too much time). Keep up a suitable pace by moderating the voting as speedily as possible!

3.1.3 The question web

You will need a ball of string or preferably soft thick wool for this icebreaker. You will also need a set of 20 questions. Ask the participants to stand in a circle. Hold one end of the string and throw the ball to someone in the group asking that person a question like 'What is the colour of a rose?'. That person has to answer the question. After answering it, holding the string, she then throws the ball of wool to another member of the group, who then answers the next question. Continue until everyone has had a turn. Eventually this will create a web of interesting information as well as it will connect everyone to each other with the woolen string forming a web—and it will be one of a kind! You can use any questions that you like. (Here are some sample questions: If you had a time machine that would work only once, what point in future or history would you visit and why? If you could go anywhere in the world, where would you go and why? If your house were burning down, what three objects would you save and why? If you could talk to someone now living, who would it be and why? If you had last week over again, what would you do differently?)

3.1.4 Finding out

Each person is given an instruction on a card. He or she then has to speak to different people in the room according to the instruction. Some suggestions for instructions to include on the instruction card: Find out who has made the longest journey to get to the training event. Who has the most unusual hobby? Find out who has the biggest feet/largest family.

Icebreakers and energizers can also serve as team-building exercises.

3.1.5 Buddy system of introducing participants

The participants are randomly grouped into pairs of buddies. Alternatively, the trainers may distribute certain paired items randomly to the participants and then let them find their buddy, who carries the other half of the paired item. The buddies then spend 5 to 10 minutes getting to know each other, and then they all come together into the bigger plenary group. All stand or sit in an informal but systematic setting, and the buddies introduce each other. The trainer encourages the participants to get to know the following general information about their buddies:

- name
- where the person works, his/her main activity, his/her role in the organization
- major interest or pastime
- what the person hopes to get out of this course.

(Avoid personal questions that may make the participants uncomfortable.)

3.1.6 Associating the participants with pictures

The trainer selects pictures of different coastal and marine habitats and species that represent different aspects of coastal and marine issues. The trainer asks participants to stand and form a circle and spreads the selected pictures on the ground. The trainer asks the participants to reflect before picking a picture that catches their eyes the most. Each participant introduces himself or herself by picking up a picture that he or she identifies with and explains what prompted him or her to select that particular picture.



An array of pictures are offered to the participants to choose from. Participants show their pictures and explain their choices to the rest.



Participants express themselves with the help of their chosen picture



3.2 Baseline experiences and expectations

Duration: 30 minutes

Material required: Pin boards, cards, pens/PPT with discussion

3.2.1 What is the collective experience and expertise in this group?

A good way to take adult audiences seriously (and familiarize your audience initially with dynamic visualization) is to get information on the participants' experience and expertise on the first day. It is important to know details such as what the participants actually know on the topics to be taught during the course, their language skills and their interest areas within the media:

- Use the living chart method or 'benchmarking' method.
- Ask the participants to stand in a group in the middle of the room.
- Ask them, 'How much do you think you already know about coastal and marine biodiversity?'





- Identify two opposite corners of the room as the two ends of an imaginary scale—one corner representing ‘I know everything that I need to now’ and the other corner representing ‘I don’t know anything on coastal and marine biodiversity.’
- Ask the participants to place themselves on this scale to give their answer. Those who think that they know everything that they need to know should stand at the first corner of the room, while those who think that they do not know anything should stand at the second corner. Those participants who know about coastal and marine biodiversity to some extent should place themselves at an appropriate place on this scale. Encourage them to talk to each other to find out their relative placement on the scale.

You can register in your mind, or take a picture of, the relative positions of the participants on the scale or write down the names of participants who know much or those who do not know anything. At the same time, encourage participants to share their experience (those who place themselves relatively high on the scale).

Now, ask the next question and let the participants change their positions according to the new question.

This method helps the trainer understand the general level of the class—whether all the participants already know something on the subject, their geographical origins (to help pitch the examples), their interest in specific media streams (print, film making, electronic, etc.) and their language skills. If the trainer finds out that four out of 20 students in the class are not very comfortable in the language that is expected to be the mode of instruction, the trainer can identify among the participants a translator who can help these students translate the difficult portions of the training material during the breaks or as and when required. Similarly, the trainer can adapt the training methods and examples for the training to have the greatest impact.

3.2.2 Cross-checking learning outcomes and schedule

What are we going to learn from this course?

- Pin the cards with the learning outcomes of the overall course (one on each card) on the board.
- Ask for volunteers who will share their views about the learning outcomes.
- Facilitate a dialogue among the participants on any additional learning outcomes required.

How are we going to learn in this course?

- Place the schedule of each week/month on cards (four long cards). Place the contents of each module on cards (seven rectangular cards). Place the contents of each field visit on cards (three or four oval-shaped cards.)
- Spread the cards on the floor and ask the participants to pick a card of their choice each.
- Start explaining the schedule and request the participants to explain what is planned for each week/module/field visit in turn.
- Ask the participants pin the cards on the board and request them to tell everyone what made them interested in their particular cards.
- Get the opinions of the participants on the overall schedule. Ask them to express their comfort levels on anything. Try to explain the reason for any specific module/activity when a question is raised. Take a majority vote if a genuine problem in the schedule is hinted at, and see how it can be adapted. Involve the participants in adapting the schedule (e.g., if they are not comfortable with the schedule of a field visit. Then explain to them the arrangements and appointments that have already been made for the field visit, and ask for their support in modifying the plan. If they wish to add some new topics to the curriculum, ask them to identify a time slot in the schedule. Ask also if there is someone among the participants who can serve as a resource person to explain the topic to the fellow participants.

Alternatively, the development of the baseline can also be done via a PowerPoint presentation and students asked to contribute on the screen in case the time and resources do not allow the use of pin boards and cards. The Powerpoint method takes approximately half the time that the pin board method takes.

Baselining is ideally done at the beginning of each session/module since each module

deals with specific contents and has specific learning outcomes. Trainers are therefore encouraged to conduct a quick baseline session at the beginning of each module.





Nobody knows everything;
everybody knows something

3.3 Session on connectedness to nature⁴

True connectivity in any relationship, be it interpersonal or with elements of nature, serves to strengthen empathy and concern. Because of personal transformations brought about by the positive effects of nature, connectedness will give rise to novel types of directives to professionals and students that will result in care and attentiveness to what is happening in the coastal and marine ecosystems around them, which might subsequently lead to positive outcomes in the form of sustainable solutions of issues related to coastal and marine biodiversity and ecosystems.

The responses of society to the loss of biodiversity are increasing dramatically, and looking at national plans and commitments, they are expected to continue to increase. However, the overall responses appear to be insufficient relative to the pressures. This sobering outlook leads one to conclude that there is something fundamental lacking in our relationship with nature. The term 'nature connect- edness' encompasses both our inner and outer nature. Contemplating natural settings calms the psyche and is a way of connecting not only to our natural sur- roundings, including other creatures, but also to our own consciousness. Eco- logical consciousness then is simply the consequence of a clear and quiet mind in contact with its origins.

Rapidly increasing scientific evidence reviewed by Selhub and Logan (2012) confirms that the brain is absolutely influenced by nature. The sciences of biology, psychology, neurology and mind–body research all inform us of different aspects of *how* nature influences the human mind and affects health and behaviour. Our perception of stress, our mental state, our immunity, our happiness and our resili- ence are all chemically influenced by the nervous system and its response to the natural environment.

Adult memory performance can be disturbed by just a few days of elevated levels of the stress hormone cortisol, and even low-level elevation of the levels of pro-inflammatory immune chemicals (cytokines) impairs verbal and nonver- bal memory. If nature can lower stress hormone levels and keep inflammation in check, it follows that nature can be of enormous importance to cognitive health.

Nature experiences have the ability to promote a sense of cognitive clarity wherein there is an absence of confusion. This type of mental focus has served humans well in the natural environment for a very long time.

Lyubomirsky et al (2005) showed that time spent in contemplation, particularly what is called 'loving kindness meditation,' produces increases in positive emo- tions and builds personal resources.

4 Text contributions by Martina Hoft and Ajay Rastogi for this section are gratefully acknowl- edged.

Contemplative practices are gradually gaining ground in the academia. Schools as well as universities are adopting elements of contemplative education in teaching mainstream subjects (see, e.g. ACMHE Association for Contemplative Mind in Higher Education). Discoveries in science, artistic breakthroughs and the common classroom experience are instances of direct perception breaking into our habitual awareness with a novel cognitive insight. A number of studies have shown that immersion in and connectedness to nature foster pro-environmental attitudes and behavioural patterns (Zaradic et al 2009; Lohr and Person-Mims 2005; Thompson et al 2005; Frantz et al 2005). The practice of nature contemplation and experiences of nature connectedness can ignite ecological consciousness and strengthen the motivation to lead truly sustainable lifestyles in line with the biological and agricultural roots of human civilization.

Tools for behavioural transformation

There is an urgent need to develop tools and techniques to reset the balance, to strengthen our innate bond with nature, to give emotions their rightful place at par with rational thinking and to acknowledge the wisdom inherent to ancient Eastern philosophies, native or indigenous perceptions and the principles alive in traditional communities, which emphasize equilibrium, reciprocity, solidarity and collectiveness. These are often reflected in meaningful ceremonies related to natural cycles and mindful thanksgiving, which can significantly improve our connection with both our external and internal nature.

Compassion, loving kindness, integrity and care strengthen the resolve to protect and respect nature. Several techniques are proposed for reorientation and anchoring. Ceremony and practical exercises, including contemplation, play an essential part.

The peaceful state of mind, tranquillity and clarity of thoughts and feelings resulting from nature connectedness have the inherent power to counteract destructive consumerism, which is generally acknowledged to be one of the root causes of environmental degradation.

Goals

- Strengthen the mind–body connection with nature, in particular with the marine and coastal environment.
- Strengthen the resolve to implement decisions that respect nature and ecosystem processes.
- Enable appreciation of key elements inherent to nature and in particular the marine and coastal environment: power, functionality, beauty and connectedness. Encourage MPA managers to actively participate and engage stakeholders in the practice of nature contemplation.
- Enable nature and human wellness to be experienced.





3.3.1 Exercise 1: Contemplation of nature

Eastern tradition informs us that contemplation leads to powerful insights of connectedness and oneness, which make it simply impossible to disregard and not care for nature or for each other. This consciousness in conjunction with exposure to nature can be a driving force in modifying the many harmful and destructive practices that we came to rely on for modern lifestyles.

Contemplation of nature deserves a special place among the many practices that are advocated for connecting with nature, such as *shinrin-yoku* (a Japanese concept that could best be translated as ‘forest bathing’ (Park et al 2010), exercising outdoors, owning a pet, gardening or wilderness therapies. While all these have their proven benefits, the emphasis is on human well-being, and care for nature is a side effect at best

Contemplation of nature can be practiced anywhere, anytime, and no equipment and no special instructions are needed. Anyone can take up this practice and incorporate it into their daily routine. Multiple benefits for the body and mind arise from a contemplative mind-set.

Contemplation of nature is akin to a meditative practice done in association with the natural environment. It involves three steps: soft gaze, disinterestedness and sympathetic attention.

Soft gaze. One chooses a view to observe. This could be a landscape, water body, agricultural field, garden or hedge. If there is no access to nature outdoors, one can choose to contemplate on a potted plant, flowers, leaves, stones, sea shells, etc. indoors. One’s attention is gently focussed on the view or the object. The eyes can blink as naturally as they do. If one is tired or feels better by closing the eyes briefly, there is no problem. Often thoughts start to rush in as soon as the eyes are closed. If that happens, the eyes should be opened as one reminds oneself about contemplating nature. Open eyes help because nature is a multi-sensuous engagement (sight, hear, smell, etc.). This is a support even though one is not consciously engaging the senses.

Disinterestedness. This is about distance from the subject’s own needs, desires, concerns and outcomes in the process of contemplation. To put it more classically, this element in the practice is ‘transcendental.’ Though one is fully aware of one’s own presence and that of the view or the object, one is not exercising the mind to find out any details about the view or the object.

Sympathetic attention. This comes from the well-developed field of loving kindness meditation. This practice, in which one directs compassion and wishes for well-being toward real or imagined others, is designed to create changes in emotion, motivation and behaviour in order to promote positive feelings and kindness towards the self and others. What is required is to just gently remind oneself once that without the elements of nature survival would be impossible and to continue, remaining disinterested and maintaining a steady soft gaze.

The recommended duration is about 30 minutes. Scientific research into the mind–body connection has pointed out that after about 22 minutes of a restful mind, a much deeper physiological relaxation starts to take place. This finding has ushered a relaxation revolution and given rise to several techniques such as mindfulness-based stress reduction (MBSR).

Contemplative practice creates a naturalness orientation and inner motivation for a simpler and richer life more in line with the biological and agricultural roots of human civilization. Evidence for the positive outcomes of sustained contemplative practice on health and behavioural transformations is increasing.

3.3.2 Exercise 2: Mindfulness

Mindfulness is paying attention to where we are, how we are, what we are feeling and what we are thinking, in the present moment. It is about being aware of our experience as it unfolds. Its practice helps us learn to explore our own life, such as our thoughts and emotions, as well as life in the world around us. The world around us also includes natural world, the creatures, the habitats. However, we are increasingly forgetting the natural world around us. Losing touch with our natural home is having serious consequences for our own health and well-being.

A greater awareness of the natural world is essential not only to our own happiness but also to inspire us to care about and protect nature, and develop a more sustainable world. Mindfulness exercise in natural environment will help the participants connect with the natural world at a deeper level and will have greater impact on their learnings in the long term.

The trainers can conduct mindfulness sessions at the beginning of the day or towards the very end of the day, depending on the resources/ logistics available. Following website links will help the trainer understand the mindfulness better.

TED Talk on mindfulness by Andy Puddicombe:

<https://www.youtube.com/watch?v=qzR62JJCMBQ>

One approach for mindfulness exercise has been describe in the participants handout. The trainer can also choose any other approach, and/or video / audio of guided mindfulness exercise from the Internet to facilitate the session.

The following approach to mindfulness and connecting with nature was adapted from Zajonc (2009)

Austrian philosopher and social reformer Rudolf Steiner recommended a deep sensual engagement with the natural world, based on Goethe's worldview, in which 'Thinking ... is no more and no less an organ of perception than the eye or ear. Just as the eye perceives colours and the ear sounds, so thinking perceives ideas'. Steiner said that by enlivening our sense impressions, we can awaken to the living, spiritual dimensions of the Earth. Too often these impressions have become routinized and dead and so are fit to perceive only the mechanical and material dimensions of our world. In order to expand our experience and understanding, we need to deepen our sensual engagement with the world of colour, movement, sound—indeed with all of sense existence.



3.3.3 Exercise 3: Experiencing our emotional connect to nature in general and to the coast and marine life in particular

People, today are overwhelmed with a number of elements that dominate the social scenario, entertainment, gadgetry, etc. all of which focuses on the 'gratification' aspect of the psyche.

To make them appreciate nature, they first need to be sensitised about the beauty, complexity and the fine workings of Mother Nature. Like a ground or earth that must be prepared to accept new seeds, so must the students minds be prepared for this transition of a busy lifestyle to being more sensitive to Mother Nature. Using the term 'Nature' by itself isolates any personification of it. Once we insert the word 'Mother' as the one who creates, personifies the complex processes of this planet. Since our target audiences are 'humans' and every human should have come from a source his/her mother, the connection is made immediately with the use of the term 'Mother Nature'. This also knocks on the emotional core of the target audience.

Before disseminating any information that requires the participants to absorb and contemplate on, a quiet session of meditation or uncluttering of the mind has proven successful. The instructor asks students to stay silent and only focus on their breathing, ideally to focus on the sound of air rushing out of their nostrils. This exercise of meditation immediately focuses the mind on the breathing and thus reducing the activity of other thoughts. This enables them to take off the baggage of a previous session or activity, thus making them open to new information also helping them retain that new information.

Emotional triggers of heart and mind are activated through viewing of a that highlights the beauty of mother earth showcasing sea creatures or any similar visuals, which create an experience of amazement in the participant's mind. This session is also like an escape for the mind. This keeps them attentive and invested. Once completing viewing the film the trainer will request the participants to stay silent and meditate on what they saw.

DURATION: 30 minutes

MATERIAL REQUIRED: Video/photo slide show, background music, envelopes to collect individual letters from students



Examples of videos:

<https://www.youtube.com/watch?v=X3CmyWI8vc0>

https://www.youtube.com/watch?v=YjGOWq_8TYQ

<https://www.youtube.com/watch?v=eH1s9GCqPKo>

Depending on the access to a coast, this session can also be organized as a coastal walk, followed by the reflection session in the classroom

- Give the participants time to reflect, share their emotional connect with nature with their neighbour and write down their ideas on paper to be submitted to the trainer.
- Have silence for a while so that the participants can process the information.
- Participants can take time to pen down their thoughts and feelings after this meditative exercise
- Collect the written sheets. Read out a few answers.

3.4 A bouquet of training methods for delivery of modules

Excellent trainers should have mastery over a wide variety of methods. They should also be agile, creative and flexible in handling a broad array of techniques.

Methods	Tool	Material	Equipment
<i>How the content is going to covered/ delivered</i>	<i>The aids that are used in the course of training</i>	<i>The content that is shared with participants</i>	<i>The infrastructure which helps in utilizing aids</i>
Small group work	Posters	Handouts	Projector
Role play	Cards	Handbook	Laptop
Case study	Stickers	Readings	Speakers
Simulation	Charts	PPT	Mike
Interactive lecture	Markers	Film clips	Boards

The following section describes a selection of methods that can be used for delivering specific topics in this course. Trainers are encouraged to experiment with new methods on the basis of their unique participants and their expectations from the course (see previous section about developing a baseline of expectations).

