

MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT
VIETNAM DISASTER MANAGEMENT AUTHORITY



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02 October 2017



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VI. CHALLENGES



NATURAL DISASTER MAP IN VIETNAM

2. Topographic characteristics

REGION 1

Typical natural disaster: FlashFlood, landslide, damaging cold, rime ice, heavy rain.

REGION 2

NORTHERN DELTA (9 PROVINCES),
AND NORTH CENTRAL (3 PROVINCES)

Typical natural disaster: Flood, tropical depression, storm, inundation, drought, salinization, damaging cold, heavy rain.

REGION 3

NORTH CENTRAL MOUNTAIN (3 PROVINCES)

CENTRAL (4 PROVINCES)

Typical natural disaster: Heat wave, flash flood, landslide, damaging cold .

REGION 4

DUYÊN HẢI MIỀN TRUNG (10 PROVINCES)

Typical natural disaster: Flood, inundation, tropical depression, storm to super storm, drought, salinization, river and coastal landslide, heavy storm.

REGION 6

CENTRAL HIGHLANDS(5 PROVINCES)

SOUTH CENTRAL MOUNTAIN (6 PROVINCES)

SOUTHEAST (6 PROVINCES)

Typical natural disaster: Heat wave, drought, flood, flashflood, landslide, inundation

REGION 5

LARGER URBAN ZONE
(05 DIRECT-CONTROLLED MUNICIPALITY + 14 PROVINCIAL CITY CLASS 1*)

Typical natural disaster: Ngập úng do mưa lũ lớn và triều cường, bão lớn và dông lốc

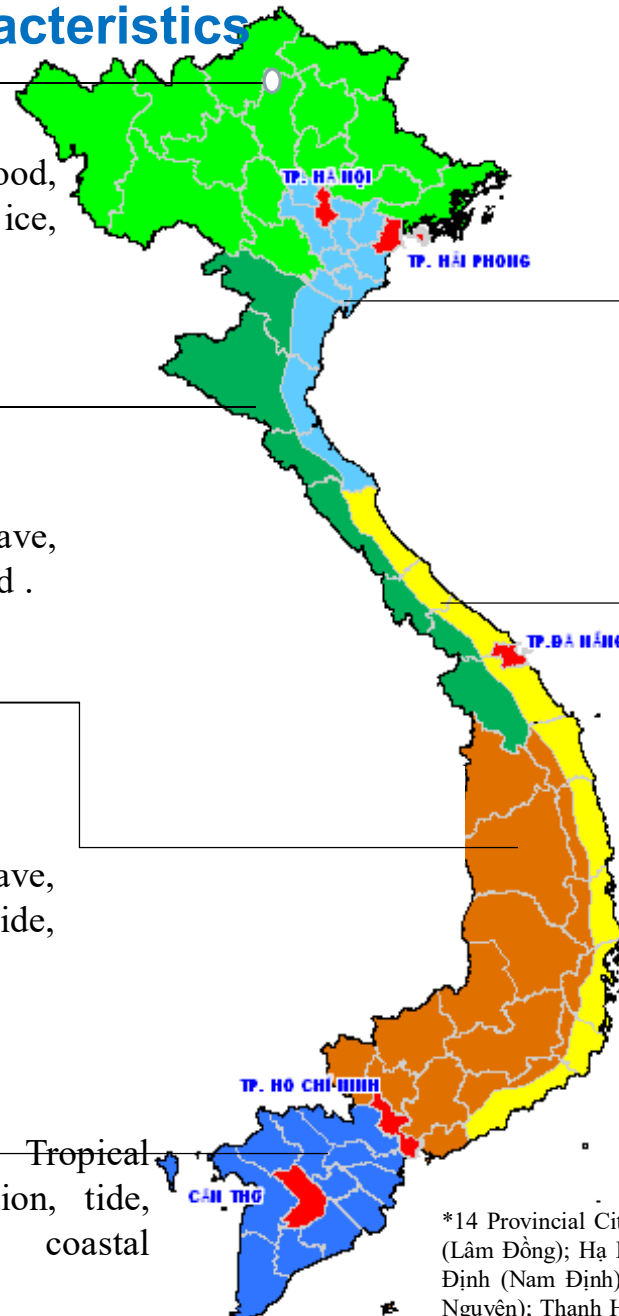
REGION 7

MEKONG RIVER DELTA (12 PROVINCES)

Typical natural disaster: Tropical depression, storm, flood, inundation, tide, drought, salinization, river & coastal landslide, thunderstorm.

