JCOMM-CHy
Coastal Inundation Forecasting Demonstration Project (CIFDP)

Item 4.3: Regional Cooperation Projects in DRR

UI-EAG MHEWS, 19-21 April 2016, Geneva

Sarah Grimes
Scientific Officer
Marine Meteorology and Ocean Affairs Division
Weather and Disaster Risk Reduction Services Department

WMO OMM
World Meteorological Organization
Organisation météorologique mondiale
Coastal Flooding & Vulnerable Populations

- Coastal populations are rapidly growing worldwide – more than 44% people live within 150 km 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 is 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

Hydrological Flooding

Sea Level Rise / Climate Change

Tides

Extreme Waves

Storm Surges

Tsunamis

Seismic Obs.

Sea Level Observations

Wind, hydrometeorological Observations

DEM, Bathymetry

Real-time Data transmission + dissemination of products

Modelling (Forecasting / Hindcasting)

Post-event survey, Mapping

Socio-economic analyses

Planning

Regulations / Policy

Adaptation

Forecasting and Warning systems
CIFDP Implementation: 4 countries (currently)

Anticipated completion 2019

http://www.jcomm.info/CIFDP

Natural Disaster Hotspots: A Global Risk Analysis. World Bank, 2005
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 – increasing awareness of storm surges - important
- Demonstration projects – other countries are encouraged to join