



Nature-based solutions and their application in river basin management

BRIDGE GBM CSO dialogue report
27-28 June 2018, Kathmandu, Nepal



Building River Dialogue and Governance (BRIDGE)



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This report has been made possible in part by funding from The Asia Foundation and the TROSA programme.

Published by: IUCN, Bangkok, Thailand

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Citation: IUCN BRIDGE GBM, 2018. *Nature-based solutions and their application in river basin management: BRIDGE GBM CSO dialogue report*. Bangkok, Thailand: IUCN. 20pp.

Cover photo: Workshop participants ©BRIDGE 2018

Available from: IUCN (International Union for Conservation of Nature)
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1 About BRIDGE GBM and the objectives of the workshop

Building River Dialogue and Governance, or BRIDGE, is a global programme implemented by IUCN in more than 15 shared river basins across Asia, Africa and the Caribbean. The goal of the programme is to support capacities of countries and stakeholders sharing river or lake basins to implement effective water management arrangements through the development of a shared vision, benefit-sharing principles, and transparent and coherent institutional frameworks.

In the Ganges-Brahmaputra-Meghna (GBM) River Basin, the BRIDGE GBM project initiated its activities in July 2016 (Phase 1) supported by The Asia Foundation. The project facilitated the development of a regional network of more than 25 civil society organisations (CSOs) from the five GBM countries (Bangladesh, Bhutan, China, India and Nepal). This network also developed a common vision and actions to promote cooperative governance of the GBM Basins. For the project's second phase, funded by Oxfam Novib's Transboundary Rivers of South Asia (TROSAs) programme, BRIDGE GBM is supporting activities aimed at institutionalisation of the network through the development and adoption of clear governance mechanisms and continued capacity building on water governance and river basin management issues. The goal of the BRIDGE GBM project is to build regional cooperation for sustainable and inclusive governance of the shared rivers in the GBM region, promoting poverty reduction and healthy ecosystems.

From 27-28 June 2018, BRIDGE GBM facilitated a dialogue and capacity building workshop on nature-based solutions (NBS), in Kathmandu, Nepal. More than 30 participants from the BRIDGE GBM CSO Network from the five GBM countries participated in the workshop. Also invited were resource persons from the regional organisations, media, and the private sector.

The workshop aimed to:

- Promote understanding of the scope and application of nature-based solutions (NBS) in river basin management and its linkages with ecosystem services;
- Discuss the status of the current understanding and application of NBS in GBM countries, and analyse projects and global case studies and success stories; and
- Explore specific NBS opportunities that could be harnessed by the GBM CSO Network and those working on water governance issues.

The workshop included presentations on the criteria and scope for nature-based solutions, including examples of projects and case studies from the GBM Region from organisations such as the International Centre for Integrated Mountain Development (ICIMOD) and the Indian Tobacco Company (ITC), as well as individual experts.

The practical exercise following the technical presentations allowed participants to analyse NBS case studies from across the globe and identify potential applications in the GBM Region. The workshop concluded with a panel discussion where experts from CSOs,

government, and private sector shared their thoughts on the challenges and opportunities in mainstreaming NBS in policy and practice.

This report provides a summary of the technical presentations and discussions, and lists the strategies and action points which the GBM CSO Network, and other parties interested in mainstreaming NBS in river basin management, can prioritise.

