

## **The Thirteenth Meeting of the High-level Experts and Leaders Panel on Water and Disasters The summary of the Meeting followed by the Minutes of the Meeting**

25<sup>th</sup> June 2019

Ford Foundation Center for Social Justice, New York, USA

The Thirteenth Meeting of the High-level Experts and Leaders Panel on Water and Disasters (HELP) was held on 25<sup>th</sup> June 2019 at Ford Foundation Center for Social Justice, New York, USA. The meeting was co-hosted by U.S. Army Corp of Engineers, the Earth Institute at Columbia University and Global Partnership for Sustainable Development Data, and was attended by some 30 participants from HELP member organizations representing national governments, international organizations, academia, civil society and private sectors.

### **I. Opening Plenary**

#### **1. Opening**

Dr. Han Seung-soo, the Chair of HELP, gave the opening remarks, followed by the welcome remarks by Sir Alex Halliday, Director of the Earth Institute, Columbia University and Dr. Joe Manous, Director, Institute for Water Resources, US Army Corps of Engineers.

#### **2. Special Speech**

H.E. Dr. Danilo Türk, former President of the Republic of Slovenia / Chair of the Global High-Level Panel on Water and Peace delivered his special speech.

#### **3. Approval of the Agenda**

The proposed agenda was approved by the members.

#### **4. Discussion on HELP Matters**

Membership issue: Two new members were appointed to replace retired HELP members. One new advisor was appointed.

Strengthening collaboration between the UN and HELP: It was reported that collaboration between UN and HELP would be established, by setting up Tokyo Satellite Offices of the Centre for Regional Development (TSO-CRD), UN-DESA in GRIPS.

#### **5. Keynote Remarks and Presentations**

Remarks were delivered by H.E. Mr. Basuki Hadimuljono, Minister for Public Works and Housing, Indonesia; followed by H.E. Ms. Cora van Nieuwenhuizen, Minister of Infrastructure and Water Management, the Netherlands; Hon. Norbert Emmanuel Tony Ondo Mba, Minister of Water, Energy and Mines, Republic of Gabon and President, African Ministerial Council on Water; Mr. Bambang Susantono, Vice President of ADB; Dr. Toshio Okazumi, Assistant Vice Minister of Land, Infrastructure, Transport and Tourism; Dr. Monika Weber-Fahr, Executive Secretary of Global Water Partnership; and Ms. Kirsi Madi, Director of the United Nations Office for Disaster Risk Reduction (UNDRR).

### **II. Plenary Discussion**

The Plenary Discussion consisted of four parts; 1) Cyclone Idai in March 2019 – How HELP can contribute to “Build Back Better” the affected countries (Mozambique, Zimbabwe, Malawi, and others); Collaboration with Water for Peace; HELP Flagship Actions; and the Advisors Meeting.

With regards to Cyclone Idai in March 2019, a possible contribution from HELP was discussed and it was concluded that HELP would 1) keep reminding the international community of the long-lasting efforts by affected countries; and 2) implement knowledge coordination as experts, bearing in mind that it should not disrupt ongoing efforts. It was announced that the secretariat would list the implementable actions by HELP members as proposals of flagship initiatives, and ask the members for comments.

Responding to the speeches by Dr. Danilo Türk, former President of the Republic of Slovenia / Chair of the Global High-Level Panel on Water and Peace, the participants had discussions on the collaboration between “Water and Disasters” and “Water for Peace” initiatives.

The participants were then briefed on the recent activities and development of Flagship Initiatives. Details on the future activities were further discussed in the following breakout sessions.

Finally, the participants were briefed on the outcomes of the first advisor group meeting held the preceding Sunday. It was decided that future advisory meetings would be continued within HELP meetings.

### **III. Breakout Sessions**

#### **Breakout Session 1: Financing and Investing**

The session was chaired by Mr. Toshio Okazumi, Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Japan and moderated by Mr. Tomoyuki Okada, MLIT. In this session, the next step of the Principles was discussed by 10 participants. The participants proposed the linkage of HELP with upcoming events, such as the 2020 Climate Summit in the Netherlands, Roundtable on Financing Water, and Green Fund Initiative. Other suggestions of HELP activities include testing the Principles in pilot projects, e.g. Cyclone Idai recovery, damage cause analysis for Build Back Better, analysis to find bankable projects, economic analysis on projects, development of more detailed Principles, collection of case studies related to the Principles through HELP networks, a more narrative version of the Principles, and so on.

