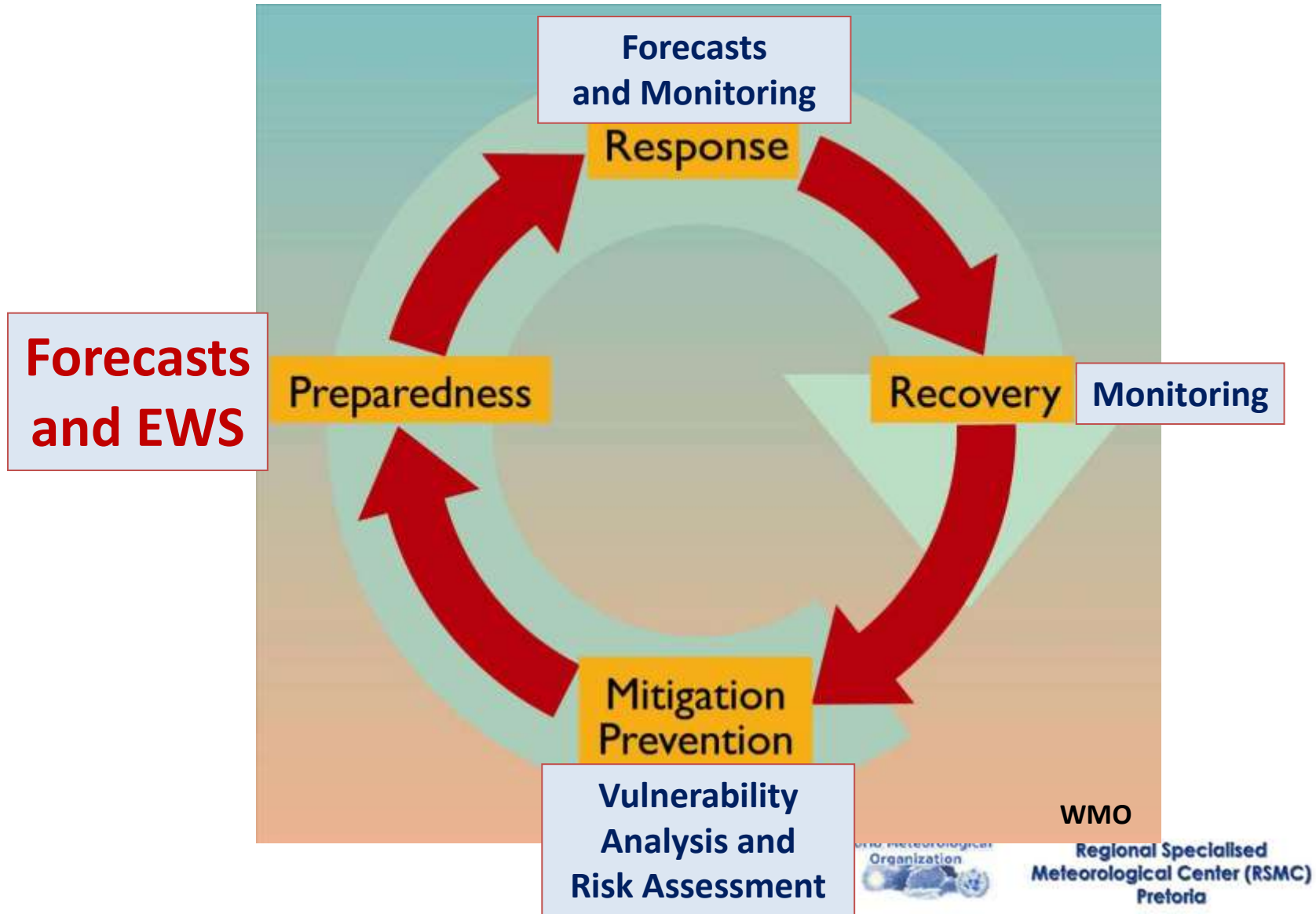


# ***PWS in support of Disaster Prevention and Mitigation***

*Eugene Poolman*

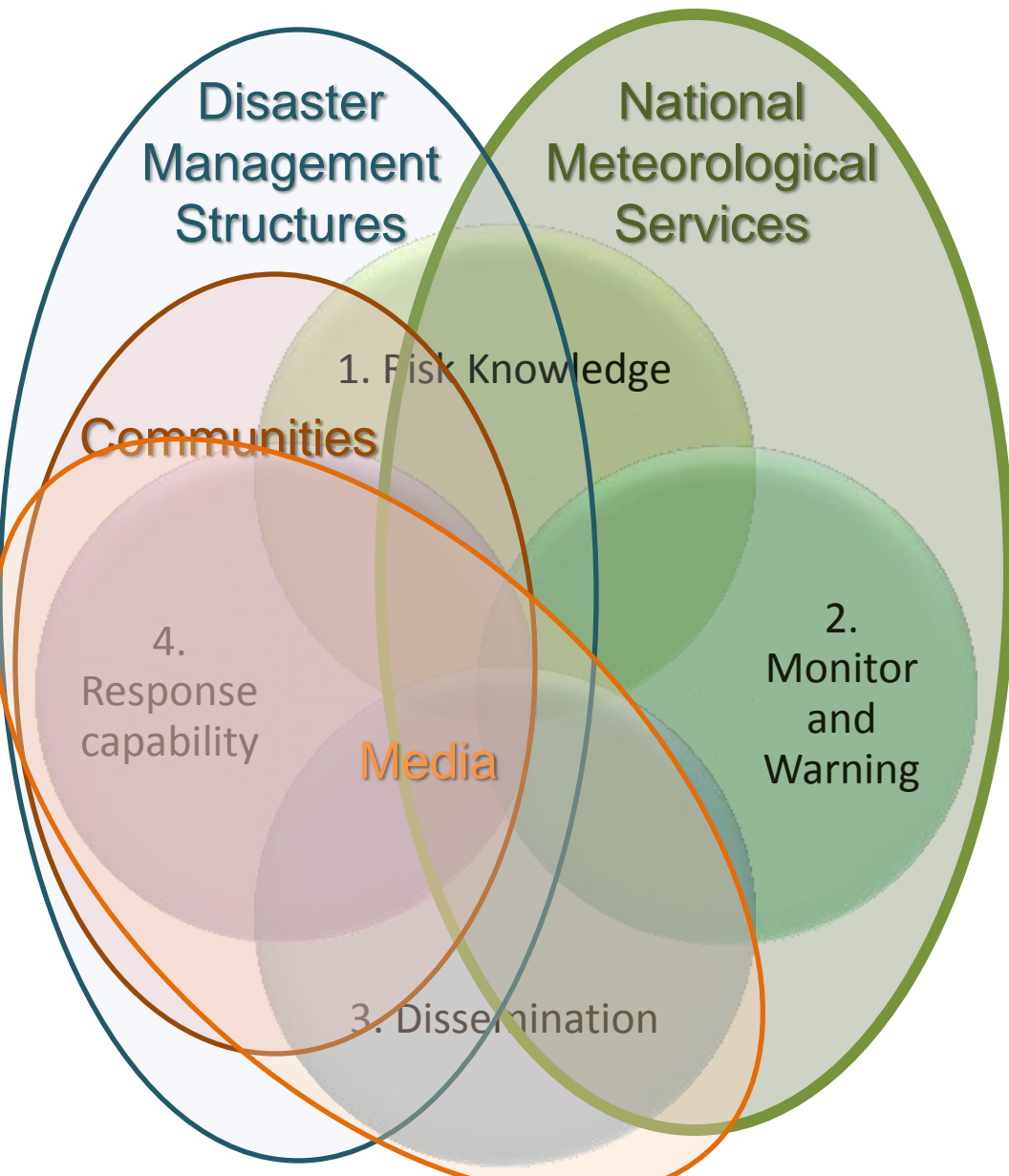
*RSMC Pretoria*

# Role of NMS in DRR



*The objective of early warning:  
"to empower threatened  
communities to act in sufficient  
time and manner to reduce loss  
of life and damage to  
property.." (ISDR)*

