Stakeholders Workshop for JCOMM-CHy Coastal Inundation Forecasting Demonstration Project (CIFDP-DR)

Santo Domingo, Dominican Republic, 15-19 November 2011

- $\| PAGE \| 2^{\perp} -$

CONTENTS

General S	ummary of the Work of the Session	3
Annex I	List of Participants	5
Annex II	Annotated Provisional Programme	8
Annex III	Draft Terms of Reference for the National Coordination Team (NCT) for the Coastal Inundation Forecasting Demonstration Project (CIFDP) in the Dominican Republic	12
Annex IV	Draft Memorandum of Understanding	14
Annex V	Provisional Timetable	16

SUMMARY

1. OPENING OF THE MEETING

1.1. Opening

1.1.1 The JCOMM-CHy Coastal Inundation Workshop was opened on Wednesday 16 November 2011 in the conference room of the National Office of Meteorology (Oficina Nacional de Meteorología, ONAMET) in Santo Domingo, Dominican Republic.Ms. Gloria Ceballos, Director of ONAMET and Permanent Representative of the Dominican Republic to WMO, opened the meeting, which also was attended by General (ret.) Luis A. Luna Paulino and Dr. Ydalia Acevedo Monegro, Deputy Minister for the Environment.

1.1.2 The workshop was also attended by representatives of several key players involved in the field, such as the Emergency Operations Centre (EOC), the National Institute of Water Resources (INDHRI), the Navy, the National Maritime Authority, the National Geological Service, among others (participants list in Annex I)

1.2 Adoption of the agenda

1.2.1 The workshop was conducted in Spanish on the basis of the provisional agenda prepared by the Secretariat, subject to some adjustments to take account of local requirements.

2 SUMMARY OF PRESENTATIONS

2.1.1 The international experts, Cristina Forbes, José Rubiera, Aurelio Mercado, and the WMO ocean affairs office, delivered a number of lectures focusing on various numerical models for predicting coastal flooding and tsunamis, and the use of television and the media for effective alerts and warnings, as well as a socio-cultural overview of the problem of coastal settlements in the Caribbean Sea region.

2.1.2 The background, scope, general framework and current status of the issue in the Dominican Republic were discussed, and there was a broad general discussion of what could be expected from the implementation of this sub-project, which would then have to be put into practice by the national coordination team for the sub-project.

2.2 Legal framework

2.2.1 Based on the discussion and the questionnaires completed by the parties concerned, it was ascertained that the Dominican Republic does have an adequate legal framework of regulations and legislation, including the Risk Management and Regulation Act No. 147 of 2002, and the Environment Act.The Civil Defence had also surveyed and mapped the various vulnerabilities by municipality.

2.3 Shortcomings and technical requirements

2.3.1 The meeting also ascertained the shortcomings and technical requirements (observation and monitoring, forecasting, operational capability and communication with

the media), social requirements (for public communication through the media, mainly television and radio and delivery of products), management requirements and a review of the modern techniques available to meet national requirements.

2.3.2 The shortcomings identified included a lack of regional planning, no coastal legislation, ambivalence over some aspects of the functions of the Emergency Operations Centre (COE) and the National Emergency Commission (CNE), problems over a lack of public education and awareness, and in general the absence of systematic meteorological information such as a modern weather report on television. The first measure is to disseminate information to the community on television from Cuba.

2.3.3 The second is to respond to the lack of academic papers that look at the historical, geo-historical or anthropologicalperspective, as important factors to consider when analysing the current cultural conditions of the areas where the risks exist. In that connection, Dr. Nara Fuentes gave a lecture entitled "Historical and anthropological perspective of the presence of coastal communities" which demonstrated the contribution of historical research in primary archive sources, and Dr. Ángela Altagracia, Vice-Minister of Culture of the Dominican Republic and a historian, supplemented the presentation of the lecture and confirmed the importance of perspective by explaining that Dominican Government environmental policy largely reflected the strong influence of a number of government type decisions that, from the colonial period, had marked the developing areas of the Island.