#### **Breakout Session 2: Creating a Climate Resilient Society through Timely Information and Analytics**

The session was chaired by Dr. Joe Manous, Director, Institute for Water Resources, U. S. Army Corps of Engineers.

Three presentations were made, followed by a participants discussion. Firstly, Mr. Jonathan Sury, National Center for Disaster Preparedness, The Earth Institute, Columbia University made a presentation titled “Planning for Disaster Housing and Recovery: Supplemental Map”. The second presentation was by Dr. Mark D. Wahl, U.S. Army Engineer Research and Development Center titled “Creating a Climate Resilient Society through Timely Information and Analytics”. Lastly, Dr. Robert S. Chen, CIESIN, The Earth Institute, Columbia University presented “Decision Support Tools for Coastal Planning & Adaptation”.

Intensive discussion was made on the usage of data for reducing disaster damage. Limitations, such as the difficulty of risk interpretation, were highlighted and the participants discussed areas that HELP can assist in.

### **Breakout Session 3: HELP Flagship Documents**

Future actions related to the Flagship Documents of HELP were discussed. Dr. Kenzo Hiroki, Professor at GRIPS, explained that the next issue of “HELP Global Report on Water and Disasters”, would cover disasters of 2019 and would be launched in the 15th HELP meeting. He added that provision of simple templates for authors would be considered to enable in-depth analyses.

Dr. Jerome Delli Priscoli, Chair of GWP Technical Committee explained that the next edition of the Water Policy Journal would focus on the evaluation of the effect of projects, which can be estimated by quantifying the damage avoided.

Mr. Thomas Panella, Chief of Water Sector Group, ADB explained ADB’s interest in developing case study publications on the role of community DRR and response, and qualification of green infrastructure and nature-based solutions, etc.

### **Breakout Session 4: Climate Change**

The session was chaired by Mr. Cees van de Guchte, Deltares / Advisor NL Ministry for Infrastructure and Water Management, the Netherlands.

A Proposal was made to prepare guidance for practitioners to develop adaptive strategies for prevention of water-related disaster risk. The document would be built on existing documents and aim to translate principles into practice. Another proposal was made to address the issue of droughts.

### **Plenary Discussion**

Moderators of the above breakout sessions presented the session summaries to the members.

It was proposed by the secretariat that the next meeting of HELP be held tentatively on 9 or 10th October and the venue be either in UNESCO or OECD headquarters.

Finally, Dr. Han Seung-soo, the Chair of HELP provided the wrap-up and closing remarks. He thanked the participants for their contribution and informed participants that the minutes of the meeting would be circulated from the secretariat in due course.

## **Minutes of the Meeting**

### **I. Opening Plenary**

#### **1. Opening**

##### **Opening Remarks by Dr. Han Seung-soo, Chair of HELP**

Dr. Han first thanked the participants for the great success of the 4<sup>th</sup> UN thematic Session on Water and Disasters held the day before. He stressed that to address water and disaster issues is a long-term task which was just getting started, and that urgent action is required, underlining the importance of Building Back Better from recent disasters in Africa, Idai and Kenneth.

He mentioned that opportunities, such as UN Summit on Climate Change, would be good occasions to shift the focus from mitigation to adaptation, as the water and disaster issue is not fully reflected in the process. He praised the recent publications of HELP, which demonstrated the broad network and expertise of HELP. He highlighted the significance of the finalization of the Principles on Financing and Investment in Water-related Disaster Risk Reduction, and underscored the necessity for further actions to implement them. He also highlighted the work of the Alliance of Alliances, which would take on a global leading role in science and education on water and disaster issue.

##### **Remarks by the Representatives of Host Institutions**

Sir Alex, Columbia University, briefly introduced the Earth institute of Columbia University. He underlined the importance of addressing water-related disasters from the viewpoint of sustainability, which is a shared challenge around the world. He emphasized the connection among sustainability, water-related disasters and climate change. He emphasized four key aspects that are important in dealing with the issue: interdisciplinarity, data, communication and global partnership.