# Partnerships in Early Warning Systems



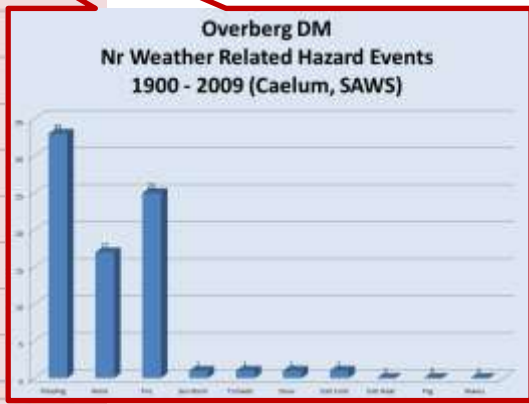
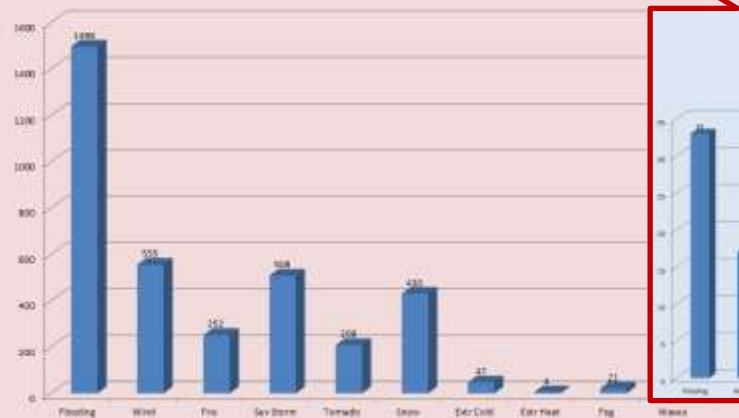
- Various role players in an EWS
- Importance of effective functioning of all 4 elements
- Importance of collaboration between all role-players, end-to-end

# 1. RISK KNOWLEDGE

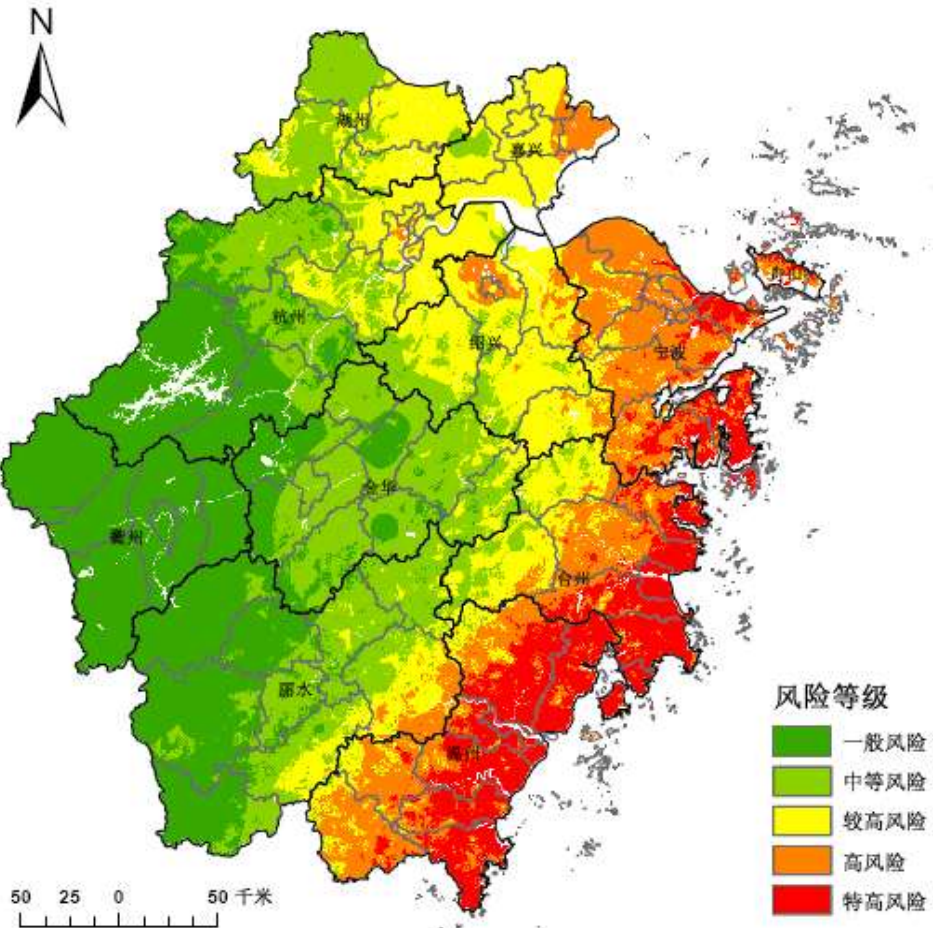
- Are the hazards known?
- Are the vulnerabilities assessed for each hazard?
- What are the patterns and trends? How does it change with seasons, and between dry and wet years?



