



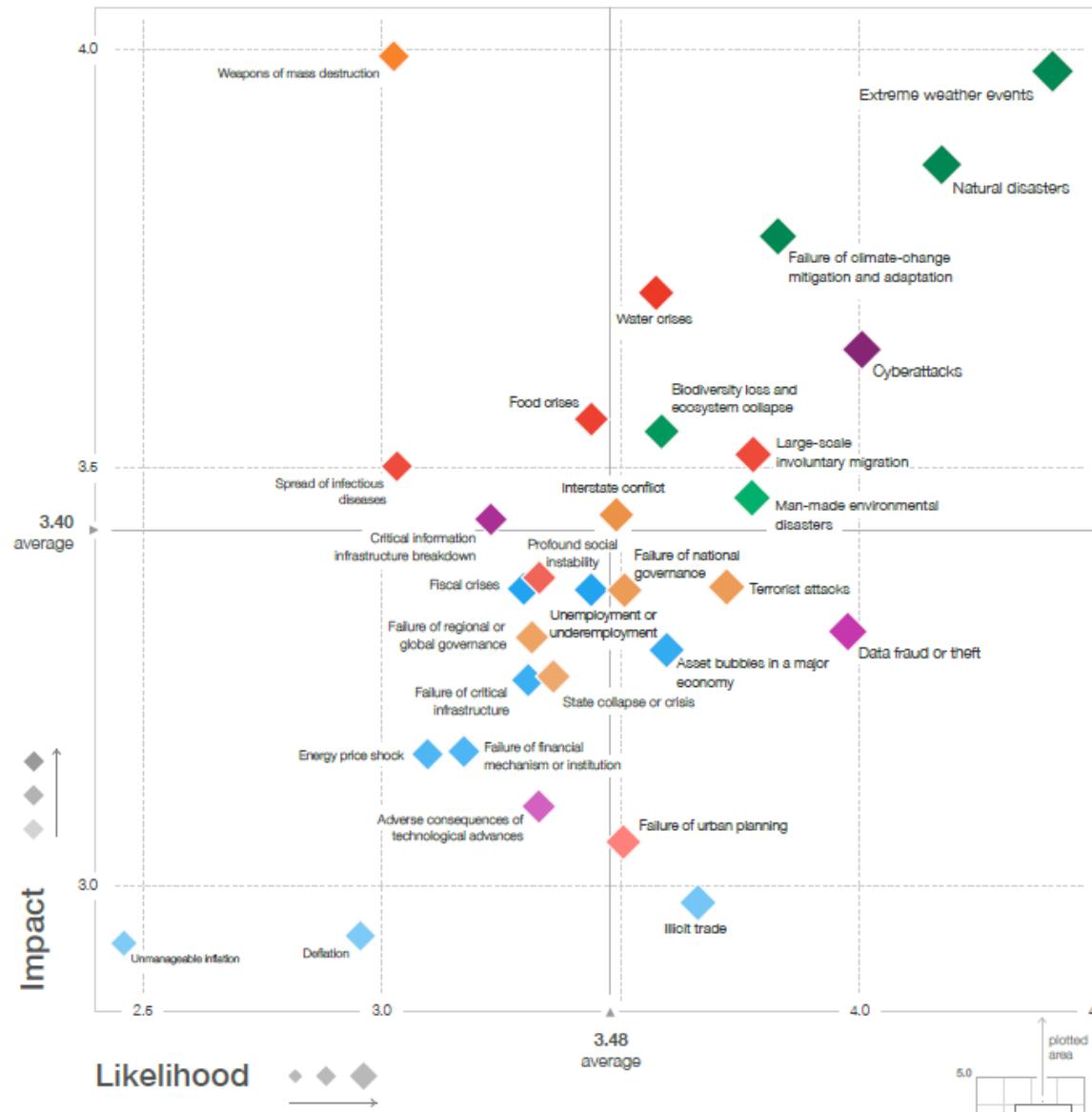
**WMO OMM**

World Meteorological Organization  
Organisation météorologique mondiale

# WMO Perspectives on CAP Implementation Worldwide

# Weather risks are the top economic risks

World Economic Forum, Davos - Global Risk Landscape 2018



Extreme weather events

Natural disasters

Failure of climate-change mitigation and adaptation



WMO OMM

Source: World Economic Forum (2018)

# 17th Session of WMO Congress (Cg-17, 2015)



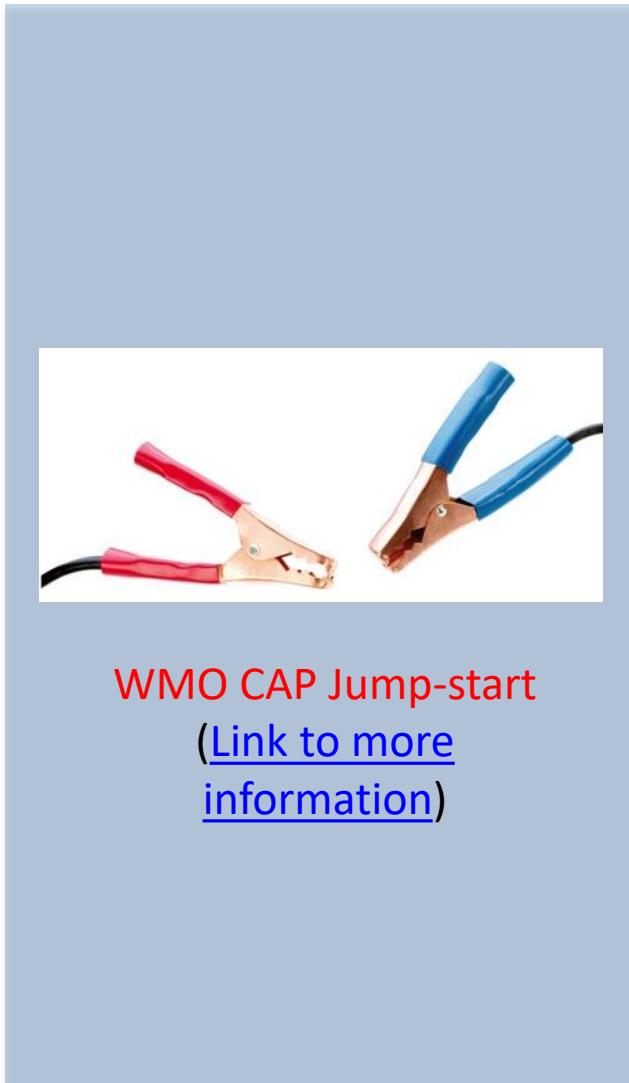
- Requested WMO Secretary-General to provide further guidance to Members on converting weather warnings into the Common Alerting Protocol (CAP) standard format

