



World Meteorological Organization

Working together in weather, climate and water

Technical Cooperation Workshop for Development of the Caribbean Regional Cooperation Programme in Multi-Hazard Early Warning System

Session 3: Operational Cooperation of NMHS and DRM Agencies and Service Delivery for MHEWS

National and regional perspectives

Section 4.3 and 4.4

Dr Maryam Golnaraghi

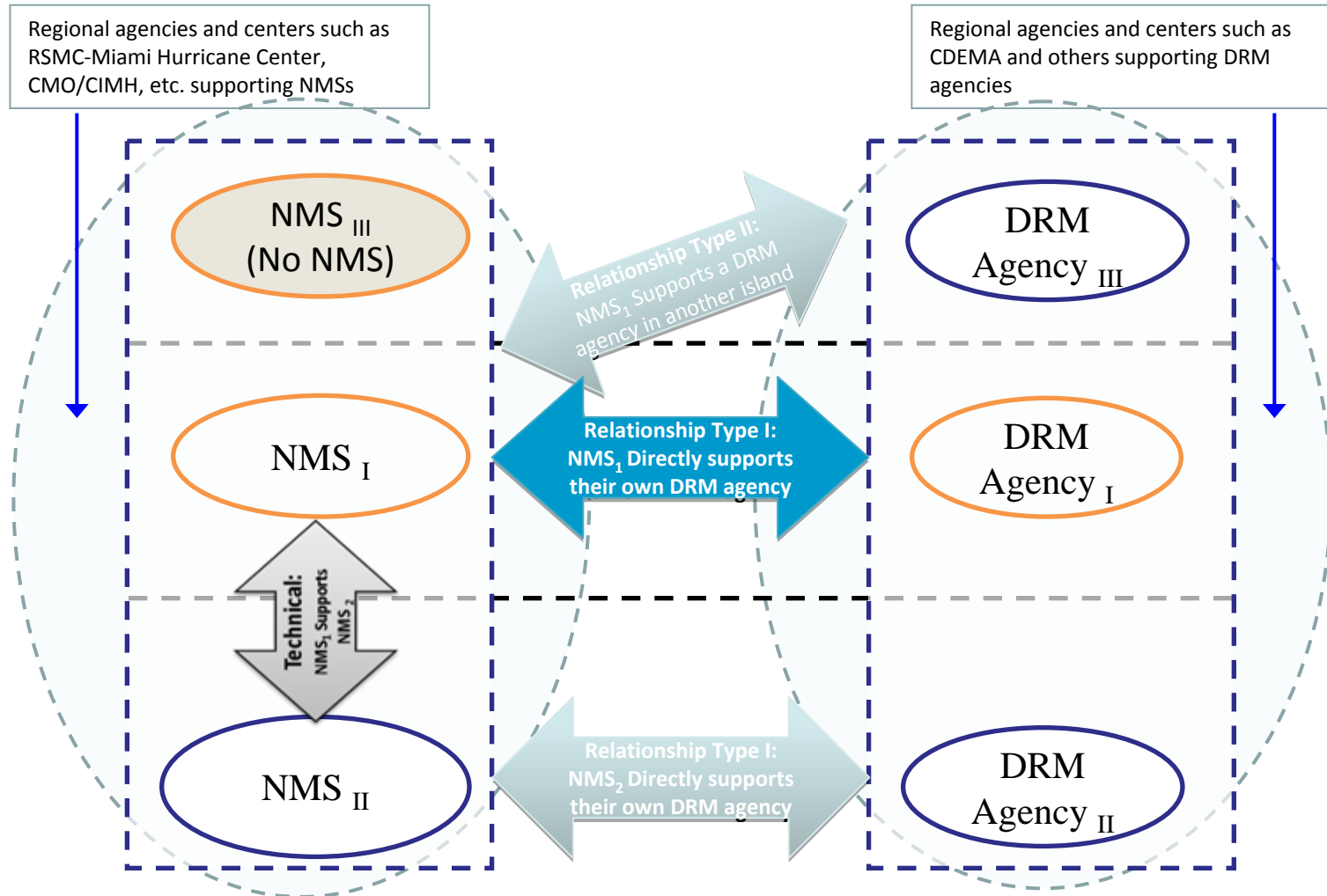
Chief of Disaster Risk Reduction Programme

