



United Nations
Educational, Scientific and
Cultural Organization



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



Asian Water Cycle Initiative (AWCI) Session
October 28, 2021

COUNTRY REPORT

Platforms on Water Resilience and Disasters

Davao City, Philippines

Dr. Anthony C. Sales, CESO III
Regional Director, DOST XI

PLATFORM on Water Resilience and Disasters

national

Data Integration

Early Warning

Climate Change Assessment

region

Davao

Central Luzon-NCR-CALABARZON

Davao HELP Network

SATREPS

Early Warning

CCA

Water-related Disaster

Environment

Agriculture

Economics

AOGEO
AWCI

OSS-SR

E-Learning for Facilitators

OSS-SR

E-Learning

modeling

Platform for Water Resilience and Disaster in Davao River Basin

Knowledge and Tools for Decision Making

Data Integration

Real-time data from ARGs, WLMS, and Tandem units

Predict downstream level rise in a certain lead time based on upstream hydromet data

Identification of possible areas where distress calls

Early Warning

Information system for disaster notification disaster-related updates

Deployment of early warnings systems (DEWS)

Installation of community-based alerting stations

Climate Change

Geo-informatics for the systematic assessment of flood effects and risks for resilient Mindanao (GEO-SAFER Mindanao)

Use of LiDAR data for Resource Mapping

PHL-MICROSAT

Utilization of satellite images through the Davao Ground Receiving Station for flood monitoring

AOGEO
AWCI

OSS-SR

e-Learning for
Facilitators

Management Plans and Policy Making

Davao River Basin Management Plan

Davao River Basin Health Scorecard

Customized IWRM Guidelines for Davao City and Davao Region

Resilience Demonstration Project: Assessment of Urban Water Systems

City and Barangay Flood Hazard Maps

Metro Davao Earthquake Model

Communities of Practice

Enhanced Barangay Disaster and Risk Management Plan

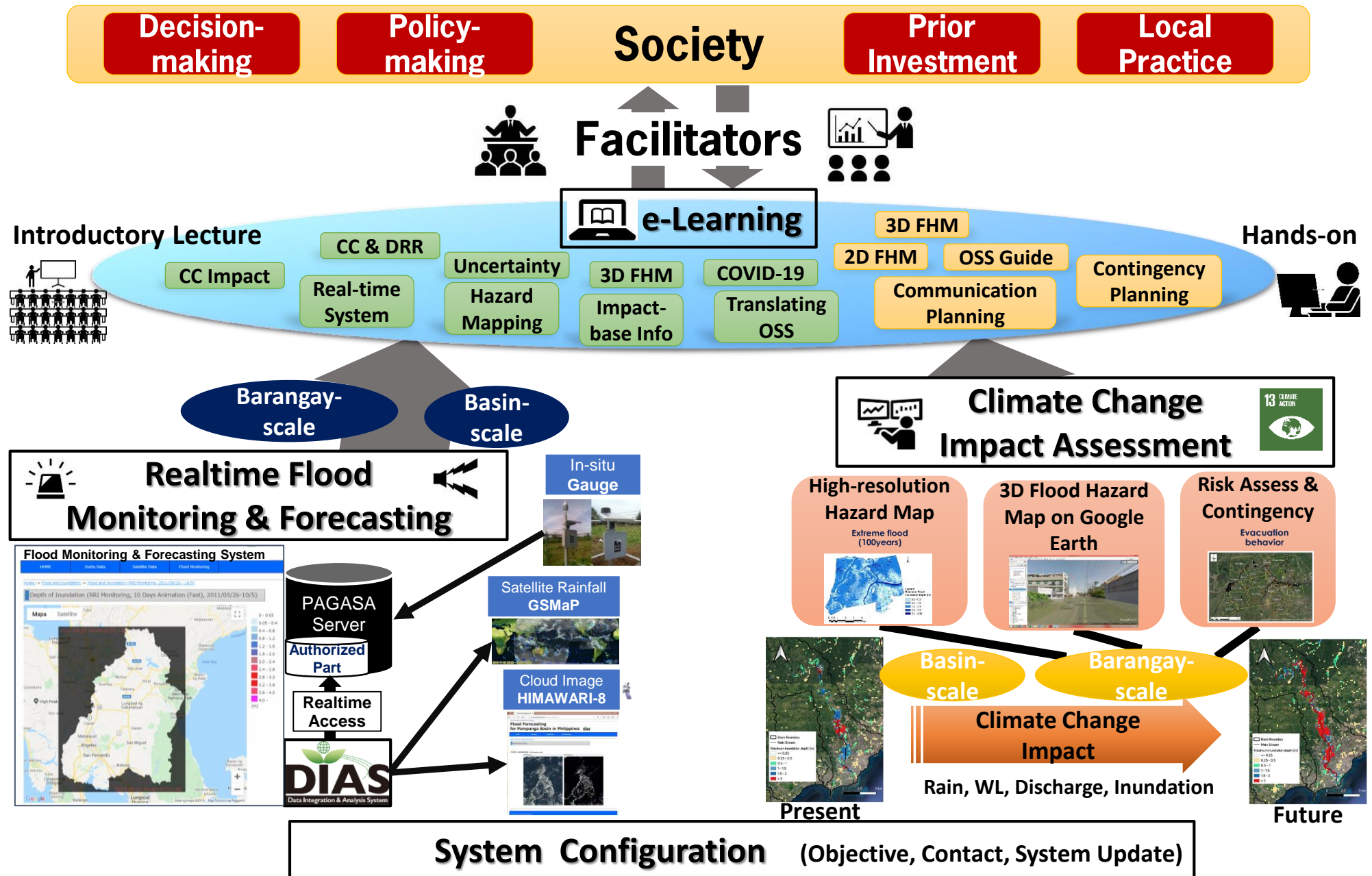
Advocacy and Capacity Building on IWRM/DRR/CC

