Summary of 3rd IFI Platform Plenary and Technical Meetings

Date:

7th February (Thursday), 2019

Participants:

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Agenda:

(Plenary Meeting; AM)

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Plenary Meeting (AM)

1. Opening Remarks

Ms. Maria Lynn P. Melosantos opened the Plenary meeting as a MC and invited Dr. Renato Renato U. Solidum, Jr., Undersecretary of DOST, for the opening remarks. Usec. Renato U. Solidum, Jr. delivered a speech on the importance of disaster risk reduction and climate change as a Co-chair of Platform. By citing the experience of past disaster occurred last December in Visaya region, he stressed the necessity of the Platform on Water Resilience and Disasters particularly in forecasting improvement, community-based preparedness and climate change adaptation. He also emphasized the importance of national and international collaboration in order to find solutions and implement them for disaster risk reduction.

Mr. Patrick B. Gatan, project director of DPWH UPMO-FCMC also made a speech on behalf of Mr. Emil K. Sadain, Undersecretary of DPWH. He reviewed the institutional structure of Platform and indicated the direction of Platform for maximizing outputs, sharing the best practices, and improving interagency coordination.

2. Introduction of Participants

Ms. Maria Lynn P. Melosantos introduced the participants with respect to each agency; DPWH, DOST, DENR, DILG, OCD, DSWD, NEDA, UP, ICHARM and Typhoon Committee.

3. Designing a Next Step

Prof. Toshio Koike made a presentation on design of next step including Japan's experiences on recurrent water-related disasters. After introducing the details of recent water-related disasters in Japan especially the western Japan floods in 2018, he schematically suggested our challenges to be addressed in preparedness, evacuation, response, and recovery activities by explaining the convergence of different preparations of hazards as a holistic approach that can increase resilience. His presentation was summarized with the explanation on what is Nation/State consists of three components; "Land & Sea", "Sovereign", and "People".

4. Updates of the Platform activities

0) Review of Platform Activities

Dr. Mamoru Miyamoto reviewed the outline of Platform framework and past activities. In his presentation, the support of International Flood Initiative (IFI), progress of activities, and framework of Platform were introduced.

1) Data Integration

Dr. Mamoru Miyamoto introduced the importance and framework of data integration activities and updated the present status of data collection efforted by Mr. Jonathan of DOST XI and Mr. Paat of PAGASA. Dr. Miho Ohara continued the presentation on damage data analysis based on the comparison of data collection procedures between Philippines and Japan. She also introduced the results of preliminary analysis on damage data in Davao City.

Dr. Renato U. Solidum, Jr. pointed out that there are no arrows from DOST and LGU in the figure of data integration based on data sharing from the responsible agencies. Dr. Miyamoto responded that there are no arrows because DOST and LGU contribute to overall. He also mentioned to improve the figure, because it will mislead viewers. Dr. Solidum added the information that DOST and other related departments are developing a governmental platform on hazard and risk information sharing, Geo Risk Philippines project. Different organizations want to be available it. Prof. Koike added two points that we would emphasize in the data integration activities; one is that the data integration is a quick job and the advantages and value can be shown for accelerating the nation's activities, the second point is that some problems can be identified and informed to the nation's platform through the data integration activities.

2) Flood Forecasting & Early Warning

Dr. Mamoru Miyamoto introduced the design of full-menu and preliminary version of the real-time flood forecasting system. Dr. Masaki Yasukawa demonstrated the preliminary version of system which is connected between PAGASA's server and DIAS on real-time. The real-time rain gauge, GSMaP, Himawari-8 and RRI simulation were introduced as the products of preliminary version.

3) Climate Change

Dr. Tomoki Ushiyama presented the impact assessment of climate change on rainfall in the Pampanga and Davao River basin. The increase tendency of rainfall was reported in both river basin.

Dr. Flaviana D. Hilario asked the number of climate change projection model, and Dr. Ushiyama answered as one model. Dr. Hilario informed that PAGASA has already applied six GCMs for considering the deference among models. From DPWH, accuracies of GSMaP and ground gauge were asked. Prof. Koike responded that GSMaP will be corrected by the ground gauge. He also added

a comment on the uncertainty due to the deference of models that will be confirmed by the statistical downscaling approach.

4) Economic Assessment

Dr. Miho Ohara introduced the results of economic assessment on the 2015 flood in the Kinu River basin and preliminary analysis in the Davao River basin. She stressed the necessity of longer period data for further analysis.

5) Contingency Planning

Dr. Miho Ohara made a presentation on the barangay-level contingency planning in Calumpit city. She suggested to identify the important viewpoints for communities.

5. Group Photo

Group photo was conducted at the next room.

6. Proposal of Implementation from Stakeholders to the Platform

1) Flood Early Warning in the Cagayan River Basin

Mr. Socrates F. Paat, Jr. introduced the current flood monitoring, forecasting and early warning activities undertaken by PAGASA. Particularly in the X-band MP radar, it was reported that seven radars will be installed in the Philippines. He suggested that the Cagayan River basin will be included in the activities of Platform in terms of flood forecasting, because the existing system implemented in the ADB project is not working anymore due to system crash in 2016. He added that one of the areas of X-band radar installation is in the Cagayan River basin.

