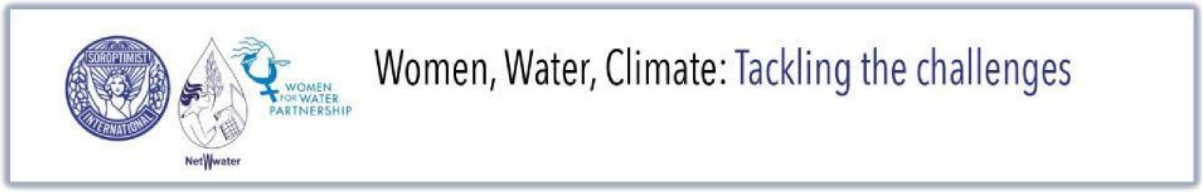


Women, Water, Climate, Tackling the Challenges

BACKGROUND

Climate change and water security continue to be the most critical development issues in South and Southeast Asia. Despite growing numbers of people emerging from poverty, issues around water insecurity remain, and in some cases, have increased. During the past 20 years, floods and droughts - the two main water and climate related disasters – have caused more than 166,000 deaths, affected another three billion people, and caused total economic damage that amounts to nearly US$700 billion (*The UN World Water Development Report 2020*). The current COVID-19 pandemic has exacerbated the demand for water since hand-washing remains the most important factor in containing its spread. Asian countries such as India are among the hardest hit as large segments of the population live in overcrowded urban slums or remote rural areas with very poor health facilities.

Women's role in water

Women for Water Partnership (WfWP) with partners NetWwater (NWW) and Soroptimist International of the Southwest Pacific (SISWP) with the financial support of the Stockholm Environmental Institute (SEI) and Sweden Sverige, organised a conference on '**Women, Water, Climate: Tackling the Challenges'.**

Objectives
The purpose of the Conference is to foster regional cooperation and policy dialogue for sustainable development and environment sustainability through capacity building, knowledge sharing and increased collaboration.

Although the face-to-face conference was scheduled to be held in Sri Lanka on 2 and 3 November, the pandemic necessitated taking the conference online.

Field visit
A field visit to be organised to Deduru Oya, a river sand mining site to study ecosystem changes with the rural community to understand the climate related water impacts, had to be aborted due to health and safety concerns related to COVID-19.

Meeting

A 'Voice of Water' meeting for Sri Lankan participants could not be held in Colombo either, due to the pandemic. The meeting was to highlight climate and water security challenges in remote rural areas and communities affected by issues such as catchment degradation, water pollution and sand mining.

WEBINARS

The Conference was preceded by a series of eight 75-minute webinars which illustrated the experiences of women in seven South and Southeast Asian countries and their responses to the challenges of water security and climate change. Featured over 4 weeks in October 2020, these case studies discussed emerging issues related to climate change, water security, water management and conservation. They were followed by Q&A sessions and interventions by young water professionals

and water experts, and included the perspectives of women, youth, indigenous peoples, and minority groups.

Webinar 1

'East Kolkata Wetlands: Women confronting climate change'

Web link: https://youtu.be/JFmdUKSOHc4

This is the first in the series and was moderated by **Priyanie Amerasinghe**, Senior Researcher, IWMI

OVERVIEW

'This webinar illustrates how human beings can live in symbiosis with nature, and how the empowerment of women could contribute to the well-being of entire communities.

The case study was presented by Drubha Das Gupta, Director, Society for Creative Opportunities and Participatory Ecosystems (SCOPE).

The East Kolkata wetlands is the largest waste water recycling plant in the world. Its distinctive ecosystem provides a natural solution for managing and treating the solid and liquid waste generated from a population of over 5 million people in the adjoining city of Kolkata. The wetland inhabitants have introduced a unique system of sewage farming that utilises the nutrients in the household waste fed into the wetlands, to grow paddy and vegetables, practice animal husbandry and farm fish.

The ecosystem also safeguards a large portion of downstream ecosystems, including the Bay of Bengal, that would otherwise have been severely affected by sewage-based pollution from Kolkata city.

Women have been accepted into the fabric of the livelihoods of this wetland community and play a pivotal role throughout these production processes. They work in equal partnership with men, but their inputs are expected only in tasks compatible with their abilities and roles as homemakers. They partner their male counterparts in maintaining and preserving the ecological balance of the wetlands.

The contribution of women is especially essential to vegetable farming, as they grow as well as sell their crops in the city markets. Some of the women have engaged in fish farming from the 1990s and work alongside their male counterparts, earning equal pay. They do pond maintenance work by day but are not required to work at night since the community understands their need for time off to attend to their household chores and families. Women are also key players in an unwritten system of inheritance within households.

CHALLENGES

Climate change delayed the monsoon during the past few years, which caused havoc in farming and food production. This year, the Amphan cyclone caused widespread damage to which was added the impact of the COVID-19 pandemic.

These challenges have been exacerbated by the threats of encroachments, illegal constructions, urbanisation and industrialisation, and industrial and chemical waste, which are destroying the ecosystem.

SOLUTION

To combat the effects of climate change, SCOPE introduced a programme to two villages of 80 farmers in this wetland community. The programme aims at improving the livelihoods of women farmers, who were supplied with high-yielding varieties of paddy seeds and introduced to organic methods of paddy cultivation. This cultivation will be monitored throughout and SCOPE plans to extend the programme to other districts. SCOPE also provided training in animal husbandry as well as financial support for rebuilding animal shelters and the roofs of homes devastated by the cyclone.

As an integral part of these rural and urban communities, youth participation will also contribute to the success and continuity of the wetlands. Young water professional **Mukta Akter**, Executive Secretary of the Bangladesh Water Partnership, itemised the numerous areas in which this could be achieved. As the leaders of the future, youth could engage in a variety of awareness programmes as well as partner women in conservation initiatives.

As suggested in the Q & A session, a bio rights programme would also enable women to benefit from the eco system services while sustaining them with insurance cover during lean times.

Expert discussant, Environment Scientist and senior fellow of WWF, **Missaka Hettiarachchi**, however, cautioned:

> *'The uniqueness and continuity of this ecosystem is based solely on Kolkata's history of political and social activism. The wetland's survival despite external pressures, rests on its unique combination of communities determined to maintain the system, the very diverse use of ecosystem services as well as the support of informal institutions like cooperatives and farmers organisations, together with the diversity of its fauna and flora.'*

As a result of the above factors, some of the achievements of these wetlands may not be readily replicable in other urban wetland systems. However, the success of this approach provides several enlightening insights that could be adapted and introduced elsewhere.

LESSONS LEARNED

> *Empowering women as entrepreneurs and giving them a voice in their families and communities have had positive impacts on the health and well-being of the entire community. It has been a key means to reducing poverty and ensuring prosperity within the community.*

This model for the recycling and re-use of waste designed by the wetland community could be replicated in other communities as well.

Webinar 2

Nepal - drinkPani: Nepali Women and Youth in Action

Web link: https://youtu.be/9vURIlkaJzs

The webinar was moderated by **Mariet Verhoef-Cohen**, President, Women for Water Partnership.

OVERVIEW

'Shaping the digital water future' discusses the effectiveness of making women and youth equal stakeholders in the decision-making process on water and climate change. The case study, presented by Amrita Gautam, founder of drinkPani, charts the story of how youth bridged the information gap between organisations by using emerging technologies to assess water quality, thus making a significant contribution towards the water security of the country.

Over 80% of water resources in Nepal are contaminated by faecal matter. Floods, landslides and melting glaciers, the results of climate change, have also contributed to the low water quality. This contaminated water has caused widespread disease and death, especially among children under 5 years of age and other vulnerable groups.

CHALLENGES

Although It is imperative that the supply and quality of water is regulated, the dearth of information between communities, water utility organisations and decision- making bodies has prevented the use of evidence-based decisions for improving water security.

SOLUTION

A research-based project was initiated to bridge the information gap. 'Young water volunteers' from two elementary schools were recruited to determine the supply and quality of the water in two water supply schemes at Pokhara Metropolitan City. The youth were trained at 'DrinkPani' water clubs and presented with drinking water information kits in order to determine water quality and collect and test water samples. They communicated the results to the stakeholders using a variety of ICT

platforms and applications. Young water volunteer Khsitiz Shapa, a member of drinkPani, outlined the methodologies used by the DrinkPani water club to assess and monitor water quality.

Expert discussant Sudan Panti, who works with the government and with WHO, Nepal, attributed the shortfall in monitoring water quality to be due to a lack of resources in state agencies. He said this project demonstrates that youth volunteers could step in to fill the resources gap and advocated a risk-based approach for continuously assuring the supply and safety of drinking water as well as a climate-resilient water safety plan.

He elaborated:

> *'This plan would involve risk assessment and risk management activities undertaken in teams that include a major proportion of women. Introducing a government policy and plan to involve students as well as adding water quality methodology to school syllabi and allocating resources for training and associated activities would be the way forward.'*

Young water professional Vincy Abraham, Founder and National Campaigns Manager of Blue Wave Impact, New Delhi, India, identified the participation of women and youth as being essential to achieving the goals of SDGs 6 and 14, namely Clean Water and Sanitation, and Climate Action. She suggested the creation of more decentralised power structures and institutions to include these two groups in making decisions.

According to her, financial constraints often limit projects such as these from being scaled up. Some key ways for obtaining funds include involving private players, having the government mandate companies to contribute a portion of their profits to social responsibility initiatives, as well as motivating people to channel their investments to climate action projects.

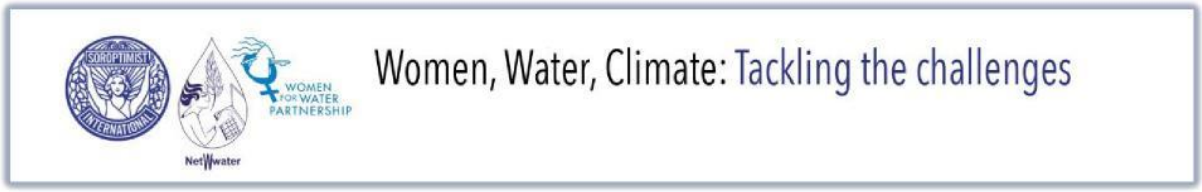
She said:

> *'Leveraging technology is also necessary for future work on climate and water. Opportunities should be made for young people to use their creativity as well if the thinking on water and climate action is to be reformed and revolutionised. However, despite the importance of empirical data for the success of a project, Indigenous data must not be discounted because climate action requires local knowledge, and women and young people are invaluable sources for procuring it*.'

LESSONS LEARNED

These initiatives could be used in other countries as well. Ownership and accountability could be increased by empowering ground-level institutions to support the initiatives.

> *However, the effectiveness of such initiatives could be sustained only if women and youth are made equal stakeholders in the decision-making process on water and climate.*



Webinar 3

Rural Bengal Women: Coping with Climate Change

Web link: https://youtu.be/iYZnFR9XkPs

The webinar was moderated by **Felix Reinders,** Chair of the Global Framework on Water Scarcity in Agriculture and President of the International Commission on Irrigation and Drainage.

