

DIASコミュニティフォーラム 2021 ONLINE, 2021/1/18

PLATFORM ON WATER RESILIENCE AND DISASTERS IN THE PHILIPPINES

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NATIONAL REPORT ON THE PLATFORM ACTIVITY

Progress of Platform Activity

- **1st Plenary Meeting**
13/3/2017, Metro Manila
Concept sharing
Platform formulation
- **2nd Plenary Meeting**
15/6/2017, Metro Manila
Data sharing guideline
Data list creation
- **Representative Meeting**
18/9/2017, Hanoi
Data list confirmation
- **Individual Meeting**
7-9/2/2018, Metro Manila
Secretariat assignment
Data collection
- **Individual Meeting**
12-13/3/2018, Metro Manila
Secretariat assignment
HLPW outcome document
- **Stakeholders Meeting**
18/5/2018, Davao
Data upload
- **11th GEOSS Symposium**
24-26/10/2018, Kyoto
Regional coordination
- **3rd Plenary Meeting**
7/2/2019, Metro Manila
Activity update
implementation



Concept of Platform

Proposed Platform on Water Resilience and Disasters
as part of the National Platform for Disaster Risk Reduction
(draft)

Vision
Platform envisions a future wherein decisions and actions for reducing water-related disaster risk are well supported by coordinated, comprehensive and sustained risk communication.

Mission
To realize its Vision, Platform works to connect the demand for sound and timely decisions and actions taken by policy-makers and local communities with the supply of disaster risk information that is generated from integrated risk assessment and risk change identification based on well archived data and statistics. In doing so, Platform strengthens data integration and analysis functions by facilitating data and information accessibility and application to decisions and actions within and across many different stakeholders.

Scope
Decisions and actions for reducing risk on water-related disasters, including floods, landslides and droughts, rely, and will continue to rely, on the ability of expert communities to collect and archive data from various sources and combine these with social and economic analyses. Platform strengthens experts' capability of data collection and archiving, integrated assessment and risk change identification and stakeholders' capacity for making maximum use of these data and information provided from the experts. Platform contributes to institutional and infrastructural design and investment including land use management and climate change adaptation (static approach) and to effective response and recovery (dynamic approach).

Implementation Strategy and Schedule
Platform follows the IFI spatial implementation strategy and works in tandem with International Decade for Action, "Water for Sustainable Development", 2018-2028. In its demonstration phase, Platform focuses on two river basins, the Panganga and the Davao; develops data integration and analysis functions by which the stakeholders work together with science communities at local and national levels; creates actionable information supporting in policy-making and community of practice; reflects integrated data and information to institutional and infrastructure design and community actions.

Data Sharing Guideline

Platform on Water Resilience and Disasters in the Philippines
(PLATFORM)
Data Sharing Guidelines

PLATFORM recognizes that the societal benefits arising from its cooperative activities can be fully realized through the sharing of data, information, knowledge, products and services among the participants in PLATFORM at least. PLATFORM also associated itself with the trend towards open data standards while agency policies or legislation preclude the sharing of data as Open Data. In order to set up data sharing guidelines which balance the interests of both data users and providers in the light of the above mentioned constraints, it is considered viable to adopt the PLATFORM data sets the following two categories:

Category 1: Data, metadata and products are shared as Open Data by default.

Category 2: Data, metadata and products are shared only among the PLATFORM Participants.

