Policy Perspective and Work of UN-SPIDER in Myanmar

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Ministry of Social Welfare, Relief and Resettlement

Sept 11; 2019

UN-SPIDER's Technical Advisory Mission to Myanmar

- to know about the utilization of space based information and GIS in DRR and Emergency Response
- Through the TAM, the following recommendations were emerged:
  - Policy and Coordination
  - Data and access
  - Information sharing
  - Capacity Building and Institutional Strengthening
  - Communication Infrastructure

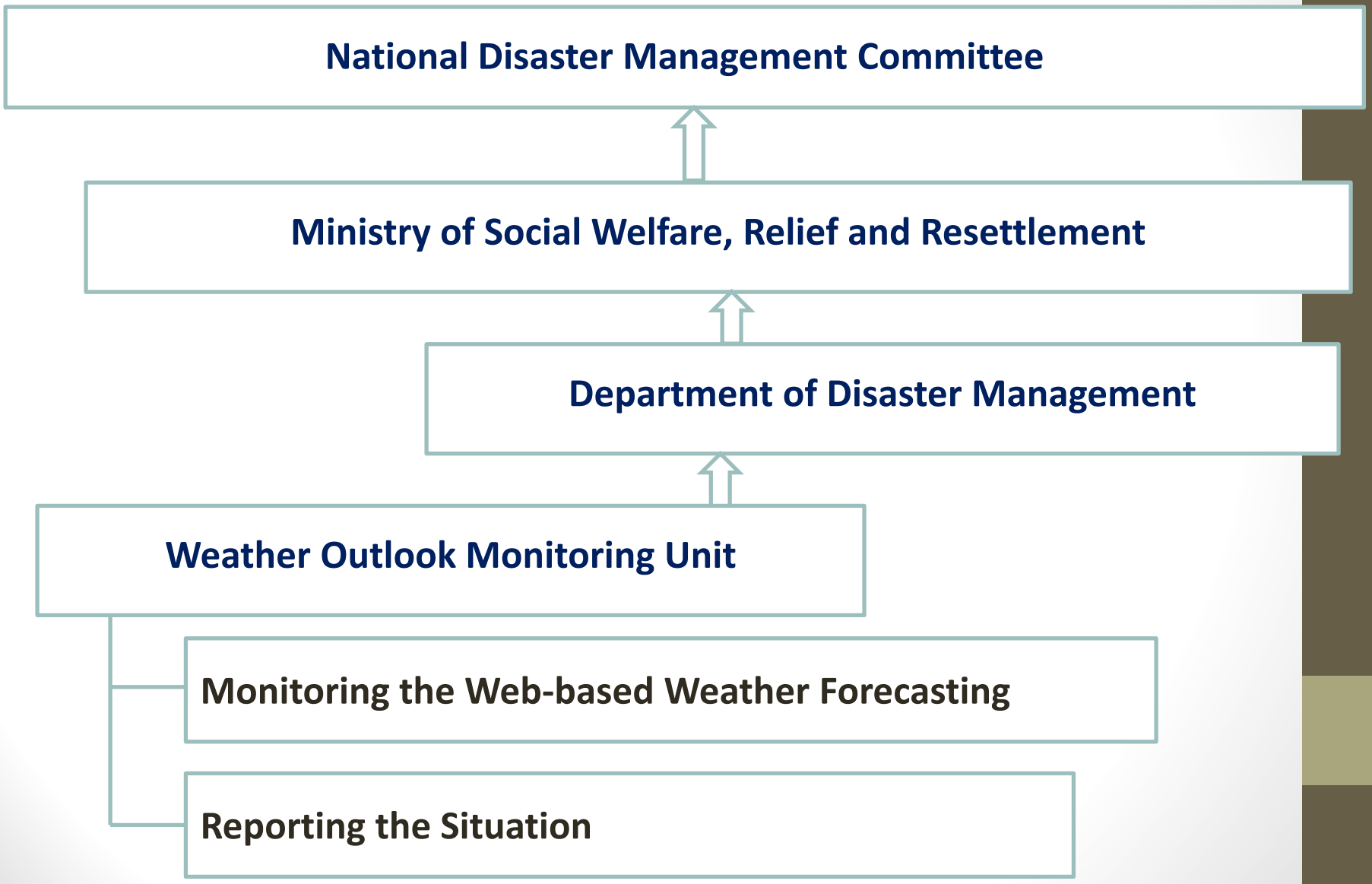
Follow-up of TAM in Myanmar (2012)

