



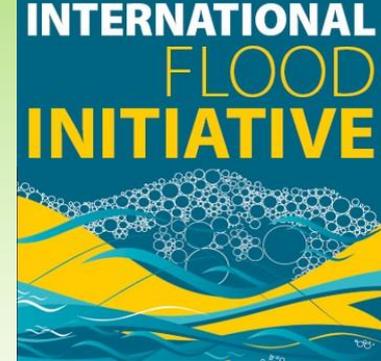
United Nations
Educational, Scientific and
Cultural Organization



International Centre for
Water Hazard and Risk Management
under the auspices of UNESCO



Public Works Research Institute,
National Research and Development
Agency, Japan



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

Tetsuya IKEDA, PhD

ICHARM

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

Side Event “Platform on Water Resilience and Disasters”

June 11, 2018



CONTENTS

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



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

- 2nd Plenary Session on March 28, 2018



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



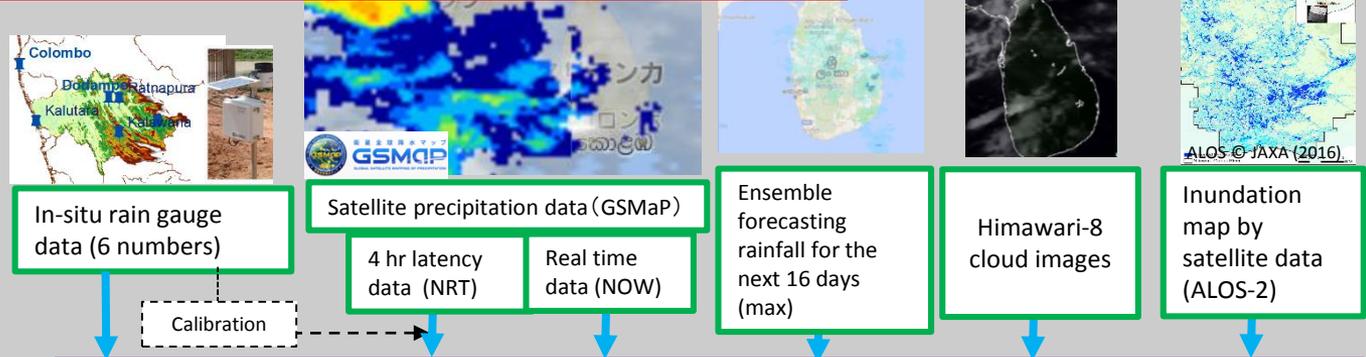
Inundated Water Level



Damaged area (Field visit on August 22, 2017)

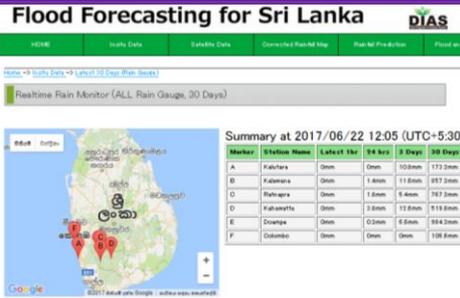
DIAS-ICHARM: Flood Information Sharing Support in Sri Lanka

Implemented by EDITORIA and ICHARM on DIAS



Flood Forecasting for Sri Lanka

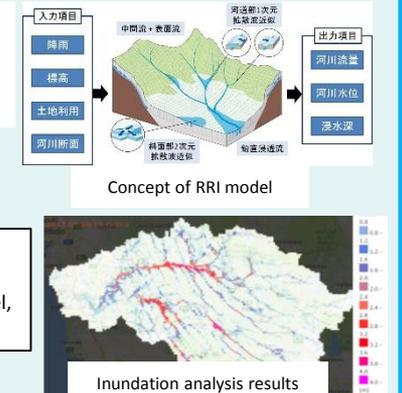
On-line Information provision on DIAS: In-situ rainfall, satellite rainfall, calibrated and forecast rainfall, inundation simulations