OVERVIEW

'Way out of a floating life,' demonstrates the effectiveness of women as changemakers and how their empowerment elevated the quality of life of the entire village. The case study was presented by Mina Das, Director of Nishtha, a CBO that works towards empowering marginalised women and girls.

Over 400 small and marginal farmers in the village of Jugdia used to cultivate four crops around the year. Floods and droughts in recent years had reduced cultivation to a single winter crop, thereby gripping the village in a vice of poverty and despair. The men took out their frustrations at the difficulties of life on their womenfolk, who were mainly illiterate and had no rights or voices in their families or communities.

CHALLENGES

Environment disasters caused by climate change brought with them poverty, hunger and despair as floods and droughts ruined crops. This reduced the poor villagers to deeper levels of poverty and forced several farmers to pursue alternative and meagre, avenues of income.

SOLUTIONS

In an effort to uplift themselves and their village, the women of this village put their heads together and came up with a model for restoring their agriculture lands. Their plan involved reclaiming an existing canal that would drain the flood water from their inundated paddy lands, and building a new canal that would store the water to irrigate their crops during the rainy season. This plan was communicated to the authorities and accepted. Today, these women rub shoulders with officials of the Panchayat as well as the higher officials of the state administration who have adopted the plan which is now in the process of implementation.

Expert discussant, **Anjal Prakash,** Research Director and Adjunct Associate Professor, Bharti Institute of Public Policy, Indian School of Business confirmed that the case study illustrates how adaptation options could be made gender sensitive by involving women in the planning, execution and benefits.

There are several barriers to providing gender -sensitive options, chief among them being the dearth of gender- sensitive information linked to climate change available for policy and planning purposes. Insufficiency of data also hampers the tracking of the progression of gender changes over time, so policymakers are unable to introduce transformative gender-sensitive policies. It is vital that this information is made available since climate change impacts women more than men.

Poor women in India carry out the major portion of agriculture activities and despite not having contributed an iota towards global warming, are at the receiving end of its worst impacts.

Climate change has created more stress on the environment and on agriculture, so the workload of poor women has increased. As a result, they suffer from 'time poverty,' and have no time to devote to purely personal needs, so they find it difficult to engage in full- time paid jobs. It is important that women free up time for leisure as well as for policy making, and participate politically in their local organisations as these will increase their sense of self- worth as well as contribute to economic growth. He suggested that a programme be introduced that both strengthens women's capacity for implementation as well as enables them to generate an independent income.

Young water professional **Eliana Harris** did her MSc thesis on the 'Gender Environment Nexus.' She examined the gender barriers to women in irrigation in India, declaring that women should be involved at every level and throughout the process if climate change is to be combated.

She declared:

> *'Although women are more affected by the impacts of climate change than their male counterparts, especially in the areas of food scarcity and natural disasters, they remain excluded from environmental decision- making. Strengthening the role of women in environment decision-making would also facilitate the achievement of the SDGs, which must be achieved by 2030. Investment in women results in the investment in future generations.'*

Greater gender-inclusivity would have substantial positive impacts on all spheres of activity; environmental – since women are more nurturing of the environment; social - they spend more of their income on the well-being of their families; economic– they will contribute to economic growth and political – their involvement could inspire other sectors to follow suit.

LESSONS LEARNED

Empowering women through utilising their indigenous knowledge on water and the environment, can transform communities. The plan can be adopted to benefit farmers in other areas too.

Webinar 4

Malaysia - Harvesting Nature's Bounty: The Sarawak Story

Web link: https://youtu.be/FrmS3q5zJ1U

This case study was moderated by Saradha Narayanan, National Representative Malaysia, Soroptimist International of the South-West Pacific and Project Director of SIROM: Clean Water for Rural Communities

OVERVIEW

'Harvesting nature's bounty' outlines the success story of women who were empowered though the provision of water. The case study was presented by Joanne Yeoh Poh Suan of Soroptimist International Region of Malaysia (SIROM) who is also project manager of the SIROM project, 'Clean Water for Rural Communities' that manages this programme.

The journey began when SIROM and a network of partners identified the remote and impoverished village of Long Tanyit in Sarawak as a worthy recipient of clean and potable water. Long Tanyit had no electricity, no access to clean potable water nor sanitation, and no primary schools or medical clinics in close proximity. Its population of 300 comprises mainly of women and young children, most of the youth having left to work in the cities. The children were undernourished and in poor health.

CHALLENGES

The village suffered from a series of drawbacks. Lack of basic infrastructure and the basic comforts of civilisation were mainly due to its remoteness. To this was added logging and deforestation which resulted in the loss of livelihoods and caused migration to the cities. These deficiencies were further aggravated by erratic weather patterns brought on by climate change, floods destroyed crops as well as the meagre infrastructure.

Women had no voice in the community as the patriarchal structure of the community intimidated them.

> *Women have a different relationship with the environment and ecological process than men due to gendered roles and responsibilities. This has given them invaluable indigenous expertise.*

SOLUTIONS

With funds provided by the SI President's Appeal (2018-2020) SIROM introduced rainwater harvesting for water storage in the dry season and the village was given ownership of the project. Villagers were taught to mount the water tanks and connect them to their homes with gutters. Filters were also installed for drinking and cooking purposes. Five girls who had left the village were encouraged to break gender stereotypes and train as welders; they returned to the village to help install the rainwater harvesting system.

Easy access to clean potable water freed up time otherwise spent in searching for water. Using the 3E strategy, 'educate, empower and enable', the women were empowered as entrepreneurs and home makers through training and education. They took on leadership roles in phase 2 of the

project, in which they were instructed in organic farming. Today, 120 women and girls work in organic farming collectively, they take turns - some farm while others look after their children. Vegetable cultivation flourishes and the women use the produce to improve the nutritious intake of their families and sell the balance to women in adjoining villages and logging camps to earn an income.

Women were also taught the importance of using clean water for cooking and drinking and were instructed on water conservation, personal hygiene and sanitation. As a result, health among the villagers and their children has improved significantly.

Their new skills enabled the women to have a voice in their homes and communities and gain the respect of their male counterparts with whom they can now work on an equal footing.

The project has also addressed the first six SDG goals, namely No Poverty, Zero Hunger, Good Health and Well- Being, Quality Education, Gender Equality, Clean Water And Sanitation.

Expert discussant Salmah Zakaria, Chair of the Academy of Sciences of Malaysia, Water Committee, stated that the Government of Malaysia was planning to implement the first phase of its Water Sector Transformation Agenda next year to accelerate implementation of IWRM in remote areas of the country as well. This phase has as its twin goals, the attainment of water security and sustainability, and the provision of water as an economic opportunity.

Young water professional Affan Nasaruddin, Co- Founder of the University of Malaya's Water Warriors, a living lab for IWM on campus, emphasised the importance of community involvement in a project which he termed 'heartware'. This, combined with 'software' namely institutional arrangements, policy and finances, and 'hardware' which he identifies as being scientific and technical inputs are the elements that ensure success. A case in point was the project initiated by the Water Warriors that cleaned up and transformed the polluted Varsity lake into a 'living lab' by mobilising the stakeholders on campus.

Commenting on the case study he observed:

> *'There is a sharp distinction between the water problems faced by rural areas and those faced by urban cities. Improved access to water for domestic and agriculture use would enable women to allocate more time for income generating as well as governance activities in their communities.'*

He advocated that Long Tanyit use groundwater if rainwater harvesting proved inadequate during the drought season as this was a safer alternative to using polluted river water. The communities should adapt to climate change, for instance, grow only climate- resilient crops, to optimise output. Careful consideration must also be given to projects introduced for the benefit of the people, to ensure that they really do benefit the people.

LESSONS LEARNED

Two important lessons were learned. Firstly, that the success of a project can be gauged by its impact on the women in the community, secondly, the supply of clean and potable drinking water to communities holds the key to eradicating poverty.

Webinar 5

Facing Nature's Fury: Women Take Charge in Lombok, Indonesia

Web link: https://youtu.be/jmJCyXSQVkE

This webinar was moderated by **Mariet Verhoef-Cohen**, President, Women for Water Partnership.

OVERVIEW

'Facing Nature's Fury' outlines the story of how water and livelihoods restored to the Rebuk Satu village, provided its women with a new lease of life and hope, and empowered them as decision-makers in their community. The case study was presented by **Isla Winarto**, Project Director of Soroptimist International of Jakarta (SIJ).

This two -year project was carried out in Rembiten, on the island of Lombok, and received local and provincial government support. It was funded by the SI President's Appeal Fund. The village suffered from a scarcity of water following the earthquake of 2018, had no WASH facilities, and practiced open defecation. They waited for hours to collect water and relied mainly on rainwater. About 80% of villagers were illiterate. The women had to give up their tradition of weaving when they were no longer able to afford the raw materials.

CHALLENGES

The project itself faced a number of challenges. Locating a source of plentiful clean drinking water was difficult, which caused delays. Building materials had to be brought in from neighbouring Java as materials available locally were of poor quality. Due to substandard workmanship, some WASH infrastructure had to be re-done, local trainers for the programmes were also in short supply. Added to this was the COVID-19 pandemic which delayed the project by five months.

Changing mindsets proved equally demanding. The villagers had to be steered away from age- old beliefs about hygiene, cleanliness and water conservation, as well as induced to move from traditional farming to organic cultivation. Patriarchal attitudes of women's subservience to men had to change as well, and education on the importance of preventing underage marriages was necessary.

SOLUTIONS

The project was driven by community involvement and acceptance. All villagers were involved in the initiatives from the start, through village meetings and the appointment of project champions as

intermediaries to respond to queries and concerns, written agreements enabled communication on each aspect of the project. Women were assigned key roles throughout.

SIJ introduced this project in two phases. Phase 1 provided the villages with water and WASH facilities, Phase 2 introduced capacity building, training and income generating initiatives.

The local weaving tradition was revived. The weavers were supplied with the necessary yarn and equipment and trained to produce new designs as well. Beautiful weaves are now being produced, which sell for over 10 times more than earlier prices, and the tradition can now be passed on to the next generation.

Organic farming techniques were taught, and life skills programmes on a variety of topics were introduced. The villagers followed classes on literacy, health and hygiene, sewing and baking. Classes on climate change equipped them with the knowledge needed to prepare for natural disasters. Micro financing, small business development and financial management programmes taught the villagers income generating activities.

All key areas have now been implemented and are having a positive impact. WASH facilities have been provided to over 100 villagers; 22 women have been appointed to leadership roles. Youth are also being engaged and are in discussion on their roles in the village and their ideas for improvement. The villagers themselves have expressed 100% satisfaction with the project.