Brainstorming. This is the generation of many ideas by simply calling out. Every answer is included in the process. The trainer does not filter the responses or views from the participants in the first round. It is a good method to get everybody involved on some broader issues (to narrow down the scope of the session) and to stimulate some unconventional inputs from them (on issues that are complicated or have too many facets to be addressed in a regular discussion mode, e.g., participants' perception of climate change). The trainer writes responses on a flip chart or on coloured cards that are pinned on a soft board.

Brain writing. This is similar to brainstorming, but instead of one person writing what others shout out, each person writes his or her own ideas on cards. These can later be clustered on pin boards.



Brainstorming and Brainwriting

There are two types of human 'thinking', which were described by early psychologists as 'convergent' and 'divergent' intelligence. Convergent thinkers are generally encountered in technical professions and in the field of administration: they prefer to go from A to B and conclude at C, their thinking processes are linear, and they like to optimize existing models and prototypes. Divergent thinkers are more often found in the realm of the arts: they are inclusive and nonlinear, and their thinking seems to 'jump around.'

In order to work on complex developments (for example in coastal tourism and its impacts on coastal ecosystems), it is important that divergent and convergent thinkers work effectively and efficiently together. This is often a challenge for trainers with heterogeneous audiences. A group that intends to go beyond its established frame of solutions (i.e., is prepared to leave the comfort zone and to learn to think out of the box) may wish to use the brainstorming or brain-writing technique. The important feature of these two techniques is that everybody agrees (and the facilitator may reemphasize this at the beginning of the session) that in the first step everything,—really everything—is allowed to be said and written down, even if it looks 'strange' or 'incorrect' or is not immediately apparently a solution. This is referred to as 'taking the nonconstrained view.'

It is only in a second round that the many ideas are clustered, discussed and evaluated—and it may transpire that an idea which initially looked crazy (like sailing west to go east) turns out to be the best solution to the problem.



Brainstorming (where every idea is written in a callout list by a moderator) and brain writing (where every idea is written by the participants on cards that are subsequently arranged on pin boards) have become key techniques for developing new ideas within heterogeneous groups. So how can we use brainstorming in the learning environment?

1. Simply visualize the question to be addressed (e.g., 'What shall we do tomorrow evening?')
2. Introduce the brainstorm rule: 'Everything is OK! No commenting on other people's ideas in the initial round'.
3. Let them storm.
4. Write the callout list on a flip chart.
5. Moderate the subsequent discussion according to the principles outlined in the chapter Dynamic Visualization.



Case studies

A case study is an intensive study of a single group, community, incident or process. In research contexts, case studies are often carried out by social, behavioural or political scientists. In educational contexts, case studies are used by trainers in order to apply newly-learned knowledge to a complex, holistic and thus realistic scenario. A concrete situation is described and the learner is provided with a variety of facts, opinions and background information. Based on this information, certain decisions have to be made. Depending on the overall timeframe (working with case studies can be quite time consuming!), certain further background information (e.g., legal texts, regulations...) may be provided.

Good facilitator includes photos, visualisation of background information, handouts for participants, short texts for group work (such as newspaper articles) and comprehensive information for further reading. A typical activity flow for working with case studies looks like as provided on the right hand.

Case studies usually take a lot of time if done thoroughly and effectively, given the amount of material involved. The (sometimes extensive) material can be read prior to the session, during breaks or in the evenings (multiday training). Sometimes groups need extra time (e.g., after dinner in the evening) to develop their inputs for the plenary session. If, in order to highlight the knowledge or learning that you want to cover, you decide to 'tweak' or modify case studies, it is essential to test the modified version in a dry run with colleagues or a beta group before using it in your regular seminars!

The trainer explains the case study with a short briefing (15 min), using selected visual materials to get the participants emotionally and cognitively into the case scenario.



Clear instructions are provided as to what to do with the case (general questions, goals, decisions to be made, timeframe...)



Participants receive the necessary material (texts, background information, etc.) to prepare themselves (including the visualisation of their group work output)



Presentation of group results by various means (demonstration of their solution or perhaps even a role game /fish bowl, etc.)



Summing up the lessons learned.

Computer-based interactive, individual drills on a computer. Graphics, animations and videos support the learning process. Sometimes they are referred to as 'webinars'. They can be combined with face-to-face interaction in seminars (blended learning approach).

Demonstrations. A resource person performs an instructional activity while the participants observe and learn how to do it before trying it themselves (e.g., how to do different steps of SCUBA diving, or how to lay a line transect in a coral area).

Dilemmas. Professional real-life situations that present dilemmas are written on a flip chart (e.g., strict conservation versus softer approach to conservation). The participants stand in the middle of the room and then position themselves (left or right, according to the position they support). There is a discussion between the groups. After the discussion, the participants are invited to change positions if they have changed their minds.

Asking the 'right' questions

Formulating good questions in training environments encourages dialogue, engenders mutual respect, stimulates an atmosphere of investigation and reflection and facilitates exchange of ideas. Let us look at some of the differences between helpful and unhelpful questions:

Helpful questions

- induce curiosity by stimulating multiple responses (open questions).
- stimulate further dialogue among the participants.
- create group understanding instead of isolating individuals.
- bring to light points of common interest.
- advance the group process strategically through personal involvement.
- reveal aims, signify aspirations and/or invite explanation of intentions and actions.
- bring out the positive qualities and achievements of a group, are provocative or challenging where necessary or useful.

Unhelpful questions

- are closed or are too rhetorical, i.e., they prompt 'yes/no' or obvious answers.
- are vague and general.
- can only be answered by an absent expert.
- require evidence that is unavailable.
- threaten to invade an individual's privacy or culture.
- are paternalistic or suggestive.
- highlight someone's incompetence.
- do not focus on the problem under investigation.

If you are unsure of your questions, it might be worthwhile doing a dry run with colleagues to get feedback to improve the type of questions you ask. New trainers might like to write down their questions during their preparation. Experienced trainers may find asking open questions comes more naturally.

Discussions. An issue or topic is briefly introduced and then debated, evaluated and, if possible, solved. Often statements and/or answers are neither totally right nor wrong. The trainer acts as the chair/facilitator. Various forms of discussions can be used (round table, small groups, etc.).

Moderating discussions

Remember the golden 10:60:30 rule for participatory group events:

The experience of trainers and facilitators all over the world has shown that students and participants learn best when you apply the simple golden rule of participatory approaches, known as the 10:60:30 rule. Only 10% of the total time should be used for theoretical input; 60% should be allocated to practice oriented tasks in working groups and the remaining 30% for discussions and summaries in the plenary sessions. During that time the solutions achieved and ideas must be integrated, understood and meaningfully summarized—this is partly the work of the trainer. There are other



occasions, such as panel discussions, where a moderator focuses on the overall flow of the discussion. But let us look particularly at a training session, where the participants have just learned something new (for example a new topic related to coastal zone management) and the trainer now intends to deepen the knowledge in the discussion that follows. What should she or he do?

- summarize the major points (using visualization on metalevel cards)
- manage the time (no endless discussion; set time limits for individual contributions)
- encourage quieter participants to contribute to the discussion as well.
- visualize the major outcomes (bullet points) on a flip chart
- paraphrase important aspects of the discussion that were not initially clearly expressed and/or have been perceived as ambivalent
- pose a meta-level question when emotions between two factions boil up
- use her or his intuition to determine the right amount of time for summarizing and moving on.



Excursions. The training venue is moved away from the classroom in order to gain experience or carry out investigations at a specific location (e.g., a fishing village or an MPA). This is sometimes a better way of achieving new perceptions and insights.

Expert interviews. Participants take the initiative: questions are collected, and an expert is invited (or a member of the group studies the subject carefully and answers the questions).

Films. This entails watching films (or parts of films) along with the group and discussing the content afterwards, possibly in a fish-bowl* method. Find a selection of films, produced by groups of media participants, elsewhere in this guide.

See the section 4 in this training guide to gain further information on how to plan and implement field excursions in relation to coastal and marine biodiversity and MPA-relevant issues for media students, trainers and practitioners.

Falling leaves

With falling leaves, many options can be generated and impressively visualized. Leaves fall from trees in different seasons—as do the leaves in a training session in which this method is used:

1. The trainer defines the topic and visualizes the question, for example, 'Which strategies could be used to reduce coastal pollution?'
2. Each participant gets a board marker and as many cards as he or she likes.
3. Now all the participants write their ideas on the cards**—but only one idea/strategy per cards. Five ideas, five cards. (e.g., 'stricter laws,' 'improved waste management technology,' 'capacity development of pollution control authorities,' 'regulate industrial pollution,' 'increase public awareness').
4. In the next step the participants form a large circle (like many trees).
5. The first participant calls out his or her first idea ('stricter laws') and lets his or her leaf (Card), on which the solution is written, fall down to the ground (like a leaf in autumn). At the same time each of the other participants who have written the same idea on card lets his or her leaf fall on the ground. There may now be six leaves on the ground (from six participants with the same idea), and the process is continued until all the ideas/leaves of the first participant are on the ground.
6. Next, the second participant calls out one of her or his ideas (e.g., 'capacity development of pollution control authorities') and lets her or his leaf fall down. All the others who have the same idea in their leaf package let it fall. There are now lots of leaves on the ground.
7. The next participant calls out her or his idea. Everybody with the same idea follows with the falling leaves. In this way more and more ideas are called out, are dropped and collect on the ground.
8. Usually several ideas are brought up that more or less everybody has. After some time, however, some very unconventional and creative ideas emerge.
9. The trainer invites the group to walk around the pile of leaves. So many leaves! (Often a wonderful effect when people initially thought that they were so limited in their ideas.)
10. Finally, the participants are invited to pick up from the leaves on the ground the ones that they would like to learn more about (or which they simply do not understand). The author of this leaf is invited to explain her or his idea/solution/strategy.

* Fish-bowl method is described on the next page

** If the cards are not available, a regular A4 size paper sheet, or any paper can be used for this purpose



Fishbowl

Fishbowl is a method with specific seating arrangement and facilitation method for discussion. In fishbowl discussions, the participants sit in a two-layered circle. In the beginning, all participants are seated in the outer circle. The facilitator provides a clear guidance to the rules and process of fishbowl method. The facilitator then begins the discussion by sitting in the inner circle and making a few statements on the issues where the discussion should take place. As soon as the statement ends, the participants from the outer circle join her/him in the inner circle and the dialogue starts. The discussion takes place only among the participants in the inner circle (the fish). This inner circle is surrounded by a larger group of observers, seated in an outer circle (the bowl). The outer circle only listens and observes. When a participant in the inner circle feels that s/he has completed their input to the topic, they quietly excuse them-self and go back to the outer circle. The empty chair is taken up by another participant from the outer circle. There might be a situation, where the participant in the inner circle are so involved in the discussion that they do not leave the circle, but some participants from the outer circle are really tempted to join the discussion, they can do so by slowly getting up and standing just on the outside of the inner circle. This should give an indication to the participants in the inner circle, and one of the participants leave the chair for the waiting discussant.

The key is to maintain a smooth transition of discussion and participant movement in the entire process. The participants should be guided well to take this as a process in natural flow and focus on their crisp inputs.

The duration of the fishbowl can vary from 15 minutes to 1 hour, depending on the number of participants and number of topics to be discussed. This flexibility of time makes fish-bowl discussion method a very important tool for a trainer, as it can be used especially when the time is short and the wrapping up of a presentation/ field visit is to be done.

It is a very good method, to enable participants in formulating their views on a certain issue in the most crisp way possible, since they have a short time to share their views and get feedback. This also helps participants in giving and receiving constructive feedback to others as the discussion takes place in a very empathetic environment. This method helps the trainer in getting an overview of the variety of viewpoint present in the room, which is helpful especially when dealing with a sensitive topic in the upcoming presentation.

Fishbowl method is different from a general group discussion in a way that in fishbowl method, only few participants are actively discussing, therefore avoiding the parallel discussions.

Discussions of the fishbowl may be noted down by the trainer on cards and placed on a pin board. The participants can then later see the discussions on the board.

Variations of fish-bowl method:

- An ideal fishbowl is as describe above, where the trainer/ facilitators narrates the rules, begins the discussion and let participants slip in the central circle and continue the discussion. In a variation, the trainer can come in again in the circle to steer the discussion in the desirable direction, in case the discussion is either stagnating or going in a direction not expected.
- When the fishbowl discussion is used immediately after a presentation/ expert input, the expert and/or trainer herself/himself keeps sitting in the inner circle while the rest of the chairs are used by the outer circle. This helps in a continuous engagement of the participants with the expert.



Effective small-group work

As a trainer you may find that you have a large number of participants (up to 35 or even more!), with varied levels of academic backgrounds, experience and interests. There might be language groups also. To get all the participants effectively engaged and contributing in such an arrangement may be difficult. Such large groups with varied backgrounds can be divided into smaller groups to encourage active participation from everybody involved.

Small groups provide a better opportunity for discussion, facilitate a better understanding of issues and, in some instances, allow the participants to make better decisions about how the issues might be tackled. Individual engagement is usually higher in smaller groups. Members are usually more committed to solutions arrived at through effective group work. New ideas and behavioural patterns are more strongly anchored and endorsed. New insights are gained by listening, sharing and learning from each other's experience.

Key prerequisites for effective group work

- A group must possess a common goal for learning.
- A reasonable degree of cohesiveness—appreciation of teamwork
- Norms conducive to learning—self-discipline
- Patterns of effective communication
- A learning culture—learning not just from the facilitators but from each other regardless of age, gender, job title, cultural background and so on.

The learning efficiency and effectiveness of small group work depend not only on the individuals in the group but also on the following factors:

- The instructions for the work must be very clear. Otherwise 'some work' happens in the small group but not necessarily what you as the trainer intended. In your pre-group preparation, get clarity on what you want the group to do and visualize your instructions in advance (i.e., write them on a flip chart or on a handout). Do not forget to explain what needs to happen after the group work has been completed (i.e., the next step—usually the group will present the results to the others).
- The setting in which the groups work needs to be well arranged. Ideally, each group will have a separate room with a round table, pens, flip chart, pin boards, etc. Availability of coffee or soft drinks is greatly appreciated during such group sessions.
- The timing must be realistically calculated and clearly stated before the groups start to work, and time management must be practiced in every group.

Guidelines for group work

These guidelines should be provided to the participants before the group work commences:

- Organize a convenient working place: you may sit in a semicircle and place your materials and boards in front of you.
- Write down the question or task legibly and clarify it, if necessary.
- Allocate the tasks—moderator, timekeeper, observer, presenter at the plenary session, etc. —and agree on the procedures, timing and type of visualization to be used.
- Prepare a schedule by estimating the time required for each step and monitoring the progress carefully.
- Reflect on the questions individually and in silence.
- Collect the ideas on cards.

- Look at, explain, cluster and analyse the cards.
- Ask yourself, 'What is missing?'
- Prepare the group work output for presentation at the plenary session.
- Present the group's output as a team.
- Maintain eye contact with the audience at the plenary session.
- Supplement visualization with creative options: role plays, involving the audience, etc.
- All cards should just be read aloud and pointed to without any lengthy explanations.
- Record feedback received at the plenary session on cards of a different colour or shape and add these to the pin board.



Flashlights. Everybody is invited to make a short statement, i.e., expressing his or her views in one or two sentences without any discussion. This fosters personal opinions. No records are created. A flashlight, like a snapshot is, by definition, short.

Information marketplace. As in a real marketplace, the information is presented/displayed on posters, through videos and in installations by the vendors (participants).



The participants/ groups are requested to install their respective stations (on walls/ tables/etc) in the training hall in a creative manner to showcase their trainings/ research/ other activities. The trainer can steer the functioning of the market place by making some participants stationary at their stations, while the others take a visit to each station; in the next round the others becomes stationary. Alternatively, a Bus Stop method can also be used, where all the participants finish working on their stations, and then the entire groups moves from one station to another, and the participants who own the station being visited present their work displayed at the station within the stipulated time limit (1 or 2 min stop at each station, depending on the time availability)

This method is useful for exchange of information among the participants from various institutes coming together at a training programme. The participants need to be informed in advance to bring the material that they want to share with others at the market place.

The method is also useful for presentation of group work by each group in a fast and effective manner, because the participants get to move around and therefore feel active while listening to the presentation by the other groups (while moving from one station to the other, the participants keep standing to make the transition efficient)

Shared learning. These are an innovation laboratory to generate responses to complexity: Several participants commit to work for a longer duration, such as a few weeks or months, on a 'central learning question' (for example, how the traditional knowledge of coastal communities can be utilized for finding solutions to protect the MPA against climate change. A shared learning journey does not propose predetermined contents, solutions or results; instead it provides the opportunity to work together on the learning questions, providing support, processes and methods.

Interactive lecturing. One-way communication. All the information is read/provided by one speaker. The speaker may use media (often combined with PowerPoint slides) and entertain the audience using both humour and rhetoric. This method is the most commonly used method as it takes less time to cover a specific set of contents, compared with other participatory methods. This method is useful when the group is constrained in terms of time but would like to reach a higher learning outcome, when a guest faculty has been invited or when the participants are visiting an expert.

Practical exercises. Participants practice what they have learned after a theory input session (e.g., writing an article for a blog or conducting research on a topic to be discussed later), analyzing biodiversity data from the field, etc.

