

## HIGH LEVEL PANEL on HYDRO-DIPLOMACY

On the Side of the UN-Water Summit on Groundwater 2022, coordinated by UNESCO

*Under the High Patronage of*

***Mrs. Irina Bokova***

*Co-chair of the International Science Council's Global  
Commission on Science Missions for Sustainability*

*Former Director General, UNESCO*

***Mr. Erik Orsenna***

*Chairman, Initiative for the Future of Great Rivers  
(IAGF Initiative pour l'Avenir des Grands Fleuves)*

*Academician at Académie Française*

\*\*\*

*The Conveners*

**Ambassador S. Gompertz**

Board Member, The Bridge Tank  
former Ambassador for the  
COP21 French Presidency

**Minister (Dr.) Hakima el Haite**

Board Member, The Bridge Tank  
former UNFCCC Champion for  
climate & Minister for COP22

**Dr. Joël Ruet**

Chairman, The Bridge Tank  
Institute for Innovation,  
Ecole Polytechnique

**Minister Hamed Semega**

Board Member, The Bridge Tank  
former High Commissioner,  
Senegal River Basin Organisation

\*\*\*

*“Rethinking Hydro-diplomacy: International Rivers as Instruments for Peace*

*Shared experiences, solutions, and sustainable resources management”*

followed by the launch of the

## WORLD WATER for PEACE CONFERENCE

December 6th, 2022, Paris & hybrid

## CONFERENCE VERBATIM REPORT

### SESSION 3: INNOVATIVE TOOLS FOR A REVISITED HYDRODIPLOMACY

*15h15-16h30; each speakers' intervention: 5-6 minutes & 2 rounds of discussion*

*Objectives: This last panel shall discuss the diversity of tools at the service of hydro-diplomacy, be they economic, technological, social, legal or political ones. Building on the need to renew and enlarge the practice of hydro-diplomacy, this session will discuss innovative ways to involve the variety of sectors, actors, resources, and territories needed for a sustainable development and co-management of water.*

Moderator: **BRETHAUT Christian** (Dr. Mr.) Scientific Director, Geneva Water Hub (GWH), Global Observatory for Water and Peace (GOWP)

- **BHUTTA Zulfiqar**, (Prof. Mr.), Founding Director, Institute for Global Health and Development and the Centre of Excellence in Women and Child Health, Aga Khan University, Karachi (*on Zoom*)
- **SCHMEIER Susanne** (Dr. Ms.), Associate Professor, Water Law and Diplomacy, Institute for Water Education (IHE), Delft
- **TARDIEU Eric** (Mr.), Director General, International Office for Water (OIEau)
- **TURAYEVA Suriya** (Dr. Ms.) leading lecturer for "Environmental Protection and Rational Use of Natural Resources", The University of World Economy and Diplomacy of Uzbekistan (*on Zoom*)
- **DAS Arnab** (Commodore. Dr. Mr.), Director and Founder, Maritime Research Center (MRC), Pune
- **TIGNINO Mara** (Dr. Ms.), Lead Legal Specialist, Geneva Water Hub (*on Zoom*)

#### **Words of introduction by the Moderator, Christian Brethaut:**

- Hydro-diplomacy is not a monolith, it is something that goes far beyond state-to-state interactions, with multiple stakeholders involved. As such, hydro-diplomacy can be considered through the lens of innovation. This session will, on the one hand, look at hydro-diplomacy globally, defining what it is through the lens of innovation, before going to the field, as hydro-diplomacy is highly context-specific and there is an added value of comparing different processes to see what can be implemented in different regions and to learn from different regions, before finally looking into new tools related to hydro-diplomacy processes. This will address a variety of topics: surface water, groundwater, quantity and quality, different types of transboundary settings, different institutional mechanisms – from informal institutions towards river basin organisations – and finally the science-policy interface.

### Introduction of the first speaker, Mr Zulfiqar Bhutta, by the Moderator

**BHUTTA Zulfiqar**, (Prof. Mr.), Founding Director, Institute for Global Health and Development and the Centre of Excellence in Women and Child Health, Aga Khan University, Karachi (*on Zoom*)

- Mr Bhutta started by giving a quick introduction to his experience with water-related issues in Pakistan, where he has largely dealt with the issue of water quality, scarcity, and safety from the perspective of health. It is therefore easy to understand why this has become such an existential issue for a country where parts of the country have traditionally been extremely water-scarce, now moving from stressed to water shortage circumstances. But as many of the panellists and participants know, Mr Bhutta said, the unprecedented floods in Pakistan in the past summer inundated one third of the country's landmass, affecting 30 million people, leading to accumulated losses of about 40 billion dollars. At the same time as we have the traditional water scarcity that originates from the issue of rapid population growth and limited resources in a largely agrarian population, we are also witnessing and seeing the real acceleration of challenges in the region and in Pakistan because of climate change, Mr Bhutta stressed. Of the approximately 7,000 glaciers that exist in the north of the country, one of the largest clusterings of these glaciers globally has seen the rate of disappearance of these glaciers over the last 10 to 15 years being faster than it has been witnessed in the last century. Glacial lake outbursts are now a reality of life for people living in that area, Mr Bhutta added.
- In this circumstance of both issues of access and issues of lack of access to water resources, what is it that countries like Pakistan should do which can be classified as innovation or new approaches to water conservation, improvement of water quality, and improvement of quality of life for its people, Mr Bhutta asked. Of late, several things have been tried in terms of community based strategies, and local water stewardship innovations. This approach can be used to reduce consumption, for conservation in the context of climate change, and also by depending upon local resources rather than wait for large countries and corporations of the world to find the resources to make this happen.
- Mr Bhutta shared the experience from one of his PhD students, who completed a large cluster randomised trial in rural Sindh, in Pakistan, whereby through a process of conditional incentivisation at community level, a whole approach in a water-scarce district in Tando Muhammad Khan was undertaken over a period of three years. Through a very nominal community incentivisation process, mostly within the possibility of ownership by the government through its own social safety nets, what Mr Bhutta and the researchers saw was a significant reduction in the risk of child disorders and water related infections in children, improvements in nutrition, and improvements in awareness at a