2.3.4 It was noted that the current technical capabilities of the Dominican Republic in relation to storm surges and waves were very limited by modern standards. This was due in large part not only to the lack of researchers and specialists, but also to the lack of high-resolution bathymetry and topography data, although it seemed that more data were actually available than were known to the local institutions. One outcome of the workshop, and the Memorandum of Understanding, would be to collect all available information to form a national data bank.

2.4 Objectives

2.4.1 Objectives to be achieved by the sub-project were identified, such as obtaining some bathymetry and topography of the coastal zones at a useful resolution. Once this problem had been solved in the Dominican Republic, high-resolution models could then be adapted to forecast surge on the coastal strip throughout the year, both with and without tropical storms, hurricanes and other weather systems. A model was also needed for forecasting storm surge in hurricane conditions, including winds, atmospheric pressure, wave accumulation, and surfacewave propagation, all of which caused coastal flooding.

2.4.2 Models were also needed for forecasting coastal flooding by tsunamis.

2.4.3 One important aspect was that these forecasts should be carried out in the shortest possible time frame, which imposed a very significant constraint on the methodology to be used.

2.4.4 Once this technical support was operational, it would provide an effective guide to sustainable development in the Dominican Republic, in line with safety and civil protectioncriteria.For this technological system to be effective, there was a need to

- $\| PAGE \| 5^{\perp} -$

develop a modern system of public information, education at all levels and public awareness in the Dominican Republic.

3 CLOSURE OF THE MEETING

3.1 Adoption of Terms of Reference and a Memorandum of Understanding

3.1.1 The workshop concluded with the adoption of terms of reference and a memorandum of understanding between the parties concerned, setting out the respective specific roles of the agencies and institutions involved in implementing the coastal flooding forecasting demonstration project and the composition of the national coordination team for the sub-project, which is annexed to the national project.

3.2 Close

3.2.1 The workshop ended at noon on 19 November 2011, and was closed by Ms. Gloria Ceballos, Permanent Representative of the Dominican Republic to WMO and Director of ONAMET.

Annex I

LIST OF PARTICIPANTS

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ANNEX II ANNOTATED PROVISIONAL PROGRAMME

[Day 1, Participation: All]

1. OPENING

(Moderation by ONAMET)

The Stakeholders Workshop for JCOMM-CHy Coastal Inundation Forecasting Demonstration Project (CIFDP-DR) will open at 0930 hours on Wednesday 16 November, at the conference room of the ONAMET Meteorological Department, Santo Domingo, Dominican Republic. Ing Gloria Ceballos, Director of ONAMET and PR of the Dominican Republic with WMO, will open the session.

N.B: International experts participating in the workshop (including the PSG members) are planned to visit ONAMET and INDHRI. (Tuesday 15 November). On Monday 14 November / a visit to the Ministry on Coastal Management and other high officials with responsibilities on coastal matters is planned (Secretariat only)

2. ORGANIZATION OF THE WORKSHOP

(Introduction by the Secretariat)

The programme for the workshop will be adopted by participants, based on the provisional programme prepared by the Secretariat. Participants will then be introduced with the hours of work and other practical arrangements. Background documents and material will be introduced by the Secretariat, which are available on the workshop web page (\parallel HYPERLINK "http://www.jcomm.info/CIFDP-DR" \parallel http://www.jcomm.info/CIFDP-DR[⊥])

The workshop will be conducted in Spanish (whisper translation for members of the Project Steering Group (PSG) who do not speak Spanish will be provided).

Participating institutions may request the consideration of additional issues. In this case, they are requested to prepare the relevant documentation and submit it to the Secretariat in due time. In addition, a few sub-items requiring a separate discussion may be identified during the workshop.

- 2.1 Adoption of the programme
- 2.2 Working arrangements

3. INTRODUCTION TO CIFDP

(Presentation by PSG representative, and WMO Secretariat)

Dr Paula Etala, on behalf of the Project Steering Group (PSG) and the Secretariat, will present information on the project concept, including background, scope, overall framework and the latest version of the draft Project Implementation Plan.

