

# TSUNAMIS : Milling and confirmation

- 1) Alert generated
- 2) Warning message composed
- 3) Message received by public
- 4) Message confirmed by public
- 5) Public decides to act
- 6) Action taken

WARNING

Receipt

Confirmation

Intention

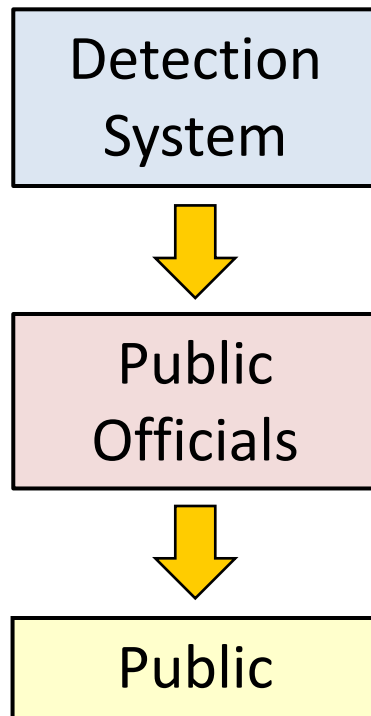
ACTIONS



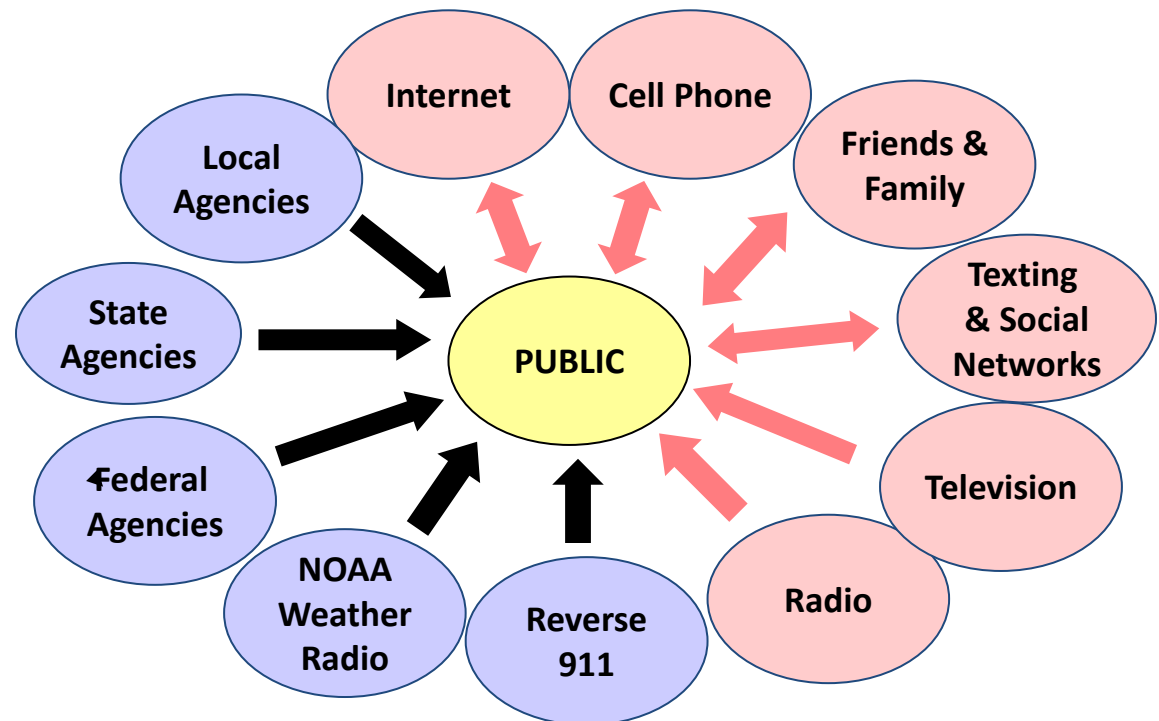
# TSUNAMIS : milling/confirmation

## Sources of

### Official warnings



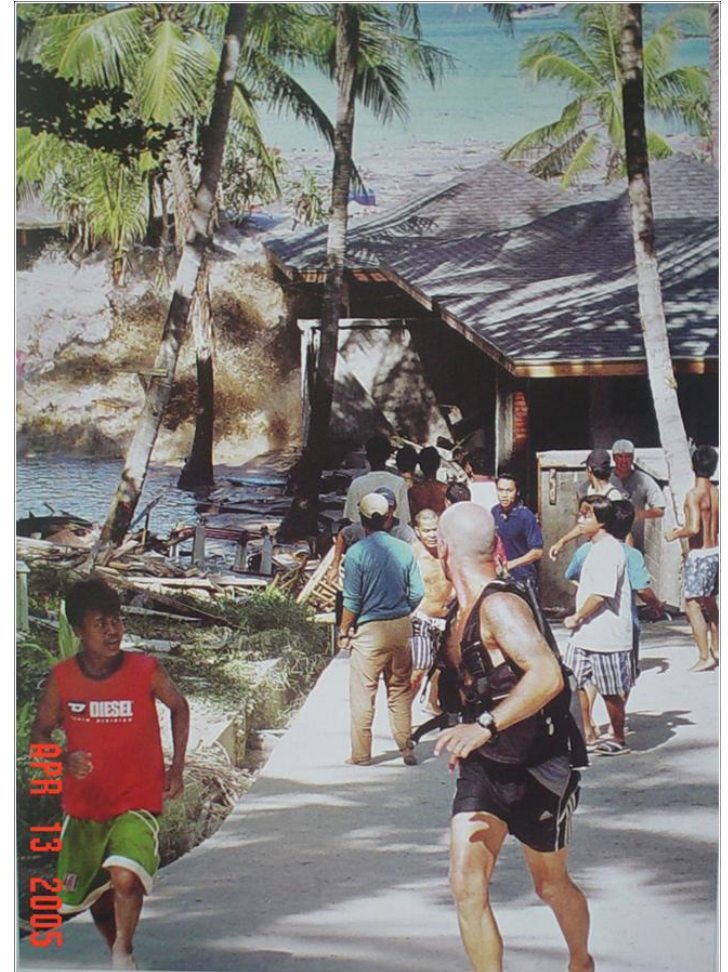
