2016 (3rd) Meeting of the Disaster Risk Reduction Focal Points of WMO Regional Associations, Technical Commissions and Programmes
(DRR FP RA-TC-TP)

14-16 December 2016
WMO Headquarters (Press Room), Geneva, Switzerland

Webpage:

FINAL REPORT

Front (from left): Carlos Frederico Angelis (RA III), K.J. Ramesh (RA II), Fred Branski (CBS, chairperson),
Kevin Horsburgh (JCOMM, chairperson), Yury Simonov (CHy)
Second row (from left): Albert A.E. Martis (RA IV), Dodo Gunawan (RA V), A. Sezin Tokar (CCI), Richard
Philippe (RA I), Karolin Eichler (RA VI, on behalf of Axel Thomalla), Jochen Luther (Secretariat)
Third row (from left): Roger Stone (CAgM), James Douris (Secretariat), Paul Kovacs (CAS)
Back row: Jitze P. van Der Meulen (CIMO), Johnson Muturi Maina (CHy), Alasdair Hainsworth (Secretariat)
1 OPENING OF THE SESSION

1.1 The Co-Chairpersons of the Disaster Risk Reduction Focal Points of WMO Regional Associations, Technical Commissions and Programmes (DRR FP RA-TC-TP), Mr Fred Branski and Dr Kevin Horsburgh, opened the meeting on 14 December 2016 at 13h30. In their opening remarks, they expressed their appreciation to the members of the group for their presence.

1.2 The Secretary-General (SG) of WMO, Prof Petteri Taalas, welcomed the participants and provided a brief summary of the climate extremes and high-impact weather events of 2016. He emphasized the high priority given to DRR by WMO Members and Congress, and recalled the importance of the Sendai Framework for DRR 2015-2030. SG also emphasized the importance of impact-based forecasting in the DRR process. He also noted the requirement for WMO to make better use of its resources, which includes reshaping and potentially shortening meetings and ensuring there are clear outcomes. SG asked the meeting to ensure that it had a clear view on the internal and external drivers of WMO's business and to ensure that the WMO DRR Roadmap could be used to steer the DRR Programme.

1.3 The Chief of the WMO DRR Services Division, Mr Alasdair Hainsworth, introduced the objectives of the meeting. Build on work of last year's meeting of the DRR FP RA-TC-TP, the aim was to a) provide guidance and coordination on WMO DRR activities and processes between RAs, TC and TPs, b) determine how to implement the WMO DRR Roadmap in/through the RAs, TCs and TPs and what such a plan should look like, c) identify good practice in effective coordination and collaboration across the RAs, TCs and TPs, d) identify where and how we could strengthen coordination and collaboration across the RAs, TCs and TPs, e) identify how the DRR FP RA-TC-TP mechanism can best add value to each RA's, TC's and TP's work, and e) determine the structure and content of future meetings of the DRR FP RA-TC-TP.

1.4 The list of the nominated DRR FP RA-TC-TP is provided in Annex I and the list participants is given in Annex II.

2 ADOPTION OF THE AGENDA

2.1 The agenda was adopted as originally presented. However, additional presentations were subsequently added during the session and are included in the modified agenda in Annex III.

3 CONCLUSIONS AND RECOMMENDATIONS

3.1 The Meeting made recommendations on issues as presented in Annex IV. Annex V contains excerpts from relevant final reports of the World Meteorological Congress and WMO Executive Council meetings relating to the mandates of both the DRR FP RA-TC-TP and the WMO Executive Council Working Group on DRR (EC WG/DRR), together with the associated decisions and resolutions. The Terms of Reference (ToR) of the DRR FP RA-TC-TP are listed in Annex VI.

4 NEXT MEETING

4.1 The next meeting was tentatively scheduled for July 2017, with a telecon in March 2017.

5 CLOSURE OF THE SESSION

5.1 Both Co-Chairpersons expressed their thanks to all attendees and the Secretariat staff for their involvement and contributions. The session was closed at 15:20 on 16 December 2016.
## 6 Annex

### Annex I: The nominated Disaster Risk Reduction Focal Points of WMO Regional Associations, Technical Commissions and Programmes

(as of 11 January 2017)

<table>
<thead>
<tr>
<th>WMO constituent body/ mechanism</th>
<th>Nominated focal point(s) and affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Technical Commissions</strong></td>
<td></td>
</tr>
<tr>
<td>CAeM</td>
<td>Ian Lisk, Met Office, United Kingdom</td>
</tr>
<tr>
<td>CAgM</td>
<td>Roger Stone, Queensland Department of Primary Industries &amp; Fisheries, University of Southern Queensland, Australia</td>
</tr>
<tr>
<td>CAS</td>
<td>Paul Kovacs, Institute for Catastrophic Loss Reduction (ICLR), Canada</td>
</tr>
<tr>
<td>CBS</td>
<td>Fred Branski, U.S. National Weather Service (NWS), USA. (Co-Chairperson)</td>
</tr>
<tr>
<td>CCI</td>
<td>A. Sezin Tokar, Office of U.S. Foreign Disaster Assistance (USAID), USA</td>
</tr>
</tbody>
</table>
| CHy                             | Johnson Muturi Maina, Kenya Meteorological Department (KMD), Kenya  
|                                 | Yury Simonov, Hydrological Centre of Russia, Russian Federation |
| CIMO                            | Jitze P. van Der Meulen, Royal Netherlands Meteorological Institute (KNMI), The Netherlands |
| JCOMM                           | Kevin Horsburgh, National Oceanography Centre, UK (Co-Chairperson) |
| **Regional Associations**       |                                         |
| RA I                            | Richard Philippe, Direction de la météorologie nationale, Ministry of Transports, Cameroon |
| RA II                           | K.J. Ramesh, Ministry of Earth Sciences, India |
| RA III                          | Carlos Naranjo Jacome, Instituto Nacional de Meteorología e Hidrología (INAMHI), Ecuador |
| RA IV                           | Albert A.E. Martis, Meteorological Department Curaçao |
| RA V                            | Dodo Gunawan, Meteorological, Climatological and Geophysical Agency (BMKG), Indonesia |
| RA VI                           | Axel Thomalla, Deutscher Wetterdienst (DWD), Germany |
| **Technical Programmes**        |                                         |
| TCP                             | Andrew Burton, Bureau of Meteorology (BoM), Australia |
| WCRP                            | Simon Mason, International Research Institute for Climate and Society (IRI), USA |
| WWRP                            | Paolo Ruti, WMO Secretariat             |
| **Others**                      | n.n.                                    |
| **Other mechanisms and projects**|                                         |
| GFCS                            | n.n.                                    |
| WIGOS                           | Jochen Dibbern, Deutscher Wetterdienst (DWD), Germany  
|                                 | Luis Nunes, WMO Secretariat              |
| WIS                             | n.n.                                    |
| **Others**                      | n.n.                                    |
Annex II: List of participants