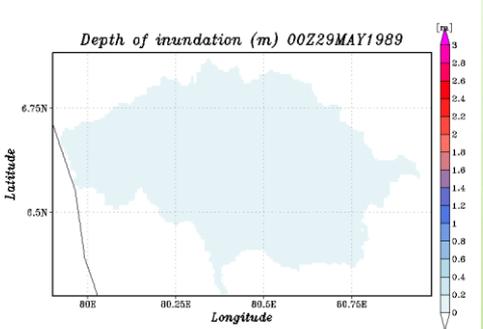
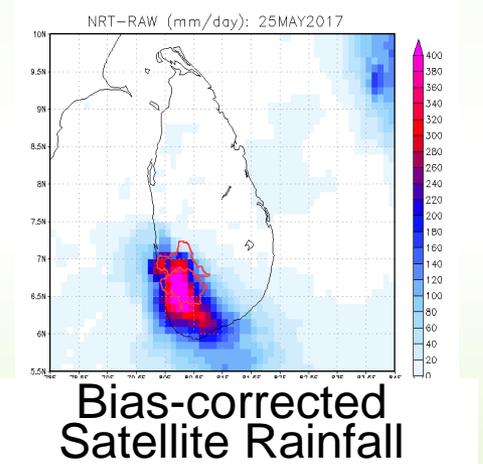
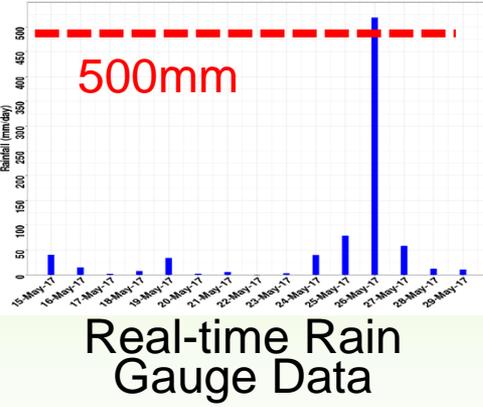
Inundation analysis by using RRI in DIAS

RRI model

Simulation and forecasting of river discharge, water level, inundation extent

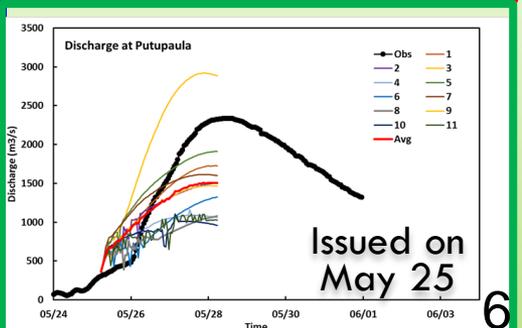
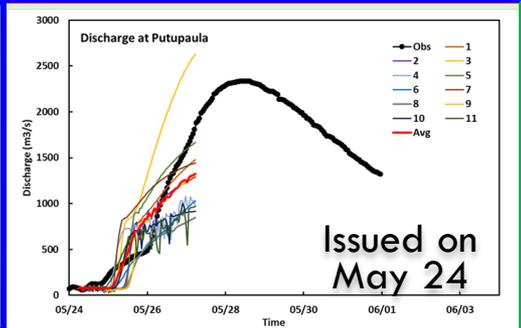


Inundation analysis results



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)





Meetings on “Platform on Water and Disaster”;