community level of community stewardship. Mr Bhutta shared that they were now engaging in expansion of this model to other parts of Sindh and bordering areas of Balochistan. Why these initiatives are so important is very simple, according to Mr Bhutta; any model one looks at very clearly indicates that with very limited resources, this is going to become an existential issue for South Asia, i.e. India and Pakistan.

- Pakistan and India signed a historic Indus Water Treaty in 1960. “Looking back, it seems almost impossible,” Mr Bhutta commented, “as to how in the midst of so much antagonism were they able to craft out a sharing of resources for mutual benefits that has lasted almost over half a century.” This is however under threat; with limited resources, a conflict related to water might become an even bigger issue than a conflict related to Kashmir. The reason why innovative strategies for water conservation and community stewardship become even more important is because with limited resources, there is no way out of it in the context of global climate change. This is why community-based approaches are so important to water conservation, agricultural strategies that reduce the usage of a limited resource of water, and also dealing with deforestation in the north of country, which is such a major contributor to a lot of the changes that are being observed today.
- Mr Bhutta concluded by saying that work was on the way in this big area and that they remained very receptive to ideas from elsewhere in the world as to what people can do themselves to ensure that they move towards water security and peace and prosperity in the region.

**Comment by Joël Ruet:**

- Because of the connection between Pakistan and India and Mr Bhutta’s mention of this specific context, Mr Ruet asked Mr Arnab Das if he wanted to react or comment on Mr Bhutta’s intervention.

**Response by Arnab Das:**

- After saluting the quality of Mr Bhutta’s presentation, Mr Das rebounded on the mention of the Indus Water Treaty. While this was a World Bank driven treaty, Mr Das highlighted two points about this treaty.
- The first point addressed the water allocation that was done under the Indus Water Treaty. Mr Das noted that this allocation had not been implemented on either side because of existing limitations affecting both sides. Water is not yet utilized by both the countries.
- The second component discussed by Mr Das centred on the fact that when the treaty was crafted in the 1960s, the concept of climate change and climate risk was not factored in. “Today, we are in a very very different era and this issue needs to be looked at,” Mr Das noted. When we look at climate

analysis or climate risk study, there is a need to look at the spatio-temporal dimension, as the spatial scale is not always of the right order. This leads to the missing out of other factors of impact. The same goes for the temporal scale. Mr Das stressed that the tools were available nowadays, especially highlighting the digital transformation. Unless there is more data available on the digital platform, it is just not viable to try and do any form of meaningful study.

- Mr Das noted that the Indus case was one example with very unique characteristics, adding that the tropical conditions have to be taken into account. Many times, the unique tropical characteristics, with their unique challenges and opportunities, are forgotten. These must however be factored in.

**Response by Zulfiqar Bhutta:**

- Mr Bhutta concurred that solutions have to be based on evidence and the best possible data available both in terms of predictions and projections, as well as geo-spatial temporality. Mr Bhutta went on to point out that one cannot choose one's neighbours and that at this point in time, given the realities of changes both in terms of climate and the reality of what is happening to water reservoirs - particularly what is happening to glaciers, which have been a traditional source of water and a lifeline for the region - "there is no alternative but to sit down and work something out in a region that is home to over 1.5 billion people." When anything happens in that region, particularly something which creates and promotes insecurity, it creates a huge impact on human development and human capital.
- Mr Bhutta mentioned that he is a paediatrician by training and that because of this, he knows that a lot of these uncertainties of climate change and its impact on health, nutrition, and development are some of the reasons why the entire sub-continent is held back in terms of global competition and development. There is therefore a need to find a way not only to coexist in peace but also to look at some of these realities from the lens of science, pragmatism, and local solutions. According to Mr Bhutta, this will require people sitting down, talking openly and plainly, based on the best evidence and looking at what works for both sides. At this stage, ground realities have changed and climate change is a bigger reality than it was in 1960 but the fact remains that the region agreed to share resources at a stage where this was necessary. That premise remains 60 years on and, if anything, becomes even more important.

**Follow-up question by the Moderator, Christian Brethaut:**

- You mentioned the fact that existing frameworks become updated because of ongoing changes but you also mentioned the importance of communities in building adaptive capacities. Part of the conversation in the previous sessions was about how to link these different levels that are involved

in hydro-political processes. From your experience: how do you better link those different levels between supranational and very local practices?