The Secretariat will provide a presentation on the ongoing and planned cooperative activities in the Caribbean region, identifying the area/aspects of collaboration between the projects in the implementation for Dominican Republic.

Invited experts Aurelio Mercado and Bernardo Aliaga will present on the ongoing status for the UNDP project for the Caribbean and IOCARIBE or ICG Tsunami initiatives on related matters.

4. DISCUSSION OF END USER PERSPECTIVES/REQUIREMENTS (Presentation by Jose Rubiera)

Dr Jose Rubiera (Cuba) will provide an overview on the end users engagement. It should be noted, in particular, the importance of user participation at an early stage in the process, so that the outcomes of the Demonstration Project / operational systems developed at the end of the Project will be the optimum balance between technical capabilities of the forecast systems and the information required by the emergency management authorities in the country. Participants are invited to discuss specifically the requirements emerging from the Dominican Republic's status, to bring it into a definite issue of national requirements in terms of social needs under the following item.

5. COASTAL INUNDATION ISSUES IN DOMINICAN REPUBLIC EMERGENCY RESPONSE

(Moderation by Jose Rubiera / WMO Secretariat)

Participants will briefly review the status of Dominican Republic [speaker(s) to be confirmed by ONAMET and/or INDHRI], in terms of damage and loss in national scale (particularly in the coastal lowlands) by storm surges and associated coastal flooding.

Responsible agencies of Dominican Republic for the national disaster management [list of agencies to be confirmed by ONAMET and INDHRI] will present on the current practices for emergency management based on the information delivered from the forecast centres. The presentations, as well as the following discussion will focus on the social aspects and needs/requirements in terms of delivering the final forecasting products, and subsequently the gaps in the current status.

- 5.1 Review Status of Dominican Republic Damage and Loss by Coastal Inundation
- 5.2 Current Status for National Coastal Inundation Forecasting and Warning, including Delivery and Communication to Disaster Management Community

6. ASSESSMENT OF TECHNICAL CAPABILITIES IN THE DOMINICAN REPUBLIC OPERATIONAL FORECASTING SYSTEMS, AND IDENTIFICATION OF POTENTIAL IMPROVEMENTS (Moderation by Paula Etala/C. Forbes)

Participants will review the status of Dominican Republic terms of: 1) the existing operational storm surge (and wave) forecasting practices including models used; 2) a description of the observational systems, both real time and delayed mode (for verification and validation), 3) associated data including bathymetry and digital elevation data, river flow data, either probabilistic or real time; 4) access where appropriate to

multi-scale numerical weather prediction products such as ECMWF, and; 5) use of RSMC guidance.

- 6.1 ONAMET M. Campusano (Deputy Director Forecasting Services)
- 6.2 INDHRI (F. Perez note that Fidel is the RD expert PSG)
- 6.3 RSMC- NHC (Miami) C. Forbes (in place of J. Rome PSG expert)

[Day 2, All Day. Participation: National Stakeholders]

7. DISCUSSION BY NATIONAL STAKEHOLDERS

(Moderation by PSG Co-Chairs and WMO Secretariat, Advice by Jose Rubiera)

A one-day meeting is planned for the discussion between national stakeholders, who are participating in the implementation of CIFDP in Dominican Republic.

National stakeholders will firstly be briefly reported on a summary of what was accomplished/learned in Day 1. It will be followed by the deliberation of the national operating agencies (including those with the responsibilities to provide forecasting and warning services, such as ONAMET) to: 1) assess the national operational capabilities (in each and all involved agencies) for coastal inundation forecasting; 2) review identified gaps and requirements for Observation/Monitoring, Forecasting, Operational Skills and Communication; 3) identify the role of each participating agency to address these requirements.