- May 9, 2017 at Nay Pyi Taw
- November 1, 2017 at Nay Pyi Taw



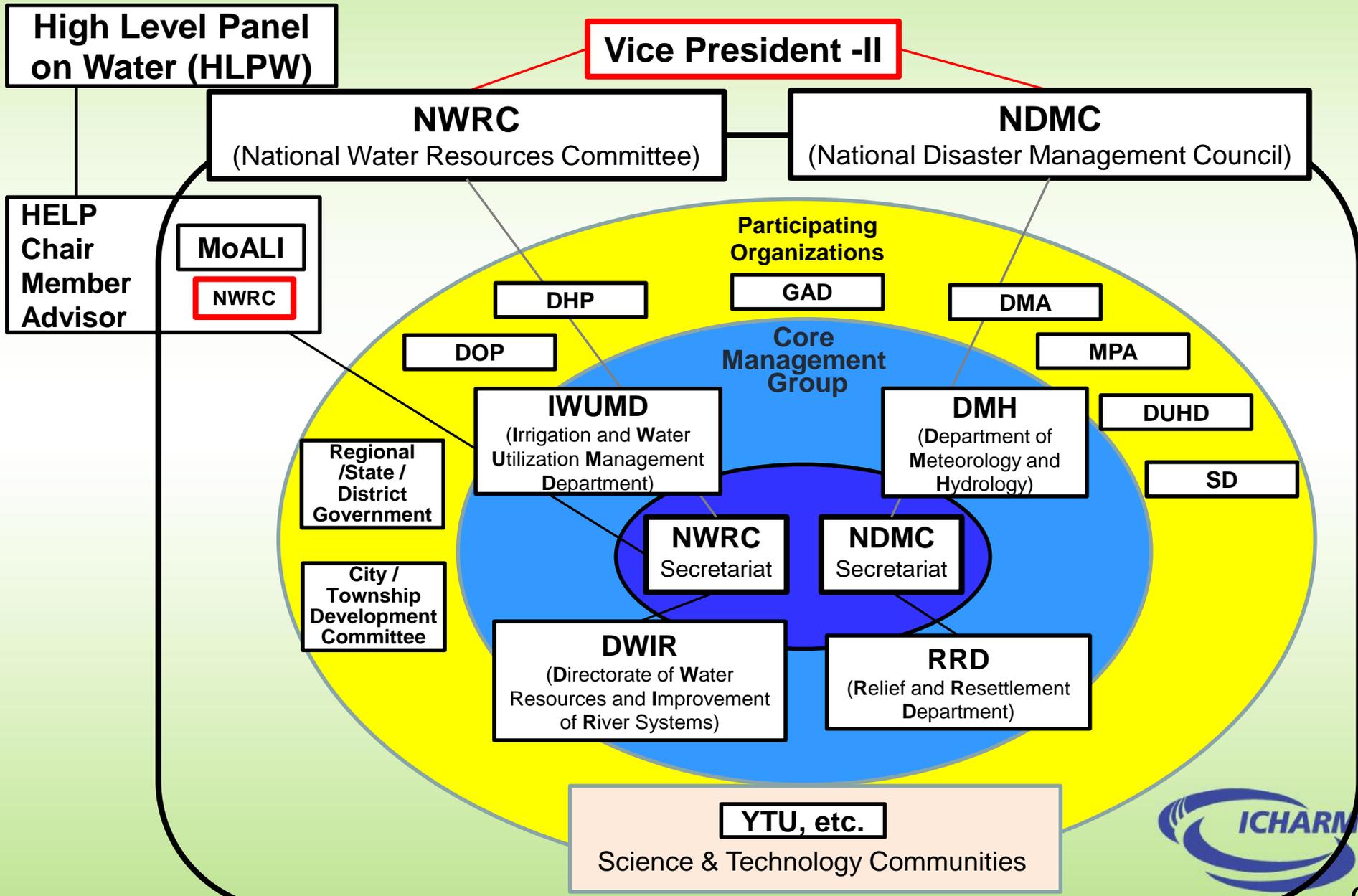
Participated Stakeholders

- **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**

- **ICARM**
- **University of Tokyo**
- **Japan Water Forum**
- **JICA**



Institutional Structure of “Platform on Water and Disaster”