### Confirmation/milling



Complex, possibly competing messages; official and unofficial sources; managing “milling conversations”

# TSUNAMIS : Milling/confirmation

- Targeted study of survivors
  - Japan
  - Thailand
  - Indonesia
  - Samoa
  - Hawaii
- In-depth one-on-one interviews



# ERUPTIONS : Model source terms

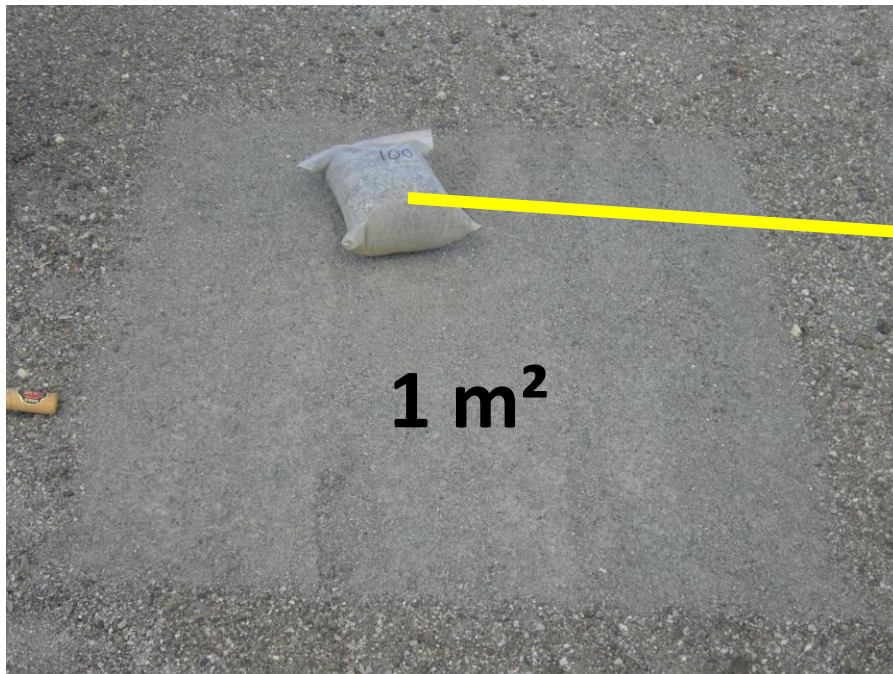
- Plume model inputs
  - plume height,
  - eruption duration,
  - erupted mass
  - mass eruption rate, and
  - **Total grain size distribution.**