REGION 8

SEA COASTAL PROVINCES FROM QUANG NINH TO KIEN GIANG; HOANG SA AND TRUONG SA ISLAND



*14 Provincial City Class 1 (2016): Biên Hòa (Đồng Nai); B.Ma Thuật (Đắk Lắk); Đà Lạt (Lâm Đồng); Hạ Long (Quảng Ninh); Huế (Thừa Thiên-Huế); Mỹ Tho (Tiền Giang); Nam Định (Nam Định); Nha Trang (Khánh Hòa); Quy Nhơn (Bình Định); Thái Nguyên (Thái Nguyên); Thanh Hóa (Thanh Hóa); Việt Trì (Phú Thọ); Vinh (Nghệ An); Vũng Tàu (Bà Rịa)



NATURAL DISASTER MAP IN VIETNAM

2. Topographic characteristics

REGION 1

Flashflood 3/10/2000 (LaiChau 39 dead, 18 injured); Landslide, flashflood 28/9/2006 (Van Chan, Yen Bai, 50 dead and missing), Landslide, flashflood after storm no. 4 in Lao Cai, Yen Bai 2008 (120 dead and missing), flashflood 5/9/2013 In LaoCai (11 dead, 16 injured), Landslide, flashflood 5/8/2017 in Lao Cai (10 dead and missing) Damaging cold, rime ice from 22-28/01/2016 in 27 provinces from the North to NgheAn (Lost 37.292ha rice and 4.082 ha crop; 36.678 cattle, 60.239 poultry and 2766 other animals were dead, total estimated damage > 1533 billions vnd

REGION 3

Flashflood 20/9/2002 (HaTinh 53 dead, 111 injured); Flashflood 9/2011 (ThanhHoa 6 dead); flashflood after storm no. 4 in Quy Chau, Nghe An 14/9/2017 (12 dead and missing)

REGION 6

From late 2015 to early 2016: severe drought in DakLak, GiaLai, KonTum, NinhThuan, BinhThuan (15.000 ha damaged, 28000 ha rice and 140.000 ha old tree were lost); total estimated damage > 8130 billions vnd.

REGION 7

Flood and inundation in 2000 (565 dead, 276 injured, 9.457 house destroyed, > 62000 household must relocate, 263.077 ha rice was damaged, total estimated damage > 4.626 billions vnd; Flood on 10/2011 (89 dead, 176.000 houses flooded, 27.000 ha of rice flooded, total estimated damage > 4.400 billions vnd; salinization in 2015: 342.254 household lack of running water; 215.445 ha of rice damaged, total estimated damage > 7.500 billions vnd;

REGION 2

Record Flood 8/1945 (79 dykes broken, 160.000 ha land for production inundated); Flood 8/1971 (16 dykes broken, 600 dead and missing people); Storm no. 7 Damrey 2005 (68 dead & missing, 4.746 houses destroyed, total estimated damage > 3.500 billions vnd); Storm no. 2016 (5 dead, >34,000 houses flooded, >200000ha of rice flooded, total estimated damage > 7.200 billions vnd; Record inundation in Thai Binh 09/2003 (30.000 ha of rice)

REGION 4

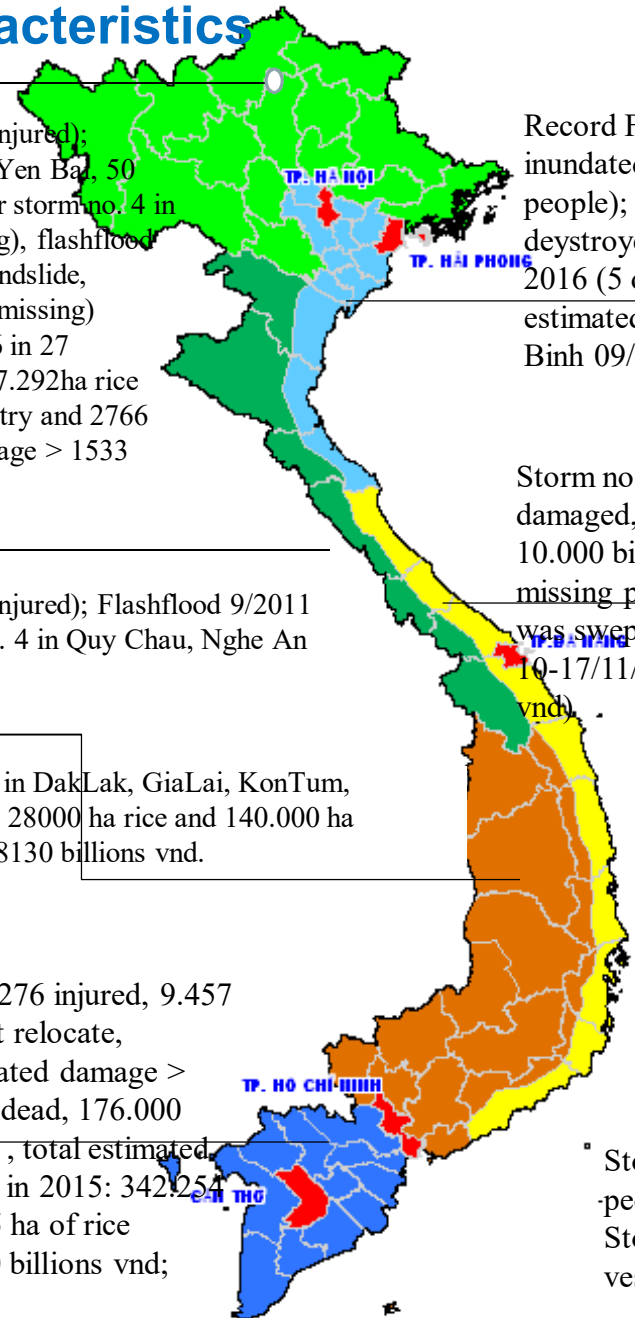
Storm no. 6 Xangsane 2006 (76 dead and missing, 35000 houses damaged, 1000 vessels damaged, total estimated damage > 10.000 billions vnd); Flood 1/11-6/12/1999 (715 dead and missing people, 1 million houses flooded and thousand of house was swept, total estimated damage > 5.000 billions vnd); Flood 10-17/11/2010 (143 dead, total estimated damage > 11.00 billions vnd).