The national stakeholders, as the result of this in-session meeting, will finally agree on the <u>National Agreement (NA)</u> for CIFDP implementation / coordination. The agreement should consist of three parts;

- 1) General agreement of participating agencies in pursuing the CIFDP in Dominican Republic;
- 2) Description of respective and specified roles of the participating agencies in implementing CIFDP, and
- 3) Membership of the <u>Sub-project National Coordination Team (NCT</u>, as annex to the NA).

The NA is the essential requirement to establish the Dominican Republic sub-project for CIFDP, and to carry on the subsequent discussions at this workshop. It should be noted that the NCT will be mainly responsible for implementing the CIFDP sub-project that includes validation and pre-operation of the developed system(s), therefore all participating agencies are invited to propose their respective roles and membership in the NCT based on their mandates at national level in coastal inundation forecasting and warning services.

- 7.1 Review of the achievement in Day 1
- 7.2 Assessment of National Operational Capabilities for Coastal Inundation Forecasting
- 7.3 Identification of Gaps and Requirements (Observation/Monitoring, Forecasting, Operational Skills, and Communication)
- 7.4 Institutional Arrangement (Roles of Participating Institution in CIFDP)
- 7.5 National Agreement

[Day 3, All Day. Participation: All]

8. ASSESSMENT OF TECHNICAL AND MANAGEMENT GAPS

(Moderation by PSG Co-Chair, Secretariat – Paula Etala, Jose Rubiera, C. Forbes, with A. Mercado advising)

Building on the precedent discussion, participants will review identified gaps and requirements – technical and social – for coastal inundation forecasting and warning services in the Dominican Republic, including delivery and communication to disaster management community. Focus will be given to the review against the available technical options, taking into account the operational environments of the Dominican Republic, and to agree on the technical options to be used for the CIFDP implementation.

- 8.1 Review of technical Gaps and Requirements (Observation/Monitoring, Forecasting, Operational Skills, and Communication)
- 8.2 Review of social/management Gaps and Requirements (Particularly for Communication and Delivery of products)
- 8.3 Review Available Technical Options to Address National Requirements

[Day 4, All Day. Participation: All]

9. PLANNING A REGIONAL SUBPROJECT FOR THE DOMINICAN REPUBLIC (Moderation by PSG Co-Chair and Secretariat)

All participants in the Workshop, including the PSG and national stakeholders participating in the CIFDP, will review the NA agreed at the National Stakeholders Discussion (item 7), and discuss on the further steps to concretize the organization framework for collaborative arrangement between national agencies, as well as between the PSG and the NCT. The description of respective roles of national agencies and NCT membership, if necessary and agreed, can be revised upon conclusion and recommendation of this Workshop.

N.B: First activity of item 9 is expected to be completed by the end of day 3 (ONAMET request)

Based on the agreement on the above issues, relevant participants will discuss on the plan and schedule to develop a detailed Implementation Plan of a Dominican Republic sub-project for CIFDP. The NCT, in consultation with the PSG, will be responsible to complete the sub-project Implementation Plan upon the agreed schedule.

- 9.1 Establishment of Sub-project National Coordination Team (NCT) and Collaborative Framework
- 9.2 Integration and Collaboration within Regional and Global Framework
- 9.3 Specific goals and objectives to improve forecasting and delivering of coastal inundation services for disaster management, and general public / media
- 9.4 Technical components (roles, guidance, products, etc.)
- 9.5 Timetable for planning and development of a Dominican Republic sub-project Implementation Plan
- 9.6 Conclusions and Recommendations

10. ANY OTHER BUSINESS

(Moderation by PSG Co-Chair and Secretariat)

Participants will be invited to raise any additional issue for consideration in the Dominican Republic sub-project.

11. CLOSING

Based on the results of discussions under preceding items, participants will consider requirements for further interactions among PSG and NCT members through emails and teleconferences during the implementation period of the Dominican Republic sub-project.

The workshop is expected to close by noon of Saturday 19 November.

