WMO / World Weather Watch and Public Warning

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WMO World Weather Watch

in the "Workshop and Demonstration of Advances in ICT Standards for Public Warning" at ITU, Geneva
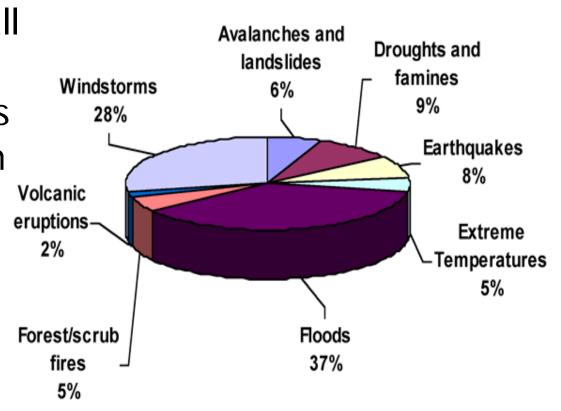
Presentation Outline

➢ About WMO / World Weather Watch

➢ The Concept of Public Warning

➢ The Challenge of Public Warning

➢ Cautions about Public Warning

➢ The Time is Ripe...

WMO/ World Weather Watch

Close to 90 % of all natural disasters in the last 10 years have resulted from hazards such as floods, droughts, tropical cyclones, severe storms...

Avalanches and landslides 6%

Droughts and famines 9%

Windstorms 28%

Earthquakes 8%

Volcanic eruptions 2%

Extreme Temperatures 5%

Forest/scrub fires 5%

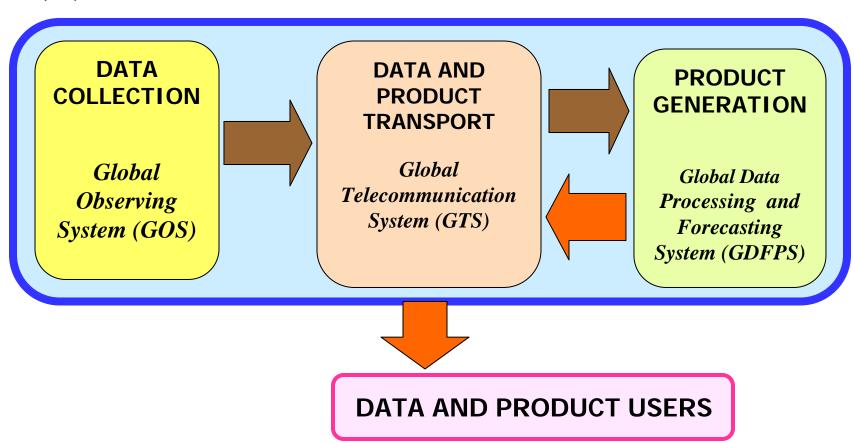Floods 37%

WMO/ World Weather Watch

The World Weather Watch consists of observing systems, telecommunication facilities, and data-processing and forecasting centres - owned and run by WMO Members countries - to generate and distribute meteorological and related geophysical observations, forecasts and early warnings

Basic Systems, Information Flow

DATA COLLECTION		DATA AND PRODUCT TRANSPORT		PRODUCT GENERATION
Global Observing System (GOS)	→	*Global Telecommunication System (GTS)*	→ ←	*Global Data Processing and Forecasting System (GDFPS)*

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DATA AND PRODUCT USERS

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WMO/ World Weather Watch

The World Weather Watch system is a crossroad of meteorological sciences and operational technology, based on international cooperation, where Information and Communication Technology (ICT) has a crucial role.

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The Concept of Public Warning

Goal: People who are
properly alerted will act
to reduce damage and
loss of life from natural or
man-made hazard events

Audiences

➢ Public (at home, at work, traveling …)

➢ Leadership (political, civil service …)

➢ Emergency Managers

➢ Responders (law enforcement, emergency medical services …)

Public Warning & Early Warning

➤ ***Early Warning*** focuses on predicting or detecting a hazard event <u>before</u> it becomes an immediate threat to life or property

➤ ***Public Warning*** focuses on communicating to people about a hazard event that <u>is</u> an immediate threat to life or property

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The Challenge of Public Warning

"Collaborative actions are necessary to assure that standards-based, all-media, all-hazards public warning becomes an essential infrastructure component available to all societies worldwide."

http://www.isoc.org/challenge

Standards-based

➢ Governments, emergency managers and ICT providers are converging on key standards (message content standard, technology standards, standards of practice)

➢ This Workshop is a prime example, bringing together standards bodies with key public warning agencies and commercial enterprises

The Challenge of Public Warning
All-media, All-hazards

➢ All available communications media should be used (from broadcast down to individual targeting) to get timely and appropriate warnings to everyone who needs them, and to only those who need them

➢ Public warning systems should be in routine use for all hazards, not only for rare events such as earthquakes and tsunami, but for severe weather, fire, and other emergencies

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Cautions about Public Warning

➢ Emergency management processes should provide for human judgment between the detection of a threat situation and the issuing of public alerts, usually under control of officials with appropriate responsibilities

➢ Where alerting involves existing operational systems, pilot implementations should be in parallel with current operations to minimize confusion and service disruption

Cautions about Public Warning

➢ Technologies supporting public warning must take into account that false alarms can be disruptive, expensive, and can degrade public confidence

➢ In any system of public warning, the authentication of senders and targeted receivers is essential

➢ Alerting systems can become targets for deliberate misinformation or denial-of-service attacks

Cautions about Public Warning

Effective public warning involves many distinct aspects other than ICT, including public education, training, building codes, policy, social science, among others

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The Time is Ripe…

➢ It makes no sense to continue building a separate public warning system for each particular threat

➢ Efficiency as well as effectiveness of public warning argue for using standards, and for combining the public warning requirement for all-media coverage with the requirement for an all-hazards approach

The Time is Ripe…

A standards-based, all-media, all-hazards public warning strategy makes sense for ICT providers now using digital technologies and integrating radio, television, cellular telephone, satellites, Internet-based and other network services

The Time is Ripe…

All-media, all-hazards public warning
is no longer a matter of designing
specialized communications technology,

it is a matter of agreeing common standards

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Standards for Public Warning (ITU, Geneva)