Report of the 3rd Asia-Netherlands Water Learning Week
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Green Growth and Water Security

Spurred by agreement in Rio+20 on The Future We Want, government water leaders in Asia and the Netherlands are searching for innovative solutions to secure their countries’ water futures and green their economies. How to mainstream R&D to boost water productivity, conservation and reuse across sectors, reduce water footprints, clean up waterways, and create multifunctional and green infrastructure? How much space do rivers need? What makes communities more resilient, and water agencies more adaptive in the face of rapid changes? How can the corporate sector help governments manage for results?

To answer these and more questions, the 3rd Asia-Netherlands Water Learning Week brought leaders together in dialogues and knowledge sharing on ‘Partnerships for Green Growth and Water Security.’

Project teams from Afghanistan, Bangladesh, Bhutan, Indonesia, Myanmar, Mongolia, Nepal, Sri Lanka and Vietnam attended this 3rd Asia-Netherlands Water Learning Week. Members of these teams contributed project case studies from Asia and the Netherlands and learned together in an intensive programme how to leverage results from collaborative approaches in water investment projects for cities and river basins.

The programme has built on the successful experience of the 1st and 2nd Asia-Netherlands Water Learning Weeks in which more than 60 Asian water leaders compared experiences with colleagues in the Netherlands in making smart choices for water security and green growth. More information on the previous learning weeks available on our ADB-UNESCO-IHE Partnership website: http://adb-knowledge-partnership.unesco-ihe.org/projects.

This learning week was organized under the water knowledge partnership between the Asian Development Bank (ADB) and UNESCO-IHE Institute for Water Education, supported by the Netherlands Ministry of Foreign Affairs through ADB’s Water Financing Partnership Facility. The partnership supports ADB’s water operations in its developing member countries (DMCs) by providing expert guidance during project preparation and implementation, to develop and implement education, training and capacity development, and to support knowledge networking programmes among (DMC) clients, partners, and Knowledge Hubs. A large number of Dutch water professionals and organisations contributed to the programme as counterparts and host organisations. They displayed and explained best practices, and shared their knowledge with the participants.
Day 1 - Introductory sessions

Learning Week Objectives
High level delegations of Afghanistan, Bangladesh, Bhutan, Indonesia, Mongolia, Myanmar, Nepal, Sri Lanka and Vietnam were welcomed by Prof. Dr. András Szöllösi-Nagy, Rector of the UNESCO-IHE Institute for Water Education, during the official opening of the 3rd Asia-Netherlands Water Learning Week.

After the official opening, Jan Luijendijk unfolded the programme and learning objectives for this week. He stated that according to a Chinese proverb, learning should be seen as "A treasure that will follow its owner everywhere". His main message for the participants of the learning week was to learn as much as possible during this event. The programme has been tailored towards the specific needs and demands of the project teams in order to enable all project team members to learn as much as possible.

In order make the most out of the learning week, all participants were asked to keep track of their learning process by daily noting three things they've learned. All these personal lessons learned would be brought back to common lessons learned and presented by each project team during the plenary session on Friday.

In addition, Luijendijk explained that in the Dutch culture people who ask questions are not being seen as unknowledgeable. In fact, asking questions show interest and would therefore lead to further explanation and will create the willingness to share even more information. During the following week it appeared that this recommendation had the desired effect, because several organisations involved in the programme mentioned that they've never had a group as eager to learn as this one.

Visit Demo-Nursery
The 3rd Asia-Netherlands Learning Week kicked off at a demo-nursery in Honselersdijk. All delegations attending this learning week joined this field visit to the demo-nursery in Honselersdijk, which is an innovation centre focused on applied science within horticulture. At this interesting location, the participants were shown how technical equipment enables farmers to control humidity, temperature, soil, light and fertilizer.

Afterwards, Priva CEO Ms. Meiny Prins gave a presentation on green growth and social enterprising. Prins, who was selected CEO of the year in 2009, explained the importance of sustainability for Priva and how this company has been able to accomplish green growth. She saw some comparisons between the Dutch and Asian horticulture. Although the Netherlands’ main horticultural region called ‘Westland’ is not considered to be an urban area, Prins stated that the Netherlands in fact does have urban horticulture. “Considering the small size and number of inhabitants, you could see the Netherlands as a big city rather than a country”, was her interesting point of view. That’s why she was able to link and compare the Dutch situation with that of major Asian cities, which made the shared information not just interesting but also applicable for the participants.
Boat tour
After these first new experiences in the Netherlands during the first day of the water learning week, it was time for a relaxing boat tour through the canals of the historical centre of the city of Delft. Participants of the learning week considered this boat tour to be a nice chance to meet other delegations in a more informal setting. Overall, it was a pleasant closure of a very informative first day.
Day 2 - Project team sessions

Afghanistan and Mongolia
The main focus of the team session of Afghanistan and Mongolia was on how water management is organized in the Netherlands, in particular with respect to groundwater. After short introductions by both teams on how groundwater issues are handled in their countries, Dr. Koos Groen (Acacia Water) gave a presentation on groundwater management in the Netherlands. The morning programme ended with an interesting discussion on groundwater management between Koos Groen, mirror team leader Prof. Eelco van Beek and both delegations.

