Activities and Outlook related to Disaster Reduction in CMA

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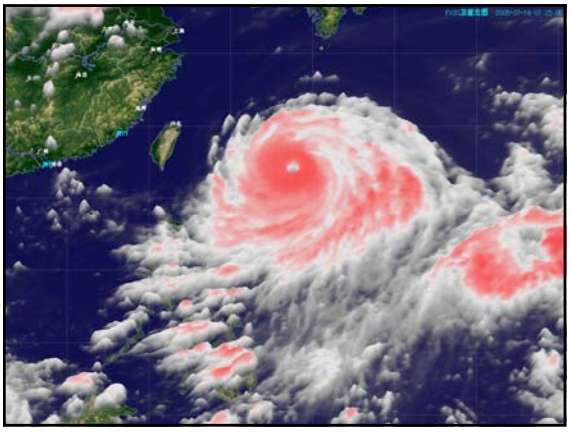
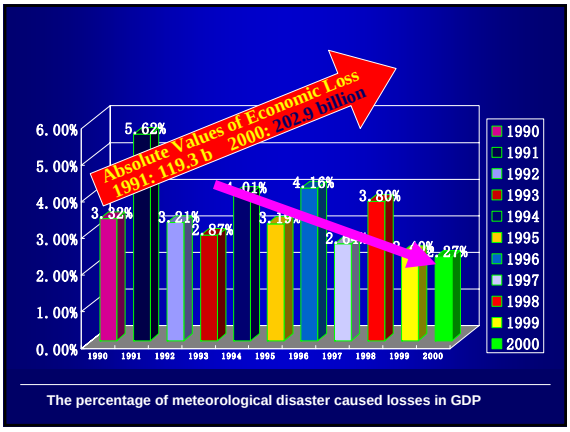
ADENDA

- Situation about MD and related disasters in CHINA
- Guidance for MD/RD management
- Recent activities related to MD/RD mitigation
- New configuration to EWS of MD/RD
- Outlook for MD/RD mitigation

Part 1 Meteorological Disasters and related Disasters Causing Heavy Losses in China

- Meteorological disasters such as tropical cyclone, heavy rain, drought, hailstone, heavy fog, high/low temperature, cold wave, sand/dust storm, thunderstorm, lightening, tornado, strong wind
  - choose to happen alternatively every year
  - cause an economic loss of several hundred billion Yuan (RMB) each year, and casualties up to several thousands
- Weather and climate-induced disastrous events such as flash flood, adverse geological event, biological calamity, forest and grassland fire
  - choose to happen alternatively every year
  - pose extreme threats to economic and social development, including living and safety
- Along with social and economic development, such losses caused by meteorological disasters and related disasters tend to be on the increase.





The percentage of meteorological disaster caused losses in GDP

Part 2
Guidance Related to MDM in China

- Meteorological LAW for MD
  - Hazard Mapping
  - Impact Assessment
  - Warning
  - Planning, Options and Measures

Guidance Related to MDM in China

- China Meteorological Services Development Strategy Study
  - Strategic Objective and Goal
    - In 2010/25%/MD's Impact on GDP
    - In 2020/50%/MD's Impact on GDP
    - People-Center
  - Platform
  - Project
  - R&D

Part 3
Recent Activities in CMA/1

- **CMA has worked out a *4-level warning signals* and associated rules for issuing.**
- **CMA has set up *regular (monthly) news release system* for meteorological information and disasters, and *directly reporting system* and *evaluating system* for meteorological disasters.**
- **CMA has prepared *Regulations on Meteorological Disaster Prevention (*Planning, Options and Measures*)*, which was now going through a legislative procedure.**
- **CMA has finished the preparation of the MD Yearbook in 2005.**