2 Workshop proceedings

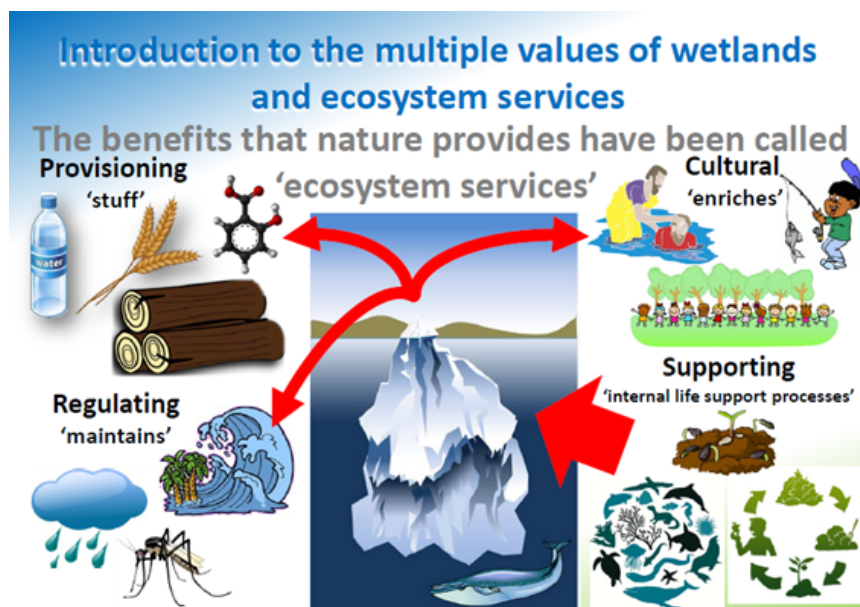
The workshop opened with an introductory presentation from Mr Raphaël Glémet, senior programme officer for Water and Wetlands at IUCN Asia Regional Office. The presentation focused on the scope of nature-based solutions and their linkages with ecosystem services. Mr Glémet also explained the methodology for the rapid assessment of ecosystem services, with particular reference to wetlands. He also shared examples of countries where nature-based solutions have been mainstreamed in policies and practices.

2.1 Introduction to nature-based solutions (NBS): criteria and scope

2.1.1 Ecosystem services and NBS

Ecosystem services are the many and varied benefits that humans freely gain from a properly functioning ecosystem. The 2005 Millennium Ecosystem Assessment (MEA) report was the first time ecosystem services were mapped and given value estimations. It identified four categories of ecosystem services. (See Figure 1).

Figure 1: Four categories of ecosystem services



The result of the assessment indicated that most ecosystem services have degraded in the last 50 years. This has been primarily due to the rapid expansion and over extraction of provisioning services, like water and fisheries.

Subsequent MEA reports published after 2005 have helped increase recognition of the value of nature conservation for human wellbeing, and have therefore supported the adoption of NBS approaches around the world.

2.1.2 Defining NBS and its scope

IUCN uses following definition for NBS:

“Actions to protect manage and restore natural or modified ecosystems, which address societal challenges, effectively and adaptively, providing human wellbeing and biodiversity benefits.”

This definition highlights key aspects of work under NBS: actions to *protect, restore* and *manage* ecosystems for the benefit of both people and nature. It was noted that NBS is not about creating new manmade ecosystems, but improving the management of existing ones for the continued supply of ecosystem services.

Also, we can identify different NBS approaches based on purpose, such as ecosystem restoration approaches (e.g. forest landscape restoration), issue-specific approaches (e.g. ecosystem-based disaster risk reduction), as well as green infrastructure approaches.

(For further information on the above, please refer to the report, [Nature-based solutions to address global societal challenges](#) published by IUCN.)

2.1.3 Cost-benefit analysis of nature-based solutions

Many countries are applying NBS in watershed management and hazard reduction. For example, Switzerland has been using NBS for alpine hazard reduction since the mid-19th century. The country invests CHF 150 million per year in forest management for hazard reduction. In the case of Switzerland, it is estimated that NBS is 5-10 times less expensive than engineered solutions for protection from landslides, rock falls, and avalanches. Also, NBS strategies can create assets for recreational and tourism industries over time.

2.1.4 Rapid assessment of ecosystem services: some considerations

It is easier to identify and put a qualitative value to a particular ecosystem service, but quantitative economic assessment is challenging, as it requires extensive data analysis and stakeholder engagement. Also, different people perceive the values differently based on their needs and expertise. For example, the value of a wetland for a fishermen and bird watcher is different. In the former case, the benefit is fishery resources (provisioning), in the latter case, the benefit is for recreational purposes (cultural). Therefore, to arrive at the right economic value of wetland services, stakeholder engagement is necessary.