Dr. Joe D. Manous, USACE reminded the participants that in every part of the world, methods and approaches to water-related disaster risk reduction is similar, although capability and resources may be different. He stated that the undergoing big flood in the Midwest of the US, was yielding experiences and technical knowledge that could be shared with the global community. He emphasized the important role of gatherings like HELP, to share lessons, experiences and practices globally, and to support each other to build resilience.

#### **2. Special Speech**

H.E. Dr. Danilo Türk, former President of the Republic of Slovenia / Chair of the Global High-Level Panel on Water and Peace made a special speech on water and peace. He stressed the need to pay more attention to the water issue, especially the strengthening of water cooperation. He stressed the importance of following-up on reported documents for further meaningful actions.

He concluded by emphasizing the importance of addressing three tasks to promote water cooperation: data, transboundary water cooperation and finance.

#### **3. Approval of the agenda**

The proposed agenda was approved by the members.

#### **4. Discussion on HELP matters**

**Membership issue:** Prof. Kenzo Hiroki announced two new members: H.E. Mr. Norbert Emmanuel Ondo Mba, Minister of Water, Energy and Mines, Republic of Gabon and President of AMCOW who replaced Mr. Patrick Eyogo Edzang, former President of AMCOW; and Mr. Imam Santoso, Chair of NARBO who replaces Dr. Keizrul Bin Abdullah, former Chair of NARBO. Dr. Han

Soeung-soo recommended Dr. Gordon McBean to join the Panel as a new advisor. All new members were approved.

**Strengthening collaboration between the UN and HELP:** Prof. Kenzo Hiroki announced that the collaboration between the UN and HELP would be established, through setting up a Tokyo Satellite Office of the Centre for Regional Development (TSO-CRD), UN-DESA in GRIPS. He mentioned that it would collaborate closely with the HELP secretariat to jointly promote global actions on water and disaster, including for follow-up of HLPW recommendations.

## **5. Keynote Remarks and Presentations**

H.E. Dr. Basuki Hadimuljono, Minister for Public Works and Housing, Indonesia presented the impact of the earthquake, tsunami and liquefaction which occurred in Palu, Indonesia on September 18th, 2018. He pointed out that the liquefaction was very strong and rare in the history of the world, and that this phenomenon is called ‘Nalodo’ by the locals. He expressed his intention to promote the recovery and reconstruction based on efficient risk assessment and planning with the Build Back Better concept. For this purpose, he proposed to establish a Nalodo Centre to support research in the geological sciences all over the world.

H.E. Ms. Cora van Nieuwenhuizen, Minister of Infrastructure and Water Management, the Netherlands reiterated that water and disasters is a field that the world must pay attention to. She emphasized the interdisciplinarity of the issue, which necessitates a holistic approach, and proposed that HELP develop a new action strategy accordingly. She made proposals on HELP’s seven strategies whereby the flagship action on finance and investment be pursued and that discussions with the financial sector be started. She also proposed that HELP discussions should include drought issues.

Hon. Norbert Emmanuel Tony Ondo Mba, Minister of Water, Energy and Mines, Republic of Gabon and President, African Ministerial Council on Water stressed the magnitude of impacts of water-related disasters on African society and the economy, and shared the African strategy to tackle the issue. He expressed his expectation that advocacy and lessons of AMCOW would contribute to increasing global awareness and mobilizing more finance and technical support.

Mr. Bambang Susantono, Vice President of ADB introduced ADB’s activities to address the issue of water and disasters, such as promotion of integrated flood risk management, initiatives to look into more creative disaster risk financing and rapid access to emergency assistance loans and grants in the aftermath of disasters. He also proposed three new flagship initiatives focusing on the roles of local communities, innovative financing and evaluation of the financial and economic costs and benefits of nature-based solutions and green infrastructure.