- TD will affect coastal areas within 24 hour and maximum sustained 2 minute wind speeds are from 10.8 to 17.1m/s or gusts are from 13.9 to 20.7m/s.
- TD has affected coastal areas and will continue and maximum sustained 2 minute wind speeds are from 10.8 to 17.1m/s or gusts are from 13.9 to 20.7m/s.
- TS will affect coastal areas within 24 hour and maximum sustained 2 minute wind speeds exceed 17.2m/s or gusts exceed 20.8m/s.
- TS has affected coastal areas and will continue and maximum sustained 2 minute wind speeds are from 17.2 to 24.4m/s or gusts are from 20.8 to 28.4m/s..
- STS will affect coastal areas within 12 hour and maximum sustained 2 minute wind speeds exceed 24.5m/s or gusts exceed 28.5m/s .
- STS has affected coastal areas and will continue and maximum sustained 2 minute wind speeds is from 24.5 to 32.6m/s or gusts exceed 28.5m/s.
- TY will affect coastal areas within 6 hour and maximum sustained 2 minute wind speeds exceed 32.7m/s.
- TY has affected coastal areas and will continue and maximum sustained 2 minute wind speeds or gusts exceed 32.7m/s.

Recent Activities in CMA/2

Regulations issued by CMA

- ***Contingency Plan for Significant Meteorological Disaster.***
- ***Procedure for Issuing Unexpected Meteorological Disaster Early Warning Signals.***
- ***Guidance on Meteorological Disaster Early Warning Signaling and Preventative Actions.***
- ***Provisional Rules on News Release of Major Meteorological Information.***
- ***Rules on Collection, Survey and Evaluation of Meteorological Disasters.***

Recent Activities in CMA/3

Grade of TCs	Maximum Sustained 2 minute Wind Speed
Tropical Depressio（TD）	10.8-17.1m/s
Tropical Storm（TS）	17.2-24.4m/s
Severe Tropical Storm (STS）	24.5-32.6m/s
Typhoon（TY）	32.7-41.4m/s
Severe Typhoon（STY）	41.5-50.9m/s
Super Typhoon（Super TY）	>51.0M/S

Previous Standard
4 Grades

Revised Standard
6 Grades

Revision on Grade Standard of TCs

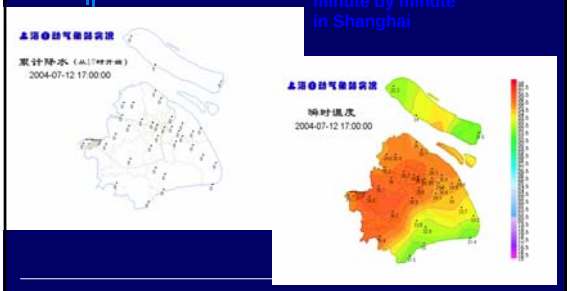
Recent Activities in CMA/4

- Involving National coordination
  - National Committee on Disaster Reduction
  - National Headquarter on Flood and Drought
  - National Headquarter on Earthquake
- Cooperation activities
  - Geological Disaster Forecast in term of Meteorology
  - Forest and Grassland Fire Forecast in term of Meteorology
  - Fest forecast in term of Meteorology

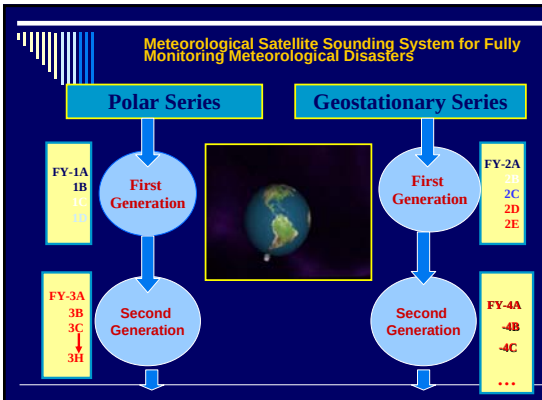
On 26 December 2004, the earthquake-generated Tsunami in the Indian Ocean brought about tremendous disasters to mankind

Part 4 **It also gave us some hints, as if propelling us to focus more attention to the important role that an early warning system can play in term of saving people's lives.**

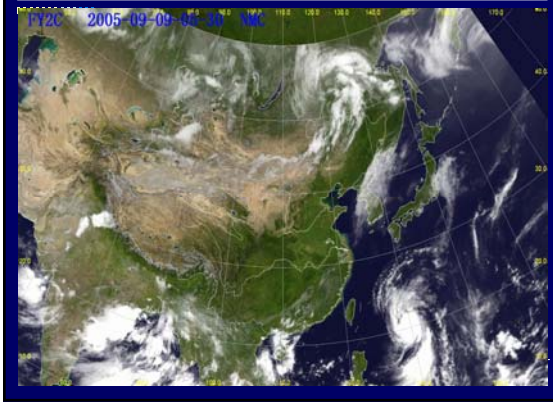
Rainfall and Temperature collected by AWS minute by minute in Shanghai