- Capacity Building Programme for Geo-informatics Disaster Management in Myanmar, November 2012
- Support to join the Workshops and training programmes organized by UN-SPIDER workshops

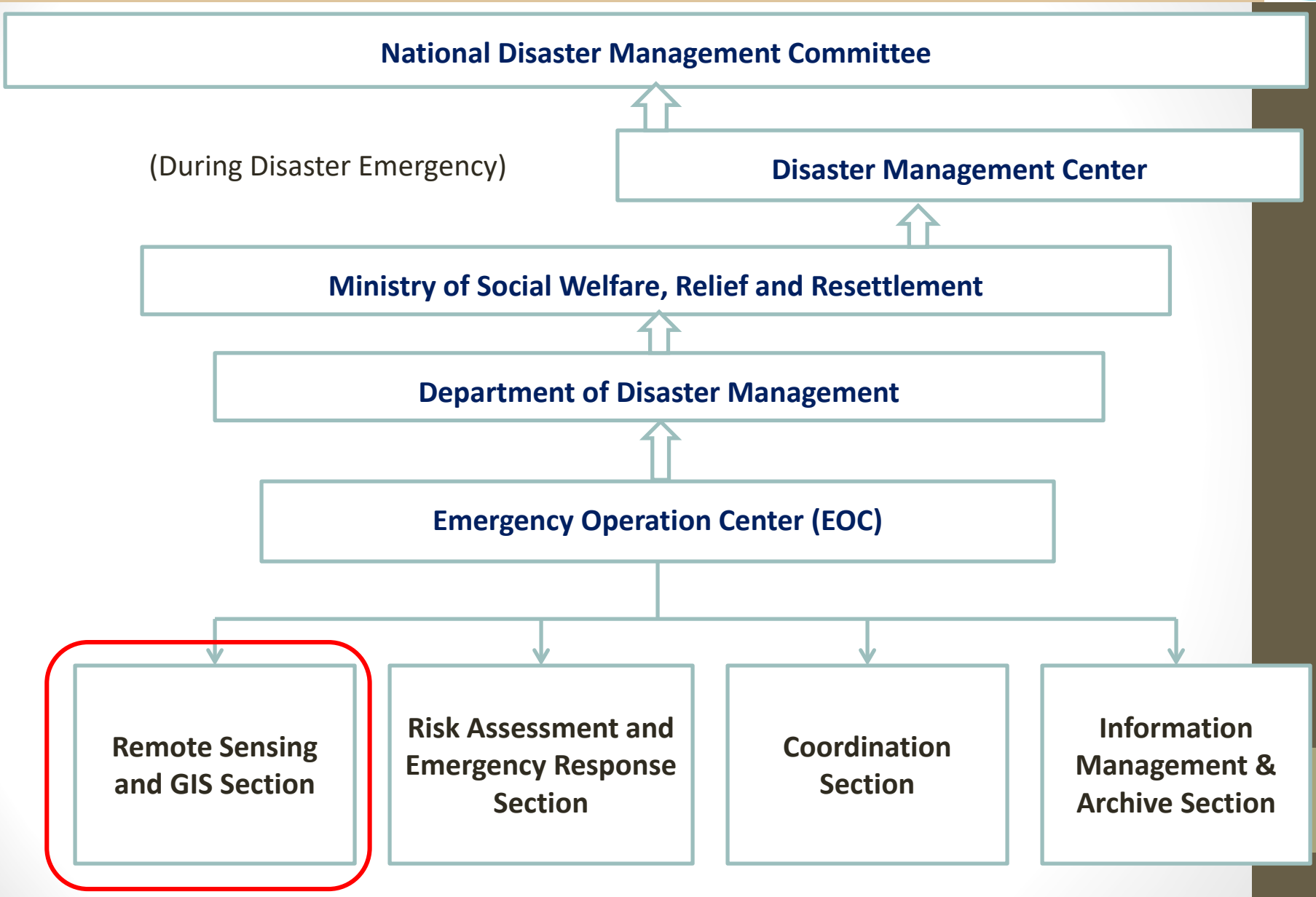
Follow-up of TAM in Myanmar (2016) (Contd:)

- Conduct high level advocacy meeting back-to-back with the Training on the “Use of Earth observation data and GIS techniques for landslide hazard mapping”