**Response by Zulfiqar Bhutta:**

- Supranational, regional, political : all of those are very important things to have, Mr Bhutta noted. At the same time, nothing works better than ground realities and things that work at the level of the micro-changes that people bring to their own life. Working in the south of the country, Mr Bhutta said that irrespective of what the government had done or of large scale programmes, people find ways and means of building resilience and adaptation to climate change and the realities of shrinking resources, as this is something that nobody can get away from. The few innovations that Mr Bhutta pointed out are the kind of innovations that need to be seen at scale, something he got to see in his own field of health over the last twenty to thirty years. A major component of progress in many low and middle income countries in Asia and Africa with regard to the millennium development goals for health, reducing maternal and new-born child mortality was also achieved through primary care approaches, through community strategies, e.g. outreach, use of community health workers, use of community support groups, or women support groups. Mr Bhutta pointed to the gender dimensions to a lot of these areas for which the solutions are not going to come from either Delhi or Islamabad. Instead, it has got to come from local communities and that is precisely what Mr Bhutta is trying to divert his group's attention to – trying to foster change on the basis of conventional wisdom, and of the ability of communities to find solutions in the midst of a lot of other crises and challenges. The subcontinent, India, Pakistan, and Bangladesh, needs a lot more of that than is currently available, Mr Bhutta concluded.
- In a last comment, Mr Bhutta added that he hoped to remain engaged and extended an invitation to the room and to Mr Das for a conference on water, security, and health held the following week in Pakistan at Mr Bhutta's Centre, where there would be a lot more discussions between professionals and particularly those involved in climate change, ecology, and health.

**Transition and introduction of the next speaker by the Moderator**

**SCHMEIER Susanne** (Dr. Ms.), Associate Professor, Water Law and Diplomacy, Institute for Water Education (IHE), Delft

- Susanne Schmeier addressed the panel by first expressing her appreciation for the local insights shared by previous participants. There is a lot happening in the outside world in terms of managing water that is shared, whether it is between people, between communities, or between countries. Ms Schmeier however noted it sometimes bothered her that this was all put under the term “water

diplomacy” even though what people do at the local level very often is not diplomacy and even what countries do with each other is sometimes not diplomacy but is merely technical cooperation. When technical water managers are working together, it is sometimes a good thing that it is not diplomacy because traditional diplomacy, i.e. handling water issues through foreign policy means, often indicates that there is already a dispute that needs to be addressed, a dispute that has escalated at the level where the ministry of foreign affairs comes in. This might not always be conducive. Quite often, as can be seen with the examples of the Senegal River, the Rhine, or the Danube, cooperation works quite well but it is the water people coming together. Ms Schmeier thus made a plea to keep in mind what is being talked about. Water diplomacy is the very diplomacy of foreign policy concerned with shared waters.

- To give some context on the work of her institution, Ms Schmeier shared that the IHE Delft, together with a supporting state university, the Transboundary Freshwater Dispute Database, and also the Geneva Water Hub and the University of Geneva, are in a process of updating all the data that is available on transboundary conflicts and cooperation between countries. Although cooperation prevails by far over conflict, the share of conflicts has actually been going up since 2000, compared to the years before 2000, both in terms of number of events and the intensity of events. At the same time, the rate of institutionalising cooperation, i.e. treaties and river basin organisations, is going down. All the conflicts seen today are around infrastructure development. There is clearly a need for water diplomacy and for engaging foreign policy makers and water managers in that. Echoing what Christian Brethaut mentioned earlier, Ms Schmeier noted that there is a lot of experience, there are tools that are available for water diplomacy. These are very often overlapping with more technical water management. Notification processes for infrastructure are one of the best conflict prevention mechanisms to make sure that one is not catching one’s neighbour by surprise by building a dam, for example, but actually having an institutionalised process through which countries in the basin are aware of what is happening. This prevents or at least mitigates conflicts.
- Ms Schmeier mentioned the interesting example of the Mekong River, where the prior consultation mechanisms of the Mekong River Commission had not prevented the conflict but had definitely prevented its escalation. The Commission has kept it at levels where they will always call on meetings between the countries and keep communication ties. Ms Schmeier then addressed the multitrack approach, where negotiators are brought together with NGOs. Haringvliet case with the Netherlands, which was the case of a downstream country causing trouble. Dutch NGOs teamed up with upstream NGOs in Germany and France to put pressure on the Dutch government to open the gates again for the salmon migration. There are also treaties and basin organisations in many regions, e.g. the Indus and many other, there are therefore tools out there for water diplomacy.

- How can we make a difference? What determines the tool's effectiveness? These were two more questions Ms Schmeier addressed. Quite often, international organisations and policy makers go and promote mechanisms and tools without necessarily questioning their effectiveness or questioning what actions are effective or not. Is it the water diplomacy itself that is not functioning? Is it the tool? Is it the notification process set up in a way that it cannot function by design? Or is it actually context specific, like regional conflicts?
- Coming to a conclusion, Ms Schmeier noted that there were three key things that needed to be done.
  - 1) Sharpening the tools that we have in water diplomacy, moving beyond the mere assumption that having a treaty, a river basin organisation, or a notification process is enough in order to really enable these mechanisms to deal with all the change that is coming up, e.g. climate change, increasing pressure on water resources, increasing unilateralism, and fake news, which was not only a problem with Trump in the US but also in other countries.
  - 2) Capacity development for individuals, for organisations, for entire societies, and for sectors that impact on water. Right now, with regards to the SDGs, a lot of sectors might achieve or partly achieve their goals under the SDGs, e.g. power and energy, but at the expense of water. "As long as we are not incorporating those sectors, actors and users in the capacity development, we are kind of doomed," Ms Schmeier concluded.
  - 3) Lastly, when discussing water diplomacy from a diplomatic and policy perspective, we should not shy away from the critical questions also addressed by Mr Karlsson over lunch, that relate to political interest, corruption, fake news, and unilateral interests. This undermines everything that has been achieved so far in water diplomacy.