REGION 5

Heavy rain, historical inundation 30/10-3/11 2008 in Hanoi (22 dead, total estimated damage > 3.000 billions vnd); Storm no. 6 Xangsane in Da Nang (2006).

REGION 8

Storm no. 5 Linda 11/1997 (3000 dead and missing people, 2897 sunken ship, 1856 vessels damaged); Storm no. 1 Chanchu in 2016 (13 sunken ship, 05 vessel missing, 226 dead and missing people)

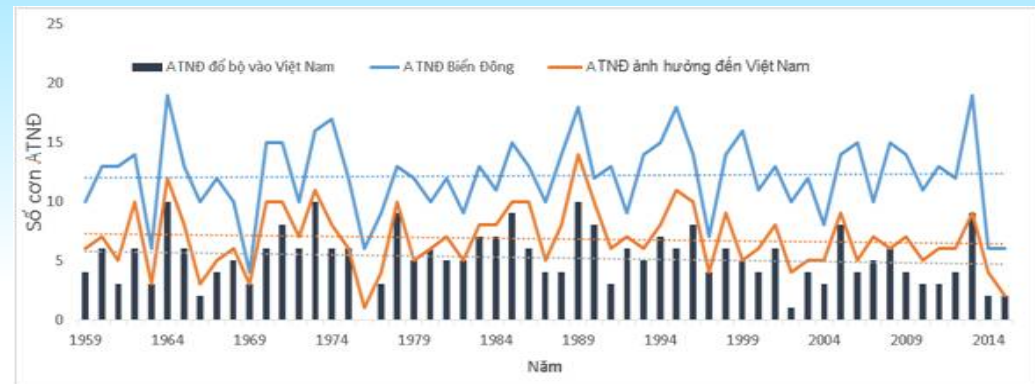




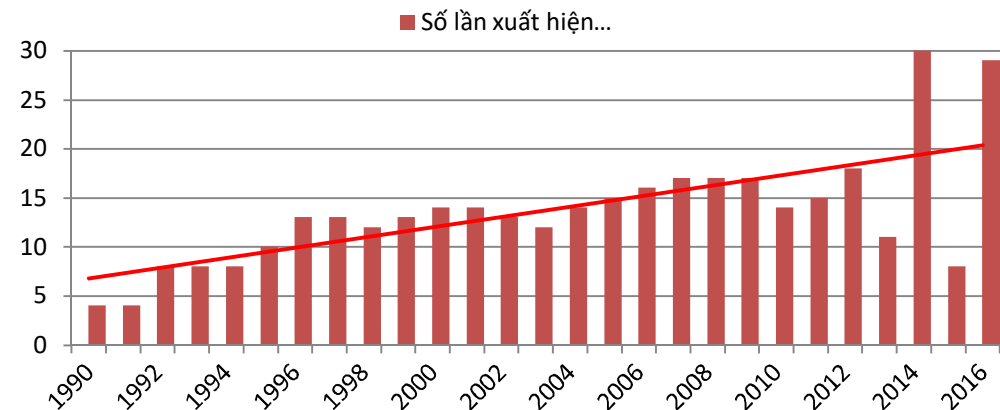
I. OVERVIEW OF NATURAL DISASTER IN VIETNAM

