Session 6 - Water and the Environment: resource management to support nature

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Session 6 - Water and the Environment: resource management to support nature

Pillar 1: EU International Partnership Priorities on ‘Green Deal alliances’

14:30 - 16:00
360 participants signed up for this session

Introduction

From Mr. Chris Burns

- Showing the ground rules (micros off, name and organization, Q&A sessions, …)
- Explanation on how to network
- Presentation of Mrs. Lesla Witmer as a moderator for today’s session.

Introduction

Facilitator: Lesha Witmer, Steering Committee, Women for Water Partnership (WfWP)

What we are going to do is tackle two issues. One is the connection between water and better environments and that is a complicated one. Another one is the connection between water pollution and the environment, where sanitation and the whole chain play a big role. And it is not about the toilets, it is about all the way down and how we use or do not use that. So, there are some very interesting topics and speakers and the message we will be passing is that there is a value in water, and water itself is a value for nature, for human beings, for health, and the way we manage our water impacts the environment. We will hear from panelists what is precious to their hearts and if you have questions you can ask them in the chat. The biographies of the panelist are on the website.

- South Africa’s sanitation choices to reduce the impact on the environment, keynote presentation by Nchedi Moripe, Chief Director, Global Cooperation and Strategic Partnerships, Water and Sanitation Department, South Africa

Introduction of the first panelist:
She is one of the greatest ladies in the water sector. She is going to talk about policy and the way Africa tried to manage its policy. She has great experience in a global corporation in strategic partnerships and has a lot of influence.

The subject of this event, “Water and beyond” cannot be better because we are in a place where alliances are necessary. Water can never be a “stand-alone” issue; water has to be there every time.
First slide:
If you look at the slide you will see that I am talking about social, political, and technical issues. If you talk to environmentalists when you talk about water, they will tell you about the issues that have to be tackled. If you talk to socialists, it will be different. People know that water is a human right, when you talk to people in finance about pricing, it is also different. When you look at the 3, you will see how their path will cross. You see the interrelation between them. This shows how water is interrelated.

Now, are we going to prioritize water? In the current situation with COVID-19, water should be prioritized because everybody needs water to wash their hands. But then you speak to people from the health sector and they will tell you that we need vaccines.

We can talk about water as one concept, but in South Africa, we consider it like this. See the slide:

![Current Sanitation Systems in SA](image)

The blue part shows that we have done a lot of progress, showing that we are green somewhere but we still see that 17% of households do not have access to clean water and sanitation. We have made a lot of progress. I think it is important for government to work on things like vaccines that are also urgent. Nevertheless, the issue of water cannot be put aside because when we are going to be vaccine, we will still need water to wash our hands.
Third slide:

When you look to the universal provision of water and sanitation in South Africa, we still have 17% of households for which providing universal access to sustainable sanitation solutions is challenging. We hope the situation will change within 5 years.

Next slide:

The biggest issue that I see, maybe in all countries, is that the governing is weakling; there is a bottomless pit. I cannot finish without saying, as the former president said, the very right of
every human being is denied every day to hundreds of people as a result of poverty. It is denying human rights when there is no access water and sanitation.

- Comment from the moderator: we had a few problems with your connection but most of your ideas were clear.

Could you answer to one question: if you look at the type of sanitation that South African countries are ambitioning to have, how do you combine the environmental impact and the health impact? Is there still a policy for that or is separate?

Because definitely before taking any decision on the sanitation policy, we need to consult the environment department, now with COVID we need to consult several departments: health, education (to be sure that student could come back to school). When coming back to normal, we cannot divide the sectors, water is universal, and all kids have to go back to school.

- That is a very important remark because if we stay in our silos, we will not solve the problems. We need horizontal collaboration, to avoid impact on other issues.

Is there another thing that we need to take into collaboration, as you know that EU and member states are now planning for a new program, under the Green Deal program, what do they need to consider, should they talk about your countries?

More partnerships, we, as countries, cannot do it alone. It is important to share knowledge, technologies, more than entities, we need partnerships.

*The moderator shows a slide that presents the technical information on where to find more info, see following slide:*
Panel Discussion

- Philippe Mayaux, Head of Sector Biodiversity and Ecosystem Services, Unit Environment, Sustainable Natural Resources, Directorate-General for International Partnership (DG INTPA), European Commission

Mr. Mayaux is introduced.

You took another angle on the same topic and it needs attention. When it comes to the Green Deal, it is important to talk about biodiversity, forestry, management, so my initial question to you is how do we get the type of water management that will help to preserve our ecosystems & biodiversity or vice versa, how can we be sure that water is part of the environment?