DISASTER RISK REDUCTION FOCAL POINTS OF REGIONAL ASSOCIATIONS, TECHNICAL COMMISSIONS AND PROGRAMMES

TECHNICAL COMMISSIONS:

Commission for Basic Systems (CBS)

Fred Branski
U.S. National Weather Service
International Affairs Office
Intl Data & Requirements Liaison
1325 East-West Highway, Room 17372
Silver Spring, MD 20910 USA.

Commission for Climatology (CCI)

A. Sezin Tokar
Senior Hydrometeorological Hazard Advisor
Office of U.S. Foreign Disaster Assistance (USAID)
1300 Pennsylvania Ave., NW
DCHA/OFDA RRB 8.06.32
Washington, DC 20523, USA

Commission for Agricultural Meteorology (CAGM)

Roger Stone
Director
International Centre for Applied Climate Sciences
University of Southern Queensland
Toowoomba, Australia, 4350

Commission for Atmospheric Sciences (CAS)

Paul Kovacs
Executive Director
Institute for Catastrophic Loss Reduction (ICLR)
20 Richmond Street East, Suite 210
Toronto, Ontario, Canada M5C 2R9

Commission for Hydrology (CHy)

Johnson Muturi Maina
Kenya Meteorological Department
Ministry of Environment, Water and Natural Resources
Dagoretti Corner, Ngong Road
P.O. Box 30259-00100

Nairobi, Kenya

Yury Simonov
Senior Researcher
Hydrological Forecasts Department
Hydrometeorological Centre of Russia
11/13 B Predtechensky per.
Moscow 123242, Russian Federation

Commission for Instruments and Methods of Observation (CIMO)

Jitze P. van Der Meulen
Senior Adviser Weather Service
Royal Netherlands Meteorological Institute (KNMI)
Utrechtseweg 297, P.O. Box 201
3731 GA De Bilt, Netherlands

Joint WMO-IOC Commission for Oceanography and Marine Meteorology (JCOMM)

Kevin Horsburgh
Head
Institute for Sustainable Coasts and Oceans
National Oceanography Centre
6 Brownlow Street, Liverpool
L3 5DA, United Kingdom

REGIONAL ASSOCIATIONS:

Regional Association I

Richard Philippe
Direction de la météorologie nationale
Ministry of Transports
33, rue Ivy, B. P. 186
Yaoundé, Cameroon

Regional Association II

K.J. Ramesh (Ramesh Kanduri Jayaram)
Director General of Meteorology
India Meteorological Department (IMD)
Ministry of Earth Sciences
Mausam Bhawan, Lodi Road
New Delhi-110003, India
Regional Association III

Carlos Frederico Angelis
General-Coordination for Operations and Modelling
Centro Nacional de Monitoramento e Alertas de Desastres Naturais (Cemaden)
Secretariat of Policies and Programs in Research and Development
Ministry of Science, Technology and Innovation
Km 39, Presidente Dutra Road
Cachoeira
Paulista – SP, Zu Code: 12.630-000, Brazil

Regional Association IV

Albert A.E. Martis
Director
Meteorological Department Curaçao
Ministry of Traffic, Transport and Urban Planning
Edifisio Siegfried Francisco
Seru Mahuma z/n
Willemstad, Curaçao

Regional Association V

Dodo Gunawan
Director
Center for Climate Change and Air Quality
Meteorological, Climatological and Geophysical Agency (BMKG)
Jl. Angkasa 1 No. 2 Kemayoran
Jakarta, Indonesia

Regional Association VI

Karolin Eichler
(on behalf of Axel Thomalla)
Office of the President and International Affairs
Deutscher Wetterdienst (DWD)
Postfach 10 04 65 Frankfurter Strasse 135
Offenbach, Germany

CO-SPONSORED PROGRAMMES AND ACTIVITIES

Group on Earth Observations (GEO)

Vanessa Aellen
Technical Expert for Water
GEO Secretariat
7bis, avenue de la Paix
Case postale 2300
CH-1211 Geneva 2, Switzerland

WMO SECRETARIAT STAFF

CO-SPONSORED PROGRAMMES AND ACTIVITIES

World Climate Research Programme (WCRP)

Boram Lee
Senior Scientific Officer
World Climate Research Programme (WCRP)
Division
Research Department (RES)
World Meteorological Organization
7bis, avenue de la Paix
Case postale 2300
CH-1211 Geneva 2, Switzerland

Integrated Drought Management Programme (IDMP)

Robert Stefanski
Chief
Agricultural Meteorology Division
Climate Prediction and Adaptation Branch (CLPA)
Climate and Water Department (CLW)
World Meteorological Organization
7bis, avenue de la Paix
Case postale 2300
CH-1211 Geneva 2, Switzerland
TECHNICAL PROGRAMMES

World Weather Research Programme (WWRP)
Paolo Ruti
Chief
World Weather Research Division (WWR)
Atmospheric Research and Environment Branch (ARE)
Research Department (RES)
World Meteorological Organization
7bis, avenue de la Paix
Case postale 2300
CH-1211 Geneva 2, Switzerland