3. Extreme weather

- Strong storms tend to increase
- Unpredictable rain and unusually heavy rain occur more frequently
- Flashflood tends to increase: period 2004–2016 (210 attacks) increased 1,5 times compared to the period 1990–2013 (142 attacks)
- Drought, salinization occurs, heat wave appears with frequency



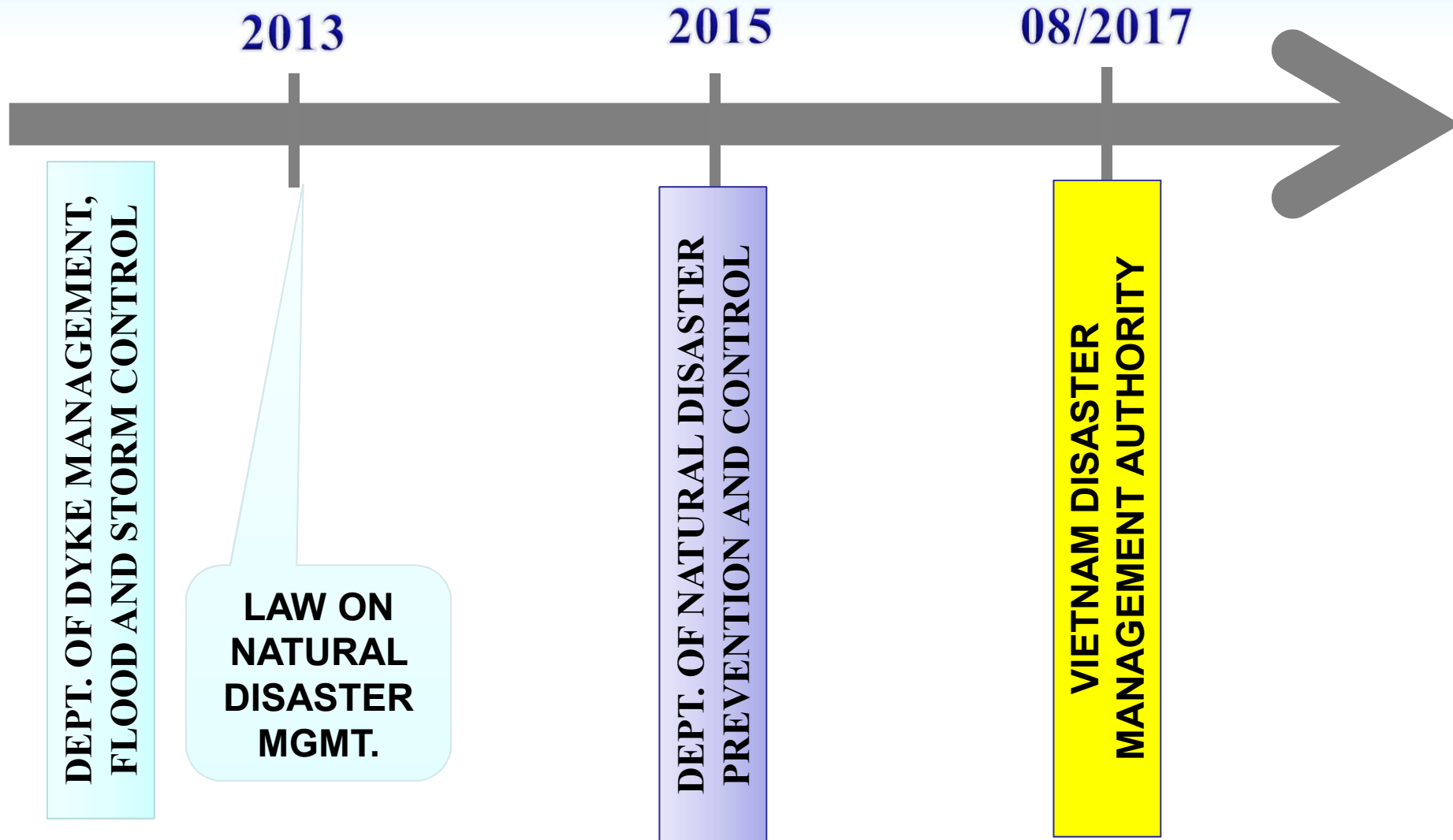
Storm level 12 or above in East Sea Period 2004-2016 (44) increased 1,3 times compared to the period 1990-2003 (35)





