Report of progress from the other IFI active countries (Sri Lanka, Myanmar, Pakistan)

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On behalf of IFI Platform participating organizations of Sri Lanka, Myanmar and Pakistan

Side Event “Platform on Water Resilience and Disasters”

June 11, 2018
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1. Progress from the other IFI active countries
   • Sri Lanka
   • Myanmar
   • Pakistan
   
   *So many governmental organizations are participating in the Platforms on Water Resilience and Disasters*

2. Input to the major international conferences in collaboration with the IFI partners

3. Future courses
IFI’s Progress in the Asian countries

• **Philippine:** Reported by Dr. Anthony Cinco Sales, DOST
  - Platform on Water Resilience and Disasters (PLATFORM)
  - Activity: Meeting in **March & June, 2017, March & May, 2018**
  - Targets: Pampanga River & Davao River

• **Sri Lanka**
  - Platform on Water Resilience and Disasters
  - Activity: Meeting in **August, 2017 and March, 2018**
  - Targets: Kalu River, Kelani River & Malvathu River

• **Myanmar**
  - Platform on Water Resilience and Disasters
  - Activity: Meeting in **May and November, 2017**
  - Targets: Bago River & Sittaung River

• **Pakistan**
  - Platform on Water Resilience and Disasters
  - Activity: Meeting in **April and December, 2017**
  - Targets: Indus River
Meetings for establishment of “Platform on Water Resilience and Disaster”;

- 1st Plenary Session on August 24, 2017
- 2nd Plenary Session on March 28, 2018

Post-Disaster Activities after flood and landslide of late May, 2017

Group photo at the 1st Plenary Session

Sri Lankan Minister joined at the 2nd Plenary Session
Meeting with Minister of Disaster Management on June 5, 2017

JDR Field Survey at Allagawa on June 7, 2017

Damaged area (Field visit on August 22, 2017)

Inundated Water Level
DIAS-ICHARM: Flood Information Sharing Support in Sri Lanka

Implemented by EDITORIA and ICHARM on DIAS

Flood Forecasting for Sri Lanka

On-line Information provision on DIAS: In-situ rainfall, satellite rainfall, calibrated and forecast rainfall, inundation simulations

Bias-corrected Satellite Rainfall

Discharge at Puttalam

Ensemble Flood Prediction

72hr 11 ensemble every 24hr

Inundation analysis by using RRI in DIAS

Ensemble forecasting rainfall for the next 16 days (max)

Himawari-8 cloud images

Inundation map by satellite data (ALOS-2)

Real-time Rain Gauge Data

NRT-RAIN (mm/day): 25MAY2017

Real-time Rain Gauge Data

500mm

Bias-corrected Satellite Rainfall

Discharge at Puttalam

ISSUED ON MAY 24

Issued on May 24

Issued on May 25

Inundation analysis results

Concept of RRI model

Inundation by using satellite data (ALOS-2)

4 hr latency data (NRT)

Real time data (NOW)

500mm

Bias-corrected Satellite Rainfall

Ensemble Flood Prediction

72hr 11 ensemble every 24hr
Outcomes of the Sessions

Participating Organizations:

- Irrigation Department (ID)
- Meteorology Department (MD)
- Survey Department (SD)
- Disaster Management Center (DMC)
- National Building Research Organization (NBRO)
- Ministry of Magapolis and Western Development (MMWD)
- Ministry of Mahaweli Development & Environment (TBD, MMDE)

Target Actions and Coordinating Bodies

1. Early Warning: rainfall, flooding, landslide: ID, MD, NBRO
2. Adaptation Planning for Global Change: (such as Climate Change, Urbanization) ID, MMDE, MMWDA
3. Economic Effect of Disasters: MMDE, DMC
4. Contingency Planning and Mainstreaming DRR: DMC

Demonstration Sites of Target Actions

1. Kalu River Basin (as rural basin)
2. Kelani River Basin (as urban basin)
3. Malvathu River Basin (as arid basin)
Activities on “Platform on Water and Disaster”

Meetings on “Platform on Water and Disaster”;
- May 9, 2017 at Nay Pyi Taw
- November 1, 2017 at Nay Pyi Taw

Participated Stakeholders
- DWIR, Ministry of Transport and Communications
- DMH, Ministry of Transport and Communications
- RRD, Ministry of Social Welfare, Relief and Resettlement
- IWUMD, Ministry of Agriculture, Livestock and Irrigation
- Yangon Technological university
- ICHARM
- University of Tokyo
- Japan Water Forum
- JICA
Institutional Structure of “Platform on Water and Disaster”

**High Level Panel on Water (HLPW)**
- HELP Chair
- Member Advisor
  - MoALI
  - NWRC

**Core Management Group**
- NWRC Secretariat
- NDMC Secretariat

**Participating Organizations**
- IWUMD (Irrigation and Water Utilization Management Department)
- DMH (Department of Meteorology and Hydrology)
- RRD (Relief and Resettlement Department)
- NWRC (National Water Resources Committee)
- NDMC (National Disaster Management Council)
- DHP
- DOP
- GAD
- DMA
- MPA
- DUHD
- SD

**Regional /State / District Government**
- City / Township Development Committee

**Science & Technology Communities**
- NWRC
- YTU, etc.
Field Survey at Sittaung River estuary (October 29 and 30, 2017)

[1st day]
- River bed sampling
- Drone investigation
- Installation of water pressure sensor

[2nd day]
- River bed sampling
- Drone investigation
- Collection of water pressure sensor

Severely eroded area
3-4 hours from Kyaik-ka-tha village

Sittaung Bridge
Village boat harbor
Findings from the field survey at Sittaung River

- West river bank has been eroded over 10 km in these 10 years, which has caused the extinction of the riverine village and farmland.
- River bed materials in the estuary and river mouth areas are thought to be supplied by the eroded bank materials and wash load from the upper reach.