Dr. Toshio Okazumi, Assistant Vice Minister of Land, Infrastructure, Transport and Tourism stressed the importance of Build Back Better after disasters, to build more resilient societies than before. Based on the experiences of Japan, such as Typhoon Jebi in 2018, where ex-ante investment had saved a damage worth 150 billion US dollars, he emphasized the role of the government initiative on this. He underlined the important processes to implement Build Back Better: firstly, to survey the evidence of disaster damages; secondly, to analyze the cause of the disaster including the impact of climate change; and thirdly, to establish a recovery plan for more resilient critical infrastructure based on the cause analysis.

Dr. Monika Weber-Fahr, Executive Secretary of the Global Water Partnership briefed participants on the consultation process of the Draft Principles on Investment and Financing for Water-related Disaster Risk Reduction. She reported that GWP in collaboration with Japan and the Netherlands,

organized consultation meetings in five regions around the world, through which many useful comments and insights were obtained from the practitioners in the field, leading to improvements of the Principle, namely with the holistic approach toward investment, life-cycle perspective and importance of droughts.

Ms. Kirsi Madi, Director of the United Nations Office for Disaster Risk Reduction (UNDRR) stressed that the challenge is to have coherence among DRR, Climate Change and SDGs, as all of them are inherently intertwined, while hazard and risk are getting more and more interconnected among sectors and countries. She reiterated the importance of taking action in a cooperative way, not separated by the boundaries of sectors and organizations, and the important role that planning processes play to achieve this. She stated that UNDRR would be the catalyst and expects all stakeholders including HELP to contribute by bringing their experience and knowledge to bear. She expressed her expectation, especially to HELP, of bringing the water community and the DRR community together.

## **II. Plenary Discussion**

Dr. Basuki Hadimuljono chaired the Plenary Discussion. It consisted of four parts; 1) Cyclone Idai in March 2019 – How HELP can contribute to “Build Back Better” affected countries (Mozambique, Zimbabwe, Malawi, and others); Collaboration with Water for Peace; HELP Flagship Actions; and the Advisors Meeting.

### **Cyclone Idai in march 2019 – How HELP can contribute to “Build Back Better” affected countries (Mozambique, Zimbabwe, Malawi and others)**

First, Dr. Kenzo Hiroki briefed participants on the meeting held the previous day between H.E. Mr. Carlos Agostinho do Rosário, Prime Minister of the Republic of Mozambique and Dr. Han Seung-soo, chair of HELP. He mentioned that the Prime Minister requested HELP to provide advice and comments regarding recent cyclone disasters. Dr. Hiroki asked the participants to give their opinions and comments on how HELP could contribute.

The following comments were made:

- In order to develop a prediction system as early as possible, methods to overcome the present gap of data acquisition should be applied, such as coupling of ordinary ground data and satellite observation data. (Dr. Koike, ICHARM)
- WMO is providing short-term to long-term support for the improvement of systems for the meteorological and hydrological agencies and capacity development with approximately a 25 million dollars budget. Coordination at an early stage among donors is necessary to determine priority areas, and HELP can contribute in this role. (Dr. Johannes Cullmann, WMO)
- The network of GWP has developed a report on Cyclone Idai, where you can find commonalities with issues that HELP has been discussing. There is a reliance on humanitarian assistance to cope with disasters. (Jerome Delli Priscoli, GWP Technical Committee)
- HELP should concentrate on areas where HELP has comparative advantages. Addressing damage reduction of critical infrastructure may be an area, since UNDRR is presently focusing on this. The International Recovery Platform (IRP) in Kobe is a useful resource for knowledge sharing. (Kirsi Madi, UNDRR)
- From the perspective of learning, Post-Event Review Capability (PERC) can be applied to Idai. HELP’s coordination function could be used. (Michael Szoenyi, Zurich Insurance Company)
- Following PDNA, the government of Mozambique is working on developing a recovery strategy to prioritize the projects and identify the implementation period. It is working directly with

donors and agencies to clarify when the pledged fund will be available. Coordination among donors and agencies is crucial. Not only funds but also knowledge is useful for the country. (Representative of Mozambique)

