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



# **River Basin Management Cycle Training Series**

## **Didactic Exercises Compilation**

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## 1 CONTEXT AND PURPOSE OF THIS DOCUMENT

In 2014, the Government of India (GoI) launched the Namami Gange Programme which rests on eight main pillars: Creating sewerage treatment capacity, creating river-front development, biodiversity conservation, afforestation, public awareness, industrial effluent monitoring and the Ganga Gram programme. These pillars demonstrated the need for a holistic and integrated strategic approach which addresses the entire river basin to achieve a cleaner Ganga.

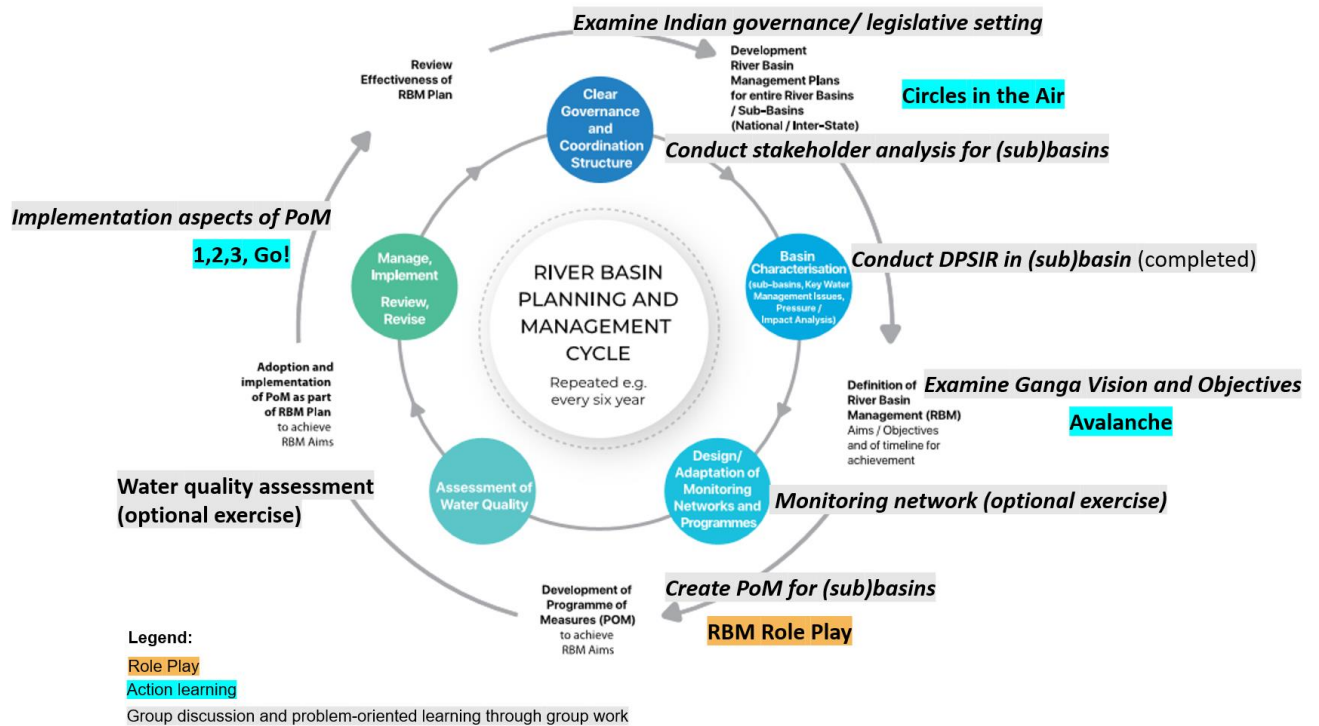
As part of its support to the GoI, the Deutsche Gesellschaft für Internationale Zusammenarbeit/ German Technical Cooperation (GIZ) launched a bilateral cooperation project Support to Ganga Rejuvenation (SGR) (also referred to as “the Project”). The Project, in conjunction with the India-European Union (EU) Water Partnership (IEWP) cooperates with the Namami Ganga Programme to enable stakeholders at national and state levels to apply integrated approaches for River Basin Management (RBM), whilst benefiting from EU approaches and experiences; namely the Water Framework Directive (WFD) and thus, allowing the transfer of technical, scientific and administrative experience from German and European river-cleaning programmes (e.g. Rhine, Danube, Elbe) to the Ganga.

To achieve this objective, the GIZ contracted the consortium which consists of AHT GROUP AG (AHT) as the lead firm and The Energy and Resources Institute (TERI) (collectively also referred to as “the Consultant”) to develop and implement a participatory training programme to introduce an RBM Cycle adapted to the Indian context.

The GIZ has placed the Project Target Group (TG) into three main categories: **(I)** decision makers, **(II)** senior officers (responsible for steering the implementation at government offices and executing agencies), and **(III)** chief technical staff (responsible for technical implementation). These actors share the common objective of cleaning the Ganga. A fourth category **(IV)** consists of training institutions whose role is to support and assist building the capacities of the former three actor categories and as such, enabling them to better fulfil their mandates whilst extending the Project benefits beyond the duration of the Services. To this end, the Consultant’s Scope of Work (SoW) also includes a Training of Trainers (ToT) for Target Group IV.

