

**ADVANTAGES AND DIFFICULTIES
OF GREENHOUSE GASES OBSERVATIONS
at the National Hydro-Meteorological Service
(NHMS), VIETNAM**

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Introduction

The hydro-meteorological sector was established in Vietnam more than 100 years ago;

With the rise and fall of the national history, the hydro-meteorological sector in Vietnam has been maintained and developed;

NHMS joined the World Meteorological Organization (WMO) on the 7th May, 1975.

Indochina Department of Meteorology's main building at Phu Lien Hill (Kien An District, Hai Phong City), since 1902

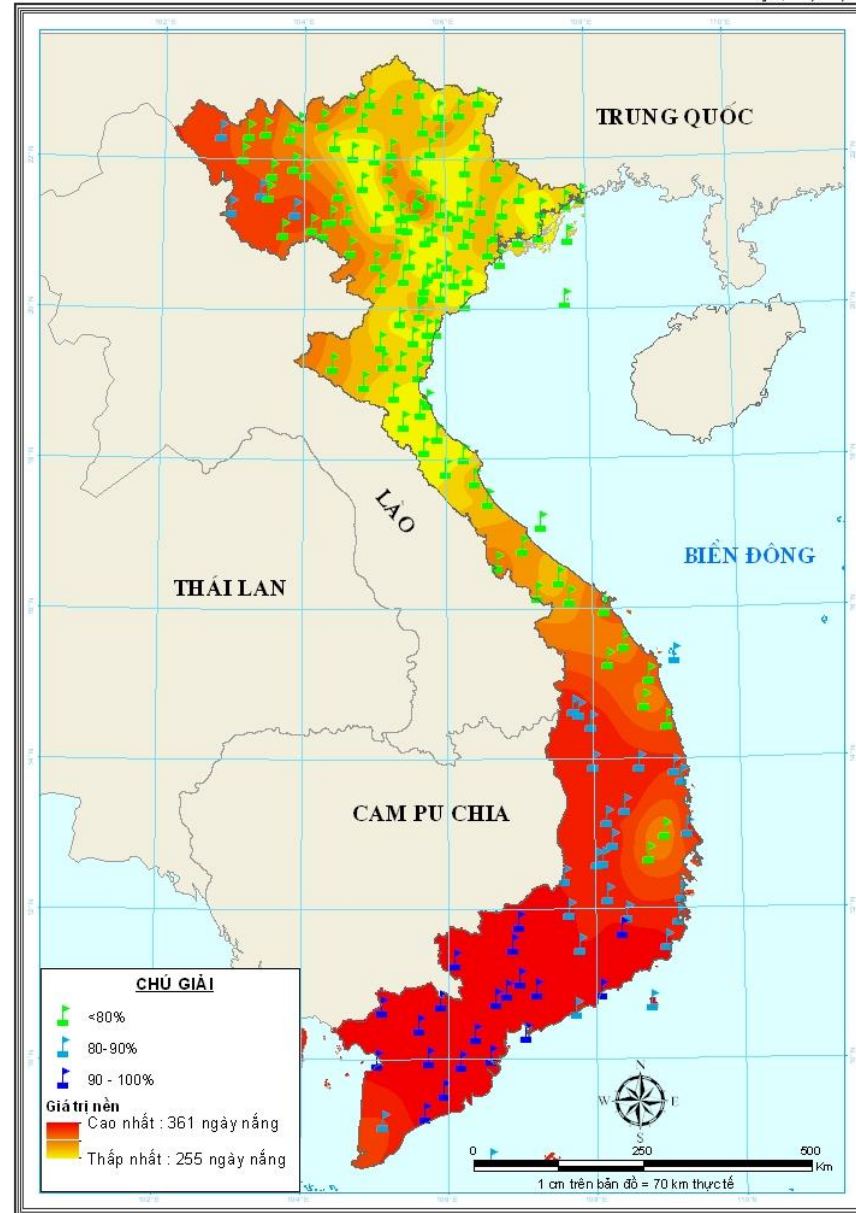


Network

- 194 meteorological stations;
- 233 hydrological stations;
- 17 upper air meteorological stations;
- 18 oceanographically stations;
- 26 air environment monitoring stations (at meteorological station sites)- include 11 greenhouse gages stations;
- 61 water environment monitoring stations (at hydrological and oceanographically station sites);
- 68 salty environment monitoring points;
- 01 GAW station (PhaDin).

