

<http://www.nchmf.gov.vn>

Medium-range Weather Forecast in Vietnam and its perspectives



National Center for Hydrometeorological Forecasting

Overview

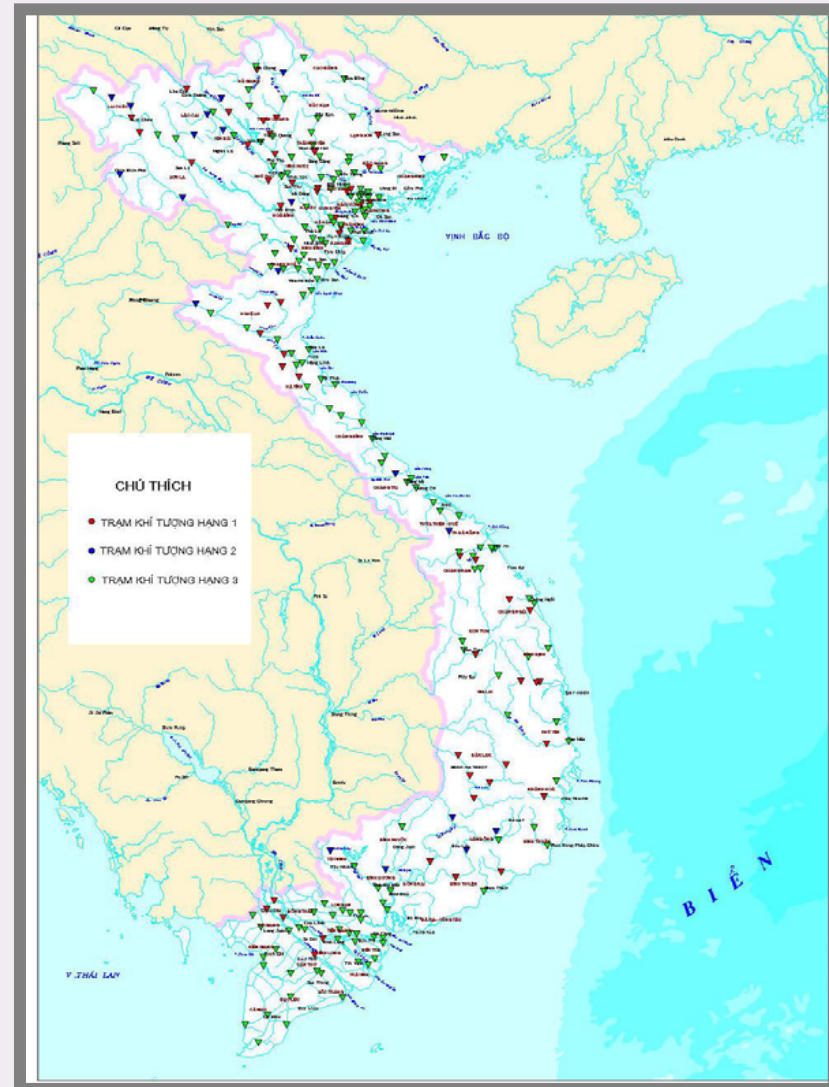
- 1. Climate characteristics of Vietnam**
- 2. Operational Forecasts**
- 3. Development Priorities and Proposals**



1. Viet Nam

- Area: ~ 330.000 km²
- Pop. : ~86 millions with 75% of population living in rural areas.
- Located in the tropical monsoon area: winter : cold, dry NE monsoon in North and Central; summer: hot, wet SW monsoon (esp. in the South).
- Affected systems: TC, ITCZ, heavy rain spells, monsoon, cold surges, ENSO.

Met. Obs. stations



Some Statistics

- **Average** annual rainfall: 1500 - 2500mm; 1800 sun.hrs
- **Max.** daily rainfall: 978mm (Hue, 3Nov1999); 569mm (Hanoi, May 1926)
- **Severe Drought:** Oct.04-Apr.05, rainfall lower than average in whole country, many regions: 30% lower, some regions: 50% - 70% lower than average (Highland and South Viet Nam). <---ENSO impacts.
- **TCs:** ~ 9-10 TS & 2-3 TD in SCS ; 3-4 T.S & 1-2 T.D landing.
- ~**20 heavy rain spells** (duration of more than 2 days): 8-9 spells in the north; 7-8 spells in the central and 5-6 in the south.
- ~**30 cold air** invasion spells.



2. Operational forecasts

- 10 days forecasts: Weather tendency, including rainfall amount, temperature (maximum, minimum, and average) for specific regions.
- Monthly forecasts: temperature tendency and rainfall for specific regions.
- Seasonal forecasts: tendency of T.C activity, NE and SW monsoon activities.



Methods

- Synoptic: Circulation anal. (geop. height at 500mb in EastAsia trough and Subtropical high)
- Statistics: Multi. Regressions equations (fcst. tendency of tmp, rain of winter-spring season and rainy season)
- Guidance from Medium range NWP products (ECMWF, APCC, NCEP, Japan, ..)



3. Development Priorities and Proposals

- Improvement on medium-range fcst. and clim. predic. are the most concerning issues in NCHMF.
- Joining CliPAS project and effectively exploit its products (<http://www.apcc21.net/>)



Based on the demand of **Sub-Regional Clim. Prediction**, we :

- Set priorities on uses/apply clim. predict. tools.
- Set priorities on uses/apply **numerical regional climate** models such as RegCM (NCAR-Regional Climate Model), CWRF RCM... for climate simulations (research) and toward operational predictions.
- Much-appreciated any support from APCC in **this issue.**



Proposals

- **Encourage** close cooperation with SEA countries.
- **Propagate** CliPAS's products via **localizations**. (e.g.: develop tools for point scale seasonal prediction, separate level of user and build plan for each..)
- **APCC Data Service System** would share the **input data** for climate scenarios simulations as well as predictions for member economies?
- Guide **policy-makers** how to use reliable climate products for making good decisions.



THANK YOU !