The document in hand has been compiled by the Consultant particularly for Target Group IV as part of the ToT. It aims to provide the trainers in the partner Indian institutes who will be delivering the training on the RBM Cycle in the future with a reference where they can find relevant exercises to integrate in their training as/where applicable. These exercises also include ice breakers and energisers to engage trainees through problem-based and action learning.

One example of how these exercises can be integrated into the context of the RBM Cycle is provided in the figure below.



This document offers an outline for implementing the exercises. The trainers are free to adjust and further tailor the structure of each exercise to better suit their own group of trainees. Likewise, the time for implementing the exercises will vary depending on the size and composition of the group.

## 2 DIDACTIC EXERCISES

### 2.1 ARMS CROSSED

<b>Objective of the exercise</b>	To alert participants of the consequences of trying to change habitual behaviour.
<b>Description of the activity</b>	<ul style="list-style-type: none"> <li>• Participants are asked to fold their arms and to note which wrist is on top (left or right). After dropping the arms, the participants are asked to fold their arms a second time.</li> <li>• Short oral survey among participants. “Who had the same wrist on top?” (Who had the left wrist up? Who had the right wrist up?)</li> <li>• Instruct the participants to fold their arms the other way.</li> <li>• Debriefing of the exercise.</li> </ul>
<b>Expected outcome</b>	Reflect on social behaviours that seem influential to achieve successful river basin management.
<b>Materials required for the activity</b>	No specific materials are required for this exercise. It is suitable for big groups of people sitting in their seats. It is only necessary that every participant can see and hear the instructor.
<b>Time required</b>	Around 15 minutes. The length of discussion is up to the facilitator.

#### Reference and additional information (i.e. photos, training material, etc.):

Sweeney, Meadows, Mehers (2011) The Systems Thinking Playbook for Climate Change: A toolkit for interactive learning, GIZ. (“Arms Crossed”, p. 14)

Proverb: “Bad habits are like a comfortable bed, easy to get into, but hard to get out of.”

## 2.2 CIRCLES IN THE AIR

<b>Objective of the exercise</b>	To discuss how one’s perspective can vary based on the view they have of the same system. Participants discover that by changing their vantage point, either mentally or physically, they can potentially discover new insights and new leverage points.
<b>Description of the activity</b>	<ul style="list-style-type: none"> <li>• Facilitator asks participants to hold their thumb (or pencil) up in the air and to keep their thumb always pointing up.</li> <li>• Draw a circle in the air in a clockwise direction. Continue drawing the circle and looking up at the top of their thumb.</li> <li>• Instruct the participants to draw the circle clockwise, bringing the thumb down a few inches at a time until it is in front of the face. Continue to circle the thumb, and slowly bring it down until looking down on top of it. Continue to draw the circle while looking down on it.</li> <li>• Facilitator asks the participants in which direction their thumb is moving? It will be a counter-clockwise direction at this point. If someone replies “clockwise”, you might want to encourage them to try again.</li> <li>• Debrief (Potential question: What does this has to do with River Basin Management?)</li> </ul>
<b>Expected outcome</b>	Reflection on sub-basin perspectives (down-stream, up-stream) and stakeholder involvement.
<b>Materials required for the activity</b>	None.
<b>Time required</b>	The exercise takes several minutes (about 10 minutes). The length of discussion is up to the facilitator.

### Reference and additional information (i.e. photos, training material, etc.):

Sweeney, Meadows, Mehers (2011) The Systems Thinking Playbook for Climate Change: A toolkit for interactive learning, GIZ. (“Circles in the air”, p. 40)

## 2.3 AVALANCHE

<b>Objective of the exercise</b>	This demonstration exercise provides a possibility to discuss rules of a system and cooperation mechanisms.
<b>Description of the activity</b>	<p><b>Goal:</b> Ask the participants to imagine that the level of the hula hoop represents the level of pollution in their River Basin (e.g. Ganga River). The common goal will be to lower it. Starting here a team of us will work to lower it, taking it down to the level of the ground.</p> <p><b>Preparation:</b> Ask for 7 volunteers – if none step forward, simply invite people to join you. Enough space is required that the exercise can be followed in plain view by all the other members of the audience.</p> <p><b>Instructions:</b></p> <ul style="list-style-type: none"> <li>• Hang your right arm down, so that the elbow is near your waist. Extend your right hand out in front of you, palm down, make a fist and extend your index finger.</li> <li>• Please stand around me in a small circle. In a moment I will lower the hoop down until all of you are supporting it, each of you with the top of your index finger touching the hoop.</li> </ul> <p>Rules:</p> <ul style="list-style-type: none"> <li>• The first rule is that each person can only touch the hoop with the top of their finger.</li> <li>• The second rule is that no one must ever, ever lose contact with the hoop. This is a team effort. If contact is lost, that person is not doing your fair share of the work. If this happens, the exercise must start again the beginning.</li> </ul> <p>Almost every time, the group’s effort to lower the hoop will have failed, despite having a common goal. This “failed” effort is the starting point for the debrief.</p>
<b>Expected outcome</b>	Reflection on setting, implementing, and achieving joint vision / Programme of Measures (PoM).
<b>Materials required for the activity</b>	Hula hoop of 70cm or more in diameter.
<b>Time required</b>	The exercise takes about 10 minutes to conduct and 10 minutes to debrief. Extra pressure can be put on the group by limiting the time available to complete the exercise.