Disaster Risk Reduction Programme (DRR)
Alasdair Hainsworth
Chief
Disaster Risk Reduction Services Division (DRR)
Weather and Disaster Risk Reduction Service Department (WDS)
World Meteorological Organization
7bis, avenue de la Paix
Case postale 2300
CH-1211 Geneva 2, Switzerland

James Douris
Project Officer
Disaster Risk Reduction Services Division (DRR)
Weather and Disaster Risk Reduction Service Department (WDS)
World Meteorological Organization
7bis, avenue de la Paix
Case postale 2300
CH-1211 Geneva 2, Switzerland

Jochen Luther
Junior Professional Officer
Disaster Risk Reduction Services Division (DRR)
Weather and Disaster Risk Reduction Service Department (WDS)
World Meteorological Organization
7bis, avenue de la Paix
Case postale 2300
CH-1211 Geneva 2, Switzerland

Xu Tang
Director
Weather and Disaster Risk Reduction Service Department (WDS)
World Meteorological Organization
7bis, avenue de la Paix
Case postale 2300
CH-1211 Geneva 2, Switzerland

Tropical Cyclone Programme
Taoyong Peng
Chief
Tropical Cyclone Programme (TCP) Division
Weather and Disaster Risk Reduction Service Department (WDS)
World Meteorological Organization
7bis, avenue de la Paix
Case postale 2300
CH-1211 Geneva 2, Switzerland

Aeronautical Meteorology Programme (AeMP)
Dimitar Ivanov
Chief
Aeronautical Meteorology Division
Weather and Disaster Risk Reduction Service Department (WDS)
World Meteorological Organization
7bis, avenue de la Paix
Case postale 2300
CH-1211 Geneva 2, Switzerland

UNABLE TO ATTEND:

TECHNICAL COMMISSIONS

Commission for Aeronautical Meteorology (CAeM)
Ian Lisk
Head of Natural Hazards
Met Office
FitzRoy Road
EX1 3PB Exeter, United Kingdom
REGIONAL ASSOCIATIONS

Regional Association VI

Axel Thomalla
Office of the President and International Affairs
Deutscher Wetterdienst (DWD)
Postfach 10 04 65 Frankfurter Strasse 135
Offenbach, Germany

CO-SPONSORED PROGRAMMES AND ACTIVITIES

World Climate Research Programme (WCRP)
Simon Mason
International Research Institute for Climate & Society (IRI)
232 Monelle Building, 61 Route 9W
Palisades, New York 10964-8000, USA

Intergovernmental Panel on Climate Change (IPCC)
Abdalah Mokssit
Secretary of the IPCC
C/O World Meteorological Organization
7 bis, Avenue de la Paix
P.O. Box 2300
CH-1211 Geneva, 2, Switzerland

TECHNICAL PROGRAMMES

Tropical Cyclone Programme (TCP)
Andrew Burton
Bureau of Meteorology
LVL 5, 1100 Hay St
West Perth, WA 6005, Australia

WMO Integrated Observing System (WIGOS)
Jochen Dibbern
Technical Infrastructure and Operations
Deutscher Wetterdienst (DWD)
Frankfurter Str. 135
63067 Offenbach am Main, Germany

WMO SECRETARIAT STAFF

World Climate Programme (WCP)
Maxx Dilley
Director
Climate Prediction and Adaptation Branch (CLPA)
Climate and Water Department (CLW)
World Meteorological Organization
7bis, avenue de la Paix
Case postale 2300
CH-1211 Geneva 2, Switzerland

Global Framework for Climate Services (GFCS)
Filipe Domingos Freires Lúcio
Director
GFCS Office
World Meteorological Organization
7 bis, Avenue de la Paix
P.O. Box 2300
CH-1211 Geneva, 2, Switzerland

WMO Integrated Observing System (WIGOS)
Luis Filipe Nunes
Project Officer
WMO Integrated Global Observing System (WIGOS)
World Meteorological Organization
7bis, avenue de la Paix
Case postale 2300
CH-1211 Geneva 2, Switzerland

Public Weather Services Programme (PWS)
Haleh Kootval
Chief
Public Weather Services Programme (PWS)
Division
Weather and Disaster Risk Reduction Service Department (WDS)
World Meteorological Organization
7bis, avenue de la Paix
Case postale 2300
CH-1211 Geneva 2, Switzerland
Global Data Processing and Forecasting System (GDPFS)

Abdoulaye Harou
Chief
Data Processing and Forecasting Division (DPFS)
Weather and Disaster Risk Reduction Service Department (WDS)
World Meteorological Organization
7bis, avenue de la Paix
Case postale 2300
CH-1211 Geneva 2, Switzerland

Marine Meteorology and Oceanography Programme (MMO)

Edgard Cabrera
Chief
Marine Meteorology and Ocean (MMO) Affairs Division
Weather and Disaster Risk Reduction Service Department (WDS)
World Meteorological Organization
7bis, avenue de la Paix
Case postale 2300
CH-1211 Geneva 2, Switzerland
### Annex III: Agenda

#### Day 1 – Wednesday, 14 December 2016

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1: Opening and Introduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.00 – 12:30</td>
<td>Lunch</td>
</tr>
<tr>
<td>12:30 – 13:00</td>
<td>Registration</td>
</tr>
</tbody>
</table>

**Session 1: Opening and Introduction**

- Welcome remarks and opening of the workshop – Petteri Taalas, Secretary-General (WMO)
- Welcome remarks by the co-chairpersons and selection of the drafting group for preparation of the final outcomes / recommendations – Fred Branski, U.S. National Weather Service, International Affairs Office (DRR FP of CBS) & Kevin Horsburgh, Head Institute for Sustainable Coasts and Oceans and Chair of IOC/WMO JCOMM Expert Team on Waves and Coastal Hazard (ETWCH) Forecasting, National Oceanography Centre, United Kingdom (DRR FP of JCOMM)
- Roundtable introduction of participants
- Objectives, structure, document list and working arrangements of the meeting – Alasdair Hainsworth, Chief WMO Disaster Risk Reduction (DRR) Services Division (C/DRR, WMO)

