

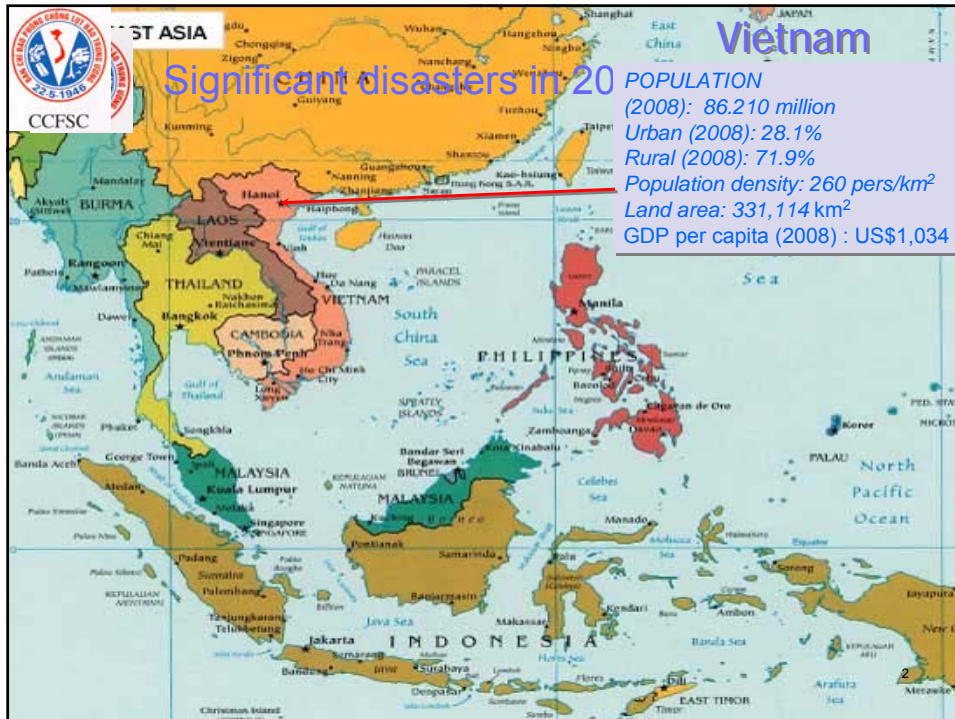
# ASIAN CONFERENCE ON DISASTER REDUCTION 2010

## Lessons learnt from recent disaster



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## Significant disasters in 2009

High	Medium	Low
Flood, inundation	Hail rain	Earthquake
Storm	Landslide	Industrial accident
Flashflood	Forest fire	Frost
Whirlwind	Salinity intrusion	
Drought		

Annually, natural disaster such as flood, storm caused damages:

(according to statistics from 1997 to 2006)

Death and missing: 750 persons

Injury: thousands of persons

Total economic loss: approximately 1.5% GDP of Vietnam

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## Significant disasters in 2009

- Typhoons : 11 in the area  
(4 typhoons effected in Vietnam)
- Flood : 6 events
- Flash flood : 3 events
- Whirlwind : 26 events



Death and Missing people: 454  
(Children: 36)

Injured people: 1,390

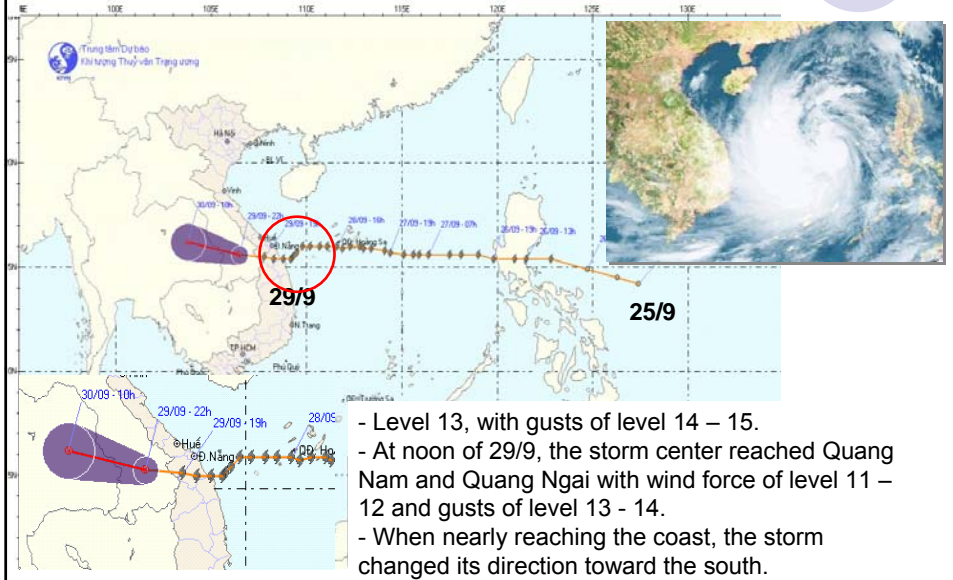
Houses damaged: 424,260

Total economic loss: 23,700 bil VND  
(1.281 bil USD) <sup>4</sup>



# Significant disasters in 2009

## Typhoon No. 9 (KETSANA)



- Level 13, with gusts of level 14 – 15.
- At noon of 29/9, the storm center reached Quang Nam and Quang Ngai with wind force of level 11 – 12 and gusts of level 13 - 14.
- When nearly reaching the coast, the storm changed its direction toward the south.