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**Reference and additional information (i.e. photos, training material, etc.):**

Sweeney, Meadows, Mehers (2011) The Systems Thinking Playbook for Climate Change: A toolkit for interactive learning, GIZ. (“Avalanche”, p. 19).

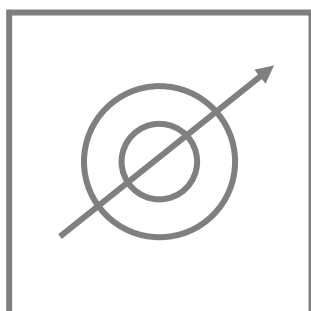


## 2.4 CONCEPTUAL DRAWINGS

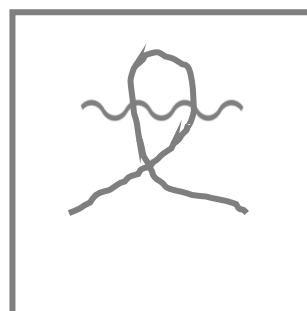
<b>Objective of the exercise</b>	This demonstration exercise aims to look at how understanding of specific concepts can vary among stakeholders.
<b>Description of the activity</b>	<p><b>Instructions:</b></p> <ul style="list-style-type: none"> <li>• Place the flipchart in a way so that the participants cannot see the paper.</li> <li>• Draw two images (see below) on the flipchart paper and ask for a volunteer to assist in this exercise.</li> <li>• Ask the remaining participants to take out a paper and pencil.</li> <li>• The participants are asked to draw the two images based on the explanation of the volunteer who has 60 seconds for each image.</li> <li>• Debrief the exercise. Although more complex, the first drawing can be redrawn more easily by the participants as it is composed by known graphical components (convention for circle, square, arrow, etc.)</li> </ul>
<b>Expected outcome</b>	Discussion on translation and communication of technical information across various disciplines/ stakeholders. This could be in relation to concepts used for basin characterisation and for joint visions and PoM.
<b>Materials required for the activity</b>	Flip chart, paper, markers
<b>Time required</b>	The exercise takes about 10 minutes.

Reference and additional information (i.e. photos, training material, etc.):

1)



2)



## 2.5 1,2,3 GO!

<b>Objective of the exercise</b>	To understand the importance of nonverbal communication in determining what happens when you are trying to catalyse change.
<b>Description of the activity</b>	<p><b>Instructions:</b></p> <ul style="list-style-type: none"> <li>• Ensure that all participants can see the facilitator</li> <li>• Say, “Now I am going to count slowly to three and then say ‘Go!’ When I say ‘Go!’, everyone should clap their hands together.” You might want to repeat these instructions twice to make sure that everyone hears and is paying attention to you.</li> <li>• Slowly count “1-2-3”, then the facilitator should clap their hands together loudly, pause for one second, then say “Go!”</li> <li>• When the facilitator claps almost everyone else will clap and not wait “Go!” as they were instructed. Pause a moment and let everyone reflect on what happened.</li> <li>• Debriefing discussion (e.g. People will not only attend to what you say, they will look at what you do.)</li> </ul>
<b>Expected outcome</b>	Discussion on river basin management activities (e.g. review of measures of PoM and monitoring activities) and on the importance of leadership, example and agreement to act.
<b>Materials required for the activity</b>	None.
<b>Time required</b>	The exercise takes about 5-10 minutes.

### Reference and additional information (i.e. photos, training material, etc.):

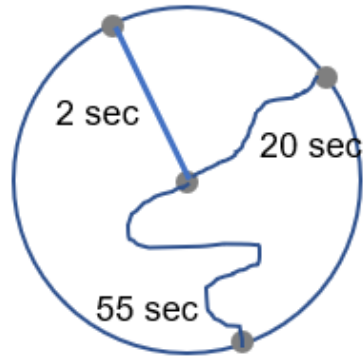
Sweeney, Meadows, Mehers (2011) The Systems Thinking Playbook for Climate Change: A toolkit for interactive learning, GIZ. (“1,2,3 Go!”, p. 143)

## 2.6 HIT THE TARGET

<b>Objective of the exercise</b>	This exercise is designed to illustrate the overshoot that comes when there is a series of delays between action and ultimate consequence.
<b>Description of the activity</b>	<ul style="list-style-type: none"> <li>• Invite/identify four volunteers (roles: time taker, administrator, politician, scientist)</li> <li>• Draw a circle on the flip chart paper with a point in the centre of the circle.</li> <li>• Introduce the task as having to reach a certain goal (context specific) which requires drawing a line from the starting point at the centre of the circle to a target point marked on the circumference. There will be three rounds.</li> <li>• 1st round: The first volunteer plays the role of the administration (e.g. water authority) and draws the line. Write the time required next to the line.</li> <li>• 2nd round: The second volunteer plays the role of politician/decision maker who guides the decision of the administrator. The administrator who is blindfolded in this round will draw but will be guided by the politician. The facilitator marks the second target on the circumference once the administrator's eyes are covered and initiates the second round.</li> <li>• 3rd round: The third volunteer plays the role of scientist who informs the politician. Now both, the administrator as well as the politician are blindfolded, and the target marked on the circumference. The administrator continues to draw.</li> <li>• Debrief: e.g. complex tasks require the integration of more institutions, which takes more time (→ planning for delays)</li> </ul>
<b>Expected outcome</b>	<p>Discussion on planning processes / integration of various stakeholders (e.g. Implementation of PoM).</p> <p>Careful and experienced facilitation and moderation is needed for this exercise to avoid suggesting that if the administrator was left alone, they could hit targets faster and more exactly. It could be suggested that in real life the administrator does not have the necessary overview and is in a sense blindfolded to the larger picture (hence the blindfold). Similarly, for round three, it could be suggested that decision makers are blind to the scientific realities and require guidance from professionals.</p>
<b>Materials required for the activity</b>	Flipchart, marker, eye-blinds.
<b>Time required</b>	The exercise takes about 10-15 minutes.