It is important to consider the benefits from ecosystem services in time and space. For example, in the case of the East Kolkata Wetlands, the value of the wetland services provided to the city is growing: the amount of wastewater that the wetlands is cleaning is increasing over time; and as the city grows, more fish and vegetable production is needed, thus eventually making these services more important over time.

Table 1 provides an overview of the skill sets and data required to undertake a rapid assessment of ecosystem services in a wetland ecosystem.

Table 1: Skill sets and data required for rapid assessments of ecosystem services

Level of detail	Application	Skills needed	Data needed	Limitations
Qualitative (<i>recognising</i>)	<ul style="list-style-type: none"> • General rapid assessment • Broad-level scoping • Screening assessment 	<ul style="list-style-type: none"> • General knowledge of benefits and values • Awareness of concepts • Systems thinking 	<ul style="list-style-type: none"> • (Very little) • Site observations • Talking to stakeholders • Published documents 	<ul style="list-style-type: none"> • Only provides an overview or scoping assessment • Based on relative value
Quantitative (<i>demonstrating</i>)	<ul style="list-style-type: none"> • Intermediate assessment • Specific issue assessment 	<ul style="list-style-type: none"> • Transferring of existing knowledge • Site specific information • Stakeholder engagement and empathy 	<ul style="list-style-type: none"> • Published data • Stakeholder engagement • Analogous sites • Site observations and monitoring 	<ul style="list-style-type: none"> • Requires comparative data • Needs to identify stakeholders • Can require original data collection

2.2 The understanding of NBS and examples from the GBM region

Participants were asked to identify examples of applications of NBS in the Ganges-Brahmaputra-Meghna River Basins (GBM) Region. Below is the summary of responses received from participants.

1. Managing wetlands for multiple purposes

Wise use and conservation of wetlands was identified as an example of NBS. The participants highlighted the East Kolkata Wetlands, a Ramsar Site covering 12,500 hectares which cleans up to 800 million tons of sewage from Kolkata City. The cleaned water sustains fish farms and agriculture that directly support more than 2,000 families. The agriculture and fisheries services provided by the East Kolkata Wetlands is an important factor contributing to the status of Kolkata as the most economical metro city in India.

Community engagement in the management and use of Tanguar Haor Wetlands located in the Meghna Basin in Bangladesh was also cited as an example of NBS.

2. Spring-shed approach for long term water security in the Himalayas

In the Mahakali Basin, the *Van Panchayat* (Village Forest Council) uses spring revival strategies to address water security issues. These strategies include identification of drying springs and conservation of micro-watersheds. A similar initiative called [Dhara Vikas](#) is being implemented by the Rural Management and Development Department of Sikkim, India. The initiative aims to revive and maintain drying springs in the northeastern parts of the state.

The traditional community practice of digging a series of conservation ponds for water table recharging in the Tarai regions of the Himalayas was also identified as a nature-based solution approach to watershed management.

3. NBS for resilience to natural disasters

In the Brahmaputra Basin in India and Bangladesh, planting bamboo (bundling) to inhibit riverbank erosion and flooding is one example that has been practised in the Brahmaputra Basin for centuries.

The use of vetiver grass as land shields in many parts of the Teesta and Brahmaputra Basins is another example. In coastal regions, mangrove forests are well recognised as a shield against tsunamis.

4. Integrated agricultural practices

Integrated farming practices during floods in Malda and Murshidabad districts in the Ganga Basin in India also serve as nature-based solutions. Flooding affects the livelihoods of local communities for at least six months in a year. One of the CSOs working in the region facilitated the adoption of salt-tolerant paddy and vegetable varieties, along with fisheries and poultry farming, by local farmers in the region. The initiatives resulted in decreased migration of people to cities and improved the economic condition of the women in the area. Other examples cited were: relocation of local communities for the revival of grasslands in Tibet; floating vegetable cultivation; and no tilling, no ploughing agriculture.