In the afternoon, the Mongolian and Afghan delegation visited Meijendel to learn more about the river water recharge works in the dune areas of the Netherlands. In the Tapuit visitor centre, a brief presentation about the work of Dunea was held including a more detailed presentation about the entire drinking water production process. The participants were invited for a walk through the dunes and visited a number of recharge ponds and series of abstraction wells. The entire excursion was hosted by very friendly people from Dunea and coordinated by Jan Willem Foppen, Associate Professor of Hydrology at UNESCO-IHE.

Bhutan, Indonesia and Vietnam
The project teams Bhutan, Indonesia and Vietnam started on Tuesday with a visit to Dordrecht where they were introduced to the concept of the Learning Action Alliance (LAA). The LAA is defined as providing a common forum for learning and action in relation to flood and water management and also to cultivate a culture of active learning on the part of the participants. Such in the spirit of the LAA, Prof. Chris Zevenbergen initiated a short group work where the Project Teams worked together with the Dutch counterparts and UNESCO-IHE students to discuss their own experiences with the focus on collaboration.

An interesting case study during the team session was the MARE Programme, presented by Martin Hulsebosch. This programme started with the cities, Bergen (Norway), Rotherham and Sheffield (United Kingdom), Dordrecht (The Netherlands), and Hannover (Germany), which experienced flooding and disasters and works for solutions to the urban flooding problems that the cities experienced and will be experiencing if no action is to be done. Dr. Berry Gersonius’ presentation touched on the core of flood risk management which is combining flood risk management with spatial planning and disaster mitigation but never forgetting the role of the community in the plan.

Dr. Berry Gersonius’ presentation touched on the core of flood risk management which is combining flood risk management with spatial planning and disaster mitigation but never forgetting the role of the community in the plan.
Sri Lanka, Bangladesh and Nepal

On Tuesday morning, delegations from Sri Lanka, Bangladesh and Nepal all gathered at UNESCO-IHE for a field visit, hosted by Vitens Evides International, to storage basins in Rotterdam. The first basin to visit was the Petrusplaat, which is a buffer location for drinking water. After a presentation by mirror team leader Gerard Soppe on the organisation and activities of Vitens Evides International, the three delegations attended a presentation explaining the history and functionality of the Petrusplaat storage basin. At this basin, surface water coming from the river Meuse is being collected. Afterwards, this water will have a first treatment before being transferred to drinking water production locations such as the Berenplaat.

Therefore, the Berenplaat was the next location of this project team session. After the lunch Erik Vermaas, who is Teamleader Hydraulics at Vitens, gave a presentation on water safety planning explaining what kind of safety measurements a drinking water company such as Vitens takes in order to assure high quality drinking water. In addition, he explained the three delegations joining the session how Vitens detects leakages in the pipelines. Afterwards, the entire group joined a tour through the Berenplaat. Sander Nugteren, Process Technologist at Vitens, who was leading this tour showed and explained all steps of the purification process of the drinking water before it's ready for consumption.
Day 3 - Field visit Room for the River project

Morning programme
On Wednesday 18 June 2014, all delegations participated in a field visit to the Room for the River project. This visit was aimed to gain new insights on how to reduce flood risk. Representatives of the Municipality of Nijmegen, Rijkswaterstaat, Water Board Rivierenland and contractor Dura Vermeer all gave a presentation.

The Room for the River project fitted perfectly in this year’s theme, because it deals with both water security and green growth. Since the frequency and impacts of flooding are increasing on a global scale, with the world’s population growth and the increase of socio-economic activities in flood-prone areas as key drivers, this issue is of relevance for many countries. And it requires innovative initiatives to deal with this issue. Therefore, case studies such as the Room for the River project are interesting for foreign delegations.

All participants of the learning week were welcomed by the Vice-Mayor of Nijmegen, who expressed her appreciation for the international interest in the project ran in her municipality. Afterwards, Programme Director Ben Broens gave an introduction on the Room for the River project. Programme Manager Cor Beekmans and Stakeholder Manager Karsten Schipperheijn shared more in depth information on their approach with regards to dike relocation and incorporating all relevant stakeholders.

Afternoon programme
In the afternoon, Karsten Schipperheijn led a field visit to the area where the dike relocation takes place. This visit was mainly focused on the technical side of the project, while the rest of the afternoon programme would highlight management aspects. During a panel discussion, representatives of both public and private organisations involved in the Room for the River project were able to share their view on their cooperation. Since difficulties in public and private involvement and partnerships can often lead to friction and delay, this case study was relevant and interesting for the participants of the water learning week.
Day 4 - Project team sessions

Afghanistan
The delegation from Afghanistan was invited by both UNESCO-IHE, by Dr. Abraham Mehari Haile, to discuss Integrated Land and Water Development and flood based farming. The delegation from Afghanistan joined the learning week to find innovative and inclusive ways to increase efficient use of irrigation and use of water for other domestic uses and its recycling. To answer these questions, the group discussed how to reverse the destructive nature of floods into a blessing for increased agricultural production and better rural livelihood:

- Relevant and significance of flood-based Irrigation Systems (FBIS) for Asia and Afghanistan
- Various techniques and practices in FBIS - spate, flood-spreading weirs, flood recession and inundation supported with some case studies.

Moreover, the group focused on how to use spate-irrigation and made plans for implementation through the Spate Irrigation Network.