First, I would like to give the general framework of this biodiversity strategy that was established in May 2020 as the first package of a bottom communication with farmers with four objectives.

I will focus on the international component. The 3 pillars are the international ocean governance, the trade policy and sometimes we forget the export of water consumption. The export of water consumption is the footprint in some parts of the world to support the sustainable use of water. I will detail more about what we intend to do in this field. The third pillar is international cooperation when there is a commitment to increase the support of the EU. In biodiversity, there are 3 pillars: protection, sustainable use, and restoration of protected areas and the wetlands.

How do we integrate biodiversity issues and water and what is their link with the ecosystem? What is new in terms of cooperation, and where does water management come from: We do not focus only on protection, only on defense. But we try to manage, large, natural landscapes for multiples objectives.

You can see in the slide a nice scene where water is in the middle.
The link between biodiversity and water pollution is mainly for the notion of ecosystem services, of local people and far away. We have the example of Bolivia: it is called the “Water shared Initiative” done by the Natura Bolivia foundation. It is a reciprocal water agreement between the producers of water, as due to the sustainable practices they guarantee the water provision? And the consumers are more in the cities. So, water agreement between the stakeholders has the objectives to avoid deforestation and provide water. They have an incentive package, not money but inputs water pomp to improve the livelihood of people. This is done with municipal water funds. This is an example of benefits for everyone in terms of clean water.

- Marlos de Souza, Team Leader Nexus, Land and Water Division, Food and Agriculture Division (FAO)

- Introduction from the moderator: he has enormous experience of what it means to have water management and water use and impacts including issues and pollution. Can you give us your highlights? You are talking from Brazil.

I was born in Brazil, a full water country, and then I move to Australia, a poor country regarding water. So, these two experiences helped me a lot to learn about water and agriculture.

Agriculture is the most dependent human activity in relation to water management. We can produce food without soil but not without water. We are so dependent on water that without water we cannot feed people; Even if we take irrigated agriculture, water is a key element.

If you think about agriculture, putting together the two elements, we have more than 3 million people in very high water shortage. If we think about water constraints and agriculture, we have the 2 elements impacting agriculture.
(See slide 1)

You have seen during the last 20 years that climate change is exaggerating this issue. We have the water stress that is taking a big impact in developing countries.

The last big impact we have is the magnitude impact of climate change. World Wide Wilderness Report states that we will have an agricultural impact. Climate change and high temperatures mean more transpiration meaning more water for the agricultural needs.

You can see the amplitude of the impacts caused by droughts, even for countries like Brazil, now these droughts are happening also in the southern states of Brazil.

Slide 2 shows how irrigated agriculture has an impact on the availability of food.

Conclusion: I will focus on innovation, how we can innovate in our way of managing water, not only for irrigation but managing water to increase the resilience of farmers, but also the reuse of water for agriculture.

- From the moderator: thanks. You made one of the commenters happy because you commented about his answer. What you and Philippe have in common is the concern about water use virtual water and trade. How can we handle that? How can we preserve enough water for the environment, biodiversity, and agriculture?

- **Stanzin Tsephel, In Integrated Solutions for Water-Stressed Regions Leh Ladakh, India - Stanzin Tsephel, BORDA**

*Presentation of BORDA as a super specialist when it comes to wastewater management and waste management systems*

The presentation is related to water and sanitation problems and solutions. Case study: a project in Leh, India. This town has water and sanitation problems. From his slide:

**Project area:**
- Leh is a Himalayan town situated at the altitude of 5000+ meters
- Limited water supply (2-3 hours/day) for limited period (6-8 months/year)
- Good water sources and good infrastructure in place
- Shifted from 90% dependence on surface water to reverse situation of 90% dependence on groundwater
- Decentralized continuous water supply
- Positive water balance
- PPP based Fecal sludge management
- Greywater linked to greenhouse effect

The Government recognized that this is a very successful project. This town is 500+ in Himalaya. In India alone, 30 provinces, Tibet, Nepal and Bhutan have the same problem. They have only 2 – 3 hours of water supply and for a few months. The rest of the year it freezes, it was not a water problem but a management problem. The example of the crisis happened, 90% depends on fires water, now 90% come from under-roof water. In most cases,
the bigger the project, the more it’s a mess. Green water to green production that’s the special side of this project.

From his slide:

Conclusion and recommendations → Most of the reported water stressed region is actually more a case of management crisis than actual water crisis → Except for exceptional cases - incremental approach seems to be the only viable approach for poor water stressed region → Decentralized approach helps reduce complexity → While maintaining integrated water management view, action can continue as a stand-alone approach → Cold regions (mostly Himalayan regions) of Asia need technology transfer from Europe and other cold regions → Water and sanitation challenge of the cold and hilly region are technically manifolds more complex and challenging, while access to resources are manifolds lesser.