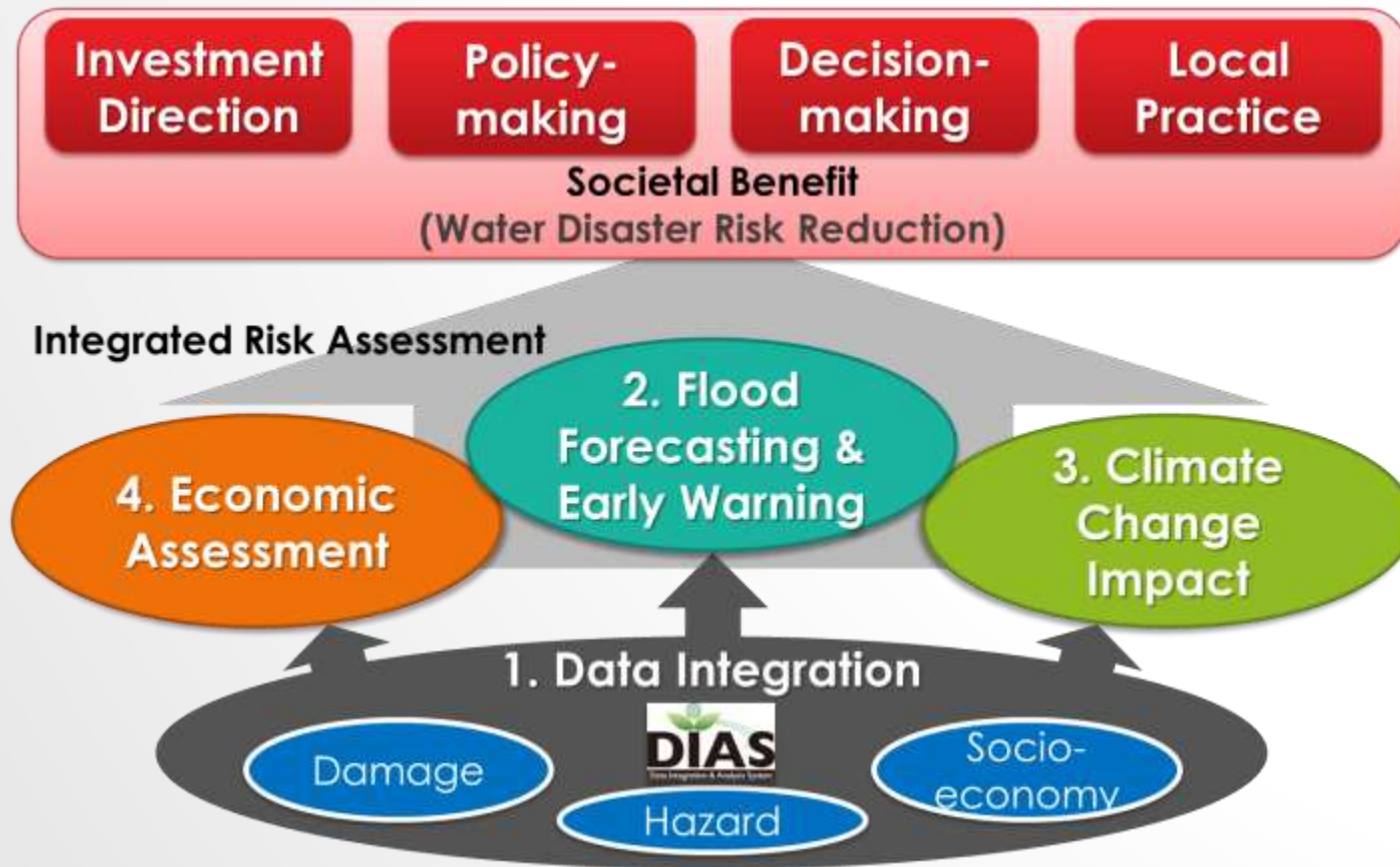
Category 3: Data, metadata and products are shared with those who get a permission from the data provider.

1. If there is any data policy indicated by the data provider, that policy always has priority over this Platform.
2. PLATFORM data are to be used only for the public interest, scientific research or education. Commercial use and exploitation of PLATFORM data sets are prohibited.
3. Any modification or change of the original PLATFORM data sets is prohibited.
4. Any re-export or transfer of the original data sets to a third party is prohibited.
5. Whenever PLATFORM data sets are used for publication of scientific results, the author(s) shall send a copy of the respective publication, preferably in an electronic form or in a separate printed version, to the PLATFORM CONTACTS as indicated below.

- Category 1:
Fully open
- Category 2:
Among Platform
- Category 3:
With permission

NATIONAL REPORT ON THE PLATFORM ACTIVITY

Activity Plan



NATIONAL REPORT ON THE PLATFORM ACTIVITY

1. Data Integration



NATIONAL REPORT ON THE PLATFORM ACTIVITY

1. Data Integration

Damage	
Data	Source of information
Casualties & missing person	OCD
Num. of affected people	OCD
Agricultural damage	DA
Housing damage	OCD
Damage to critical infrastructure	DPWH, LGU
Direct economic loss other than agricultural loss	LGU NEDA

Hazard	
Data	Source of information
DEM (LiDAR)	UP Mindanao
DEM (ifSAR)	NAMRIA
Hydromet data	PAGASA, ASTI, DREAM
Inundation depth (LiDAR)	UP Diliman, UP Mindanao
Inundation depth (interview)	PAGASA
Rainfall	PAGASA
River flow	DPWH, UP Mindanao
River cross section	DPWH, UP Mindanao
Tidal level	NAMRIA

Socioeconomic	
Data	Source of information
Land use	LGU, DOST
Agriculture	PSA, DA
Population	PSA
Infrastructure	DPWH/LGU
Industry	DTI
Commerce	DTI
Drainage facility	DPWH/LGU
Information	PSA, NEDA
Sectoral Regional GDP	PSA
Sectoral employed population	PSA
Tax revenue	BIR
Land price	City Assessors Office