Mind maps

Mind-mapping is another tool that helps improve the thought processes regarding the topic at hand. At school we learn that life is sorted into certain categories—biology, history, languages, etc.—and we structure what we encounter in the same way a book is usually structured (i.e., as in a list of contents): First, there is a headline (for example, ‘genetics’), followed by chapters (‘The Cell,’ ‘The Genetic Code,’ ‘The Chemistry of DNA,’ etc.), subchapters and so on. For an exam we learn it all in hierarchical order—the ‘ideal’ student is able to repeat the ‘book chapters’ in their sequential order. Mind maps structure content in a different way. They place the subject which is considered central and most important, in the middle, and the branches emerging from this central point are visualized to arrive at the next level of information. Further information is represented in the form of secondary and tertiary branches, etc.

There is empirical proof that visualizations by means of mind maps are better remembered compared with long lists of contents. Human perception prefers this visual logic (activating both the left and right hemispheres). Mind maps are therefore an efficient tool in the training setting. Instead of rearranged PowerPoint charts with endless lists (which are often quickly forgotten), start by writing the topic of the session on a flip chart. During the next 45 minutes you can easily add branches. Minor aspects can be added as third- or fourth-level branches. You will be surprised how well your audience remembers the content of such sessions!

On the Internet you will find additional mind-mapping tools that offer both sophisticated designs and flexible forms (Mindjet, Freemind, etc.)

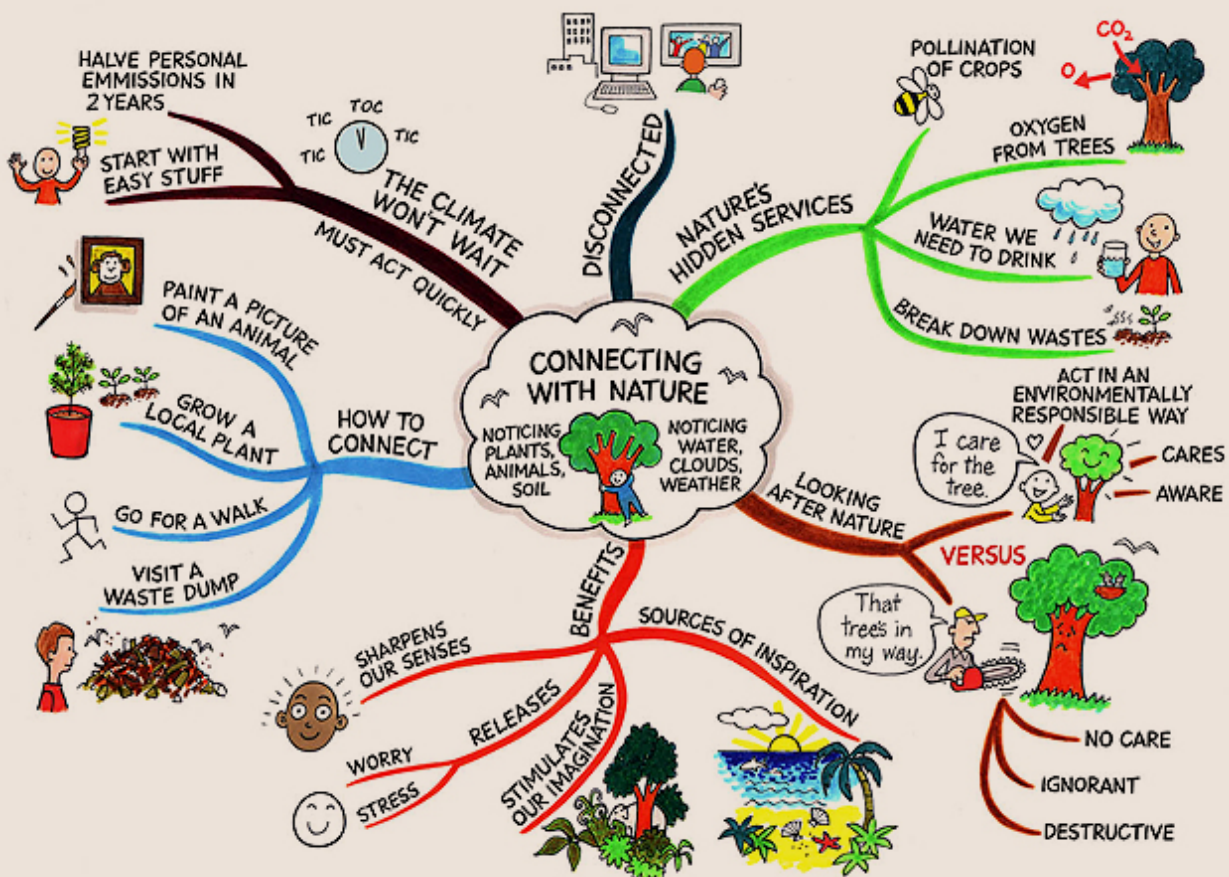


Photo taken from <http://learningfundamentals.com.au/resources/#lightbox/9/>

PowerPoint Presentation. The trainer arranges the topic visually, often standing at the front and explaining it to the participants using prepared slides.

Good presentations

If you wish to make a presentation, you may find this advice helpful in getting participants to remember a little bit more than average!

Here are some general tips:

- **Tell the participants what you are going to tell them (introduction).**

Have a clear introduction, explaining your motivation and presenting a clear outline of the problem you wish to solve. Visualize the contents in the manner most appropriate for your audience. The introduction is mainly strategic (e.g., philosophical embedding, how today's presentation is linked to overall managerial issues and the training course in general). Have a good conclusion slide as well: it should contain the key findings and ideas that you really want people to remember.

- **Tell them (main body).**

Provide them an overview first, and then go into the details (inductive/deductive). This also helps them pace their use of brain power as they go along. Humour is both enjoyable and effective as a teaching tool prepare a couple of puns and jokes beforehand—but avoid becoming a full-time jester. Be careful here: forced humour is not funny!

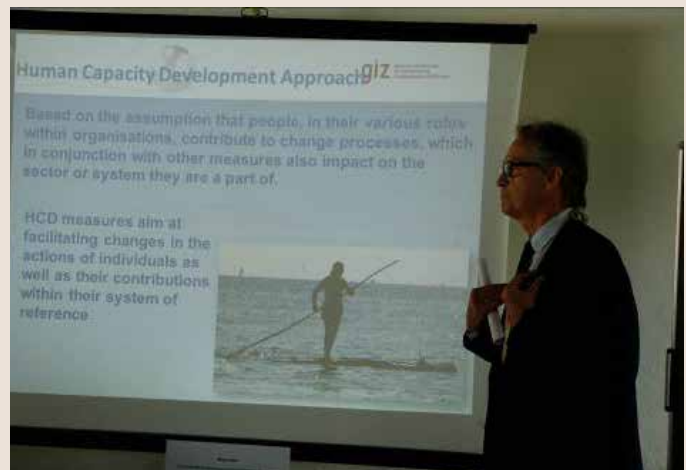
Give participants time to think about the important facts by pacing yourself, slowing down or even stopping for a moment, where appropriate. Listen to the questions very carefully: many presenters answer questions other than those actually asked.

- **Tell them what you told them (conclusion).**

Use only one conclusion slide. Try to establish a common thread, especially if you have to present many different aspects during one session. Help the participants understand where you are going.

PowerPoint guidelines

- Make your slides easy to follow.
- Put the title at the top of the slide, where your audience expects to find it. Slides should have short, one-line-only titles. A long title is a no-no.
- Simplify and limit the number of words on each slide.
- Try not to use more than eight bullets per slide.
- Use contrasting colours for the text and background.
- Best: dark text on a light background. Sometimes a matt pastel background looks much better than glaring white.
- Be consistent with fonts and avoid fancy fonts.
- Choose a font that is simple and easy to read, such as Arial, Times New Roman or Verdana. Avoid script-type fonts as they are hard to read on screen. And avoid CAPITAL LETTERS.



- Use large fonts. Use at least 18 pt so that people at the back of the room can read the text elements on the screen easily.
- Avoid excessive use of slide transitions and animations. - Also keep animations consistent. A PowerPoint presentation is meant to be a visual aid, not the focus of the presentation. Do not use fancy animation effects unless absolutely necessary.
- Avoid having too many slides with text only. Use photos, charts and graphs. Meaningful photos are better than mainstream clip art.
- Use suggestive graphical illustrations as much as possible.
- People remember pictures and graphic metaphors far better than they do text. A few real photos related to your subject are best.
- Do not put in details you will not be addressing explicitly (e.g., long tables with less relevant information).
- Use thick lines in drawings (1½ points or more).
- Use strong colours for important information and pastel colours for unimportant information.
- Limit the number of slides.
- Spell-check — a spelling mistake is a horrible attention-magnet. At best your audience is merely distracted; in the worst case they think that if the presenter cannot even spell correctly, how likely it is that the content is excellent.
- Make sure your presentation can run on any computer.
- When you make a presentation in a new environment (at a conference venue or new training centre), check the hardware before your presentation (and have an audio cable at hand when using embedded sound and/or multimedia files).
- You are the added value of your presentation.

Use PowerPoint as a support for your presentation. You are the main channel of information! Do not just read out aloud what is written on the slides; the participants could do that themselves without your help!

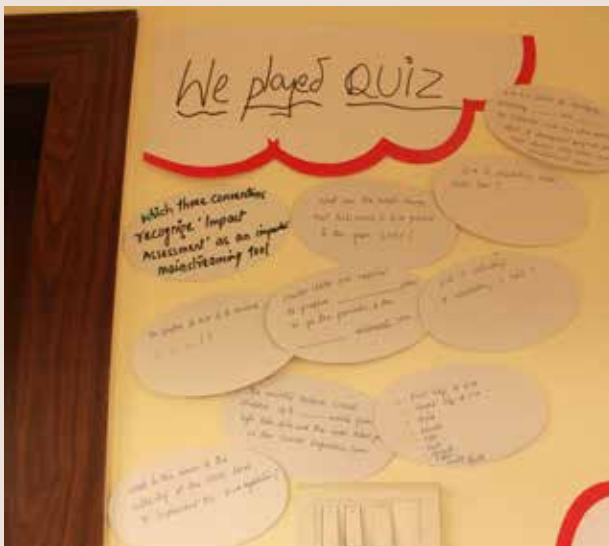
Self study. Everybody gets some time individually in order to solve a problem, prepare an issue, carry out a practical exercise, etc. and then reports back to the group. Trainer must demarcate some time during the training for the self study.

Problem solving. A challenge or a problem is presented to the students. Tools (i.e., a calculator) or handouts may be provided that allow them to find the solution by experimenting and using previously acquired knowledge.

Quiz

A well-prepared quiz always raises the energy levels and encourages active participation. Here is a simple suggestion on how to combine visualization techniques and the quiz technique:

1. Prepare 25 (or more) intelligent questions of different degrees of difficulty. A 10-point question is easy, and a 50-point question very difficult.
2. Form three or more competing teams, visualize the 25 questions using 5×5 rectangular coloured cards. On the front of each card write 10, 20, 30, 40 or 50 and the category to which the question belongs (for example, accounting, budgeting, expenditure management, monitoring and evaluation, statistics). The question itself is written on the back of the card. Remember to keep the score as the game proceeds and give the standings after each round.
3. Explain the rules: One player in the first team starts. She or he can choose the question (e.g., 'Accounting 40!'). The text of the question on the back is now read out loudly so that everybody can hear (and can start thinking about the answer!). If the player answers the question correctly, her or his team gets 40 points. If she or he gives a wrong answer, the team loses 40 points. However, before answering, she or he may also say, 'I do not know, I give it to the group.' Now the other members of the team can confer and answer. If the answer is correct, the team gets 20 points (50 per cent). If the answer is incorrect, the team is deducted 60 points, i.e., 50 per cent more than for the individual wrong answer. The team can also decide that it is too risky to provide an answer themselves. In this case, the question is open to all the teams. The first team to shout can give it a shot. When someone from the second team knows the correct answer, this team gets the 20 points. But think twice—giving the wrong answer will lead to this team being deducted 60 points as well. It can then be offered to the remaining teams again and so on.
4. The next question can be chosen from the first participant of the second team. The same procedure is followed (first the player, second the team, third all the teams, etc.) until all 25 questions are answered. Finally the scores are calculated. Don't forget some jokes and have a little prize for the winner ready, which can be easily shared by the entire team.



Role play

Selected participants act for a short time in prescribed roles in a given situation. The circumstance and roles are defined by the trainer. As the focus is on the lessons learned, a thorough debriefing session is extremely important.

A role play (or a role-playing game) is a real-life simulation in which the participants perform the roles of fictional characters. After the characters have been outlined, the participants are asked to volunteer to play one or the other of these. Sometimes the choice of character is left entirely to the participants; sometimes the trainer 'encourages' a participant to play a certain role. The participants determine the actions of their characters on the basis of their characterization (often provided in a role description).

While following a set of rules, the players still have the freedom to improvise: their spontaneous or strategic choices shape the direction and outcome of the game. Role play should be realistic. The role descriptions should enable easy identification (for example, a hiring manager, a job applicant and an HR specialist in an interview setting).

Role play activities need to be prepared carefully. Only very experienced trainers with motivated and well-functioning groups should use this method spontaneously. It is highly recommended that time be invested before the training session in reflection about the instructions to be given to each player. Good instructions increase the likelihood that the exercise will be a success. Role play may trigger strong emotions, particularly when it becomes obvious that the player is not just playing any role ('the applicant') but is herself or himself highly emotionally involved, acting out her or his own style of dealing with socially tense situations (nervousness, etc.). As a consequence, a thorough and clear debriefing of the players on a character-by-character basis is essential, and they need to be symbolically 'released' from their roles.



Socio-games

These are similar to role games, but the topics are related particularly to social and emotional issues. Aside from 'playing,' techniques such as interviewing the protagonist and freezing may be used to understand what people are experiencing in the given situation.

While role play and fish bowl refer to methods in which the participants identify temporarily with their assigned roles, socio-games are classified under the category of games. They are not primarily a method for teaching something specific (or reaching the learning outcomes pertaining to knowledge and skills). They do, however, address the social fact that all the people in the room are humans. As such, participants want to know who the others are and how they tick. Psychologists call this the "need for affiliation" and "social comparison." Does she know someone whom I know as well? Is he coming from the same region as me? Is there someone in this room who is into meditation? Who has more experience than me on this subject? The answers to such questions may determine the atmosphere of training; whether it will be a "good" experience or if people go home feeling depleted, not having enjoyed the experience.

As we can see it is worth investing some time in addressing the "human factors." Socio-games are often used at the beginning of a training session as a "warm-up" or "icebreaker." For example:

The trainer can use cards, rotating circles, benchmarking or any other method to implement the questions.

Simulation exercise

"Simulation - as the name suggests- is simulating a real life situation in the training hall -for the participants, where the trainer has the opportunity to facilitate the participants on handling difficult situations, understanding other's viewpoints, and deepening their understanding of the human values and attitudes, apart from gaining further understanding of the subject."

"A simulation example provided below begins with a case study (case can be real-life or fictitious. The benefits of using a fictitious case is that the individual bias is eliminated and the participants take an objective look at the issue as well as human relationships). The next step is a role play where trainer assigns roles to participants and the scene is enacted. The last and most crucial part of the simulation is the debriefing, which must be a two-layered exercise i.e. in the first round the participants reflect on their situation while being in the role, and then they come out of their respective roles and reflect on their own behaviors/ statements/ feeling when they were in a different role than their real-life roles"

Following is an example of a simulation based on a fictitious case:

The participants are assigned to one of the roles introduced in any fictitious case (please refer to the last section of this guide to see the simulation case). In the fictitious country of Ceebano, a state government is calling a meeting of all the heads of the government departments relevant to coastal and marine issues as a response to an external funding availability. The state government departments are required to reach a consensus on their priorities with regard to coastal and marine protection.

The simulation case describes the details of the location, the situation and a scenario for a meeting/ discussion. The participants are assigned to one of the roles to be played in this fictitious country called Ceebano a few days in advance. Ideally, participants are assigned a role that is different from

their viewpoint/position in the real world. The pleasant personalities in class may be assigned roles of the antithesis or the corrupt character roles.

The participants also receive confidential instructions (after the assignment of their respective roles) that provide a more thorough introduction to the role they are playing, including their interests and initial positions. They are advised not to contradict what is in their confidential instructions but are encouraged to improvise beyond them as the process evolves.

They are advised not to tell or show their confidential instructions to anyone else except other members of their own small group.

The participants review their confidential instructions and reflect upon the roles they will play, including how they will shape their perspectives on the issues at hand. If they have any questions or concerns, they discuss these with the facilitators directly.

The game begins

The group convenes to play their predetermined character roles in the fictitious country called Ceebano. They now discuss the theme subject, which is how to prioritize the external funds coming to Ceebano.

The group must discuss the following adaptation strategies and identify which ones enjoy the widest support:

- Man-made protective infrastructure
- Forest restoration
- New agricultural technologies and techniques
- Development of non-agricultural sectors
- Resettlement

When discussing each of these adaptation strategies, participants consider the following criteria:

- What are the long-term and short-term implications of these approaches for Ceebano. How do these approaches address the main climate change problems, i.e. erratic rainfall as well as flood and landslide threats to Ceebano?