# Next CAP decision?

- WMO Technical Regulations
  - CAP as a recommended (or mandatory?) standard

# Implementation of CAP

- WMO through PWS programme assists Members through the «CAP Jump-start» arrangement
  - Experts visit NMHSs and provide training and freeware
  - LDCs and developing countries are supported
- There is a need for resources for advancing implementation of CAP





## CAP Jump-Start Workshop, Vacoas, Mauritius

# Training

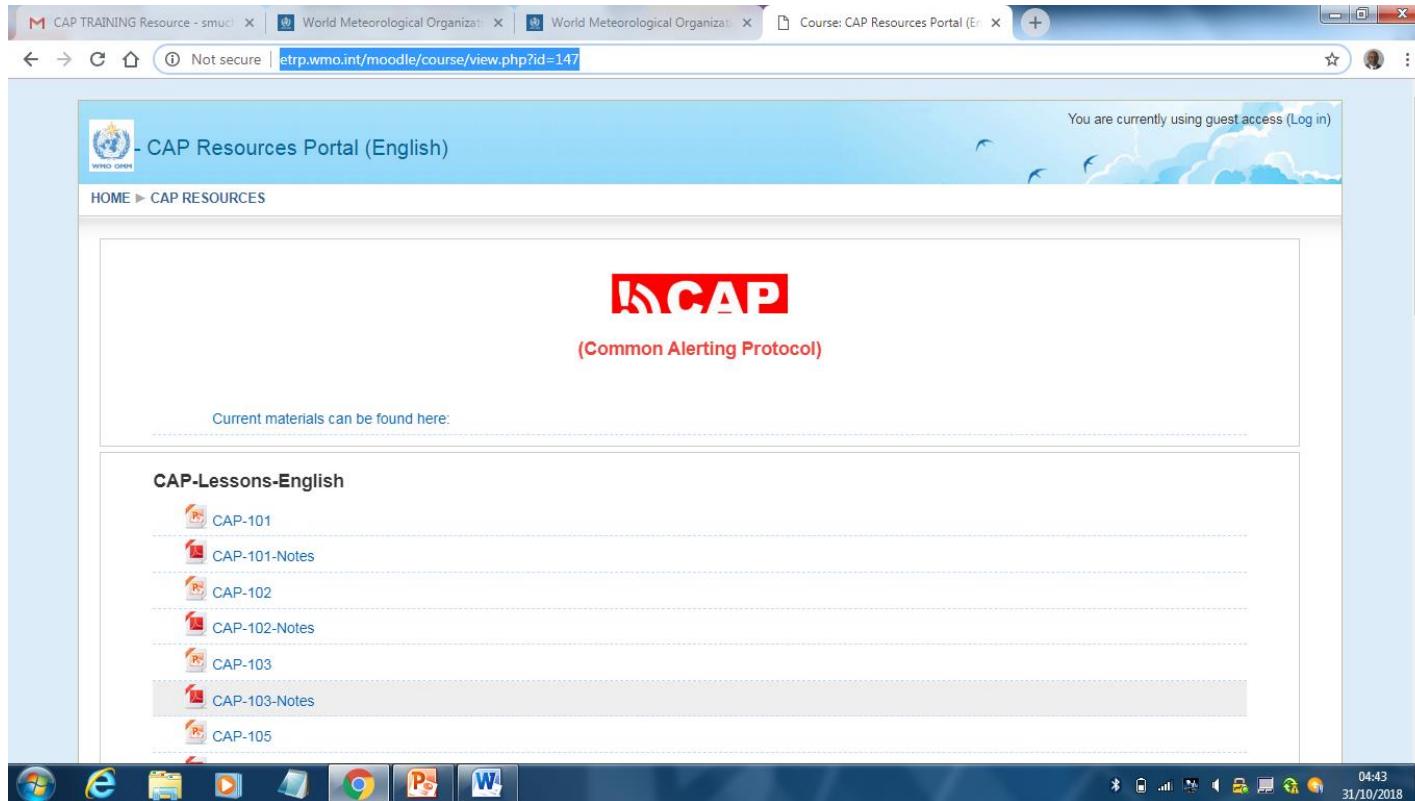
- Saudi Arabia and Middle Eastern Region (Under discussion)
- CAP Workshop, Lao and Vietnam (Oct 2018)
- RA III IBFWS and CAP Workshop 10-14 Sept 2018
- CAP Jump-Start Workshops Curaçao, Grenada, St. Lucia, Dominica, St. Kitts and Nevis & Sint Maarten (18 Feb to 14 March 2018)
- Common Alerting Protocol (CAP) Jump-Start Workshop SIDS, Pacific (Palau, Federated States of Micronesia, Fiji, Tuvalu, Niue, and Nauru) July-August 2017



# Training: Leveraging PWS funded projects

- Severe Weather Forecasting Demostration Project (SWFDP) (Norway, Korea etc)
- Climate Risk & Early Warning Systems (CREWS) (Pacific, S.E Asia, Caribbean, Africa)
- HIGH impact Weather Lake System (known as HighWAY (Kenya, Uganda, Tanzania, Rwanda, Burundi)

# Online Training Platform



etp.wmo.int/moodle/course/view.php?id=147

You are currently using guest access (Log in)