# Typhoon No. 9 (KETSANA)



- The impact area from Quang Binh to Binh Dinh and the Highland region.
- Huge rains from Nghe An to Binh Dinh and the Highland area.
- Rains before and during the storm were huge but decreased after the storm, which is a special phenomenon.
- The flood became the same or even bigger than the 1999 one and was stronger than storm Xangsane in 2006.



## Typhoon No. 9 (KETSANA)

### **Damages caused by the typhoon and floods to the Central region and the Highlands**

#### Damages in terms of people:

People dead: 172

People missing: 12

People injured: 629.

- Houses collapsing or swept away: 21,734
- Houses unroofed or damaged: 450,727
- Houses were flooded: 173,611
- Classrooms were damaged: 5,268 rooms

#### Damages to agriculture:

Rice flooded and damaged: 39,335 ha;

Secondary crops flooded and damaged: 54,960 ha;

Corns and sugar canes flooded: 11,372 ha;

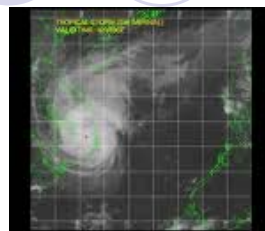
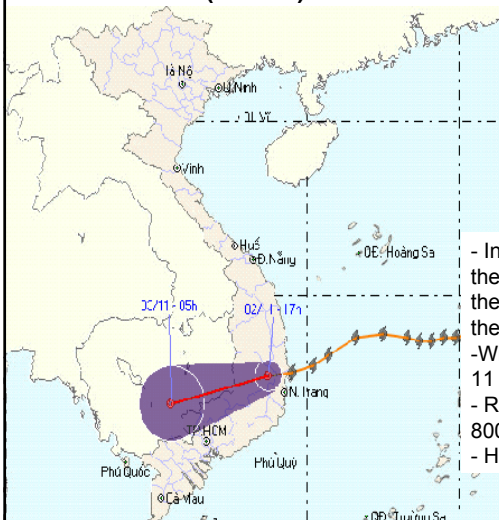
**Total estimated damages: VND 14,312 billion.**

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## Significant disasters in 2009

### **Storm No. 11 (Mirinae)**



- In the afternoon of 2/11/2009, the storm entered the South of Phu Yen and the North of Khanh Hoa, the Middle and South of the Central Region and the Highlands.

- Wind force was of level 8 – 9, with gusts of level 11 – 12.

- Rainfall from 200 - 350mm, some area 600 – 800mm.

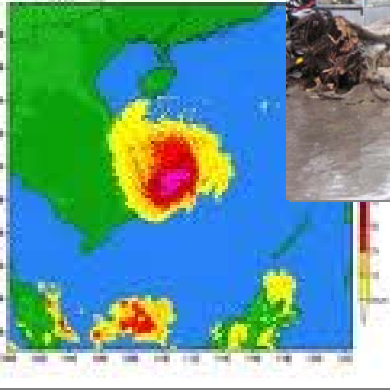
- Historical flood on some river.

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## Significant disasters in 2009

### Storm No. 11 (Mirinae)



- Rainfall from 200 - 350mm, some area 600 – 800mm.
- Historical flood on some river.

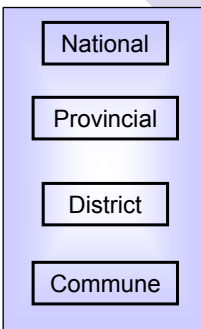


## Responses to the typhoon

### Social organization

- Central Committee of the Fatherland Front
- Viet Nam Red cross
- HCM youth Union
- Women Union
- Non governmental organization
- Private sector
- Research Institution etc.

### Government



### International Organization

- International organization: UNDP, DIPECHO, WB, ADB, AusAID, JICA, DANIDA, Netherlands Embassy, Luxembua...
- International NGOs: Oxfam, SC, Care, DW, CECI, World Vision, Red Cross,...
- Natural disaster mitigation (NDMP)
- Disaster Management working group (DMWG)
- etc

PEOPLE





## The challenger

- Difficult to predict rainfall and flood ...
- Flood level rise higher than before even higher than the water level gauges
- Operation of reservoirs ...
- Inundation to made many Isolated areas ...
- Reducing forest areas
- Infrastructure development
- .....