Annex III Draft for discussion Nov 2011 Rev1

Terms of Reference for The National Coordination Team (NCT) for the Coastal Inundation Forecast Demonstration Project (CIFDP) in the Dominican Republic

1. Preamble

1.1 Members of the World Meteorological Organization (WMO), working closely with the Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM) and in cooperation with the WMO's Commission for Hydrology (CHy), have decided to develop an example of cooperative work as a strategy for building improved operational forecasts and warnings capability for coastal inundation that the responsible national agencies can sustain by:

- Implementing operational, open-source coastal inundation, end-to-end forecasting and warning systems;
- Supporting the exchange of data and information among stakeholders;
- Developing cross-cutting cooperation of different scientific disciplines and user communities; and
- Building communication platforms between researchers, forecasters and disaster managers involved in coastal inundation due to tropical cyclones (and their associated "storm surge") and extratropical low pressure systems, migratory anticyclones (due to wind driven surge events) and tsunamis.

1.2 These terms of reference are applicable to the elements of the CIFDP being developed to address the needs of the Dominican Republic.

1.3 The stakeholders invited to participate in the meetings of the NCT include:

- Oficina Nacional de Meteorologia (ONAMET)
- Instituto Nacional de Recursos Hidráulicos (INDHRI)
- Centro de Operaciones de Emergencia (COE) / Defensa Civil
- Ministerio Ambiente
- Ministerio Turismo
- Ministerio Ciencias y Educación
- Servicio Geológico Nacional
- Marina de Guerra, and the
- World Meteorological Organization

1.4 Additional stakeholders may be invited by agreement of those stakeholders attending a meeting at which a quorum is present (60% of the agreed list).

2. Scope of work

2.1 The NCT will work with the Oficina Nacional de Meteorologia as the coordinating agency responsible for the implementation of operational systems to provide warning for coastal inundation. In the framework of CIFDP, the NCT shall play the key role in developing the Project with the guidance of and close collaboration with the CIFDP Project Steering Group (PSG) to:

- Identify the requirements of users and stakeholders in the Dominican Republic for advice and warnings related to coastal inundation;
- Promote technology development and transfer through the provision of: 1) risk assessment and tools for said assessment; 2) services from coastal inundation forecasting and warning services; and 3) training material specifically developed and based on the progress in Project implementation;
- Assist in resolving data and information exchange and management issues among stakeholders in the CIFDP, in view of establishing a longterm framework for information sharing;
- Guide the implementation of a communication platform that will improve interactions of National Meteorological and Hydrological Services (NMHSs) with CIFDP stakeholders and partners (Government, Disaster Management and Civil Protection Agencies, media, NGO's, etc.,) for better understanding of user requirements, effective communication of the advisory and warning messages, and user feedback;
- Encourage and support specialized training programs, which would enhance the capabilities of NMHSs to produce and provide storm surge forecasting, coastal inundation forecasting and warning services.

2.2 The NCT and PSG will meet at regular intervals as required by the demands of the project (possibly every six months initially).

2.3 The NCT will work with the PSG to develop proposals for donor support for CIFDP activities.

2.4 Also, the NCT will be open and transparent in its functioning, making available to all stakeholders a report of each meeting held, including a summary of the decisions taken, a list of current stakeholders, and a list of the meeting's participants.

2.5 It will work with the PSG to prepare and issue the final report on the CIFDP, in coordination with the WMO Secretariat, and prepare recommendations to be transmitted to the relevant programs and projects.

Annex IV Draft for discussion 28 November 2011

MEMORANDUM OF UNDERSTANDING IN SUPPORT OF THE COASTAL INUNDATION FORECASTING DEMONSTRATION PROJECT

AMONG THE NATIONAL METEOROLOGICAL OFFICE, NATIONAL INSTITUTE FOR HYDROLOGICAL RESOURCES, EMERGENCY OPERATIONS/CIVIL DEFENCE CENTRE, MINISTRY OF THE ENVIRONMENT, MINISTRY OF TOURISM, MINISTRY OF SCIENCE AND EDUCATION, NATIONAL GEOLOGICAL SERVICE, THE NAVY AND THE WORLD METEOROLOGICAL ORGANIZATION