HOME > CAP RESOURCES

**CAP**  
(Common Alerting Protocol)

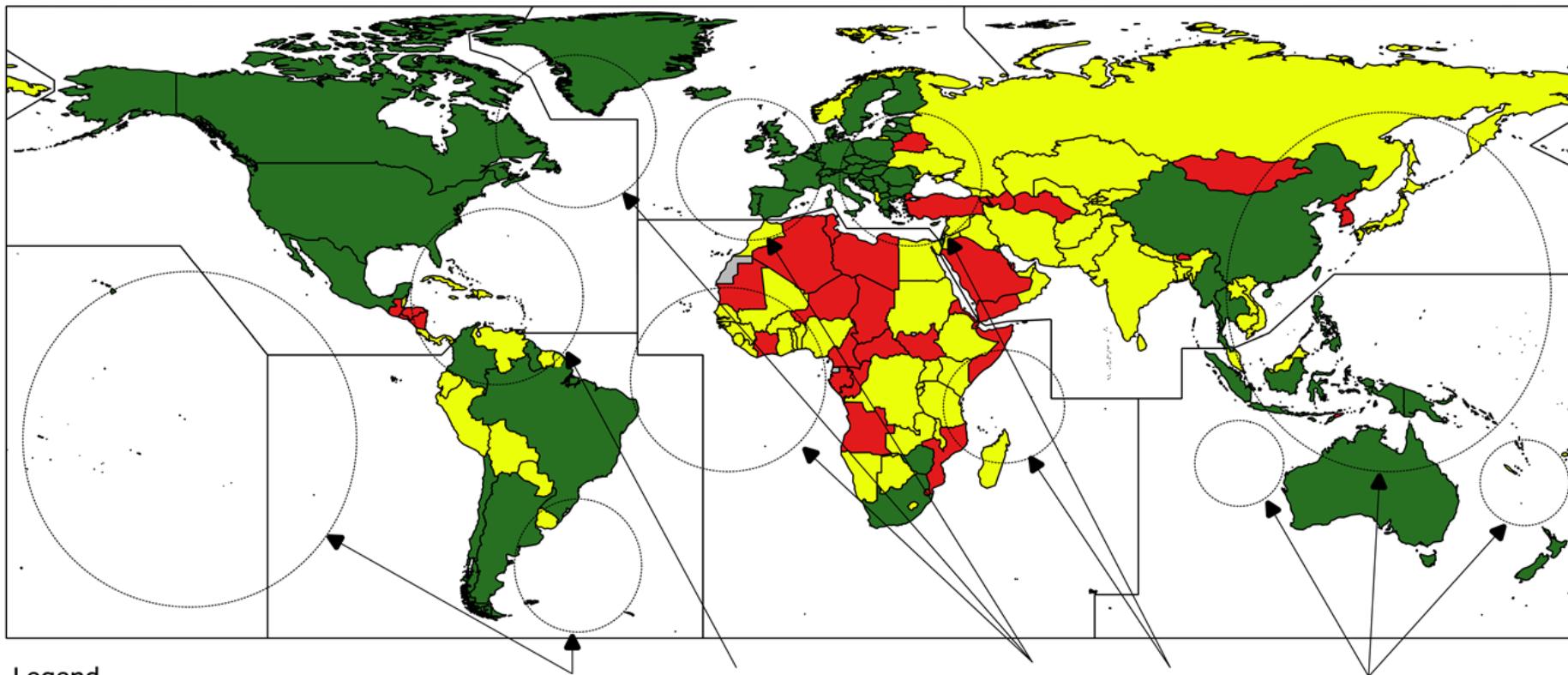
Current materials can be found here:

**CAP-Lessons-English**

- CAP-101
- CAP-101-Notes
- CAP-102
- CAP-102-Notes
- CAP-103
- CAP-103-Notes
- CAP-105

cap.wmo.int

# Implementation Of The Common Alerting Protocol (CAP)



## Legend

- Have Implemented Operational CAP System
- CAP Implementation Process Initiated
- Status Unknown
- Not WMO Member

American Samoa (U.S.)  
 Samoa, Tonga  
 Niue  
 Falkland Islands (U.K., Claimed by Argentina)  
 Tokelau (New Zealand)  
 Wallis and Futuna Islands (France)  
 Pitcairn Islands  
 French Polynesia, Kiribati  
 Cook Islands (New Zealand)  
 Falklands/Malvinas

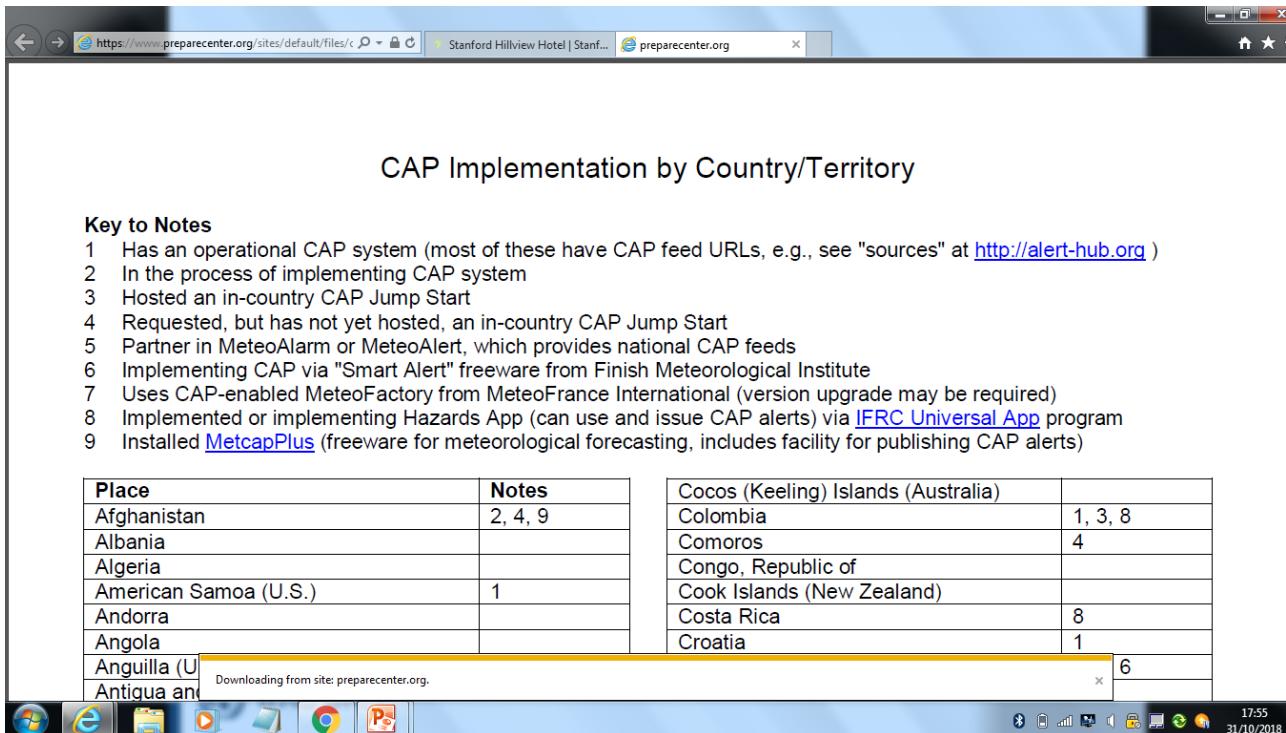
Anguilla (U.K.) Puerto Rico (U.S.)  
 Virgin Islands (U.S.)  
 Aruba (Netherlands) Antigua and Barbuda  
 Barbados Bahamas Bonaire (Netherlands)  
 Curaçao Dominica Dominica Republic  
 Jamaica Montserrat Saba (Netherlands)  
 Saint Lucia Sint Eustatius (Netherlands)  
 Sint Maarten (Netherlands) French Guiana  
 Cayman Islands (U.K.) British Caribbean Territories  
 Guadeloupe (France) Curacao and Sint Maarten  
 Martinique (France) Haiti Virgin Islands (U.K.)  
 Saint Barthélemy (France) Trinidad and Tobago