Ms. Maria Lynn P. Melosantos noted that this session is showing proposal to the Platform activities and participants are asked to think what is interesting and how can we build these proposals for sharing and making benefits for all stakeholders.

2) Capacity Development on the Climate Change

Dr. Anthony C. Sales proposed the necessity of capacity development on climate change with introduce the ongoing two projects in Davao City; “Be Climate Smart NOW: Enhancing Resilience to Disasters and Climate Change through Sustainable Technologies and Practices” and “Science and Technology Action Frontline for Emergencies and Hazards Program (SAFE)”. He also shared a table clearly showing the activities for capacity development in Davao City. The proposed activities include five steps; Climate Change Orientation, DIAS Orientation, End-users Training, Technical Seminar and Benchmarking.

7. Discussion on the Way Forward

Prof. Toshio Koike reviewed and summarized the topics presented until sixth agenda. UPLB asked institutional landscape how LGU which is a front line can manage the risk and action on the climate change. Dr. Anthony C. Sales responded the plan in Davao City could be done by all stakeholders according to the preparatory discussion on the Platform based upon existing knowledge at LGU level. He also stressed the validation on the ground by all stakeholders in Davao City. There was a question on the sediment transportation in the stream flow of inundation model, and responded the sediment theme can be addressed in the activities as needed, because it is an important issue. Coastal flood is suggested to consider in Davao in terms of historical experiences. Prof. Toshio Koike answered that ICHARM cannot include costal flood because of ICHARM capacity, but ICHARM can collaborating with other organization or institute such as Tokyo University for storm surge or coastal flood. Dr. Renato U. Solidum shared the activities of DPWH for river flood and coastal flood in the Davao River basin. Dr. Julius Caesar V. Sicat from DOST region III suggested to consider and include

the proposal on flood protection infrastructures and facilities in the Pampanga River basin. Prof. Enrico C. Paringit advised the importance of conversation among hazard, infrastructure, public understanding, key policy and others. Prof. Toshio Koike agreed and emphasized the importance of interdisciplinary and interagency matters that mean end-to-end discussion including measurement, understanding, prediction and improvement for the reasonable achievements. Pampanga River Flood Forecasting Center of PAGASA shared the information on current instrument of measurement particularly in the annual regular measurement of cross-section. Ms. Lenie Duran-Alegre from OCD region XI proposed to additionally include land slide and other river basins in the Mindanao river basin. Prof. Koike explained the position of ICHARM. ICHARM can share the knowledge and provide the educational opportunities as a research institute. ICHARM will also collaborate with international support mechanism such as World Bank, Asian Development Bank, JICA and so on. A Participant from DPWH introduced an ongoing technical support project funded by ADB. Existing river structures, planning river structures and sedimentation are considered in the ADB project for master planning and feasibility study.

Finally, Prof. Koike reviewed and summarized the discussions in the agenda 7.

8. Chair Summary

Dr. Renato U. Solidum, Jr. gave a summary of the Plenary Meeting of Platform on Water Resilience and Disasters. He indicated that more people are now involved in the Platform comparing with the start in 2017 as Prof. Fernando C. Sanchez, Jr. of UPLB commented. It signifies the large interest among Filipino participants and researchers. He also mentioned that we need to collaborate and sustain the Platform. He gave a message though this is international effort, we need to operate at local level and continue the discussions beyond the scope of ICHARM.

Technical Meeting (PM)

1. Discussion on the Way Forward

Prof. Toshio Koike led the discussion for collaborative implementation with reviewing the discussion in the Plenary session. Specific actions for each component were discussed one by one.

Regarding data integration, he raised a discussion point where should be addressed with barangay level data as the targeted area in region III and XI. OCD responded that the damage data normally is consolidated at municipality level, but details of particular damage could be identified by barangays. Dr. Julius Caesar V. Sicat od DOST regional III recommended to focus on Minalin and Santo Thomas because those are flood prone areas. Prof. Toshio Koike confirmed that the barangay level damage data in the Davao River basin and Minalin and Santo Thomas, region III will be collected and archived in DIAS. The barangay data in Minalin and Santo Thomas will be cooperated with DOST region III and DPWH region III. Prof. Ruth U. Gamboa from UP Mindanao commented that DENR region XI has already had the Davao River basin framework and NWRB has an assessment of the Davao River in 2017.

As for flood forecasting and early warning, Prof. Toshio Koike confirmed that X-band radar data will be utilized for real-time flood forecasting in addition to ground gauge and GSMaP. Also, the Cagayan River basin will be included as the target of flood forecasting system development. Mr. Socrates F. Paat, Jr. informed that real-time observation data in Davao will be included in the DIAS in the coming month. Also, it was informed that the implementation of X-band radar will be completed within this year. Dr. Joseph E. Acosta from UP Mindanao reported on the ongoing flood

forecasting and flood hazard mapping project. Prof. Toshio Koike also asked how to use the flood forecasting system. He suggested to share the prototyping system of DIAS real-time flood forecasting with password. DPWH asked the resolution of RRI model in each target river basin. Dr. Miyamoto answered in the Cagayan 1km, in the Pampanga 500m, and in the Davao finer than others.