**Grain Size Distribution (Sittaung River, Myanmar)**

**River Reach Areas:**

- **Bed Materials**
  - A: from Kunseik to Madauk bridge
  - B: from Sittaung bridge to Kunseik

- **Bank Materials**
  - A: at lower part of bank
  - B: at upper part of bank

**Estuary Areas:**

- **Bed Materials**
  - A: at lower part of bank
  - B: at upper part of bank

**Bank Materials**

A: at lower part of bank
B: at upper part of bank
Activities for “Platform on Water and Disaster”

A meeting for establishment of “Platform on Water and Disaster”;
- March 2-3, 2017 at PMD Headquarter, Islamabad

Participated Stakeholders
- **PMD**: Pakistan Meteorological Department
- **PCRWR**: Pakistan Council of Research in Water Resources
- **GCISC**: Global Change Impact Studies Center
- **NARC**: National Agriculture Research Centre
- **NDMA**: National Disaster Management Authority
- **UNESCO**
- **ICHARM**
Institutional Structure of “Platform on Water and Disaster”

Co-chair PMD (Pakistan Meteorological Department)
Co-chair FFC (Federal Flood Commission)

Core Management Group
Co-chair PCRWR (Pakistan Council of Research in Water Resources)

Secretariat
UNESCO Category 2 Center
(Regional Centre for Water Management Research in Arid Zones)

Policy

Ministry of Climate Change
NDMA (National Disaster Management Authority)

Participating Organizations
SAWCRI  BARI  CDPM  NUST  UET  SUPARCO  WPDA
Activities (UNESCO Pakistan Project)

**Indus-IFAS:** flood forecasting system based on IFAS/RRI

**INPUT DATA**
- Rainfall data (PMD ground-gauges, GSMaP and forecasted)
- **Real-time observed discharges**

**CHALLENGES:**
- Lack of trans-boundary data
- Null-Low rain gauges network density
- Uncertainty on snowmelt

**OUTPUT DATA:**
- Rainfall distribution maps
- Hydrographs at specified locations
- Inundation extents in mid-low Indus

**FLOOD HAZARD MAPPING**

Inundation area by RRI
**3rd Asia-Pacific Water Summit Thematic Session**

**WATER AND DISASTERS**

**IN THE CONTEXT OF CLIMATE CHANGE**

- From the Mountains to the Islands -

**Time & Date:** 13:30 – 17:00, December 11, 2017

**Venue:** Yangon, Myanmar

**Co-organizers:** ICHARM, ICIMOD, SPC, HELP

**Session Framework:**
- Part 1: Keynote Speeches by High-Level Leaders (3 speakers)
- Part 2: Country Presentations (10 presenters from 7 countries)
- Part 3: Panel Discussion (5 panelists)

**Highlights:**
- **Vice President of Myanmar** stressed the importance of IFI Platform activities at the Plenary Opening Speech
- **All the DGs/DDG of the Platform participating organizations of Myanmar** (DMH, IWUMD, DWIR, RRD) made the presentations
- **Contribution and input to the Yangon Declaration**
Keynote Speech by H. E. Dr. Jose Ramos-Horta, Senior Minister of the Democratic Republic of Timor-Leste

Prof. Koike, Director, ICHARM, the co-chair, and the panelists of Part 3

Presentation by Mr. Wasantha Bandara Palugaswewa, Irrigation Department, Sri Lanka

All the DGs/DDG of the Platform participating governmental organizations of Myanmar (DMH, IWUMD, DWIR, RRD) made the country presentations
1) Launch of Alliance of Alliances on DRR researchers
   - A global action “Alliance of Alliances on DRR researchers” has been launched at the Special Session “Water and disasters”

2) Contribution to the Thematic Session of Asia-Pacific Regional Process
   - Presentation on the progress of IFI and Platforms on Water Resilience and Disasters at the Thematic Session “Climate change, disasters and water related adaptation in the Asia Pacific region”
   - Participation at the panel discussion and input to the synthesis session report at the Synthesis Session “Upscale Innovation for a Water-Secure Asia and the Pacific”
Future Courses

1. Further progress in the Asian countries
   - Sri Lanka
     - Continuous support in 2018 flood season
     - Developing collaboration with IFI partner organizations
     - Planning to organize the 3rd Plenary session in late 2018
   - Myanmar
     - Continue field survey in the Sittaung river
     - Planning to organize the meeting in 2018
   - Pakistan
     - Completion of UNESCO Pakistan Project in September 2018

2. Input to the major international conferences
   - WMO: Global Conference @Geneva, May 2018
   - UNESCO-IHP: Side event at the Intergovernmental Council @Paris, June 2018
   - High Level Political Forum @ New York, July 2018
   - AP Regional Meeting of UNESCO National Commissions @Gyeongju, September 2018
   - ADB: Asia Water Forum 2018 @Manila, October 2018
   - GEO AP Symposium and XV Plenary @Kyoto, Oct.-Nov. 2018
   - and others
Thank you very much for your kind attentions

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