- Sichuan University can support long-term capacity development. It can organize workshops with various organizations to provide opportunities to share knowledge. (Gretchen Kalonji, Sichuan University)
- The post-disaster support is challenging because the government is expected to fulfil macro-economic stabilization, humanitarian aid and project formulation simultaneously. The incorporation of technical knowledge of Build Back Better in reconstruction is necessary, but it is difficult due to the different time frames. Sometimes the required budget is beyond the capacity of macro-economic stabilization, and Build Back Better is not always among the first priorities. In this context, guidance on how to incorporate Build Back Better is helpful. (Dr. Megumi Muto, JICA)
- The World Bank will provide 545 million dollars to the affected countries, with an additional 150 million dollars sourced from existing projects. Since there are coordination systems in place, it is better for experts to work through their own organizations. (Mr. Greg Browder, WB)
- Together with a graduate from a JICA-supported training course, ICHARM is proposing a community-based flood early warning system. It proves that capacity development is beneficial in the long run. (Dr. Koike, ICHARM)
- GWP is planning a climate change resilience project with GCF. The GWP network is useful to facilitate collaboration with the local community. (Ms. Monika Weber-Fahr, GWP)
- In the case of the tsunami of Palu, coordination among donors was of the utmost importance. I, myself directly coordinated with WB, ADB and JICA to decide who does what, when and at what scale. Another important aspect was procurement. (Dr. Basuki Hadimuljono, Indonesia)
- There is a gap between the humanitarian aid phase and the reconstruction phase. It generally takes 6 months to one year to provide loans. Provision of technical knowledge is needed to realize Build Back Better, such as to transform temporary shelters to sturdy permanent housing. (Prof. Tanaka, GRIPS)

Dr. Kenzo Hiroki wrapped up the discussion by mentioning that considering the added value of HELP, it must be effective 1) to keep reminding the international community of the long-lasting efforts of affected countries; and 2) to implement knowledge coordination as experts, but bearing in mind that it should not disturb ongoing efforts. He added that the secretariat would list the doable actions by HELP members as flagship initiatives and ask the members for comments.

## **Collaboration with Water for Peace**

Responding to the speeches by Dr. Danilo Türk, former President of the Republic of Slovenia / Chair of the Global High-Level Panel on Water and Peace, Dr. Basuki asked the participants how “Water and Disasters” could collaborate with the “Water for Peace” initiative.

The following comments were made:

- We can learn from the history of the development of transboundary organizations or border organizations, which are developed as conflict management institutions. Knowledge and lessons from history would be beneficial to help provide incentives for cooperation and options (Jerome Delli Priscoli, GWP Technical Committee)
- ICHARM is implementing a UNESCO program funded by Japan, the “West African platform on Water and Disaster”, which involves 11 countries. All countries agreed on sharing data in the project, which corresponds to one of the 3 key factors that Dr. Danilo Türk highlighted: data, transboundary cooperation mechanism, and funding. (Dr. Koike, ICHARM)

- It is an interesting theme from the viewpoint of higher education to promote international cooperation. (Gretchen Kalonji, Sichuan University)
- The secretariat will develop a draft paper on the idea of a flagship initiative of HELP to be implemented in collaboration with the Geneva water hub. It will be circulated for inputs. (Prof. Kenzo Hiroki, HELP Secretariat)
- The challenge is that water experts often have no background in diplomacy, which is necessary to be effective. (Dr. Joe Manous, USACE)
- Involvement of technical water people is important. Engineers, as well as diplomats should be involved in setting up the systems. GWP is supporting the engagement of engineers. (Ms. Monica Weber-Fahr, GWP)
- GWP's existing network is valuable, which involves political / technical cross-sectional stakeholders. (Jerome Delli Priscoli, GWP Technical Committee)
- We should focus on what we can solve. We should start from building frameworks to jointly assess information to eventually build trust. If we are committed to politics and diplomacy, we may fall into a difficult situation. There are good existing initiatives by UNESCO, WMO, GWP, etc. (Dr. Johannes Cullmann, WMO)
- To generate political will, the educational process is important, although it may take time and patience. Institutional frameworks are an important component. Engineering skills and diplomat skills have to intersect. We should look carefully at the "Water diplomacy" process in the EU and engineers should intervene if necessary. (Dr. Danilo Türk, former President of Republic of Slovenia / Chair of the Global High-Level Panel on Water and Peace)

## **HELP Flagship Actions**

Dr. Basuki asked the leaders of each Flagship Action to report on the recent activities and development.