Vertical Helophyte Filter System in Communities

Sustainable Basin Livelihood

Community Learning Centers

Online Synthesis System (OSS)





United Nations
Educational, Scientific and
Cultural Organization



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



e-Learning Workshop of the Davao OSS for the Candidates of “Facilitators” in Davao City, Philippines

April 19-May 17, 2021

e-Learning Contents

<i>Course-1</i>			
CC-1	Integrated Approach for Climate Change and Flood Disaster Risk Reduction in Davao	<i>Prof. Toshio Koike</i>	} Exam
CC-2	Impact Assessment of Climate Change in Davao City	<i>Prof. Tomoki Ushiyama</i>	
CC-3	Uncertainty in Future Climate Change Scenario	<i>Dr. Katsunori Tamakawa</i>	
FM-1	Flood Monitoring and Forecasting for the Davao River Basin	<i>Dr. Mamoru Miyamoto</i>	
FM-2	Flood Hazard Mapping and Contingency Planning for Davao City	<i>Prof. Miho Ohara</i>	
FM-3	3D Flood Hazard Mapping for Disaster Risk Reduction	<i>Dr. Takuya Inoue (CERI)</i>	
DRR-1	Effective Hazard Information & Public Awareness	<i>Dr. Nobuyuki Tanaka (JMA)</i>	
<i>Course-2</i>			
DRR-2	Flood Response under COVID-19	<i>Prof. Miho Ohara</i>	
DRR-3	Translating OSS knowledge into science communication plan	<i>Prof. Della Grace Bacaltos (DSSC)</i>	➔ Assignment-1
DRR-4	Sharing knowledge on disaster resilience and sustainability by all	<i>Prof. Toshio Koike & Prof. Miho Ohara</i>	➔ Assignment-2

Participants in WS

Candidates for the facilitator were invited from different disciplines and sectors of society.

- **CRITERIA 1 (Direct disciplines):** Those who have a background in DRRM, CCA, Sustainability, IWRM, RBO management, Flood management, and Climate/meteorology
- **CRITERIA 2 (Good mix of sciences):** Natural science, Engineering, Social science including communication, ICT, and Communicator in the mother tongue.
- **CRITERIA 3 (Representation from different levels of governance):** Barangay, City/ Municipality, National government, Private sector/Industry, Civil society, Academe, Media, and Special representation from DRBMA which is an interregional body.
- **CRITERIA 4:** Members of HELP Davao Network



Candidate of Facilitator

National Government	11
Local Government	2
Academe	11
Civil Society Organization	1
Private Sector	2
Media	2
TOTAL	29



Participants in the Q & A Session

Feedback & Discussion

- **Framework and timeline of future operation** to maintain the functionality and sustainability of Davao OSS. The actual engagement of the facilitators should be planned out. One suggestion is the Davao River Basin Management Alliance or DRBMA
- **Incorporation with ongoing and past activities/projects** such as UNESCO project on disaster resilience
- **Access and navigation of Davao OSS**, (this may be a part of the hands-on training)
- Proposal for **reflecting local knowledge, experience and insights** to Davao OSS
- Proposal for **grouping of Facilitators according to the target audience** (who can be knowledge users or brokers) and special skills for effective mastery

Science Communication

Aiming for “**CONSILIENCE**”, integrating the concepts of DRR and sustainable development with concrete actions.

Target Audience (PENTAHELIX)	Possible OSS Knowledge/Content to be disseminated and translated	Possible Communication Medium /Channel/Tool/ Activity	Next Step
Local Communities (Youth, Women, People’s Org)	Identified by “Facilitators” for each target audience during the e-learning workshop assignments and feedback sessions	Identified by “Facilitators” for each target audience during the e-learning workshop assignments and feedback sessions	Identify and Plan specific activities Translated the OSS training materials to Philippine National Language (Filipino) and Local Dialect (Bisaya)
DRR Team (Barangay and City Level)			
Government Agencies (DENR, DILG, DOST, DSWD, DOH)			
Policy Makers (legislators and local government officials)			
Private Sector			
Media			
NGOs and CSOs			

Secured policy support thru RDC XI Resolution, enjoining the adoption of the Davao OSS

2nd Phase Training for Davao City

OSS-SR Hands-on Training Workshop for Facilitators (November or December 2021)

	Title	Lecturer	Outline
2-1	How to Use the OSS	M. Miyamoto K. Tamakawa	Understand the overview of OSS. Instruct how to download and use the data of climate change impact assessment, real-time basin-scale inundation, and local barangay-scale inundation.
2-2	Training on 2D & 3D Flood Hazard Mapping	K. Naito N. Nagumo	Learn how to make 2D flood hazard maps and identify flood risk at each Barangay level by using flood simulation results and QGIS software (free GIS software). Learn how to visualize flood risk in 3-dimension(3-D) by google earth and street view function.
2-3	Training on Contingency Planning	M. Ohara	Learn how to develop contingency scenario and plan among related stakeholders by using flood simulation results.
2-4	Communication planning	Della Grace Bacaltos (DSSC)	Create the specific action plan of Science Communication

An aerial photograph of a coastal city, likely San Francisco, showing a dense urban area, a winding river, and a large bay with mountains in the distance under a blue sky with white clouds. The text "THANK YOU" is overlaid in the center.

THANK YOU