



## ITU-GSMA Regional Training Workshop on ICTs for Disasters Management for Arab States

**Khartoum, Sudan 28-29 August 2017**

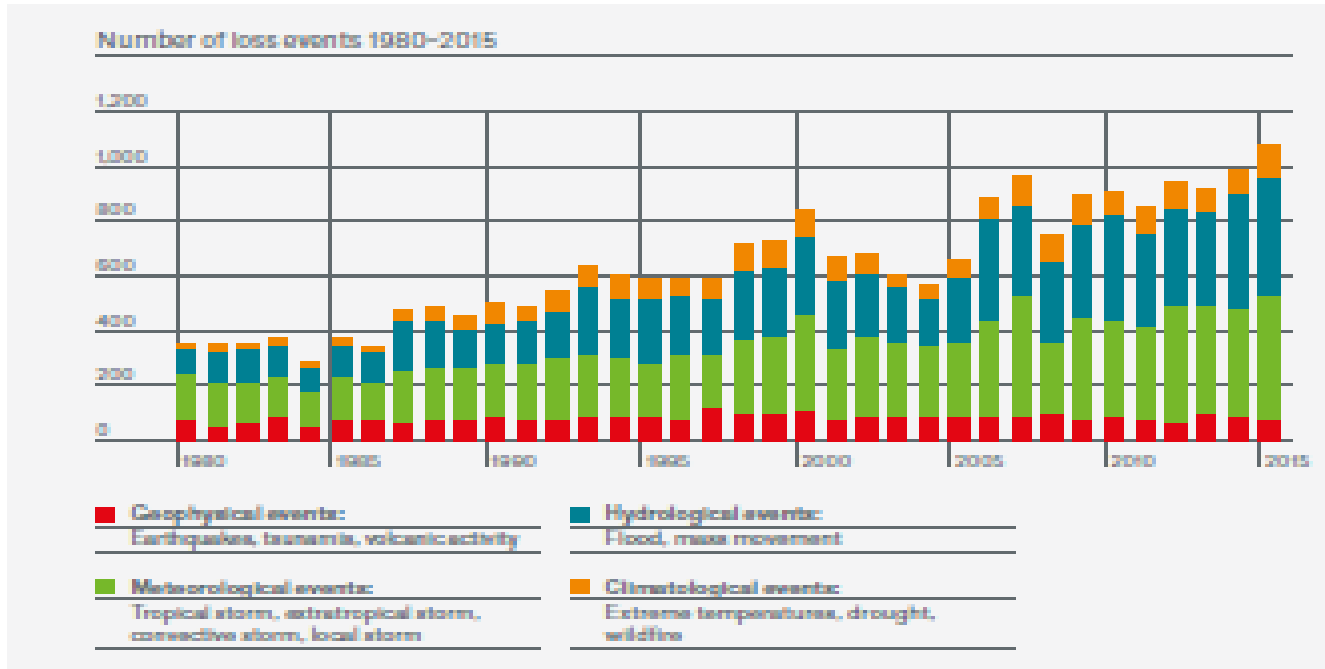
Early Warning Systems, Common Alerting Protocol and where the National Meteorological and Hydrological Services fit in

Alasdair Hainsworth – World Meteorological Organization (WMO)