At least 7 major AD models: MOCAGE, FALL3D, NAME, MLPRO, TEPHRA2, PUFF, HYSPLIT

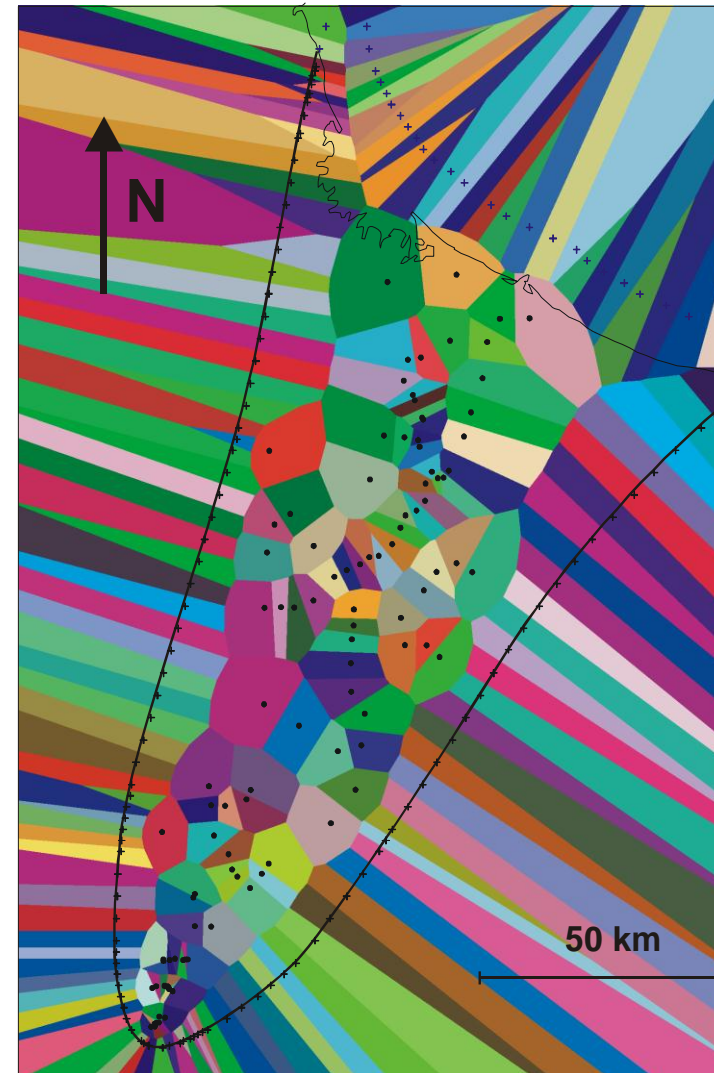
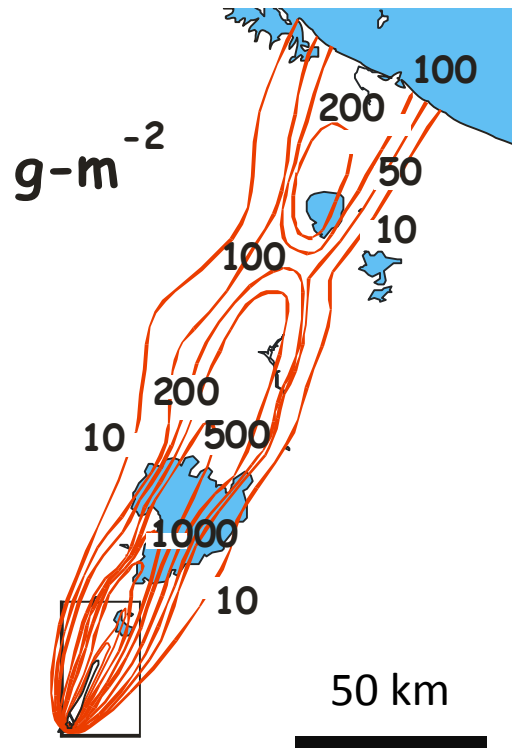
# ERUPTIONS : Model source terms

- 25 VEI > 3 eruptions with well constrained
- height, duration, volume, MER but
- **only 5 of these have TGSD**  
(Mastin et al.; 2009)



# ERUPTIONS : Model source terms

- only 5 of these have TGSD  
(Mastin et al.; 2009)
- data are totally **incompatible**



# ERUPTIONS : Model source terms

- Generate consistent TGSD for
- 20 recent eruptions VEI 2-4
- Candidates???????????
- BONUS: also refine other inputs