James Douris

Jean-Noel Degrace



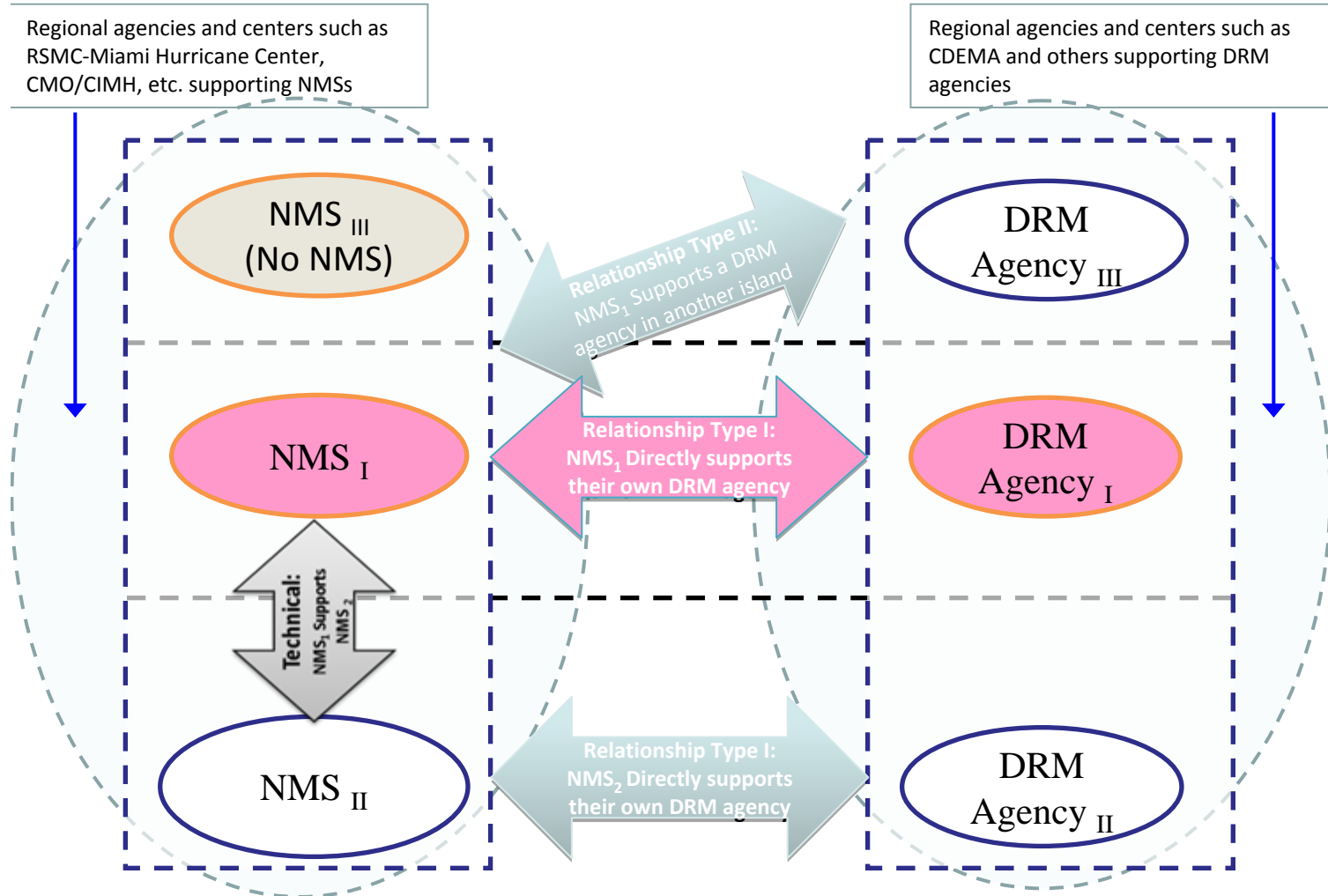
Different relationships between Disaster Management Agencies and Meteorological Services