SỐ NGÀY NẮNG TRUNG BÌNH NĂM 2009 - 2010

Tỷ lệ 1:7,000,000



Network - Plan

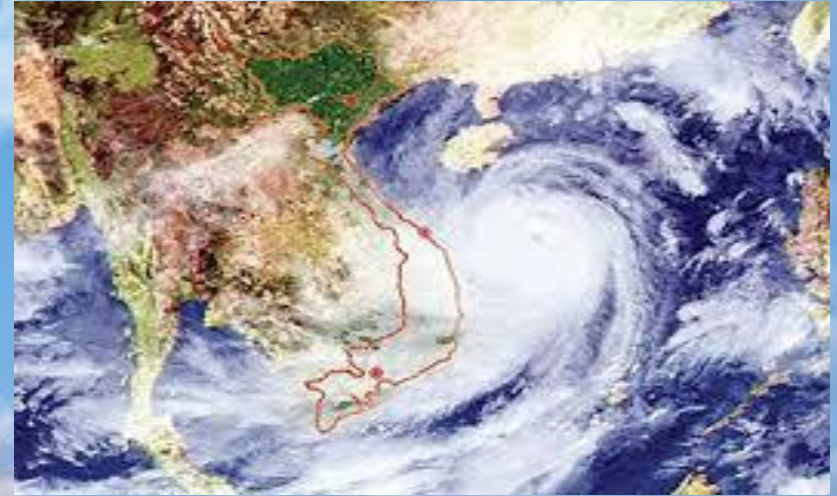
From now until 2020, 36 monitoring climate change stations will be newly established.

Advantages

- NHMS stations have been used to observe greenhouse gases based on their advantages of facilities, human resources, favorable observation positions;
- Government's concern and investment;
- International organizations' support.

Difficulties

- Some measurement instruments not adapt to Vietnam's nature conditions: air humidity, tropical rain, lightning, storm, and insects.



Insects crawl on instruments



Difficulties

- Untimely supply of spare parts;
- High cost of maintenance;
- High technology not regularly updated;
- Deficient experience of work management and operation.

Solutions

A vibrant rainbow arches across a bright blue sky filled with scattered white clouds. The rainbow's colors are vivid, and its reflection is visible on the surface of the blue ocean below. The overall scene is bright and optimistic.

10/28/2015

Solutions

- Continue taking advantages of the network of the NHMS's observation stations;
- Find appropriate technological solutions in Vietnam's natural condition;
- Use equipments at the best-case;
- Strengthen human resources;
- Improve ability of technology through international cooperations;
- Advance organizational mechanism.

Conclusion

- Climate change monitoring is an urgent task set out by the Vietnamese Government;
- Greenhouse gases statistics has been collected annually;
- Climate change monitoring has received concerns of the country's leaders and the scientists;
- For the future: develop advantages and overcome difficulties are very important activities in NHMS

A vibrant rainbow arches over a blue ocean under a bright blue sky with scattered white clouds. The rainbow's colors are clearly visible, and its reflection is seen on the water's surface. The text is centered over the image.

Some pictures for activities in Greenhouse gases in NHMS Vietnam





2002/08/27 14:26

TrendData 15.73MB

Lang - Ha Noi

(08001)

SO2	13ppb	NO	0ppb
NO2	13ppb	NH3	20ppb
CO	1.19ppm	O3	71ppb
NMHC	0.42ppmC	CH4	2.52ppmC
TSP	44ug/m3	PM10	31ug/m3
OBC	1.2ug/m3	WD	SW
WS	1.8m/sec	Temp	30.5degC
Hum	71%RH	SR	294W/m2
UV	16.3W/m2	ATP	1001hPa
Rain	0.0mm		

Lock

Message

DataDisp

Menu



GAW station - Phadin











A vibrant rainbow arches across a bright blue sky filled with scattered white clouds. The rainbow's colors are vivid, and its reflection is visible on the surface of the blue ocean below. The overall scene is bright and cheerful.

Thank you very much!