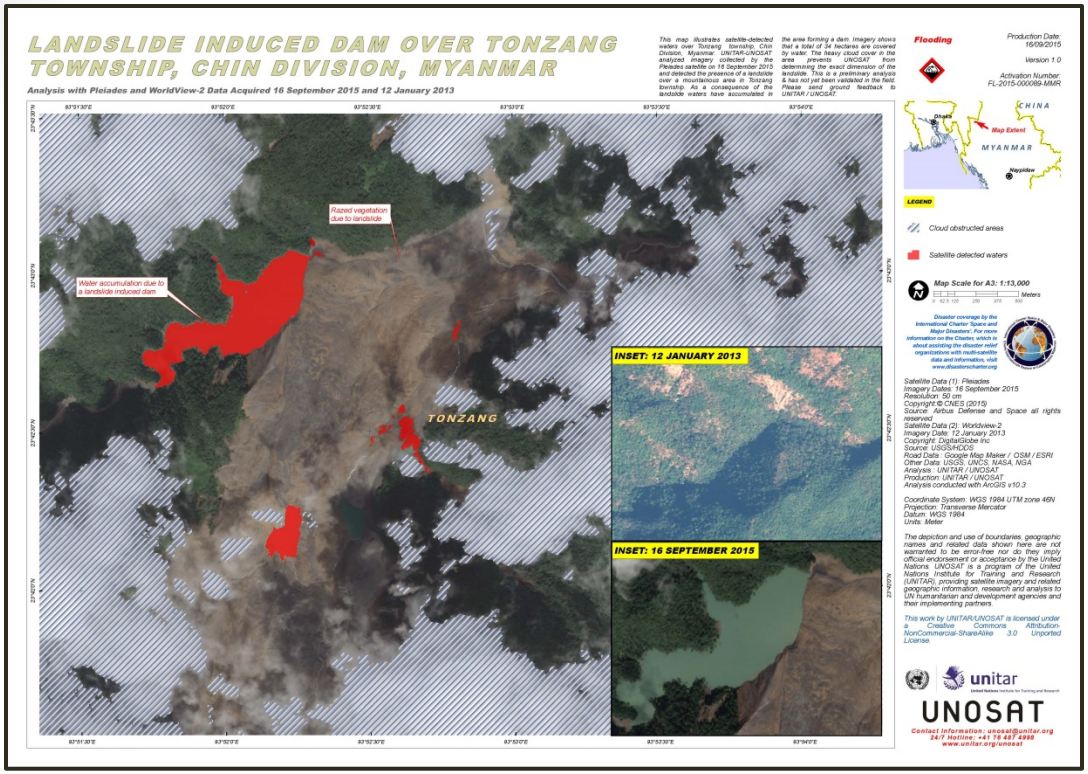
Before TAM


National Disaster Management Committee
Ministry of Social Welfare, Relief and Resettlement
Department of Disaster Management
Weather Outlook Monitoring Unit
Monitoring the Web-based Weather Forecasting
Reporting the Situation

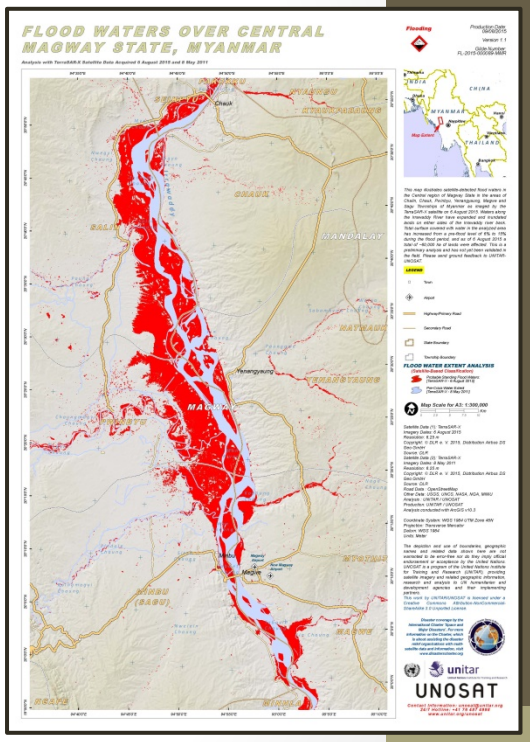
After TAM


National Disaster Management Committee
(During Disaster Emergency)
Disaster Management Center
Ministry of Social Welfare, Relief and Resettlement
Department of Disaster Management
Emergency Operation Center (EOC)
Remote Sensing and GIS Section
Risk Assessment and Emergency Response Section
Coordination Section
Information Management & Archive Section