# Growing number of weather related disasters





# Drought in Africa & Mongolia, Flooding in Americas



**ITU WTDC**  
BUENOS AIRES 2017

9-20 October



Somalia, South Sudan, Kenya, Nigeria, Madagascar



Canada



Mongolia



Peru & Colombia



**WMO OMM**



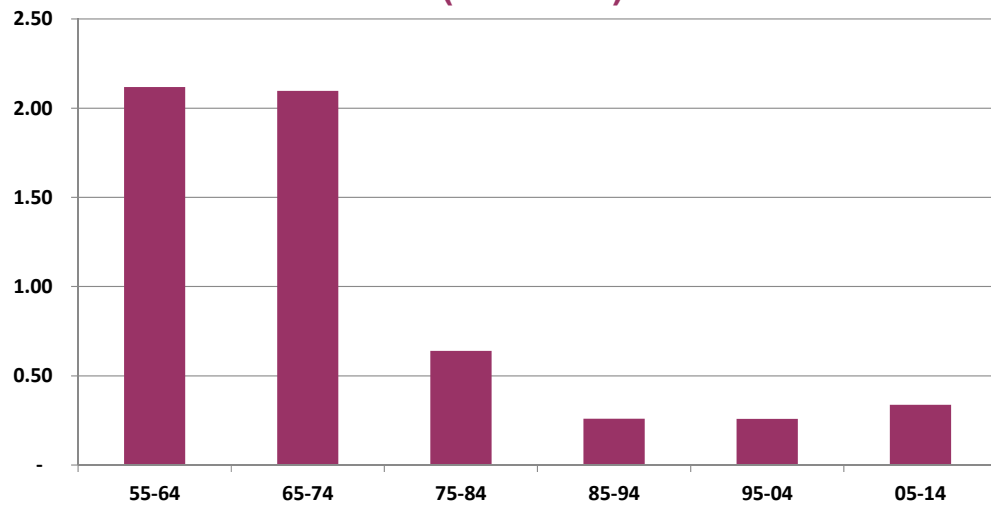
**CELEBRATING**  
**25 YEARS**  
OF ACHIEVEMENTS



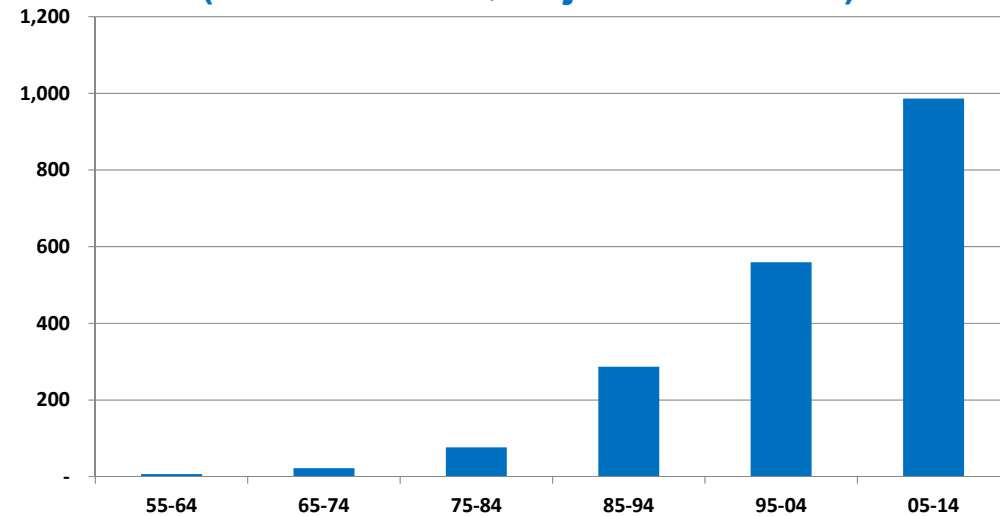
# Impacts of hydrometeorological and climatological hazards (1955–2014)