II. ORGANIZATIONAL STRUCTURE OF VIETNAM DISASTER MANAGEMENT

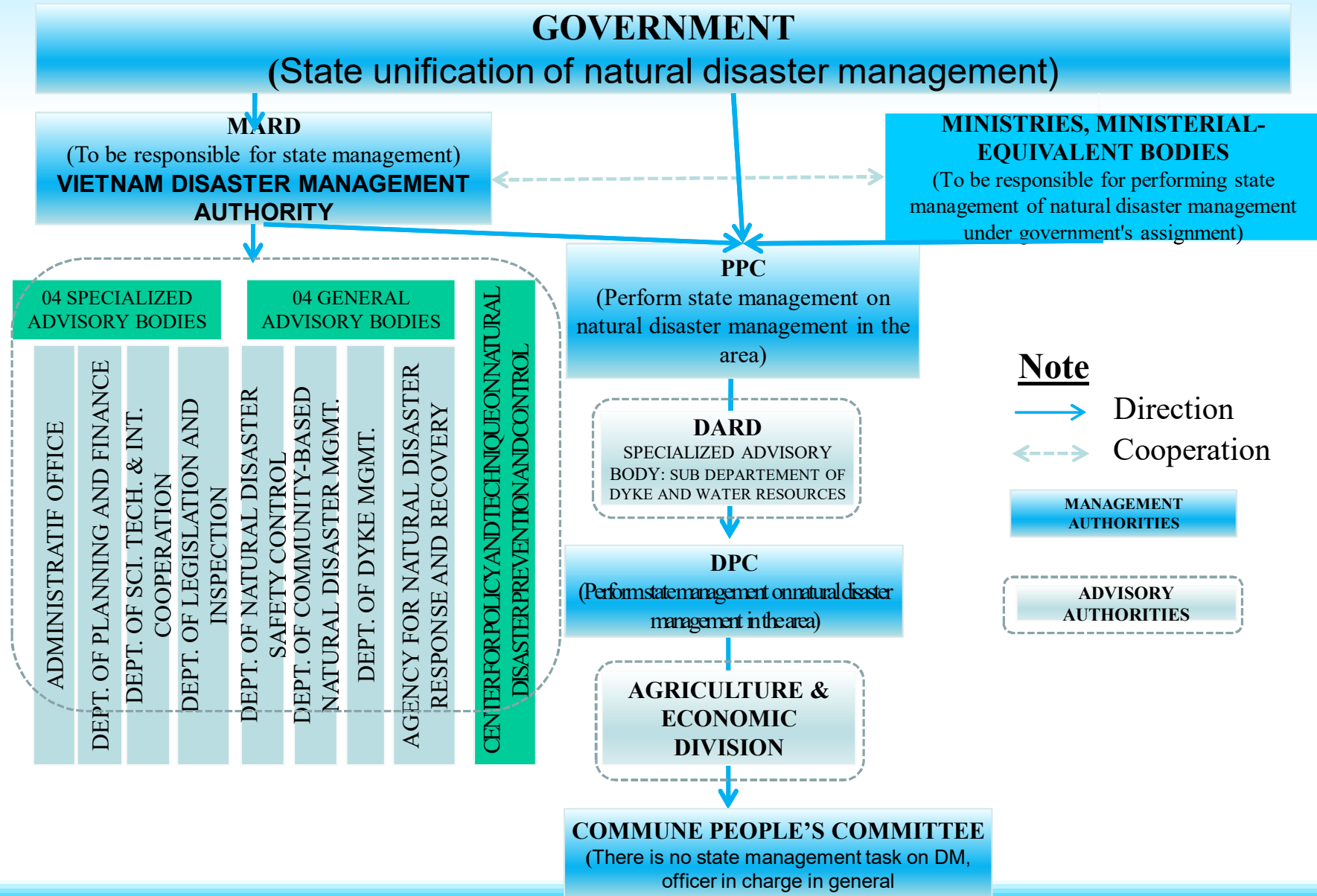
NATIONAL AGENCY OF NATURAL DISASTER MANAGEMENT (STANDING OFFICE OF THE CENTRAL STEERING COMMITTEE FOR NATURAL DISASTER MANAGEMENT)





II. ORGANIZATIONAL STRUCTURE OF VIETNAM DISASTER MANAGEMENT

FLOW CHART ON STATE MANAGEMENT AGENCIES ON NATURAL DISASTER MANAGEMENT





II. ORGANIZATIONAL STRUCTURE OF VIETNAM DISASTER MANAGEMENT

MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT

VIETNAM DISASTER MANAGEMENT AUTHORITY
(STANDING OFFICE OF THE CENTRAL COMMITTEE FOR NATURAL
DISASTER MANAGEMENT)