Republic of Cabo Verde  
 Greenland (Denmark)  
 Faroe Islands (Denmark)  
 Sao Tome and Principe  
 Maldives  
 Comoros Mauritius  
 Palestine  
 Gibraltar (U.K.)  
 Kosovo  
 Mayotte (France)  
 Reunion Island (France)  
 Saint Pierre and Miquelon (France)  
 Seychelles  
 Vatican City State (Holy See)

Guam (U.S.) Taiwan (China)  
 Solomon Islands  
 Hong Kong, China Fiji  
 Macao, China  
 Micronesia, Federated States of  
 New Caledonia Singapore  
 Tuvalu Vanuatu  
 Brunei Darussalam  
 Christmas Island (Australia)  
 Cocos (Keeling) Islands (Australia)  
 Northern Mariana Islands (U.S.)  
 Tibet (China) Timor-Leste

# CAP Implementation

- [https://www.preparecenter.org/sites/default/files/cap\\_implementations\\_28.pdf](https://www.preparecenter.org/sites/default/files/cap_implementations_28.pdf)



Key to Notes

1	Has an operational CAP system (most of these have CAP feed URLs, e.g., see "sources" at <a href="http://alert-hub.org">http://alert-hub.org</a> )
2	In the process of implementing CAP system
3	Hosted an in-country CAP Jump Start
4	Requested, but has not yet hosted, an in-country CAP Jump Start
5	Partner in MeteoAlarm or MeteoAlert, which provides national CAP feeds
6	Implementing CAP via "Smart Alert" freeware from Finnish Meteorological Institute
7	Uses CAP-enabled MeteoFactory from MeteoFrance International (version upgrade may be required)
8	Implemented or implementing Hazards App (can use and issue CAP alerts) via <a href="#">IFRC Universal App</a> program
9	Installed <a href="#">MetcapPlus</a> (freeware for meteorological forecasting, includes facility for publishing CAP alerts)

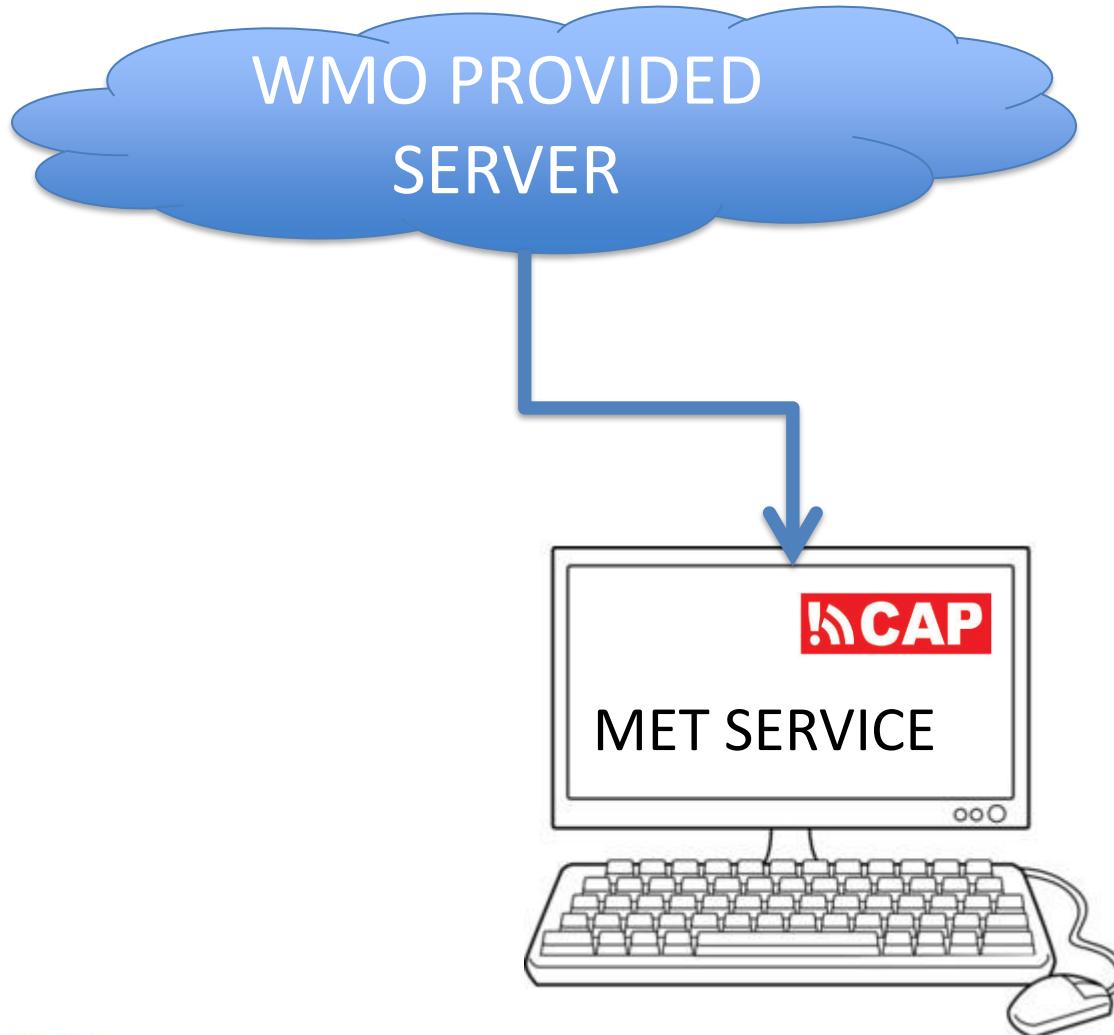
Place Notes

Afghanistan	2, 4, 9
Albania	
Algeria	
American Samoa (U.S.)	1
Andorra	
Angola	
Anguilla (U)	6
Antigua and	
Cocos (Keeling) Islands (Australia)	
Colombia	1, 3, 8
Comoros	4
Congo, Republic of	
Cook Islands (New Zealand)	
Costa Rica	8
Croatia	1

Downloading from site: preparecenter.org.