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

Sittaung
Bridge

Village boat
harbor

Kyaikkatha Village

Alanbya vilage

test

Severely eroded
area

3-4 hours from
Kyaik-ka-tha village

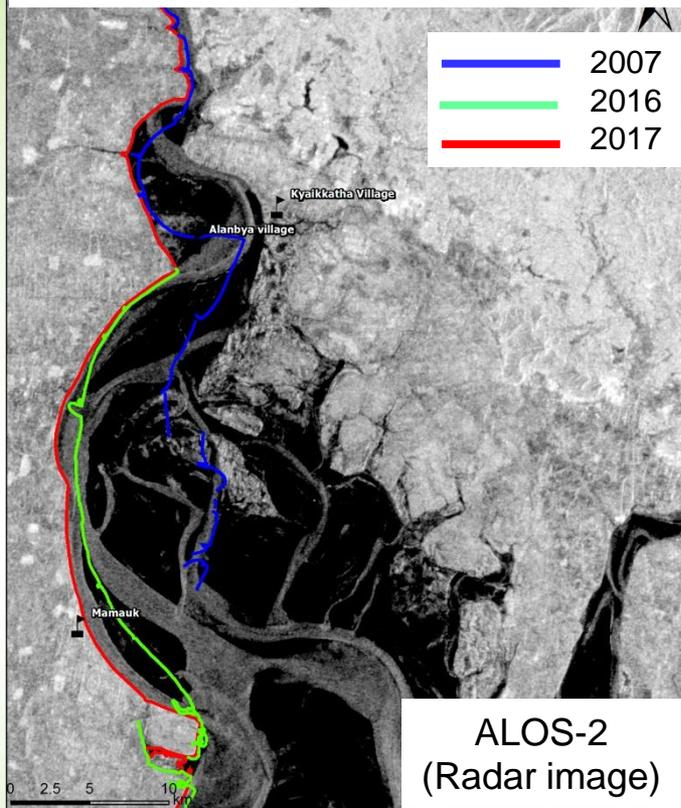
Image © 2017 CNES / Airbus
© 2017 Google

Google Earth

画像取得日: 2017/2/12 17° 15'00.92" N 96° 48'04.07" E 標高 7 m 高度 73.63 km

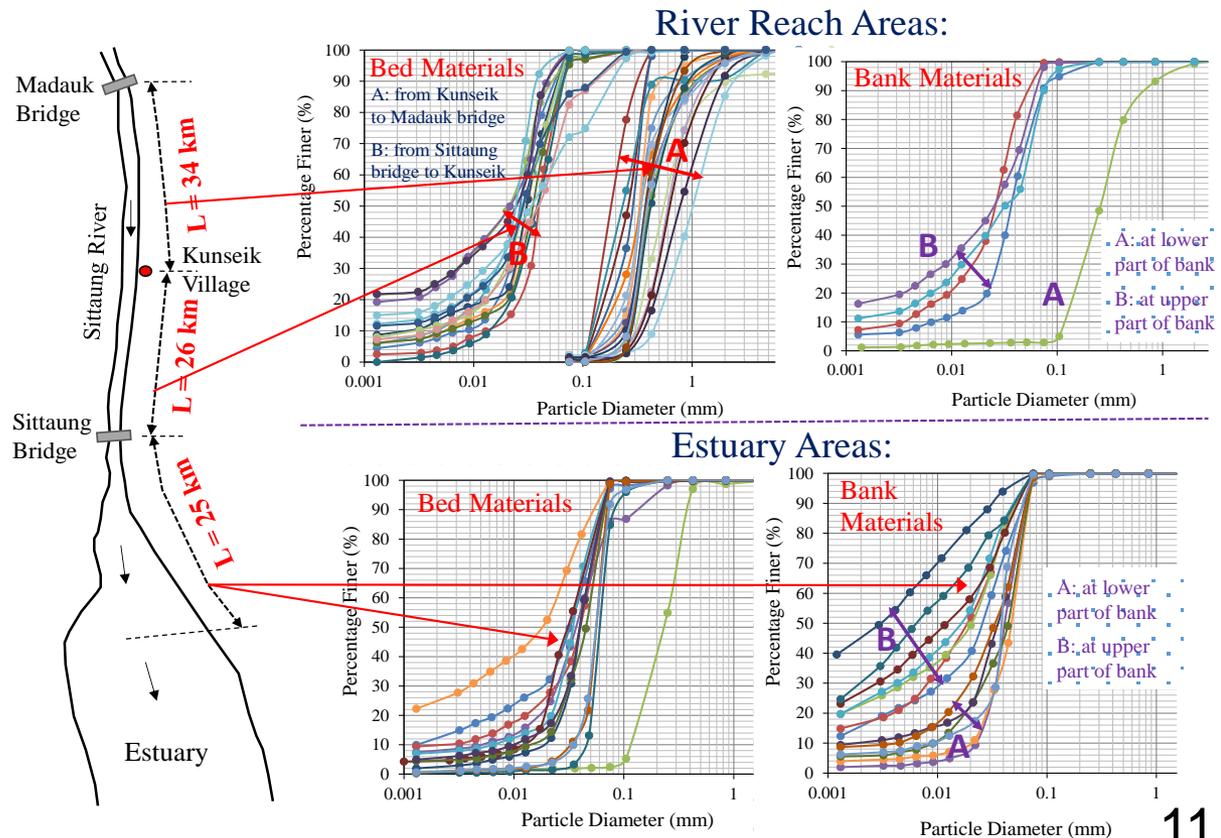
Findings from the field survey at Sittaung River