**Comment by Joël Ruet:**

- Mr Ruet expressed his appreciation for Ms Schmeier's presentation. Mentioning The Bridge Tank's policy brief on hydro-diplomacy, Mr Ruet noted that Ms Schmeier's presentation could have been an academic discussion on this paper and the paper could have been an academic discussion on Ms Schmeier's presentation. While these two might disagree on the surface, in terms of definition and taxonomy of hydro-diplomacy, the intuition behind the policy brief was to open out the sphere of the ministry of foreign affairs and to link it with other capacities, just like economic diplomacy has done. Despite this difference in definition, Mr Ruet noted that in his understanding, he and Ms Schmeier agreed on what is to be integrated to the usual text-based conflict-linked forms of diplomacy. Mr Ruet thanked Ms Schmeier once more for providing The Bridge Tank with food for thought on its policy brief.

**Follow-up question by Stéphane Gompertz:**

- Mr Gompertz asked Ms Schmeier if she could elaborate what she meant when she said “sharpening the tools,” as he found that idea very interesting.

**Response by Susanne Schmeier:**

- There are already a lot of tools that exist and that have been developed over time, actually before we started calling the concept water diplomacy or hydro-diplomacy, e.g. with treaties, basin organisations, third party involvement, negotiation support, processes that have been developed in basins or global instruments like notification systems requiring information sharing, etc. We have that and it is applied a lot but it might not be very targeted, it might not be applied in a timely manner, it might be applied ineffectively, or it might be misused or abused by certain countries for the sake of a unilateral interest beyond the interest of the basin. If we can sharpen these tools, e.g. by exchange between different river basins, asking question like “how have you done that? What challenges did you encounter? Why did this work? Why did you get stuck at that point in the notification process?” This would really help those who really manage the river basins, Ms Schmeier argued.

**Follow-up question by the Moderator, Christian Brethaut:**

- Could you elaborate on who is in the best position to do the brokering work, to bring those people together and also make the tools more visible?

**Response by Susanne Schmeier:**

- After acknowledging the complexity of the question, Ms Schmeier stated that in her personal view, there is a lot of value in global events such as the upcoming UN Water Conference but that in fact, what is needed is much more basin to basin cooperation, technical exchange, more Chatham House Rule workshops where representatives of river basin organisations can come together in an environment where it is not about showcasing all the great things that have been done in order to acquire new donor funding, but really having those who manage the basins at different levels sit together and exchange. This can be facilitated by those providing knowledge and doing research, e.g. the University of Geneva, the IHE Delft. It therefore really comes down to the people who manage the basins and not necessarily to those who sit in New York.

**Transition by the moderator, Christian Brethaut:**

- This offered a perfect transition towards more cross-basin aspects. Giving the floor to Eric Tardieu, Mr Brethaut invited him to give some global perspective on basin management and the dialogue between basins, based on his experience.

**TARDIEU Eric (Mr.), Director General, International Office for Water (OIEau)**

- Mentioning the word “innovation” in the title of the session, Eric Tardieu started his address to the panel by saying that he wanted to go above and beyond that. “Hydro-diplomacy needs more science,” Mr Tardieu stated. Taking the case of climate change impact at the local level, there is very clear evidence that what is needed is more science to know the concrete effects on the ground, at the local level. There are global models and there are regional models but they are not sufficient when it comes to seeing how to be able to share a common water resource. Mr Tardieu stressed that while innovation is important, especially in the context of the UNESCO Summit on Groundwater, what is really needed is more science and more shared knowledge about the water resources.
- Hydro-diplomacy is therefore not only people talking and trying to find agreements, there is a need for knowledge and to share a common understanding of the resource. There is however often a lack of knowledge and science to do that, an initial message Mr Tardieu wanted to highlight before turning to his other remarks.
- Mr Tardieu’s second main point focussed on a technical aspect of hydro-diplomacy or water cooperation, namely water information systems. Under the appearance of a very technical issue, it is also a very strong trust building tool and common knowledge sharing tool. In Mr Tardieu’s view, it is very important to continue to invest in shared water information systems, including the knowledge of the water resources, the knowledge of water users, the dialogue between the needs of the different stakeholders, e.g. agriculture, hydropower, or industry. It is in the OIEau’s experience, as a network working with many basin organisations, that this step of sharing, designing, and implementing a common water information system is a key trigger in the construction of trust and joint management. This is not only the case on a technical basis but also on a diplomatic, policy, and political basis.
- Mr Tardieu mentioned examples he described as not very well-known, from a region without an existing river basin organisation. This is the case of the cooperation between French Guiana and Brazil, with the Oyapock transboundary river, and French Guiana and Suriname, with the Maroni River. There is no basin organisation between these three countries. In addition to that, there is a