Important instructions to be given to the participants:

- You will likely have your own opinions on the questions this exercise raises, but you are urged to stay true to your roles as described in your confidential instructions.
- One goal of an exercise such as this is to allow participants the chance to think beyond their usual biases and experiences and put themselves in the shoes of other stakeholders.
- The debriefing session at the end of the exercise will provide each participant an opportunity to step out of his or her simulation character and relate the lessons he or she learned to the actual everyday situations he or she faces.

Story telling. The audience listens to a story. The voice is important. The story should not be too long. The acceptance of stories may vary from culture to culture and type of audience and the issue to be conveyed. Usually story telling works well during a field visit to share the details of the issue and connection with that area.

Making your own video and being a conservation reporter

Watching videos at a training session is easy—provided you find suitable videos. But have you ever thought about making a video with your participants or, more precisely, creating the conditions that allow your participants to make meaningful videos and by doing so apply their knowledge of the topic and gain additional insights? All you need are some mobile phones with video functionality or one or two video cameras.

1. Choose a topic that allows the participants to develop some creativity in capturing it on video.
2. Instruct them to produce a 5-minute clip. They can ask people on the street for statements, they can use cardboard as a box for a television speaker, they can paint a diagram on the flip chart to be filmed for 10 seconds. Ideally they should be able to demonstrate a process, a product or solution, etc.
3. Finally, the results (videos) of the small groups are shown to the plenary group for discussion. And if they are really cool, some participants may even upload them to YouTube after the session.

Keep in mind the fact that ‘making a video’ as a training method does not aim for technical perfection. If you do not have a separate microphone for the reporter, simply play with a big pen as if it were one. Funny videos will be best remembered!

World Café/Knowledge Café

The World Café or Knowledge Cafe method is a simple, effective and flexible format for hosting large group events. A creative process is set in motion within a relaxed, coffeehouse-like atmosphere. Several rounds of discussion, knowledge exchange and idea generation among the participants often lead to new insights and perspectives.

- Setting: Create a ‘special’ environment, most often modelled on the Parisian café. Place coloured pens and flip chart paper on the tables. There should be four to eight chairs at each table depending on the total number of participants.
- Welcome and introduction: The facilitator begins with a warm welcome and an introduction to the knowledge Café process, establishing the context, sharing the Café ‘etiquette’ and putting participants at ease. The leading questions or topics for each table are briefly explained.
- Group rounds: The Café house talks begin with the first of three (or more) 20-minute rounds of conversation for the groups seated at each table. At the end of the 20 minutes, each member of the group moves to a different table, except for one person who stays and acts as the ‘table host’ for the next round. She or he then welcomes the next group and briefs them quickly on what was discussed in the previous round.
- Questions: Each table work on a different question relating to a specific topic. The question should be visualized at each table, i.e., in the form of a flip chart next to the table or board with cards.
- Harvest: After several rounds of discussions, the main results are collected at each table and presented visually, in a variety of ways, to the whole group. Finally, the results are displayed on the walls to present a visual gallery.

The Knowledge Café method can be modified to suit the group requirements, the stage of the training at which this method is being used, the availability of time, etc.

3.5 Energizers

Energizers are needed as a source of refreshment after long periods of concentration, usually spent seated in an unchanged position. By promoting blood circulation through movement and stretching and briefly focusing on something completely different, the thinking faculties are given a break and are refreshed. Energizers and icebreakers can be a lot of fun.

During a training/classroom session, there are some moments when the group energy becomes too low to allow participants to absorb anything. These situations might arise due to the weather, time (after lunch) or any other reason. It is the responsibility of the trainer to identify such moments and make space for the group to regain its energy. Energizers are also helpful in bringing the group to focus just before beginning a rather serious topic. The following is a selection of some energizers that can be used as such or after necessary customization by trainers:

‘Bring me something blue’

Competing groups are challenged to find, as fast as possible, an object determined by the trainer. ‘Bring me something blue!’ There is one point for the fastest group delivering anything blue to the trainer of the class. ‘Bring me a credit card’ or ‘a signature from the receptionist’ or (for outdoor energizers) ‘a stone,’ ‘a white flower,’ etc.

Clapping on the ground

A different category of energizers includes those that make everybody physically imitate somebody or do something strange at the same time. For example, you may ask people to kneel down and put their hands on the ground in front of them. Now instruct them, ‘First, please put your left hand, exactly to the left side of your left neighbour’s right hand.’ When this is done, give the following instruction: ‘Now put your right hand exactly to your right neighbour’s left hand.’ If done correctly, there will now be a circle of hands on the ground, in which everybody has between her or his hands, two other hands (from the neighbours on the left and right). Now the real fun (and concentration) starts, when you instruct the participants, ‘Now we are going to go around the circle, clapping on the ground in sequence. Each hand, one clap. After one hand claps, the neighbour has to clap. As fast as possible!’ Chaos! (You can even introduce double clapping once the group has mastered the coordination necessary for the single claps.)

The blinking murderer

The participants stand in a circle facing inward. The trainer has written a little message for each person, on game-cards. One card is the ‘murderer’ card, and a second one is the ‘detective’ card. The rest of the cards are empty or contain meaningless information. Once the cards have been distributed, the detective goes into the middle of the circle and has the task of identifying the ‘murderer’ as fast as possible. The murderer does not reveal her or his identity but begins her or his mission by

blinking her or his eyes. She or he looks directly at people in the circle and blinks. If someone clearly recognizes that the killer is blinking at him or her, it is too late—he or she must fall to the ground. Slowly each person in the circle will be 'softly killed'. The more alert the detective, the faster the murderer is identified and arrested. Then the game can be restarted by dealing the cards again.

'Now we touch our nose!'

This kind of energizer exercise requires the full concentration of the audience. The trainer gives a command that everybody has to follow: 'Now we touch our noses.' 'Now we put our left leg over the right.' Not difficult so far, but, while speaking, she or he is demonstrating something different with her or his own body (for example, touching her or his ear while she or he commands everybody to touch their noses). This energizer also has very important communication message for the participants, i.e. it is not so much what you say, but what you do is observed and followed by others.

Prime numbers

High levels of concentration are required for counting games also. The easiest game is to request everybody to count but establish some arithmetic rules: When a number can be divided by 7, don't say '7' or '14', but instead say 'blubb,' if the number is a prime number (1, 2, 3, 5, 7, 11, 13...), say 'puh,' etc. Participants who fail to do so keep getting eliminated from the group.



3.6 Team-building exercises

There are fundamental differences between energizers and team-building exercises: you will need more time for a team-building exercise, and you will need to issue instructions clearly and debrief the teams when you finish. The debriefing session will include questions such as these: What did you experience? Who was the leader? Did you feel personally involved? Were you involved or left out? Why did it work, why not?

The team-building exercise is not designed principally to have fun but rather to help people cooperate better and communicate more efficiently.





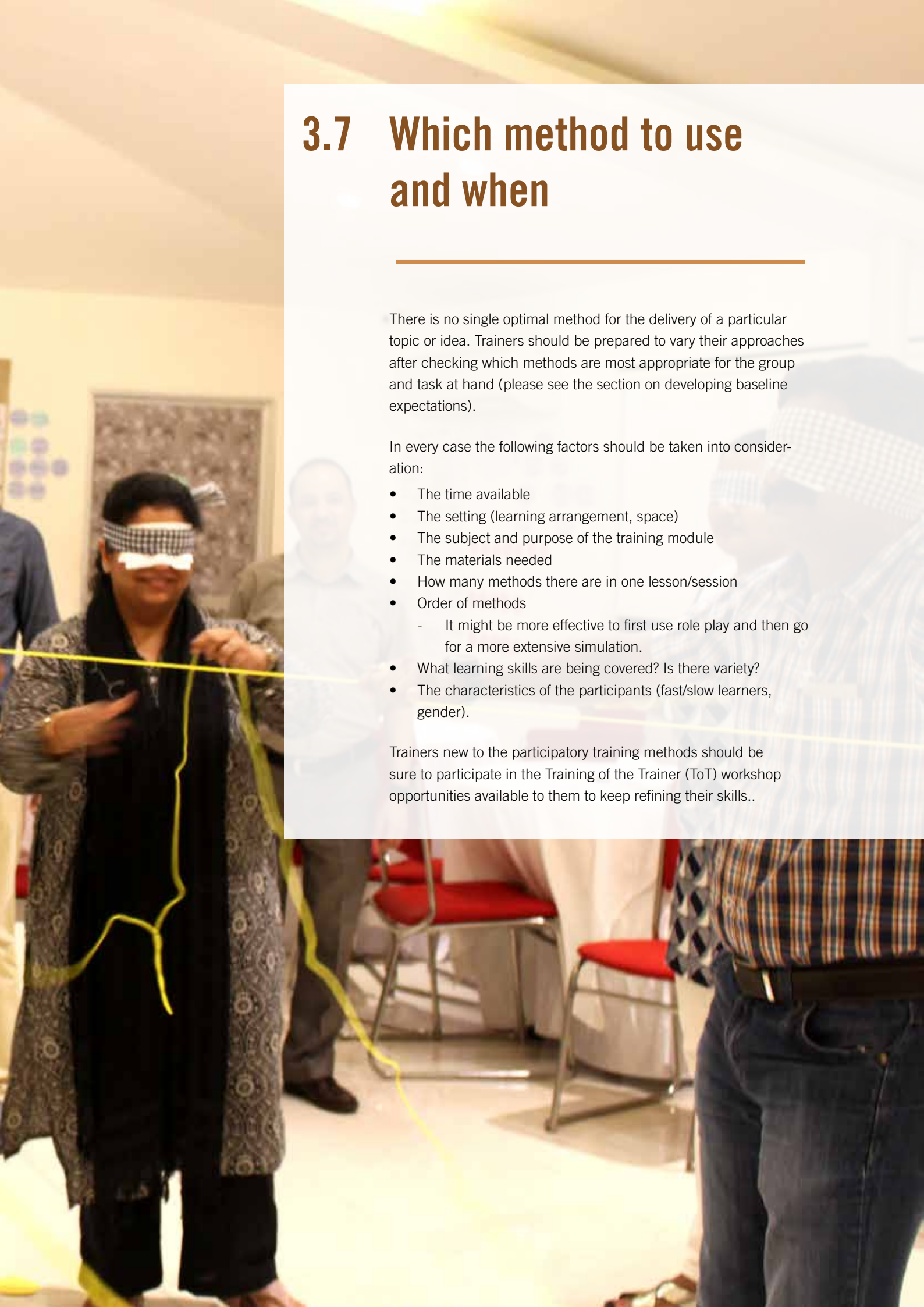
3.7 Which method to use and when

There is no single optimal method for the delivery of a particular topic or idea. Trainers should be prepared to vary their approaches after checking which methods are most appropriate for the group and task at hand (please see the section on developing baseline expectations).

In every case the following factors should be taken into consideration:

- The time available
- The setting (learning arrangement, space)
- The subject and purpose of the training module
- The materials needed
- How many methods there are in one lesson/session
- Order of methods
 - It might be more effective to first use role play and then go for a more extensive simulation.
- What learning skills are being covered? Is there variety?
- The characteristics of the participants (fast/slow learners, gender).

Trainers new to the participatory training methods should be sure to participate in the Training of the Trainer (ToT) workshop opportunities available to them to keep refining their skills..





3.8 Methods of evaluating training programme

At the end of a training session, in the middle of a training week or at the end of a programme you and your institution may be keen to carry out an evaluation. Here are some ideas how to carry that out:

3.8.1 Quick session feedback

This is a very effective method for evaluating one session or module. Ask all participants to stand in a circle. Tell them that you would be interested in their evaluation and to get it, you will read out a set of sentences. Each participant should reflect for two seconds and then either take one step forward if she agrees, or take one step backward if she disagrees or remain standing if she neither agrees nor disagrees.

It is a quick way to take the overall impulse of the group (and it is good that everybody sees where the others stand). Examples of useful sentences in such a scenario are provided on the right hand side.

You can also use benchmarking method to get a quick feedback.

“The time allotted for discussing this topic was insufficient”
“The session was boring”

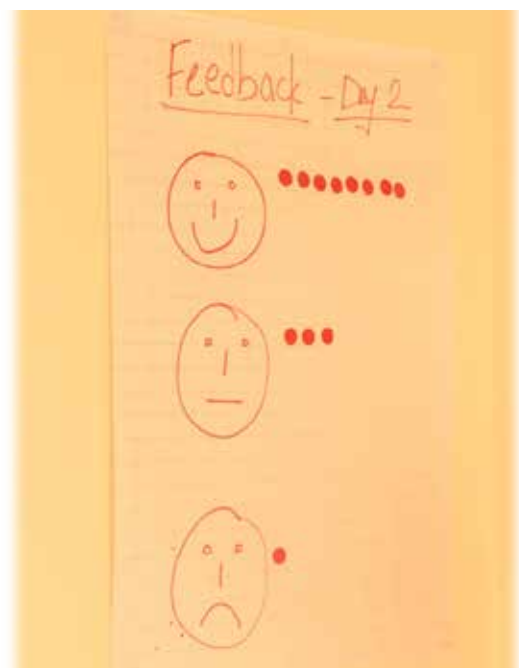
“I have understood the relevance of the topic”

“I will be able to apply the knowledge from the session in my own working environment”.

3.8.2 Mid-term evaluation

Use a mood barometer, as shown in this photo:

Create a smiley board/ flipchart as shown in this image and ask students to mark with dots/ pen the option that is good for them. This provides an overview of the class mood to the trainer.



3.8.3 Comprehensive final evaluation

As the term “evaluation” denotes, it is a question of “values.” Values may vary from person to person and from institution to institution. The question as to “what to evaluate” depends considerably on what is considered “valuable” in the culture and context of the training activity.

A good evaluation questionnaire combines open questions (e.g. “How can this training be improved next time?”), hard data/facts (e.g. age of participants, duration) and rating scales (such as “Was the content relevant for your work?” rating on a five point scale).

Please refer to sample feedback formats in the last section. They can be modified and supplemented as appropriate to your needs.

3.8.4 Open feedback

Mark one space in your classroom/ training room. This can be either a soft board/ white board or wall. Keep some card, pens near that space, ask them to write their suggestions and feedback and when they feel like. The wall/board may be provided with the following bigger headings to steer the feedback process:

- What I liked
- What surprised me
- What was outstanding
- What I did not like
- What do I suggest for the next session



SECTION 4

Planning, organizing and implementing coastal expeditions for media students, professionals and MPA managers⁵

Field expeditions are an important tool of experiential learning for all kinds of participants. But organizing a successful field expedition needs some planning, and some rules to be followed so that the success is maximized.

For any expeditions three things are very important - a) the teaching and learning Goals, b) the expedition landscape, c) field safety dimensions; hence the organisers are expected to keep them in mind while planning outdoor experiential learning events including expeditions.

⁵ The text of this section is adapted from a Earthwatch publication





4.1 How to organize a field expedition in a coastal or marine ecosystem

4.1.1 Selection of site

The site should be chosen very carefully to give the participants the best learning experience.

An appropriate site is selected on the basis of the learning outcomes. The site should be not very far from the institute/place where the course is being conducted. This is so that travel time is minimized. The travel time should be less than 30 minutes so that the maximum time is spent in observation or work to achieve the learning outcomes.

A thorough survey of the site should be performed to check whether the site is appropriate for the objective of the visit. The site should also be assessed from the point of view of safety and mitigation of risks. The weather conditions that will prevail during the survey should also be assessed. This will give an idea of when to organize the field visit, i.e., season, time (low tide, high tide), etc. An expedition briefing is prepared on the basis of these initial assessments.

4.1.2 Expedition briefing

The expedition briefing document is the primary disclosure document that you share with your participants. It is your main tool for communicating with participants and setting their expectations at the right level prior to their arrival at the field site. Therefore, it is essential that the trainers spend good time in working on this document, which

- clearly outlines the objectives of the expedition
- describes how participants will and will not be involved
- places their learning in the wider context of the goals of the expedition
- clearly identifies the leadership of each team, including the roles and responsibilities of the entire project staff and all those who will be present in each team
- provides detailed information about the location, including any pertinent cultural information
- highlights potential hazards and safety recommendations for

the project site, as well as the eligibility requirements of participants

- provides detailed logistical information, such as what participants may expect to eat, where they will sleep, what their daily routine will be, how they will be transported during the project and all rendezvous and departure details
- provides information on what will happen in the event of an emergency.

If all these points are clearly and accurately addressed, the participants' expectations should be matched or, hopefully, exceeded during the expedition.

4.1.3 Disclosing risk

In case you plan the expedition to an area with known risks, such as a beach for snorkelling, or using a trawling boat for expedition, or any similar activities, it is important to understand the importance of risk disclosure to the participants.

Using your expedition briefing to disclose known risks of the expedition, coastal or marine location or surrounding area is very important as potential participants will use the briefing as a tool to decide whether they are willing to accept the risks or not.

If participants opt not to accept the risks disclosed and therefore not to participate in the expedition, this should not be seen as a negative thing or as a reason for avoiding communicating risks to potential participants. It is better to have participants who have chosen to join on the basis of well-informed decisions rather than have people learn of the risks associated with the expedition when they arrive and wish to leave due to fears and concerns.

4.1.4 Safety management

Most of the sections in your expedition briefing should provide information to prepare participants prior their arrival for the project, which in turn will promote a safe field experience. General Conditions, Potential Hazards, Eligibility Requirements, Health Information, and Emergencies in the Field. Additionally, the Communications, Travel Planning, and Expedition Packing Checklist sections are key in ensuring that your participants are well prepared for the field. Each section plays a special role in the expedition briefing.