**Session 2: Background**

- Outcomes of the 68th session of the WMO Executive Council (EC-68) – Alasdair Hainsworth
- Review of the outcomes of the 2015 (2nd) Coordination Meeting of the WMO DRR FP RA-TC-TP, 3-5 November 2015 – Fred Branski & Kevin Horsburgh
- Status of the WMO DRR Roadmap – Jochen Luther, Junior Professional Officer DRR Services Division
- Considerations on the development of a WMO DRR Roadmap Implementation Plan – Alasdair Hainsworth & Jochen Luther
- Briefing on progress with implementing Resolution 9 (Cg-17) – Alasdair Hainsworth

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 3: DRR-related Mandates and Activities/Projects of WMO Regional Associations, Technical Commissions and Programmes</th>
</tr>
</thead>
<tbody>
<tr>
<td>15:30 – 16:00</td>
<td>Coffee</td>
</tr>
</tbody>
</table>

**Key issues for discussions: 10-15 minute presentations/inputs**

1. What projects/activities of your RA/TC/TP could be considered as a good practice in effective coordination/collaboration across the RAs/TCs/TPs? Please present one or two examples.
2. What priority projects/activities within your RA/TC/TP could benefit from strengthened coordination/collaboration across the RAs/TCs/TPs? Please include what/why/who (with which entity) and possible mechanism(s) to carry out this coordination.
3. How can the DRR FP RA-TC-TP mechanism best add value to your RA's/TC's/TP’s work?
4. What structure would you suggest for future meetings of the DRR FP RA-TC-TP to ensure realizable and predictable outcomes from the work of the FPs?
5. In an effort to focus the next meeting(s) of the DRR FP RA-TC-TP, please provide two topics (thematic, project(s), regional, etc.).

**Note:**
The discussion should address how each RA/TC/TP coordinates across the RAs/TCs/TPs and describe the major challenges faced.
### 16:00 – 17:30
**Background on Session 3 – Alasdair Hainsworth**
- Commission for Basic Systems (CBS) – Fred Branski
- Commission for Hydrology (CHy) – Johnson Muturi Maina, Kenya Meteorological Department & Yuri Simonov, Senior Researcher, Hydrological Forecasts Department, Hydrometeorological Centre of Russia (DRR Focal Points of CHy)

### Day 2 – Thursday, 15 December 2016

#### Session 3 (continued)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Content</th>
</tr>
</thead>
</table>
| 09:00 – 11:00 | Commission for Instruments and Methods of Observation (CIMO) – Jitze Van der Meulen, Senior Adviser Weather Service, Royal Netherlands Meteorological Institute (KNMI), The Netherlands  
Commission for Agricultural Meteorology (CAgM) – Roger Stone, Director, Queensland Department of Primary Industries & Fisheries, University of Southern Queensland, Australia  
Joint WMO-IOC Commission for Oceanography and Marine Meteorology (JCOMM) – Kevin Horsburgh  
Commission for Aeronautical Meteorology (CAeM) – Dimitar Ivanov, Chief Aeronautical Meteorology Division (C/AEM, WMO) on behalf of Ian Lisk, Head of Natural Hazards, Met Office, United Kingdom  
Commission for Atmospheric Sciences (CAS) – Paul Kovacs, Institute for Catastrophic Loss Reduction (ICLR), Canada  
World Weather Research Programme (WWRP) – Paolo Ruti, Chief World Weather Research Division, Research Department (C/WWR, WMO)  
World Climate Research Programme (WCRP) – Boram Lee, Senior Scientific Officer World Climate Research Programme Division (SO/WCRP, WMO) on behalf of Simon Mason, International Research Institute for Climate & Society (IRI), USA |
| 11:45 – 12:15 | Group Photo & Coffee |
| 12:15 – 13:00 | Commission for Climatology (CCI) – Sezin Tokar, Senior Hydrological Advisor, Office of U.S. Foreign Disaster Assistance (USAID), USA  
Building Drought Resilience to Reduce Poverty: Integrated Drought Management Programme (IDMP) – Robert Stefanski, Chief Agricultural Meteorology Division (C/AgM, WMO)  
Integrated Flood Management: Associated Programme on Flood Management (APFM) – Robert Stefanski |
| 13:00 – 14:00 | Lunch |
| 14:00 – 15:30 | Group on Earth Observations (GEO) – Vanessa Aellen, Technical Expert for Water, GEO Secretariat, Switzerland  
Tropical Cyclone Programme (TCP) and its regional bodies, incl. the intergovernmental ones in Asia (ESCAP/WMO Typhoon Committee & WMO/ESCAP Panel on Tropical Cyclones) – Taoyong Peng, Chief TCP Division on behalf of Andrew Burton, Bureau of Meteorology (BoM), Australia  
RA I (Africa) – Richard Philippe, Director Direction de la météorologie nationale and Permanent Representative of Cameroon with WMO  
RA II (Asia), incl. RIMES – K.J. Ramesh, Director General of Meteorology, India Meteorological Department (IMD), Ministry of Earth Sciences, India |
| 15:30 – 16:00 | Coffee |
### Session 3 (continued)

<table>
<thead>
<tr>
<th>Time</th>
<th>Speakers and Organizations</th>
</tr>
</thead>
</table>
| 16:00 – 17:00 | RA III (South America) – Carlos Frederico Angelis, General-Coordination for Operations and Modelling, Centro Nacional de Monitoramento e Alertas de Desastres Naturais (Cemaden), Brazil  
RA IV (North America, Central America and the Caribbean) – Albert A.E. Martis, Director Meteorological Department Curacao and Permanent Representative of Curacao & St. Maarten with WMO  
RA V (South-West Pacific) – Dodo Gunawan, Center for Climate Change and Air Quality, Meteorological, Climatological and Geophysical Agency (BMKG), Indonesia |