potential conflict, especially between Suriname and France, as they do not agree on the border. For three or four years now, the OIEau has been involved with many local partners in the design of an observatory of the water and biodiversity resources. The results have gone beyond the OIEau's expectations, Mr Tardieu said. At the beginning of this, the OIEau was made of water practitioners - technicians who thought it would be interesting to have more monitoring stations on the two rivers and to exchange data. A lot of technical services were thus involved in the three countries. The result was a gain of political attention, with politicians noticing that it was possible to exchange data in a very peaceful manner – data describing what was happening with the resource, especially with regard to flood management. In terms of innovation, the idea of shared infrastructures is important and the OIEau would like to promote it even though it is neither easy to implement nor common. Mr Tardieu added that maybe one idea could be to promote the idea of the infrastructures related to monitoring, as they do not cost a lot of money, they are not too complicated, and donors could be found for them. Under the responsibility of the transboundary basin organisation, this could be an innovation: to extend this idea that the monitoring system has to be shared at the transboundary level. Shared management at the transboundary level could also be a condition for donors willing to fund monitoring systems. There is arguably the issue of sovereignty to be taken into consideration, as it brings additional difficulty.

- Another innovative approach in the perimeter of water information systems are the incoming satellite technologies. We now have the possibility to use satellites like the SWOT satellite, allowing to deliver monitoring on river flows and river levels, which are key issues for navigation for example on the Congo River. There will be other possibilities for the analysis of the quality of water or the different types of uses. This brought Mr Tardieu back to his first point about science and technology. While it might be a little bit far from hydro-diplomacy, Mr Tardieu noted that there are tools, be they technical or knowledge tools that can allow for a better understanding between stakeholders, not only between different countries but for example between agriculture and industry. These are possibilities that ought to be promoted, Mr Tardieu concluded, because they extend the parameters of cooperation between two countries or stakeholders.

**Comment by Susanne Schmeier:**

- As a quick addition, Ms Schmeier addressed the example of non-defined border monitoring stations. This example is often associated with the Global South but there is actually exactly the same situation between Germany and the Netherlands, where a border has never been defined since the end of WWII until today. Monitoring stations that are jointly owned by the governments were thus put in those areas.

**Comment by Stéphane Gompertz:**

- Mr Gompertz mentioned another example, one unrelated to water but related to the environment, with the example of Tromelin and the agreement between France and Mauritius. There is an issue of sovereignty on who owns the island of Tromelin. France and Mauritius agreed to put aside the issue of sovereignty and agreed to use the island to monitor the environment together. Unfortunately, Mr Gompertz commented, this very intelligent idea was killed by the French parliament.

**Follow-up question by the Moderator:**

- I really like this idea that the process and the implementation of a tool, not only the tool and its impact itself, leads to trust-building. From your experience across basins, comparative perspectives, what are your lessons learned in terms of replicability for this to happen? Are we talking about the need for an effective RBO? Do we need more political commitment? Do we need strong civil society?

**Response by Eric Tardieu:**

- The scenario where a river basin or groundwater organisation exists creates the best conditions for peaceful, trustful cooperation and management of common water resources. To get that, there is a need for political commitment and for resources, both financial and human resources. Orienting his answer in that direction, Mr Tardieu said that having a river basin organisation is an important factor but that we needed to expect more than that. What is a basin organisation, Mr Tardieu asked. It is a political steering organ with an executive team. There is a need in many basins, including in Africa, Europe, and many regions, to develop the capacities of these teams. They need more competencies, more skills, more knowledge on how to operate water information systems for example. They also need more independence from the countries. This is a very sensitive issue, as each basin organisation has its own history and political balance. Mr Tardieu concluded by saying that this is an area where things could be improved, something which could be called capacity development. On very concrete issues, e.g. the status of the staff, their knowledge, technical abilities, and real autonomy towards the political strategic steering capacity.

**Question by Mara Tignino to Eric Tardieu and Susanne Schmeier:**

- **To Eric Tardieu:** thinking of river basin organisations, the case of the Senegal River Basin Development Organisation is often mentioned as being the best model for river basin organisations. What are the ingredients that have made this organisation a model that works? What has pushed the countries to have this model with joint water infrastructure, i.e. something very difficult to have? What are the elements that could be reproduced for other rivers?

- **To Susanne Schmeier:** from this idea of river basin organisations as an anchor for water-diplomacy, do we need to have an anchor on the political willingness in these river basin organisations, as we see in Africa that it is a real political organisation with ministers and very high level positions, or do we need more technical bodies like in Europe? How do you see this relationship between different models in the river basin organisations?

**Response by Eric Tardieu:**

- There are many possibilities and the political will from the countries is at the very core and basis of the success of the life of river basin organisations. This condition has to be preserved at the political level for the countries to see their interest and the outcome of their political investment in these RBOs. This is something that the hydro-diplomacy community could improve, by investing more in successful stories of transboundary cooperation. As technicians, there are many examples to say why transboundary river basin organisations are important but the question should be: what are the stories that we are able to tell? It will bring more peace, more development, more security, so there are many stories that could be told in order to bring the needed momentum.