Mongolia
The Mongolian delegation focused on groundwater management during this project team session. Specifically, this session paid attention to new techniques for artificial storage and retrieval of groundwater. To this end presentations were given and discussions were held at UNESCO-IHE. Yangxiao Zhou, Associate Professor of Hydrology at UNESCO-IHE, focused on aquifer storage and recovery techniques. Mr. Carl Paauwe of Water Board Delfland gave a presentation on the role of his organisation on groundwater management and Mr. Koos Groen of Acacia explained harvesting techniques in the Netherlands and abroad. In the afternoon, the group went on a field visit to the Water Board of Delfland and a greenhouse that is experimental artificial storage and retrieval techniques.

Sri Lanka
Together with Jan Willem Foppen, Associate Professor of Hydrology at UNESCO-IHE, the Sri Lankan delegation went to TNO. The aim of this visit was to learn more about DINO, the database on the subsurface of the Netherlands and about groundwater monitoring networks including the way groundwater level data are stored. In the afternoon, the delegation went to Halsteren Laag, a nature conservation area, a nice example of active groundwater management in the Netherlands. There we took rubber boots with us and also an EC meter to do some fact finding in the various ponds and ditches on the area. In between, and to make maximum use of the time, Mr. Foppen gave a presentation on groundwater governance in the Netherlands. In addition, with a PowerPoint presentation, Foppen briefly introduced the Halsteren Laag area to the delegation. Both presentations were held in the field.
Bhutan, Indonesia and VietNam
The delegations from Bhutan, Indonesia and VietNam continued the discussions and learning process they started on Tuesday, regarding the green cities and Learning and Action Alliances. The teams were hosted in the historical location het Meisjeshuis in Delft. The workshops answered to questions of the teams regarding how to strengthen relations between urban planning, environment and natural resource management, climate resilience and disaster risk management and identify investments for short, medium and long term.

Bangladesh and Nepal
The delegations of Bangladesh and Nepal joined a session focused on regional water management. This session hosted by Vitens Evides International and jointly organised with Water Board Rijnland started with a boat tour to Spaarndam. Therefore, the bus brought all participants to a location where a boat was already waiting for the group. By boat, the group visited the Spaarndam pumping station. Afterwards, the boat trip continued to the historical centre of the town of Spaarndam, crossing a (water) lock along the way.

After a nice lunch in this historical centre, the group went by bus to the office of Water Board Rijnland. At this office the delegations of Bangladesh and Nepal attended several presentations. Firstly, a presentation was given, which shared how Water Board Rijnland deals with water governance and policy. Secondly, Niek Oortman focused on water quantity and barrier in his presentation. As closure of the day, a presentation was given on the Water Board's approach regarding crisis management.
Day 5 - Outcomes and commitments

Field visit Harnaschpolder
The final day of the 3rd Asia-Netherlands Water Learning week started with a field visit to the wastewater treatment plant at the Harnaschpolder. After a warm welcome by the Vice Dikereef, a presentation was given on the role, tasks, governance and financing system of Water Board Delfland. The next speaker, Mr. Paul Oostdam of Delfluent, gave an introduction to the wastewater treatment plant Harnaschpolder project. Moreover, he gave more information on PPS financing constructions. Afterwards, Oostdam also led the actual field visit to the Harnaschpolder, where the learning week participants could see how the wastewater treatment plant functions.

Outcomes and commitments
The 3rd Asia-Netherlands Water Learning Week was attended by 44 participants from 9 Asian countries, including 7 ADB staff. Moreover, an additional 15 participants attending the concluding Water Legislation Workshop at UNESCO-IHE, Delft, participated partly in the programme. Countries represented were Afghanistan, Bangladesh, Bhutan, Indonesia, Myanmar, Mongolia, Nepal, Sri Lanka and Viet Nam. Most participants expressed great satisfaction with the programme and the organisation of the learning week. The participants appreciated in particular the good combination of interactive lectures and field visits. Many were motivated to adapt the new and innovative ideas they heard into their country specific water strategies and like to continue to interact with the Dutch counterparts. All delegations expressed their desire that their countries continue to participate in the next learning week.

The participants highlighted that their key learning during the week was in getting a better understanding of the value of collaboration and coordination among and between government agencies, people, private sector and institutes in the design, planning and implementation of large infrastructural works. Participants to the 3rd Asia-Netherlands Water Learning Week were also largely interested in water governance and in particular water legislation, when they were briefed on the outcomes of the Water legislation Workshop.
Annex 1: Sharing lessons and opportunities

Afghanistan

Project: Afghanistan IWRM

Learning objectives:

<table>
<thead>
<tr>
<th>Afghanistan</th>
<th>Learning objectives</th>
<th>Netherlands Country Team Coordinator and members</th>
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<tbody>
<tr>
<td></td>
<td>To be able to formulate a framework and to facilitate establishment of green standards, certification and legislation for sustainable consumption and production. Meanwhile to find innovative and inclusive ways to increase efficient use of irrigation and use of water for other domestic uses and it’s recycling.</td>
<td>Requested from Dutch expert team: The team would be looking to work with counterparts that specialized in Green Growth and Water Security, Integrated Water Resources Management, River Basin Management, Irrigation Management Transfer, Participatory Irrigation Management, Institutional Development and Water Law.</td>
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Project team members:

<table>
<thead>
<tr>
<th>AFGHANISTAN</th>
<th>1</th>
<th>Mr. Ziarat Gul Rahel</th>
<th>Director General</th>
<th>Nangarhar Valley Development Authority</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>2</td>
<td>Mr. Ehsanullah Munib</td>
<td>Project Director, Water Resources Development Investment Program</td>
<td>Ministry of Agriculture, Irrigation and Livestock</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Mr. Ahmad Khalid Abdullah</td>
<td>Project Director, Water Resources Development Investment Program</td>
<td>Ministry of Energy and Water</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Mr. Wais Ahmad</td>
<td>Advisor (Water)</td>
<td>Minister of Energy and Water, director for MEW’s dams projects</td>
</tr>
</tbody>
</table>

Country coordinator(s):
Mr. Abraham Mehari Haile, UNESCO-IHE
Prof. Eelco van Beek, UNESCO-IHE/Deltares

The team gained the following insights:
- Role of private sector is vital in development;
- Research and knowledge sharing is an important element towards the success;
- Special attention is being paid in environment protection as the demo doesn’t use any fertilizer so the underground water won’t be contaminated.
- Afghan delegation had extensive discussion mainly on the cost and maintenance of green houses with the CEO and the organizers to explore the options of investment on the green house in Afghanistan.
Due to the flood every year in Afghanistan tens of hectares of land is being damaged and hundreds of people are killed. However, widening of the river in some part of the country may not be feasible, but construction of earth dikes can be a good approach.

The idea for implementation of room for the river raised after the severe floods of 1993–1995 that resulted in innovation of such complex project.

Good communications between the key stakeholders i.e. water board, Municipality, Ministry of Infrastructure, environment, and the contractor.

Spate irrigation production is sometimes higher than perennial irrigation.

The economic analysis of Internal rate of return is very important as the spate irrigation structures may not last long as it totally depends on the capacity of the flood.

Flood separating weirs are useful for aquifer recharge.

There is an essential need to improve the livelihoods of the poverty-stricken communities living in the spate areas where harvested water can be used for the crop production cycle.

Sand dams and road water harvesting are good options for Afghanistan.

The team will follow up on the following actions:

Further improvement is required in different fields of the water sector in Afghanistan such as:

Institutional strengthening:
1. Coordination, dialogue, and cooperation on the trans-boundary issues;
2. Amendments to the water law of 2009;
3. Further enhancement of regulatory framework;
4. Implementation of modern infrastructure for flood control and irrigation.
Bangladesh

Project:
Dhaka Water Security

Learning objectives:

<table>
<thead>
<tr>
<th>Bangladesh</th>
<th>Learning objectives</th>
<th>Netherlands Country Team Coordinator and members</th>
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<tbody>
<tr>
<td></td>
<td>Learning objectives: (i) Learn Dutch and international best practices for ensuring water security for large cities. (ii) Identify approaches and mechanisms for watershed management and pollution control through collaboration of various stakeholders including roles of civil society organisations. (iii) Discuss formulation of an inter-ministerial steering committee towards effective watershed management of Meghna River with clear mandates and time-bound action plans.</td>
<td>Requested from Dutch expert team: Experts should include a representative from regulatory agencies as well as water utilities</td>
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Project team members:

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<tr>
<th>BANGLADESH</th>
<th>Joint Secretary</th>
<th>Ministry of Industry</th>
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<tr>
<td>1</td>
<td>Ms. Saleha Afroz</td>
<td>Joint Secretary</td>
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<tr>
<td>2</td>
<td>Mr. Md. Alamgir</td>
<td>Director (Enforcement and Monitoring)</td>
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<tr>
<td>3</td>
<td>Mr. Md. Mahmudul Islam</td>
<td>Superintending Engineer &amp; Project Director</td>
</tr>
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Country coordinator:
Mr. Gerard Soppe, Vitens Evides International

The team gained the following insights:
- Learned more about the Dutch demography, water management, water control and legislation.
- Learned about the project of other project teams.
- Learned about the demo-nursery and its modern horticulture system.
- Learned more about water purification by UV and activated carbon.
- Learned how to manage resettlement of affected persons in project area.
- Stakeholder interaction should take place in different stages of a project.
- Learned more about PPP model for wastewater treatment plant.

The team will follow up on the following actions:
- Setting up a nursery system, similar to the demo-nursery visited on day 1.
Bhutan

Project:
Improved Urban Environmental Infrastructure Development Project

Learning objectives:

<table>
<thead>
<tr>
<th>Learning objectives</th>
<th>Netherlands Country Team Coordinator and members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bhutan</td>
<td>Requested from Dutch expert team: It would be useful if the team of experts will have practical experience in designing, implementing and managing projects that use holistic approaches such as IUWM.</td>
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Project team members:

<table>
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<tr>
<th>BHUTAN</th>
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<tr>
<td>1</td>
<td>Mr. Tenzin</td>
<td>Director, Department of Engineering Services</td>
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<td>2</td>
<td>Mr. Jigme Dorji</td>
<td>Project Manager</td>
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<td>3</td>
<td>Ms. Anu Pradhan</td>
<td>Project Manager</td>
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<tr>
<td>4</td>
<td>Mr. Kinley Penjore</td>
<td>Project Manager</td>
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Country coordinator:
Mr. Assela Pathirana, UNESCO-IHE