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## Lessons learnt

- Increasing of early warning system
- Reforestation
- Increasing recorded systems
- Operation of reservoirs
- CBDRM
- Preparedness especially at the comune with “4 on the pots”
- Capacity for search and rescuse
- Intergrating disaster reduction in development plans

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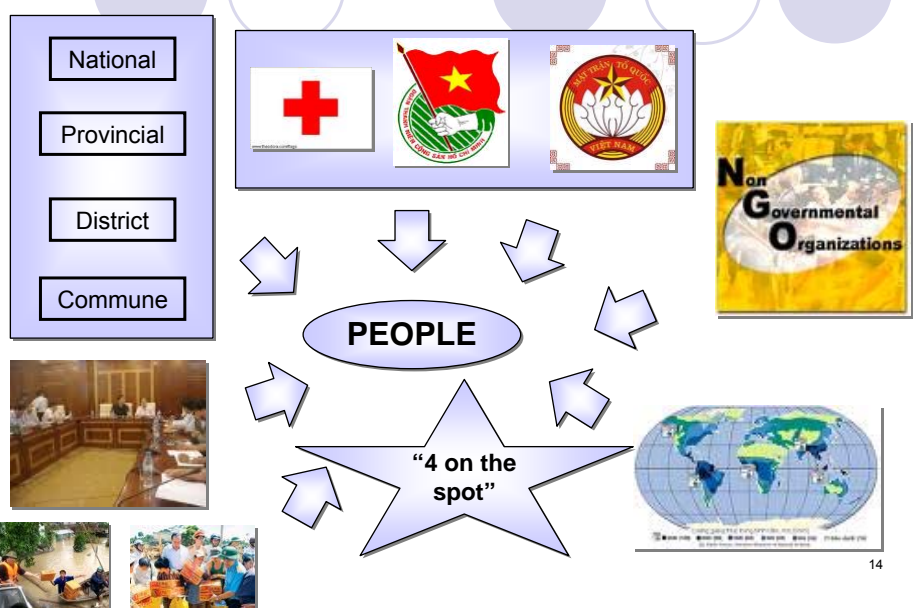


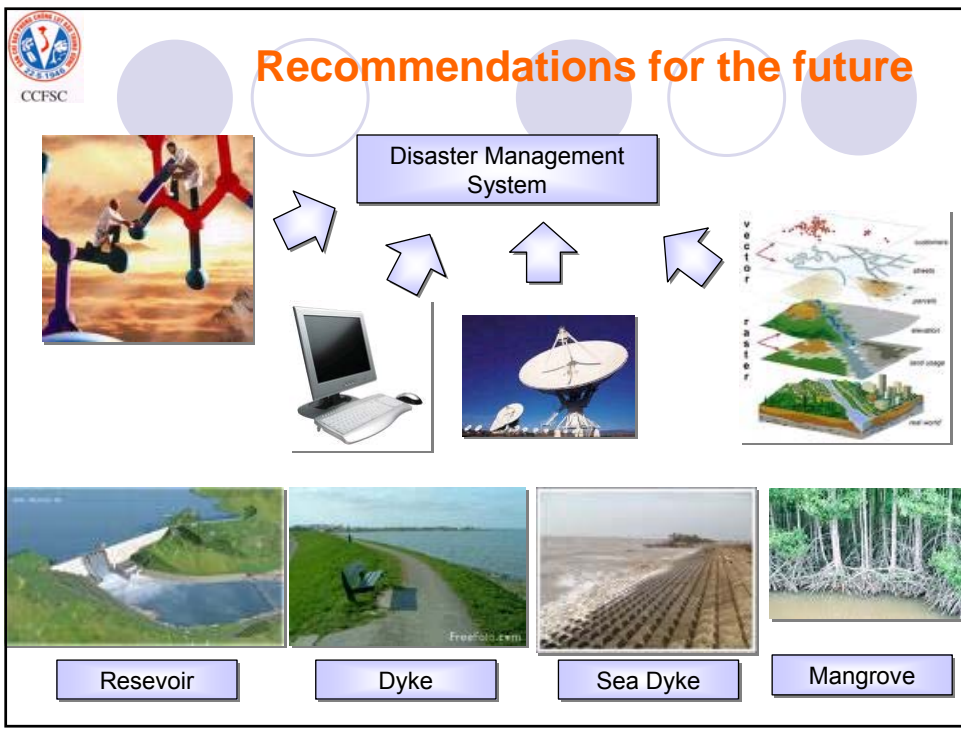
# Lessons learnt

- Integrating disaster preparedness into socio-economic development plan of sectors and areas, with emphasis on disaster resistant and adapted infrastructure development.
- Consolidating disaster management legislative framework suited to the current situation and possible future effects from climate change.
- Strengthen the disaster management system at all levels, professionalize forces; strengthen communication and search and rescue equipment system.
- Deploying effectively project increasing community awareness and community based disaster risk management. Implementing guideline "4 on the spots"
- Developing science and technology for disaster prevention and response, application related to new technology, new materials to develop gradually modern disaster prevention and response system, take advances of science development in the country and in the world.
- Consolidating and building infrastructure system to serve disaster prevention in which focus on: multi-objective reservoir, river dyke system, avalanche works, sewage system to prevent salt, keep water, shelters for boats and ships, protective forest, mangrove forest.
- Consolidating coordination of localities, strengthen international cooperation in ASEAN and partner, pacific Asian and in the world.



# Lessons learnt









**Thank you  
for your attention!**

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