**Response by Susanne Schmeier:**

- One important question is: how should an RBO look like? And what are the successful ones? This is something difficult to define. Although there are commonalities across RBOs in terms of government structure, some being more technical, others more political, with a secretariat, they still vary a lot. If one assumes a “form follows function” starting point, the problems in the basins are very different, which means organisations need to be defined differently. In a basin such as the Senegal, the point that triggered the creation of the river basin organisation was the willingness of the countries to develop water resources in order to eradicate poverty, this resulted in building shared infrastructure, as single countries were not able to do so alone because of the lack of financial resources. An organisation with more of an implementation mandate owning and managing the infrastructure thus makes sense in that case.
- In a situation like the one in the Rhine, it is about coordinating the fight against pollution, which requires a very different structure. It depends on what the problem is, joint infrastructure is not always the indicator for success, Ms Schmeier noted. It certainly is in the case of Senegal but in other cases it will be very different.
- About the question on political vs. technical aspects, both are required in Ms Schmeier’s opinion. There are examples in basins of how things shift, like the example of the Mekong, which was very technical at first until, in 2010, the heads of state and government met and they now do so every

four years. The Orange River provides an example of a conflict successfully addressed by a river basin organisation. The recent droughts in Southern Africa led to Botswana suffering significantly and eyeing the transfer that exists between South Africa and Lesotho, asking for its own share. Ms Schmeier recalled meetings she attended where the minister of Botswana half-jokingly said that this was a situation where in other regions there would be a water war. What did they do? They came together under a river basin organisation, bringing in the ministers at one point and deciding to do a study together to determine whether they could expand that transfer scheme to Botswana, keeping this downstream country on board to avoid a conflict.

**Comment by Hamed Semega:**

- The key to success may be a joint investment programme, as they have in the Senegal River Basin. The key to force political will, which is itself key to have a viable river basin organisation, will be promoting data. People are aware what they can gain in having access to data in order to efficiently manage the river. This can force the will to change, Mr Semega underlined.

**Transition and introduction of the next speaker by the Moderator**

**TURAYEVA Suriya** (Dr. Ms.) leading lecturer for "Environmental Protection and Rational Use of Natural Resources", The University of World Economy and Diplomacy of Uzbekistan (*on Zoom*)

- Dr. Turayeva developed her presentation into 2 parts: first, she presented the situation of water resources management in Central Asia. In a second step, she described the cooperation mechanisms developed internally in the region, in order to improve water management, through dialogue between neighbours and prevention of water-related risks.
- Water resources management situation in central Asia: Partnerships between Central Asian countries are actively growing, notably regarding water resources management. Almost 85% of the regional water resources are concentrated in Tajikistan & Kirghizstan. The main share & distribution waters come from Amu-Darya & Syr-Darya. Kyrgyzstan is the only country that receives its water resources, otherwise the other countries in the region depend on each other. For instance, in Uzbekistan & Turkmenistan, almost 90% of water resources come from outside. Uzbekistan is one of the main experts in agriculture, so it is the most dependant on water resources. Relations between countries are characterized by their shared challenges regarding water resources, such as:
  - Climate change: over the past 50 years, the volume of glaciers has decreased by an average of 30% and this trend continues. Global warming will lead to a drop in the level of rivers in Central Asia by 40%.

- Population growth: approximately 1.66% Urbanization: the share of urban population in the CA region is growing, same as the demand for water for household needs, areas services & urban amenities.
- Economic development: GDP will rise by 4.1% next year, leading to a significant rise in electricity demand.

Risks are common to the entire region, such as: Water problems (floods, mudflow...), outburst of high mountain outburst-prone lakes, risks of destruction of tailings of radioactive and toxic mining waste, use of deposit of groundwater, oil and gas that have a transboundary nature of occurrence.

The region is sadly known by the tragic fate of the Aral Sea, which has dried up considerably. This has caused a huge crisis in the region, notably in terms of water scarcity in arid climate and desertification. This crisis lead us to observe climate change effects both in winter and summer seasons and has environmental, economic & social consequences. Ms Turayeva explained the ongoing process of lowering the water level in the Aral Sea:

- Ecology: Disappearance of 90% of fauna due to increased water salinity
- Increasing aridity and continental climate
- The emergence and constant growth of the Aralkum desert with an area of 38 thousand km<sup>2</sup>;
- Disappearance of the natural barrier: the Aral Sea was a protection against the spread of dangerous bacteria;
- Economy: Termination of fishing
- Unsuitability of water for irrigation of rice, cotton and wheat;
- Social aspects: Increasing disease in the region - constant dust storms (75 million tons of dust per year) carry both sand and pesticides from the bottom of the drying sea;
- From 2012 to 2018 The population of the coastal city of Muynak has decreased by 25%;
- Water diplomacy as a New Form of Multilateral Partnership: Dr. Sura Turayeva explained that the development of tools and mechanisms for cooperation in water management began in 1995 with the Nukus Declaration. However, the situation of electricity (hydropower) and water distribution was very difficult. All the documents that were initially signed were purely declarative. In 2016, Kirghizstan froze its participation in common water activities and the International Fund for Saving the Aral Sea (IFAS). Uzbekistan, Turkmenistan, Tajikistan, and Kazakhstan are parts of the Helsinki Convention. Central Asian countries are aware of 2 trends: decreasing resources and increasing demand.

