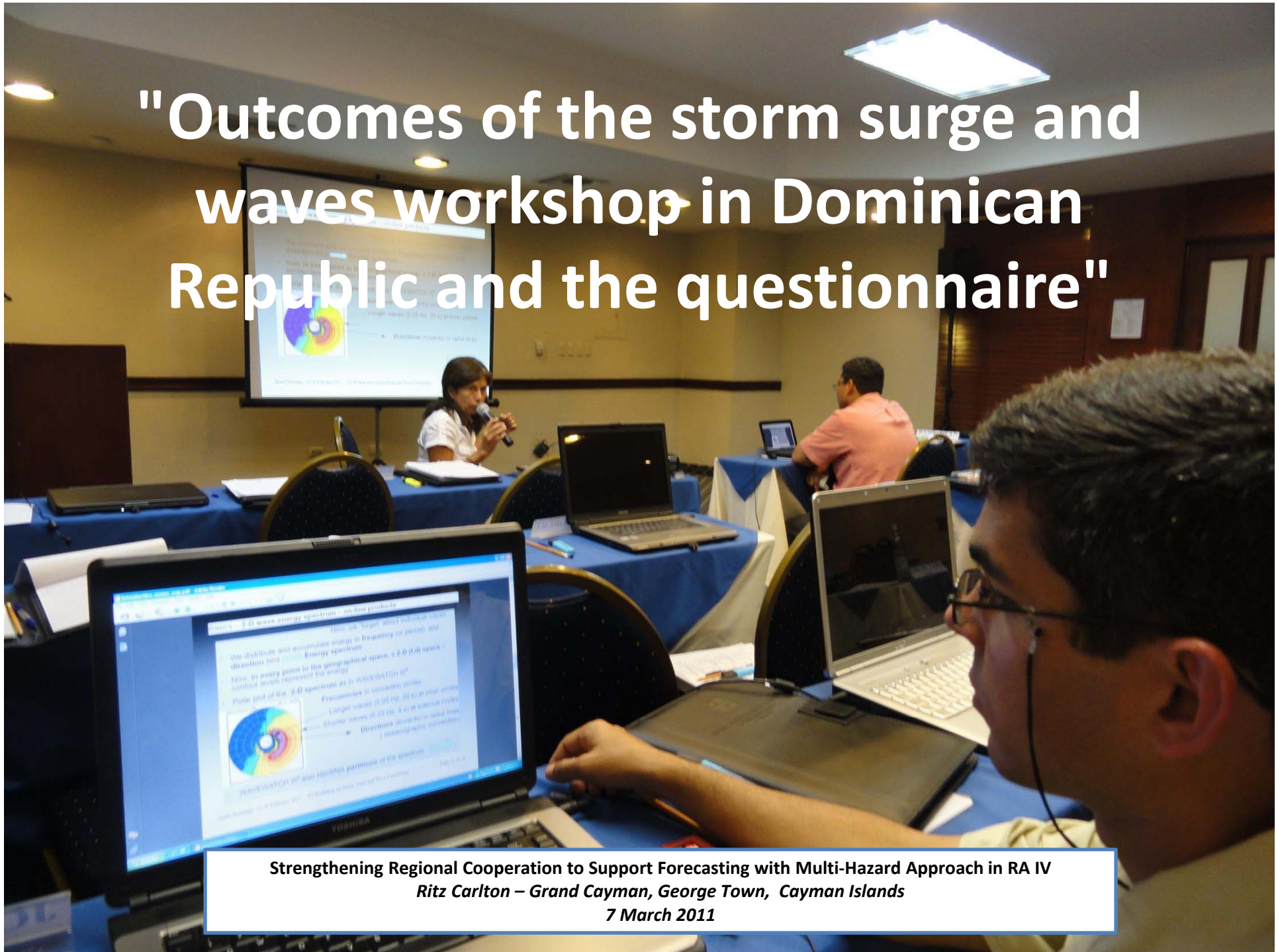


"Outcomes of the storm surge and waves workshop in Dominican Republic and the questionnaire"



Strengthening Regional Cooperation to Support Forecasting with Multi-Hazard Approach in RA IV
Ritz Carlton – Grand Cayman, George Town, Cayman Islands
7 March 2011