**Reference and additional information (i.e. photos, training material, etc.):**

Sweeney, Meadows, Mehers (2011) The Systems Thinking Playbook for Climate Change: A toolkit for interactive learning, GIZ. ("Hit the target", p. 76)



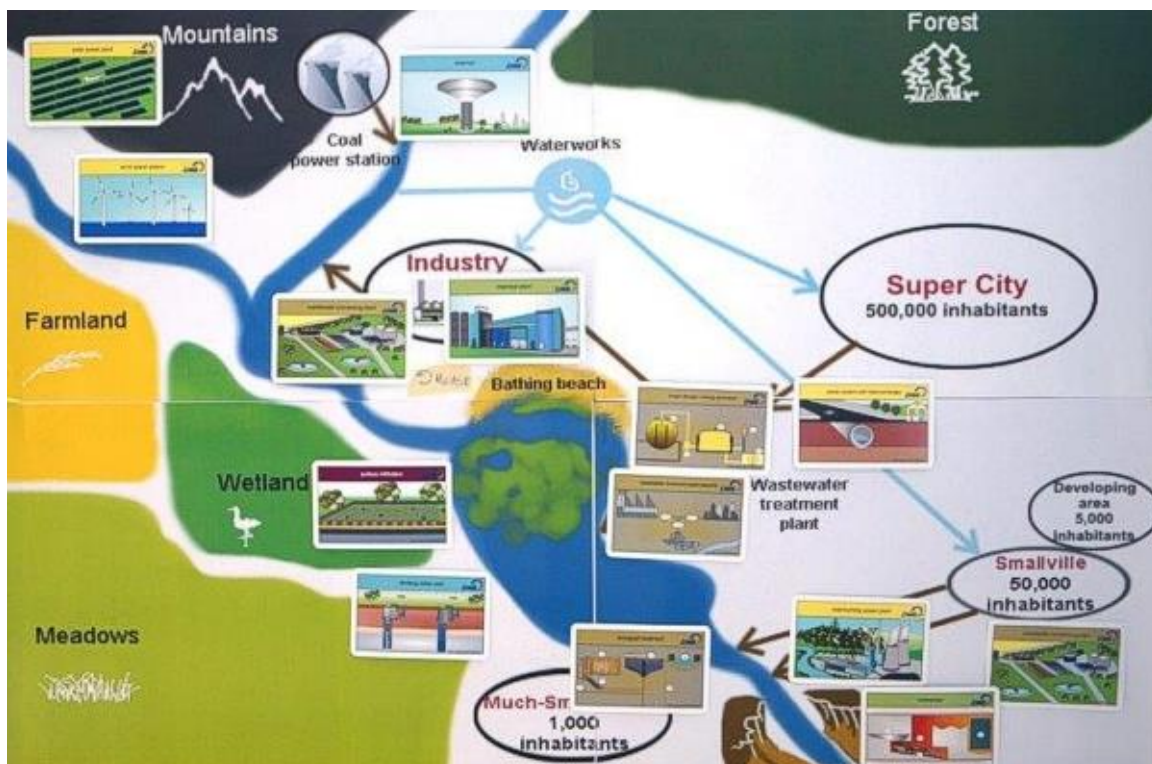
## 2.7 RBM ROLE GAME

<b>Objective of the exercise</b>	To encourage systems thinking in a river basin scenario. This interactive group exercise aims to improve understanding of conflicts, competing interests, limitations of time and resources.
<b>Description of the activity</b>	<ul style="list-style-type: none"> <li>• <b>Introduction and distribution of roles</b> (e.g. consultant, water utility, government)</li> <li>• <b>Introduction and distribution of tasks</b> (e.g. Plan the future of the Green Province):             <ol style="list-style-type: none"> <li>1. Improve the condition of the ecological system of lake Super-City in order to reach bathing water quality to enable. for instance, the operation of commercial bathing sites and to promote tourism.</li> <li>2. Improve the drinking water supply and scarcity in summer and the wastewater treatment infrastructure.</li> <li>3. Improve existing energy and make it sustainable for the green future.</li> <li>4. Attract new industries, new jobs, solve the waste problems.</li> </ol> </li> <li>• <b>Debriefing/ feedback on exercise</b></li> </ul>
<b>Expected outcome</b>	<p>Enhanced understanding of holistic RBM approach.</p> <p>The facilitator should be very familiar with the description of the role-playing game and the requirements of playing it out over several hours.</p>
<b>Materials required for the activity</b>	<p>Large maps, whiteboard, magnetic cards (DWA), pinboard, pins.</p> <p>Printouts of information on location, tasks and roles.</p>

### Reference and additional information (i.e. photos, training material, etc.):

Link to DWA shop: <https://webshop.dwa.de/en/environment-training-system-a6.html>

Link to DWA training description: [https://en.dwa.de/en/environment\\_training.html](https://en.dwa.de/en/environment_training.html)