The team gained the following insights:

- The best way for sustainable green city development is to adopt Integrated Water Management approach.
- It is better to provide enough time for planning, discussion and debate in urban development decisions; create good chances for shorter and smoother implementation.
- For a country with very limited arable land (<3%), and dependent on agriculture (69%) greenhouse farming is promising. It can not only improve the production and productivity but can also improve the quality of products like vegetables, flowers. (There is potential to export to high-end market in the region)
- For successful implementation of urban development programmes, there is no alternative to Genuine and Committed stakeholders’ collaboration. It may be very difficult to cultivate such collaboration, but it is indispensable.
- Our conventional view of stakeholders’ consultation and collaboration has been to achieve some fixed objectives. But we learnt that it also can be an opportunity for Learning (knowledge exchange) and improvement.
- Opportunistic approach
- Challenge the Contractors. Traditionally the Governments assume the attitude that they know all the problems and solutions for urban development. The Contractor (i-Lent) specifically mentioned that if Contractors are “challenged” they can sometimes come up with innovative and better ideas to problems.

The team will follow up on the following actions:

- Adoption of Learning and Action Alliance in future urban development projects.
- Incorporate green design in urban infrastructure development.
- Inform the Department of Agriculture on scaling up Green House Farming (though expensive)
- Review the Technical bids for WWTP at Thimphu (DBOT) diligently
Indonesia

Project:
Green cities initiative

Learning objectives:

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<tr>
<th>Indonesia</th>
<th>Learning objectives</th>
<th>Netherlands Country Team Coordinator and members</th>
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<tbody>
<tr>
<td>Learning objectives: 1. To learning about the benefits and mechanisms of an integrated urban, climate resilient planning approach and/or the possible structures of innovative and green financing of urban infrastructure; 2. The city teams are expected to apply the newly acquired skills and experiences in the urban planning of their respective city, guided by Bappenas and ADB.</td>
<td>Requested from Dutch expert team: 1. to provide the team with theory and practical information on integrated, climate resilient urban planning and innovative green urban financing. 2. better understanding of the need for a multi-stakeholder based participatory approach 3. case studies and site visits to local governments in the Netherlands</td>
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Project team members:

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<tr>
<th>INDONESIA</th>
<th></th>
<th>Cleansing and Landscaping Agency</th>
<th>Malang Government</th>
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<tr>
<td>1 Mr.</td>
<td>Pandu Zanuar Sulistyo</td>
<td></td>
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<td>2 Ms</td>
<td>Diah Ayu Kusumadewi</td>
<td>Regional Development Planning Agency</td>
<td>Malang Government</td>
</tr>
<tr>
<td>3 Mr.</td>
<td>Medha Baskara</td>
<td>Lecturer</td>
<td>Agriculture Faculty of Brawijaya University, Kota Malang &amp; Founder Green City Communities</td>
</tr>
<tr>
<td>4 Mr.</td>
<td>Zaenal Arifin</td>
<td>Deputy Director for Urban Affairs, Directorate of Urban &amp; Rural Affairs</td>
<td>Bappenas</td>
</tr>
<tr>
<td>5 Mr.</td>
<td>Julian Syah</td>
<td>Project Manager</td>
<td>Green Cities Initiative Indonesia</td>
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Country coordinator:
Mr. Assela Pathirana, UNESCO-IHE

The team gained the following insights:
- Netherland/Europe is not Indonesia/Asia, but there’s same basic principles can be applied all over the world in order to start working in the right direction: Commitment, Open & Positive Mind, Transparency en Consistency.
- Mankind changed the world and the changing world is now affecting us in the form of climate change, disaster, etc.
- Success stories in how people adapt, like Priva and the Room for the River project, didn’t happen in a blink of an eye. It happens gradually.
- Green Growth and Demand of Green will only be achieved if stakeholders agree to move in the same direction.
The team will follow up on the following actions:

Short term:
- Sharing knowledge to a lot more people
- Initiating a leadership brainstorming forum
- Creating a workable system (for example: LAA)

Long term:
- Creating a long-term masterplan
- Enhancing green culture education from early ages
- Strategic funding for greening/park, damage prevention project and community based development
- A wider cooperation of projects towards livable and happy city
Myanmar

Project:
ADB-UNESCO-IHE National Water Legislation Project

Learning objectives:
The main learning objectives were knowledge, experience sharing, and discussing follow-up activities.

In order to meet these objectives, the following topics have been covered: key principles of national water legislation, the perspective of external advisors, presentations about the water legislation of each country, groundwater (IGRAC), common substantive legal issues and lessons learnt

Project team members:

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<tr>
<td>1</td>
<td>Mr.</td>
<td>Ko Ko Oo</td>
<td>Deputy Director General, Directorate Water Resources and Improvement of River System, Ministry of Transport</td>
</tr>
<tr>
<td>2</td>
<td>Mr.</td>
<td>Myo Thein</td>
<td>Staff Officer, Environmental Conservation Dep., Ministry of Environment Conservation and Forestry</td>
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<tr>
<td>3</td>
<td>Mr.</td>
<td>Dr. Zaw Lwin Tun</td>
<td>Director, Irrigation Department, Ministry of Agr and Irrigation</td>
</tr>
<tr>
<td>4</td>
<td>Mr.</td>
<td>Dr. Khin Maung Lwin</td>
<td>Member, Expert Group, National Water Resources Committee</td>
</tr>
</tbody>
</table>