- From the moderator: very interesting. We always like to think that if you are in Asia it is too hot, and central Asia is cold. You have made the message very clear that the need of this region is different from what people assume.

- Mrs. Jennifer Williams, Executive Director, Faecal Sludge Management Alliance (FSMA)

*FSMA is a new organization but became recognized in 2011 with the first conference in South Africa. She speaks about her first slide but does not spend time on the figures.*

How these people will receive safe water for 2030, we have to act quickly if we want to achieve the goals of SDG6.2

Second slide:
- Faecal sludge management (FSM) includes: the storage, collection, transport, treatment, and safe end-use or disposal of faecal sludge
- The alternative solution to manage the water. Its principle is to be a resource for recovering, reduce as a key step in the process, and a way to transport water.
- Treatment and disposal are important parts of the process because if it is not treated well, it will produce environmental pollution. The EU uses to handle a similar initiative through EU directives, policy, and standards. A similar initiative is a need. The FSM alliance is currently an initiative to construct a new FSM Centre as Catalyst to begin to formalize the sector.

*A critical issue is to create partnerships and as part of her conclusion she talks about the facts in her slide:*

Sanitation funding needs to explicitly include FSM as a top funding priority • Sewer coverage cannot keep pace with urban population growth • FSM is the best alternative where sewer coverage is not feasible • Less energy and water intensive – includes resource recovery –
often energy and water positive • Already in practice - with faecal sludge being generated daily that needs management FSM Alliance is building a new initiative to create an FSM industry standard • Objective: help formalize the FSM field and help create a market-driven industry •

Looking for stakeholders and funding to help shape this as quickly as possible! Learn more about FSM at the 6th International Faecal Sludge Management Conference • Join us as FSM6 Virtual, 31 May – 3 June, www.FSM6.org • Learn more about FSM Alliance at www.fsm-alliance.org EU commission, Delegations, all negotiating partners: prioritize FSM in your programming of the MFF!

- From the moderator: excellent pitch and a lot of people will join your virtual conference because it is part of the chain that does not get a lot of the necessary attention because we need to do something with the residues even if you have treated the water to implement ecological reuse of the residues. Looking at unconventional systems, not only try to look to transfer, it also needs alternatives ways of dealing with whatever is coming out of the toilet but also knowing what to do with the good clean water.

• Mrs. Silvia Saravia Matus, Economic Affairs Officer, Water and Energy Unit, United Nations Economic Commission for Latin America and the Caribbean (UN ECLAC)

ECLAC has done a lot of regional studies on the sustainable management of water resources. Let’s talk about the water nature-based solution of water matter management. Do you know that in Latin America we have a lot of water resources, our water resources concentrate in the Amazon region? 80% of the population in cities does not have access to safe water sanitation and clean water. 4 out of 5 rivers are polluted.

Nature-based solutions for this concept include water, but also biodiversity, agriculture, energy, and provision of ecosystem services in Latin America countries. We have carried out a study on water, food, and biodiversity and its nexus with them.

The lessons that we learned from this study are on the one hand the need for a common framework to evaluate and on the other hand the successful outcome for this resource.

Examples: in terms of water availability, one of the solutions that we have found are water funds that are aims to maintain water chains and to supply cities and to implement water management, surveillance, and monitoring of poverty areas. This type of mechanisms continues to change the traditional program of using rivers through living next to them.

Other examples are the ACA ecosystems in Brazil, Ecuador, and Peru aimed to maintain water supply to the community. These Rainwater solutions can also be used to manage water and there are examples of cities that manage rain water; one of them is the city of Medellin, Colombia.
The next slide will highlight that they continue working with nature-based solutions under their programs and that what is important for them is a paradigm change regarding climate change.

- Comment from the moderator: everyone speaker states they need to get partnerships, so contact them and talk to them to give inputs.

Discussion with the audience

- Question to Mr. Philippe Mayaux, are you happy with the intervention you heard about nature-based solutions? And what are your comments on virtual water and the role of trade?


There is a strong democrats pressure because water is a treasure, the Virunga National Park, lack in a very insecure sector, how to change this energy is big dams, here is an asset to biodiversity. We build a small hydropower plant and thanks to that we can generate electricity and jobs: from the water we go through energy and then to jobs and jobs in this place mean stability. So, one good example of a natural solution is a good thing. So, this example answers the first part of the question.