The project ties in with SDG goals 4, 5 and 6, namely, the provision of Quality Education, Gender Equality, and Clean Water and Sanitation, and also involves SDG goals 1, 2 and 3, namely, No Poverty, Zero Hunger, and Good Health and Well Being.

Expert discussant **Fany Wedahuditama,** Regional Coordinator for South East Asia, Global Water Partnership (GWP) outlined various aspects of the project that ensured its sustainability. He advocated the importance of identifying all stakeholders of a project, stating that the inclusive approach of this project has been fundamental to its success. The project is comprehensive and successful in terms of design and implementation as the lessons learned from the recent earthquake had been incorporated into its design. This confirms consideration of the needs and concerns of the community, which is also affirmed by the high community participation. Application of the user-pays principle affirms that the sustainability of the project was addressed from inception. It is noteworthy that the project goes beyond merely supplying the community with infrastructure facilities, and teaches them livelihoods as well.

He expressed interest in involving his own organisation, GWP, and its network of partners, in collaborating with SIJ in the project's next phase.

He suggested:

General issues mapping should be incorporated into the design of every project hereafter, as this will enable identification of particular sensitivities that could influence the project's long-term sustainability.

Young water professional **Shotaro Goto** has experience in WASH and sewage planning. He emphasised the importance of communication and sharing technologies to mitigate the impacts of climate change.

He declared:

> *Experts have difficulty in developing indicators to assess the impacts of SDG 6, so the general public is unaware of climate change impacts and the fact that they could worsen in the future, and so is unable to take mitigatory measures. Youth have an important role to play here by sharing this information on social media since they are the generation best equipped to do so.*

Water and sanitation issues are more serious in low and middle- income countries. Therefore, those living in high income economies who possess mitigation technologies should assist low- income economies by sharing these technologies with them. He quoted the example of his country, Japan, which has developed flood mitigation technologies and is willing to share the technology with other countries.

He suggested that the wider effects of WASH issues should also be considered, which necessitates collaboration among experts in those areas, namely, water, sanitation, gender, poverty and the environment.

Young water professional **Uli Filtru Handayani,** Communication and Project Officer for Alliance of Water Stewardship, Indonesia, lauded the project for its several strengths. She itemised these strengths as including its community-driven approach which ensured that the solutions introduced met community needs, the empowerment it promoted through awareness and capacity building and training programmes, its infrastructure design that is responsive to climate change, and the fact that it also involves the government.

She suggested several improvements for the future. These include, more emphasis on youth involvement as a bridge between the village and community leaders, the need for a stakeholder assessment to ensure that all members of the community contribute their ideas, assurance of the sustainability of the project - which includes building and maintenance of WASH facilities as well as ensuring that these facilities are functional and provide a safe and secure water supply. Since Lombok is a tourist area, attention must be paid to protect important forest areas and water sources. Domestic fresh water could be used for irrigation, installation of a rainwater harvesting system would complement the groundwater and surface water supply alongside policies that should protect and regulate their use. Youth can also help maintain the systems to ensure sustainability. Safe access to water and sanitation in the context of climate change is vital. Youth involvement will ensure the long-term sustainability of the project.

She observed:

> *'There is still a lot of work that youth could engage in, in Indonesia, especially in the area of water issues and climate change. Many people here still link climate change with emissions, we must create awareness through social media.'*

LESSONS LEARNED

This programme has the potential to be replicated in other impoverished villages as well.

> *Empowering women as changemakers is fundamental to elevating the living standards of their communities. It is also important to include and involve all members at every level of the community in the process if the change is to be sustainable and carried into the next generation. Every aspect of development and climate change must also be considered concurrently if an initiative is to be successful, as all issues are intertwined.*

Webinar 6

Thailand – Khung Bang Kachao: Keeping Bangkok's Green Lung Breathing

Web link: https://youtu.be/OSfPZKTJR7k

The webinar was moderated by **Christiaan Berend Morssink**, President, Global Water Alliance

OVERVIEW

The case study illustrates the effectiveness of social collaboration for creating sustainable socio-economic development. It was presented by Ampai Harakunarak, who specialises in environment and social safeguards, environment policy and natural resources management.
Khung Bang Kachao is an oasis of green located at the curve of the Chao Phraya River. It is the last remnant of Bangkok city's green metropolis and was named the 'Best Oasis of Asia' by TIME magazine in 2006.It is the 'lungs' that produce oxygen for Bangkok's seven million inhabitants.

Canals and water bodies comprise about one-fifth of this urban oasis, wetlands and groves occupy another one-fifth, while a quarter of the area constitutes agroforestry and home gardens. Residential areas and parks take up the balance area. The wetland area has an abundance of fresh, salt, and brackish water, which are the repositories of its varied vegetation and the source of the rich flavours of the fruit and vegetables grown there. It is rich in biodiversity and home to over 600 species of flora and fauna, including birds and fireflies. In addition to its environmental resources, this green space also supports cultural, economic and social resources and is a tourism hot spot.

The area is home to Khung Bang Kachao communities of about 40,000 people, of which half are women.

CHALLENGES

Of late, social, economic and environmental changes are impacting the continuity of this lush land and waterscape. The built environment that surrounds it is encroaching on it as urbanisation and industrialisation advance rapidly.

This is aggravated by changes in land use and climate. Frequent floods threaten ecosystem integrity and biodiversity and are leading to the loss of several local species. The decreasing availability of freshwater due to saltwater intrusion from the Chao Phraya River and polluted wastewater from households, farms, and industries is reducing agricultural yield. Commercial agriculture that uses harmful fertilizers and pesticides is also putting the aquatic and forest ecosystems at risk.

SOLUTION

In 2018, the project 'Our Khung Bang Kachao' was initiated by the Chaipattana Foundation in collaboration with 34 leading national, private sector, civil, academic and research organisations. The project also received the sanction of the Royal family of Thailand.

Using a multidisciplinary approach, the project applied the collective impact model that invited cooperation across all sectors as well as the participation of the entire community. It had a clear vision and shared goals that used the collective skills and knowledge of the wide and varied partners to conserve and develop the oasis to make it sustainable into the future. The project works closely with the community and responds to community needs.

The team set specific goals which included improving livelihoods, preserving biodiversity and fostering sustainable community growth. The focus is on water management and erosion control, waste management, youth development, income generation, cultural development, and the promotion of sustainable tourism.

The project has recorded significant achievements in its first year. Green areas have been increased, green markets to sell local produce have been established and community incomes augmented. Scenic routes for tourists have been developed, youth empowerment and career development initiatives have got underway, and youth are participating in biodiversity studies. Community capacities are also being built and strengthened on various aspects of IWM using indigenous knowledge, capacities are also being built to combat existing and emerging trends especially in environmental and climate change. in the current context, this includes coping with the COVID-19 pandemic.

The communities also benefit from a biodiversity management project funded by the Global Environment Facility (GEF), UNDP and Business and Export Development Organisation (BEDO) which, together with local government, works with the communities on livelihood development and has introduced gender responsive activities and training.

Expert discussant **Simi Kamal**, Founder and Chairperson of the Hisaar Foundation, Pakistan, is a specialist in women's empowerment, social governance and poverty alleviation.
She said:

> *Bangkok's green oasis exemplifies how a modern city that has expanded during the past century has kept the balance between green areas and development. It highlights a number of areas, for example how greening can combat climate change, and focuses on the needs of communities, biodiversity, the building of green value chains and on IWRM. It also circumvents the complex issues of administrative and private sector support. There is often a clash between the authorities and communities, and large fossil fuel companies support greening of the environment. All these and many other aspects have been brought together here to form a cohesive whole.*

She shared three examples of other megacities around the world that have strived to move away from concretization to keep a balance between green areas and development and compared them to the Bangkok experience.

She cited the experience of Lake Biwa in Japan which had been polluted by the industrial effluents of surrounding cities. Women were at the forefront of a movement that restored the lake to its pristine condition. A group of mothers took to the streets to raise awareness of the pollution in the lake that was causing sickness in their children. Their lobbying reached the Supreme Court of Japan, which decreed restoration of the lake by the companies responsible for its pollution.

Gutter Baghicha in Karachi, Pakistan, once comprised acres of greenery that used to serve as the lungs of the city. It was inhabited by many indigenous fauna and flora. However, the area has been steadily depleted over the years, through land-grabbing for the construction of unauthorized housing and shops. The green space is now only one-fourth of the size it once was. Shehri, a civil organisation, led a movement to preserve this vital ecosystem, which included campaigns and court appearances, and the encroachment has been halted for the time being. In its present size however, it is unable to fulfil its earlier function as the lungs of the rapidly expanding city of Karachi.

Cape Town is an example of the impacts of climate change. Day Zero, the day on which the city would run completely dry, was to be upon the city last year. But the catastrophe was averted by the citizens themselves, who banded together to limit water usage, and today, Day Zero is no longer an imminent threat.

She declared that Bangkok should be taken as an example for all megacities, although many cities lack the water and rain that Bangkok enjoys. If women in the water sector are to respond effectively to the challenges of climate change, which is occurring much faster than expected, they must support the adoption of good practices seen in cities globally. These cities have given out urban allotments, supported effective laws, facilitated different levels of society coming together, and fostered a better understanding of the roles of women, youth and citizens. Changes will occur when all these elements come together. Each city must also learn how to grow food in every available space. This involves green thinking and the greening of buildings.

Young water professional **Sumit Vij,** Wageningen University and Research, The Netherlands, Vrije Universiteit Amsterdam, provided an overview of some of the aspects of the case study that could be addressed in the future. He advocated youth involvement in every aspect of these future challenges.

When considering megacities, he emphasised the importance of realising the value of the different types of water resources available. Wastewater is a major issue in cities and the focus is usually on cleaning the wastewater. But the term 'wastewater' is actually a misnomer as it has a natural value which urban areas could utilise to grow the food for rapidly expanding cities, instead of relying on the peri urban areas for food supplies, thereby depleting their resources. The presence of the three different types of water in Khung Bang Kachao, demonstrates the usability of water and its importance to nature and people. This requires the intervention of youth.

He said that although the case study considered sustainable development and IWM it must go beyond this to include the linkage between climate change adaptation and SDGs as well, especially SDGs 5, 6 and 13, namely, Gender Equality, Clean Water and Sanitation, and Climate Action; ways must be devised to bring these three goals together.

He observed:

Climate change adaptation and the SDGs are large international initiatives but they have been working in silos. It is vital that they are brought together. The many effective partnerships forged in the 'Our Khung Bang Kachao' project could be utilised to bring the two initiatives together with the facilitation of youth. Since youth have a futuristic outlook, they will be successful in bridging the gap between the synergies and trade-offs.

Young climate activists could be brought to the forefront to effect the above. Research is also necessary to understand these three SDG targets and devise strategies to break silo thinking in science and bureaucracy.

Asian women professionals, by virtue of the many hats they wear, have a futuristic approach and can bring about a better understanding of nature. Working with youth, they could bring about a paradigm shift that would help develop proactive plans for the future.