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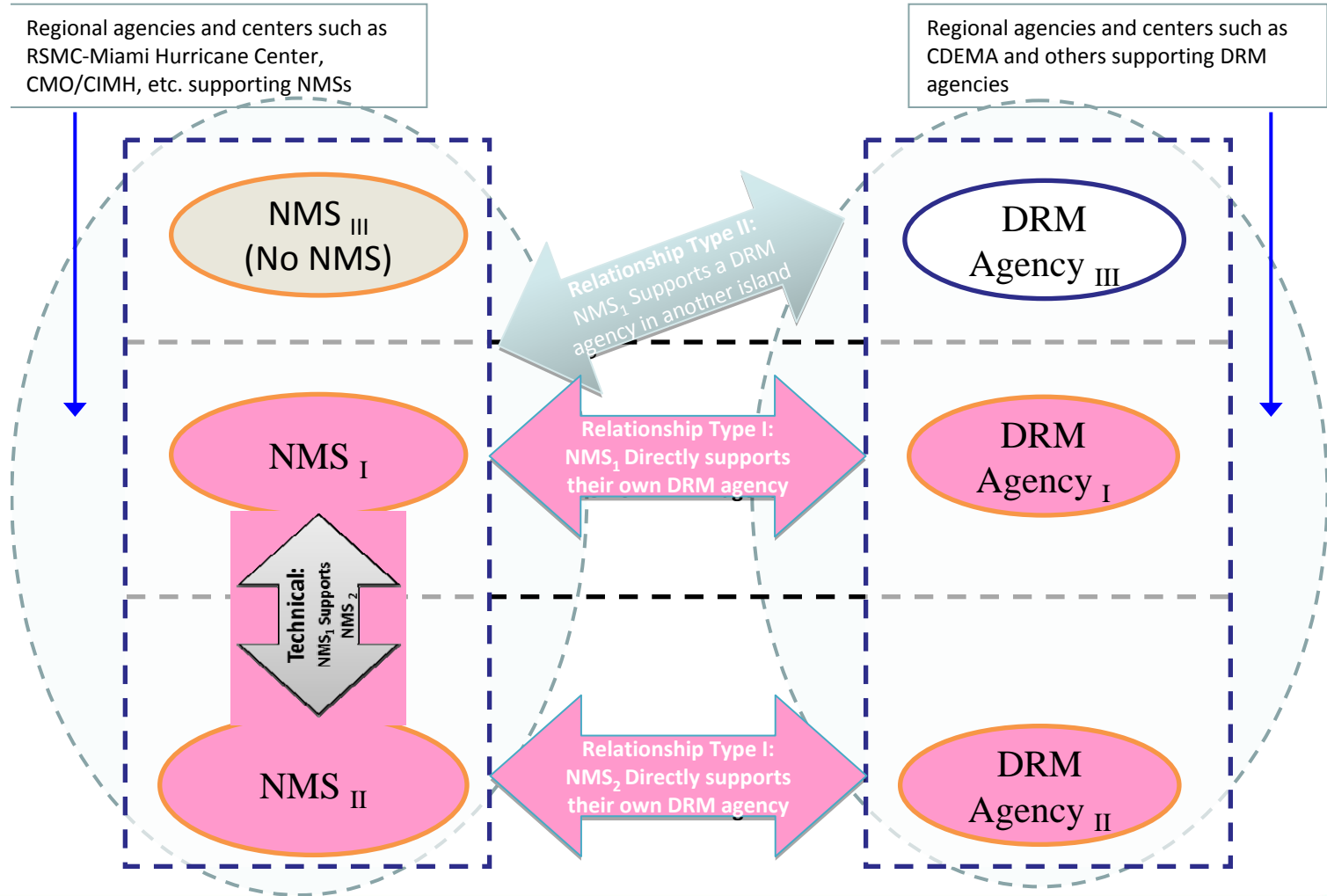
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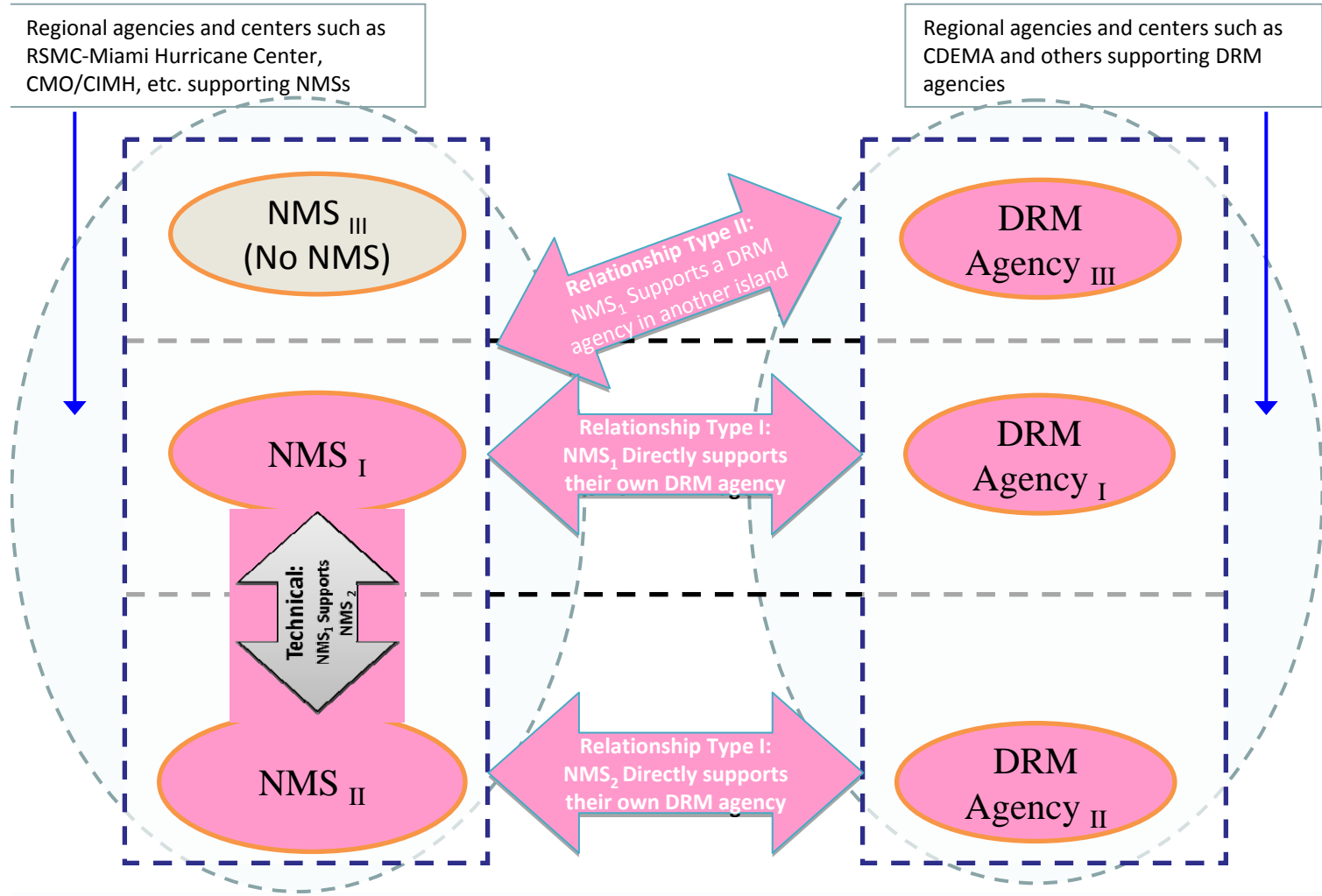
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- St Vincent & G.