TCP/JCOMM Workshop Storm Surges and Waves Forecasting



GOALS

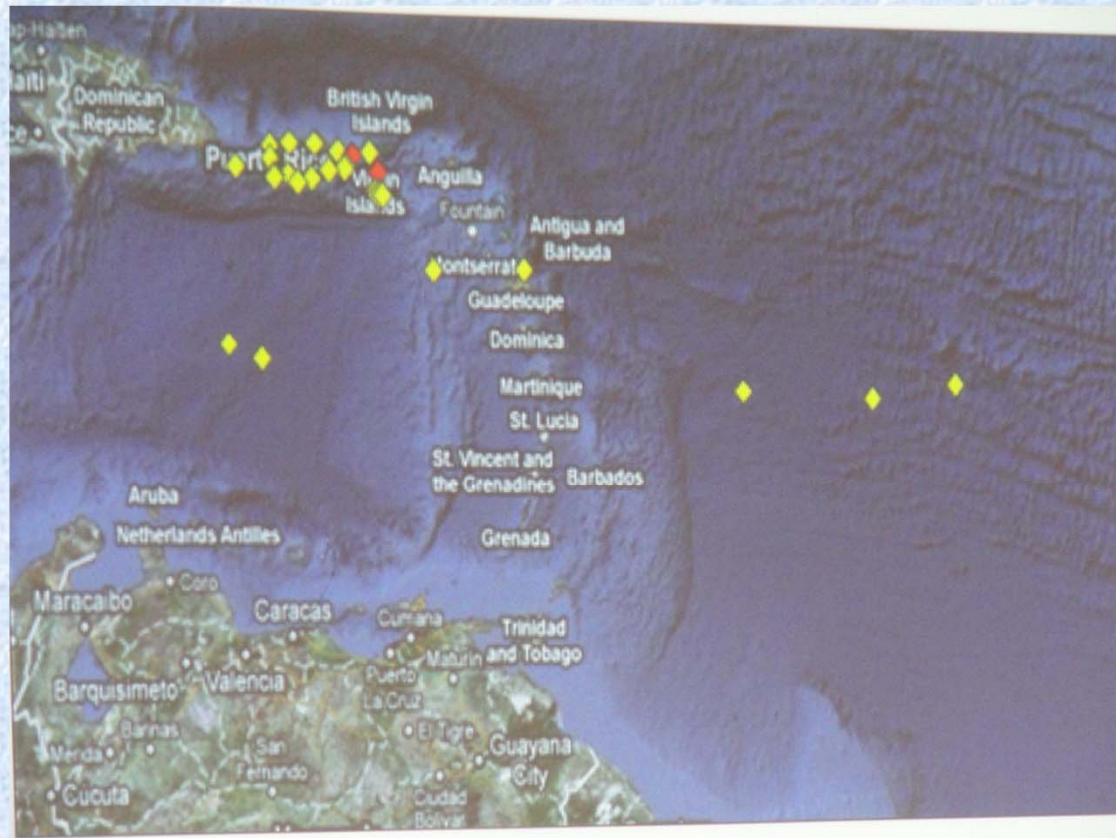
- To show available operational forecasting products
- To assess national capacities & needs for coastal hazards risk reduction
- Overview & coordination with coastal disaster's risk reduction initiatives in the Caribbean (i.e., [Caribbean MH-EWS Programme](#))
- Introduction to the [Coastal Inundation Forecasting Demonstration Project \(CIFDP\)](#) in the Caribbean

CURRENT STATE ASESMENT

- Meteorologist handle Marine concepts such as warnings and briefings
- But not technically equipped to handle-use products from other agencies such as NHC and ECMWF
- Most of SIDS do not currently possess the know-how to apply the existing technology to produce local marine advisories for coastal development, preparedness and navigation purposes
- Too much fragmentation among agencies

USER REQUIREMENTS

- Gaps with regard to Marine Observations
- A network of buoys and tide gauges is required



CURRENT STATE ASESMENT

- Lack of human resources and capacity building
- Almost no exchange of technologies within the region
- Lack of recognition to countries that might help in the above mentioned situation
- Almost no working protocols have been developed thus far

USER REQUIREMENTS

- Need defined marine “authorities” within the NMHS’s (National Meteorological and Hydrological Services)
- Need marine training to build the technical expertise for the Caribbean region
- If possible, the same personnel should attend marine meteorology workshops in the future in order to ensure continuity

Observations and Monitoring

Need for Strengthening of the observation and monitoring capacities through:

National

- **Development** of bathymetric survey and databases
- **Establishment** of an appropriate coastal and offshore observation network

Regional

- Complete the network of buoys and tidal gauges for sea-level and sea observations
- Improvement of **regional sharing of observation data**

Marine Forecasting

Need for strengthening of forecasting capacities through:

National

- **Improvement of local forecasting models** for marine related hazards
- **Training & replacement of forecasters** at retirement age
- Coordinating and creating **communication platforms** between the maritime agencies and the NMHS
- **Dissemination** of information through disaster management agencies and user communities on the coastal zone (i.e., port authorities, fisheries, etc..)