Site risk assessment

Site risk assessments are conducted in order to identify the level of risk associated with each site or activity so that appropriate mitigation measures can be put in place and appropriate decisions made. Evaluating the risk allows the faculty/trainer and the local resource persons at the site to be aware of the most important safety issues and provides a framework for participants to operate within.

Although it is necessary to be aware of risks, it is also important not to overreact in the face of common daily hazards. The site risk assessment process focuses on significant hazards, but it is equally important that trainers and participants learn to use common sense to assess everyday hazards. Risks cannot be entirely eliminated, and it is therefore necessary to learn to live with hazards and their associated risks. We do this by creating a safety culture in field visits that encourages the use of common sense as well as encourages participants to think before they act.

There are three principal applications in site risk assessment:

- Planning. Risk assessment identifies areas of risk and concern so that appropriate steps can be taken to eliminate or reduce the risk.
- Expedition briefing document and field briefings. Risk assessment informs the written expedition briefing as well as the oral safety and orientation briefings that the faculty members/ trainers deliver in the field. Dynamic use of site risk assessment. Site risk assessment should be carried out for each site or continually re-evaluated and updated even if the same site is used for field visits. Your input and participation in this process are critical for developing site risk assessment as a dynamic tool and not simply a piece of paper in a file.

Risk assessment template

The risks to be recorded include but are not limited to:

- the environment
- transportation
- personal
- safety
- wildlife
- health

Site risk assessments can be updated annually prior to a field visit and on an ongoing basis as needed.

Risk control measures are actions that either reduce the likelihood of an event's occurrence or reduce the severity of the consequences. The intention of the risk assessment is to identify the project's hazards and assess what risk they represent to the field visit. Once the risks have been identified, the training Institute/ trainer will either accept this risk or reduce the risk by means of a hierarchy of controls. These controls are called proactive controls. This process is based on a combination of common sense, experience and training.

After proactive control measures are identified, the residual risk is evaluated. It is important to remember that just because control measures are put in place, risk is no longer present. Control measures require continual risk management and the compliance of the training institute staff and the participants. Even with compliance, residual risks will exist. Thus, reactive control measures are equally important as proactive control measures.

Emergency response plan

Risk Assessment is the basis of Emergency Response (ERP). It is a good practice to have an emergency response plan prepared by the trainer for the site where an expedition is being planned and to have the ERP reviewed before the field session. Emergency Response can only be prepared based on the understanding on hazards and associated risks achieved during the reconnaissance visit. It helps one to pre-empt certain things and situations. It is very important have this document readily available to all in important places like - Vehicles, Accommodation, Dining area, Training premises - hall, auditorium, etc. and also with the First Aid Box. During and before the expedition, the participants should be made aware about this, its content and should be told where it can be found. It is also important to get the information in your ERP tested and verified before the first expedition.

Why have an ERP?

- The ERP will allow appropriate resources to be accessed quickly.
- Advance procedures form the basis for effective handling of expedition emergencies.
- The ERP helps the trainer to think about how to deal with the 'worst-case scenario.'
- A clearly outlined ERP guides action and should help you, your project staff, participants and Training Institute staff handle an incident more effectively and efficiently.

What should an ERP include?

- Important contact information specific to the project and location (for example, emergency assistance, project staff, and relevant authorities)
- Should also include contact details of nearest Police/Fire Stations, Ambulance and Emergency Health care facilities
- Location of immediate care facilities for injured or ill persons
- How to evacuate to relevant medical care
- How to communicate with interested parties (locally, headquarters)
- Basic instructions for what to do in the event of an emergency.

Emergency response protocols

- All the trainers and institute staff, likely to accompany the participants in the expeditions, should be trained in emergency procedures for the project before the field session.
- The ERP should be communicated to the participants on the first day of the expedition.
- Copies of the ERP should be placed at useful locations, e.g., they should be posted in common rooms, placed inside first-aid kits, kept inside project vehicles and handed out to participants.
- All the trainers and institute staff, likely to accompany the participants in the expeditions, and the participants should have a good understanding of the plan and feel comfortable with the procedure so that they can respond in an emergency.
- In the event of an emergency, there are other people also who can help.

Insurance

It is recommended to check if all the participants are covered by an appropriate accidental policy.

4.1.5 Participants' forms

It is recommended that before the expedition the organizers obtain details of the participants such as personal information, health details and travel details. The organizers should get a liability release signed by the participants as well as the resource persons. Any additional forms such as scuba health forms should be signed before beginning the activity.

Personal Profile

This form contains personal details of the participant, including important emergency contact information, and should be reviewed by the expedition lead or manager.

Health Declaration

This section outlines the health and the physical abilities of the participant. It is essential that you take time to review this section in advance of the team's arriving (preferably as soon as you receive it). For some trainings/ expeditions, teams or individuals, this section may include the signature of each participant's doctor, confirming that they are comfortable with the idea of the participant joining the expedition. It is also important that the participants or their doctor mentions about their pre-existing illness for better expedition management and preparation.

Declaration for Field Expeditions

Water-Based Projects

If your planned field visit involves working in, on or near water, the participants need to complete this section, outlining their swimming experience and ability as well as their experience on boats and other sea craft and experience with snorkelling (if applicable).

A specialized scuba health form is to be filled before the expedition. If any information in the Water-Based Forms section causes concern, please inform the organizing institution. For example, you may feel that a participant's experience is not comprehensive enough for him or her to comfortably and safely take part in the expedition.

Liability Release, Assumption of Risk and Indemnity Agreement

This section contains legal information regarding the risks and hazards inherent to all expeditions and a release of liability. All participants must sign the 'Participation Liability Release Form' to confirm that they have read, understood and consented to the policies outlined in the Participant Rights and Responsibilities document and the project conditions as described in the expedition briefing. A participant may not join an expedition until he or she has signed this document. The signatures of the parent(s) or guardian(s) are required for minor participants.

Any expert who comes as a resource person and is involved in the field activities should sign a liability release form.

A sample of the liability release form is available in the last section.

Behaviour Agreement

This section is a requirement for minors participating in teen, school group and student fellow teams. It sets out the expectations for minors on these teams relating to conduct and behaviour.

Travel Information

This form should include information on how and when a participant will get to the rendezvous as well as any contact information for the participant immediately before the expedition starts. The expedition coordinator will have checked that the scheduled time of arrival (by air, train, bus, etc.) will be early enough, but if you foresee any problems, you should let the organizers know as soon as possible.

4.1.7 Trainer's training

It is the responsibility of the expedition coordinator to ensure that all the faculty members, trainers and other staff members of the institution who are likely to participate in the planning or implementation of the expedition, are appropriately trained. This includes training about the conditions and resources of the expedition site, local customs, local resources, and other guidelines of this field-learning journal and reviewing the site risk assessment, how to implement the described control measures and how to enact the site ERP.

4.1.8 Certifications

First aid. There should be at least one field staff member on every team holding current certification in first aid or having this certification as part of his or her other medical certifications. For example, an expedition in a remote outdoor setting should have a staff member who has undergone the Wilderness First Aid or Wilderness First Responder course, while a project in a more urban setting, with better access to medical assistance, could have someone who has undergone training in basic first aid.

Cardiopulmonary resuscitation (CPR). At least one member of the field staff should hold current certification in CPR or have this certification as part of his or her other medical certifications.

Lifeguard. If there are any water activities among the activities of the expedition (e.g., snorkel projects, boat-based projects), there should be at least member among the field staff who is trained to the appropriate level of lifeguarding. The type of lifeguard training should be based upon the type of water that will be encountered (e.g., pool, waterfront or lake, open water, swift water).

Scuba diving. On any expedition where scuba diving will be undertaken, a member of the project staff must serve as a dedicated Divemaster. Divemasters and assistants on diving expeditions must have current certification in CPR, basic or standard first aid and emergency oxygen administration for diving injuries (DAN O2 Provider). It is recommended that all expedition staff members have current certification in these areas. The following table describes the minimum diving certification level for all staff members of diving projects:

Certifying agency	Minimum certification	Required for
NAUI, PADI, SSI	Divemaster or Instructor	Expedition Divemaster,
BSAC	Dive Leader	Expedition Divemaster
NAUI, PADI, SSI	Rescue Diver	
BSAC	Sports Diver	

4.1.9 Medical kits

Medical kits should be appropriately equipped, maintained and kept readily available throughout each expedition. Each kit should contain over-the-counter medications appropriate to the working environment. The staff must have training related to the contents of the medical kits and be able to make good judgements about injury status.

4.1.10 Cultural awareness

Cultural and community interactions

At times during the expedition we may be working closely with local communities. Participants and members of the expedition staff are encouraged to engage and interact with local communities wherever possible. The local coordinator should be familiar with the culture and communities living in and around the expedition site and have established links with the local people and organizations in the area. Early contact with the host communities is vital, and it is essential to have built up local knowledge and expertise well before the start of the project.

Visiting local schools, having meetings with local organizations and learning about new cultures are all part of an expedition experience.

Briefing participants on cultural awareness

Participants are often guests where the expedition is taking place and as such are obliged to consider the culture of the local people and minimize disturbances to their daily routine. It should be impressed on the participants that being culturally sensitive is important when visiting any new place. Patience, good humour, an acceptance of differences, using common sense and showing respect will help visitors enjoy cultural differences and make them part of a rich experience wherever they travel.

The participants should be provided cultural information in the expedition briefing and before going into the field; however, participants may still experience some culture shock upon arrival.

This briefing may need to cover some of the following areas, depending on the country and culture in which the project is based:

Alcohol. Is alcohol tolerated in the local area?

Religion. Inform the participants of the religion of the area and any special considerations or customs that should be followed.

Dress. Inform the participants of any special considerations regarding clothing or dress. They should respect the culture by dressing appropriately.

Behaviour and customs. This may include attitudes to governments, royal families, military establishments, etc. Are there any major cultural or personal customs that are offensive to communities in this region?

Attitudes towards women. May women go out alone, or will that draw unwanted attention?

Photography. It is courtesy in any location to ask permission before taking photos of local people, but also note any specific restrictions concerning photography in the area (e.g., do not take photos at airports, government buildings, religious sites).

Local laws. Are there any laws of which participants may not be aware (e.g., smoking or drinking in public places, sexual orientation, illegal medications)?

Daily Briefings

These should take place either each evening or each morning and include:

- information about the activities of the day or the next day
- the equipment and clothing that will be required
- the day's schedule of tasks

4.1.11 Expedition steps and processes:

Briefing (30 minutes)

It is a good practice to give a clear briefing at the start of each field visit about the activity, site where the activity is being planned, the role of each participant and the resources required. A safety briefing should also be given, on the risks associated with the site (boat, animals, etc.), clothing required (shoes, clothes, caps, etc.) and what to carry (notebooks, books with identification keys, water bottles, etc.). The site can be shown on Google Earth, or some photos of the site can be shown to the participants to provide a better idea of the site beforehand. A briefing about the logistic arrangements should also be provided.

The briefing can be done using a PowerPoint presentation or flip chart.

It's a good practice to ask the participants if they are clear about their tasks. In case there are queries regarding the field visit or task, it should be answered. The briefing is done at the training venue. It is also a good practice to have a notice board on which the week's schedule is listed, as well as specific daily tasks, weather forecasts, etc.

Teams should be formed before the field visit.

Team formation

If the group is large, break it into smaller groups so that group management is performed in the best manner and each participant gets a role in the field activity. The teams can be given the same tasks for observation, or they can be assigned different tasks based on stakeholders, etc., so that within a short time the participants can get the best out of the field visit. For example, in an expedition to a local fisheries market, one group can focus on and interact with the fish sellers, another group can focus on the middle-men/contractors and the process they are following, a third group can focus on the buyer and the pricing information, etc, a fourth group can focus more on the species-related information and the relative volume and price of the key fish species brought to the market. Therefore, the groups should be divided well in advance so that time is not lost in the field.

Methodology

Various methods can be used, depending on the type and size of the group and time availability. It could be one or a combination of various tools. A resource person who has knowledge about the site or issue can give an explanation in the field in the form of a walk and talk. This may include a brief history of the place that the participants may not learn about by just observing the site.

In addition, participants can just observe on the basis of the task they have been assigned. They can be involved in an activity such as measurement or assessment to obtain hands-on experience.

Interactions with villagers or specific stakeholders (members of the fishing community, farmer federations, hotel associations, etc.) can be arranged. Visits to research stations, NGOs, industries, etc. can be arranged during the visit to enhance the learning experience of the participants.

Time of field visit

The time is important for any field and therefore should be planned according to the activity. For example, if it is summer, then the visit should be planned for early in the morning or late in the afternoon. If the visit is to a fish market, it should be planned for the morning or evening, when there is activity at the market.

Duration of field visit

The duration of each field visit depends upon the overall training schedule and the time allotted for the field sessions.. It can range from a few hours to an entire day. The participants should be informed about the duration before they move or start the activity.

Briefing in the field (5 minutes)

It is a good practice to have a short safety briefing at the start of the field activity in the field. This is to minimize the risk by reminding the participants about the risk at the sites. This may be repetitive, but it is necessary. Also, remind the participants about the duration of the activity and the place and time for assembly after the activity.

Debriefing/reflection session

At the end of the activity, there should be a short debriefing session in the field so that the participants can appreciate what they have experienced.

A reflection session should be planned in detail so that each group or individual can reflect upon the learning and all the participants can learn from the experience of the others and the learning outcomes for which the field visit was planned are achieved.

Tools for reflection session

Different tools can be used for reflection:

- i) *Fishbowl method*. Please refer to section 3 for details.
- ii) *Group presentation*. This can be done using a chart, a PowerPoint presentation or a photo slide show/video from the field.
- iii) *Individual reflection*. Each participant is given a chance to tell the others what the highlight of the field visit was for him or her.
- iv) *Dialogue and brainstorming*. Please refer to section 3 for details.

A group of people is seen from behind, standing in a field of dense green vegetation. They are wearing white t-shirts with blue text. The person in the foreground has long dark hair and is wearing a white t-shirt with the text "Facilitating Capacity Development" and "www.indo-germanbiodiversity.com". To their right, another person is wearing a blue patterned headscarf and a white t-shirt with the same text. A third person is partially visible on the far right, wearing a white cap and a striped shirt. The scene is brightly lit, suggesting a sunny day.

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4.2 How is the learning experience enhanced?

4.2.1 Modularized field activity and learning

Field visits should be organized to permit participants in applying the knowledge gained in each module the classroom/training session to field situations.

4.2.2 Possible expedition themes

- Identification of habitats and species
- assessment of threats faced by the coastal/marine ecosystem visited
- interactions with the local coastal communities to understand their relationship with coastal and marine biodiversity
- conducting assessment and monitoring of coastal and marine biodiversity components
- Infrastructure and industrial development and its impact on coasts, coastal pollution and human health- linked application of EIA, SEA and Marine Spatial Planning tools
- vulnerability of the coast to climate change and natural disasters.
- understand the compliance status of law and policies in coastal areas
- various fisheries practices- accompanying fishworkers on trawlers as well as during tradition fishing
- Interactions with the local media and NGOs to understand the awareness and communication needs of the local population, students, citizens etc and what information can the MPA managers provide to make it more effective.



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The topics should always be local in nature so that the participants can relate to the issues in a personal way.

The learning journal providing a guided learning and reflection during the expedition helps the participants gain some understanding before their arrival, reflect during the programme and act when they go back. The journal also acts as a personal field diary for the participants for their notes and reflections.

4.2.3 Site selection

Select a site where participants can observe biodiversity, i.e., species (flora and fauna), habitats, ecosystems, etc., and most of the ecosystem services. It can be a beach where participants can see the flora and fauna and fishing activity, a village near the coast or a beach where there is tourism activity.

For example, a relevant site where there is some violation of the coastal zone regulation (CZR) law or where some actions have been taken by the relevant government departments to stop the CZR violation should be selected: encroachment in a protected area such as a mangrove, a landfill site, construction in a protected area or some major project in a coastal area.

Sites for understanding mainstreaming biodiversity, are all around us, e.g., highways (looking at the placement of a highway project and assessing the possible damage to the coastal habitat and species). The availability of an EIA report or at least a summary EIA report of the site being visited is very important. This will help participants assess their own observations about the impacts and the mitigation plan proposed in the EIA report.

A site that has been affected by a climate change event or some natural disaster or that is prone to such events can also be selected for the visit.

4.2.4 Effective Briefing

Brief the participants about the site, and show them a Google map if required to explain the route. Brief the participants about the observations to be made, health and safety (cap, water, temperature, etc.), clothing and footwear. Also brief them about the cultural issues if there are any. Brief them about the kind of photos to be taken. Remind the participants to note down what they learn in the space given in the learning journal for reflection.

Key points for briefing

The participants should be informed about the site and the activities. They should be briefed about cultural issues if any. They should also be briefed about some laws related to MPAs and what they should pick and what they should not. They should be briefed about health and safety, i.e., seat belts, life jackets in boats, hydration, etc. They need to be informed about the duration of the activity.

Methods

Dialogue and brainstorming

The participants can have a dialogue with the expert or a brainstorming among themselves prior to going to the field.

Walk and talk

An expert gives a briefing about the ecosystem services if this has not been covered in the classroom session. The briefing also covers biodiversity. It is delivered in a participatory manner by asking participants what they observe (different plant species and animal species (birds, crabs, etc.), different ecosystems (beaches, rocky shores, mangroves, etc.), for example). The expert's briefing about biodiversity is based on the responses. Similarly, the participants are asked about other observations. They typically come up with observations about the soil, plants, animals, birds, fish, water, estuaries, tourism, temples, etc. The facilitator can brief the participants about ecosystem services on the basis of the responses.