LESSONS LEARNED

Cities can mitigate the challenges of climate change and water scarcity by creating green spaces. Youth also have a key role to play in effectively managing the city's water resources and in bio diversity initiatives.

SESSIONS

Day 1

Web link: https://youtu.be/xN1T3LQoxSo

Opening remarks

The first day of the two-day conference, 'Women, Water, Climate: Tackling the challenges' was held online on Monday 2 November and moderated by **Mariet Verhoef-Cohen,** President, Women for Water Partnership, The Netherlands**.** The moderator welcomed the participants and mentioned the timeliness of the theme, as the conference was being held at a time when the entire world was experiencing the challenges of the COVID-19 pandemic. In such a situation, she said, clean drinking water is necessary, and women are essential to take care of the sick and look after and feed their families. Climate change disasters are all water- related, and women, water and climate are involved stakeholders.

She explained that the conference was to be held in person in Sri Lanka to enable participants to network and better understand the issues involved, but the lock down on the island compelled the organisers to take the decision to move online, so the conference was now being held as a full virtual zoom seminar.

The conference opened with an address by **Minister Dinesh Gunawardena**, Minister of Foreign Affairs, former Minister of Water Supplies. The Minister said that the COVID-19 pandemic confirms the critical importance of hygiene, sanitation and access to clean water for preventing and containing diseases, to which, unfortunately, over half the world's population has no access.

He said:

> *Sri Lanka's access to clean drinking water and sanitation facilities is the highest in South Asia and the government plans to increase this in order to improve health and living standards. The island's hydraulic civilisation was built by the ancient kings and is acknowledged even today as being an amazing engineering feat. It enabled Sri Lanka's ancestors to conserve water not only for domestic and agricultural use but also to conserve the environment, retain soil moisture and maintain the water table.*

This superior technology developed the tank cascading system which relied on the temporal and spatial disparities of rainfall and recycles and reuses water through a network of tanks. The tank-system controlled floods and droughts and ensured continuous paddy cultivation and seasonal water supply for households and livestock.

Over the past decade, however, the frequency of extreme weather events has caused water stress and prompted Sri Lanka's ranking of second place in the Global Climate Risk Index of 2019, in its vulnerability to climate change.

Climate change has affected the most vulnerable groups including women, who bear the burden of water management in their households and must walk long distances to fetch water that may not be sufficient nor potable to meet household needs.

> *Women and girls are also the most affected by poor sanitation. Reducing the availability and quality of water will affect the availability of food and the access to and utilisation of water, which will most impact poor farmers of which 43% are women. Natural disasters impact women most because of socio economic structural inequalities and cultural and economic disparities. It is, however, women who are central to collecting and safeguarding water, and are also responsible for 70% of water management worldwide. Therefore, they are key to laying the foundation for a resilient society.*

This conference connects three of the SDGs, namely Gender Equality, Clean Water and Sanitation, and Climate Action. SDG 17 is also relevant here because it emphasises the necessity for strong international cooperation, which is needed to ensure that countries have the means to recover from the pandemic. Therefore, conferences of this nature that build partnerships, share knowledge and collaborate are timely and important. to plan better water management in the future.

The **Keynote Address** was given by **Dipak Gyawali,** Nepal Academy of Science and Technology, former Minister of Water Resources.

Prof. Dipak Gyawali stated that social sciences had failed because they suffered from serious deficiencies. They either had too much bureaucratic socialism, or, following the collapse of the Soviet Union, relied solely on markets. Later, a combination of state and market was adopted but this too was inadequate.

He declared:

> *Problems of climate change, water, energy and problems of inequality and lack of inclusiveness of vulnerable groups cannot be solved by textbook engineering. Public-private partnerships are incomplete because they include alliances only with the top management and bureaucracy, namely the first two legs of the three-legged triangle. The third leg must be included, namely civic activism, if sustainable solutions are to be arrived at.*

So, policy-makers must consider public-private-civic partnerships because each of these organising styles has a different approach to the problem. They have very divergent views on risk, justice, nature as well as on development, and each uses very diverse forms of power: markets use persuasive power, governments use coercive power and activists use moral power. This is based on Hindu-Buddhist philosophy. Since we do not live in an ideal world, we experience, what is termed a 'distortion of

karma' when governments, markets and civic movements do not maintain their *karma*. In such an instance, governments that should be trustees are rent seeking and, in many cases, corrupt; markets that should be genuinely competitive promote crony capitalism; civic societies become political and business-oriented instead of being the voice of activism. The development triangle becomes very distorted and corrupt because each 'leg' does not do what the *dharma* dictates that it should.

Although government and international policies cause considerable activity at the top levels, there is no evidence of these policies having reached down to the village level. Similarly, eagle-eye science like, for example, satellite and remote sensing technology is good, but without 'toad's eye' science that looks at grass-roots level realities and determines the type of science needed there, policy and development decisions will lead to wrong conclusions. Both sciences are necessary.

Whereas 'eagle eye' science lacks roots, 'toad's eye' science may lack the broader perspective. The main issue at present is the lack of 'toad's eye' science. This is where civic movements come in, because they operate at village level and can create awareness about the problems faced by the villagers.

He used three exampled to illustrate his point. The first was about the drying up of Himalayan springs, which was due to the mismanagement of water rather than to climate change-related issues. Entire villages had to be abandoned due to the over pumping of groundwater which caused natural springs to disappear. Recharge had also reduced substantially because people abandoned livestock rearing due to labour migration to the Middle East. As a result, the buffalo- wallowing ponds that used to recharge the groundwater were drying up. This was a toad's eye problem that scientists realised could not be solved at national or district level. The solution lay at village level.

The second case study was on the Brushwood dam on the Tinau, which was environment-friendly and had been built using traditional technologies. The dam washed off during the monsoon but during the dry season its waters diverted to the fields in quantities sufficient for producing a second or third crop. The government built a concrete dam to circumvent the problem of monsoonal floods, but the river had moved away by the time the dam was built. The irrigation system below was destroyed to create the modern concrete structure and as a result, the villagers who had a traditional system earlier were left without a system. Eventually a third technology, a pump, was introduced to tap the groundwater. So, three different types of technology that came for three diverse organisational styles were introduced, namely, community-led dam technology, the government- led cement dam and the market-led pump. All these are necessary and if they had been in place together, would have achieved better sustainability. Unfortunately, the hegemony of poor engineering and economics at the development agency and government agency level opted for large structures without considering other options that are socially, environmentally and economically more feasible.

The third case study was on pesticides, which are really biocides because they kill all life, not just pests. They are a water-borne disaster as poor application techniques are used to spray pesticides in the fields. As a result, they end up in water and food. Regulations for their use are either weak or non-

existent, and several pesticides banned in the U.S and Europe find their way into developing countries. People often use their bare hands to spray them. Agriculture in Nepal has become feminised, men manage livestock while women engage in agriculture, so, there is a prevalence of cancer among women as young as 12 years old. Pesticides are also leading to the deaths of domestic animals as well as animals in national parks.

River bed mining is another massive problem in the country. The sand for much of the highways in northern India and the Gangetic plains in Bihar and Uttar Pradesh is mined from river beds in Nepal, which is making them more vulnerable to flooding. On the one hand, the rivers are being encroached by urban expansion, and the river bed is being mined, on the other. The net result of these twin disasters is the decline of the water table and the drying up of the traditional wells, which is reducing water availability in the cities. This is a cause for concern in the present situation of the COVID-19 pandemic in which hand washing is mandatory. The depletion of river water is also reducing the fish, both in numbers as well as species., and the 2500 families who once depended on fishing for their livelihoods have now dwindled to about 200 to 300, the rest have been compelled to migrate for labour opportunities to the Gulf countries. It is now mostly the marginalised who are left behind and the problem affects them.

The problem of climate change was created by the energy sector but its impact is felt by society through the water sector, since water touches every aspect of life. Most of the water problems today have been created by man, which climate change will only exacerbate. Since these problems are of our own creation, we must remedy them before climate change worsens. The COVID-19 pandemic has exposed the limits of conventional science and medicine.

Development should also be rethought, using the nexus approach and systemic science. This is a big challenge and the forthcoming recession will compel us to address it, whether or not we want to. These problems must be addressed with far more toad's eye science. For example, the problem of river sand mining in Sri Lanka has been brought to the fore with toad's eye science, whereas eagle eye science will view river sand as a material with a great market value and not realise the negative impacts its depletion causes.

SESSION 2 DAY

Weblink: https://youtu.be/jaht2W12LaA

Webinar 7

Sri Lanka - A Disaster in the Making: Illicit Sand Mining of Sri Lanka's Rivers

'River sand mining and its impact on water, women, climate and the environment' was moderated by **Badra Kamaladasa**, former Director General of Irrigation, Sri Lanka.

OVERVIEW

'Effect of illicit river sand mining in Deduru Oya river', as its name implies, illustrates the devastation caused to the river and its environs by illicit river sand mining (RSM), which is extracting sand faster

than nature can produce it. The case study was presented by **Dileepa Chathuranga Hettiarachchi**, Divisional Irrigation Engineer, Puttalam, Irrigation Department, Sri Lanka.

Next to water, sand is the second largest natural resource in the world, but unlike water it is non-renewable. It is depleting steadily because of its use as a raw material in construction. Women are particularly affected because they bear the burden of care in families and communities.

In 2018, the United Nations Environment Programme (UNEP) conducted a study to promote action-oriented global conversation on RSM.

The demand for river sand has escalated following the post- Tsunami construction boom, and has reached 20 million cubic meters annually. About 60% of this demand is from the west coast of the island where Deduru Oya is located. Originating in the central hills of Matale, Deduru Oya meanders through the coconut triangle of the island through many urban and suburban areas in close proximity to the main road system, which gives easy access to sand miners.

The widespread devastation caused by river sand mining is unquantifiable. It has compromised the water security of the area by lowering the water table, which has damaged lands, coconut plantations and other crops as well as degraded eco systems and sub- eco systems. The inlet structures of state and private organisation, and the natural water inlets to the minor irrigation cascade tank systems have been inactivated; the destruction caused to the river bank, river bed and the pollution of river water is irreversible. The river profile has also been altered and sea erosion has accelerated. Economic impacts are correspondingly high, a case in point being the embankment failure of the Sengal Oya anicut, which was restored this year by the Irrigation Department at a cost exceeding USD 3 million (LKR 550 million). The social impacts are far-reaching as well. Since the river has engulfed cultivation lands and destroyed crops, women are compelled to walk great distances to collect water, villagers have become enslaved to illegal river sand mining activities and youth find it an easy source of income. Lack of water for cultivation is prompting farmers to pump water from tube wells, which could bring with it a host of problems in the future. The villagers have also lost confidence in the intervention of government agencies.