**Day 3 – Friday, 16 December 2016**

### Session 3 (continued)

<table>
<thead>
<tr>
<th>Time</th>
<th>Speakers and Organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00 – 09:30</td>
<td>RA VI (Europe) – Karolin Eichler on behalf of Axel Thomalla, Deutscher Wetterdienst (DWD), Germany</td>
</tr>
</tbody>
</table>

### Session 4: Discussion on WMO DRR Roadmap Implementation Plan

<table>
<thead>
<tr>
<th>Time</th>
<th>Notes/Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:30 – 12:30</td>
<td>The discussion should address how each RA’s/TC’s/TP’s mandates, priorities, projects/activities, and challenges – as formulated in their plans – contribute to the WMO DRR priority – and in particular to the Implementation Plan of the WMO DRR Roadmap – and to the implementation of the Sendai Framework for DRR 2015-2030 through the lenses of i) hazard and risk assessments, ii) risk reduction through prevention, mitigation, and preparedness (incl. MHEWS); iii) response, recovery, and rehabilitation; and iv) risk transfer.</td>
</tr>
</tbody>
</table>

**Coffee**

### Session 4 (continued)

<table>
<thead>
<tr>
<th>Time</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:00 – 12:30</td>
<td>Discussion WMO DRR Roadmap Implementation Plan</td>
</tr>
<tr>
<td>12:30 – 13:30</td>
<td>Lunch</td>
</tr>
</tbody>
</table>

### Special Session

<table>
<thead>
<tr>
<th>Time</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:30 – 14:30</td>
<td>Forecast-based Financing: Mainstreaming of the early warning early action model into Red Cross Red Crescent disaster management of the International Federation of Red Cross and Red Crescent Societies (IFRC) worldwide – Erin Coughlan &amp; Andrew Kruczynski, Red Cross Red Crescent Climate Centre, The Netherlands / Department of Earth and Environmental Sciences, Columbia University, USA</td>
</tr>
</tbody>
</table>

### Session 5: Review of the Draft Summary from Sessions 3 and 4 and Closing

<table>
<thead>
<tr>
<th>Time</th>
<th>Activities</th>
</tr>
</thead>
</table>
| 14:30 – 15:00 | Finalization of the draft summary and of the 2016 DRR FP RA-TC-TP meeting recommendations – all  
Action points, next steps and important dates throughout 2016 – Fred Branksi  
Official closing of the 2016 (3rd) DRR FP RA-TC-TP meeting |
Annex IV: Decisions made by the 2016 (3rd) Meeting of the Disaster Risk Reduction Focal Points of WMO Regional Associations, Technical Commissions and Programmes DRR FP RA-TC-TP

1. The Secretariat will prepare a letter, in conjunction with the Co-Chairpersons, to the President of WMO to clarify the reporting roles, procedures and governance (such as membership, also from technical and co-sponsored programmes) of the DRR FP RA-TC-TP and of the DRR User Interface Working Groups (UI-WGs). These processes have become unclear since the Co-Chairpersons of the Executive Council Working Group on DRR (EC WG/DRR) are no longer available. Moreover, there is uncertainty around whether the EC WG/DRR will be able to meet during 2017. DRR governance-related recommendations should be included in the DRR document presented to the sixty-ninth session of the WMO Executive Council (EC-69) in May 2017.

2. When preparing the draft procedures for assistance to Members who have been, or are about to be, impacted by significant events which may restrict their abilities to provide critical services, the Secretariat should examine and, where possible, use the Emergency Response Activities (ERA) procedures and examine other agencies that have similar, successfully implemented procedures such as United Nations Office for the Coordination of Humanitarian Affairs (OCHA).

3. The Secretariat should investigate extending the current HelpDesk for Integrated Flood Management (IFM) which was developed within the framework of the Associated Programme on Flood Management (APFM) to broader DRR aspects, especially the concept of “support-based partners”. This would not be a 24/7 service but rather an information resource, such as a well-organized webpage, that would point at further support mechanisms and at national/regional DRR protocols.

4. The Secretariat will draft a letter to the Secretary-General (SG) of WMO requesting that a second coordinated assessment survey of the capacities of National Meteorological and Hydrological Services (NMHSs) to support DRR be undertaken again (previously undertaken in 2006) to establish a baseline of DRR capability following the adoption of the Sendai Framework, as laid out in the WMO DRR Roadmap. The results will provide critical information also to UNISDR and other partners.

5. The Key Performance Indicators (KPIs) and Key Outcomes (KOs) associated with the Expected Results and the DRR Priority of the WMO Strategic and Operating Plans 2016-2019 need to be updated and passed to EC via the EC WG/DRR and the EC WG/SOP. A Work Plan for the DRR Services Division at the Secretariat should also be developed.

6. DRR Roadmap summary – From the various Congress and Executive Council decisions (Appendix IV), the Meeting concluded that the Roadmap required the following (and noted that much of this is already included):

   Aim:
   - guide WMO activities to support all components and phases of disaster risk management (enhance service delivery to DRR stakeholders)
   - guide their further enhancement and coordination

   Vision of a “DRR-services ready NMHS”:
Co-produce and co-deliver user-driven services for DRM in multiple sectors and at various spatial and temporal scales

Fully link vulnerability, exposure and impact data to hazard information

**Objectives:**

- Provide a *framework* for Members to enhance their NMHSs contribution to DRR/DRM
- Provide mechanism to enhance WMO programmatic *coordination/collaboration* in DRR/DRM
- Provide *guidance* to WMO how to support DRR/DRM at all levels → knowledge products
- Reference and leverage *developments in capabilities* → S&T/R&D, pilot/demonstration projects, training, etc.
- Enhance the *role/visibility* of WMO/NMHSs in DRR governance
- Describe *requirements* (monetary and non-monetary)

The meeting examined possible sub-structuring of activities in the Roadmap:

- **(7) priorities** included in the WMO SP/OP and most RAs’ OPs *(such as DRR, GFCS, WIGOS, etc.)*
- **Levels** *(global / regional implementation, national guidance)*
- **Levels of development** of Members and their NMHSs *(based on the DRR survey)*
- DRR Programme **thematic areas** *(components of DRM / Sendai Priorities for Action)*
- **Activity types** *(stakeholder/user engagement, partnerships, knowledge products, pilot/demonstration projects, research, events)*
- **Phases** *(budgetary periods, assessment-development-testing-broad implementation, short vs long term)*
- **Societal / Grand Challenges** *(WWRP/WCRP)*

It was noted that all existing WMO plans *(such as the WMO Strategic and Operating Plans, the RAs’, TCs’ and TPs’ plans, etc.)* need to be considered when implementing the Roadmap. Several TCs *(such as CBS and Chy)* are in the process of developing new work plans. It was also noted that the Implementation Plan should contain a resource section *(financial and human → donors, NMHSs, Secretariat).*

7. The Secretariat should look to establish a workspace *(e.g. a portal on the WIS Wiki)* so that documents for comments and editing can be stored there to enable easy access for the DRR FP RA-TC-TP and others. For future meetings of the DRR FPs it could be considered to have joint presentations of the programmes *(from the Secretariat side)* and the RAs and TCs.

8. The meeting noted that DRR Programme activities need to be more tightly coupled and coordinated with SWFDP, CIFDP and other projects and activities and that this should be incorporated into the DRR Roadmap Implementation Plan. The activities should also complement the roles of the RAs *(since almost all projects are regionally/sub-regionally organized)* and of other WMO community groups as well as the overarching WMO Strategy for Service Delivery.

9. The meeting requested that, where possible, the DRR Roadmap Implementation Plan should consider and leverage the work being undertaken by other programmes and divisions on Quality Management Systems (QMS) and competencies.
10. Discussion on the “Global MeteoAlarm” Project:

   a. The European Meteoalarm initiative is seen as an aggregator of data, not a generator of data. It should be seen as a data service. Meteoalarm may be a proprietary name, so Global MeteoAlarm may not necessarily be appropriate.

   b. CAP is an enabler for this Project so existing initiatives and efforts to extend CAP to all Members must be supported.

   c. The work being undertaken by the Inter Programme Task Team on Climate, Weather and Water Extremes (IPTT-CWWE) for implementing Resolution 9 (Cg-17) and the SEE-MHEWS-A project are seen as a prototype for such a global service.

   d. The Project should carefully note the outcomes of the Meteoalarm usability study which is being conducted.

   e. The Project should also consider the work being undertaken by the European Response Coordination Centre (ERC) and the European Severe Storms Laboratory (ESSL) as well as the outputs of the ARISTOTLE project and the European Flood Advisory Service (EFAS).

   f. The Severe Weather Information Centre (SWIC), which is operated on behalf of WMO by the Hong Kong Observatory of Hong Kong, China, could be the logical base for the final service.

11. The Secretariat should develop an email alias for the DRR FP RA-TC-TP.

12. The Terms of Reference of the DRR FP RA-TC-TP should be examined by the Meeting and assessed for their appropriateness (included in Appendix VI) and potential updating.

13. Actions listed by Co-Chairpersons:

1. Report of meeting  Sec & Co-chairpersons  Early Jan (Mar)
2. Workplan and telecon schedule  Sec & Co-chairpersons  Jan (Mar)
3. Reporting mechanism  Co-chairpersons  Dec-Jan
4. Survey release  Co-chairpersons  Sept
5. Share mandates & ToRs (for update)  Sec  Mar
6. FP to write a short note on how their RAs’/TCs’ activities contribute to the Roadmap and its IP, i.e. what they are already undertaking and what they have requested / committed to do in the future  FPs  Mar
7. Consolidate CB [& Programme] inputs  FPs  May
8. DRR Roadmap review & restructuring
   a. Finalization of the Roadmap for approval by the President of WMO  mid Mar
   b. Initial structure of the Implementation Plan  Co-chairpersons  Mar
   c. Major thematic organization of the Implementation Plan  All  Mar
   d. Section assignment & writing  All  Mar-Apr
   e. Iterate  All  Mar-Jun
9. EC Recommendation & Report  Sec & Co-chairpersons  Mar
10. Next meeting  All  Jun-Jul
Annex V: Decisions by the World Meteorological Congress and the WMO Executive Council with regards to Disaster Risk Reduction

Excerpt from Final Report EC-66

Resolution 8 (EC-66)

WMO DISASTER RISK REDUCTION ROADMAP

THE EXECUTIVE COUNCIL,

Recalling Resolution 27 (Cg-XV): WMO Strategic Plan, in which DRR is a strategic priority area,

Noting:

(1) The significant importance of Disaster Risk Reduction (DRR) to WMO Members,

(2) WMO DRR activities are fundamentally based upon, and are in support of, the core work of NMHSs,

Noting further:

(1) The Hyogo Framework for Action (HFA) 2005-2015,

(2) The third World Conference on Disaster Risk Reduction (WCDRR-III) that is planned to be held from 14 to 18 March 2015, in Sendai, Japan, would consider for adoption the Post-2015 Framework for Disaster Risk Reduction,

Considering that focused effort should be made by WMO Members to provide expertise, in support of authoritative risk-informed decision-making, to:

(1) Further develop and implement Multi-Hazard Early Warning Systems that support readiness, response and resilience of nations and communities,

(2) Advance understanding of high-impact meteorological, hydrological and environmental events, and rapid transfer of scientific and technological knowledge to DRR decision-making,

(3) Support effective communication of warning information to stakeholders,

Emphasizing that the WMO DRR programme should facilitate efforts that promote delivery of authoritative forecast and warning information to decision support mechanisms at local, national, regional and global levels, through:

(1) Coherent and consistent implementation of WMO DRR priorities within all relevant programmes and projects of the WMO, in the light of the recommendations of the regional associations and, where appropriate, the advice of the technical commissions,

(2) Primary consideration to enhance NMHSs’ capabilities to conduct their core activities,