2015 Nation-wide Flood

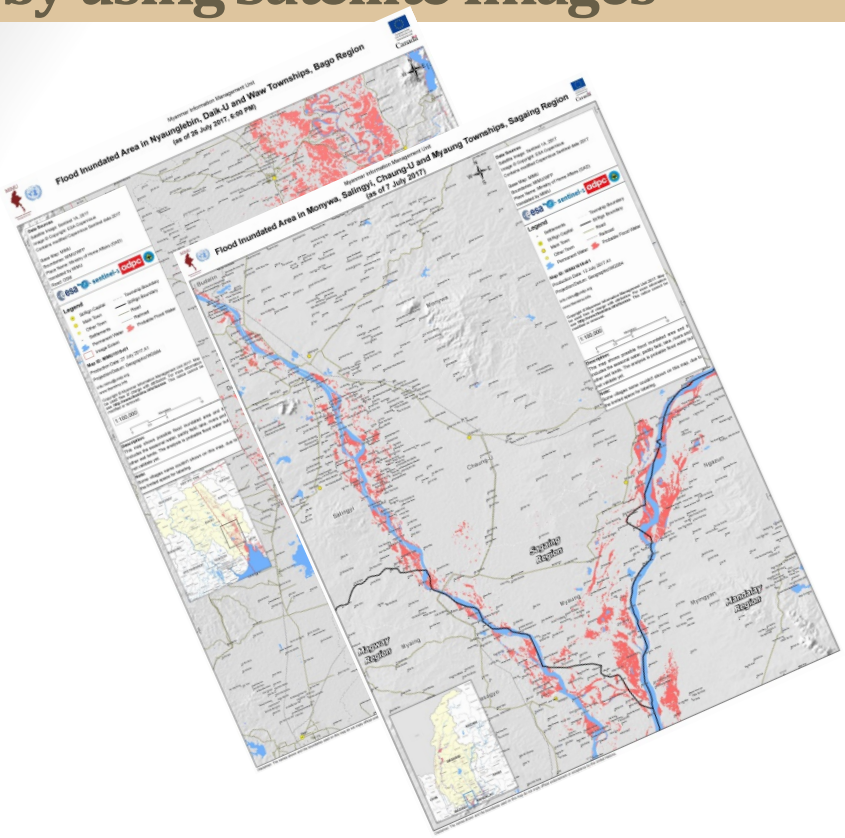


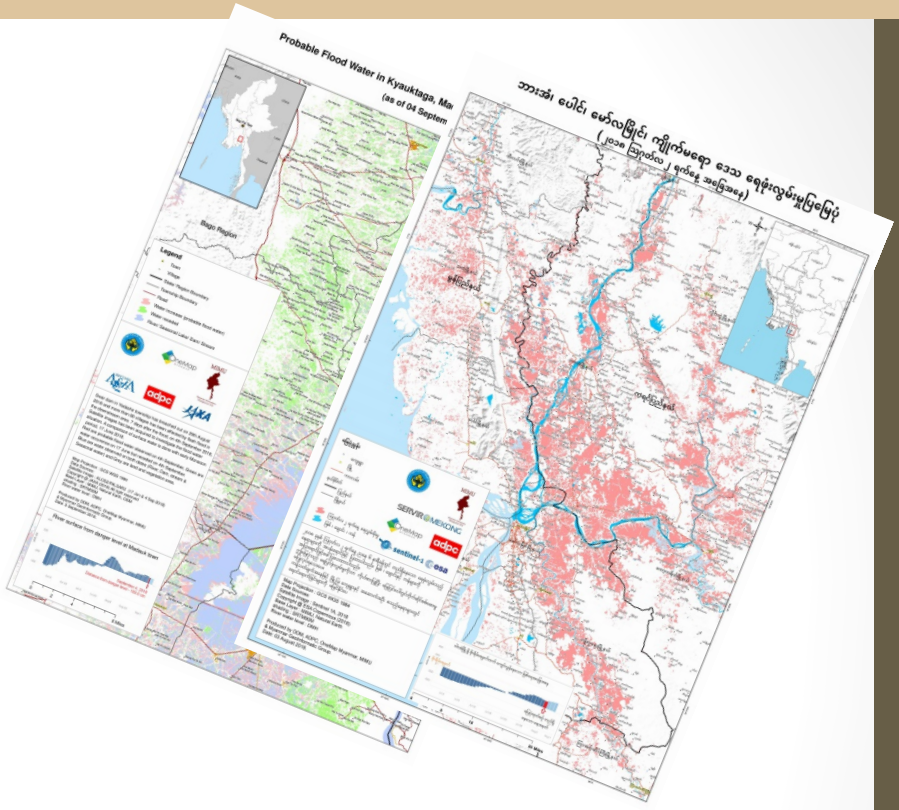
- Activate Sentinel Asia for Emergency Observation Request