CHALLENGES

The extraction of river sand is one of the least regulated activities in many regions of Sri Lanka and the sheer scale of the mining is one of the largest sustainability challenges of the 21st century throughout the Asian region, as it damages terrestrial riverine and ocean ecosystems. The extreme weather caused by climate change is exacerbating the problems. Sand mafia, fortified by political influence, dominate this extraction, which makes policy difficult.

It is only recently, however, that RSM has been identified as a threat and attention focused on its negative social, economic and environmental impacts.

SOLUTIONS

A Supreme Court order that bans all river sand mining activities along a specific stretch of the Deduru Oya has been put into effect. Community leaders, environment and special groups and women front-runners have been engaged in raising awareness on the importance of mitigating river sand activities. Stakeholder committees are now being appointed to make decisions on issues related to river sand mining. The Coastal Conservation Department is now involved in maintaining the coastal belt. The Irrigation Department is also actively involved and has initiated several activities, for instance, the setting up of the Riverine Management Branch.

Several actions could also be pursued in the future. These include exploring alternatives for river sand use in construction, development of a basin management plan, increasing awareness of the need for conservation at both village and school level, close monitoring of activities along the river, action taken on complaints received from villagers, youth and environment groups, as well as halting the mining until the equilibrium of the river bed has been restored. Line institutions like the police, the Central Environment Authority (CEA), the Irrigation Department, the divisional secretariats and *grama niladhari (*government officer who functions at village level) offices of the respective areas must also be empowered to manage the situation. Ultimately however, it is the government that must introduce a legal framework to control river sand mining across the country.

A video taken on a field visit to Deduru Oya, graphically illustrated the devastation caused to the river and its environs by illicit sand mining as well as sand mining with a permit. Key stakeholders described the situation from their own perspectives.

Expert discussant **Kiran Pereira** is author of the acclaimed 'Sand Stories: Surprising truths about the global sand crisis and the quest for sustainable solutions'. Kiran's work has also been featured in the award- winning documentary 'Sand Wars'.

She confirmed:

> *'The RSM issues highlighted in the case study are similar to those experienced in over 70 countries. Several industries the world over depend on different types of sand. Unfortunately, the extraction, use and trade of sand from quarries, lakes, rivers or sea beds are not regulated by any international convention, a problem that is being slowly recognised.'*

Following UNEP Report 2019, the UN Environment Assembly has adopted two important resolutions, namely, one on mineral resource governance and the other on sustainable infrastructure, which will be tabled in the UN Assembly next year.

Young water professional **Paridhi Rustog**i who has a background in environmental engineering, is reading for her Masters in Integrated Climate System Sciences in Germany. She said, as with other environment issues, sand mining most affects vulnerable people – the marginalized communities, women and children especially in developing regions in which sand is used indiscriminately. The Intergovernmental Panel on Climate Change (IPCC) identified agriculture, forestry, land use and

associated changes as contributing a fourth of GhG emissions in anthropogenic climate change, between 2007 and 2016. Sandmining is also a contributor to a changing climate. This could range from simple changes in the hydrological regime to a higher incidence of disasters, namely floods and landslides, so policy interventions are critically important.

She suggested:

> *Introducing a strategy that makes villagers the shareholders in development initiatives inspires public ownership and motivates communities to become environment stewards. Thus, the key to creating sustainable change is to engage communities to create awareness of negative environmental impacts and empower them to take ownership of their environment.*

The Aranayake landslide of 2015 is a case in point. Apart from the loss of lives and livelihoods, the landslide compromised ecosystems. Sri Lanka Water Partnership and partner organisations tested several strategies to alleviate the post- disaster situation. These strategies related to water, hygiene and sanitation, and involved community engagement to create sustainable change. Schoolchildren were engaged to spread the message of environment protection throughout the community. By connecting them to their environment, the students were trained to safeguard it, and villagers were taught to realise that they were ultimately in charge of their own futures.

This strategy is based on the principle that a child who does not encounter value in his environment cannot be expected to safeguard it.

Mitigating the effects of climate change is more important than adapting to them, however. The current growth model of building skyscrapers and reclaiming land is unsustainable and needs rethinking.

LESSONS LEARNED

> *Although regulation by state legislation and monitoring by line organisations is effective in mitigating the environment, social and economic impacts of sand mining, this must be carried out in a timely manner to ensure that the negative impacts of exploitation can be halted before irreversible damage is done.*

Webinar 8

Schools as Catalysts: Water Security in Sri Lankan Tea Estates

This is the last in the series of webinars, and was moderated by **Tom Davies**, First Secretary Development Cooperation of the Australian High Commission, Sri Lanka, an experienced development practitioner and analyst.

'Women and children as catalysts for promoting conservation in Sri Lanka' focuses on improving water security in the estate sector in Sri Lanka, and was presented by Kusum Athukorala, former Chair of NetWwater Sri Lanka, recipient of the International Water Association's (IWA) Women and Water Award, and the Zonta Woman of Achievement for the Environment Award in Sri Lanka. Her work covers the areas of water resources management and advocacy.

OVERVIEW

Ceylon Tea is renowned the world over and produced in tea estates situated mainly in the central highlands of the country. Indentured labourers brought from neighbouring India pluck the tea leaves. These are historically marginalised communities whose living standards are below the national development and social indices: they do not own their homes or land, suffer from issues of water security, and live in overcrowded substandard housing known as 'line rooms' which lack toilets, so open defecation and solid waste pollution is rife.

The plantations are in an ecologically and environmentally sensitive area which is part of the island's hydraulic civilisation. It was maintained as a water tower by the ancient kings of Sri Lanka and during their time, the people were forbidden access to this sensitive catchment area since human activity would impact the waterways and downstream irrigation systems.

The tea estates are important for the well-being of the entire island as tea is an essential commodity export, and the area also promotes agriculture and tourism. The central highlands have many UNESCO heritage sites as well, and are a repository for traditional medicinal herbs.

CHALLENGES

A host of challenges plague this sector. In recent years, tea estates have been declining in importance as other areas of the economy have superseded them as foreign exchange earners. This has resulted in reduced incomes and the migration of estate labour to the informal sector and the Middle East in search of jobs. Low estate income and dependence on off-estate labour keep estate labourers at a level of abject poverty lower than that experienced elsewhere on the island.

The fact that Sri Lanka is high on the Global Climate Risk Index does not help matters, extreme weather events are the norm in the plantations area. Droughts that reduce water availability are followed by heavy rains that cause landslides due to poor land management, which destroy homes, livelihoods and ecosystems. To this is added deforestation and the consequent man-wildlife conflict that has resulted in the loss of endemic and valuable wild life.

Women bear the burden of labour within the estate community. Tea pluckers work a twelve- hour day, daily. Since the community is beset by issues of low estate incomes, mothers have left their children in the care of grandparents or guardians to pursue jobs in the Middle East. Poor accessibility to schools, lack of resources for education and health as well as the low literacy of women also affect the well-being of these communities. Caste and cultural issues also exist within the communities.

Today, the social framework of the estates is gradually changing. The line rooms are being replaced by self-contained housing. How this will affect community unity and the stewardship of water resources is yet to be determined.

Solutions to some of the challenges experienced since working with the communities over the past five years are yet to be arrived at, mainly in the area of intra-system water conflicts. Various strategies are being explored.

SOLUTIONS

Government support is available for certain aspects, which include setting up the Sustainable Development Council, the legal framework for achieving the SDGs, as well as the Sustainable Development Act in 2017. On the other hand, it is difficult to breach the silo thinking in government agencies, and the widely divergent politics of the country.

In 2015, NetWwater joined hands with Lanka Jalani and a consortium of public and private sector partners to introduce awareness and advocacy initiatives to this sector in order to promote responsible water stewardship through knowledge-based behavioural change. Initial advocacy was a challenge, due to the lack of information available on the issues faced by the sector, since few civil organisations had conducted advocacy and awareness activities in the estates earlier due their remoteness. Other difficulties faced when introducing these initiatives included the presence of the vestiges of the colonial management style in some plantations and the trade unionisation of the workers.

The youth and children, who are better educated than the older generations, were identified as the changemakers in the community. They were also more aspirational as they had been exposed to lifestyles beyond the narrow confines of the estates, and would therefore be more inclined to adopt measures that encourage water stewardship and ecosystem awareness. Women were also identified as drivers of change. Despite the heavy burdens they bear and their own low literacy, women, especially mothers, were supportive of these programmes.

The lower levels of education in the community prompted the team to move their advocacy and action initiatives from the classroom onto the street. Awareness was created through a variety of performing arts, environment programmes were designed from living ecosystems rather than taken from textbooks, and the advocacy tools developed were based on life in the estate sector.

Expert discussant **Veena Khanduri**, Executive Secretary and Country Coordinator, Indian Water Partnership, said that the Sri Lankan estate sector and the poor facilities available for the workers was no different from estate sectors in India and other parts of the developing world. This, she said, was due to the historic tea-estate centric perspective that still prevails in the sector. She said that stewardship without ownership is the critical problem. Ownership of housing, land and other resources is low, so stewardship of these resources is correspondingly low. Pollution and climate change have increased the issues of water security issues in the sector - only 43% of the communities have access to clean water, as against 90% of communities in the rest of the island, as pointed out by Minister Dinesh Gunawardena. Climate change issues are impacting the quality of the tea produced as well as the health of the workers. Responsible water management is essential for sustainable tea production.

She said:

> *Future programmes must focus on sustainable resource management. As a first step, these programmes should begin with catchment conservation initiatives that will build awareness of their own ecosystems among the communities. The initiatives demonstrated in the case study provide a thoughtful insight into mobilising these communities and link to all 17 SDGs in the goals and targets of economic and social development and the dependency of an adequate water supply in quality and quantity.*

The case study authenticates the importance of community engagement as this involves inclusive governance and practice by connecting local environment actors at village level. It taps into village culture by engaging youth for sustainable behavioural change and responsible water stewardship, which is key to the uniqueness and success of the programme.

She said the impact of these issues on women- headed houses is highest, since women play the dual roles as breadwinner and home maker. They enjoy no maternal benefits, and during pregnancy and postnatally they continue to engage in hard labour. Girls in the estate sector drop out of school early due to the poor quality of life.

She questioned Kusum Athukorala on

a. The steps to be taken to decide on policies and programmes to improve the participation of women, by overcoming traditional barriers and equipping them with new skills for providing them with better livelihood options.
b. In a scenario in which shrinking profit margins have prompted plantation companies to replace traditional labour with machinery, how can the estate workers retain their traditional jobs?

Young Water Professional **Oshadi Ranasinghe**, a NetWwater volunteer who works in the area of environment management and conservation, biomass energy, forestry and sustainable practices presented 'future directions for young water professionals in catchment conservation'. Forest cover has reduced from 84% in 1881 to about 24% in 1992 due to its conversion to other land uses, as a result of population growth which puts huge pressure on land availability. As the world moves towards achieving SDGs in 2030, plantation companies can move towards attaining sustainable business through community investment, training and stakeholder advocacy. In the tea estate sector, issues classified as non-conformities in achieving sustainability standards include the rainforest alliance, ethical tea partnership and forest stewardship certificate in the tea estate sector. The same issues are replicated elsewhere in the world. Although plantation companies invest substantially to achieve sustainability certification, many fail because they do not pay attention to the most important points that involve community stakeholders as partners in the sustainability process by developing awareness and advocacy initiatives. Most of the non- conformities itemised could be controlled through community awareness and attitudinal changes.