2.3 Examples of NBS projects in the GBM region

Some selected projects were presented at the workshop as NBS case studies. The summary of these cases and the main discussion points are summarised below.

1. Himalica Project experience in the Hindu Kush Himalayan countries

Rural communities in many parts of the Himalayan Region are suffering due to high incidences of poverty, declining agriculture and ecosystem services, and migration to urban areas. To address these, the International Centre for Integrated Mountain Development (ICIMOD), is implementing, together with partners, six pilot project in five Hindu Kush Himalayan (HKH) countries. The Support to Rural Livelihoods and Climate Change Adaptation in the Himalayas, or Himalica Project, has been promoting a package of Climate Resilient Agriculture (CRA) practises at various pilot sites. One of the six pilot projects was the Cardamom Value Chain Diversification in eastern Nepal. This pilot project aims to address issues of poverty and the impacts of climate change on local agriculture using natural solutions and traditional knowledge. (To know more about the work please follow the YouTube link, *The Large Cardamom Revival* - <https://youtu.be/Z574tkxU4qQ>)

2. Mainstreaming Eco-Disaster Risk Reduction (Eco-DRR) into local planning

Mr Purna Chandra, field coordinator of UN Environment, Nepal, shared the learnings from the Ecosystems Protecting Infrastructure and Communities (EPIC) Project. With the overall objective of creating an enabling environment for the adoption of NBS, the project is working to build capacity of local and national actors (development, environment, and DRR actors) through trainings and demonstration on bio-engineering approaches to control landslides and soil erosion.

Local grass species were used successfully to decrease incidents of landslides along roads (eco-safe roads) in many villages. The project has also created knowledge and demonstrated good NBS practises for disaster risk reduction.

Table 2: Grass species used in bio-engineering

Important grass species from a bio-engineering perspective (ranked based on effectiveness)	
1. Vetiver	<i>Chrysopogon zizanioides</i>
2. Broom grass	<i>Thysanalaena maxima</i>
3. Salim	<i>Chrysopogon gryllus</i>
4. Babiyo	<i>Eulaliopsis binata</i>
5. Khar	<i>Cymbopogon microtheca</i>
6. Nepiyar	<i>Penniseluim purpureum</i>
7. Kans	<i>Saccharum spontaneum</i>
8. Kush	<i>Desmostychia bipinnata</i>

3. Nature-based solutions in agriscapes

Mr Manjunath Lakshmikanthan, regional manager for CSR of ITC, India presented how ITC is working with local farmers to promote ecologically and economically resilient agricultural practices using a landscape approach. Initiatives include mapping of ecosystem services important to agriculture; and identification of factors affecting these ecosystem services and developing strategies to enhance them. The revival of the traditional Ahar and Pyne system, an indigenous irrigation system prominent in South Bihar, India, was also undertaken. Ahar and Pyne systems have fallen into disrepair over the decades due to neglect, and evidence shows that pyne areas have been decreasing over time: from 0.94 million hectares (mha) under pyne systems in 1930, the figure was reduced to 0.53 mha in 1997.

ITC is also promoting zero-tillage agriculture among wheat, rice and lentil farmers. This resulted in reduced seed rate and fertiliser use and increased yield, doubling the income of farmers.

Some common learning points highlighted by these cases are:

- Engaging local communities and governments for the implementation of NBS projects: local people were engaged in planting and the monitoring of the plant survival rates in the EPIC project, contributing to the success of the project.
- Linking livelihoods enhancement (green jobs) to benefits such as Eco-DRR and Climate Change Adaptation (CCA) in order to develop a successful demonstration project.
- The uptake of solutions is greater if these are simple, low cost and co-developed with the active engagement of government, private sector, and communities.
- Financial, technical and institutional support is needed for community engagement during the initial stages.

- Keep women in the centre during the development and implementation of NBS approaches.