- Can detect not only the flood extent but also the landslide induced dam
- Can provide the effective information to the decision makers to plan the recovery

Generating the Inundated Area Maps by using Satellite Images

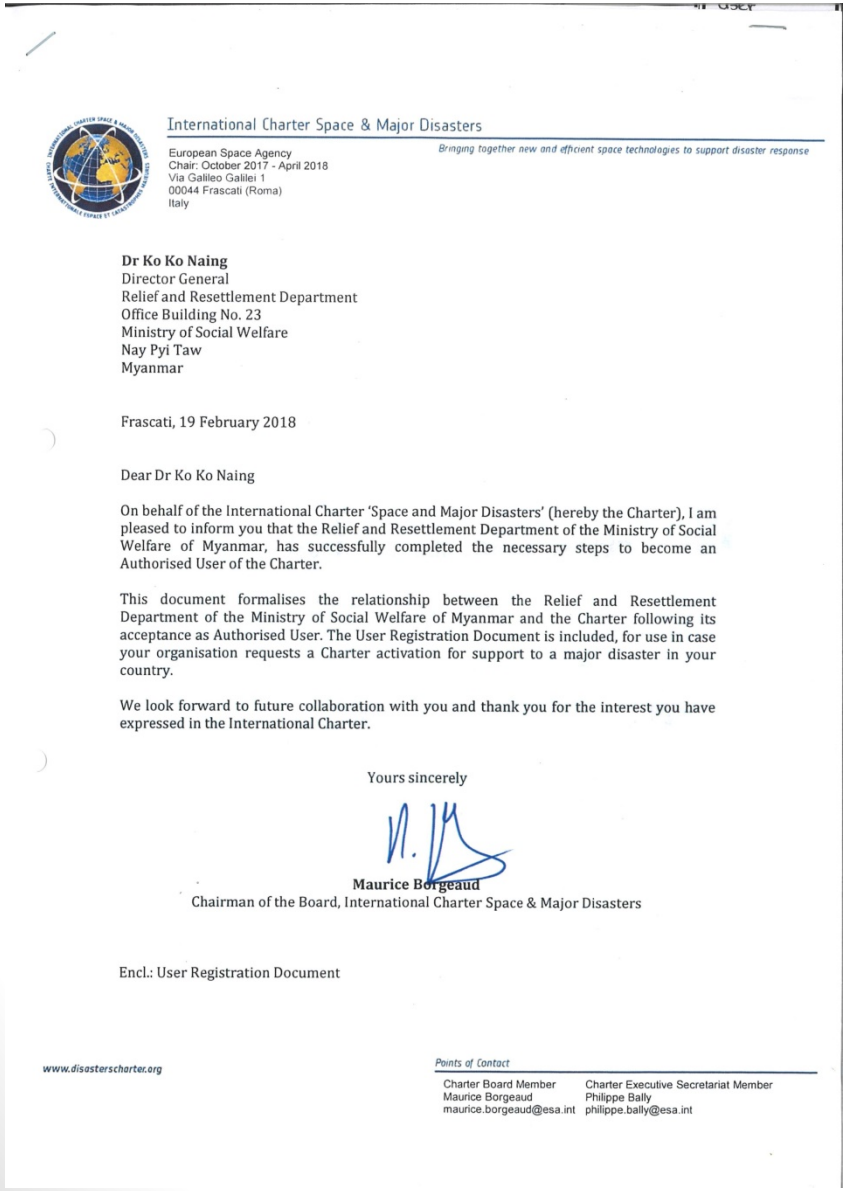




- During the annual flood seasons in 2017 and 2018, DDM submitted the EOR to SA to provide the satellite images and the inundated area maps can be generated by the technical support and coordination of MIMU, One Map Myanmar, ADPC/ Servir-Mekong