Firstly, Mr. Tomo Okada, Director for International Coordination of River Engineering, International Affairs Office, River Planning Division, Water and Disaster Management Bureau, Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Japan, reported on the development of the Principles on Investment and Financing for Water-related Disaster Risk Reduction. He explained the intensive consultation process, which was implemented together with GWP and other international organizations. Opinions to the draft were collected and reflected to improve the content. He reported that there had not been a significant change in the contents but some minor improvements of wording.

Secondly, Dr. Gretchen Kalonji, Sichuan University and Dr. Koike, ICHARM reported on the update of Alliance of Alliances on DRR Researches. She reported that after the last meeting, a steering committee was established. ICHARM has developed new connections with other groups, including the Alliance of national Science Organizations (ANSO), backed by the Chinese Academy of Sciences. Dr. Koike touched upon the Global Earth Observation (GEO), a system of systems that enables interoperable data and information management and observation.

Prof. Kenzo Hiroki reported on the "HELP Global Report on Water and Disasters 2019", which had just been launched. He expressed appreciation to members and advisors who had contributed to the production of the report. He announced that compilation for the next report would be starting and asked for the members' cooperation. Jerome Delli Priscoli, GWP Technical Committee, reported on the publishing of Water Policy Journal Volumes. He informed participants that the second book



would be issued in 6 months. He explained that quantitative analyses of the performance of investment would highlighted in the next edition.

Mr. Cees van de Guchte, Director of Global Agendas and International Organizations, Deltares / Advisor NL Ministry for Infrastructure and Water Management, explained their new Flagship Initiative proposal on “Climate Change”. He presented his idea of developing a guidance document on climate change adaptation, with focus on pre-disaster investment. Another proposal he made was on putting drought issues on the agenda of HELP.

### **Advisory Meeting**

Prof. Kenzo Hiroki briefed participants on the result of the first advisor group meeting held on Sunday. He mentioned that the meeting had proved to be useful. It was decided that future advisory meetings would be pursued within HELP meetings.

## **III. Breakout Discussion**

### **Breakout Session 1: Financing and Investing**

The session was chaired by Dr. Toshio Okazumi, Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Japan and moderated by Mr. Tomoyuki Okada, MLIT. Firstly, Dr. Okazumi explained the objective of the Breakout Session, that is that HELP discussions would focus on the next steps of the Principles following the publication of the Principles the previous day.

Mr. Cees van de Guchte, Deltares introduced the results of two consultation meetings on the Principles with OECD, UNDRR, WWC and other organizations. He also suggested the possibility of collaboration between HELP and the Roundtable on Financing Water, or 2020 Climate Summit in the Netherlands. He proposed the idea that the next step could be the delineation of several detailed Principles and the application of the Principles to a pilot project, for example, the Cyclone Idai disaster recovery. Dr. Hirotada Matsuki, MLIT stressed the concept of Build Back Better during the reconstruction phase of Beira City, Mozambique with the necessity of damage cause analysis. Mr. Tom Panella, ADB proposed the collection of good examples to showcase the Principles through the network of HELP members. Mr. Michael Szoenyi, Zurich Insurance supported the establishment of a database collecting good practices. Dr. Jerome Delli Priscoli, GWP suggested that the criteria of prioritizing projects could become a possible target for the next HELP activities. Dr. Megumi Muto, JICA introduced the Statistics Group of the OECD's Development Assistance Committee (DAC), which discusses disaster risk reduction (DRR) markers in relevant sectors for monitoring DRR financing. She also stressed the importance of bankable projects based on their economic analysis. Mr. David Boys, PSI raised the issue of political migration as a consequence of disasters. He also proposed developing a narrative version of the Principles. Mr. Michael Szoenyi added the possible linkage of HELP with the Green Fund Initiative.

### **Breakout Session 2: Creating a Climate Resilient Society through Timely Information and Analytics**

The session was chaired by Dr. Joe Manous, Director, Institute for Water Resources, U.S. Army Corps of Engineers.