The case studies triggered a debate on whether these examples can be considered as actual NBS. Participants asked: “Can we consider soil conservation practices such as no tillage, use of organic fertiliser etc., examples of NBS? Maintaining soil fertility is an important issue, but is this enough to revive the entire ecosystem and ensure the sustainability of the variety of ecosystem services in a particular landscape?”

It was argued that scale is important and NBS includes a set of integrated approaches, therefore the landscape or river basin shall be the ‘unit’ for NBS planning, and it may include both green and grey approaches.

Box 1: Global case studies on NBS discussed during the practical exercise

1. Micro-watershed model for transboundary water governance in the Tacaná watersheds of Guatemala and Mexico

Unregulated land-use changes in the upper part of the Tacaná Watershed in Mexico, and enhanced erosion due deforestation and livestock grazing, increased the risk of floods and mudslides downstream in Guatemala. As a response, IUCN and partners initiated numerous community pilot projects where micro-watershed councils (from the bottom-up) were created. These successfully applied ecosystem-based approaches specific to water quality and soil conservation. The success of the initiative translated into policy change at the bilateral level, and an alliance was created between the government and NGOs on the Inter-Institutional Coordination for Natural Resources and the Environment (CORNASAM).

In Mexico, the Cahoacan River Basin Commission was created and basin municipalities initiated the development of risk management approaches for local communities at the micro-shed level. In Guatemala, CORNASAM adopted the micro-watershed as the unit of planning and coordinated outreach and trainings were facilitated for local communities to promote the adoption of NBS approaches. Micro-watersheds were mapped, and a database developed identifying the most vulnerable areas. This case is an example of a ‘bottom-up’ approach to resource governance.

2. Restoration of Cache la Poudre River to recover its ecological function and reduce flood risk in Fort Collins, Colorado

The Cache la Poudre River is a seasonal, snowmelt driven river originating in the Rocky Mountains in the USA. The river has played an important and historic role in the growth of the city of Fort Collins. Today, due to the land use changes, gravel mining, urbanisation, and the modification of river channels for irrigation purposes, the river has lost most of its floodplains, leading to increased sedimentation and flood risks for the city of Fort Collins.

Since 2011, a suite of river restoration projects using NBS practices has been implemented by the City of Fort Collins and its partners. Two such initiatives just upstream of the city of Fort Collins are the Sterling Pond Ecological Restoration and the McMurry Natural Area Ecological Restoration. These projects removed high, artificial banks created along the river to prevent flooding during gravel mining operations. Together, the two projects restored two kilometres of the river’s channel and riverbanks.

The projects also created over five hectares of riparian floodplain forest, and several hectares of wetlands. The projects planted an astounding 1,200 trees, 25,000 shrubs, and 60,000 wetland grass plugs. Both projects included the removal of hard infrastructure, and the reconnection of more than 1,500 metres of river with its floodplains.

3. Securing livelihoods through mangrove conservation and restoration in Costa Rica

By the 1960s many of Costa Rica's mangrove forests were degraded due to overexploitation and conversion to salt evaporation and shrimp culture farms. Analysis of 2010 satellite images indicated that approximately 34% of the Gulf of Nicoya's mangroves have disappeared, in turn affecting local livelihoods and biodiversity. In response to these issues, Conservation International began a pilot mangrove restoration project in 2014 in two coastal communities located on the island of Chira in the Gulf of Nicoya. This project consisted of establishing baseline measures and assessments of carbon sequestration for policy making, replanting of mangrove forests by local stakeholders, building local capacity for sustainable use of mangroves and livelihood diversification, and creating a local education programme.

Women from Montero, a fishing community on Chira island, were the first to agree to implement the programme since they realised that the success of their husbands' fishing depended on healthy mangrove ecosystems. Within one year after the start of the project, local stakeholders had planted more than 8,000 mangrove saplings, which had a survival rate of over 90%. This pilot project served as a model for other communities on the island, some of which have also started replanting mangroves.