Example DWA magnetic cards attached to scenario map

## 2.8 INTRODUCE YOUR PARTNER (ICE BREAKER)

<b>Objective of the exercise</b>	Provides time for participants to get to know each other in groups with diverse participants.
<b>Description of the activity</b>	<ul style="list-style-type: none"> <li>• Divide the group into two-person teams by asking them to find a partner that they know the least about.</li> <li>• The pairs then interview each other for about 10 minutes. Example questions include: What is your name? What is your background? Why are you involved in this training? What do you hope to gain from it?</li> <li>• After the interviews, reassemble the group into a big circle and have each participant introduce their partner to the group (max 5 minutes each). Ask both participants to stand up for the introduction.</li> </ul>
<b>Expected Outcome</b>	Increased exchange among participants.
<b>Materials required for the activity</b>	None.
<b>Time required</b>	Dependent on number of participants, 10 minutes to explain and for the interviews and max 10 minutes per pair presenting (usually much shorter).

### Reference and additional information (i.e. photos, training material, etc.):

To avoid this process taking up too much time the introductions should be short and brief. Let the participants know that the introduction of each partner should take a maximum of 5 minutes each. You can encourage the participants to applaud the introductions, which will help build their enthusiasm.

## 2.9 CIRCLE OF FRIENDS (ICE BREAKER)

<b>Objective of the exercise</b>	A greeting and departure exercise for large numbers of participants who are attending a module where the chance of everyone meeting everyone at the same time again is unlikely.
<b>Description of the activity</b>	<ul style="list-style-type: none"> <li>• Form two large circles, one outer circle and one inner circle - the participants in the inner circle should be facing participants in the outer circle.</li> <li>• Ask the participants in each circle to take one step in opposite directions – i.e. The outer circle participants step to the right while the inner circle step to the left.</li> <li>• The participants greet each new person as the circle continues to move around.</li> <li>• The participants can greet each other by simply saying one word that they think expresses something they feel, right now, or something that is important to remember.</li> </ul>
<b>Expected Outcome</b>	Participants will all have met at least once.
<b>Materials required for the activity</b>	None.
<b>Time required</b>	Up to 10 minutes.

### Reference and additional information (i.e. photos, training material, etc.):

To speed up the process divide the participants by assigning them number 1 or 2. Those given the number 1 form the outer circle. Those given the number 2 form the inner circle



## 2.10 LINE-UPS (ICE BREAKER AND ENERGISER)

<b>Objective of the exercise</b>	An exercise for larger groups to get participants interacting. Can be used to lighten up a heavier session.
<b>Description of the activity</b>	<ul style="list-style-type: none"> <li>• Organise the participants into two or more groups of 8 to 20 people.</li> <li>• The facilitator tells the participants that in the Line Up they will have a chance to learn things about one another they may never think to ask.</li> <li>• The facilitator tells the groups that this is a competition, and that when they are asked to line-up in a particular way the first group to do so wins, so they need to get into the lines as quickly as possible. For example: Tell the groups to line up by height (shortest to tallest) and to all clap when they have finished.</li> <li>• Other examples could include: Shoe size; Alphabetically by name; Number of siblings; Month of birth; etc.</li> </ul>
<b>Expected Outcome</b>	Participants will all have met at least once.
<b>Materials required for the activity</b>	None.
<b>Time required</b>	5 minutes to set up, 3 minutes per criteria.

### Reference and additional information (i.e. photos, training material, etc.):

Conduct a practice round first. It is best if the facilitator uses criteria that links to the training material. This exercise can be used periodically throughout a long training and ask groups to come up with their own way of letting you know they have finished (e.g. yell, hum a song, put up their hands, etc.) This can add a lot fun to the exercise.

## 2.11 PICTURE PUZZLES

<b>Objective of the exercise</b>	Can be used to form groups for creative thinking exercises and brainstorming, or alternatively simply as an energiser.
<b>Description of the activity</b>	<ul style="list-style-type: none"> <li>• Each participant picks a puzzle piece out of the container.</li> <li>• After each person has chosen one, the participants begin to search for others with puzzle pieces that can be joined to make the picture or comic strip.</li> <li>• After the participants have found everyone in their group, they should put the pictures back together.</li> <li>• Once they are done, the newly formed group can sit down to work together on a creative thinking exercise or design project.</li> </ul>
<b>Expected Outcome</b>	Participants will have interacted to form groups.
<b>Materials required for the activity</b>	<p>Work out how many groups are to be formed.</p> <p>Create 'Picture Puzzles - as many puzzles as work groups required. For example, if you need 5 groups you will need to make 5 different picture puzzles. The total number of all of the puzzle pieces should match the total number of participants (e.g. for 5 groups from 20 participants, 5 pictures would be needed, each cut into 4 pieces).</p> <p>Pictures should be relevant to the content of the training. Place all the puzzle pieces in a bag, basket or box and invite the participants to pick a piece.</p>
<b>Time required</b>	10 minutes.

### Reference and additional information (i.e. photos, training material, etc.):

Once the groups have formed, they could brainstorm the topic of their picture.