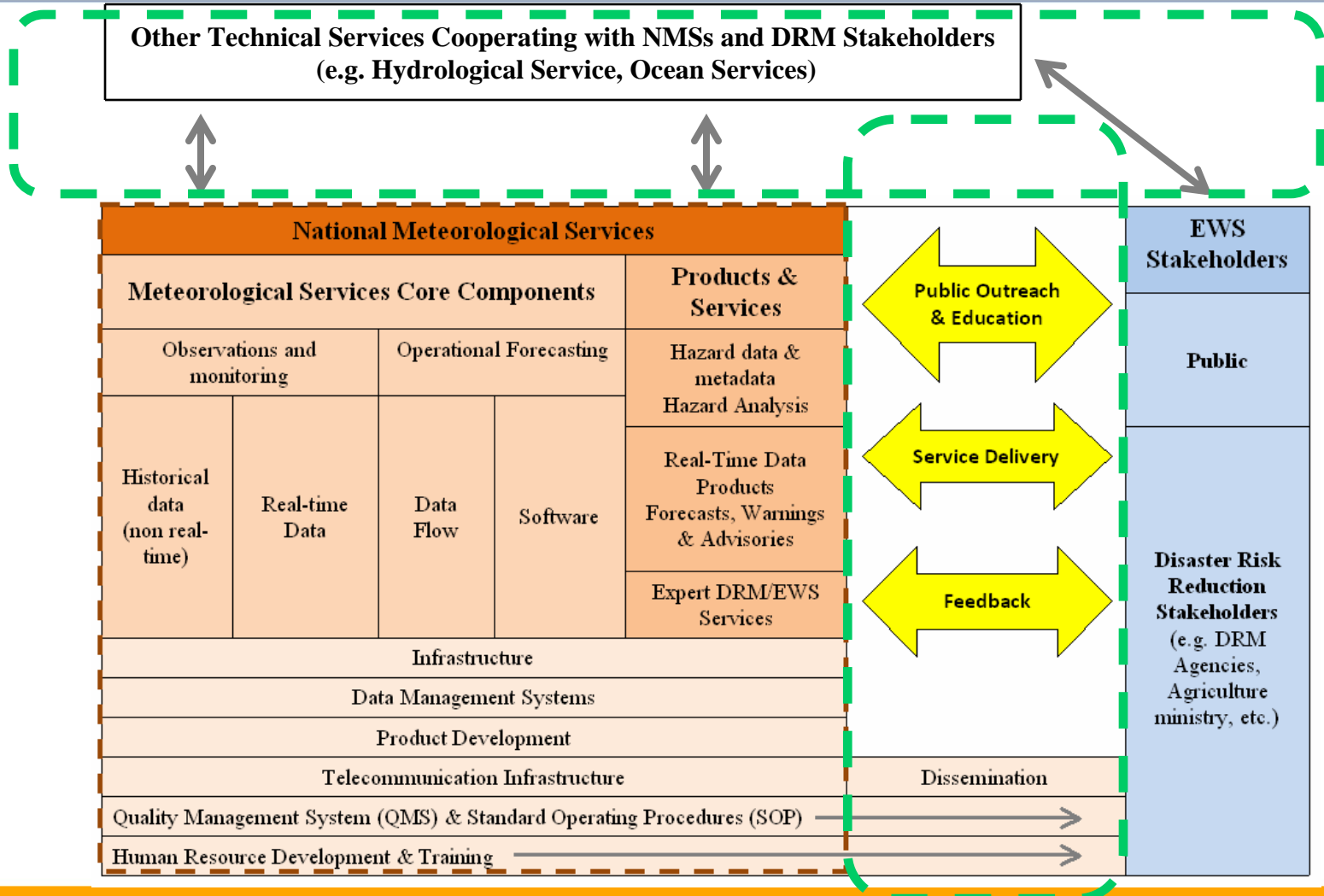
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- Grenada
- St Marteen
- St Vincent & G.
- Anguilla
- BVI
- Bonaire
- Montserrat
- St Kitts & N.
- St Martin/St Barth
- Saba/St Eustatius
- Turks and C.