Case study

Use the case study method if suitable sites are not present in the area. Case studies should also be used for obtaining a better understanding before going to the site. If there are no local case studies, then case studies from other areas should be discussed with the participants.

Icebreaker with the local community

The participants should use an icebreaker when interacting with the community as members of the fishing community or fish traders may not be very comfortable interacting with the media at first without a proper introduction. The participants can introduce themselves as students who are learning about coastal and marine and problems related to the fishing community. Once the participants gain the confidence of the community, the fish workers and traders will feel proud to share. So the specific icebreaker can be decided on by the whole group so that everyone speaks in the same tone during interactions.

There can be a local person who can introduce the participants to the community and fix a meeting, or the participants can be taken to a fish market where the participants just make their observations.

4.2.5 Dividing the group to enhance cross-learning among participants

Divide the group into teams depending on the number of participants. Each group can be given a different activity, e.g., diversity of animals; diversity of plants; provision of ecosystem services; cultural/aesthetic services; and regulating and supporting services.

For example, the group can be divided depending upon the different observations required, i.e., the characteristics of the MPA, the factors governing MPA, different management models of MPAs, the challenges faced by MPAs and sustainable fishing. If the time is limited, then different groups can be given different observations to perform; if there is sufficient time, then all the groups can be given the same tasks for observation.

4.2.6 Field Learning Journal for the participants to facilitate individual learning and reflection

Provide handouts to the participants for recording their field observation, and discuss it with them to answer any questions that they might have. It is a good practice to have the participants fill up one field learning journal as a demonstration, so that they are clear on the questions and possible notes to be taken in the field.

The trainer can pick and choose the field observation questions and edit the field learning journal to match the possible issues to be observed at the selected site.

4.2.7 Debriefing/wrap-up to fill the gaps in the information

Do a quick wrap-up for about 5 minutes reflection once the activity is finished. It should be the highlights of the groups (just one point each). This will help groups learn anything that they missed and will give them a chance to see it while they are in the field.

4.2.8 Detailed reflection to consolidate views and cross-checking perceptions

Conduct a detailed reflection session, preferably on the same day or the next day, for about 1 hr to 2 hrs. Methods to be used:

- *Personal reflection.* Each participant reflects on one highlight or something learnt from the visit.
- *Group reflection.* Each group makes a presentation with the help of a chart or PowerPoint and photos and videos.
- *Fishbowl method.*
- *Dialogue and brainstorming.*

4.3 Follow-up

The follow-up can be facilitated on the following lines:

4.3.1 Personal learning review:

An integral part of any learning programme is the opportunity to stop for or a moment and reflect on everything participants have learnt so far.

4.3.2 Looking into the future

Facilitate a session to help the participants explore what being a media professional / MPA manager/ researcher/ trainer for coastal and marine ecosystems will mean to them, and let them articulate their personal vision as a participant (now) and as a professional (in the near future). Generate ideas and possibilities for actions and maintain it as an “Ideas Bank”.

4.3.3 Communication products for general public:

After the field visit, participants must be facilitated to consolidate their observations, views and experiences in the form of small articles and write-ups for educating people via social media/ other methods.





SECTION 5

Tools and handouts

This section provides the formats for various handouts and instructions to be provided during sessions. The trainers can customize and take printouts for their own use or for the participants, as the case may be.



Handout 5.1 Taking Participant’s Feedback: Daily reflection

Handout on reflections: Formats for participants to capture experiences

Session	What is easy for me?	What is challenging for me?	What do I want to change in training methods/ daily schedule/ etc. *	Conclusions – what do I want to do with my insights?

* “No sessions after lunch” is not a valid option ☺

Handout 5.2 Taking Participant's Feedback: End of the course

Dear participant,

Thank you for your participation in the course on -----.

We request your support in contributing to further improvement of the curriculum, and Training material. To help us further enhance the alignment of such course with your needs and the needs of the future course participants, we would request you to participate in this survey and share your experience and any suggestions you might have for improvements.

Please read the following statements and indicate your level of agreement by marking the appropriate box.

You have six possible answers ranging from "totally disagree" to "totally agree".

If you cannot answer or do not wish to, please tick the "no answer" box.

Thank you for your help and support!

Your trainer

1. Working and learning methods

	Totally disagree	Totally agree	No answer
The content and outcomes of the individual sessions were clear throughout.	<input type="text"/>	<input type="text"/>	<input type="text"/>
Participants were able to bring their own experience and examples into the sessions	<input type="text"/>	<input type="text"/>	<input type="text"/>
The material (e.g., presentation, handbook, handouts etc.) helped me to understand the content better.	<input type="text"/>	<input type="text"/>	<input type="text"/>
The working and learning methods were appropriate to the tasks and suitably varied.	<input type="text"/>	<input type="text"/>	<input type="text"/>
I could relate the examples to the context of my own work and life.	<input type="text"/>	<input type="text"/>	<input type="text"/>

Self-assessment: How far do you think you have achieved the learning outcomes of Module 1?

[*these are only samples learning outcomes. Trainer must use the learning outcomes of the specific training]

Learning outcomes	Degree of achievement				
	Perfectly	Easily	To some extent	Not so well	cannot
I am able to:					
explain the term 'Biodiversity' and describe different aspects of the concept					
outline different types of ecosystem services arising out of coastal and marine biodiversity					
express the difference between terrestrial and coastal ecosystems with clear examples					
Illustrate different types of coastal and marine habitats and summarize the threats that they face					
the ecological basis for conserving coastal and marine biodiversity					
Explain the key differences between landscapes and seascapes					
appreciate the difference in socio-economic and political contexts of terrestrial and coastal-marine ecosystems and their management					

What competences or expertise have you acquired in addition to the training course's explicit outcomes?

Knowledge:

.....
.....

Skills:

.....
.....

Values

.....
.....

Which training method/ session you liked the most?

.....
.....

Any other suggestion you would like to provide for improving the upcoming trainings?

.....
.....

Handout 5.3: General Instructions for the simulation exercise (Module 2)

Simulation exercise – Prioritizing climate change adaptation measures

Development planning in the state of Ceebano⁶

Part A⁷

General instructions

[to be handed over to the participants a week or two before the simulation exercise is to be conducted]

⁶ This simulation exercise is adapted from "Climate Change Negotiation Role-Play: Prioritizing Climate Change Adaptation Measures- Agricultural Planning in the Bien Gio River Delta" developed by Elizabeth Fierman under the supervision of David Fairman, David Plumb, Lawrence Susskind, Philip Angell, and Kelly Levin, for the the Harvard Law School teaching materials & publications available at <https://www.pon.harvard.edu/shop/prioritizing-climate-change-adaptation-measures/>

⁷ Please see the methods section in the relevant session of the Module 7 to see the relevance of Part A and Part B of this simulation handout.

Simulation instructions

Dear participants,

We are going to play this simulation game on the Development Planning in the fictitious state of Ceebano for PRIORITIZING CLIMATE CHANGE ADAPTATION MEASURES.

Where am I?

You are in the state of Ceebano!

On the next pages, you will see detailed description of the state of Ceebano, its economy, agriculture, environment and all the relevant information that you would require to get to know Ceebano. Please familiarize yourself with Ceebano.

What is the situation?

The simulation situation

Meeting Participants with the Chief Minister

The Chief Minister has asked representatives of eight department and organizations to participate in this consultative priority setting process. S/he has hired a professional facilitator to ensure the discussions are productive and to help the group reach agreement. Brief introductions to the participants are provided below:

Planning and Development Department – The state government authority with broad influence on all matters related to development. This department is considered one of the most powerful government agencies.

Environment and forest department – The state government authority on all matters relating to the environment, biodiversity and natural resources, including climate change. This agency was in charge of producing the State Climate Change Report.

Agriculture, fisheries and Rural Affairs department– The state government authority on all matters relating to rural affairs, including agriculture and fisheries. This department has a strong presence throughout Ceebano via its local offices.

Kiew Mountain Provinces Coalition – A coalition of the six provincial governments representing different districts of Ceebano. Provincial governments are charged with implementing state policies within their provinces. They have some autonomy in adapting state policies to local realities, but cannot deviate from state mandates.

University of Thoy Bat (UTB) Hydrology and Meteorology Research Institute – A highly respected scientific institute focusing on Ceebano's water resources and weather patterns. One of its programs focuses specifically on climate change impacts in the state.

Ceebano National University (RNU) Agriculture and Fisheries Research Institute – A highly respected scientific institute focusing on agriculture and fisheries technologies. Technical experts from this institute often work with farmers in Ceebano.

Ceebano Farmers Union – An organization representing farmers in Ceebano, including both rice and fish farmers. Its mandate is primarily to communicate relevant government policies to farmers,

although when possible it strives to convey farmer concerns and perspectives to government authorities as well.

Secretariat, Global Fund for Climate Change Adaptation – The Secretariat is in charge of managing day-to-day operations at the Global Fund, including mobilizing resources and managing donations. The Global Fund is eager to see Ceebano receive the \$500 million.

Professional Facilitator – The facilitator has been hired to help participants prioritize the various adaptation approaches, and has no influence or stake in the decisions taken today.

What am I supposed to do?

You will be assigned to one of the roles introduced in the second section of this handout. You will also receive confidential instructions (after assignment of your role) that provide a more thorough introduction to the role you are playing, including your interests and initial positions. **You should not contradict what is in your confidential instructions, but feel free to improvise beyond them as the process evolves. In fact, improvisation is encouraged.**

You will not tell or show your confidential instructions to anyone else except other members of your own small group.

Please review your confidential instructions and reflect upon the role you will play, including how it will shape your perspective on the issues at hand. If you have any questions or concerns, please feel free to raise them. The group will then convene for to discuss how to prioritize the donated funds.

Tasks before the Chief Minister and her/his team of ministers/ experts/NGOs

The group must discuss the following adaptation strategies and identify which ones enjoy the widest support:

- Man-Made Protective Infrastructure
- Forest Restoration
- New Agricultural Technologies and Techniques
- Development of Non-Agricultural Sectors
- Resettlement

When discussing each of these adaptation strategies, consider the following criteria:

- What are the long-term and short-term implications of these approaches for Ceebano?
- How do these approaches address the main climate change problems, i.e. erratic rainfall as well as flood and landslide threats to Ceebano?

Important

- You will likely have your own opinions on the questions this exercise raises, but you are urged to stay true to your roles as described in your confidential instructions.
- One goal of an exercise like this is to allow participants the chance to think beyond their usual biases and experiences, and put themselves in “the shoes of” other stakeholders.
- The debrief at the end of the exercise will provide you an opportunity to step out of your ‘simulation’ character and relate the lessons you learned to the actual everyday situations you face.

About Ceebano

Introduction and background

Ceebano is a state in a developing country called *Taxum* in South Asia with a rapidly growing agriculture-oriented economy. The country's most important livelihood activities are agricultural, especially rice, Fisheries products, especially fresh-water fish, and handicraft items. *Ceebano* is now the fifth biggest rice producer and third biggest chillies exporter in the world; currently, approximately 70% of rice produced in *Ceebano* is sold for export. This represents a striking change from three decades ago, when *Ceebano* experienced widespread food shortages and was a net importer of food.

Despite a sharp decline in poverty rates in recent years, rural areas remain poorer and less developed than urban areas. Many rural population, especially young people, are moving to *Taxum's* metro cities and pursuing work in non-agricultural sectors. The state government has begun setting policies aimed at shifting the economy's base from pure agriculture to diversified agriculture and power generation from hydro resources, both to alleviate rural poverty and to make the state more competitive nationally and globally. Under these policies, rice and chillies exports are expected to remain important for *Ceebano's* economy, but industrial exports are expected to eventually surpass rice exports in value. More rice will be sold on the domestic market to protect national food security, which remains a government priority. Last year agriculture contributed 50% to the state GDP.

The Kiew mountain range

The Kiew is a major mountain range in the North part of the country and a global biodiversity hotspot. This region is home to almost 20 million people, or about 25% of *Taxum's* population. The region, commonly referred to as the North Mountain, is composed of ten primarily rural provinces. The state of *Ceebano* lies in the middle of this region. Major city in the state, *Thoy Bat City*, is becoming an increasingly important industrial, distribution, and commercial center.

Ceebano lies at medium to high elevation – much of it lies at more than 1500 meter above sea level. Land in the mountain range is heavily utilized for agriculture and, increasingly, plantations for carbon sequestration. Mining, landslides, and earthquake are adding to the vulnerability of the natural ecosystems in the state.

Over 60% of the crop area in *Ceebano* is under rainfed agriculture. Rice is the most important crop grown in the state, although chilly farming and fisheries has been gaining importance, in part because fish is a more lucrative product for the farmers. The natural resources of the state are subjected to degradation and loss due to deforestation, unsustainable agricultural practices, fragmentation and degradation which ultimately impact the biodiversity as well as critical ecosystem services. Increase in human and livestock population, increased extraction of fuel wood, lack of land ownership rights, conversion of natural forests into plantations for horticultural crops, mining, overgrazing, and forest fire are the major causes of deforestation in the state. Many agriculture and horticulture fields have been created through the removal of moist deciduous and evergreen forests of the state as well as filling up of the wetlands; an estimated 200,000 hectares of forests have been removed for agriculture alone. Due to the hilly terrain, cultivation of crops along the slopes and overgrazing by livestock, the soil resources of the region are subjected to erosion and loss.

Approximately 100,000 additional hectares of wetlands have been removed for other purposes, including road and a new *Halley pad* construction and the creation of agricultural land, leaving approximately 15% of the original forest remaining in the state today.

Climate conditions in the state do pose challenges to food production. Like the rest of *Taxum*, the state has two seasons: a rainy season and a dry season. Rain fall is critical for the crops, although intense

rains and storm systems can cause major floods that destroy crops, homes, and infrastructure. By contrast, during the dry season water scarcity in the state poses significant challenge for not only for agriculture but also for hydroelectric power production as well as overall activities of the population, specifically drinking water. It is widely agreed in the State and by the international scientific community that the Ceebano state is one of the areas most vulnerable to climate change, especially the impacts of erratic rainfall and extreme events.

The state is expected to face increased frequency and magnitude of natural disasters like landslides and flash floods, as well as GLOF (Glacial Lake Outburst) in some of the higher areas of the state.

State Climate Change report

Recently, the government released the State Climate Change Report, which highlights the serious risks posed by climate change impacts on Ceebanoa. The report outlines various scenarios for temperature change, precipitation change, and sea level rise, based on high, medium and low greenhouse gas emissions trajectories for the rest of the 21st century. The government has selected the medium emissions scenarios for use as the basis for creating climate change adaptation policies and plans. Nevertheless, the government recognizes that these are simply scenarios; the future will depend on a variety of critical determinants, such as future emissions reductions.

The report confirms that extreme events of landslide and flash floods as well as drought are the most dramatic threat to Ceebano, although temperature and precipitation changes will have significant impacts on the state as well. Cold waves, snow storms and avalanches are also likely to increase with higher precipitation in the North region. Apart from the climate-induced extreme event, earthquake is one of the most significant threats to the state, especially in the South region, which fall under the most vulnerable category as per the national classification.

The report confirms that the climate models predict 1.5-3.0°C increase in temperature; and 250-500mm increase in precipitation in the North region, while a decline of 300-400mm rainfall is predicted for certain pockets of the South region.

The report shows that Climate variability and climate change could impact agriculture, water resources and forest sectors.

The Global Fund for Climate Change Adaptation

A large multilateral organization has established a Global Fund for Climate Change Adaptation. The Global Fund will invest in activities that make developing countries more resilient and prepared for climate change. Given the vulnerability of Ceebano to climate change rise, as described in the National Climate Change Report, the Secretariat has decided to allocate US\$500 million specifically for use in the Ceebano state. The centre has also decided to match up equal funding for the state Ceebano for adapting to climate change.

Payments from the Fund are conditioned on recipient governments setting priorities for how the funds will be allocated. This priority-setting process must include consultations with various parties, including implementing state government authorities, scientists, and citizens groups, such as farmer representatives. The Global Fund has said it will prefer to support initiatives that have the widest support among the different parties being consulted.

The Global Fund is ready to disburse the funds as soon as Ceebano's government conducts its consultation process and develops its priorities. It has also indicated that it is not likely to make a second donation to Ceebano in the near future.

The question: What should the priorities be for allocating the donated funds?

Ceebano's Chief Minister has asked a group of representatives from relevant government line departments, traditional governance structures, the scientific community, and the farmers union to meet and discuss recommendations for prioritizing the donated funds.

The Chief Minister wants to know where the group can find areas of agreement. He is asking the group to focus its discussion on the implications and potential outcomes of each approach. He is not asking the group to set specific funding levels for each priority, as he plans to make those decisions. He wants the recommendations by the end of today's meeting.

In preparation for the meeting, the Planning and Development department of the state of Ceebano has outlined five categories of adaptation approaches for the group to consider; these approaches are described below. They can be prioritized as meeting participants see fit. Other options can be presented as well. The Planning and Development department estimated how much each option would cost to make a meaningful investment.

A) **Man-Made Protective Infrastructure: Dams, dykes, levees and embankments and boulder netting on road-sides**

Funds can be used to invest in protective infrastructure, such as dams, dykes, levees and embankments and boulder-netting on road sides. These types of infrastructure can protect existing land, homes, farms, and businesses from floods and landslides by creating a defense against the flood water and material from landslide.