### Human losses by decade (millions)



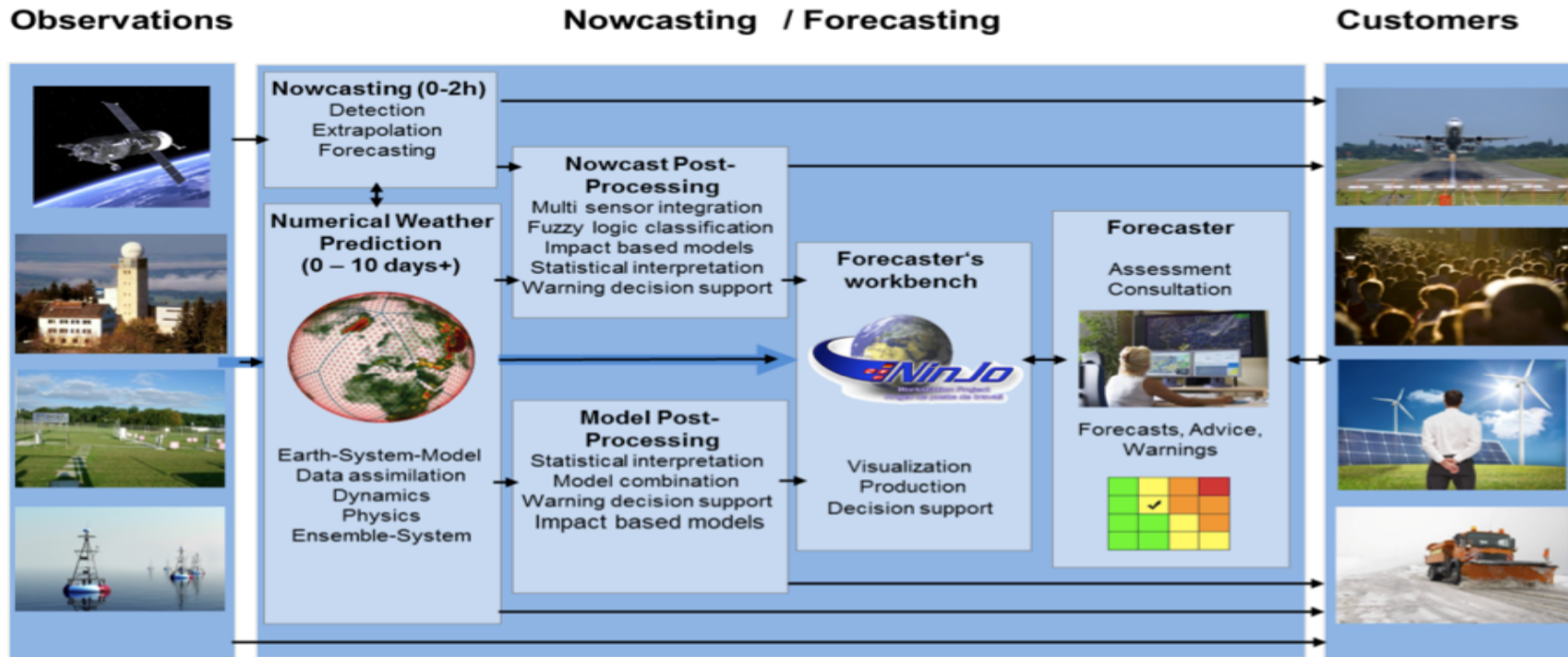
### Economic losses by decade (billions of US\$ adjusted to 2013)