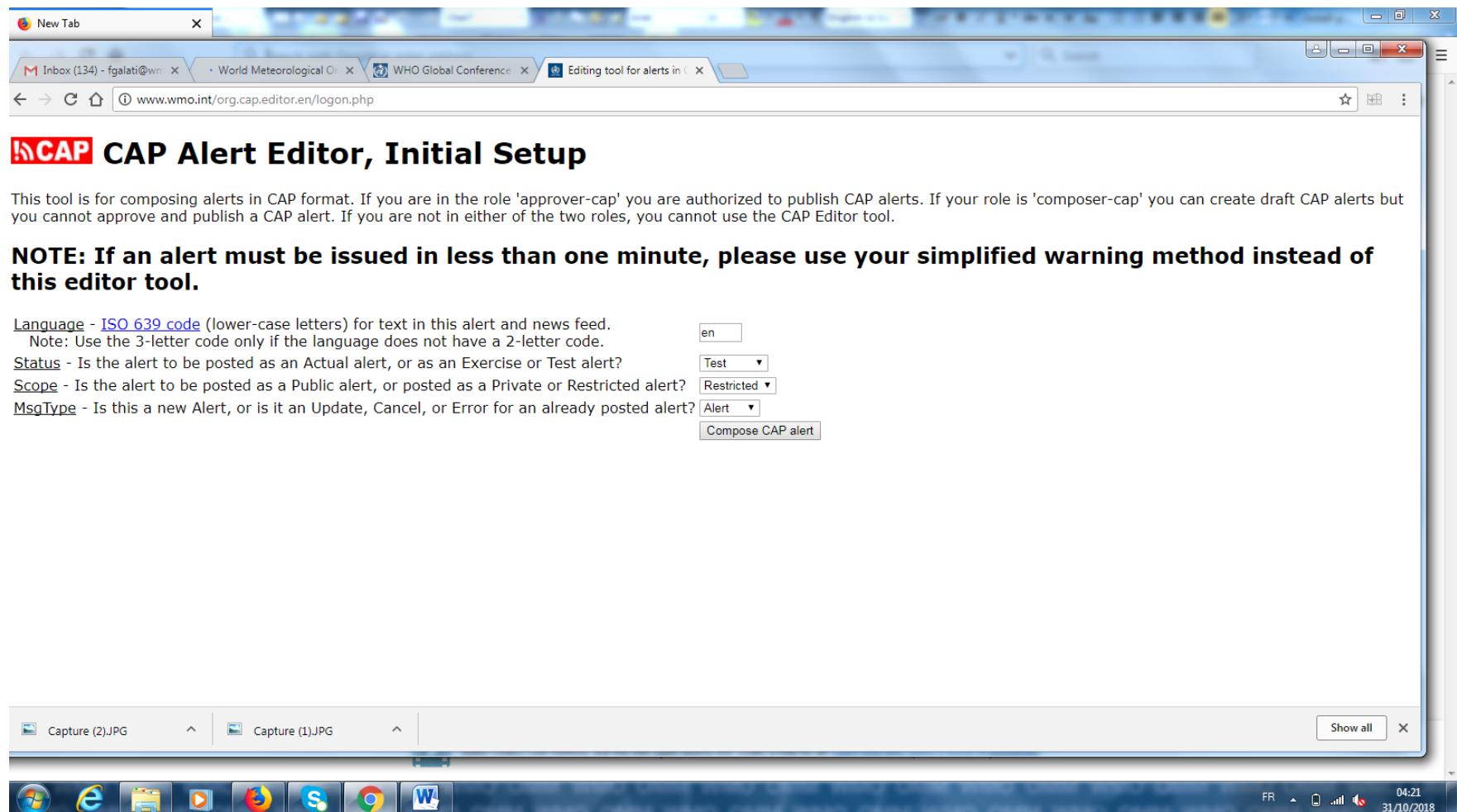
# WMO Online CAP Editing Platform



# WMO Online CAP Editing Platform

- Now working to have an on-line CAP editor on WMO Web
- Targeting NMHSs where Web server access is an issue

# Online Web CAP Editor



**CAP Alert Editor, Initial Setup**

This tool is for composing alerts in CAP format. If you are in the role 'approver-cap' you are authorized to publish CAP alerts. If your role is 'composer-cap' you can create draft CAP alerts but you cannot approve and publish a CAP alert. If you are not in either of the two roles, you cannot use the CAP Editor tool.

**NOTE: If an alert must be issued in less than one minute, please use your simplified warning method instead of this editor tool.**

Language - [ISO 639 code](#) (lower-case letters) for text in this alert and news feed.  
Note: Use the 3-letter code only if the language does not have a 2-letter code.