As the climate change impact assessment, Prof. Koike introduced an example in Viet Num that is the activity of ADB project and showed the uncertainty due to GCM models.

Dr. Miho Ohara was invited to present the specific activities on contingence planning at local level. She introduced the local community practice in case of Calumpit City. Dr. Naoko Nagumo introduced a function to visualize the inundation information based on the results of RRI model simulation. She showed the function of 3D illustration on the Google Earth for making the information understandable by using the example in Davao City. In conjunction with capacity building in Davao proposed by Dr. Anthony C. Sales, ICHARM researchers will visit Davao and identify two or three target barangays for contingency planning activities. Ms. Maria Lynn P. Melosantos pointed out the importance how to share/translate the information based on science and technology to various types of local people.

With regard to capacity development, five-category activities proposed by Dr. Sales were specifically confirmed. Since the statistical downscaling can be done by stakeholders by utilizing DIAS, the activities will be able to be expanded to wide stakeholders, but analysis itself should be done by expert such as ICHARM. As for end-user training, ICHARM's contingency planning will be merged in support of the HELP Davao Network. Dr. Renato U. Solidum, Jr. asked how to operationalize technologies at community level. Prof. Toshio Koike explained the importance to make it operational based on the principle of responsibility. If the function of operational usage is requested, governmental cooperation should be undertaken.

Prof. Koike summarized the discussions with the explanation on holistic approach among five components of the Platform framework of activities. Prof. Fernando C. Sanchez, Jr. commented that UP members support the activities of Platform.

2. Discussion on the Holistic Approach

Combined with the previous session.

3. Discussion on the Implementation Strategies for Maximizing Synergy Effect

Prof. Koike confirmed the concrete activities for finalizing the actions to next step of each component; Data Integration, Flood Forecasting and Early Warning, Climate Change, Economic Assessment, and Contingency Planning.

1) Data Integration
   - Data collection in Davao has been almost done, but the rest of data will be requested again by DOST XI.
   - The barangay-level damage data will be collected by the support of Davao City
   - Two areas, Minalin and Santo Thomas, were identified as the targets of barangay-level data collection in the Pampanga River basin
2) FF & EW
   - Real-time flood monitoring and forecasting systems will be developed for the Pampanga, Davao and Cagayan River basin.

- X-band MP radar data and UP's flood modeling will be included in the systems.
- A coordination meeting on the systems will be held before June 2019.
- How to use the system; the responsibility belongs to government and agencies/department, and the software, data and knowledge will be shared with research institutes. The education is very important for expanding the collaboration. Some possibilities of collaboration between governments of the Philippines and Japan will be considered.

3) Climate Change
   - The uncertainty quantification and understanding uncertainty are very important for decision-making.

4) Economic Assessment & 5) Contingency Planning
   - A strategy for sharing scientific information with communities needs to be developed considering Industry X.X.
   - Collection of the statistical data will be completed in collaboration with Davao City office.
   - Similar data set for Minalin and Santo Thomas will be developed in the Pampanga River basin.
   - Contingency planning cooperation will be prepared in conjunction with the capacity development program, and actions will be started.
   - Five categories of capacity development program will be done in the next stage.
   - With regard to the bench marking, experiences of the Davao city should be learned and applied to the Platform.

Additional comment: End-to-end approach of measurement, operational study and analysis of river channel and flood plain should be done, and the information should be introduced for the improvement of planning.

He also emphasized the necessity of facilitators between national-level and local-level, in other words, a strategy for implementing the comprehensive disaster risk reduction. Dr. Anthony C. Sales introduced the case of HELP Davao Network which is local platform between national government and local communities. He also raised the Regional Development Council as another option. There is Regional Research Development and Innovation Committee chaired by DOST under the Council. UPLB commented the communication is one important element for whole processes including database usage and risk communication. Ms. Maria Lynn P. Melosantos suggested to add bottom-up arrow in addition to top-down arrow between national-level and local communities. Dr. Joseph E. Acosta added the contribution from academia such as LiDAR data.

Prof. Toshi Koike introduced the High-Level Panel on Water and its outcome document, Making Every Drop Count, for identifying our position. One more point to be recognized is the regional coordination as discussed in the 11th GEOSS AP-Symposium last October in Kyoto, because the regional coordination mechanism can make possible to exchange our experiences. Typhoon Committee is very good example of regional coordination. Dr. Jinping Liu from ESCAP/WMO-TC congratulated the concept and solution of Platform and conveyed that Platform is a useful reference for the cross-cutting program of Typhoon Committee. Also, other participants from Typhoon Committee mentioned their messages.

The meeting was adjourned by Prof. Toshio Koike.