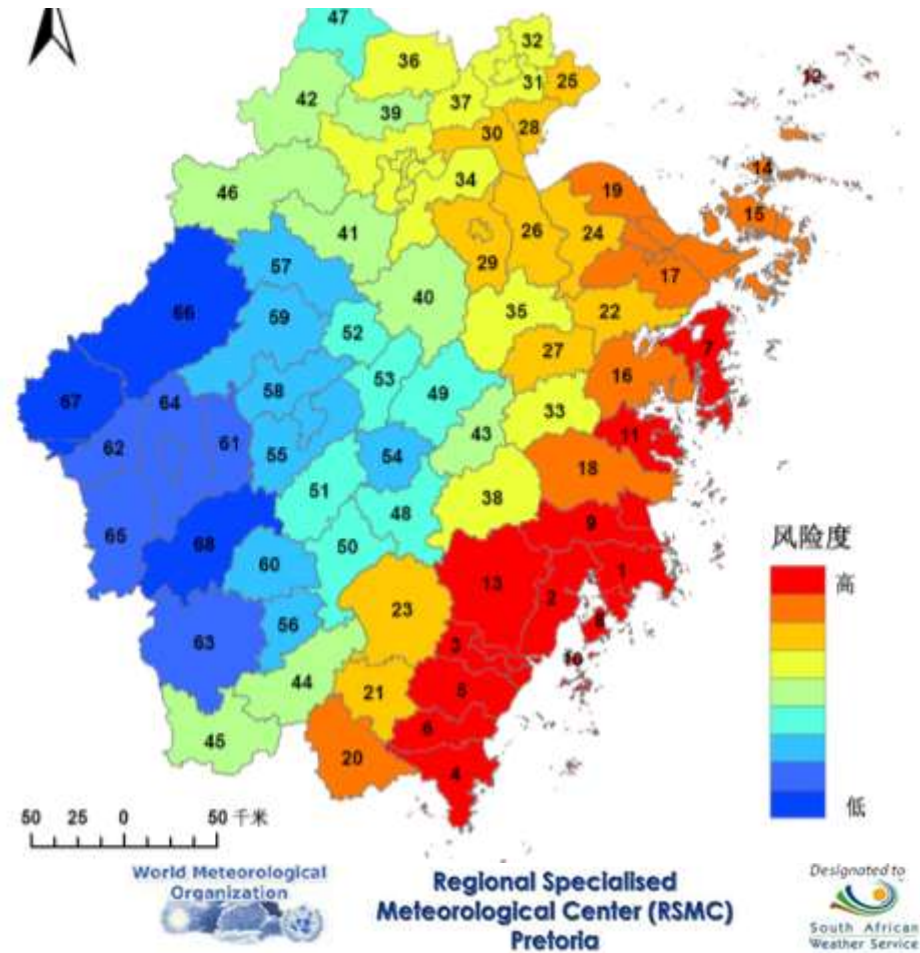
South Africa  
Nr Weather Related Hazard Events  
1900 - 2009 (Caelum, SAWS)