- Significant Outputs for applying Earth Observation Technology and Space-based information in DRR

Charter Authorized User



International Charter Space & Major Disasters

Bringing together new and efficient space technologies to support disaster response

European Space Agency
Chair: October 2017 - April 2018
Via Galileo Galilei 1
00044 Frascati (Roma)
Italy

Dr Ko Ko Naing
Director General
Relief and Resettlement Department
Office Building No. 23
Ministry of Social Welfare
Nay Pyi Taw
Myanmar

Frascati, 19 February 2018

Dear Dr Ko Ko Naing

On behalf of the International Charter 'Space and Major Disasters' (hereby the Charter), I am pleased to inform you that the Relief and Resettlement Department of the Ministry of Social Welfare of Myanmar, has successfully completed the necessary steps to become an Authorised User of the Charter.

This document formalises the relationship between the Relief and Resettlement Department of the Ministry of Social Welfare of Myanmar and the Charter following its acceptance as Authorised User. The User Registration Document is included, for use in case your organisation requests a Charter activation for support to a major disaster in your country.

We look forward to future collaboration with you and thank you for the interest you have expressed in the International Charter.

Yours sincerely

Maurice Borgeaud
Chairman of the Board, International Charter Space & Major Disasters

Encl.: User Registration Document

www.disasterscharter.org

Points of Contact

Charter Board Member	Charter Executive Secretariat Member
Maurice Borgeaud	Philippe Bally
maurice.borgeaud@esa.int	philippe.bally@esa.int

- Become as a Charter AU since September 2017

Project Management Training

PM training participants in Myanmar.

- Being a Charter Authorized User, the Project Management Training was convened on 19 September, 2017 to be able to submit requests and access observations from satellites for disaster response at the Department of Disaster Management (former Relief and Resettlement Department) in Nay Pyi taw Myanmar.

Workshop on Coordination Improvement on Emergency Mapping Support

- jointly organized with Sentinel Asia/ ADRC on 30th Jan; 2018
- Aiming
  - to promote the utilization of space-based technology in DRR and DRM through Sentinel Asia Mechanism and
  - to raise the collaboration and coordination among the related institutes and agencies

Capacity Development Training

- to enhance the participants' knowledge and understanding on
  - Basic concept of flood hazard and risk assessment, data required and applicable methodologies
  - Use of flood frequency as a proxy for flood hazard mapping
  - The web-based flood frequency and hazard mapping tool, its underlying methodology and applications including development of flood risk map

High Level Advocacy Workshop in 2019

- to get the understandability from the policy level regarding to the utilization of space technology in Disaster Management
- to strengthen coordination between technical experts to boost data sharing, availability of experts during major disasters

Effort to utilize Space-based information for Near Real-time Flood Monitoring

- To get an online platform that is user-friendly and allow users access to flood maps on a (near) real-time basis
- To have the capacity of Myanmar government and other stakeholders
- To be able to support the daily routine of DDM in integrating the satellite-based flood mapping into existing policy framework and guideline for emergency response
- To collaborate with international and national partners to improve the satellite-based emergency mapping overall

Capacity Building Trainings

- to strengthen the skills for analyzing maps and making use of emergency response maps produced as part of International Charter activations

"Training on an Overview of the Use of Space Technology in Disaster Risk Management"

"Earth Observation for Multi-Hazard Risk Assessment and Emergency Response"

Utilization of UAV/ Drone in DRR

- Observing the river bank erosion of Ayeyarwaddy River in Minbu Township of Magway Region in collaboration with drone team from Myanmar Aerospace Engineering University and Department of Agriculture

Situation of River Bank Erosion in Minbu taken by UAV

Drone Team Deployment to Taung Nawin Dam

Priority Actions which are necessary to use geospatial and Space based Technology under Myanmar Action Plan on Disaster Risk Reduction (MAPDRR)