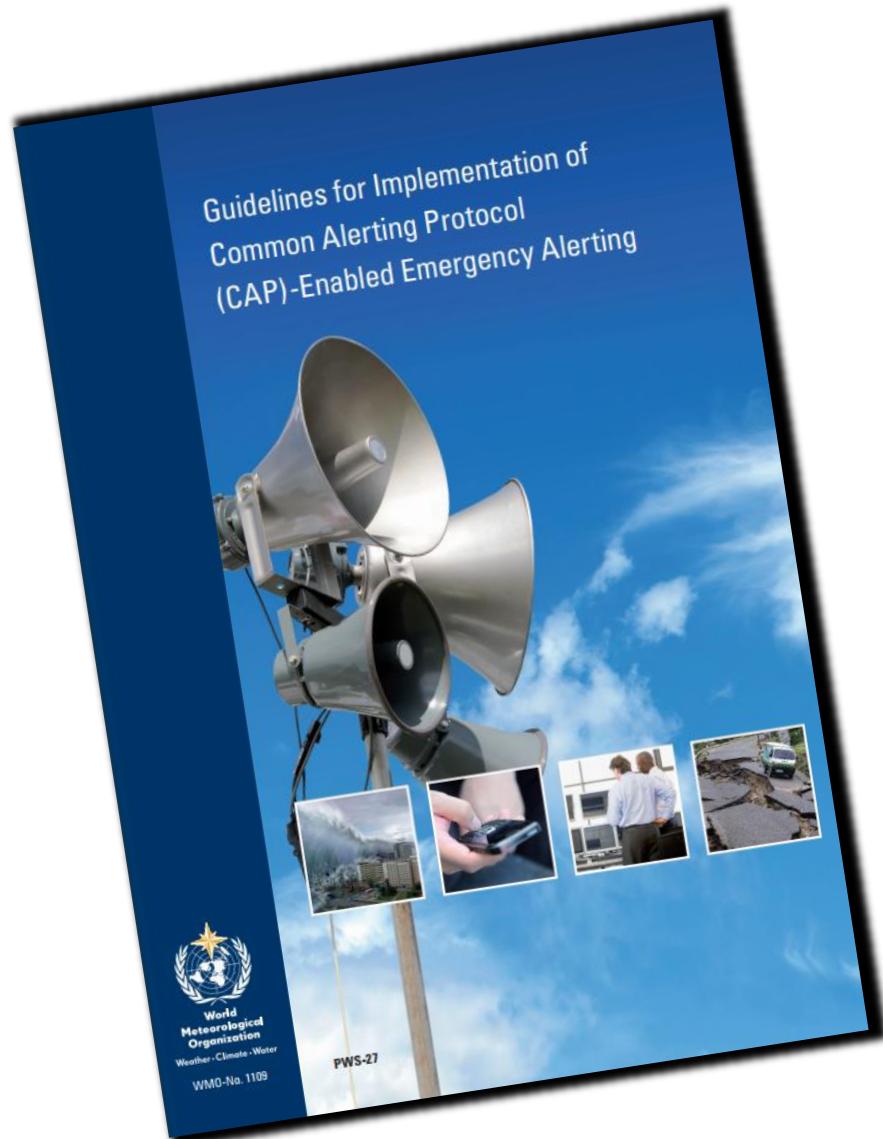
Status - Is the alert to be posted as an Actual alert, or as an Exercise or Test alert?

Scope - Is the alert to be posted as a Public alert, or posted as a Private or Restricted alert?

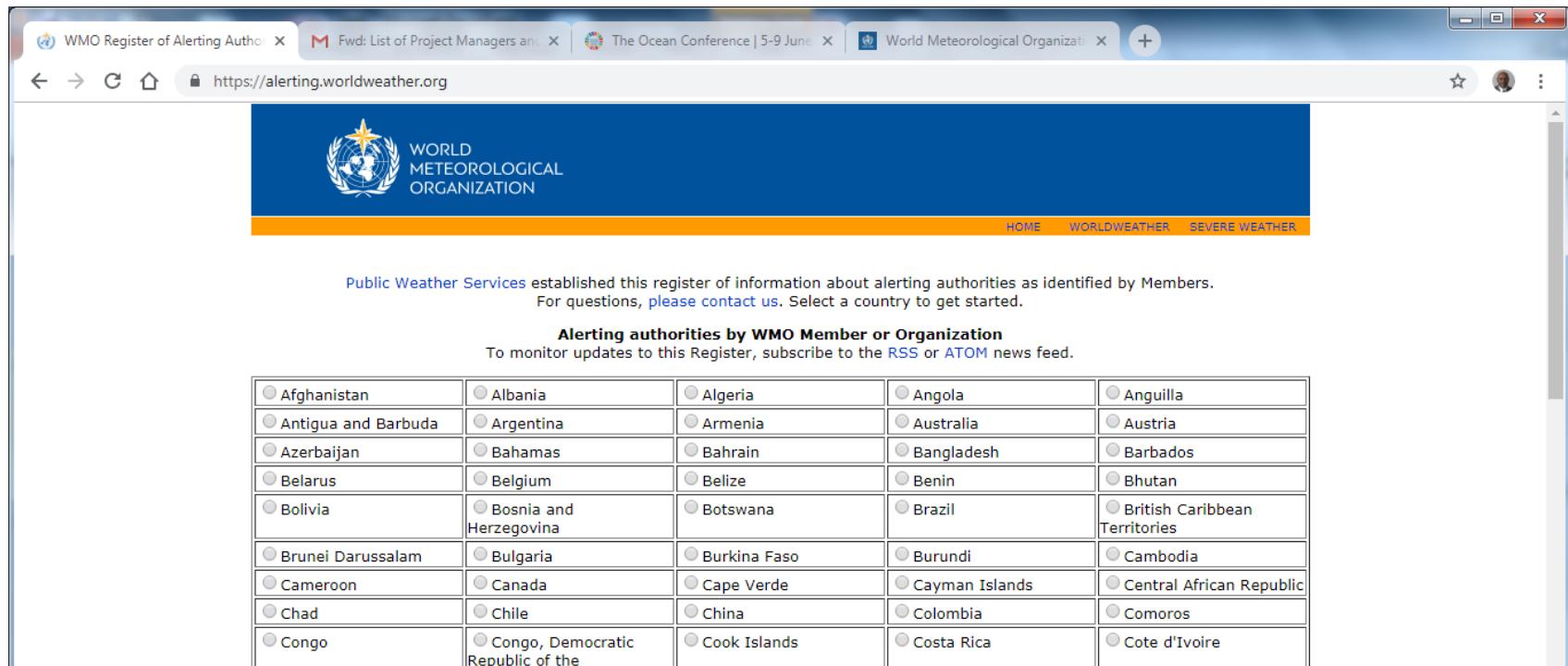
MsgType - Is this a new Alert, or is it an Update, Cancel, or Error for an already posted alert?