ADMINISTRATIVE OFFICE

DEPT. OF PLANNING AND FINANCE

DEPT. OF SCI. TECH. & INT. COOPERATION

DEPT. OF LEGISLATION AND INSPECTION

DEPT. OF NATURAL DISASTER SAFETY CONTROL

DEPT. OF COMMUNITY-BASED NATURAL
DISASTER MGMT

DEPT. OF DYKE MAMAGEMENT

CENTER FOR POLICY AND TECHNIQUE ON
NATURAL DISASTER PREVENTION AND CONTROL

CENTRAL AND HIGHLAND
SUB-DEPT. OF NATURAL DISASTER MANAGEMENT

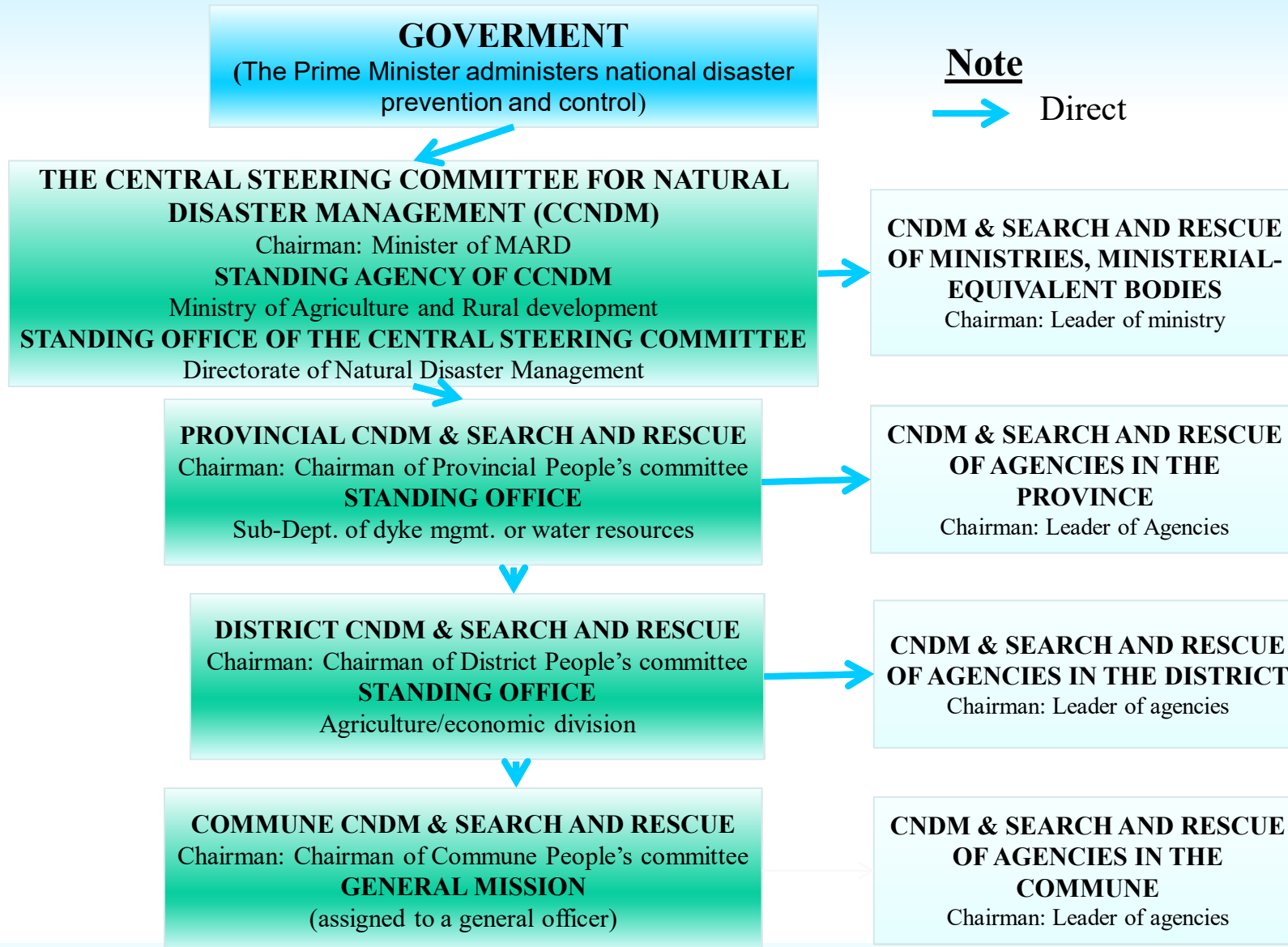
SOUTHERN SUB-DEPT. OF NATURAL
DISASTER MANAGEMENT





II. ORGANIZATIONAL STRUCTURE OF VIETNAM DISASTER MANAGEMENT

FLOW CHART ON INTERDISCIPLINARY SYSTEM OF COORDINATING, STEERING AND DIRECTING AGENCIES OF NATURAL DISASTER MANAGEMENT





II. ORGANIZATIONAL STRUCTURE OF VIETNAM DISASTER MANAGEMENT

Response according to level of disaster risk

No.	Type of disaster	Level of disaster risk				
		1	2	3	4	5
1	Storm / Tropical depression			X	X	X
2	Cyclone, lightning, hail	X	X			
3	Heavy rain	X	X	X		
4	Heat wave	X	X	X		
5	Drought	X	X	X	X	
6	Damaging cold, rime ice	X	X	X		
7	Fog	X	X	X		
8	Flood, inundation	X	X	X	X	X
9	Flash flood	X	X	X		
10	Landslide due to rain or flood	X	X			
11	Salinization	X	X			
12	Strong winds on the sea	X	X	X		
13	Earthquake	X	X	X	X	X
14	Tsunami			X		X



Responsibility to respond according to the level of disaster risk

- ❖ Level 1: President of Commune People's Committee, Chairperson of commune steering committee for natural disaster management