MAP DRR 2017

Priority Actions necessary to use geospatial and space based technology

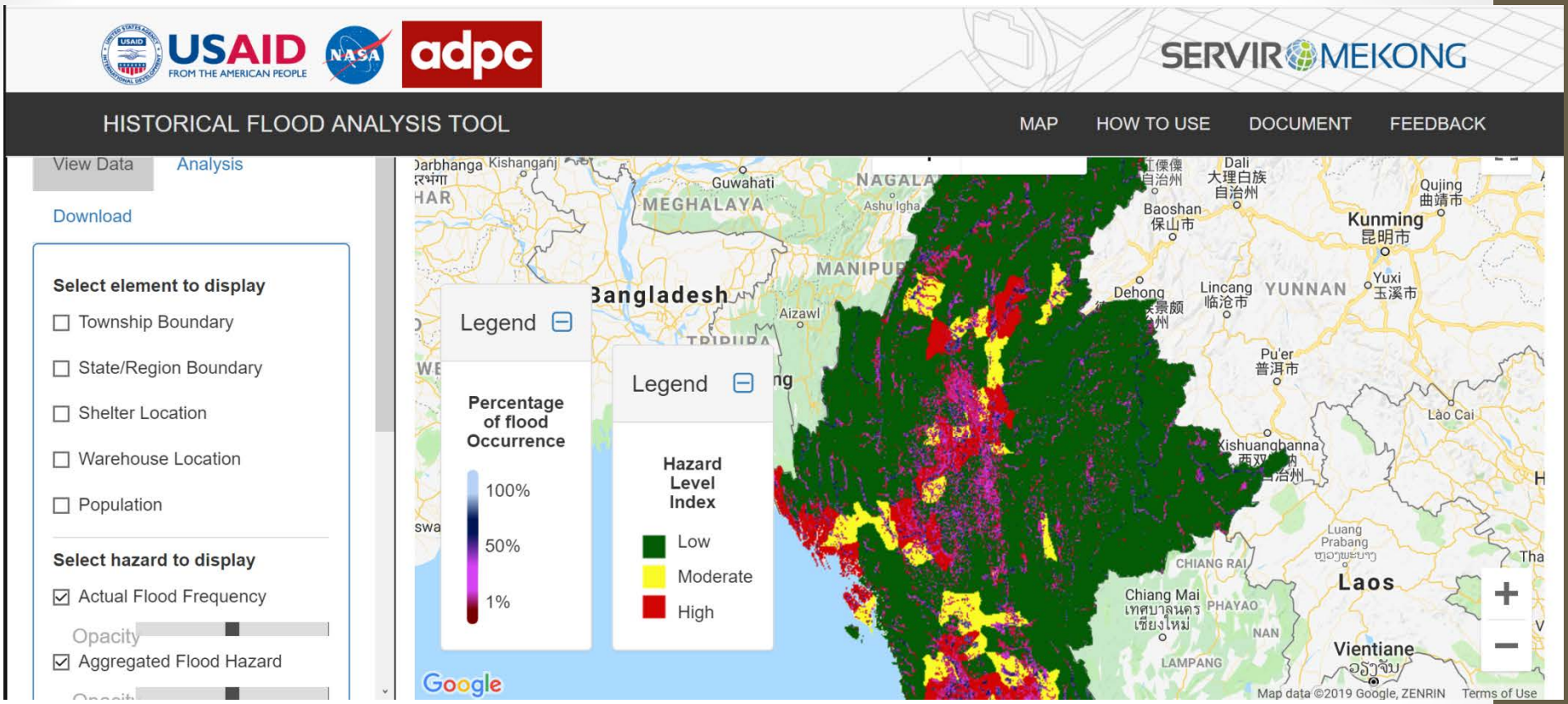
Priority Action	Lead Ministry/ Dep't
1.2 National comprehensive multi-hazard probabilistic risk assessment of Myanmar	• **DMH**
1.4 Assessment of dam safety and reservoir, critical infrastructure and vital government and lifeline buildings in Myanmar	• **IWUMD** • **MOC**
1.5 Tsunami, floods, cyclone and storm surge risk assessment of Ayeyarwady Region and Rakhine State	• **DMH** • **DDM**

MAP DRR 2017

Priority Actions necessary to use geospatial and space based technology

Priority Action	Lead Ministry/ Dep't
1.6 Landslide risk assessment of Chin State	• **DMH** • **DDM**
1.7 Earthquake risk assessment along Sagaing Fault	• **DMH** • **DDM**