Protective infrastructure requires regular maintenance, and can be breeched or destroyed during major landslides or floods. In fact, some argue that building this type of infrastructure can decrease disaster preparedness by providing a false sense of security. There are already over 350 kilometers of dykes, levees and embankments in the Kiew Mountain range, most of which require at least some degree of repair and/or improvement; improvements include strengthening and, in some cases, increasing height.

There is ongoing discussion among scientists about the environmental impacts of protective infrastructure. There is evidence that this type of infrastructure can increase erosion and damage ecosystems and habitats. However, there is uncertainty regarding extent of these effects.

Cost Estimate for a Meaningful Investment: At least \$250 million.

B) **Natural Protective Infrastructure: Forest restoration**

Funds can be used to restore evergreen and deciduous forests, which used to grow across much of the Ceebano's geographical area. Forests provide natural protection against floods and landslides, and provide habitat to many species, including the endemic species that are flagship to the Ceebano being a global biodiversity hotspot.

Many scientists emphasize that unlike man-made infrastructure like dikes and embankments, forests both provide protection and are beneficial to the environment. Nevertheless, researchers are currently studying the magnitude of floods and landslides Ceebano's forests could tolerate before losing their ability to perform their natural functions and eventually becoming uprooted.

Over three quarters of Ceebano's forests have been destroyed, in large part to make room for agriculture and infrastructure. Replanting forests would therefore mean finding solutions for required agri-

culture production, and also putting in place effective environmental impact assessment guidelines to avoid further loss of forests.

Cost Estimate for a Meaningful Investment: At least \$150 million.

C) New Agricultural Technologies and Techniques

Funds can be used to invest in the development of new agricultural technologies and techniques. These technologies and techniques could help protect food security and farmers' livelihoods by helping adapt mountain agriculture to changing climate conditions. The Planning and Development department has recommended focusing on biotechnology, water management technologies, and crop integration techniques.

Research suggests that biotechnology can be used to develop rice varieties that tolerate higher salinity and water levels while still producing high yields. There are also technologies being developed to better utilize water resources, such as improved water harvesting and well design methods. Research on new agricultural technologies has slowly begun in Taxum, and is moving more quickly in some other parts of the country. If these technologies were developed elsewhere, there is no guarantee that they would be quickly or cheaply transferred to Ceebano, therefore it is important to develop these technologies in Ceebano itself.

While there is some evidence of direct negative environmental impacts of genetically modified foods, some have suggested that consumers might also resist purchasing genetically modified foods because of perceived health and environmental issues. This could lower the profitability of crops as well acceptance levels among local communities and limit Ceebano's food security programme. Crop integration techniques are already being used in the state. In particular, some farmers now use integrated fish-rice farming systems, as well as System of Rice Intensification (SRI). Bringing this and other techniques to scale in the state could help farmers in certain areas adapt to changing rainfall and temperatures, allowing them to increase their incomes and protect against risks to one crop or the other.

Abandoning intensive rice cultivation would, however, decrease overall annual yields in the short term. Research is still being conducted on the environmental impacts of this type of crop integration, although the current research suggests that when done correctly, it is ecologically sustainable. Bringing crop integration to scale in the state would involve constructing necessary infrastructure, such as fish farms and buffer zones to separate crops, and would in many cases require training for farmers.

These technologies and techniques could help protect agriculture, allowing food production in the state to continue, but only in areas not expected to be submerged or heavily flooded. They would not, however, protect population themselves from direct climate impacts like landslides, floods, and droughts.

Cost Estimate for a Meaningful Investment: At least \$250 million.

D) Development of Non-Agricultural Sectors

Funds can be used to diversify rural livelihoods by investing in the development of nonagricultural industries. This strategy would allow development in the state to continue and could protect jobs in the long term, compensating for large losses of agricultural land and jobs from climate change.

Development of non-agricultural industries is expected to reduce food production by diverting land and resources away from agriculture. On the other hand, alternative industries would provide non-agricultural jobs that could increase local incomes, create jobs, and potentially entice young people to remain in the state. This approach would involve capital investments, investments in training and education

for population, and investments in transportation infrastructure like road, rail, airport and bridges. Some population would need to be relocated for construction of industrial and commercial zones and supporting infrastructure.

The Planning and Development department has recommended including funds for a comprehensive land use plan, to ensure that new developments are sited in viable areas. Still, some argue that there is little value in developing industrial zones and related infrastructure in the state because of increasing vulnerability from intense floods and landslides.

Others have expressed concern that existing industries and urban areas are already causing major habitat loss and pollution, particularly in water used downstream for drinking and agriculture. They caution against creating more pollution that could harm remaining agricultural areas and the environment.

Cost Estimate for a Meaningful Investment: At least \$350 million.

E) Resettlement

Funds could be used to resettle population away from areas predicted to experience intense flooding or extremely vulnerable to landslides. This approach would help prepare for the abandonment of the areas most vulnerable to climate change, leaving adaptation efforts to focus on areas that can be “saved.”

This investment would involve helping population in targeted areas move and find livelihoods in new areas, as well as an education campaign to inform them about the need to relocate. Investing in relocation now could make the resettlement of millions of population more orderly. It would also help the government prepare for consequences related to relocation, such as higher infectious disease incidence due to increased population density.

Many population are not prepared to abandon their land and farms, and would regard the intangible costs of this approach as very high. Many government officials have expressed concern about the political difficulties of asking people to leave their homes and land without an imminent, pressing threat to their safety.

Cost Estimate for a Meaningful Investment: At least \$150 million.

Handout 5.4: Confidential instructions for the simulation exercise

Simulation exercise: Prioritizing climate change adaptation measures

Development Planning in the state of Ceebano

Part B⁸

Confidential instructions for each group

[to be handed over to the participants a one or two days before the simulation exercise is to be conducted]

⁸ Please see the methods section in the relevant session of the Module 7 to see the relevance of Part A and Part B of this simulation handout.

Agriculture, Fisheries, and Rural Affairs Ministry: Confidential instructions

You are the Principal Secretary of Agriculture, Fisheries and Rural Affairs, the state government Department with authority on all matters relating to agriculture and rural issues. You are trained as an agronomist.

You often work closely with the Ceebano provinces, both through the Department's provincial offices and by collaborating directly with provincial leaders. You also collaborate often with international donors interested in agriculture and rural development. You are originally from Ceebano, where your parents were once farmers.

While you have many concerns about the impacts of climate change on Ceebano, **the following is most important to you:**

- Your top interests are to protect agricultural jobs and food security

Given these interests, your initial thought is that the top priorities are:

1. Investment in protective infrastructure
2. Investment in new agricultural technologies and techniques

Below are some additional thoughts:

You believe that farming is vital for Ceebano. Today, Ceebano relies on agriculture and fisheries for both domestic food security and for export income, and the majority of Ceebano population depend on agriculture for their livelihoods. Given these current needs, you think it is clear that this group must prioritize protecting food production, especially in the short-term but also in the long-term.

You support making a large investment in protective infrastructure for the following key reasons:

- Infrastructure is a proven way of providing protection. It is therefore logical to build and repair the infrastructure necessary to protect existing hills, land and farms.
- Ceebano population will appreciate government efforts to protect them. It is unconscionable to ask them to simply abandon their land.
- The government has explicitly recognized that the Climate Change Report scenarios are uncertain. The possibility that areas predicted to be affected by erratic rainfall, floods and landslides could actually remain viable for population and for agriculture and fisheries means they should be protected, not abandoned.
- Environmental impacts associated with man-made infrastructure are of less concern than the potential for climate change to cause devastating losses in life, widespread hunger, and major damage to Ceebano's economy.
- Forests aid siltation and mitigate the effects of storms and surges, but man-made infrastructure is a better defense against landslides and floods.

You think investing in new agricultural technologies and techniques is an important way to protect agriculture itself in the long-term, especially because:

- If farmers are to adapt over time to changes like increased flooding and temperature variations without sacrificing food security and their traditional livelihoods, new agricultural technologies and techniques are necessary.
- It is an added benefit that crop integration, especially integrated rice and SRI can increase farmers' incomes.

You would not necessarily oppose development of non-agricultural sectors, particularly if you could be convinced that this would benefit farmers and raise their incomes, but this option is not your preference.

Similarly, you realize that resettlement may become necessary, but you would prefer to focus on protecting existing homes and farms first.

Today you plan to constructively discuss all strategies with your colleagues, while clearly expressing your core interests and initial priorities.

Development planning in the state of Ceebano

Ceebano National University Agriculture and Fisheries Research Institute: Confidential instructions

You are the Director of the Agriculture and Fisheries Research Institute at Ceebano National University (RNU).

You are trained in agricultural engineering, and you have expertise in irrigation systems and plant breeding.

You have been working to make the institute a leader in agricultural research and technology development.

You are originally from the northern hills of Taxum, but you did your doctoral work in Ceebano and you often work with farmers there.

While you have many concerns about the impacts of climate change on the state, **the following is most important to you:**

- Your top interest is to protect food production in the state in the long-term.
- Your second most important interest is to ensure that the group is careful to protect the environment, especially since the long-term viability of agriculture depends on high quality water and soil.

Given these interests, your initial thought is that the top priorities are:

1. Investment in new agricultural technologies and techniques
2. Investment in forest restoration, particularly as an alternative to man-made infrastructure

Below are some additional thoughts:

You believe that agriculture in the state is vital for Ceebano's food security and economy, and you also know how important it is to the existing way of life in the state.

You view new agricultural technologies and techniques as a good strategy for adapting agriculture to changing climate conditions in the long-term, and believe this approach would have the following key benefits:

- The proposed technologies and techniques can help farmers adapt to changing salinity and water levels, hopefully while still producing high yields. This would allow farmers to feed themselves and the rest of Ceebano despite climate change impacts.
- Crop integration can protect against risks to one crop or the other and boost farmers' incomes.
- Your institute is already developing the proposed technologies, and with funding could certainly speed up its work.
- Developing technologies in Ceebano could avoid costly technology transfer issues.

You realize that infrastructure is necessary to protect state population and farms, but you are concerned about the environmental impacts of man-made infrastructure. You know it is not realistic to oppose all efforts to construct infrastructure, but you would rather see the group focus on forest restoration as a protective measure.

You are even more concerned about the possibility of developing non-agricultural industries that would pollute water and land in the state and ultimately harm agriculture as a result.

While you understand that resettlement of mountain population will probably be necessary, you have trouble accepting the idea of simply abandoning pieces of the state. You are quite sure that most of the farmers you work with feel the same way.

Today you plan to constructively discuss all strategies with your colleagues, while clearly expressing your core interests and initial priorities.

Development planning in the state of Ceebano

Environment and forest department: Confidential instructions

You are the Principal Secretary of the Environment and forest department and are in charge of climate change policy matters. You hold degrees in ecology and environmental management. Although you are originally from the Western part of Ceebano, you did your academic work at the University of Thoy Bat and maintain a strong professional relationship with research institutions there.

While you have many concerns about the impacts of climate change in Ceebano, **the following is most important to you:**

- Your top interest is to ensure that efforts to adapt to climate change do not cause further damage to the environment.
- Your second most important interest is to protect agriculture and food security in a sustainable way.

Given these interests, your initial thought is that the top priorities are:

1. Forest restoration
2. Resettlement for the most vulnerable population
3. Investment in agricultural technologies and techniques, as long as research on their environmental impacts is also funded.

Below are some additional thoughts:

While you agree that it is important to protect land, population and farms where possible, you are worried that building extensive man-made infrastructure will harm the environment. You prefer focusing on forest restoration and resettlement for the following key reasons:

- Man-made infrastructure can damage eco-systems, particularly due to the negative environmental impacts due to trade-off with other ecosystem services, pollution due to construction material and process. It damages soil fertility and harms habitats, in turn endangering a variety of species (and also harming agriculture).
- By contrast, forests are a natural protection mechanism, and provide habitat to many species, and conservation of other habitats such as wetlands supporting fisheries activities, which means they are a more sustainable alternative to existing fisheries activities.
- Science clearly predicts that ultimately, some areas of the state will be severely affected by erratic rainfall, floods and landslides. Constructing infrastructure in these areas is not a viable long-term adaptation approach and could ultimately put population even more at risk.
- By planning for resettlement early, the government can mitigate environmental risks, like increased demand on wastewater treatment systems, associated with increased population density elsewhere.

In sum, forests would provide some short/medium-term protection for the population of state, while resettling the most at-risk populations is the best long-term protection plan.

With regard to protecting agriculture and food security in a sustainable way, you are pleased that the current research suggests that the new technologies and techniques being discussed today do not cause environmental damage. You will encourage funding this approach, as long as research on related environmental impacts is also funded.

You are concerned about the potential environmental damage from building new infrastructure and developing non-agricultural industries. You would want the group to find ways to address these environmental concerns before agreeing to infrastructure and non-agricultural industries as options.

Today you plan to constructively discuss all strategies with your colleagues, while clearly expressing your core interests and initial priorities.

Development planning in the state of Ceebano

Ceebano Farmer's Union: Confidential instructions

You are the Director of the Ceebano Farmer's Union. Your family has been farming for generations in one of the Ceebano provinces that the government predicts will be heavily affected by floods and landslides. Your farm primarily produces rice, which you both sell to exporters and use to feed your own family. You also grow a variety of fruits. You are considering moving to fish farming, however, especially because last year flood damaged almost half of your rice and fruit crops.

This is the first time you have been invited to present the union's views directly to government officials; more often, you present government views to your members. So, you feel the need to be careful not to upset the government when presenting your ideas.

While you have many concerns about the impacts of sea level rise on the state, **the following is most important to you:**

- Your primary interest is to protect agricultural jobs, farmers' land and homes, and your traditional way of life.

Given this interest, your initial thought is that the top priorities are:

1. Investment in man-made protective infrastructure
2. Investments in new agricultural technologies and techniques

Below are some additional thoughts:

Like the other farmers in the union, you are extremely worried about losing your source of livelihood and way of life. You know that the children of many farmers want to move to cities, but most of the farmers you know do not want to leave their land or move to industrial jobs.

You think investing in man-made protective infrastructure and new agricultural technologies and techniques would provide the following key benefits:

- Infrastructure is a proven way to protect farmers from flooding and landslides, as you have seen in your own experience. Since climate change will make these problems worse, it makes sense to invest in more infrastructure.
- Many union members would be willing to give up limited amounts of land for protective measures.
- Forest restoration may be another good protection strategy, but your fish farming members have major concerns about having to relocate to make room for forests. You would need to ensure that farmers would be compensated for any relocation costs.
- New technologies and techniques will help farmers like you deal with changing temperatures and rainfall as well as new pests and diseases. In the long-term, these strategies are necessary if agriculture is to adapt to climate change.
- Many farmers already want to integrate their crops, but don't have enough money to make the necessary land conversions or get the training they need to adopt SRI.

The proposed technologies all sound important to you, although you do want to make sure that new technologies do not increase farmers' input costs.

You have serious concerns about resettlement and development of non-agricultural sectors, since these seem like strategies for abandoning agriculture in the state. Your key concerns are:

- Most farmers you know do not want to move or give up their land.
- Even the government recognizes that the Climate Change Report scenarios are uncertain. Why force farmers to abandon their land for something that might not happen?
- Development of non-agricultural sectors might be a good idea in principle, but farmers are tired of being asked to give up their land for industrial development, especially for industries that pollute land and water.

Today you plan to constructively discuss all strategies with your colleagues, while clearly expressing your core interests and initial priorities.

Development planning in the state of Ceebano

Global Fund for Climate Change Adaptation Secretariat: Confidential instructions

You are the Deputy Executive Director of the Global Fund Secretariat.

The Secretariat manages the Global Fund's day-to-day operations, including mobilizing resources and managing donations.

You are not from Ceebano, but many years ago you were Ceebano state project director for a large multilateral organization.

You have a firm understanding of the Global Fund's internal politics and priorities, but you are also familiar with the needs and challenges in Ceebano. You have a degree in development economics.

Today's meeting is extremely important to your office because if it goes smoothly, it will lead to the first payment from the Fund. You and the Executive Director do not want to see any delays or mistakes that could put future donations at risk.

While you have many concerns about the impacts of climate change on the state, **the following is most important to you:**

- You want to ensure that Ceebano complies with the Global Fund consultation requirements by listening to all voices at today's meeting, and identifying priorities that have the greatest level of agreement.
- You want to ensure that protecting against risks to agricultural production and ensuring long-term food security are core priorities.

Given these interests, your initial thought is that Ceebano's top priorities should include:

1. Investment in new agricultural technologies and techniques.

Below are some additional thoughts:

It is natural that some parties will have more influence than others. If, however, you see that any participants and/or their opinions are completely ignored at today's meeting, you will have to report to the Executive Director that Ceebano did not comply with the Global Fund rules and is ineligible for the donation. You will push for the group to reach consensus on its priorities.

One of the key reasons for the creation of the Global Fund is donor countries' concern about threats to international food security from climate change. Therefore, it is vital to the future of the Fund that long-term food security be a focus of today's discussion (this is also beneficial for Ceebano, since you know food security is a big domestic concern there).

You believe that investing in new agricultural technologies and techniques is the best strategy for protecting food security for the following key reasons:

- The proposed technologies and techniques all sound like promising methods for adapting agriculture in the state to changing climate conditions. In the long-term, this type of adaptation will be vital for protecting food production.
- Keeping food production as high as possible in the face of climate change increases the likelihood that Ceebano can feed itself and still export to other states.

- You particularly think support developing rice varieties that can tolerate erratic rainfall and higher temperatures while still producing high yield, since rice is one of the most widely consumed foods in the world.
- Using the Global Fund donation for cutting edge research on how to make agriculture more sustainable would boost the reputation of Ceebano's scientists and intellectual community (as well as the Fund!). This, in turn, could lead to further investment in the country's development.