Country coordinator:
Ms. Zaki Shubber, UNESCO-IHE
Mr. Bart Teeuwen, Teeuwen Advice

The team gained the following insights:
- The workshop has been an excellent learning experience for all
- Implementation stage is crucial - secondary legislation and practical modalities: capacity, inter-agency coordination & integration
- Early involvement of legal experts
- Multi-disciplinary approach
- Common issues:
  - Procedural: organisation of the drafting process
  - Substantial: institutional structure (e.g. public participation, decentralisation), planning, operational instruments (e.g. permit/license systems), financing (private sector involvement), data collection/monitoring, enforcement, dispute resolution
- Leadership
The team will follow up on the following actions:

- 6 proposals to be developed for the next stage
- Training on water legislation – particularly on drafting such legislation
- Workshops for relevant stakeholders
- Legal assessment of existing water-related legislation

The participants of the 1st National Water Legislation Workshop expressed a need for more sharing about water legislation. Therefore, another possible follow-up of this learning week could be organising more workshops. Water legislation could also become a more substantial part of plenary sessions during a future learning week, depending on the interest of other project teams in this subject.
Mongolia

Project:
Tuul River Rehabilitation Project

Learning objectives:

<table>
<thead>
<tr>
<th>Learning objectives</th>
<th>Netherlands Country Team Coordinator and members</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How to deal with water shortages as declining water resources are becoming a</td>
<td>Requested from Dutch expert team:</td>
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<tr>
<td>constraint for economic development, and pollution has become a serious public</td>
<td>1. To meet with those organisations dealing with (i) groundwater management and protection,</td>
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<td>health concern.</td>
<td>(ii) coordination among agencies in The Netherlands</td>
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<tr>
<td>2. Development of institutional and human resource capacity to effectively</td>
<td>2. Netherlands experiences in groundwater recharge in the coastal areas to get a better understanding of the</td>
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<td>coordinate with other stakeholders in the basin and regulate development</td>
<td>technical and institutional arrangements.</td>
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<td>activities.</td>
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<td>3. To discuss and see the Netherlands experiences to get a better insight of the</td>
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<td>technical and institutional settings.</td>
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Project team members:

<table>
<thead>
<tr>
<th>MONGOLIA</th>
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</thead>
<tbody>
<tr>
<td>1. Mr. Ganbat Gongorjav Director, River Basin Management Division Policy Implementation</td>
</tr>
<tr>
<td>2. Ms. Bayarmaa Surenkhorloo Officer Policy Implementation Department of the MEGD</td>
</tr>
<tr>
<td>3. Mrs. Battsetseg Senior officer - Hydrologist Water Management and Planning Division of TRBA</td>
</tr>
<tr>
<td>4. Ms. B. Urangoo Executive Director Water Research Development Centre</td>
</tr>
<tr>
<td>5. Mr. Altangerel. Ts Hydrogeologist Santhydro Consulting</td>
</tr>
</tbody>
</table>

Country coordinator:
Prof. Eelco van Beek, UNESCO-IHE/Deltares, Mr. Wim Douven, UNESCO-IHE, Mr. Yangxiao Zhou, UNESCO-IHE, Dr. Jan Willem Foppen, UNESCO-IHE

The team gained the following insights:
- The separate perception of water, food and energy should be integrated
- Everyday cooperation between governments and private sector should be improved
- Coherent legislation

The team will follow up on the following actions:
- Flood protection and management
- Management and treatment of waste water
- Water Governance
- Groundwater recharge innovations such as Aquifer storage and recovery
Nepal

Project:
Kavre Valley Integrated Water Supply Project

Learning objectives:

<table>
<thead>
<tr>
<th>Learning objectives</th>
<th>Netherlands Country Team Coordinator and members</th>
</tr>
</thead>
</table>
| (i) Gain knowledge about collaborative approach from other countries experiences to address the key challenges of the KVIWSP  
(ii) Identify tools and instruments for increasing social and institutional accountability at the local level in absence of electorate representative.  
(iii) Review KVIWSP design for establishing partnership for water security in Roshi Khola basin | Requested from Dutch expert team:  
Institutional Development Specialist, Social Development Specialist and Communication Specialist |

Project team members:

<table>
<thead>
<tr>
<th>NEPAL</th>
<th>Learning objectives</th>
<th>Netherlands Country Team Coordinator and members</th>
</tr>
</thead>
</table>
| 1     | Mr. Mani R. Gelal   | Project Director  
Secondary Towns Integrated Urban Environmental Improvement |
| 2     | Mr. Kosh Nath Adhikari | Project Manager  
Kavre Valley Water Supply Subproject |
| 3     | Mr. Ashok Kumar Byanju Shrestha | Coordinator  
KV Water Supply Coordination Committee |
| 4     | Mr. Sushil Gewali   | Executive Director  
Town Development Fund |

Country coordinator:
Mr. Gerard Soppe, Vitens Evides International

The team gained the following insights:

- Integrated Water Management is the Key for Success: Water management integral part of spatial plan of municipality
- Multi level governance structure – clear roles and responsibilities for Company establishment - municipality as a shareholder
- Water Board composition (electoral system)– Residents, business, and farmers; however lead by the state government
- Principals for tariff setting – Polluters pay for wastewater and interest-pay-say
- PPP approach could be effective for wastewater treatment
The team will follow up on the following actions:

- Incorporation of Integrated Water Resource Management in Water Policy, Plan, and law
- Restructuring of Kavre Valley Water Supply Management Board – e.g. inclusion of beneficiaries from municipalities and source VDCs
- Give Management responsibility for wastewater to Kavre Valley Water Management Board
- Define Water cycle of Kavre Valley, and prepare a programme to establish partnership for water security in Roshi Khola basin
- Pilot PPP approach for waste water management in one of the towns of STIUEIP.
Sri Lanka

Project:
Improved water supply and sanitation services in 30 year long civil conflict affected Vavuniya, Sri Lanka for a population of around 50,000 through effective Integrated Water Resources management of the Per Aru Reservoir.

Learning objectives:

<table>
<thead>
<tr>
<th>Sri Lanka</th>
<th>Learning objectives</th>
<th>Netherlands Country Team Coordinator and members</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Learning Objectives : 1) After building a drinking water reservoir how best to manage the water resources, catchment and downstream by controlling the environmental flow. 2) Once the implementing agency withdraws (after 2016) how best to sustain the WUA’s &amp; water management strategies developed. 3) Ground water regulating laws &amp; method of implementation in other developing countries. 4) Strengthening NWSDB capacity to manage water resources</td>
<td>Requested from Dutch expert team: 1) Innovative strategies for catchment protection and water use including rain water harvesting. 2) Techniques adopted for ground water mapping. 3) Share knowledge in ground water legislations and implementation</td>
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Project team members:

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<tr>
<th>SRI LANKA</th>
<th>Project team members</th>
<th>Government of Sri Lanka</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Mr. J.R.B Nedurana</td>
<td>Project Director (Dry Zone Urban Water &amp; Sanitation Project), NWSDB</td>
</tr>
<tr>
<td>2</td>
<td>Mrs. Saraswasthi Mohanathan</td>
<td>Additional District Secretary</td>
</tr>
</tbody>
</table>

Country coordinator:
Mr. Gerard Soppe, Vitens Evides International
Dr. Jan Willem Foppen, UNESCO-IHE

The team gained the following insights:

- Netherlands Authorities are shifting from various Sector based Acts such as G.W. Act, River Act, Sea water pollution Act etc., to an Integrated Approach for Legislation, while Sri Lanka still has various independent Acts resulting in delays in approval and implementation. Attempt made for IWRM in 2003 was not successful.
- Green house technology is very effectively managed in the Netherlands with respect to energy, water, heat reuse, evaporation, sunlight control, manure etc.
- Knowledge has been generated by very educated farmers instead of educational Institutions, which is a relatively new concept to Sri Lanka.
- That a NRW of 6% is excellent
- In the Netherlands meter readings are taken by water authorities once in 5 years. In Sri Lanka meter readings are taken monthly, which is a costly, unproductive exercise. Especially for small domestic consumers.
- The Room for the River project was an example of extensive stakeholder consultation, excellent co-ordination between client and contractor, accurate contract specifications by client and creating traffic by pass arranging.
• A way to assure quality work by the contractor is to negotiate to make maintenance the responsibility of the contractor.
• Interesting about the Room for the River project was that in case of disagreement between two parties, the work continued as the job was of national priority.
• Willingness for (accurate) data sharing benefits everyone and is crucial for development of 3D and 4D models.
• Monitoring ground water quality is essential for sustainable agriculture and nature preservation.
• Plant species adopted for groundwater will perish in a rainwater environment.
• Over extraction of groundwater can lead to extracting water from a below level strata with anaerobic conditions, not suitable for human consumption.
• Draw off and recharge of groundwater should always match.
• Defining clear boundaries between different water authorities is very important.
• Two-stage biological treatment for air to get rid of smell is a new experience.

The team will follow up on the following actions:
• The need for effective management of water resources and catchments was stressed (water safety plans).
• In Vavuniya Town, the Sri Lankan project team will have to develop a system for effective management of the drinking water source which is very limited in the dry zone.
Vietnam
Project: Secondary Green Cities Development

Learning objectives:

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1) how to strengthen relations between urban planning, environment and natural resource management, climate resilience and disaster risk management and identify investments for short, medium and long term; 2) participatory approaches, innovative implementation and financing mechanisms by engaging civil society and private sector; 3) deliver the project outputs in a timely manner; 4) obtain reliable information on climate change induced impacts; 5) develop long-term policies to protect climate sensitive public goods (water supply, political cooperation, etc.)</td>
<td>Requested from Dutch expert team: 1. The team requests for expertise in urban ecology, watershed based urban and environment planning and / or urban hydrological modelling. 2. Expertise in solid waste management, particularly for solutions in low volume waste collection.</td>
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Project team members:

<table>
<thead>
<tr>
<th>VIETNAM</th>
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<tbody>
<tr>
<td>1 Mr. Nguyen Cong Nguyen</td>
<td>Director of Project Management Unit</td>
<td>Ha Tinh</td>
</tr>
<tr>
<td>2 Mrs. Tran Thi Thao</td>
<td>Assistant Director, Financial specialist</td>
<td></td>
</tr>
<tr>
<td>3 Mr. Hoang Xuan Viet</td>
<td>Director of Project Management Unit</td>
<td></td>
</tr>
<tr>
<td>4 Mr. Van Anh Tuan</td>
<td>Vice Chairman</td>
<td>Tamky CPC</td>
</tr>
<tr>
<td>5 Mr. Chung Thanh Dong</td>
<td>Director</td>
<td>URENCO</td>
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Country coordinator:
Mr. Assela Pathirana, UNESCO-IHE

The team gained the following insights:

- Water is comprehensively and integrated managed and planned, making water become an advantage of the Netherlands, not the disadvantage.
- Water legislation:
- Water board:
  - Administration: Board is elected-Chairman is appointed
  - Finance: raised by levying taxes –pollution tax-Water System charge
  - Mission: Ensuring Sturdy dikes and sufficient water, flood and clean water
  - *Serving all purposes of water governance but also balancing all stakeholders’ benefits
- Water governance projects
  - Long term and comprehensive water governance planning
  - Strong political will
- Multi-level approaches in planning and realization
  - Good analysis and management of stakeholders
  - Winning supports of communities
  - Strong commitment of all stakeholders/beneficiaries

- Communities in water sensitivities
  - Proactive in water management: Flood prevention with flood gate in front of main entrance door of the house, very sensitive to water and supportive to government in water issues
  - Trust and support to government decisions because they know that what government is doing is for their safety and their benefits
  - Very well-aware of nature, water and environment importance

- Green and respecting-to-nature concepts in all construction works: dikes, dams, bridges, river shores are very green and natural and multi-functioning
Annex 2: Participants evaluation and follow up

A total of 40 participants responded to the post event survey given on the last day of the 3rd Asia Netherlands Water Learning Week. Overall the participants rated the learning week positively. With 74% rating it as valuable and 26% as interesting.

Figure 1: Overall Rating of the Learning Week

The objectives of the learning week in terms of addressing issues on water security and identifying innovative solutions for green growth were achieved (see Figure 1) with only 8% of the participants rating it as moderately achieved.

Figure 2: Addressing Water Security and Identifying Solutions for Green Growth

One of the key objectives of the programme is for the participants to identify smart choices that they can implement in their own country specific situations. Figure 2 shows that while this objective was rated highly, 52% and 20% of the participants rated this category as almost achieved and moderately achieved, respectively. Many of the participants coming from the developing member countries were very impressed with the Dutch projects and programmes. However, participants see some of the Dutch projects and activities as expensive that it will pose difficulty for the developing countries to implement in their own situation. This challenge will receive more attention in the Learning Weeks to come.
The participants in general found the learning week as a valuable course (see Figure 11). Everyone was satisfied with the programme and the organisation of the learning week. The participants appreciated the good combination of lectures and field visits. Many were motivated to adapt the ideas into their country specific water strategies and to continue to interact with the Dutch counterparts. Some also expressed their desire to continue to participate in the next learning week.
Annex 3: Netherlands Team Coordinators and Members Organizing Team:

Netherlands Team Coordinators and Members

- Ms. Lies Janssen, NWP
- Mr. Bart Tjeeuwen, Teeuwen Advice
- Ms. Zaki Shubber, UNESCO-IHE
- Mr. Ad Doppenberg, Vitens Evides International
- Mr. Gerard Soppe, Vitens Evides International
- Prof. Eelco van Beek, UNESCO-IHE/Deltares
- Mr. Wim Douven, UNESCO-IHE
- Mr. Yangxiao Zhou, UNESCO-IHE
- Mr. Assela Pathirana, UNESCO-IHE
- Mr. Abraham Mehari Haile, UNESCO-IHE
- Ms. Meiny Prins, CEO Priva
- Prof. Chris Zevenbergen, UNESCO-IHE/Dura Vermeer
- Dr. Jeroen Rijke, Flood Resilience, UNESCO-IHE
- Dr. Wim van der Linden, Deltas
- Dr. Koos Groen, Acacia Water
- Ms. Ellen Kelder, Municipality of Dordrecht
- Dr. Berry Gersonius, UNESCO-IHE
- Mr. William Veerbeek, UNESCO-IHE
- Dr. Sebastiaan van Herk, UNESCO-IHE
- Dr. Jan Willem Poppen, UNESCO-IHE
- Mr. Daan Spitzers - Vitens
- Mr. Erik Vermaas - Vitens
- Mr. Sander Nugteren, Vitens
- Mr. Ben Broens, Rijkswaterstaat, Directeur RvR
- Mr. Paul Mathieu, City of Nijmegen
- Ms. Yvette Pas, City of Nijmegen
- Mr. Cor Beekmans, Rijkswaterstaat, RvR project
- Mr. Karsten Schipperheijn, City of Nijmegen
- Mr. Eric Kuindersma, Water Board Rivierenland
- Mr. Martin Egas, Dura Vermeer
- Mr. Carl Pauwe, Water Board Delfland
- Ms. Marleen de Lange, Water Board Rijnland
- Mr. Johan Remijn, Water Board Rijnland
- Mr. Niek Oortman, Water Board Rijnland
- Ms. Adri Bom-lenstra, Loco-Dijkgraaf
- Mr. Paul Oostdam, Delfluent
- Audrey Esteban
- Stefan Siepman