## 2.12 REARRANGE THE TRAINING ROOM

<b>Objective of the exercise</b>	To create more cooperation and coordination amongst the participants and introduce the idea of participating.
<b>Description of the activity</b>	<ul style="list-style-type: none"> <li>• During a break, the facilitator sets the training space up with the seating in rows facing forward and the facilitator's desk, flip chart, etc at the back of the room.</li> <li>• When the participants return the facilitator asks them to take a seat, and then walks behind them and begins the presentation of the next section of the workshop. The participants will need to turn around to see what is going on - they will likely be confused and uncomfortable.</li> <li>• The facilitator should explain that in organisations or even at the community level change is often implemented in the same way. Community members are not an active part of the change process but pushed into change by someone they cannot see and who decides what they think is best for them. Explain that this way of instigating change is about as effective as conducting a workshop in this 'backwards' way. Explain that many formal organisations, including government departments, operate in this same way which makes communication and coordination difficult, and that productive changes occur much better by using good, communicating, cooperative teams.</li> <li>• Ask the participants rearrange the space so that more effective learning, communication, and teamwork can take place.</li> </ul>
<b>Expected Outcome</b>	An increased awareness of the importance of "having a say".
<b>Materials required for the activity</b>	A rearranged training room with chairs in rows facing forward and the training equipment (flip chart, screen, etc.) behind the participants.
<b>Time required</b>	20 minutes.

## 2.13 WHISPERS

<b>Objective of the exercise</b>	Illustrates the importance of direct communications rather than second-hand information.
<b>Description of the activity</b>	<ul style="list-style-type: none"> <li>• The facilitator chooses a short sentence. It is best to choose a sentence related to the workshop material. For example: “River Basin Management works best if we talk and listen to each other”</li> <li>• The participants form a large circle and the facilitator starts by whispering the statement to the first participant.</li> <li>• This participant whispers the statement to the person next to them and so on throughout the whole group.</li> <li>• At the end, the last person announces the message they heard, and the facilitator writes this on a board. Then the facilitator writes down the original message - invariably the message has changed dramatically as it passes from ear to ear.</li> <li>• At this stage the facilitator can lead a discussion on what happened and what the lessons learned might be (e.g. when we want to gather information we must talk directly to the source and not simply rely on information that we have heard by way of rumour or on what we think the others may be saying).</li> </ul>
<b>Expected Outcome</b>	The participants experience information deterioration through communication.
<b>Materials required for the activity</b>	None.
<b>Time required</b>	10 minutes.

### Reference and additional information (i.e. photos, training material, etc.):

Participants are not allowed to say the message more than once. The message needs to be whispered so that other participants do not hear. The trick is to start with a sentence that is not too long.

## 2.14 LEARNING CONTRACT

<b>Objective of the exercise</b>	A learning contract at the start of the training can help everyone involved to understand the goals of the module and to consciously agree that they will work together toward reaching the goals.
<b>Description of the activity</b>	<ul style="list-style-type: none"> <li>• Start the training by stating what the goal of the training is; what the participants can learn; and what they will be able to do on completing the module.</li> <li>• Explain that this is a learning contract between the facilitator and the participants and that it is the facilitator's job to strive to ensure that the contract is fulfilled.</li> <li>• Write up this contract on poster paper and keep it in a prominent place throughout the workshop. Ask the participants to come forward and sign the contract.</li> <li>• Next hand out index cards to each of the participants and ask them to write down their own personal expectations - what they hope to learn from the workshop. The cards can be stuck onto another piece of large paper.</li> <li>• At the end of the workshop / exercise the facilitator can return to both the learning contract and the participants' learning expectations and together with the participants check whether both have been fulfilled.</li> </ul>
<b>Expected Outcome</b>	This formalises the implicit agreement between trainer and participants and makes explicit the what the trainer intends and what the participants expect.
<b>Materials required for the activity</b>	Flip chart, markers, cards, pens.
<b>Time required</b>	15 – 20 minutes.

## 2.15 BALL TOSS REVIEW

<b>Objective of the exercise</b>	This is a physically active exercise that can be used at the end of the day or at the end of a session. It is especially useful after a session that involves a lot of technical material or requires heavy concentration as it is also an energiser.
<b>Description of the activity</b>	<ul style="list-style-type: none"> <li>• The facilitator asks the workshop participants to form a circle</li> <li>• The facilitator starts by saying what they thought was the most valuable lesson or concept learned that day, and then throws the ball to another participant.</li> <li>• The participant states the most valuable or important lesson / concept they learned that day and throws to other participants and so on until all participants have expressed their valuable lessons/concepts learned.</li> </ul>
<b>Expected Outcome</b>	This formalises the usually implicit agreement between trainer and participants and makes explicit what the trainer intends and what the participants expect.
<b>Materials required for the activity</b>	A (soft) ball.
<b>Time required</b>	15 – 20 minutes.

### Reference and additional information (i.e. photos, training material, etc.):

If a participant receives the ball and has nothing to say they can pass and throw it on to another participant. One trainer should quickly note the comments to record the remarks of the participants for documentation.

