Coastal Inundation Forecasting Demonstration Project CIFDP

Flood Forecasting Initiative-Advisory Group (FFI-AG 3), Geneva, 5-7 Dec, 2017



WMO OMM

World Meteorological Organization
Organisation météorologique mondiale

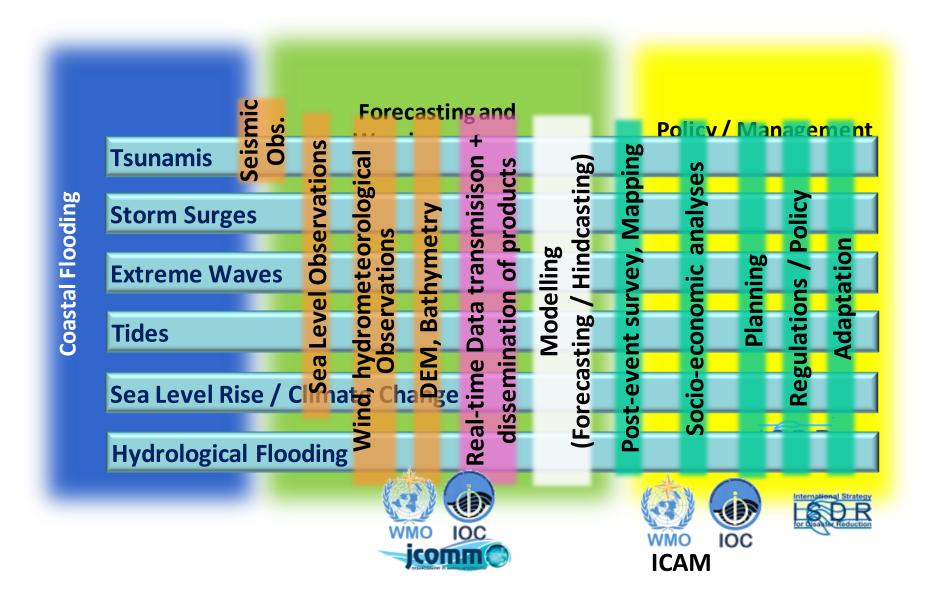
Coastal Flooding & Vulnerable Populations

- Coastal populations are rapidly growing worldwide more than 44% people live within 150km of the coast
- Coastal inundation threatens lives and livelihoods
- Historically, storm surges have killed more people than winds by Tropical Cyclones, and inundation from earthquake-triggered tsunamis
- Storm surges are the most underestimated and misunderstood of natural hazards

Reducing vulnerability in coastal areas

- Recognizing the extreme vulnerability of coastal areas and reducing the risk of disaster is a priority in WMO, the Joint IOC-WMO Technical Commission for Oceanography and Marine Meteorology (JCOMM) and the Commission for Hydrology (CHy).
- The Coastal Inundation Demonstration Forecasting Project (CIFDP) was established in 2009 a partnership between WMO, JCOMM and CHy.
- It's a multi-hazard early warning system, integrating river flow, storm surge, wave and flood forecasting to enhance coastal inundation forecasting and warning systems, that can be sustained by the responsible national agencies.