Concerned with providing public alerts of the highest quality to coastal communities in the Dominican Republic in the event of possible inundations resulting from phenomena such as tsunamis, tropical lows, migratory anticyclones, the Azores/Bermuda semipermanent anticyclone and a direct or indirect hit by tropical cyclones,

Noting that in accordance with the Law on Risk Management (147-02), which defines the responsibilities of a number of government institutions of the Dominican Republic, it is necessary to ensure that these institutions work in complete harmony,

This Memorandum of Understanding describes the commitment of the signatory agencies to work in cooperation with the National Meteorological Office (ONAMET), in a manner consistent with the aforementioned law, to assist one another in the development of their respective functions, responsibilities and missions before, during and after coastal inundation events,

Noting that the Coastal Inundation Forecasting Demonstration Project (CIFDP) will be developed on the basis of the combined and sustainable contributions of the signatories, together with substantial multilateral and multidisciplinary cooperation and coordination,

The Parties agree to work together to provide support to the CIFDP by participating in and supporting the National CIFDP Coordination Team, and in particular they:

Agree that they will work together on:

- The assessment of user requirements for services related to coastal inundations in the Dominican Republic;
- The exchange of data needed by CIFDP operational services;

- Providing support, in an efficient and effective manner, for the management of data that are used in operational forecasting, alert validation systems, and in research and development aimed at improving the CIFDP. These data include:
 - Measurements of atmospheric pressure, wind, temperature, precipitation and humidity/dewpoint close to the surface;
 - The level and flow of rivers;
 - Average sea level;
 - The bathymetry and topography of the coastal zone of the Dominican Republic (provided by **public and private institutions**);
 - Maps of danger zones vulnerable to storm surges, tsunamis and other hazardous conditions, for planning and zoning of coastal areas;
 - Use and coverage of the coastal zone (thematic maps);
 - Digital elevations of the terrain (topography) in the coastal zone of the Dominican Republic;
 - Other data that the National Coordination Team may from time to time deem to be of vital importance for the CIFDP;
- Identification of a storage centre for existing information;
- Technology transfer among the Parties to this Agreement and the sharing technology from donor countries;
- The training of personnel responsible for operational and development activities related to the work of the CIFDP.

Decide that this Agreement may be amended at any time at the request of one of the Parties and that any amendment must be done in writing and signed by all of the Parties;

This Memorandum of Understanding shall enter into force following its signature by all of the Parties on 1 March 2012 and shall remain in force for a period of five years, unless all of the Parties agree in writing that it shall expire at an earlier date;

Further, any institution of the Dominican Republic or any other organization may accede as a Party to this Agreement with the consent of the original Parties to the Agreement.

Signed by:

- Director, National Meteorological Office
- Executive Director, National Institute for Hydrological Resources
- Director, Emergency Operations/Civil Defence Centre
- Minister, Ministry of the Environment
- Secretary of State for Tourism, Ministry of Tourism
- Ministry of Science and Education

- National Geological Service
 Navy
 Secretary-General, World Meteorological Organization

ANNEX V

PROVISIONAL TIMETABLE

Day 1: 16 November 2011, Wednesday

1000-1030 Organization of the Workshop 2.1. Adoption of the Workshop Programme

All participants

1130-1150Introduction to CIFDP3.1 Concept and Scope of the Project

Discussion Presentation- End User Perspectives/Requirements

5

1400-1420

1420-1440

1440-1500

Coastal Inundation Issues in the Dominican Republic and Emergency Response

- 5.1 Presentation- Review Status of Dominican Republic (Damage and Loss by Coastal Inundation)
- 5.2 Presentation- Current Status for National Coastal Inundation Forecasting and Warning, including Delivery and Communication to Disaster Management Community
- 5.3. Presentation Review status of tsunami inundation risk in the Dominican Republic