Linkages of Meteorological Services with EWS stakeholders and core capacities of Meteorological Services to support EWS and DRM stakeholders





Session 3: Operational Cooperation of NMHS and DRM Agencies and Service Delivery for MHEWS

Presentation of the Panel

- **Finnish experience with operational cooperation of NMHS and DRM Agency of Finland and development of QMS**

Dr. Martti Heikinheimo, FMI

- **French West Indies experience with operational cooperation of Météo-France and French Civil Security and QMS**

Lt-Col Philippe Cova, Civil Security and Ms Daniele Carnino, Météo-France

- **Opportunities for strengthening NMHS/DRM operational cooperation: Experiences from the USA**

Mr. Lynn Maximuk- NOAA-NWS

- **Training Programmes across NMHS and DRM agencies**

Mr. Tim Spangler, Comet

- **Common Alert Protocols**

Mr. Eliot Christian, WMO

- **Capacity development in QMS/SOPs and service delivery framework of NMHS to DRM Agencies in the Caribbean,**

Dr. Maryam Golnaraghi and Mr. Samuel Muchemi, WMO



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Questions for the working groups (1/3)

Relationships between Meteorological Services, DRM agencies and other technical institutions in EWS context

- List the primary agencies engaged in early warning Systems in your country /territories, particularly linked to EWS for hydrometeorological Hazards. What are the roles and responsibilities, and are these documented officially?
- Specify the type of NMS in your country/territory and define what types of relationships exist with DRM agency?