For details of the case studies please refer to the publication [Nature-based Solutions to address global societal challenges](#).

2.4 Outcomes of panel discussions: NBS in government and private sector policies

Panelists:

- Mr. Ram Hari Pantha, Ministry of Forest and Soil Conservation, Government of Nepal
- Mr Giresh Mohan, Senior Regional Manager, ITC, India
- Mr Sheikh Rokon, Secretary General, Riverine People, Bangladesh
- Mr Soumya Dutta, Energy and Climate Change Expert, PAIRVI, India

1. What is our understanding of, and where do we stand in terms of real applications of NBS?

Nature-based solutions have only recently entered in dialogue processes, but it is practised by communities and finds spaces in natural resource management (NRM) policies of GBM countries. In Nepal, the policies on watershed management and climate change adaptation include ecosystem-based approaches as an important strategy. In Bangladesh, the government has been promoting the use of bundling as an erosion

control measure. In India, some of the NBS actions mandated by the environment ministry include catchment area treatment and compensatory afforestation.

However, there is a gap between policy and implementation on the ground. There is a lack of understanding about NBS and there is limited capacity to design and implement NBS among the stakeholders. Our understanding of NBS is still low and fragmentary, and is limited to planting of trees along riverbanks and wetlands.

For the actual application of NBS in river basin management, we need to understand the workings of different river systems and use this information to adapt global best practices to the local context. To make it a success, it is important to ensure that the process is participatory and builds the knowledge and capacity of local communities and government bodies to adopt these practices.

2. How can the GBM CSO Network promote NBS applications regionally?

There is still limited understanding about the application of NBS in transboundary contexts. However, examples exist at local micro-shed levels. The GBM CSO Network itself could be a platform for learning exchange on NBS good practices.

CSOs can take the initiative to document specific NBS projects in their area, measure the impacts of NBS projects in quantitative terms, create a knowledge base and use it for advocacy with relevant authorities and stakeholders for the adoption on NBS at the river basin scale.

3. How can we strengthen NBS market linkages and create demand?

Despite the fact that NBS is cost effective, it still lacks market integration and there is not enough demand particularly from the communities themselves. It is important to identify where the markets are and what are the economic barriers to the adoption of NBS approaches. The lack of recognition of the long-term benefits of NBS is a barrier to its market integration. If we can economically quantify the long- and short- term benefits, it becomes easier for both policy makers and markets to support NBS approaches. Furthermore, to create the demand for NBS at the community level, there is a need to demonstrate linkages with livelihoods and locally relevant issues.

3 Conclusions and consensus points emerging from the workshop

Below is the summary of discussions and actions identified to support the mainstreaming of NBS in river basin management.

- NBS is part of local traditional practices and are being applied by communities and governments in the areas of river basin management and disaster risk reduction. Therefore, application and use of traditional knowledge is an important criterion for defining whether a particular intervention strategy is NBS or not.
- A wide range of NBS opportunities exist in river and wetland ecosystems. The management of Deepor Beel, a lake in Assam, India, and the Hilsa Sanctuaries in the Meghna and Padma River Basins in Bangladesh, are some examples where NBS approaches are being applied with success. Decision making on river basin management is often done without clear understanding of the full range of wetland values. There is a need to take a quantitative approach in generating data on the socioeconomic benefits of the wetlands, and designing and demonstrating NBS approaches.
- Nature-based solutions are highly cost effective but lack market integration, and it will take a while for these to become more economically viable. Market linkages are important for achieving scale – using strategies like Payment for Ecosystem Services (PES) and benefit sharing within nature-based solutions will support its operationalisation and encourage the involvement of the private sector.