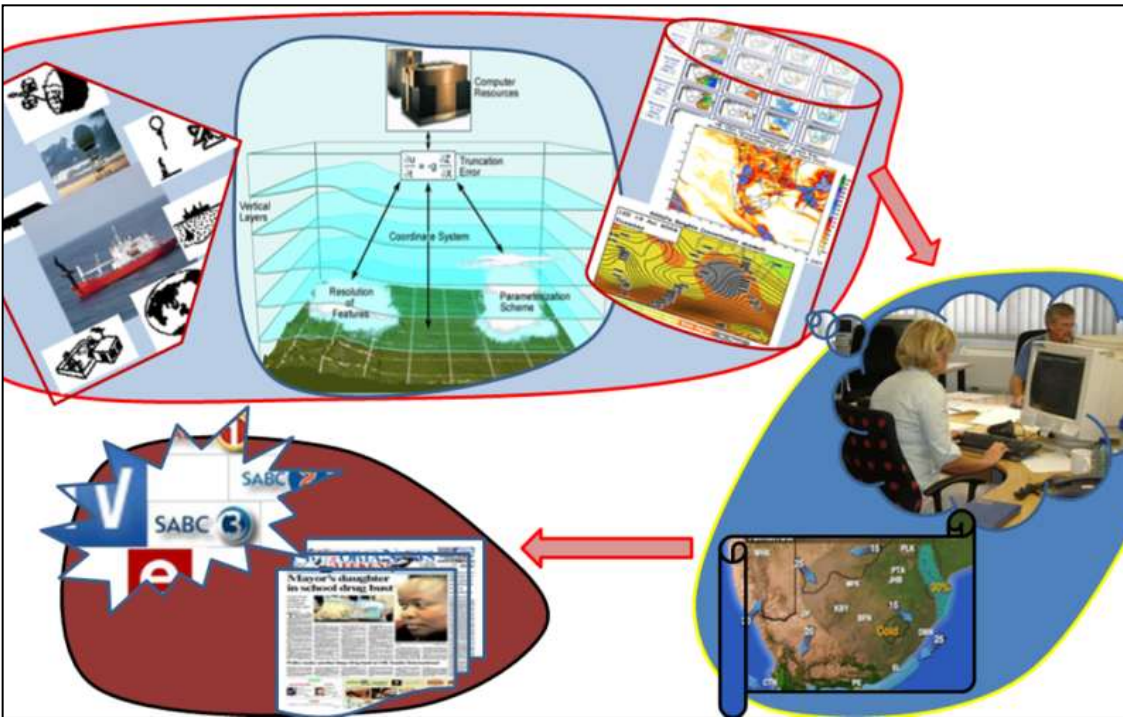
Typhoon risk map in Zhejiang



Typhoon risk classification by counties in Zhejiang

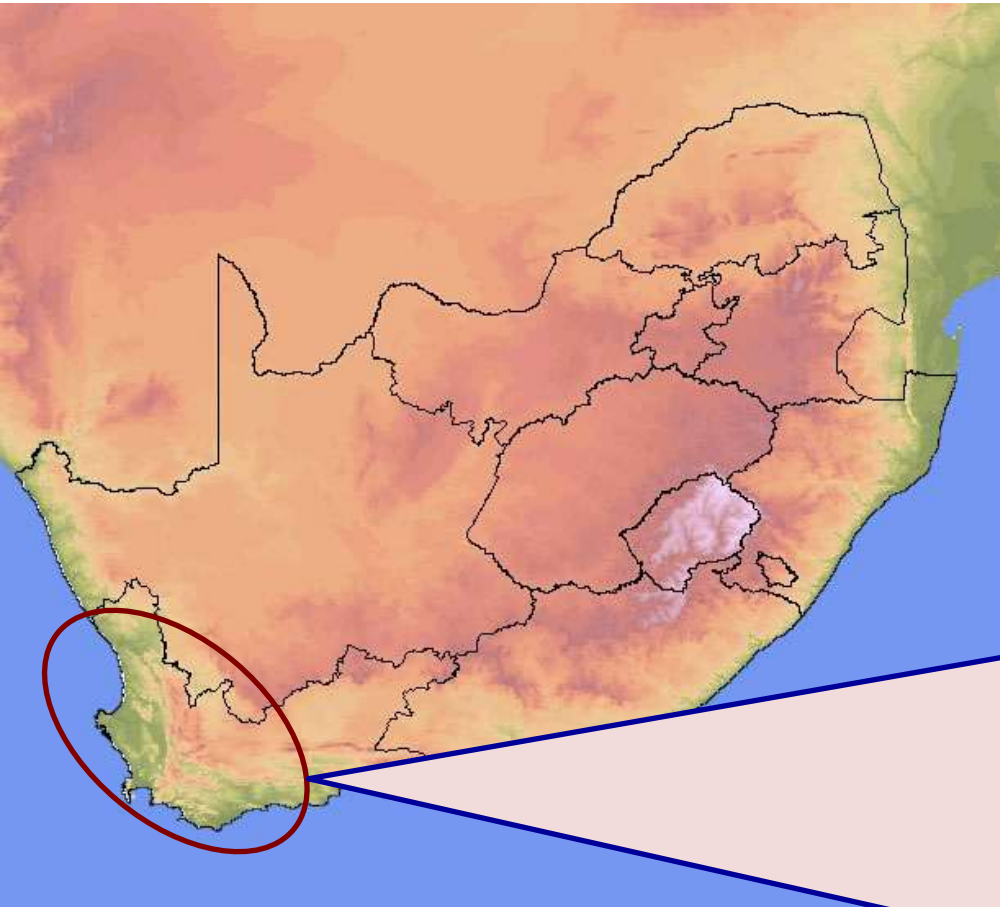


## 2. MONITORING & WARNING PREPARATION



- Is there a sound scientific basis for making forecasts?
- Are the right parameters being monitored?
- Can accurate and timely warnings be generated?