On August 24, 2018, the summit of the heads of the IFAS founding states was held in Turkmenistan, which was last held in 2009 before this meeting. This summit contributed to:

- Cooperation to further improve the water management, environmental and socio-economic situation in the Aral Sea basin, and also noted the significant contribution of IFAS in this area.
- Improving the organizational structure and legal framework of IFAS in order to create an effective and sustainable institutional mechanism capable of promptly responding to new challenges.
- Cooperation in the implementation of regional projects and programs aimed at saving the Aral Sea, ecological improvement of the Aral Sea region and the Aral Sea basin, such as:
  - Action Program for Assistance and Assistance to the Countries of the Aral Sea Basin 2021
  - Regional Program for Environmental Protection in Central Asia 2022
  - Climate Adaptation & Mitigation Program for Aral Sea Basin – Program implementation period until 2030

Dr. Turayeva explained the main steps of water diplomacy in Central Asia between 1992-2022. According to Dr. Turayeva, water diplomacy is a flexible cooperation tool; it is very important to be created across the world and work with population.

- *Bilateral diplomacy*; Strengthening the role of a regional organization for resource management based on commercial benefits and modern market mechanisms in the form of an international water energy consortium CA & Cooperation with international partners and donors
- *Multilateral diplomacy at the global level*: global water conventions and initiatives
- *Public diplomacy*: basin councils, INBO network Joint regional projects, work with the population on water and energy saving
- *New technologies and diplomacy*: Implementation of new approaches and scientific research.

### **Transition and introduction of the next speaker by the Moderator**

**DAS Arnab** (Commodore. Dr. Mr.), Director and Founder, Maritime Research Center (MRC)

- Mr Das started his contribution to the panel by noting that the digital transformation is extremely important, and that the digital tool needs to be looked at. Mr Das also noted a difference of opinion he had with regard to satellite data; when we talk about the underwater component, the satellite will never be sufficient. The underwater component cannot be ignored, this would be like ignoring 90 percent of water bodies, Mr Das said.
- The Underwater Domain Awareness will be an extremely important tool for safe, secure, sustainable growth. “Safe” is safety from any natural disasters, “security” is concerned with security challenges, “sustainability” is not only about ecology but also about financial sustainability, and “growth”

because without growth there is nothing. Mr Das used the word “Indo-Pacific region” because of the importance of tropical waters.

- The Indo-Pacific itself is defined as the tropical water of the Indian Ocean and the Pacific Ocean, as the tropical conditions cannot be ignored. To see, to understand, and to share – these are the broad three pillars required within this framework.
  - “To see” is represented by the sensors and platforms which are going to carry the sensors. Whether it is a surface platform or a sub-surface platform, AUV, or any other platform, the right kind of investment in terms of technology and science is very important.
  - “To understand” is found in the data analytics, which includes doing the pre-processing to mitigate all kinds of distortions that are possibly part of the data.
  - “To share” has to be in a usable format, actionable input must be given to the user, be it the policy maker, the stakeholder, the practitioner, or the community. It is important to keep track of everybody’s requirement and provide them data accordingly. Today, there are so many tools that are available, e.g. mobile devices, and this needs to be addressed.
- The next aspect mentioned by Mr Das was concerned with what he called the people economy and nature. Communities cannot be ignored, they are often victims of the uncertainties of the ecosystem, e.g. the failing monsoon or some other natural disaster. Can a technological tool bring more certainty to this? What can also be seen is that communities on the ground are not supported by financial institutions because of the uncertainties in their practices. How are these tools to be built, and how are they brought into the system where the communities are supported? There are already certain tools, which can be found on the MRC’s website, whether it is shrimp farming, seaweed farming, or tuna farming. Even managing floods, erosion, and droughts, a whole lot of aspects are required, Mr Das noted; this is where the Underwater Domain Awareness becomes very important.
- Mr Das then introduced the UDA Framework to the panel. The framework has 4 stakeholders: maritime security, blue economy, environment and disaster management, and science and technology, which are integral parts of a whole ecosystem. Mr Das then expanded on acoustic capacity & capability building. Anything one wants to see below the water requires an acoustic device, a sonar. The degradation of performance between the temperate and tropical waters reaches 60 percent. A sonar that gives you 32 nautical miles in temperate waters gives you 6 nautical miles in tropical waters. In Africa and South Asia, everything is in the tropical water. Unless the importance of the tropical conditions is recognised, we will go horribly wrong, Mr Das emphasised.
- Many of the Western models are not customised to the tropical conditions and the people in tropical waters have no idea of their own traditions, Mr Das said. The bottom-up approach is very important to the UDA framework, with a lot of sensing, application of analysis, and then policy

regulation. There are many aspects that are over-regulated and there are many aspects that are not regulated at all. This model brings a lot of structure to the governance mechanism, where resources are allocated and synergised. Many times, democracies are not able to prioritise, Mr Das noted, as their funds and resources will always be limited. But if we all come together in a manner that is shown on the UDA Framework, Mr Das said, recalling the comments of Mr Bhutta on the population distribution in the region, where the population is very high, which is both a demographic advantage and disadvantage, and if the next generation is not employed meaningfully, it will lead to riots. It is therefore a political question, Mr Das commented.

- How do you meaningfully employ this population? Mr Das said it was necessary to skill people correctly, impart knowledge to them so that they can be part of the development process and not be left out. The MRC is thus developing several academic programmes and module training programmes, as capacity building has to be done at multiple levels. Mr Das concluded by noting that there is not a single academic institution running a course on acoustic survey, despite the fact that acoustic survey is the only way to see what is happening below water.
- Mr Das ended his intervention with a quote from Henry Ford: “Coming together is a beginning; keeping together is progress; working together is success.”