On consolidating NBS knowledge and its practical demonstration, the following were highlighted:

- **Document NBS examples:** There are many nature-based solutions, both contemporary and traditional, but they are not properly documented and shared with policy makers. Documentation of good practices and analysis of its policy implications for the GBM Region is needed.
- **Demonstrate replicable partnership models for the implementation of NBS projects:** The starting point could be a multi-stakeholder dialogue with CSOs, government bodies and the private sector to share NBS best practices and develop project proposals of a regional nature.
- **Local-level demonstrations:** Countries in the GBM region are losing wetlands despite the fact that wetlands play a critical role in flood and flow regulation. Therefore at the local level, wetlands provide a good entry point for demonstrating NBS approaches.
- **Resource persons:** There is a need to develop resource persons through training of trainers (TOT) and tools for NBS operationalisation.
- **Media as ally:** can be extremely important in raising awareness about NBS. Regular dialogues must be created and facilitated between CSOs and media on the issue of NBS in river basin management.

Annex 1: Agenda

**BRIDGE GBM CSO dialogue:
Nature-based solutions and their application in river basin management
27-28 June 2018, Kathmandu, Nepal**

Day 1: Wednesday, 27 June 2018	
Time	Sessions
8:30 – 09:00	Registration
Session 1: Introductions and the Objectives of the Workshop	
09:00-09:20	Welcome remarks
09:20-09:30	Objectives and agenda the workshop
09:30-09:50	Introduction of participants
09:50-10:10	Updates on the BRIDGE GBM project activities
Session 2: Nature Based Solutions (NBS): Criteria and scope	
10:10-10:40	Introduction to nature-based solutions (NBS) <i>Presentation and plenary discussion</i>
10:40-11:30	Individual exercise: Identifying examples of NBS in river basin management
11:30-11:50	Group picture and coffee break
11:15-12:00	Individual exercise: Identifying examples of NBS in river basin management
Session 3: Application of NBS: From concept to practice	
12:00-13:00	Identifying and valuing ecosystems services in a river basin context
13:00-14:00	Lunch break
14:00-15:15	Case studies on ecosystem-based approaches (examples from the GBM region) Ecosystems restoration; ecosystems-based management approaches; green infrastructure; and natural infrastructure approaches Presentations: <ul style="list-style-type: none"> • Nature-based climate resilient practices for improved rural livelihoods in the HKH (Dr Sanjeev Buchar, Senior watershed management specialist, ICIMOD) • An example of a nature-based solution for sustainable development: a case study from Nepal (Mr Sanjaya Devkota, NBS expert) • Nature-based agriculture for sustainable agriscapes (Mr Manjunath Lakshmikanthan, Regional manager for CSR, ITC, India) <i>Plenary discussions</i>
15:15-15:40	Coffee break
15:40-17:00	Group work: Analysis of global case studies on NBS, and identification of strategies for application in the GBM Region
19:00-21:00	Networking dinner

Day 2: Thursday, 28 June 2018	
09:00-09:15	Recap from Day 1
09:15-09:45	Practical Exercise I: NBS in river basin management <i>Explanation about the case study and the methodology of the practical exercise</i>
09:45-10:40	Practical Exercise II (group work): NBS in river basin management <i>Discuss the case and propose avenues and recommendations for the identification of ecosystem services and the integration of nature-based solutions in basin planning</i>
10:40-11:00	Coffee break
11:00-12:00	Panel discussion: Challenges and opportunities: integrating NBS within government and private sector policies Panelists: <ul style="list-style-type: none"> • Mr Ram Hari Pantha, Ministry of Forest and Soil Conservation, Government of Nepal • Mr Giresh Mohan, Senior Regional Manager, ITC, India • Mr Sheikh Rokon, Secretary General, Riverine People, Bangladesh • Mr Soumya Dutta, Energy and Climate Change Expert, Public Advocacy Initiatives for Rights and Values in India <i>Q and A</i>
12:00-13:00	End of workshop and lunch break