# The Challenge of User Relevant Forecasts



## Forecast for:

Jun – Aug 2010

## Region:

Western Cape

## Expected Weather:

Possibly more active cold frontal period towards mid-winter over western parts

## Consequences:

- ✓ Moderate risk of local flooding
- ✓ Coastal impacts due to high swell and strong winds caused by fronts
- ✓ Risk of wildfires throughout winter



# 3. DISSEMINATION

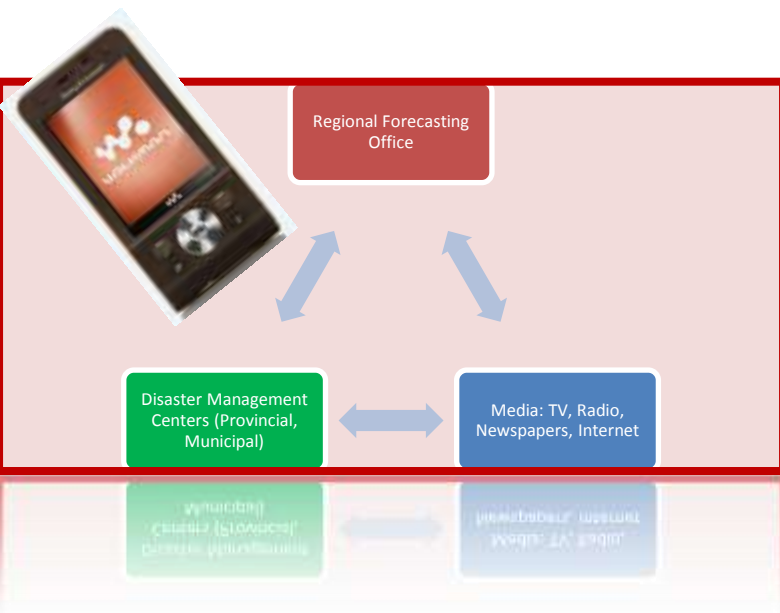
Warning dissemination mechanisms



- Do warnings reach those at risk?
- Do people understand the warnings?
- Do they contain useful information that enable proper responses?
- What is the best practice to ensure effective dissemination to communities at risk?

# Warning dissemination

- To Disaster Management Centers prior and during event:
  - Internet, email, SMS, telephone
  - Specialized info through a DM website
- To general public and communities at risk:
  - Media, including TV, internet, newspapers, radio, community radio
  - Via local disaster managers
- Problem of dual communication to the public:
  - Developed cities
  - Rural communities – do we reach them effectively?



## 4. RESPONSE CAPACITY



- Do communities understand their risks?
- Do they respect their warning service?
- Do they know how to react?
- What is their coping capacity?

# Main Participants in EWS

- *Technical Monitoring Agencies*
  - Key national agencies to issue early warnings (like NMHSs)
  - Usually the *single official* voice for early warning information in country
- *Authorities Concerned with Impact*
  - Emergency management departments, disaster management centers
    - Responsible for declaring disasters
    - Coordinate response and recovery activities
    - Undertake preventative mitigation and preparedness activities
- *Communities*
  - EWS will fail if communities are not involved in risk assessment, dissemination, preparedness and response
- *Political Role Players, administrators*
  - Their support is crucial to make it work

# Effective Early Warning Systems

- Continued scientific developments
  - Increase lead time, use new technology, better dissemination
- Involve stakeholders:
  - Better understanding of their needs, increased ownership
  - Capacity building
- Warning presentation and communication
  - Concise, understandable and actionable
  - Consistent and credible
  - Must address the risk of end-users, advising on reaction
- Response: everyone at risk must
  - Receive warning, believe it, react timely
- Verification
  - Assess, correct deficiencies

# The Multi Dimensions of EWS

- An EWS can distinguish between different dimensions with its own roles and impacts:
- National early warning system
  - Mandated to for example the national meteorological service
  - Based on scientific monitoring systems
- Community based early warning system
  - Functions at the community level
  - Utilizes community based techniques or systems and knowledge
- Essential that all dimensions are integrated to avoid conflicting information

# Improve collaboration with Disaster Management

- What advise do you have to improve collaboration??
- **Most important: Develop partnerships**
  - DRM need a professional they can trust to interpret the data
  - Build a relationship - importance of know them personally
  - Attend DRR meetings, be there

# Questions?

***“Mankind will never be able to master natural hazards – they will continue to strike... But by being better prepared we will decrease the risk of hazards turning into disasters”***

(Jan Egeland, Under Secretary General for Humanitarian Affairs, United Nations, at the Third International Conference on Early Warning, March 2006, Bonn, Germany)