Historical Flood Mapping Tool

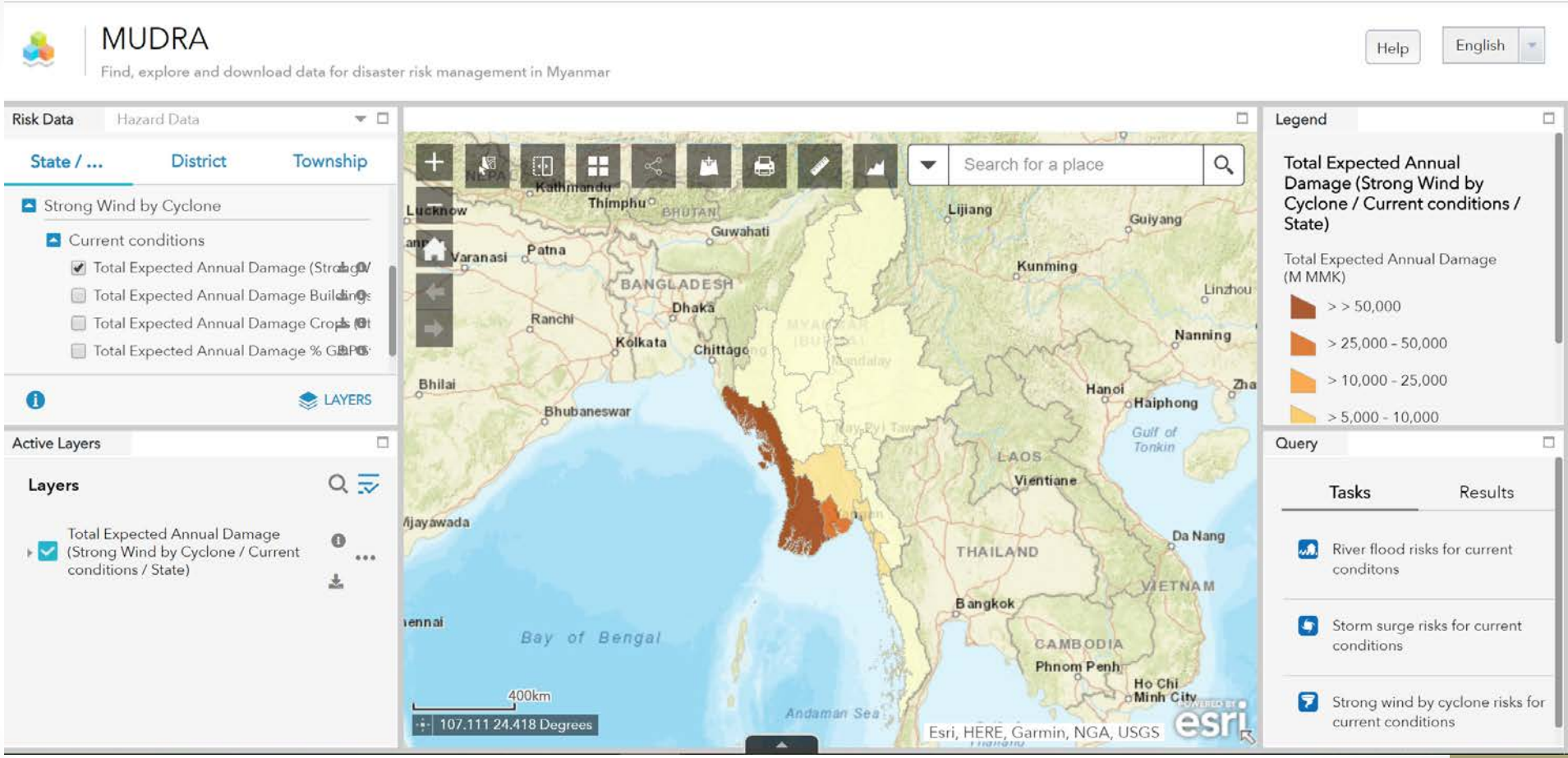


- To be able to access the information on frequencies, duration and extent of flood by using the Satellite based information
- To improve disaster response system in Myanmar by enhancing disaster preparedness for effective response and resilient rehabilitation and construction

Development of web based platform for Disaster Risk Modeling on Tropical Cyclones, Flood, Storm Surge, & Cyclone Wind Hazard

- implementing a project “Strengthening climate and disaster resilience in Myanmar”, with technical support from the Asian Development Bank (ADB) and financial support from the Government of Canada for:
  - River flood hazard
  - Cyclone storm surge flood hazard
  - Cyclone wind hazard
- to improve understanding of disaster and climate risk among government officials at national level and officials in Ayeyarwaddy Region by assessing the hazard, exposure and vulnerability

Myanmar Unified Disaster Risk Application (MUDRA)



- Under Construction for Verification, Validation on the results of Models and User Friendliness
- Planned to launch officially in coming October

Thank You.