- ❖ Level 2: President of Provincial People's Committee, Chairperson of provincial steering committee for natural disaster management
- ❖ Level 3: Chairperson of the center steering committee commands the ministries, provinces to implement the response measures.
- ❖ Level 4: The Prime Minister commands the ministries, provinces to implement the response measures.
- ❖ Level 5: The Prime Minister demand the State President to declare a state of emergency



III. PRIORITY ORIENTATIONS

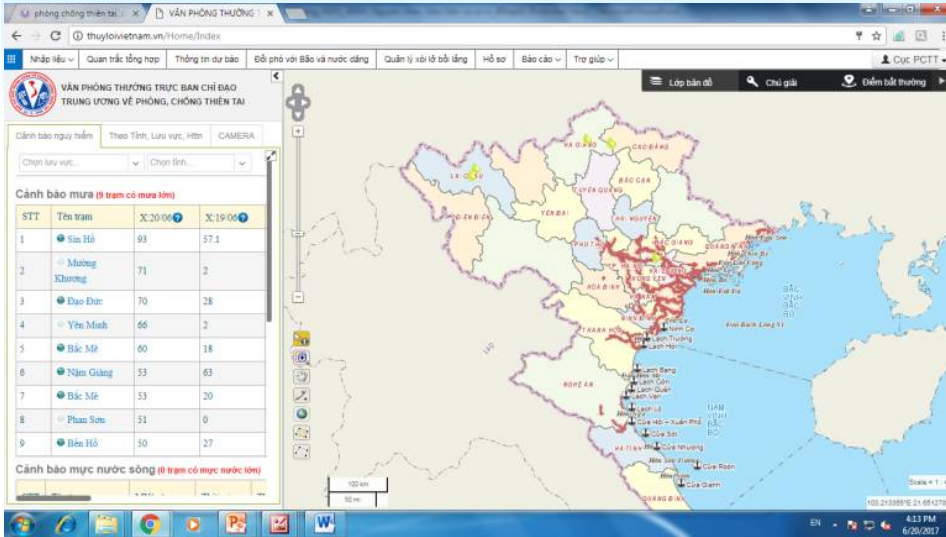
- ❖ To strengthen the organization of the state authorities at different level (province, district, commune); Strengthening the control of natural disaster safety, ensuring the prevention requirements in the process of infrastructure development; control and reduction of disaster risk;
- ❖ To build natural disaster prevention works: observation, multi-disaster warning system, infrastructure for evacuation, dykes, dams, anti-landslide...
- ❖ To actively respond and recovery from natural disaster. To consolidate forces, materials, equipment and facilities for the disaster management
- ❖ To strengthen the community-based disaster management
- ❖ To strengthen the communication on natural disaster prevention;
- ❖ To strengthen research and application of science and technology in natural disaster management;
- ❖ To strengthen international cooperation in natural disaster management;
- ❖ To strengthen different resources in natural disaster prevention;