(3) Clear identification of the role of NMHSs to deliver authoritative, and where possible, impact-based forecasts and warnings among WMO partners, UN bodies, and external planning processes, such as the Post-2015 Framework for DRR,
Requests the Secretary-General:

(1) In consultation with Members, to urgently develop a WMO DRR roadmap of prioritized and realistically achievable activities and deliverables, that are consistent with the WMO Strategic and Operating Plans, as well as the work plans for relevant WMO Programmes and projects;

(2) To present a draft WMO DRR roadmap to Cg-17 for consideration and to be reflected in the WMO Strategic and Operating Plans 2016-2019;

(3) To coordinate WMO-wide participation in the preparation and drafting of the Post-2015 Framework for DRR, in line with the development of the WMO DRR roadmap;

(4) To provide regular updates to Members on the progress of WMO DRR programme, including the WMO-wide engagement in the Post-2015 Framework for DRR and the planning of relevant events at WCDRR-III.

Excerpt from Final Report EC-67

Establishment of the Working Group on Disaster Risk Reduction

3(8).1 The Council acknowledged the directions given by the Seventeenth World Meteorological Congress (Cg-17) on the implementation of the Disaster Risk Reduction (DRR) activities of WMO, and decided that there is a need for the establishment of an expert body to guide the relevant activities of WMO in this important area, including:

   a) implementation of the WMO DRR priority in the WMO Strategic Plan 2016-2019,
   b) assistance to Members to implement the Sendai Framework for DRR 2015-2030, and
   c) WMO participation in the implementation of the United Nations Plan of Action on DRR for Resilience.

3(8).2 The Council recalled that Cg-17 highlighted that the WMO DRR Roadmap emphasizes the role NMHSs need to play across all timescales, such as the provision of weather-specific early warnings with improved lead time, slower onset seasonal or climate-related information, and related hazard and risk information for planning and prevention purposes, including the reduction of existing risks and the prevention of the creation of new risks. The Council stressed that the DRR Roadmap should reflect the need for NMHSs to actively engage with disaster risk management (DRM) agencies, strengthening partnerships with other relevant stakeholders (e.g. National Red Cross/Red Crescent Societies), and taking advantage of all relevant resources and initiatives.
Resolution 5 (EC-67)

EXECUTIVE COUNCIL WORKING GROUP ON DISASTER RISK REDUCTION

THE EXECUTIVE COUNCIL,

Noting:

(1) The WMO Strategic Plan 2016–2019,
(2) Resolution 6 (EC-LXIII) – Executive Council Working Group on Service Delivery,
(3) Resolution 5 (Cg-17) – Public Weather Services Programme,
(4) Resolution 2 (Cg-17) – Implementation of the WMO Strategy for Service Delivery,
(5) Resolution 23 (Cg-XVI) – Tropical Cyclone Programme,
(6) Resolution 24 (Cg-XVI) – Marine Meteorology and Oceanography Programme,
(7) Resolution 48 (Cg-XVI) – Implementation of the Global Framework for Climate Services, 22
(8) Resolution 52 (Cg-XVI) – Disaster Risk Reduction Programme,
(9) Resolutions 9 (Cg-17) – Identifiers for cataloguing extreme weather, water and climate events,
(10) Resolution 10 (Cg-17) – Sendai Framework for Disaster Risk Reduction 2015–2030 and WMO participation in the International Network for Multi-hazard Early Warning Systems,
(11) Resolution 53 (Cg-XVI) – Aeronautical Meteorology Programme,

Recognizing that:

(1) The vision of the Disaster Risk Reduction (DRR) Programme is to enhance, in a more collaborative, cost-effective, systematic and sustainable manner, the science-based contributions of National Meteorological and Hydrological Services (NMHSs) to the protection of lives, livelihoods and property, through strengthened capabilities and partnerships in the field of DRR, at national and international levels,
(2) Disaster risk reduction is a cross-cutting issue requiring the expertise and collaboration of weather, climate and hydrological professionals, disaster risk management practitioners, social and economic specialists and sectoral experts,
(3) The WMO DRR Roadmap outlines the role and contribution of NMHSs in the entire disaster risk management process,
(4) That the Sendai Framework for Disaster Risk Reduction 2015–2030 addresses risks from all hazards, both natural and man-made, with many provisions highly relevant to NMHSs,

Decides to establish an Executive Council Working Group on Disaster Risk Reduction with the following terms of reference:
(1) To provide guidance on implementation of the DRR Programme, in particular with respect to:

a) Aligning the DRR Programme with the Sendai Framework for Disaster Risk Reduction;

b) Developing the WMO DRR Roadmap and its subsequent updates as required;

c) Strengthening coordination mechanisms among WMO Programmes, technical commissions, regional associations, the Secretariat and relevant partners and cosponsored programmes;

b) Reviewing the implementation approaches and outcomes of the regional/national cooperation projects and programmes in DRR, and assessing their effectiveness; developing new projects and/or expanding existing ones;

e) Documenting good practices and developing guidelines in the thematic areas of the DRR Programme;

f) Standardization of hazard information for loss and damage assessment;

g) Capacity development approaches for WMO DRR activities;

h) Engaging NMHSs to fully support, as an important contributor to disaster risk management, national reconstruction and DRR planning following a major disaster;

i) Coordinating emergency response activities, such as those related to air-borne hazards;

j) Strengthening cooperation and coordination between providers of weather-, climate and hydrology-related products and services and users (customers) in the public and private sectors, including the media, academia, social and economic sciences, international and intergovernmental agencies and non-governmental organizations, at national and international levels;

k) Strategies and priorities that can be applied by NMHSs in the implementation of the WMO Strategy for Service Delivery, in particular in early warning;

l) Participation of WMO in the International Network for Multi-hazard Early Warning Systems;

(2) To provide advice, guidance and recommendations for more effective engagement of WMO Programmes involved in DRR and service delivery activities with the GFCS, in particular the User Interface Programme;

(3) To monitor progress made with the above-mentioned terms of reference and report back to the Executive Council;

**Authorizes** the working group to establish subgroups and task teams as and when required;

**Requests** the Secretary-General to support the work of the working group.
WMO DRR Roadmap

3.2.32 Congress noted Resolution 8 (EC-66) requesting the Secretary-General to “urgently develop a WMO DRR Roadmap of prioritized and realistically achievable activities and deliverables, that are consistent with the WMO Strategic and Operating Plans, as well as the work plans for relevant WMO Programmes and projects”.