QMS and SOP

- Have you established QMS and SOP across the NMS and DRM agency and stakeholders? Are these SOPs available in form of formal common documents? Is your country/territory developing QMS systems for aeronautical applications?



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Questions for the working groups (2/3)

Evaluation and feedback

- **Identify and describe the evaluation and feedback mechanisms within the operational EWS. Has there been a significant re-evaluation and improvement of your EWS in the past? If yes, please indicate what lead to this re-evaluation and describe the improvements made.**

Service delivery

- **Is there a process in your country/territory to identify the needs and requirements of DRM agencies for products and services of NMS? What hydromet products and services (e.g. observation data, forecasts and warning products) are required by these EWS stakeholders?**
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Questions for the working groups (3/3)

Dissemination Mechanisms

- Specify the dissemination mechanism(s) for delivery of warnings to the authorities and public? Who is involved in this dissemination mechanism(s). Do you utilize CAP for dissemination of your warnings? If not, do you plan to implement CAP and in what timeframe?

Annex 1 is a specific questionnaire on CAP

- How do you assess the effectiveness of the dissemination mechanism(s) to ensure that warnings reach their target audiences in a timely manner? How often per year do you do these assessments?

Regional cooperation

- Reflect on your priorities for strengthening of existing regional cooperation mechanisms and regional institutional capacities in support of the above-mentioned issues in this section..



Thank You



http://www.wmo.int/pages/prog/drr/events/Barbados/index_en.html



Gaps and needs in operational cooperation

- Strengthening of relationships and cooperation and coordination mechanisms to improve understanding of Meteorological Services and DRM agencies respective capacities needs and challenges with regards to MHEWS;
 - Enhancing ongoing multi-EWS stakeholders workshops and trainings at national or/and regional level;
 - Strengthening of communication protocols among EWS stakeholders, including DRM agencies and Meteorological Services, to improve feedback mechanisms;
 - Enhancing coordinated multi-EWS stakeholder drills and exercises to improve feedback mechanisms, especially for relationship type II.
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Recommendations in operational cooperation

- Organization of national and regional workshops and training sessions for Meteorological Services, DRM agencies and EWS-stakeholders to identify users and their respective needs, capacities and challenges and to develop guidance for cooperation and coordination procedures, including feedback mechanisms and exercises.
 - Comprehensive QMS, centered on EWS-users needs, to frame the EWS-oriented activities of the Meteorological Services and the feedback mechanisms from DRM agencies and population for continual improvement.
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Gaps, needs and recommendations in product and service delivery

- Improvement of forecast and warning products through a user centered approach, including development/strengthening of methodologies and mechanisms for user feedback during product development and operational phases;
 - Strengthening real-time coordination mechanisms between among technical institutions and DRM agencies to provide input on forecasts and warnings products;
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Gaps and needs in Dissemination

- Strengthening of dissemination mechanisms between Meteorological Services and DRM agencies through:
 - Strengthening of regionally harmonized protocols;
 - Integrated tools or systems with automated processes;
 - Strengthening of back up systems and up to date means.
- Improvement of the capacities of the Meteorological services for a comprehensive management of their public web sites;
- Enhancing the credibility and the impact of live communication on Media through:
 - Bilateral workshops and training with forecasters and Media specialists and/or journalists;
 - Specific integrated tools or systems dedicated for TV broadcast.



Recommendations in Dissemination

Dissemination mechanisms

- Full redundancy at national level and back-up systems through regional arrangements to ensure continuity
- Use of coordinated protocols and systems between Meteorological Services, DRM agencies and EWS stakeholders that enable end to end efficiency and control
- Capacities for web site management in the Meteorological Services or at national level or through a regional approach

Communication

- Relationship with the media and need for bilateral training
 - Use of specific production system dedicated to TV broadcasting
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Gaps, needs and recommendations in Public Outreach

- Development and/or adaptation of multimedia educational programmes on all hazards and risks, with specific attention to vulnerable groups in society and to local needs, and by making use of local examples;
 - Development of partnerships with DRM agencies and other national and international organizations to facilitate the production of educational materials.
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