For the second part of your question, in the Commission, we have a Research Centre and 7 years ago they developed a study about water consumption in EU cities, and it seems that 40% of the water is important mainly for 3 commodities: cocoa, cotton, and coffee. For that, we also tried to work with the producing countries (Agriculture unit of EU work with Ivory Coast to develop a better value for cocoa and to avoid child work and environmental safeguard). Another example shows that via better management of water resources, it is possible to help the life of the regions.

- From the moderator: just a remark, there is something called the “Water Stewardship Standard” it is good for countries and organizations to look at the criteria in the WSS because it will help them carry a better water management.

You made some remarks that will be nice to discuss: the connection between agricultural and nature-based solutions and water trade solutions? Something like the water court alliance or something like that?

- Mr. Marlos de Souza: The water trade is a so complex concept. One missing element in the virtual trade is balance in terms of associating dollar to what is imported and to what is exported to the country and how to do the water balance. That is a complex issue. That is the first complexity. The second one is how to look at the water footprint, how to calculate it. We did a study which lasted two years, and there are big issues on how to calculate that. Water trade is an important factor, but we need to complete the question, for the moment we are just looking at the importing part and we need to do this balance.

FMO is pushing to be more efficient but still coming about water efficiency and if we do not put efficiency and policy to free the water from other activities does not mean that water will be free for uses and environment. If we have more efficient systems, it does not mean that we
have more water. Just going through modernization does not mean that it will be better for water management. We have a good opportunity to innovate using new concepts and ideas.

- Comments from the moderator: we have a lot of long-standing traditional knowledge but we still have to learn from and use better what we already have but doing it on the other way around by using all these lessons learned

- Questions for Mrs. Nchedi Moripe:

There were two questions for you,

- How are you using non-sure sanitation? Eco sanitation and dry sanitation, and how are you coming with that?
- And another question about the reuse of used water? Used water? How are you using these different insights in South Africa?

In the past 2 years, South Africa has fully tried to adopt and conceal dry sanitation, we are forced to look at it because we are a dry country, currently, universities and schools are studying where we are piloting this dry sanitation uses. We went for these solutions as well because we have different mountain regions where it was difficult to bring water and sanitation technologies.

Dry technology is another issue that South Africa is considering. Therefore, currently, we pilot it with schools in rural areas. We are trying to see about policy, our challenge is pollution in our rivers that are heavily polluted. This is another issue that is taking our energy. Instead of repairing, we are going for the cheapest solution and reusing water is a solution we are going for. The one we are using is the one for sanitation, and also for agriculture, we are trying to reuse water. Also, for agriculture, we are trying to go on the reuse of water to alleviate the system. We are trying to cover the space and cover with all the technologies that can help our country.

- From the moderator: it is interesting that South Africa is looking for decentralized systems and reuse of water, to make it to better management of your rivers, and I understand that is a huge challenge. Another recurrent element that you are also stressing is that we do not think that all the issues and problems are always the same (like in the mountain and valley areas).

Mrs. Nchedi Moripe added that when she heard one of the speakers, she thought about the challenges they have as a country: ecological issues with the rivers that are used as “trash”, they have a program called ‘adopt a river’ where women are working to clean the rivers. The event includes education because all that are human rights.

- From the moderator: I wanted to ask you about “adopt a river”, I am happy you mentioned it because it is a wonderful project. It is also interesting the connection you made that if there is a lack of services, in this case, WASH, you are creating pollution, because people will not have any other solution than using the rivers as trash, so the connection between human rights and basic needs will also prevent pollution.

The moderator is going back to Jennifer.

You mention two things: one is that ecosystems services, how can they help us to better water management?
Even the word “ecosystems” made us think to create solutions but we must look at the entire system holistically. Because sometimes when you try to solve a problem on one side you create a problem on another side.

- Mr. Stanzin Tsephel: I am not talking about solid bases but more about using natural-based solution rather than mechanical ones. Let’s keep it small: A: locally we do not transport water. B: Keep it simple; use water locally, use gravity systems instead of plumbs, chemicals, radiators, and C: we use traditional plants to treat the water. In that area, that is how we work.

- Mrs. Silvia Saravia Matus: I know that there is more that you want to tell us on the activities in your region, is there something that you want to add? I will take on your question on ecosystems experiences. Because, in our experience, nature-based solutions have been a priority. So, to get an idea, here in the region, 7 years ago, there was a study carried out about the value of ecosystems. These systems allow having water retention systems, the uses in agriculture and so on. The study showed that 200 cases out of 100 focuses on the maintenance of ecosystems. So, we want to provide better evidence on nature-based solutions and integration of better valuation on knowledge and traditional practices that we should better value and incorporate.