Metadata Template

Category	Data	Source of information	Data Type	Specification
DEM (LiDAR)	UP Mindanao	Grid	Year: Area: Davao River basin Spatial Resolution: 10m	Year: Area: Davao River basin Spatial Resolution: 10m
	NAMRIA	Grid	Year: Area: Davao River basin Spatial Resolution: 5m	Year: Area: Davao River basin Spatial Resolution: 5m
Rainfall	PAGASA	Time series (Point) Digital Paper	Names() or Total number: 10 Period: 1980-2016 Temporal Resolution: Daily Elements: Meteorological observation	Names() or Total number: 10 Period: 1980-2016 Temporal Resolution: Daily Elements: Meteorological observation
	PAGASA	Time series (Point) Digital Paper	Names() or Total number: 10 Period: 1980-2016 Temporal Resolution: Daily Elements: Meteorological observation	Names() or Total number: 10 Period: 1980-2016 Temporal Resolution: Daily Elements: Meteorological observation
Water level	PAGASA DPWH UP Mindanao	Time series (Point) Digital Paper	Names() or Total number: Period: 2000 - 12/2017 Temporal Resolution: occasional	Names() or Total number: Period: 2000 - 12/2017 Temporal Resolution: occasional
	PAGASA DPWH UP Mindanao	Time series (Point) Digital Paper	Names() or Total number: 1 (Davao, Lacson, Calinan) Period: 2003 Temporal Resolution: occasional	Names() or Total number: 1 (Davao, Lacson, Calinan) Period: 2003 Temporal Resolution: occasional
River cross section	DPWH UP Mindanao	Geometry (Point) Digital Paper	Names() or Total number: 276 Period: 2003 Temporal Resolution: - Elements: Field measurement	Names() or Total number: 276 Period: 2003 Temporal Resolution: - Elements: Field measurement
	NAMRIA	Time series (Point) Digital Paper	Names() or Total number: Period: Temporal Resolution: Elements:	Names() or Total number: Period: Temporal Resolution: Elements:
Inundation depth (LiDAR)	UP Diliman	Map	Year: 2016 Area: Davao City Spatial Resolution: 1/200000 Elements: Flood hazard map (100 year return period, 1.5m depth)	Year: 2016 Area: Davao City Spatial Resolution: 1/200000 Elements: Flood hazard map (100 year return period, 1.5m depth)
	PAGASA	Map/Point Digital Paper	Year: Area: Spatial Resolution: Elements:	Year: Area: Spatial Resolution: Elements:
Dam operation	NIA	Time series (Point) Digital Paper	Names() or Total number: Period: Temporal Resolution: Elements:	Names() or Total number: Period: Temporal Resolution: Elements:
	OCD	Statistics Digital Paper	Period: 2012, 2013, 2014, 2015, 2016, 2017 (event-base) Area: Region XI Scale: Nation Province City Municipality Barangay	Period: 2012, 2013, 2014, 2015, 2016, 2017 (event-base) Area: Region XI Scale: Nation Province City Municipality Barangay
Affected people	OCD	Statistics Digital Paper	Period: 2012, 2013, 2014, 2015, 2016, 2017 (event-base) Area: Region XI Scale: Nation Province City Municipality Barangay	Period: 2012, 2013, 2014, 2015, 2016, 2017 (event-base) Area: Region XI Scale: Nation Province City Municipality Barangay
	DA	Statistics Digital Paper	Period: 2010, 2011, 2012, 2014, 2015, 2016 Area: Region XI Scale: Nation Province City Municipality Barangay	Period: 2010, 2011, 2012, 2014, 2015, 2016 Area: Region XI Scale: Nation Province City Municipality Barangay
Housing damage	OCD	Statistics Digital Paper	Period: 2012, 2013, 2014, 2015, 2016, 2017 (event-base) Area: Region XI Scale: Nation Province City Municipality Barangay	Period: 2012, 2013, 2014, 2015, 2016, 2017 (event-base) Area: Region XI Scale: Nation Province City Municipality Barangay
	DPWH LGU	Statistics Digital Paper	Period: 2012, 2013, 2014, 2015, 2016, 2017 (event-base) Area: Region XI Scale: Nation Province City Municipality Barangay	Period: 2012, 2013, 2014, 2015, 2016, 2017 (event-base) Area: Region XI Scale: Nation Province City Municipality Barangay
Critical infrastructure damage	DPWH LGU	Statistics Digital Paper	Period: 2012, 2013, 2014, 2015, 2016, 2017 (event-base) Area: Region XI Scale: Nation Province City Municipality Barangay	Period: 2012, 2013, 2014, 2015, 2016, 2017 (event-base) Area: Region XI Scale: Nation Province City Municipality Barangay