Three presentations were made and the participants discussed them. Firstly, Mr. Jonathan Sury, National Center for Disaster Preparedness, The Earth Institute, Columbia University made a presentation titled “Planning for Disaster Housing and Recovery: Supplemental Map”. He introduced the results of his research on developing a categorized mapping of disasters, which indicates the risk to communities through a National Hazard Index. He explained that the map is aimed for use as a political decision making tool.

The second presentation was by Dr. Mark D. Wahl, U.S. Army Engineer Research and Development Center titled “Creating a Climate Resilient Society through Timely Information and Analytics”. He explained the development of tools for preventing conflict caused by water excess and shortage. He introduced several tools such as a water security indicator tool to show the hotspot from the 3-month data, a streamflow prediction tool to predict flow up to 2 weeks prior, etc.

Lastly, Dr. Robert S. Chen, CIESIN, The Earth Institute, Columbia University presented “Decision Support Tools for Coastal Planning & Adaptation”. He explained the tool was to provide open and standardized information to be used for disaster management, one of which is to determine a disaster situation as derived from the usage of electricity.

An intensive discussion took place on the usage of data for reducing disaster damage. Limits, such as the difficulty of risk interpretation, were highlighted. Participants pointed out that finding ways to fill raise awareness was the key to supporting decision makers and raising awareness of the public. In addition, one of the comments pointed to the necessity of developing simple models that do not rely on an abundance of data, since there is insufficient data in countries in Asia and Africa. The participants discussed areas that HELP should cover to contribute to solving the issue, and pointed out that moving the principles to implementation is one of the important roles.

### **Breakout Session 3: HELP Flagship Documents**

Future actions were discussed related to the Flagship Documents of HELP.

Dr. Kenzo Hiroki, Professor at GRIPS explained that the next issue of “HELP Global Report on Water and Disasters”, which would cover disasters of 2019 would be launched in the 15th HELP meeting. He added that provision of simple templates for authors would be considered to enable in-depth analyses.

Dr. Jerome Delli Priscoli, Chair of GWP Technical Committee explained that the next edition of the Water Policy Journal would focus on the evaluation of the effect of projects, which can be estimated by quantifying the damage avoided.

Mr. Thomas Panella, Chief of the Water Sector Group, ADB, explained ADB’s interest in developing a case study publication on the role of community DRR and response and qualification of green infrastructure and nature-based solutions, etc.

The participants agreed on the importance of reviewing the disaster events and analyzing the effect of measures quantitatively, so that the need for the proper investment in DRR can be clearly explained.

### **Breakout Session 4: Climate Change**

The session was chaired by Mr. Cees van de Guchte, Deltares / Advisor NL Ministry for Infrastructure and Water Management, the Netherlands.

It was pointed out that coherence between water-related disaster risk reduction and a discussion on climate change is necessary.

A Proposal was made to prepare guidance for practitioners to develop adaptive strategies for prevention of water-related disaster risks. The document is to be built on existing documents and aims to translate principles into practice. Some comments and advice were made by the participants regarding the fact that processes of public consultation and stakeholder analyses, and bottom-up approaches to disseminate to practitioners, are necessary.

Another proposal was made by Mr. Cees van de Guchte to address the issue of droughts, as one of HELP’s activities.

## **IV. Plenary Discussion**

Moderators of the above breakout sessions presented the session summaries to the members.

Dr. Han Seung-soo reported on the roundtable lunch he had joined during the lunch break. He mentioned that the roundtable was hosted by H.E. Ms. Cora van Nieuwenhuizen, Minister of Infrastructure and Water Management, the Netherlands, and that the main topic was on the establishment of a “Global Center on Adaptation”, the purpose of which he valued.

Dr. Kenzo Hiroki reported on the tentative plan for the next HELP meeting. He mentioned that it would be held on 9 or 10th October and that the venue be either in UNESCO or OECD headquarters.

Finally, Dr. Han Seung-soo, the Chair of HELP provided the wrap-up and closing remarks. He thanked the participants for their contribution and informed participants that the minutes of the meeting would be circulated from the secretariat in due course.