- From the moderator: I want to invite all the panelists to maybe give me a tweeter on what they conclude will be their final message to this session.

• Michely: “Nature is something interesting; it is a give and take situation - if you do not take care of the environment, he will give back what you deserve, so maybe a disaster”. The issue of pollution is taking a central spot, with the mask we are using to prevent ourselves to contract corona, people are throwing it in the seas and the species in the sea are wearing our masks, so we should think about it! Water is at the center of this disaster and environmentalists should look at that and come to us to avoid this. COVID also needs waste management.

• Philippe Mayaux: Normally, when I do a tweet I try to be good, so I think many hours for 20 characters, so it is difficult, but I will say “the necessity to take care of the water and biodiversity and vice versa: “healthy ecosystems are crucial for clean water and the opposite, really showing that the two must be tackled together. We cannot provide clean water and take care of sanitation if we cannot consider the resources at the same time. We cannot have healthy ecosystems if we do not have the forest. That is why the planet needs to be tackled altogether”.

• Mr. Marlos de Souza: “Agriculture is a gift of nature. Treat nature well and agriculture even more”

• Mr. Stanzin Tsephel: I am not a tweeter person but as a call of duty I will say “Nothing can stop an idea when time is right, so nature-based solution time is happening. It cannot be stopped so join the force.”

• Mrs. Jennifer Williams: In time of crisis comes innovation, and we all experience COVID so let’s transform nature into an opportunity.

• Mrs. Silvia Saravia Matus: we need to move from sectoral management of natural resources into more comprehensive management. The adaption of the nexus approach.
as well as nature-based solution. That will be useful to adapt to the current water changes.

**Conclusion:**
- If there are questions that are not answered in the questions and answers part, we apologized, we will answer by writing.

**Question & Answers:**

- **Niclas Gottmann** - DG INTPA à Conférenciers et participants (2:34 PM)
  Feel free to browse people to connect with and schedule meetings here: https://waterandbeyond.b2match.io/participants
  Please find all the information on today's keynote speakers and panelists here: https://waterandbeyond.b2match.io/page-1801

- **Niclas Gottmann** - DG INTPA à Conférenciers et participants (2:41 PM)
  Please find interesting background information and presentations concerning all 'Water and Beyond' sessions on our Capacity4Dev space. For this session, please visit: https://europa.eu/capacity4dev/public-water_and_sanitation/discussions/water-and-environment-resource-management-support-nature

- **Yael Mason** à Conférenciers et participants (2:49 PM)
  I understand that South Africa has adopted a non-sewered sanitation. Please relate to the management of the entire sanitation service chain (desludging, on site disposal or off-site transport and treatment and end use? and to safely managed sanitation according to SDG 6.2?

- **Yael Mason** à Conférenciers et participants (2:50 PM)
  This is a question to Nchedi@

- **Lars Skov Andersen** à Conférenciers et participants (3:01 PM)
  Consider the virtual water exported from the arid Mediterranean to the humid northern Europe.

- **Lesha Witmer** à Conférenciers et participants (3:36 PM)
  UN Water report on water efficiency unwater.org
  Water stewardship standard - AWS
  Marlos De Souza à Conférenciers et participants (3:40 PM)
  FAO released last year one of our flagship publications (The State of Food and Agriculture - SOFA) completely dedicated to water covering all elements of water and agriculture: http://www.fao.org/3/cb1447en/CB1447EN.pdf

- **Lea APPULO**, Wetlands International à Conférenciers et participants (3:59 PM)
Wetlands are super nature based solutions. Water storage and quality benefits they provide are vital to sustainable development and climate adaptation. Wetlands are natural climate buffers and contribute to reduce risks. Healthy ecosystems like wetlands can contribute to offer solutions to contemporary challenges like poverty, instability and vulnerability to climate change.

Arnaud de Vanssay à Conférenciers et participants (4:00 PM)
Silvia, do you have a link you could share on your study on NBS with the 200 examples?
Silvia SARAVIA MATUS - UN ECLAC à Conférenciers et participants (4:01 PM)
We are still in the final editing process of the study. We will post it in our web once it is finalized. But in the meantime I could share with you a ppt. Send me your email: silvia.saravia@cepal.org

- Shobana Srinivasan BORDA à Conférenciers et participants (4:02 PM)
Questions and queries to europeanpactforwater@borda.org
Alliances:
susana.org
fsm-alliance.org

- Niclas Gottmann - DG INTPA à Conférenciers et participants (4:03 PM)
Join the conversation on Slack: https://join.slack.com/t/water-and-beyond/shared_invite/zt-ks36f4us-2ZNJVDblYJB00R78y_14~w