# Guidelines

## Guidelines for Implementation of Common Alerting Protocol (CAP)- Enabled Emergency Alerting



# WMO Register of Alerting Authorities



The screenshot shows a web browser window with the following tabs:

- WMO Register of Alerting Autho
- Fwd: List of Project Managers and
- The Ocean Conference | 5-9 June
- World Meteorological Organizati

The main content area displays the WMO logo and navigation links for HOME, WORLDWEATHER, and SEVERE WEATHER. A message from Public Weather Services explains the purpose of the register. Below this, a section titled "Alerting authorities by WMO Member or Organization" lists countries in a grid. The countries listed in the grid are:

Afghanistan	Albania	Algeria	Angola	Anguilla
Antigua and Barbuda	Argentina	Armenia	Australia	Austria
Azerbaijan	Bahamas	Bahrain	Bangladesh	Barbados
Belarus	Belgium	Belize	Benin	Bhutan
Bolivia	Bosnia and Herzegovina	Botswana	Brazil	British Caribbean Territories
Brunei Darussalam	Bulgaria	Burkina Faso	Burundi	Cambodia
Cameroon	Canada	Cape Verde	Cayman Islands	Central African Republic
Chad	Chile	China	Colombia	Comoros
Congo	Congo, Democratic Republic of the	Cook Islands	Costa Rica	Cote d'Ivoire

<https://alerting.worldweather.org/>

# Register Example

WMO Register of Alerting Autho Fwd: List of Project Managers and The Ocean Conference | 5-9 June World Meteorological Organization

https://alerting.worldweather.org

 WORLD METEOROLOGICAL ORGANIZATION

HOME WORLDWEATHER SEVERE WEATHER

Public Weather Services established this register of information about alerting authorities as identified by Members. For questions, [please contact us](#). Select a country to get started.

## WMO Register of Alerting Authorities [ [home](#) ]

- 2.49.0.0.554.0 Meteorological Service of New Zealand Limited
- 2.49.0.0.554.1 GNS Science
- 2.49.0.0.554.2 Ministry of Civil Defence & Emergency Management
- 2.49.0.0.554.3 Ministry of Health
- 2.49.0.0.554.4 Fire and Emergency New Zealand
- 2.49.0.0.554.5 New Zealand Police
- 2.49.0.0.554.6 New Zealand Transport Agency
- 2.49.0.0.554.7 Ministry for Primary Industries

Select one of the above 8 alerting authority records for New Zealand

Authorized registry editors may proceed to the editing page by clicking [here](#).

[Back to top](#)

© World Meteorological Organization, 7bis, avenue de la Paix, Case postale 2300, CH-1211 Geneva 2, Switzerland  
Tel.: + 41(0) 22 730 81 11 / Fax: + 41(0) 22 730 81 81 - [Copyright](#) | [Disclaimer](#) | [Map disclaimer](#)

03:26  
01/11/2018

# CAP messages URL

WMO Register of Alerting Autho Fwd: List of Project Managers and The Ocean Conference | 5-9 June World Meteorological Organizati

<https://alerting.worldweather.org>

Public Weather Services established this register of information about alerting authorities as identified by Members. For questions, [please contact us](#). Select a country to get started.

## WMO Register of Alerting Authorities [ [home](#) ]

OID: 2.49.0.0.554.0 WMO Member: New Zealand ISO 3166: NZ NZL 554

Issuing Organization: Meteorological Service of New Zealand Limited

Hazard Categories: Met

Authorization Basis: It is the Minister of Transport who, under the Meteorological Services Act 1990 (as amended in 1992), is responsible for ensuring the provision of meteorological warnings and forecasts for New Zealand and the collection of data to support these services. Furthermore, the Minister is required to designate an organization that shall provide the authorised warning service in New Zealand.

CAP Feed URL(s):  
Language: English URL: <https://alerts.metservice.com/cap/rss>

Forecasts URL: <http://www.worldweather.org/046/m046.htm>

Alerting Area (NWSE): -34.000 166.00 -48.000 179.000

**Map view of the typical area for this alerting authority.**



Hazard Categories

- Geo:** Geophysical (earthquakes, volcanoes, tsunami, etc., includes landslide)
- Met:** Meteorological (weather, storms, etc. includes flood)
- Safety:** General emergency and public safety
- Security:** Law enforcement, military, homeland and local/private security
- Rescue:** Rescue and recovery
- Fire:** Fire suppression and rescue
- Health:** Medical and public health

03:27  
01/11/2018

# WMO Global Multi-hazard Alert System (GMAS)

- GMAS under development as an authoritative source of warnings and information related to high-impact weather, water, ocean and climate events
- To provide authoritative information and advice to UN agencies, humanitarian communities, national disaster management etc



# WMO Global Multi-hazard Alert System (GMAS)

- **Live Feed Widget** developed through collaboration of PWS and CPA of WMO and Hong Kong Observatory (HKO)



- You can see it at:  
[https://www.wmo.int/pages/index\\_en.html#alertwidget](https://www.wmo.int/pages/index_en.html#alertwidget)





WORLD  
METEOROLOGICAL  
ORGANIZATION

Weather · Climate · Water

# Severe Weather Information Centre 2.0 (Beta)

Home | Tropical Cyclones | Severe Weather Observations



## Warnings in Effect (Full List)

**Slovakia**  
  
Slovak Hydrometeorological Institute  
Severity: ■ ■

**Italy**  
  
Italian Air Force National Meteorological Service  
Severity: ■

**New Zealand**  
  
MetService  
Meteorological Service of New Zealand Ltd. (MetService)  
Severity: ■ ■