**Reduction of the number of victims thanks to greater effectiveness of early warning systems and prevention measures**



# Towards impact-based forecasting

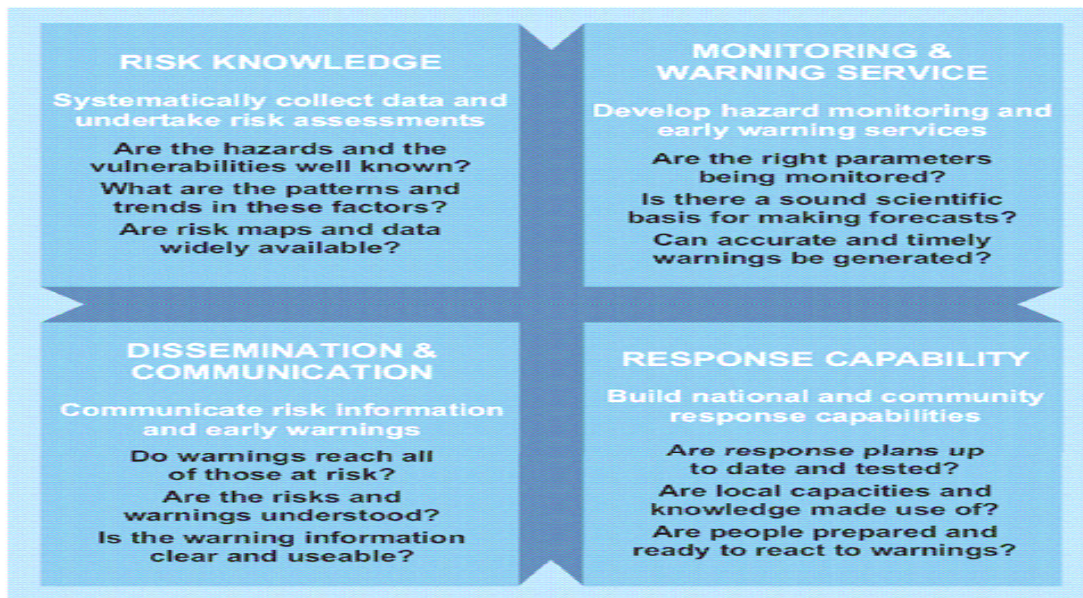




# An integrated view of early warning systems

Developed and endorsed by three International Early Warning Conferences (1997, 2001, 2003), by the Hyogo and Sendai Frameworks, national hydrometeorological services, national emergency institutions and international and regional initiatives on other hazard warnings.

Now upgraded by Multi-Hazard Early Warning Conference in Cancun 2017 to “Multi-Hazard Early Warning Systems”



*Indian Ocean tsunami was a failure in all four elements; hurricane Katrina had good warning services and shortcomings in communication and preparedness*

- ❑ Original has been widely applied
- ❑ Available in 19 languages





# Regional Partnerships – Regional MHEWS



**meteoalarm**  
alerting europe for extreme weather

EUMETNET  
The Network of European Meteorological Services

Start | News | About Meteoalarm | Help | Terms and Conditions | Links | Display Options

» Europe:

Created: 27.04.2014 19:00 CET | Valid For: 27.04.2014

### Weather warnings: Europe

Awareness Reports - You can find detailed information about the warnings in the awareness reports issued for each country. Select the relevant country.

AT		
BA		
BE		
BG		
CH		
CY		
CZ		
DE		
DK		
EE		
ES		
FI		
FR		
GR		
HR		
HU		
IE		
IS		
IT		
LU		
LV		
ME		
MK		
MT		
NL		
NO		
PL		
PT		
RO		
RS		
SE		
SI		
SK		
UK		

awareness types:  Display:

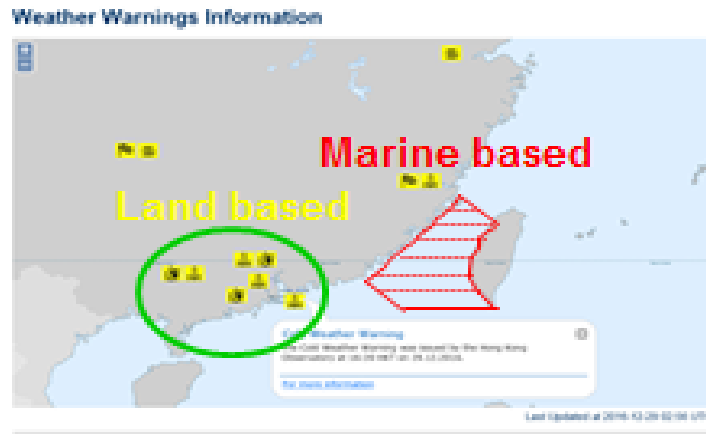
Change Language: | BG | BS | CZ | DA | DE | EE | EN | ES | ES | ES | FI | FR | GR | HR | HU | IS | IT | LT | LV | ME | MK | MT | NL | NO | PL | PT | RO | RS | SI | SK | SV | VA





# Global Multi-Hazard Alert System (GMAS)

- **New concept by WMO Members to develop a system -**  
To be recognized globally by decision makers as a resource of authoritative warnings and information related to high-impact weather, water, ocean and climate events.