Bank lines in estuary of 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.**
- Rive 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)



Activities for “Platform on Water and Disaster”

A meeting for establishment of “Platform on Water and Disaster”;

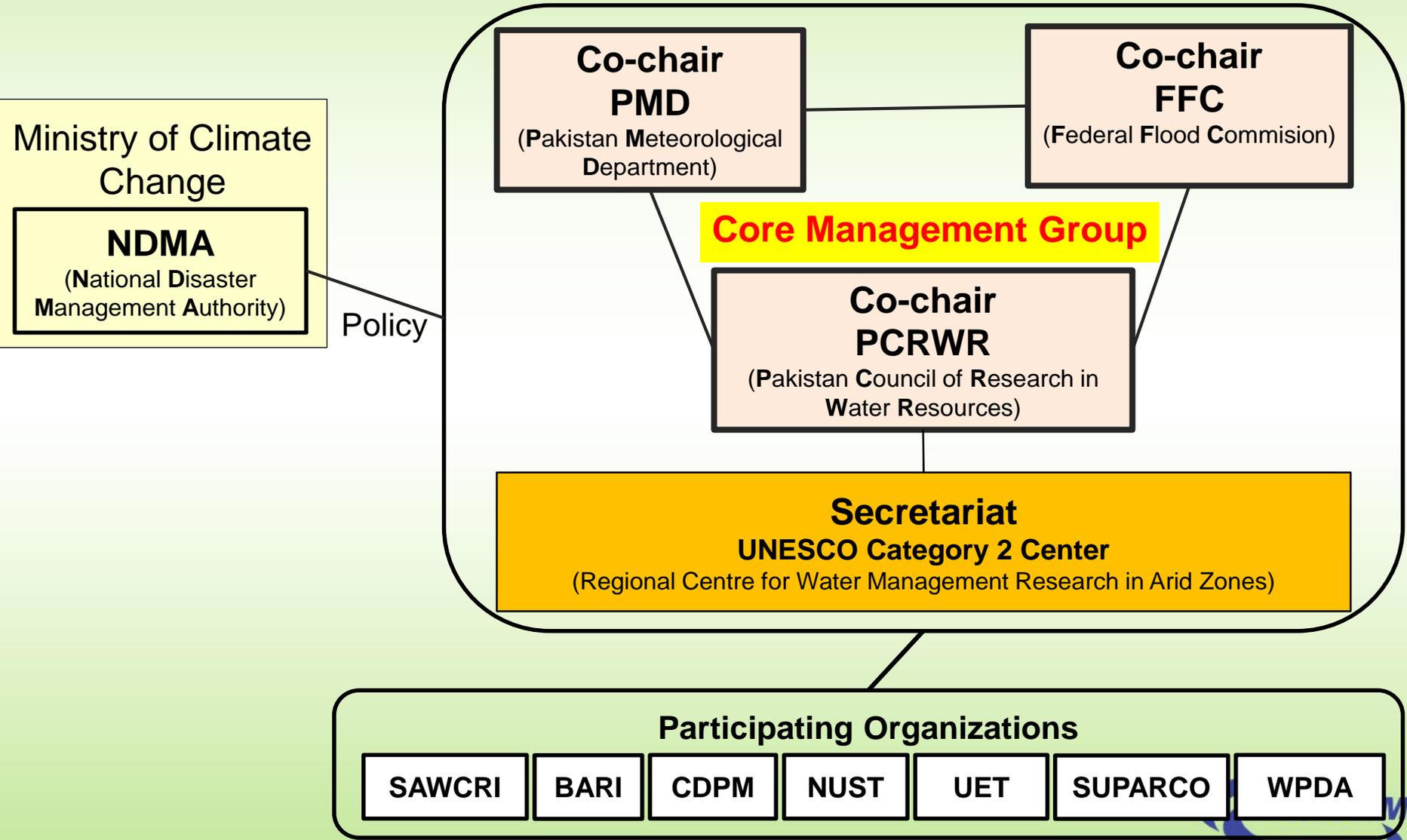
- March 2-3, 2017 at PMD Headquarter, Islamabad