Annex 2: List of participants

S/n	Title	Name	Designation	Organisation
Bhutan				
1	Ms	Rebecca Pradhan	Senior ecologist	Royal Society for Protection of Nature, Bhutan
2	Mr	GK Chhopel	Chairperson	Bhutan Water Partnership
3	Mr	Yeshi Nidup	Current affairs producer	Bhutan Broadcasting Services Corporation
Bangladesh				
4	Ms	Sharmeen Murshid	Executive director	Brotee, and Member of the National River Conservation Commission (NRCC)
5	Mr	M. Mokhlesur Rahman	Executive director	Centre for Natural Resource Studiess (CNRS)
6	Mr	Sheikh Rokon	Secretary general	Riverine People, Dhaka
7	Mr	S M Manjur Rashid	Policy-advocacy-campaign and communications lead	Oxfam Bangladesh
8	Mr	Md. Badi Akhter	Programme director	Oxfam Bangladesh
9	Mr	Shamsher Ali	Manager, Land and water rights	ActionAid Bangladesh
10	Mr	Md. Munir Hossain	Project coordinator	Gana Unnayan Kendra (GUK)
11	Mr	Abu Siddique	Journalist	Dhaka Tribune
China				
12	Ms	Zang Jie	Project officer	Green City Environmental Culture Development Centre (GreenCity)
13	Ms	Cheng Shuling	Project officer	Shan Shui Conservation Centre

14	Ms	Deng Jing	Project officer	China Biodiversity Conservation and Green Development Foundation (CBCGDF)
15	Ms	Zhou Chen	Media professional	CAIXIN Media Group
16	Mr	Cirenluobu (Tsering Norbu)	Executive director	The Pendeba Society
India				
17	Ms	Veena Vidyadharan	Fellow and deputy head, CITEE	CUTS International, Jaipur
18	Mr	Sabyasachi Dutta	Director	Asian Confluence, Shillong
19	Mr	Ashish Prakash	Project manager	Nav Jagriti, Bihar
20	Ms	Gitika Goswami	Programme director for policy and planning	Development Alternatives Group
21	Mr	Aditya Ranjan	Program officer	Oxfam India
22	Mr	Soumya Dutta	Energy and climate change expert	Public Advocacy Initiatives for Rights and Values in India (PAIRVI)
23	Dr	Partha J Das	Head, Water, climate and hazard division	Aaranyak
24	Ms	Ayesha Dsouza	South Asia programme coordinator	International Rivers, India
25	Mr	Amitabh Mishra	Chief executive	Grameen Development Services
26	Mr	Samudra Gupta Kashyap	Journalist, author and media trainer	
27	Mr	Jayanta Basu	Environment and climate correspondent	The Telegraph
28	Mr	Kaushik Hazarika	Independent consultant	IUCN
29	Mr	Manjunath Lakshmiathan	Regional manager, corporate social responsibility (CSR)	ITC India

30	Mr	Giresh Mohan	Senior regional manager, CSR	ITC India
Nepal				
31	Dr	Sanjeev Buchar	Senior watershed management specialist	International Centre for Integrated Mountain Development (ICIMOD)
32	Dr	Sanjaya Devkota	NBS expert	Ecosystems Protecting Infrastructure and Communities (EPIC) Project
33	Mr	Ajaya Dixit	Executive director	Institute for Social and Environmental Transition (ISET)
34	Mr	Robin Ghimire	Executive director	Union for Culture, Human and Environment Protection (UCHEP)
35	Mr	Dipendra Raj Karki	Executive director	Abhiyan Nepal
36	Mr	Balendu Hamal	Executive director	Association for Protection of Environment and Culture (APEC)
37	Mr	Dev Narayan Yadav	Founder	Koshi Victim Society
38	Mr	Amar Saud	Project officer, Transboundary Rivers of South Asia (TROSA programme)	Rural Women Development and Unity Centre (RUWDUC)
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40	Mr	Govind Raj Joshi	Executive director	RUDES Baitadi
41	Mr	Narayan Joshi	Executive director	Sankalpa
42	Mr	Rajesh Sada	Freshwater lead	WWF Nepal
43	Mr	Ram Hari Pantha	Secretary	Ministry of Forest and Soil Conservation, Government of Nepal



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