## Common Alerting Protocol (CAP)



CAP – (ITU) standard message format designed for All-Media, All-Hazard, communications:

- **over any and all media** (*television, radio, telephone, fax, highway signs, e-mail, Web sites, RSS "Blogs", ...*)
- **about any and all kinds of hazard** (*Weather, Fires, Earthquakes, Volcanoes, Landslides, Child Abductions, Disease Outbreaks, Air Quality Warnings, Transportation Problems, Power Outages ...*)
- **to anyone:** the public at large; designated groups (civic authority, responders, etc.); specific people

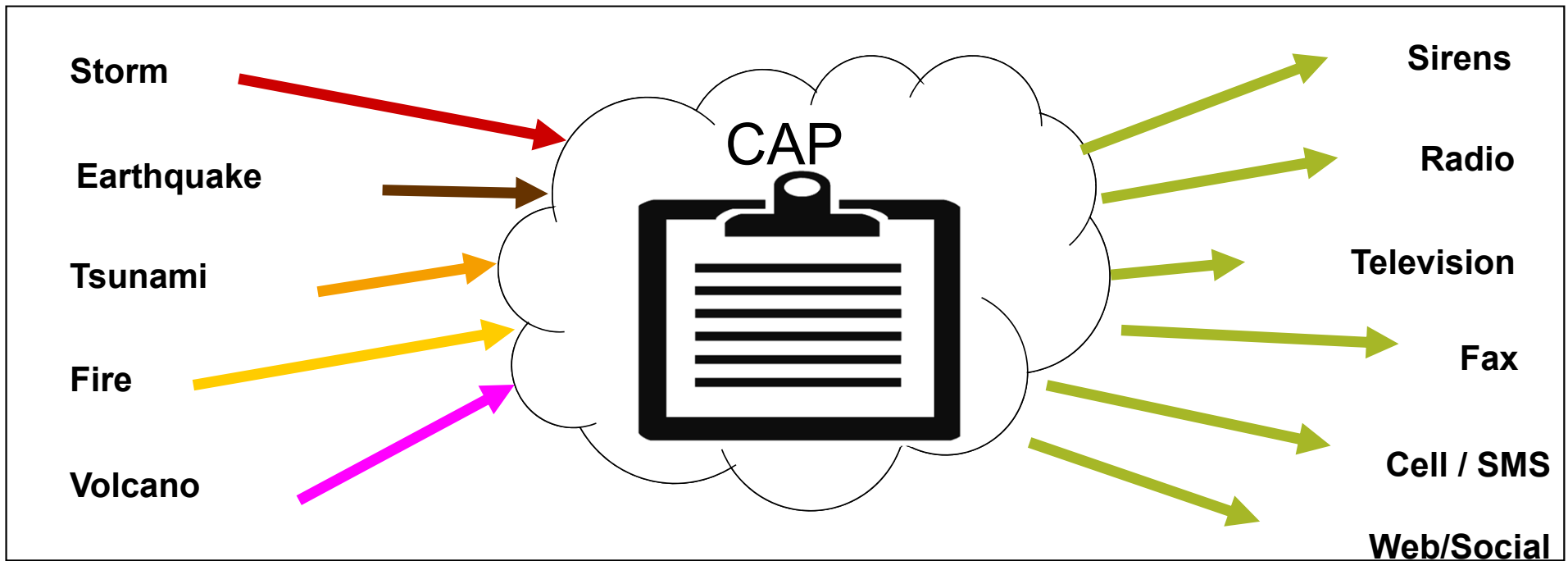
**CAP facilitates the transmission of warnings messages and is vital**





# All-Hazards, All-Media Message Format

Any City / Province / Country





## Summary

- Weather/climate events account for **>80%** of disasters
- Climate change means **more weather** related **disasters** are likely to occur
- Good (**quick, reliable**) **communications links** are **vital** for the operations of National Meteorological and Hydrological Services
- Comms **MUST** be **robust** with **redundancies**
- National Meteorological and Hydrological Services work in **partnership** with **response** and **emergency** agencies
- **Focusing** on **impacts** rather than weather
- **CAP** is **vital** in order to facilitate **machine/machine information transfer** – quicker, less scope for error, can be translated into multiple languages on multiple platforms





**Thank You**