You will not take a strong stand on the other adaptation approaches that Ceebano's government has outlined, although personally you think infrastructure and forests could be very important for protecting farms and farmers, and therefore food security.

Today you plan to constructively discuss all strategies with your colleagues, while clearly expressing your core interests and initial priorities.

However, if you are not satisfied that the recommendations go far enough to protect food security, you will have no choice but to recommend to the Executive Director that the donation offer be rescinded.

Development planning in the state of Ceebano

Planning and Development Department: Confidential instructions

You are Principal Secretary of Planning and Development, the state authority with broad influence on all matters related to development. You have a close relationship with the Minister of Planning and Development, who has sent you to represent him at today's meeting. You are trained as an economist, and much of your work at the department relates to development in Ceebano.

While you have many concerns about the impacts of erratic rainfall on increased flood and landslide events in Ceebano, **the following is most important to you:**

- Your top interest is to ensure continued development, modernization, and poverty reduction in the state over the long term.
- Your second most important interest is to protect existing land, farms and population, as well as future development.
- One of your interests in protecting land is to ensure long-term food security for Ceebano.
- It is also important to you to meet the donor's requirements and provide the Chief Secretary with recommendations that enjoy wide support from this group.

Given these interests, your initial thought is that the top priorities are:

1. Development of non-agricultural sectors
2. Investment in protective infrastructure

Below are some additional thoughts:

In your view, investing in the development of non-agricultural sectors would have the following key benefits:

- It is a long-term strategy to compensate for the eventual loss of agricultural land and jobs due to climate change
- Young workers could be enticed to stay in the state. This would reverse current trends and help keep the state productive in the long run.
- Industrial and service sector jobs can be up to 2.5 times more lucrative than agricultural jobs.
- Comprehensive land use planning can help ensure that new industries and related infrastructure are sited in areas that are not expected to be affected by floods and landslides.
- This approach would complement existing national development plans, which already emphasize shifting Ceebano's economic base from agriculture to industry.

You know that some farmers would need to be relocated for the construction of industrial and commercial zones, but you regard this as a necessary short-term sacrifice.

With regard to protective infrastructure, you understand that some areas of the state will eventually be affected, but you think it would be politically difficult to justify abandoning parts of the state before the need to do so is very clear. Therefore, you think that:

- Limited funds should be invested in protecting highly vulnerable areas in the short-term, primarily by improving existing protective infrastructure.
- More funds should be invested in infrastructure to protect areas predicted to be viable in the long-term, to protect land for food production, as well as for future industrial and
- commercial zones.

You have more faith in man-made infrastructure, but you would not oppose forest restoration if you were convinced this would be an effective protection strategy.

Today you plan to constructively discuss all strategies with your colleagues, while clearly expressing your core interests and initial priorities. You are eager to see the group find areas of agreement to present to the Global Fund, and are genuinely interested to know what other people around the table think about appropriate priorities.

Development planning in the state of Ceebano

Ceebano Provinces Coalition: Confidential instructions

You are the Chief of Thoy Bat Province, and are currently the Chairman of the Ceebano Provinces Coalition (the chair rotates among the 10 provinces every two years).

During your four years as Chief of Thoy Bat Province, your main priority has been developing the province into an agriculture marketing center. You are trained in business administration, and have lived in Thoy Bat Province for your entire life.

Today you must balance your role as Chief of Thoy Bat Province with the overall perspective of the Provinces Coalition. Thoy Bat Province is the most rapidly developing province in the state, and is also one of the provinces least vulnerable to climate change. As Chief of Thoy Bat Province, you want to push forward with development. Other provinces, however, have other key concerns.

While the provinces have many concerns about the impacts of climate change on Ceebano, they agree that **the following is most important:**

- Your top interest is to prepare for economic and job losses due to sea level rise.
- Your second most important interest is to provide immediate protection to at-risk areas and population.

Given these interests, your initial thought is that the top priorities are:

1. Development of non-agricultural sectors
2. Investing in protective infrastructure and mangrove restoration
3. Improving Ceebano's warning and forecasting systems

Below are some additional thoughts:

Erratic rainfall and extreme events are expected to damage agriculture in all of the provinces.

Loss of agricultural land and jobs would mean increased poverty rates and decreased revenues.

The provinces support developing non-agricultural sectors as a strategy for mitigating these impacts, for the following key reasons:

- Industrial and service sector jobs can be up to 2.5 times more lucrative than agricultural jobs.
- Diversifying livelihoods would give state population the option of continuing with traditional farming practices where possible or moving to different livelihoods without necessarily needing to leave the state altogether.
- Young people could be enticed to stay in the state, which would keep families closer together and keep the region productive in the long-term.
- Provinces do not have the resources to begin this type of development process.
- Improved transportation infrastructure would be an important additional benefit in terms of developing and modernizing the state.

The provinces also feel strongly that their population must be kept as safe as possible as quickly as possible. Protective infrastructure, including mangroves, and improved warning and forecasting systems would provide the following key benefits:

- Both man-made and natural protective infrastructure is proven to provide protection. Some infrastructure could be constructed/repared quickly for short-term protection.
- Focusing on protective infrastructure will buy time for the government to consider alternative adaptation approaches.
- Improving Ceebano's warning and forecasting systems would ensure that state population is quickly and easily informed of weather events like storm surges, which will get worse with climate change.

Today you plan to constructively discuss all strategies with your colleagues, while clearly expressing the Provinces' core interests and initial priorities.

Development planning in the state of Ceebano

University of Thoy Bat Hydrology and Meteorology Research Institute: Confidential instructions

You are the Director of the Hydrology and Meteorology Research Institute at the University of Thoy Bat.

You have degrees in hydrology and mountain engineering.

Your institute has often collaborated with the Environment and forest department, including by providing technical advice on the recent State Climate Change Report. Your institute has been observing hydrological processes and weather data for years now, and you have personally observed a decline 1 meter water table and drying up of springs in the past decade.

While you have many concerns about the impacts of climate change on the state and on Ceebano, **the following is most important to you:**

- Your top interest is to ensure that the parties are realistic and pragmatic about dealing with the impacts of sea level rise, especially by considering the short, medium and longterm effects of both sea level rise and strategies to adapt to it.
- Your second most important interest is to find ways to protect state population from harm in the short, medium and long-term.

Given these interests, your initial thought is that the top priorities are:

- Improving the government forecasting and warning systems as a short-term protection mechanism
- Investing in protective infrastructure and forest restoration as medium-term protection strategies
- Resettlement for the most at-risk mountain populations as a long-term protection strategy

Below are some additional thoughts:

You believe it is vital that the group thinks about climate change impacts – and strategies for dealing with it - in terms of short-term, medium-term, and long-term needs and impacts. You think the three above priorities are an example of this, for the following key reasons:

- *Short-term protection: forecasting and warning systems*
 - Forecasting and warning systems provide short-term protection by quickly and effectively warning population about climate events like floods and landslides, which are likely to worsen with climate change induced erratic rainfall.
 - Ceebano's hydro-meteorological centers have improved greatly in recent years, but you believe that further improvements would save many lives in the short-term, even while other adaptation strategies are pursued.
 - You think that effective improvements could be quickly made for \$50 million.
- *Medium-term protection: man-made infrastructure and forests*
 - These types of infrastructure are proven to provide protection, and could be constructed/ grown in the short and medium term.
 - However, it is not clear that infrastructure and forests can survive increasingly intense climate change impacts, including landslides and floods, so these may not be viable long-term strategies.
 - You believe strongly that the scope of any investment in man-made infrastructure must be limited. It is not pragmatic to erect infrastructure that will be destroyed within a few decades.

- *Long-term protection: resettlement*

- Resettlement is the most realistic long-term strategy for protecting at-risk mountain populations. It is clear that some areas of the state will be so overwhelmed by floods and landslides that they are not worth protecting.
- You realize this is hard for many population and officials to accept, but there is no avoiding this reality. The longer the government waits to invest in resettlement, the less orderly and more dangerous it will become.

You will not oppose the other proposed strategies as long as you are convinced that investments in them are pragmatic.

Today you plan to constructively discuss all strategies with your colleagues, while clearly expressing your core interests and initial priorities.

Handout 5.5: Participants' handout for Mindfulness exercise

Feeling and connecting with the elements

Earth

Collect a stone or a shell. In a coastal environment, a shell may be easily found on the beach. Observe its fixed shape, feel the weight, observe its unyielding surface, its self-contained quality. What are its colours, is it warm or cool? Sense its texture. Having entered deeply into the experience of the shell, turn aside or close your eyes and sustain the empty space of open awareness once again. Most likely the memory of the shell will appear. You will see its shape and varied colours and feel its surface again with your mind's eye. Intensify the memory image. Give yourself the time needed to fully re-envision the shell.

Keeping the eyes closed or looking the other way, continue by releasing the memory image completely in order to feel the after-image of the shell or the emptiness. The difficult practice of silence, without expectation, but with the presence of the mind, begins. Sustain the empty silent space. Repeat the exercise, turning rhythmically and slowly between concentration on the shell and open space.

The shell leaves a trace behind, which we are able to sense as the lingering presence of the shell in the empty space before us or perhaps within us. Allow the inner presence of the shell to remain where it is, but then, with your eyes open, pour yourself a shallow bowl of water.

Water

Water now becomes your object of contemplation. Observe it intently. Move the bowl slightly and notice the delicate movement of the water's surface. Notice how it conforms in shape to the vessel containing it. Observe that its surface is flat and parallel to the surface of the Earth—tip the glass, and the water's surface stays parallel to the ground. Swirl your finger in the water: it is clear, cool and wet. Observe how different it is from the shell: clear, compliant, mobile, wet and responsive. Detail the many properties of water that you can perceive directly. Avoid textbook facts or associations, but rely on your senses.

Again, having concentrated on the water, turn aside or close your eyes and sustain the empty space of silent open awareness. Allow the gesture or quality of water to arise fully in consciousness. Do not attempt to 'see' something. Instead simply allow your open awareness full play. What does water 'feel' like to you? Repeat the exercise until you are confident that you have found a deep feeling for the inner gesture of water.

Now juxtapose the shell and water in your interior space. Appreciate the differences between the inner gestures of the shell and water as they appear side by side. Since comparison can be a powerful experience and an important tool, give it time to develop. Be patient or repeat the exercise as often as necessary.

Air

To earth and water we can now add air. Since it is all around us, we do not need to take it from the ground or pour it into a bowl. Air is present around us and inside us. But it is mostly unobserved until a breeze stirs and we feel the wind on our cheek or see the fluttering of leaves, bending of grass, etc. Rhythmically observe the air and feel the omnipresent movement of air in the empty space. Even when the wind dies away, the air remains. Now place this experience beside that of water and earth. Observe the difference. Do not think; simply observe. Shell is not water, water is not air. Each has its own nature. Sense them each and their differences.

Studied in this way, the elements and colours form an alphabet of inner experience. We have been misled into seeing only the external aspects of things. Contemplation on sense objects shifts attention to another aspect that is typically neglected: we break the chains of habitual consciousness and train our observation to sense the subtle gestures of everything around us. We are learning an interior language that will prove to be essential for our later stages of contemplative practice and experience. Every sense experience becomes an occasion for deep engagement and the rise of its inner correlate.

Light (fire)

Earth, water and air do not exhaust nature's bounty. In turning away from the material world towards light, we find ourselves challenged to attend contemplatively to the insubstantial. We are constantly in light's presence but uncertain of its nature. It is at once illusive and essential not only to sight but to life as well. Plants, animals and humans would wither away without its nourishing energy. The contemplation on light is different from the one that encompassed the previous elements. Begin with light's absence. The experience of outer darkness prepares us for the dawn. The features of the landscape are connected to you through light. We are placed into relationships through light. Feel these qualities of light as you observe the light phenomena around you. Sense not just the luminous objects themselves but the light that is between you and everything that you see.

Appreciate the particulars of the relationship that light makes possible. Shift your attention increasingly away from the objects seen and toward that which works unseen between everything, gently and invisibly weaving disparate parts into a whole. Moreover, the brightness of light stimulates and uplifts us, while darkness draws us into silence that extends us into the unseen all around. Everyone can sense the difference between the inner presence of light and the presence of darkness. Discover this difference for yourself as you live your way into light inwardly. When you are filled with light, be silent. Sit with the after-image of the setting sun.

We have learnt how to become the cloud, rain, river and sea, going through all the transformations of water. But what is of import is not the water but the change. Keep your attention not on the medium but on the transformation it undergoes. We enter into the manifold forces and loving wisdom that unfold around us. We are in them, they are in us. We learn to enter into the life and death of nature, to know its coming into being and its passing away. Through this phase, we learn to be born with the sprouting corn and to die with the withering husks. The cycle of life is no longer a merely physical sequence but an unfolding interior drama of flourishing and failing, patterned on the endless reality of life and death in all realms: plant, animal and human.

The ecological consciousness

Life carries meaning and purpose. Purposeless growth is profligate and cancerous. The tree must give fruit, the seeds must be formed. If we have worked our way stepwise to the flame of dying and becoming, if we have felt reverence before nature and committed ourselves to service, then the death of the husk, which is to say our lower self, is nothing fearsome. We are certain to uncover the real self thereby.

At the close of the contemplation, guide yourself back by recalling the full importance that awaits you here upon the good Earth. Contemplating in this way can help us form a true spiritual relationship with the Earth in a way many traditional societies and philosophers did. Arne Naess placed the experience of profound ecological interconnectedness at the heart of his philosophy of 'deep ecology' and recognized the spiritual foundations of ecological ethics. Satish Kumar called it 'reverence ecology.' Naess, Kumar and so many others rightly acknowledged that an ethics governing the relationship of humanity with the Earth cannot be the outcome of a rational cost-benefit analysis merely but must be predicated on a lived spiritual relationship to her. The above-mentioned approach and methods help us connect deeply with nature and cultivate ecological consciousness.

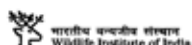
Closing ceremony- Gathering the minds

About the CMPA project

The Project –‘Conservation and Sustainable Management of Existing and Potential Coastal and Marine Protected Areas (CMPA)’, under the Indo-German Biodiversity Programme, is a technical cooperation project jointly implemented by the Governments of India and Germany (2012-17). The Project is commissioned by the German Federal Ministry for Environment, Nature Conservation, Building and Nuclear Safety (BMUB) with funds provided under the International Climate Initiative (IKI), in partnership with the Ministry of Environment, Forests and Climate Change (MoEFCC), Government of India.

The project aims at contributing to conservation of biodiversity through participatory approaches in the management of existing and potential coastal and marine protected areas in India. Project activities are implemented together with the Forest Departments of the project partner states - Gujarat, Goa, Maharashtra and Tamil Nadu, as well as with premier national training institutions.

Our partners



The Wildlife Institute of India (WII), Dehradun

WII has a mandate to train Indian Forest Service officers, State Forest Service officers and other key stakeholders such as the Coast Guard and Customs and has recently initiated a one-week refresher course exclusively addressing issues related to integrated management of coastal and marine biodiversity that is targeted at senior forest officials.



Xavier Institute of Communications (XIC), Mumbai

XIC is a professional media centre offering a variety of services in training and production. XIC is an autonomous educational unit of the Bombay St. Xavier's College Society Trust, which comprises St. Xavier's College, the Institute of Management, the Institute of Counseling and the Heras Institute of Indian History and Culture. XIC pilot-tested the curriculum between December 2014 and May 2015 and subsequently decided to integrate the curriculum into its Communication for Development (C4D) diploma course.

www.xaviercomm.org



BMM Department, St. Xavier's College, Mumbai

St. Xavier's College is one of the most prestigious liberal arts colleges in India. The BMM department was established in 2002. The Bachelor in Media Studies, a programme begun by the University of Mumbai in 1999, is being run by St. Xavier's College under the system of academic autonomy. While this is an applied course that seeks to provide industry with qualified media professionals, St. Xavier's believes that an academic grounding is very essential for forming young people for this crucial job of communications.

www.xaviers.edu



St. Paul's Institute of Communication Education (SPICE), Mumbai

St. Paul's Institute of Communication Education (SPICE) is a fast-growing media school in India offering a comprehensive post-graduate diploma in journalism that trains students for a career in print journalism, television journalism and digital journalism. With top-notch media faculty members and excellent infrastructure, SPICE is the go-to destination for Gen Next journalists.

www.stpaulsice.com



Department of Communication, Journalism and Public Relations, Gujarat University

The Department of Communication, Journalism and Public Relations was established in 1987–1988. The department plays a vital role in providing media professionals and communication experts to various fields. Two courses are offered by the department, the Master's in Mass Communication and Journalism (MMCJ) and the Master's in Development Communication (MDC).

<http://www.gujaratuniversity.org.in>



Earthwatch Institute India

Earthwatch Institute India is a premier research and engagement institution, engaging citizens in scientific field research and education to promote the understanding and action necessary for a sustainable environment. Coastal and Marine Ecosystem is one of the key focus areas in which Earthwatch conducts scientific research to promote sustainable solutions to further strengthen efforts in regard to nature conservation and environment protection in response to environmental challenges.

Earthwatch programmes have a niche in citizen science and experiential learning and they bring this unique approach to coastal expeditions to increase scientific knowledge among key stakeholders, to develop environmental leaders, enable organisations to become more sustainable, contribute to management plans and pro-environment actions, and to enhance natural and socio-cultural capital.
<http://in.earthwatch.org/>