#### **Transition and introduction of the next speaker by the Moderator**

**TIGNINO Mara** (Dr. Ms.), Lead Legal Specialist, Geneva Water Hub (*on Zoom*)

- Mara Tignino structured her address to the panel by presenting a perspective on the rights of nature. There is a process of attributing a legal personality to rivers. From a legal perspective, this passes through a domestic practice, e.g. a decision from a judicial court. A concrete example comes from Colombia, where national tribunals have attributed a legal personality to the Atrato River or the Amazon rainforest, which is a shared resource between multiple countries. What the implications of this domestic judgement might be for neighbouring countries remains to be seen.
- Ms Tignino mentioned additional examples from Ecuador and Bolivia, where the constitution attributes the legal personality of nature. Possible tensions might emerge from that, Ms Tignino noted, between the attribution of a legal personality to a river and the state interest or the interest of a society in general. There is therefore a possible tension between the rights of nature on the one hand and human rights on the other. When this important process of attribution of the legal personality is started, it goes through a community level process. It is very important to involve the local community, Ms Tignino highlighted, before pointing out that in some processes, the attribution of the legal personality goes together with the creation or the appointment of the guardians of the

river. The local community is the best place to ensure this protection and representation of the rights of nature.

- There are therefore two elements to remember: on the one side, the attribution of the legal personality through domestic practices, i.e. legislations, judicial cases, on the other, the appointment of the guardians, of the local community to preserve the rights of nature. There then comes a third aspect: in a case before a national court, who can represent the interests of the natural resource, of the river, before judges? Ms Tignino went on to say that until now, it has been difficult to say what the prospective is for international law, because most parts of this development are based on domestic practices. There are however some trends in international law, in particular with an initiative that is brought by Bolivia before the UN General Assembly, i.e. Harmony with Nature. There is also an advisory opinion of the International Court of Human Rights which talks about the rights of nature and rights to nature, combining human rights with rights of nature. Since October 2022, the UNGA has recognised the human right to a healthy environment. One question from the international perspective is thus how to combine these two perspectives.

#### **Main takeaways of the session and conclusion by the Moderator, Christian Brethaut:**

- What transpired from this session was the diversity of processes behind what is meant with hydro-diplomacy. A point that was discussed is the fact that diplomacy is not actually always needed, sometimes the technical dimension might also be quite useful.
- A second point was found in the necessity to sharpen the tools. By sharpening the tools, we addressed the brokering dimension, involving different communities, being able to share knowledge about water, to build shared water information systems, but also to make the best use of tools: digital tools, technical tools, while also keeping in mind all the socio-political processes.
- Finally, talking about the tools themselves, the simple process of implementing the tools can already lead to trust building. It is then also a lot about focussing on the process, rather than seeing the tools as a means for itself.

#### **Conclusion by Joël Ruet:**

- It was a very educating session, which allowed us to look back on certain things we discussed, get some new perspectives, hypotheses, and suggestions, Mr Ruet said before thanking the participants. Of course we are immersed in geographies and this session allowed to complete our geographic tour, saluting and expressing his gratitude to the speakers who joined from abroad. This event which was organised in Paris & hybrid format, had speakers intervening from different cities, e.g. Marrakesh, Dhaka, Abidjan & Conakry – thanks to Ministers Touré and Sidibé, who could not join but

6<sup>th</sup> December 2022, Paris & Hybrid

sent pre-recorded contributions – Skopje, Athens, Oslo, Geneva, Tokyo, and Tashkent. This speaks for the diversity of geographical perspectives, notwithstanding the perspective of data, the main stretch of the river, and the headsprings, which are dear to our heart. “The mistake is to conclude” (from the French “L’erreur c’est de vouloir conclure”), Mr Ruet quoted. We started the whole process with some assumptions that there is still a possibility to collectively contribute to 1) the politics of water peace, 2) innovative legal and institutional tools for hydro-diplomacy, 3) conceptual framework & institutional tools of inclusive cooperation, 4) Rivers Science, technical innovation and entrepreneurship incubation. And this has been discussed throughout the day so we are happy, Mr Ruet noted, because our hypotheses at The Bridge Tank were not too much off track. This is one first reason to be satisfied; the second reason for satisfaction is that this happened across sessions. “Let’s continue, and hopefully, let’s continue together,” Mr Ruet concluded before adding that he hoped participants had been intrigued to continue this collective exercise and fine tune it over time. The idea of a platform was mentioned, let this idea stress-test itself, be stress-tested and used by the speakers, and let’s see if it becomes permanent, a recurring rendez-vous in the international community. Turning to Hamed Semega, Mr Ruet thanked him for giving The Bridge Tank the idea for this event and handed the microphone over to him.

#### **Conclusion by Hamed Semega:**

- Concluding the session by quoting Confucius, Mr Semega stated it was better to move forward slowly on a good path, than to rush on a bad one. It is always good to try, Mr Semega noted before thanking Mr Ruet for hosting this event. Hydro-diplomacy is not only dealing with conflicts, it is also preventing them. As time goes by, conflicts on water will intensify. To build on this perspective is a key component of what we have to do. Mr Semega concluded by thanking all the participants.

**END OF THE CONFERENCE.**