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”

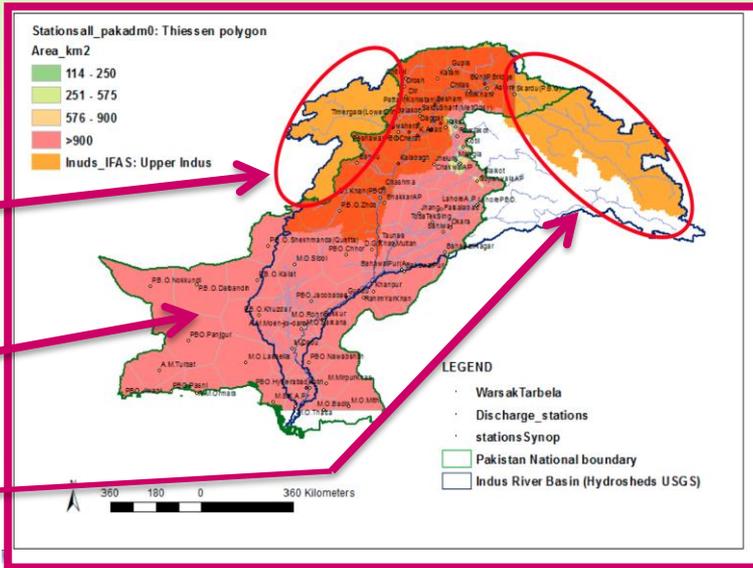


Activities (UNESCO Pakistan Project)

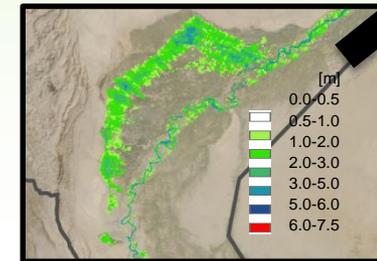
Indus-IFAS: flood forecasting system based on IFAS/RR1

INPUT DATA CHALLENGES:

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



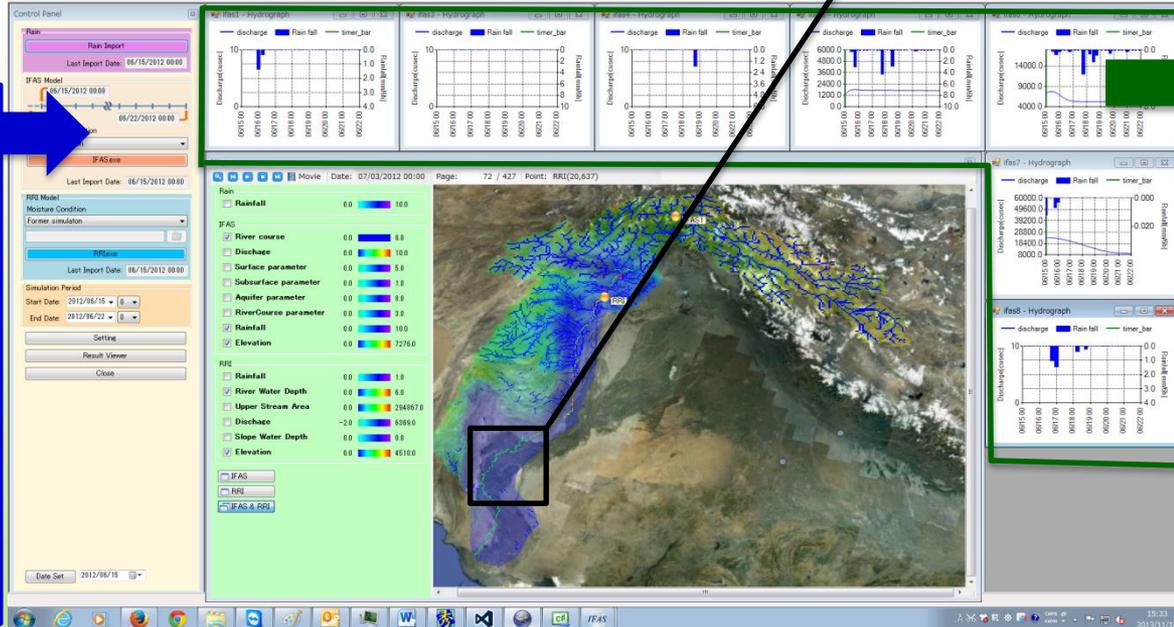
Inundation area by RRI



FLOOD HAZARD MAPPING

INPUT DATA:

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



OUTPUT DATA:

- Rainfall distribution maps
- Hydrographs at specified locations
- Inundation extents in mid-low Indus

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

8th World Water Forum

– Contribution in terms of Water and Disasters –

Date: March 19 - 23, 2018

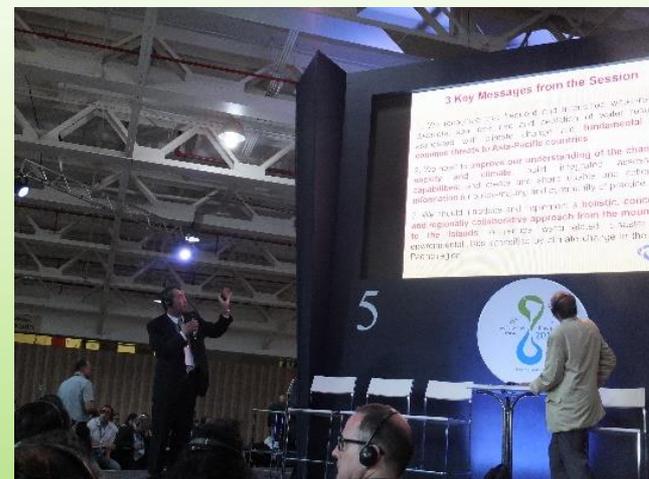
Venue: Brasilia, Brazil

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



**We are
now here**

***Thank you very much
for your kind attentions***



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