3.2.33 Congress emphasized that WMO DRR activities are based upon, and are in support of, the core work of NMHSs. Hence, the WMO DRR Programme should, in close collaboration with relevant technical programmes, and in particular the PWS Programme and Hydrology and Water Resources Programme (HWRP), facilitate efforts that promote delivery of authoritative forecast and warning information to decision-making authorities at local, national, regional, and global levels as well as provide relevant hazard and risk analysis and assessment to assist DRM.

3.2.34 Congress requested the Secretary-General to leverage existing guideline documents already created by expert teams within the TCs, gather lessons learned from NMHSs and disaster management partners, and identify existing gaps within the DRR Roadmap outline, which need to be filled. This will increase efficiency and minimize duplication of effort as the DRR Roadmap and other planning evolves.

3.2.35 Congress emphasized that all DRR work should proceed in consideration of all relevant guidelines and documents created by the expert teams within TCs, as well as input provided from NMHSs’ own DRR roadmaps, frameworks, and best practices.

3.2.36 Congress noted with appreciation that a draft WMO DRR Roadmap was prepared and sent to all the Members for their review and comments.

3.2.37 Congress noted that specific thematic areas to be addressed by the Roadmap should be closely interlinked with the priorities for action of the Sendai Framework for DRR 2015–2030, including the emphasis on a people-centred, multi-hazard approach to DRR underpinned by science and technology.

3.2.38 Congress noted that the Roadmap emphasizes the role NMHSs need to play across all timescales, including the provision of weather-specific early warnings with improved lead time, slower onset seasonal or climate-related information, and related hazard and risk information for planning and prevention purposes, including reducing existing risks and preventing the creation of new risks. In this context, the Roadmap:

   d) References developments in capabilities such as multi-hazard and impact-based forecasting; especially in dissemination and communication of early warnings to emergency managers, the general public, and other relevant stakeholders, with emphasis to support NMHSs of most vulnerable Members, specifically LDCs and SIDs;

   e) Provides a framework for WMO Members to enhance NMHSs’ contributions to their national DRR efforts using in particular the possibilities of national and regional Platforms for DRR and forums, including forecasting, warning, service delivery, communication of forecasts and warnings to the public, and public education efforts;

   f) Provides a mechanism to enhance WMO Members’ and programmatic collaboration in respect of DRR;
g) Identifies both tactical and strategic opportunities to enhance the role of hydrometeorology and therefore NMHSs in global, regional, national, and sub-national DRR and climate change adaptation strategies;

h) Provides mechanisms for engagement with the international DRR stakeholder community, e.g. the United Nations system, regional organizations and economic groupings, the private sector, and humanitarian agencies;

i) Provides guidance and tools to NMHSs to strengthen linkages with emergency managers, decision makers in hydrometeorologically sensitive sectors, and the general public on reducing risk of weather, space weather, climate and water hazards.

3.2.39 Noting the enormous significance of the Sendai Framework for DRR 2015-2030 to the DRR priority of WMO and the need for assisting WMO Members in the effective implementation of this Framework through:

a) Developing DRR knowledge products (e.g. guidelines, standards, training modules) in thematic areas such as hazard and risk assessment, MHEWS, humanitarian planning and response, and disaster risk financing;

b) Assisting with the coordinated national and regional DRR capacity development activities and demonstration projects in these thematic areas;

c) Promoting, engaging in, and facilitating multi-stakeholder partnerships in DRR on different levels.

3.2.40 In this regard, Congress requested the Secretary-General, in consultation with Members and collaboration with technical commissions and regional associations, to develop a final draft of the WMO DRR Roadmap for consideration and approval by the 68th Executive Council. It requested Executive Council to guide its further development and implementation, including monitoring and evaluation, and updating, in line with the Sendai Framework for DRR 2015–2030 adopted by 187 countries and other relevant international development frameworks (e.g. on sustainable development, climate change, humanitarian assistance, and urban issues).

3.2.41 Reemphasizing that the DRR Programme is a cross-cutting programme that coordinates the DRR services supported by various WMO Programmes, Congress requested EC to establish an appropriate governance mechanism to guide the implementation of the WMO DRR priorities through the DRR Programme with the aim to strengthen the capacities of Members, especially of their NMHSs, and the role of the WMO operational and research networks and designated entities assisting and cooperating with WMO, to deliver high-quality services for DRR towards building resilience at all levels.
Annex VI: Terms of Reference of the Disaster Risk Reduction Focal Points of WMO Regional Associations, Technical Commissions and Programmes (DRR FP RA-TC-TP)

Draft Terms of Reference
(as of 5 November 2015)

The disaster risk reduction focal points (FPs) of the WMO regional associations (RAs), technical commissions (TCs) and technical programmes (TPs) (DRR FP RA-TC-TP) will use the following Terms of Reference (ToR):

1) Serve as a point of contact for representation, coordination and promotion of RAs’, TCs’ and TPs’ DRR-related activities and issues;

2) Conduct an ongoing review of the DRR Roadmap, proposing updates where necessary;

3) Propose and coordinate the development of priority initiatives (including suggestions for pilot projects) and plans that integrate the relevant activities of the RAs, TCs and TPs, necessary in supporting the ongoing implementation of the WMO DRR Roadmap and WMO Strategy for Service Delivery;

4) Gather and share information on DRR-related activities and good practices of the RAs, TCs, TPs and other agencies/initiatives in support of the implementation of the DRR Roadmap; and,

Report on progress to the presidents of Technical Commissions (PTC) and the Presidents of Regional Associations (PRA).