	LGU NEDA	Statistics Digital Paper	Period: 2012, 2013, 2014, 2015, 2016, 2017 (event-base) Area: Region XI Scale: Nation Province City Municipality Barangay	Period: 2012, 2013, 2014, 2015, 2016, 2017 (event-base) Area: Region XI Scale: Nation Province City Municipality Barangay
Economic damage	LGU NEDA	Statistics Digital Paper	Period: 2012, 2013, 2014, 2015, 2016, 2017 (event-base) Area: Region XI Scale: Nation Province City Municipality Barangay	Period: 2012, 2013, 2014, 2015, 2016, 2017 (event-base) Area: Region XI Scale: Nation Province City Municipality Barangay
	PSA	Grid/Statistics Digital Paper	Year: 1990, 1995, 1998, 1999, 2000, 2007, 2010, 2015 Area: Region XI Spatial Resolution: Regional Elements: Population Census	Year: 1990, 1995, 1998, 1999, 2000, 2007, 2010, 2015 Area: Region XI Spatial Resolution: Regional Elements: Population Census
Land use	LGU DOST NEDA DENR	Map/Statistics Digital Paper	Year: Area: Spatial Resolution: Elements:	Year: Area: Spatial Resolution: Elements:
	PSA DA DENR	Map/Statistics Digital Paper	Year: 2015, 2016, 2017 Area: Nation Spatial Resolution: National Elements: Value of Production, Farm gate Price, Volume of Production	Year: 2015, 2016, 2017 Area: Nation Spatial Resolution: National Elements: Value of Production, Farm gate Price, Volume of Production
Infrastructure	DPWH LGU	Map/Statistics Digital Paper	Year: Area: Spatial Resolution: Elements:	Year: Area: Spatial Resolution: Elements:
	DTI	Map/Statistics Digital Paper	Year: Area: Spatial Resolution: Elements:	Year: Area: Spatial Resolution: Elements:
Industry	DTI	Map/Statistics Digital Paper	Year: Area: Spatial Resolution: Elements:	Year: Area: Spatial Resolution: Elements:
	DTI	Map/Statistics Digital Paper	Year: Area: Spatial Resolution: Elements:	Year: Area: Spatial Resolution: Elements:
Commerce	DPWH LGU	Map/Statistics Digital Paper	Year: Area: Spatial Resolution: Elements:	Year: Area: Spatial Resolution: Elements:
	DPWH LGU	Map/Statistics Digital Paper	Year: Area: Spatial Resolution: Elements:	Year: Area: Spatial Resolution: Elements:
Sectoral regional GDP	PSA	Map/Statistics Digital Paper	Year: 2015, 2016, 2017 Area: Region XI Spatial Resolution: Regional Elements: Sectoral region GDP at current prices & at constant 2000 prices	Year: 2015, 2016, 2017 Area: Region XI Spatial Resolution: Regional Elements: Sectoral region GDP at current prices & at constant 2000 prices
	PSA	Map/Statistics Digital Paper	Year: 2017, 2018 Area: Nation Spatial Resolution: National Elements:	Year: 2017, 2018 Area: Nation Spatial Resolution: National Elements:
Sectoral employed population	DPWH LGU	Map/Statistics Digital Paper	Year: 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018 Area: Region XI Spatial Resolution: Regional Elements:	Year: 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018 Area: Region XI Spatial Resolution: Regional Elements:
	PSA	Map/Statistics Digital Paper	Year: Area: Spatial Resolution: Elements:	Year: Area: Spatial Resolution: Elements:
Tax revenue	DPWH LGU	Map/Statistics Digital Paper	Year: Area: Spatial Resolution: Elements:	Year: Area: Spatial Resolution: Elements:
	PSA NEDA	Map/Statistics Digital Paper	Year: Area: Spatial Resolution: Elements:	Year: Area: Spatial Resolution: Elements:

ONLINE SYNTHESIS SYSTEM (OSS)

System Configuration

- Objective
- Contact
- System Update

Realtime Flood Monitoring & Forecasting

Flood Monitoring & Forecasting System

PAGASA Server
Authorized Part

Realtime Access

DIAS
Data Integration & Analysis System

In-situ Gauge

Satellite Rainfall GSMaP

Cloud Image HIMAWARI-8

Barangay-scale

Basin-scale

Impact Assessment



Present

Future

- Rainfall
- WL
- Discharge
- Inundation

Climate Change Impact

Basin-scale

Barangay-scale

High-resolution Hazard Map
Extreme flood (100years)

3D Flood Hazard Map on Google Earth

Risk Assess & Contingency
Evacuation behavior

e-Learning

Introductory Lecture

CC & DRR

CC Impact

Uncertainty

COVID-19

Real-time System

Hazard Mapping

OSS Guide

2D FHM

3D FHM

Contingency Planning

Hands-on

Facilitators