## 2.16 CATCHING FINGERS

<b>Objective of the exercise</b>	<p>This is a physically active exercise that can be used to wake participants up, get them alert and can, with a bit of imagination, be made humorously relevant to the training (for example grabbing the finger is getting somebody to do what they should, pulling a finger free is dodging a workload)</p>
<b>Description of the activity</b>	<ul style="list-style-type: none"> <li>• The facilitator asks the workshop participants to form a circle.</li> <li>• Participants are asked to hold out their right hands with the palm upwards towards their neighbour to the right and their left index finger just above the palm of their left neighbour.</li> <li>• On three (1, 2, 3!), each participant must simultaneously try to catch the index finger of the right neighbour and pull their own finger away from being caught by their left neighbour.</li> </ul>
<b>Expected Outcome</b>	<p>The group is enlivened.</p>
<b>Materials required for the activity</b>	<p>None.</p>
<b>Time required</b>	<p>10 minutes.</p>

## 2.17 LOOKING BACK FROM THE FUTURE

<b>Objective of the exercise</b>	To encourage participants (particularly decision makers) to consider what would be needed to reach an improved management of the Ganga. This visioning exercise could be carried out as part of a concluding session in Training Module 3.
<b>Description of the activity</b>	<ul style="list-style-type: none"> <li>• The facilitator encourages participants to imagine an ideal state for river management of the Ganga at some undefined point in the future and that they have reached this point and are now looking back.</li> <li>• Participants are asked to describe: (1) the state of the river basin; (2) the management system for the resources and uses of the resource; (3) the roles of different actors. The facilitator can capture these points as they emerge and put them on cards on the board.</li> <li>• Participants are then asked to describe how they reached this point (reflecting the narratives that had been seen for RBM systems elsewhere), with the facilitator capturing the narrative and presenting it chronologically on the board. They should be asked at some stage just how long it took to reach this state.</li> </ul>
<b>Expected Outcome</b>	The group has started to engage in reflections of how to reach an improved river basin management and how they think it should be.
<b>Materials required for the activity</b>	Flip chart, meta-plan board, markers, cards, pens.
<b>Time required</b>	30 minutes.

### Reference and additional information (i.e. photos, training material, etc.):

The exercise should be carried out like a brainstorming, without going too much into technical details, in order to build on the ideas and energy of the decision makers.



## 2.18 PRESSURES ON WATER RESOURCES IN THE GANGA BASIN

<b>Objective of the exercise</b>	To encourage participants to reflect upon the pressures water resources in the Ganga basin are currently under and how this is expected to change with time. This exercise could be carried out as part of Training Modules 1 or 2.
<b>Description of the activity</b>	<ul style="list-style-type: none"> <li>• Identify major pressures on water resources (quality and quantity) in the Ganga basin presently being experienced and expected in the future.</li> <li>• Research facts regarding 3 of these problems (using own knowledge, available reports, internet sources etc).</li> <li>• Present your findings / results (method: Flipchart, board, cards, ppt)</li> </ul>
<b>Expected Outcome</b>	Participants have reflected on the main pressures water resources are facing in the Ganga basin.
<b>Materials required for the activity</b>	Flip chart, meta-plan board, markers, cards, pens.
<b>Time required</b>	5-minute introduction and 15-minute presentation. Time needed to prepare may vary and can be either part of the training module or foreseen as a homework.

## 2.19 WATER DEMAND, TRENDS AND POTENTIAL CONFLICTS

<b>Objective of the exercise</b>	To encourage participants to reflect upon the tensions and the dynamics of different water use sectors at sub-basin level. This exercise could be carried out as part of Training Modules 1, 2 or 3.
<b>Description of the activity</b>	<p><b>Work in groups of 2-3 people:</b></p> <ul style="list-style-type: none"> <li>• Identify a sub-basin of the Ganga catchment (e.g. river basin or canal system).</li> <li>• Find out the Water Demand in this sub-basin according to use sector.</li> <li>• What are the current trends of water demand (sectors, volume and quality required)?</li> <li>• What are the current and potential water problems or water conflicts in the basin?</li> <li>• Present your findings / results (Method: Flipchart, board, cards, ppt)</li> </ul>
<b>Expected Outcome</b>	Participants reflect upon the different water users and the possible tensions between their demands in a sub-basin of the Ganga.
<b>Materials required for the activity</b>	Flip chart, meta-plan board, markers, cards, pens.
<b>Time required</b>	5-minute introduction and 15-minute presentation. Time needed to prepare may vary and can be either part of the training module or foreseen as a homework.

## 2.20 CONFLICT ANALYSIS IN RBM

<p><b>Objective of the exercise</b></p>	<p>Competing interests and demands for water resources can lead to conflicts of interest. This exercise gives participants the chance to consider how these interests may clash. This exercise could be carried out as part of Training Modules 2 or 3.</p>
<p><b>Description of the activity</b></p>	<p>Work in groups of 2-3 people and discuss</p> <ul style="list-style-type: none"> <li>• In a basin, water is being used for: <ul style="list-style-type: none"> <li>– Irrigated agriculture.</li> <li>– Water supply to one large city and 3 smaller municipalities.</li> <li>– To dispose of industrial effluents from a large chemical plant.</li> <li>– Cooling water for coal-fired power plants.</li> </ul> </li> <li>• In a group, discuss the different interests of different user groups in that basin and identify the potential conflicts between them.</li> <li>• Discuss options to resolve the conflict, the mechanisms that can be applied for conflict-resolution and the different compromises that could be found between users.</li> </ul>
<p><b>Expected Outcome</b></p>	<p>Participants have carried out an initial analysis of potential conflicts which may occur between competing water uses and interests.</p>
<p><b>Materials required for the activity</b></p>	<p>Flip chart, meta-plan board, markers, cards, pens.</p>
<p><b>Time required</b></p>	<p>5-minute introduction and 15-minute presentation. Time needed to prepare may vary and can be either part of the training module or foreseen as a homework.</p>