Meteorological Satellite Sounding System for Fully Monitoring Meteorological Disasters

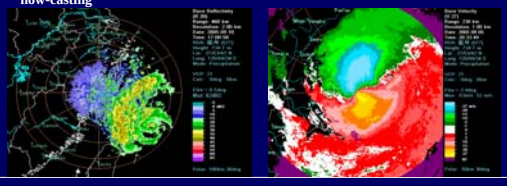


FY Meteorological Satellite is a Part of WMO Global Meteorological Satellite Observation Network

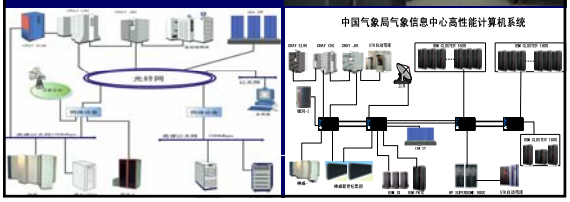


The New-generation Weather Radar Network Leading to a Noticeable Improvement in Short- and Very-short Range Forecasting and Warning

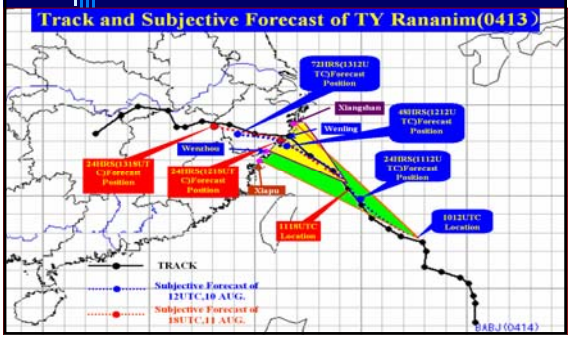
- Doppler weather radars deployed in China contributed noticeably to forecasting Typhoon, with monitoring and tracking.
- The data obtained by radars such as the intensity, height, coverage and distribution of precipitation proved to be useful to the real-time monitoring and now-casting



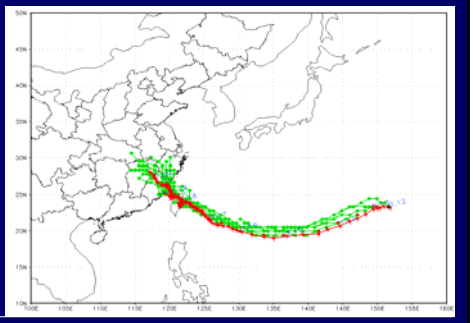
Computer Facilities and information systems



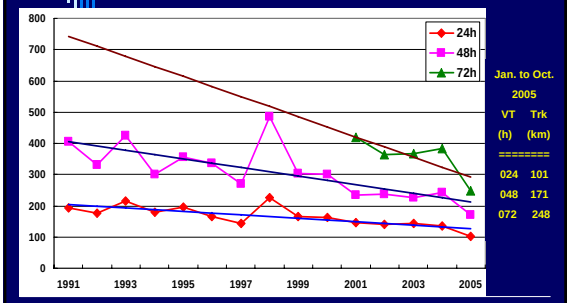
Forecast Models for the Typhoon Track and Intensity Put into operation in 2004



Tracks of Typhoon Haitang (0505) predicted by GMTTP



CMA 24-72h mean typhoon track forecast errors （1991-2005）



Jan. to Oct. 2005

VT (h)	Trk (km)
024	101
048	171
072	248

Note: The 2005 is from January 1 to October 10

Operational Forecast

Part 5
Next Step and Further Work

- Guideline
  - Hazard Mapping
  - Risk Assessment
  - Impact Assessment
- Standard
- Inventory
- Partnership

With the guidance of HFA from WCDR and Beijing Action plan from ACDR

Thank you for your time!

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