She declared:

> *Young water professionals should play their role in strengthening public-private- community partnerships, develop a scientific approach to identify possible sources of pollution with community support - work especially with schoolchildren on issues of pollution, and promote sustainable agriculture. They are futuristic and innovative, so they can use their knowledge and capacities to help the catchment communities attain water security.*

By addressing the many areas young water professionals could develop a scalable model of the tea landscape in the central hills that could be applied in tea plantations in other countries as well. These initiatives will meet the following nine SDG goals, namely goal 1: No Poverty, goal 5: Gender Equality, goal 6: Clean Water and Sanitation, goal 10: Reduced Inequality, goal 11: Sustainable Cities and Communities, goal 12: Responsible Consumption and Production; goal 13: Climate Action, goal 17: Partnerships to achieve the goal. The involvement of women as full and equal partners is necessary if these SDGs are to be achieved by 2030.

LESSONS LEARNED

Two key lessons were brought to the fore, namely, that:

> *Youth should be engaged to drive the empowerment of communities, and schoolchildren should be empowered as catalysts for change.*
>
> *It is also important to base advocacy initiatives on experiences that the communities could relate to, if such initiatives are to be sustained into the future.*

QUESTION AND ANSWER SESSION

The Q & A session was moderated by **Ania Grobicki**, Deputy Director of External Affairs, Green Climate Fund.

Question: We'd like to see a higher emphasis on natural pollinated conservation which has a direct impact on ground cover maintenance and re-growth in all catchment areas, micro and macro, to preserve the bees. This has a direct link to catchment conservation activities.

Answer: **Kusum Athukorala**. The tea estates are adjacent to sensitive catchment areas like Horton Plains. Encroachment occurs when incomes reduce. Pockets of land by the rivers are also acquired informally for vegetable cultivation, which is heavy in pesticides. Vegetable cultivators are less tolerant of encroaching wildlife, for instance many of the 20 leopards that died had been snared in traps. On the issue of bees, several women tea pluckers have been attacked by wasp stings. This occurs as a

result of the clash of the two systems. A policy is necessary that controls the erosion of the ecosystems, deforestation and logging. Colonial structures, mindsets and policies still take precedence. We have not as yet been able to evolve this into a stakeholder platform that involves all players.

Question: What is the government policy for water management on tea estates? How can government policy affect what's happening there?

Answer: **Kusum Athukorala.** Government policy has had a positive impact because the level of health and education available on tea estates have improved substantially from what they were 20 years ago. But there is now a loss of livelihoods. Stopping people from migrating by giving them an income source closer to their homes is an issue. Unfortunately, we have not had a discourse on this area. Such a discourse calls for a multi stakeholder platform.

Answer: **Veena Khanduri**. India has a coherent water policy that is connected with the forest and tea estates as well, so land and forest policies also impact water policy. To achieve exclusivity for the tea estate and tea growers, a multi stakeholder platform must be set up with the private sector and the government sensitised.

Answer: **Badra Kamaladasa.** Most tea estates in Sri Lanka are owned by the private sector. So, monitoring areas like soil conservation which is necessary in catchment management, is limited to some extent. Present legislation has no regulation that provides regulators with access. The government is now considering changing this situation.

Question Are there alternative methods for collecting river sand or alternative sources for river sand so that so much damage is not caused to river catchments?

Question. How can we start a discussion in the construction industry to avoid the use of river sand altogether?

Answer: **Badra Kamaladasa**. Discussions with the construction industry on alternatives to river sand took place over the past two years. Workshops and consultative seminars were held to consider alternatives, mainly manufactured sand, which is technically and environmentally feasible. So the construction industry is moving towards the use of manufactured sand, but the mindset of those engaged in construction must change. They prefer using river sand because technical specifications are based on the use of river sand. Documentation, policies and legislation need changing before this could be implemented. Other alternatives are also being considered in Sri Lanka.

Answer: **Kiran Pereira.** Although the construction industry is conservative, a lot of changes are taking place on a global scale. Many parts of the industry are exploring the use of renewable materials like sustainably and responsibly sourced timber straw bale which has good insulation, dammed earth constructions etc. Interesting buildings are coming up in countries like The Netherlands, Canada, Australia, which are constructed with renewable materials.

Question: Would it be valuable to link the environment destruction caused by river sand mining to the disaster risk movement? Bringing the disaster risk community on board would bring in stronger voices against river sand mining.

Answer. **Kiran Pereira**. Yes. If concrete was a country it would be the third largest emitter of GhG in the world. Cement is responsible for 8% of global carbon emissions. The building industry is the world's largest consumer of natural resources. Especially after disasters, it is important to explore alternative materials, renewable materials and to recycle the sand that has already been extracted from infrastructure. Only a third of demolition materials are being reused around the world. We are extracting from precious eco systems, building and then throwing it away. This must stop.

Ania Grobicki. Green cement has a big role to play. Innovation must be explored because the use of river sand is a huge social problem. In the long term, alternatives must be brought in.

WRAP UP REMARKS

Saradha Narayanan, National Representative Malaysia, SISWP, thanked the panel of speakers for their outstanding presentations, stating that the stimulating line up of experts in the water sector had inspired and challenged the participants to confront the many issues that challenged water security in the region. She highlighted the many threats to water security discussed in each presentation and the solutions arrived at to mitigate these threats. River sand mining was causing widespread damage to river eco systems. Cost and availability must be balanced with knowledge of use when pursuing alternatives to river sand. The younger generation would be tasked with this challenge. The issues in the tea plantations were also a cause for concern. The thought- provoking discourse of Dipak Gyawali was also appreciated.

Climate change has a direct impact on water security which in turn, affects food security. The COVID-19 pandemic has brought the need for water to the forefront, due to the stipulations of frequent hand washing that requires the availability of clean water. Vulnerable communities are once again the most severely affected by these many and varied issues.

Day 2

Session 1

THE WAY FORWARD

Opening remarks

Mariet Verhoef-Cohen, President, Women for Water Partnership, welcomed the online participants and said that this, the final day of the Conference, would provide solutions to the issues discussed in the first session and the regional webinars.

Short recap of day 1

Theresa Devasahayam, Associate Faculty at Singapore University of Social Sciences (SUSS) is an expert on women's issues in South East Asia, and the UN Representative in Bangkok for Soroptimist International.

KEY LEARNINGS

Ms Devasahayam said the conference brought out the complexities of the relationship between women and water security, and their link with climate change.

The conference opened with an address by chief guest Minister Dinesh Gunawardena, who spoke on issues of water security and women. Water is a precious resource, women play a key role in the household collecting water, the COVID-19 pandemic made its critical importance more apparent.

Keynote speaker Prof. Dipak Gyawali emphasised the hegemonic relationships in the development agenda and the struggle of marginalised communities to attain water security. He advocated a ground-up approach in which civil activism takes precedence. He also made the point that many of the problems related to water security are created by the people and will worsen with climate change.

Webinar 7 on river sand mining discussed the exploitation and abuse of resources due to the lack of regulations. The need to look for alternatives to replace sand was also addressed.

She said that unequal social relationships and the exploitation of natural resources were threads that recurred through all the presentations. The relationship between the villagers and the state was shown to be an unequal one, in which urbanised society benefited while the villagers were left behind. The repercussions of an ecosystem imbalance, and the effects that the disruption of water access had on human, plant and animal life were other areas considered.

Synthesis of Sri Lankan Voice of Water symposium – presented by **Missaka Hettiarachchi,** Environment Scientist and Senior Fellow of WWF**,** whose areas of expertise include environmental management and policy, and environmental engineering and disaster management.

The session was **moderated by Mariet Verhoef-Cohen,** President, Women for Water Partnership

Voice of Water (VOW) was a series of events planned to give voice to the water concerns of community, state and private sector 'water protector' individuals and groups in Sri Lanka. The initiative will enable them to communicate with each other on a variety of media as well as create a common platform to address decision- makers and policy- makers. VOW helps these groups understand the multiple aspects of these issues from a watershed perspective.

The Voice of Water initiative demonstrates the importance of community involvement, namely, the toad's eye view, in decision making, and the critical need for climate adaptation. It also shows the disproportionate burden borne by women in relation to water security, and their critical role in resolving the water crisis.

A cross section of community organisations, grass roots political groups, the academia, local government and state agencies based in the remote regions of Sri Lanka, shared their experiences and perspectives on video. The issues highlighted in the five case studies featured climate and water security challenges experienced by rural communities and the initiatives taken to combat or mitigate

these issues. They explored wetland and catchment degradation, water pollution, degradation caused by landslides, as well as water and livelihood issues in paddy cultivation. These examples confirm how water acts as a stimulant for community engagement and empowerment, and the effectiveness of water management that combines engineering skills with nature- based solutions.

VOW Case studies in detail

The first case study features the water from the Knuckles mountain range, which is a precious resource used for domestic as well as agriculture purposes. The water feeds the Mahaweli river as well as two reservoirs situated below. Knuckles is part of a world heritage site in the central highlands of Sri Lanka, and has a special ecosystem renowned for its biodiversity. It has economic and cultural significance as well, but despite its value, the area is neglected. The second case study was on the massive landslide at Samasarakanda, Aranayake, which was caused by deforestation accompanied by heavy rains. The water table changed In the aftermath of the landslide, drying up the water resources in the area. A bank in the private sector working with the Sri Lanka Water Partnership, introduced a rainwater harvesting project to schools and through it, created awareness of the water situation in the area. A reforestation programme was also introduced. Case study 3 outlined the work carried out by the Irrigation Department in developing the Handapanagala reservoir to preserve the watershed and utilise the water before it flowed into the ocean. The impacts of climate change and human activities are reducing water quality and supply in the area. The fourth case study was about farmers in the eastern province who are challenged to continue paddy cultivation in both seasons due to weather extremes brought on by climate change. This has caused people to move away from farming to pursue other occupations. Study 5 featured the importance of rainwater harvesting in situations of climate change. The last case study was on the Bolgoda wetlands and discussed its destruction by the built environment and human activity. It emphasised the need for the support of state, civil societies and NGOs to restore it to its former pristine glory.

DISCUSSION AND LESSONS LEARNED FROM THE 8 CASE STUDIES (WEBINARS)

Deepa Joshi, Gender, Youth and Inclusion LeadWater, Lands and Ecosystems program, IWMI

She opined that the series considers issues beyond those addressed by ‘women, water and climate change,’ it explores women’s roles, responsibilities and relationships in water within the context of social relationships. This was demonstrated by the West Bengal case study, which identifies corridors of power that exist at different institutional levels.