## 2.21 DEFINING A BASIN VISION

<p><b>Objective of the exercise</b></p>	<p>A joint vision for basin management can bring different interests together and align them along one joint idea for the basin's future. This can help mobilise different actors to engage them in basin planning and management activities. A joint vision in is a high-level statement of goals and priorities that basin planning aims to support. The vision describes the desired state of the basin, reflecting and addressing the main concerns and aspirations for the basin, and giving a broad indication of the priorities in the basin. This exercise could be carried out as part of Training Modules 1, 2 or 3, and particularly targeting the decision makers.</p>
<p><b>Description of the activity</b></p>	<p>Work in groups of 2-3 people and discuss</p> <ul style="list-style-type: none"> <li>• Discuss in a small group which dimensions/components a vision for the Ganga basin should contain. Consider the environmental, economic and social development needs and political issues</li> <li>• Formulate these components into a short vision statement (max. 1 sentence) and present it to the group.</li> </ul>
<p><b>Expected Outcome</b></p>	<p>Participants are aware of the necessity of a vision for RBM and have experienced trying to formulate one that address different interests.</p>
<p><b>Materials required for the activity</b></p>	<p>Flip chart, meta-plan board, markers, cards, pens.</p>
<p><b>Time required</b></p>	<p>5-minute introduction and 15-minute presentation. Time needed to prepare may vary and can be either part of the training module or foreseen as a homework.</p>

## 2.22 RELEVANT STAKEHOLDERS AND THEIR ROLES AND RESPONSIBILITIES IN RBM

<b>Objective of the exercise</b>	River Basin Management requires the consultation and participation of a range of different stakeholders. This exercise should bring participants to analyse who should be involved in RBM, how they should be involved and what their responsibilities might be. This exercise could be carried out as part of Training Modules 2 or 3.
<b>Description of the activity</b>	<p>Work in groups of 2-3 people and discuss</p> <ul style="list-style-type: none"> <li>• Which stakeholders should be involved in basin management for the Ganga Basin (at overall basin level and at sub-basin level)?</li> <li>• Who should take which responsibilities?</li> <li>• Present a list of 8 selected stakeholder and describe their role and their responsibilities regarding the overall basin management process (Method: Flipchart, board, cards, ppt).</li> </ul>
<b>Expected Outcome</b>	Participants have identified a range of relevant stakeholders at basin and sub-basin level and reflected on their roles and responsibilities in RBM.
<b>Materials required for the activity</b>	Flip chart, meta-plan board, markers, cards, pens.
<b>Time required</b>	5-minute introduction and 15-minute presentation. Time needed to prepare may vary and can be either part of the training module or foreseen as a homework.

## 2.23 TRANSBOUNDARY / INTER-STATE RBM I – CHALLENGES AND BENEFITS

<p><b>Objective of the exercise</b></p>	<p>As river basins in general are not confined to one political unit, river basin management often requires inter-state or transboundary cooperation. The Ganga basin extends over four nations (India, Nepal, China and Bangladesh) and within India, eleven federal states. This exercise encourages participants to reflect on the implications of inter-state and transboundary river basin management, the challenges and the potential benefits and may be of most use as part of Training Modules 2 and 3.</p>
<p><b>Description of the activity</b></p>	<p>Working in groups, discuss:</p> <ul style="list-style-type: none"> <li>• Which challenges arise when a river basin is shared by several States?</li> <li>• How does this affect each State's use of the water resources?</li> <li>• What benefits could arise from such a situation?</li> <li>• Briefly present your main findings to the group and discuss the different presentations.</li> <li>• You might want to choose either the four nation states of the Ganga basin, or a sub-basin of the Ganga that you are familiar with as an example.</li> </ul>
<p><b>Expected Outcome</b></p>	<p>Participants have discussed the implications of transboundary basin management.</p>
<p><b>Materials required for the activity</b></p>	<p>Flip chart, meta-plan board, markers, cards, pens.</p>
<p><b>Time required</b></p>	<p>5-minute introduction and 10-minute presentation. Time needed to prepare may vary and can be either part of the training module or foreseen as a homework.</p>

## 2.24 TRANSBOUNDARY / INTER-STATE RBM II – FORMALISING COOPERATION

<p><b>Objective of the exercise</b></p>	<p>As river basins in general are not confined to one political unit, river basin management often requires inter-state or transboundary cooperation. Effective management of the basin (or sub-basin) thus requires agreements and treaties between the states involved. This exercise encourages participants to reflect on the implications of inter-state and transboundary river basin management, the challenges and the potential benefits and may be of most use as part of Training Modules 2 and 3.</p>
<p><b>Description of the activity</b></p>	<ul style="list-style-type: none"> <li>• Using the same basin / sub-basin as in the previous exercise, discuss in your group which principles you would include in a water treaty between the states to formalise cooperation that you have been charged with designing.</li> <li>• Keep in mind the specific nature of your basin, the challenges facing the entire basin, and how you would like the cooperation to look.</li> </ul>
<p><b>Expected Outcome</b></p>	<p>Participants have considered and discussed what aspects should be included in formal treatise regulating transboundary river management.</p>
<p><b>Materials required for the activity</b></p>	<p>Flip chart, meta-plan board, markers, cards, pens.</p>
<p><b>Time required</b></p>	<p>5-minute introduction and 10-minute presentation. Time needed to prepare may vary and can be either part of the training module or foreseen as a homework.</p>



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