COE

ONAMET and INDHRI

ONAMET/UATO

1600 - 1730 J. Rubiera (moderator)● ● - $\| \mathsf{PAGE} \, \| \, \mathbf{26}^{\perp} \,$ -

Day 2: 17 November 2011, Thursday

0900-0920 0920-0940 0940-1000 1000-1020 Assessment of Technical Capabilities in the Dominican Republic Operational Forecasting Systems, and Identification of Potential Improvements 6.1 Presentation- ONAMET 6.2 Presentation- INDHRI

6.3 Presentation- RSMC-Miami - NHC

6.4. Presentation R3i

ONAMET INDHRI C. Forbes A. Mercado

Coffee Break

11:00-1130 1130-1200

1200-1300 DISCUSSION BY NATIONAL STAKEHOLDERS : PSG + NCT

7.1 Review of the achievements from Day 1

7.2 Assessment of National Operational Capabilities for Coastal Inundation Forecasting

7.3 Identification of Gaps and Requirements (Observation/Monitoring, Forecasting,

D. Resio (moderator)

J. Rubiera WMO Secretariat

1430-1600

DISCUSSION BY NATIONAL STAKEHOLDERS : PSG + NCT (cont'd) item 7.3 and

7.4 Institutional Arrangement (Roles of Participating Institution in CIFDP): Terms of

- \parallel PAGE $\P31^{\perp}$ -

D. Resio (moderator)

J. Rubiera

WMO Secretariat WMO Secretariat and

Day 3: 18 November 2011, Friday

8

0900-0930

0930-1000

ASSESSMENT OF TECHNICAL AND MANAGEMENT GAPS: PSG + NCT

- 8.1 Review of technical Gaps and Requirements (Observation/Monitoring, Forecasting, Operational Skills, and Communication)
- 8.2 Review of social/management Gaps and Requirements (Particularly for Communication and Delivery of products)

D. Resio

J. Rubiera

1120-1200

ASSESSMENT OF TECHNICAL AND MANAGEMENT GAPS: PSG + NCT (cont'd) 8.3 Review Available Technical Options to Address National Requirements

D. Resio, A. Mercado and 1400-15:30 hrs **PLANNING A REGIONAL SUB-PROJECT FOR DOMINICAN REPUBLIC:** PSG + NCT

9.1. Preparatory discussion and outline on:

- Specific goals and objectives for CIFDP Dominican Republic sub-project

- Draft nation requirements for 1) service delivery and associated framework (e.g. data sharing system); 2) forecasting and warning technologies; 3) observing networks and

D. Resio (moderator)

WMO Secretariat 15:30 – 17:00

(cont'd / Draft nation requirements) 9.2.Integration and Collaboration within Regional and Global Framework 9.3 Identification of Technical components (roles, guidance, products, etc.) 9.4 Timetable for planning and development of a Dominican Republic sub-project

D.Resio (moderator)

WMO Secretariat

* This day will be preceded by a presentation by Dr Fuentes, "The Experience of the Sea Peoples in Colombia: An Anthropological and Historical Approach

Day 4: 19 November 2011, Saturday

0900-11:00

PLANNING A REGIONAL SUB-PROJECT FOR Dominican Republic: PSG + NCT (cont'd) Establishment of Sub-project National Coordination Team (NCT) and Collaborative Framework

9.5 Outline of the Funding Proposal for CIFDP Dominican Republic Sub-project: Specific goals and objectives to improve forecasting and delivering of coastal inundation services for disaster management and general public / media (clear definition of expected outcome of the CIFDP Dominican Republic sub-project)

PSG and NCT **PLANNING A REGIONAL SUB-PROJECT FOR DOMINICAN REPUBLIC:** PSG + NCT (cont'd) Discussion and revision/edition of the proposal (outline)

9.6 Conclusions and Recommendations (Participants will be invited to raise any

- $\| \mathsf{PAGE} \, \P \, \mathsf{44}^{\perp} \,$ -

Note: PSG- Project Steering Group NCT- National Coordination Team