She pointed out:

> *All case studies discuss the persistent inequality and inequity in water quality and quantity especially among marginalised communities, which is also more expansive than the outcome of climate impacts, the Nepal case study being a case in point. COVID- 19 reveals the inequalities in access to water supply and sanitation among rural and urban communities, especially in marginalised communities.*

It is of note that the marginalisation and vulnerability of rural communities requires the intervention of mediating NGOs if they are to be provided with access to water and sanitation. In this context, accountability and responsibilities must be addressed if SDGs are to be achieved. Responsibilities for financing water and sanitation must be identified and considerations given as to whether or not one-off financing of projects by private companies is sustainable.

From this follows the political economy and the broader issues of corridors of power as described in the case study on sandmining. The case study from Malaysia once again raises the question of financing and sustainability, as it reveals the fact that the villagers rely on the very logging companies responsible for the deterioration of water quality and quantity, for income from the sale of the produce they grew with improved water supply.

In the area of gender and social equality, all the case studies confirm the versatility of women and their capacities to accept roles and responsibilities in water management and ability to interact with the local and private sectors. In the aftermath, the impact of these initiatives on the women, and whether or not they gained from the experience or bore additional burdens should be explored. For instance, in the case of the West Bengal case study it must be determined whether the women's intervention in improving their water supply correspondingly improved their access to land and other resources.

Gender transformative approaches prescribe that institutions should be realigned to make them more inclusive, it is important to explore how this can be achieved. Intersectional inequalities must also be addressed and the type of women included and excluded from water engagement looked into. An IRC study reveals that governments must bear responsibility for financing of WASH as community financing is not sustainable and tends to exclude the poorest segments.

From the feminisation of responsibilities and obligations in the area of women and water arises the question of how these interventions have improved lives. The Kolkata case study illustrated the fact that there can be a transformation in gender segregated roles and that women could have control over certain aspects of their livelihoods.

Although improved water and sanitation undoubtedly improves the lives of women, it also raises issues about whether marginalised women and youth should be made responsible for an area for which governments and institutions should be held accountable.

Laurens Thuy – Gender and Communication Specialist, UNESCO WWAP

In his presentation titled 'Case studies and women's undeveloped potential in water', Mr Thuy identified a number of key issues in the 8 case studies presented, which, he said, impeded sustainable development and the achievement of gender equality.

Firstly, women have a limited role in water management and decision-making in many countries, when compared with men. This imbalance has significant implications on decision-making, for instance, policies often lack gender considerations and hence disproportionally impact women and girls. This has an impact on education, with girls more at risk of leaving school after primary school.

He emphasised the need for enhancing community awareness and advocacy on topics related to gender equality and sustainable development. Vocational training is important for women and youth. But a key disadvantage to moving forward is the lack of sex-disaggregated data on these issues.

He declared:

> *Water is intrinsically connected to life, and access to clean water is a basic human right. Although everyone should have equal access to water, in practice this is often not the case. Gender determines different relationships with water.*

There are different water-related tasks for men and women, women and girls being primarily responsible for collecting water for their households, with consequences on education, work, and even health. Therefore, water assessment must include the gender perspective.

To address this gap in sex-disaggregated data, WWAP started an initiative aimed at achieving a global standard for gender-responsive water assessment, monitoring and reporting, and developed the WWAP Toolkit. The toolkit consists of 4 tools that address the areas of data

> *Sex-disaggregated data is necessary to provide the information necessary for drafting gender policies. These policies must be based on understanding the different needs and strengths of men and women and the complexities of gender relationships, ascertaining who has access and control over water resources; assessing the constraints to project implementation and the project's potential to empower women.*

collection, namely, indicators, methodology, guidelines and questionnaire. The first tool comprises gender-responsive indicators in water assessment, monitoring and reporting. The second tool provides the methodology for collecting the data, while the guidelines provide

data collection methods tailored to meet the requirements of a broad range of users. Finally, the questionnaire lists questions that could be asked when gathering the information.

He said that many of the gender-related areas discussed in the eight case studies are listed in the indicators, which enables the collection of data on these issues.

Climate change impacts society through changes in the availability and distribution of water as well as aggravates already existing water-related challenges. These factors indicate that women are more affected than men by its impacts. Reliable and timely sex-disaggregated data is needed to understand and respond. He used the example of the Sinharaja forest reserve, to illustrate the fact that environmental threats that are putting this tropical rain forest at risk of losing its identity as a world heritage site, are having a greater impact on women and children.

The projects have the potential to achieve sustainable development, particularly SDGs 3, 5, 6, 10, 13 and 17, namely, Gender Equality, Clean Water and Sanitation, Reduced Inequality, Climate Action, and Partnership to achieve Goal. However, in order to accomplish this, women and youth must be involved in natural resources management and decision making, and participate in every stage of a project. There is an urgent need for women's voices to be heard in water-related issues and in the decision-making process. Dialogue between communities and institutions must improve, and build capacities must also be built if all these goals are to be achieved. Sex-disaggregated data is necessary to achieve this.

Liza Debevec, Gender and Social Inclusion Specialist, Global Water Partnership (GWP)

She opined that the webinars addressed all the levels required to achieve gender transformation, starting from community engagement at grass roots level. DrinkPani, Nepal, for example, explored all levels of engagement, where the youth, including girls, were given equal opportunities of participating in a science project, and the young women were given the opportunity to participate in these webinars as well. This is often not the case in the water and development sectors which are still dominated by men. She stated that international organisations usually focus on building capacities outside, in the marginalised women they want to empower, rather than look at gender transformation within the organisation. Women are rarely given opportunities to be at the forefront and to be seen as leaders. As a result, men usually occupy seats in senior management. The opportunities provided in these webinars, for women researchers to present their work, and for young water specialists to comment on the presentations, is a particularly important aspect of the webinars. We must create opportunities for women to shine in the public context by changing the system. Some

of the women presenters at this webinar could lead their communities in the issues they work on.

She cautioned:

> *Even gender experts who champion women's participation could fall into the trap of gender stereotyping women. Are we creating the platforms to empower women, or are we striving to empower them to conform to our own conceptions and beliefs?*

Much inspirational work has been carried out in these webinars and GWP will explore ways in which they could collaborate and support this through regional and country partnerships.

Question & Answer session

Moderated by Leonie Pearson, Senior Research Fellow, Water for SEI Asia

Question: We talk about the need for segregated data for gender policy. How can the system be changed to engage the women from the start, rather than try to change gender policy which may or may not be successful? In short, how do we change the system rather than try to change the women?

Answer: **Laurens Thuy -** Gender considerations must be introduced simultaneously in different areas, at different levels as swell as top-down. In terms of projects, women must be integrated from the start of each project rather than at the last phase. This requires project managers, communities and decision-makers to be well informed. Data and capacity building are the most crucial areas needed since several projects seem to have gaps in the knowledge on gender- related issues.

Answer: **Theresa Devasahayam.** The system itself is probably produced by men, since much of development work is male -dominated. Gender relationships must be changed at every level of society and at every scale. Changes in attitudes, culture and behaviour are required to achieve this, which takes time. Both a top- down as well as a bottom- up approach is necessary.

Question to **Liza Debevec** from the Moderator. Can you give examples of where systems have changed to accommodate women and youth?

Answer: **Liza Debevec**

> *We must first address the fact that there is gender inequality, and that we must not change the women but the system instead. However, fixing the system should start with conversations at every level, which can at times be rather uncomfortable. If we want to make sure that women participate in the processes in a meaningful manner at every level, we must ensure we don't create barriers through our own biases. Transformative thinking must start with us.*

For example, GWP introduced a project on gender transformative change in the fields of water and climate policies, which may be extended to Asia as well. Conversations with the GWP team in the regions raised awareness of the need to change practices inhouse before we attempt to influence governments and other partners. We all play a role in the systemic injustices in society.

Question: Amrita Gautam - How do we leverage financial support in women- led projects, especially in the context of grassroots work to upscale the model and strategies replicating the required dimensions of the case studies and examples in this conference?

Answer: **Deepa Joshi:**

> *2.4 billion people lack access to sanitation and half that number lack access to clean drinking water, but the national budgets in these developing countries and the finances allocated for water supply and sanitation are insufficient to meet these gaps. The proportionate spending on defence when compared with the allocation for water and sanitation in the national budgets of several developing countries indicate the necessity for transformational investments in sectors like water supplies, sanitation, energy for domestic use.*

By the global development community intervening and addressing these gaps, albeit with very good intentions, in some ways, this legitimises the underspending of national governments. Personally, I feel that creating more money for these programmes and projects is not the way forward, but rather, that the way forward should be to ensure that the funding for these initiatives does not happen without negotiating and bargaining for intervention by national governments to improve their spending on WASH.

Answer: **Lisa Debevec -** There is a lot of opportunity now. Donors are under pressure to deliver on gender-related issues, so projects can utilise these opportunities, so there is a trade-off. There are also opportunities to educate donors and governments.

She emphasised:

> *Gender transformative approaches are the 'sexy' phrase right now in a lot of development funding, and this momentum must be utilised.*

Of course, as mentioned by Dipak Gyawali, the implications of this work must also be considered.

Question to Lisa Debevec by the Moderator: Can you provide an example of such a donor?

Answer: **Lisa Debevec -** There is now considerable pressure to develop gender- focused work and align all the SDGs with the gender SDGs.

She reiterated:

> *No donor accepts a project that does not include a gender element. Certain governments have development policies based on feminist principles.*

The government of Australia was interested in supporting a project that had OECD gender markers, GWP developed a project for them on gender transformative approaches in the climate sector in Africa.

Questions to be answered

Although the following questions were not answered, they highlighted several important issues

From Lisa**:**

It would be good to get some information on how the different project teams go about project design and fundraising?

Also, what are the capacity challenges that they themselves face internally?

From Tom Mollenkopf:

To what extent can we improve the role of women in water and climate issues in the absence of broader social and political change?

From Liza Debevec:

How do the different teams address the challenge of fundraising for the projects and how do they approach project design?

Given the comment from Deepa Joshi that we should not fix the women but fix the systems:

What tools and skills are needed by those who are working on these issues and projects? What are we still missing?

From Missaka Hettiarachchi To Dr. Joshi:

How do you think the lessons of Kolkata - women taking initiative and leadership in different aspects of the wastewater fishery system - can be transferred and replicated in other places and cases?

From Kusum Athukorala to Everyone:

There is a need for gender sensitization for the water bureaucracy if women are to be allowed in the corridors of power. How do we initiate this process?

From Amrita Gautam

How do we leverage financial support to Youth and Women led Projects, especially in the context of grass-roots work to upscale the model and strategies in replicating to the required dimensions?

To Deepa:

You talked about the negative impact of logging companies on the environment, but paradoxically communities rely on them. How could this paradox be resolved?