**Hong Kong, China**  
  
Hong Kong Observatory  
香港天文台 HONG KONG OBSERVATORY  
Severity: ■

**Slovenia**  
  
Environmental Agency of the Republic of Slovenia  
Severity: ■ ■

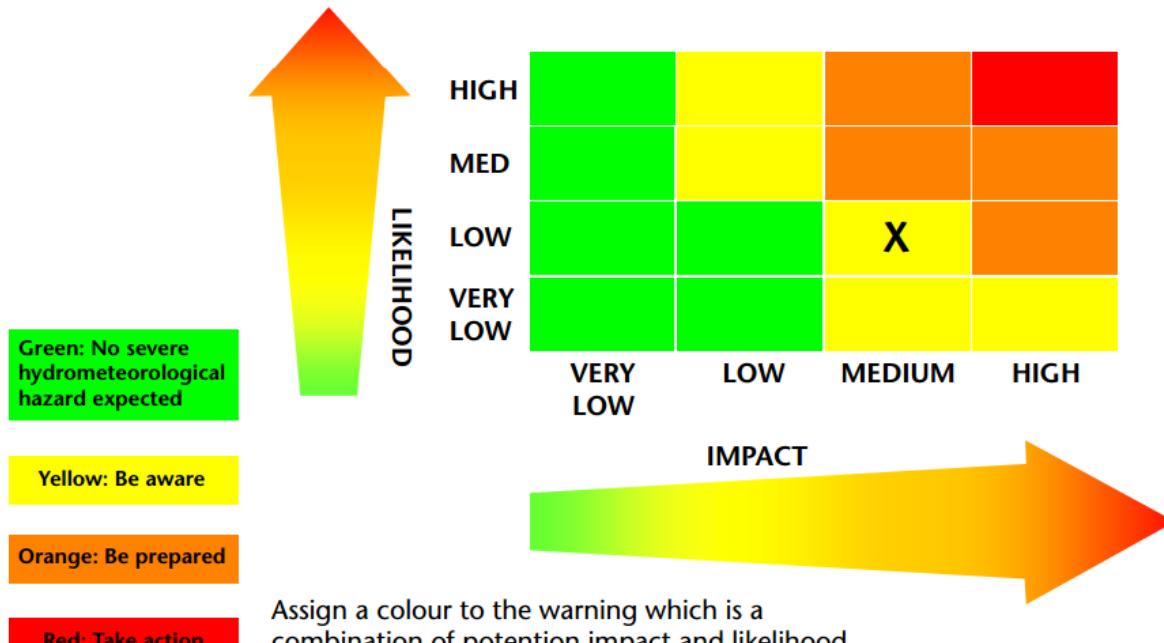


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# Impact Based Forecast Risk Matrix



(Source: Met Office, United Kingdom)

Figure 2. Risk matrix



# The Impact-based Forecast (IBF) and CAP

- Question of communication of format of IBF in relation to CAP format
- how the Forecasting and Warning Services Initiative that takes into account the impacts can take better advantage of CAP

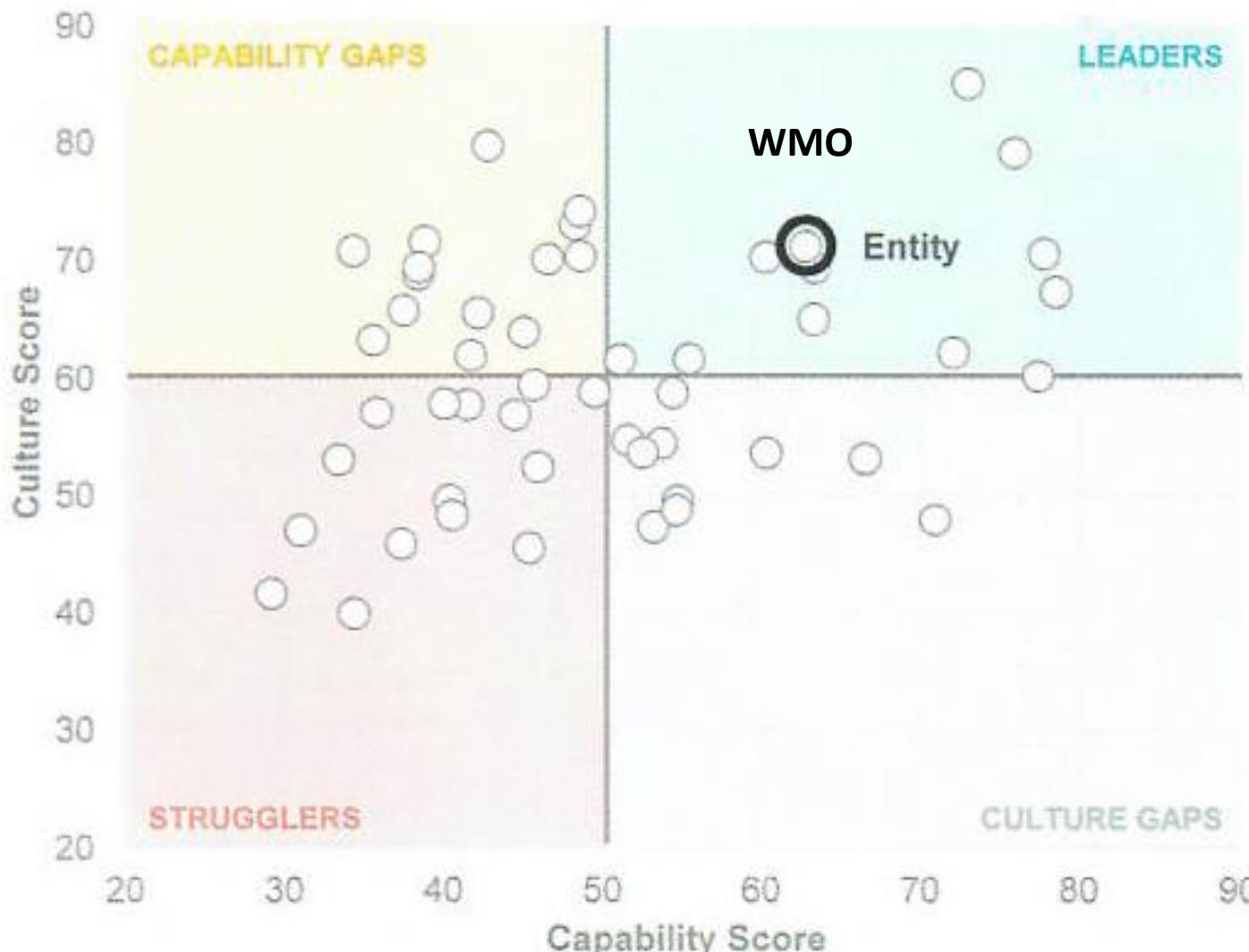


# Innovativeness of 52 UN Organizations

WMO 3/52 Culture, 11/52 Capability & one of the 11 Leaders

## CAPABILITY & CULTURE MAP, 52 ENTITIES (selected entity circled)

Aggregate scores for culture and capability (structures, strategy, leadership)



WMO

Thank you  
Merci



**WMO OMM**

World Meteorological Organization  
Organisation météorologique mondiale