End-to-end Coastal Inundation Management



WMO CIFDP cascading framework

Global Centres

Met Office, US NWS, ECMWF, DWD

- Ensemble products
- High Resolution inundation Models
- Global Guidance

Regional Centres

e.g. RSMC

- High Resolution Models
- Regional Guidance

National Meteorological Services e.g. BMKG

Public

- Warnings
- Tailored advice to specific user-groups

Ag. Extension
Workers
TV, Radio
SMS
fishermen

Local Government

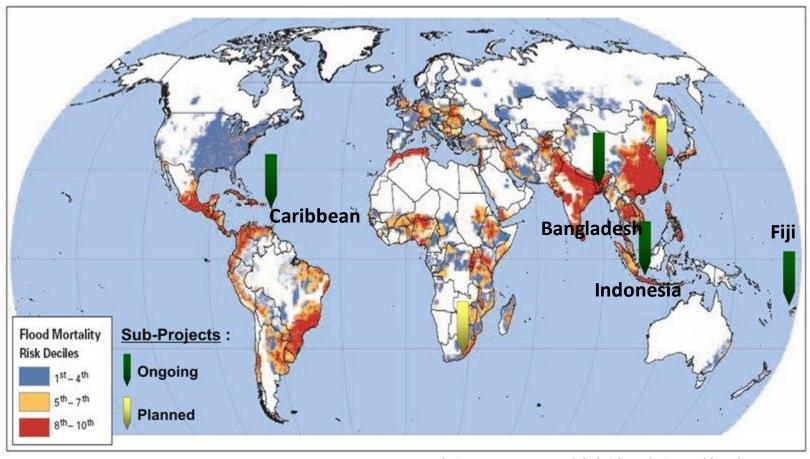
*Emergency Responders

CIFDP Implementation: Key Players

http://www.jcomm.info/CIFDF **WMO JCOMM** CHy **Project Steering Group** (Coastal Inundation Experts & Social Science Experts Relevant representing WMO-JCOMM/CHy) External Programmes **Experts** & Groups **National Coordination Team** Regional **National System** Forecasting **Programmes** Agencies (e.g. RSMC) **Developers** International Other Disaster Disaster **National** Management Response Agencies Agencies Agencies

CIFDP Implementation: 4 countries (currently)

http://www.jcomm.info/CIFDP



Natural Disaster Hotspots: A Global Risk Analysis. World Bank, 2005

ICG/CARIBE EWS-XI - Mid term meeting of officers

CIFDP Progress

- Phased approach with collaboration between individuals and institutions with expertise in storm surge, wave and hydrological flooding
- Focused on transfer of technology to adopting countries, particularly for developing capacity in the met and hydrological services
- Implemented on national and regional scales to support end-user needs on completion, forecasting will be provided by National Meteorological and Hydrological Services
- Public outreach especially increasing awareness of storm surges
- Demonstration projects only for now future of CIFDP

(JCOMM-5-d05-3-AGENDA ITEM 5.3: SUPPORT-FOR-DISASTER-RISK-REDUCTION-PARTICULARLY-IN-COASTAL-ZONES-draft1_en)

Considering:

- CIFDP is a WMO Demonstration Project led jointly by two Technical Commissions (CHy and JCOMM)
- CHy-15 (Res 6) has already requested to coordinate with JCOMM a joint assessment to consider the desirability of developing a governance structure and procedures that would transition the Coastal Inundation Forecasting Demonstration Project (CIFDP) to a more sustainable platform
- all CIFDP sub-projects expected to be completed by WMO Cg-18 (2019),
- JCOMM MAN 12th session (2015) considered CIFDP as 'Demonstration' and agreed that an evaluation of CIFDP should be conducted before any decisions on its future
- CIFDP Project Steering Group concurred with Resolution 6 (CHy-15) calling for an independent joint assessment



(JCOMM-5-d05-3-AGENDA ITEM 5.3: SUPPORT-FOR-DISASTER-RISK-REDUCTION-PARTICULARLY-IN-COASTAL-ZONES-draft1_en)

- Decision 5.3(1)/1 Future of the Coastal Inundation Forecasting Demonstration Project
 - Decides to ask the JCOMM Management Committee to initiate coordination with CHy, with support from the WMO Secretariat, for a joint independent assessment of the CIFDP, as stipulated in Resolution 6 (CHy-15) and, depending on the results, to consider developing a governance structure and procedures that would transition the CIFDP to a more sustainable platform for the strengthening of national multi-hazard early warning systems to address flooding in coastal areas;
 - Requests JCOMM co-presidents in coordination with CHy president to report the results of the assessment, and any proposed future governance structure to WMO Cg-18 (2019).



Thank you

<u>ecabrera@wmo.int</u> mmo@wmo.int



World Meteorological Organization Organisation météorologique mondiale