From Nilufa Islam to Everyone:

It was rightly pointed out the lack of baseline data...there is an opportunity to use the status of different country of South Asia 's SDG 5, 6 and other crosscutting SDGS situation (not sure about this one?)

From Laurens Thuy To Liza:

Do you have examples of GWP's work in interaction with communities for the achievement of sustainable development or gender equality?

From an anonymous participant to All Panelists:

Is a Global call for action and implementation after all this research worth considering?

Veena Khanduri

How do we ensure institutional arrangements that include women as important decision makers in water governing bodies and build women's leadership in water management?

Let's look at the main method of household surveys - we need intra-household information and go from numbers to quality

From Badra Kamaladasa to All Panelists:

Numbers will not show us the correct perspective of gender participation. In certain cultural backgrounds their views are not heard, but shows their presence.

How do we change / persuade donors to change their criteria and methodology? only big is "beautiful".

Eliana Harrigan

What is the most efficient way of breaking down traditional patriarchal norms that mean women are excluded from the water sector (e.g. women use purely domestic waters so don't need irrigation water)?

From Lesha Witmer to All Panelists:

Christian, should not some organisations take the initiative to talk about the methodology and process together? invite development banks / donors? and do global coordination and guidance?

CLOSING PLENARY ON THE WAY FORWARD

PANELISTS: Sudarshana Jayasundera, Christian Severin, Tom Mollenkopf

Moderated by Mariet Verhoef-Cohen

Sudarshana Jayasundera, Senior Social Development and Gender Specialist, Asian Development Bank (ADB) Sri Lanka, whose areas of specialty include gender equality and social inclusion, monitoring and evaluation, education and community development.

Mr Jayasundera outlined funding opportunities with several groups of donors that are now being made available to civil society organisations.

He elaborated:

> *Donor agencies have expanded engagement with NGOs, and specific funds are now being made available to support innovative work. This funding carries few selection criteria and can be accessed by organisations working in the area of gender and climate change.*

Multilateral and bilateral donor agencies have also increased their focus on civil organisations. These organisations usually fund governments and the respective ministries that execute their projects, and partner innovative work carried out by civil society organisations. They involve their local partners in various aspects of their projects, and consider the views of NGOs from a development as well as social and environment safeguard perspective.

He explained:

> *In response to work accomplished earlier in areas of women's activism, multilateral organisations are introducing strategies to support work in gender equality and women's empowerment.*

However, work in more focused areas like climate change, women and risk involves thematic or cross- cutting aspects that can vary in different contexts and may even depend on the interests of the project team involved. Although this is a challenge to more focused interventions in the areas of women, water and climate change, it also creates opportunities to advocate for more resources.

He pointed out several more indirect ways in which NGOs could access funding. Multilateral organisations work with specific sectors in a country, so civil society and grass roots level organisations that work on gender issues could explore ways in which their work can integrate into the sectoral dimensions of these large-scale projects. Also, while these multi-million-dollar projects support development initiatives, they have in-built mechanisms to mitigate negative impacts as well. These mechanisms could vary from consultations with local NGOs, women's rights and environment organisations, to setting up grievance mechanisms and systems to compensate people who suffer from the negative impacts. These systems can be creatively utilised to explore ways and means by which the potential negative impacts of development work can be transformed, as well as how the funding opportunities available to mitigate these negative impacts can be diverted to support women, water and climate change initiatives.

These bilateral and multilateral organisations currently explore areas of innovation, research, data sciences, networking as well as conferences and forums that share best practices. For example, a project for women in the power sector, initiated by the World Bank and partnered by ADB, brought together women engineers and professionals in South Asian countries in a forum to increase their partnership and leadership. The World Bank is currently embarking on a similar project for women in the water sector.

He pointed out:

> *Professional networks are increasingly working with multilateral organisations to create a platform for dialogue, innovation and sharing resources, which may also present opportunities for community service organisations to accessing funds in these areas of focus.*

Christian Severin, Coordinator of the Global Environment Facility (GEF) , and Lead for International Water focal area, he manages the focal area's engagement across geographical regions as well as globally.

Over the past two to three decades, GEF has dispersed grants of about USD 20 billion with a total co-financing of USD 107 billion. GEF also manages the Small Grants Program that supports CSOs and NGOs globally. Although the gender perspective was discussed earlier, it was not embedded into the project structure, but in 2011, GEF and partners designed a gender mainstreaming policy framework that has since been applied rigidly to all project funding. Now, countries that request GEF funding for programmes must ensure that they have included a gender perspective and that they meet the approximately 15 indicators embedded into the grant criteria in their reporting structure, from concept to inception. This ensures that GEF projects are sensitive to all the issues around policy changes, so many organisations have now incorporated this aspect into their projects. This is being included in government processes as well. We must now ensure that this shift to gender inclusion and indicators is able to capture some of the mainstreaming taking place right now. This is a process that does not have immediate answers.

He said:

> *The COVID-19 pandemic has had a huge impact globally and financially, and forced behavioural changes around the world. How this is to be addressed should be determined. There is a green-blue recovery process that must be mainstreamed into financing; building back in a more sustainable manner must be ensured. This includes a paradigm shift towards gender inclusion in the project cycle, in policy and decision- making processes, because the pandemic necessitates thinking differently.*

There is an interesting local-global interaction in this conference both in the examples of some of the technologies being tested as well as in the whole gender initiative.

He emphasised:

> *The most important aspect of a project is to build trust and understanding with partners, for which all stakeholders must be on board. Both financial as well as political power can be achieved if this process is attempted together.*

The GF International Waters portfolio has been building capacities over the past two decades through a knowledge management process known as IWlearn. Tools have been developed with project partners to ensure that gender is part of GF projects and reporting. Translating science to policy is also vital.

Tom Mollenkopf is a board member and President- elect of the International Water Association (IWA) and an independent advisor on policy, strategy and governance. He is passionate about the central role played by water and sanitation in the social, environmental and economic well-being of society. He is also a firm believer in the power of constructive engagement and evidence-based decision-making as the foundation of sound policy.

He stressed the importance of leadership throughout the water sector, and stated that:

> *The case studies demonstrate the pivotal role that leadership plays. The theme of the conference highlights three critical issues, namely, gender inequity, inadequate planning, and delivery of water and sanitation, and inaction around climate change.*

He said the case studies featured in the conference were inspirational and practical and were driven by energy, passion and a powerful vision - the desire to see change for the better. They have meaning because they are action- oriented and results- driven. The projects also demonstrate technical and scientific elements and community and political engagement, supported by action.

In line with the theme of the conference, IWA has been at the forefront, actively raising awareness about the impacts of climate change and water. However, it is only recently that the organisation turned its attention to gender inequity and social inclusiveness. He said that this new approach enriches IWA programmes and makes the organisation more effective. IWA's focus has been on good science and practice. It has strong engagement in the research and academic sectors as well as technical utility practitioners. This technical approach follows many participants in the water sector. However, good science is critical but is insufficient on its own.

He declared:

> *To be effective, good science must inform policy. Evidence -based decision- making must engage with policymakers on terms they understand, and this will drive action and change. Here again, leadership plays a critical role, as there are many opportunities to convert technical knowledge to action through good leadership. This must be achieved at local, regional, national and global levels.*

The perception that age brings knowledge and experience is not necessarily true, older professionals do not necessarily have all the answers.

He reiterated:

> It is the fresh approaches and enthusiasm of emerging water leaders that are necessary to move forward. Young water professionals play an important role and must be provided with a platform.

Mr Mollenkopf said he would, during his tenure as President of the IWA, not only promote awareness of gender and inclusion but would also strive to avoid ageism.

Moderator Mariet Verhoef-Cohen added that the pivotal role played by women in leadership in the water sector was formally acknowledged for the first time in 1992, by Principle 3 of the Dublin Statement on Water and Sustainable Development. In 1995, the Beijing Declaration and Platform for Action expanded this, affirming the importance of women's collaboration and joint efforts in leadership.

CLOSING REMARKS AND WRAP UP

Kusum Athukorala, has a deep interest in crossing disciplinary and academic boundaries, from languages and cultural studies to development studies, primarily environmentally related, and is now recognised as a multi-disciplinary skilled professional. Her work covers water resource management and advocacy on ground-level issues in Sri Lanka.

She thanked the participants for their partnership in the long march of gender and water, and the SEI for their financial support that enabled this conference. Although the conference was first organised to be held in Sri Lanka in person, the lock down necessitated by the pandemic compelled the organisers to rethink the plan.

Despite the many infrastructural and other challenges experienced by the planning team in Sri Lanka, they were successful in overcoming the challenges due to their collective commitment and passion for water, supported by the three international partners.

She thanked the Chief Guest, Hon. Dinesh Gunawardena, Foreign Minister of Sri Lanka, whose interest in water and water security extend over a long period of time. His interest supports the decision taken at the Hague Forum, to access political decision- makers. Former Minister of Water of Nepal, Dipak Gyawali, was also appreciated for his insightful contribution that prompted participants to look beyond water management agencies and ministries to the most marginalised communities of women and children, and in parallel, consider the role of community catalysts in enabling communities to have a voice.

The regional presenters were commended for the productive manner in which they highlighted the issues. The moderators, international experts and the young water professionals were also lauded for having enlivened the platform for women, water and climate change. The dedication of the Sri Lankan team was appreciated. Despite the cancellation of the 'Voice of Water' event that was to have established a cohesive platform for enabling decision-makers, more opportunities to challenge the status quo would follow.

She thanked the panellists for contributing their invaluable experience and expertise to the discussion, and stated that the activities identified and the issues raised by them would be valuable pointers for charting the way forward. She outlined the main areas of concern and action raised by the various panellists - Deepa Joshi's discussion on entrenched inequalities and the corridors of power, and how the transformative approaches discussed should be a point of reflection for the way forward; Laurens Thuy's emphasis on the importance of sex-disaggregated data and capacity building that must accompany this. She said his case study on the Sinharaja forest brought to mind the valuable work accomplished by champions of environmental issues who have gone before. Lisa Debevec's comments about women having no voice must be pursued further, and on the subject of transformative investment, multilateral agencies should be apprised that investment in women would provide them with the best possible returns.

Christian Severin's important point on the need for change in the larger sector, and his emphasis that the COVID-19 pandemic could be utilised as a challenge that can bring about behavioural change, could open doors to practicing NetWwater's triple-A strategy of Awareness, Advocacy and Action. Tom Mollenkopf's insistence on effective leadership in the sector and concerns on ageism, reinforces the importance of creating opportunities for young water professionals. She said that although he made a valid point that good science must inform policy, this must be extended to the wider context to include indigenous knowledge, which is just as much an essential component as good science developed by scientists: good science then would be the result of bringing the two streams together.

In closing, Ms Athukorala extolled the virtues of Awareness, Advocacy and Action, which, she said would help spread the message of water security during the unsettling times of the COVID-19 pandemic.

ଓ Close of conference ଓ