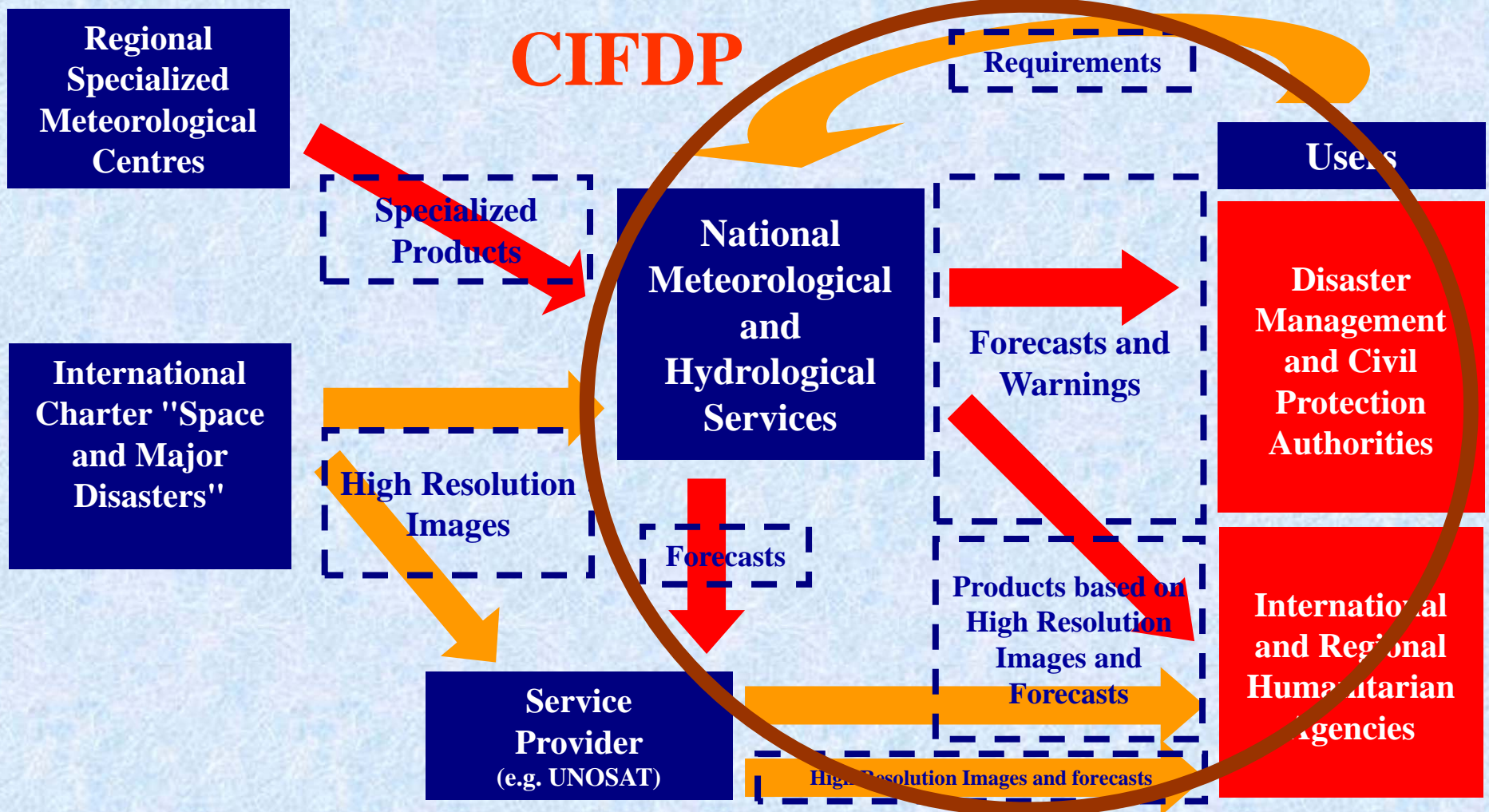
Marine Forecasting

Strengthening forecasting & coordination capacities:

Regional

- **Development & improvement** of the storm surges & wind waves warning systems
- **Strengthening the role of regional centers** to develop coordination mechanisms on marine hazards
- **Identify national focal points** for coastal & marine hazards & capacity development through a **Regional Training Center**

Coastal Inundation Forecasting Demonstration Project (CIFDP)



Integrated Approach to Coastal Inundations Forecasting & Management Systems

How could coastal inundation forecasting products be improved and effectively coordinated, with existing warning services provided by the NMHSs?...

With a integrated team work as a strategy for building improved operational forecasts and warnings capability for coastal inundation through:

Technology development and transfer

Use of NMHSs capabilities to produce and provide coastal inundation forecasting and warning services

Communication platform and training

Improving interactions between NMHSs and end-users (Government, Disaster Management and Civil protection Agencies, Media, etc...)

CIFDP - *Outline*

- *Expected outcome:*
End-to-end integrated software coupling meteorological, hydrological and met-ocean forecasting components for fulfillment of end-users needs for coastal inundation operational forecasting and warning services
- *Regions/countries for the implementation:*
 1. Bay of Bengal (*Bangladesh*)
 2. Caribbean (*Dominican Republic*)

Partners: WMO Programmes: MMOP, HWR, TCP

Met Services: NMHS, RMSC and Regional DRR Institutions

International: IOC-UNESCO, IHO, UNOSAT

Preliminary Findings of the Survey
Section 3: Marine Gaps and Needs

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THANK YOU !
¡ GRACIAS !