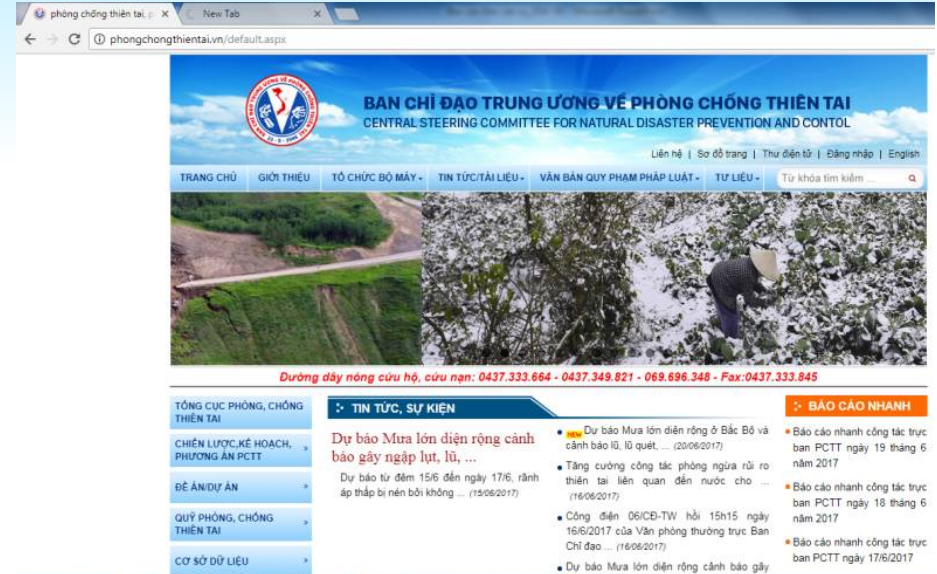
IV. INFORMATION SUPPORT SYSTEM FOR DECISION MAKING

1. Database for disaster preparedness

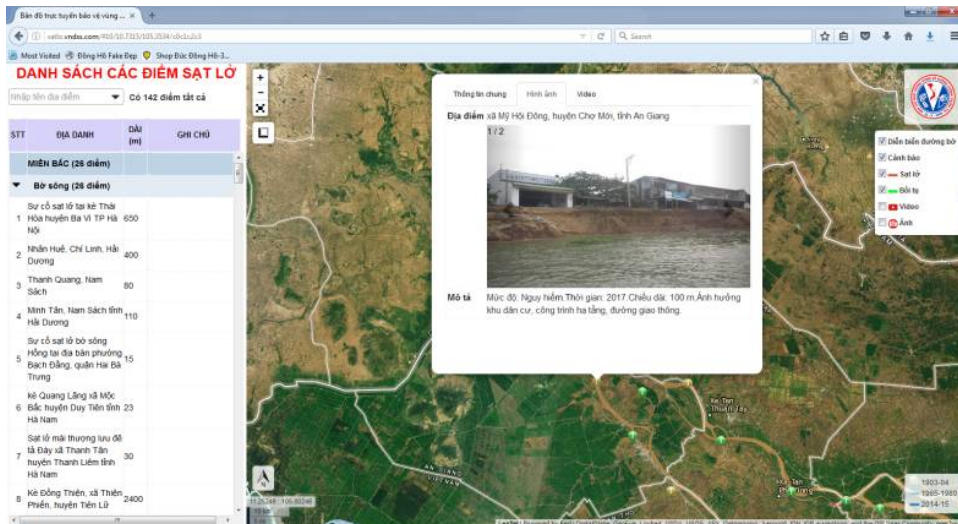
Database



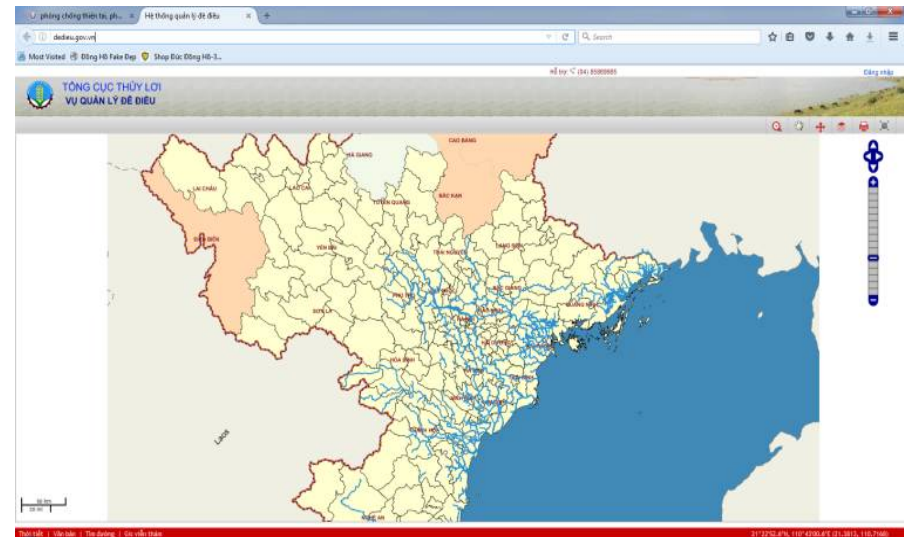
Website of the center steering committee



Dyke data



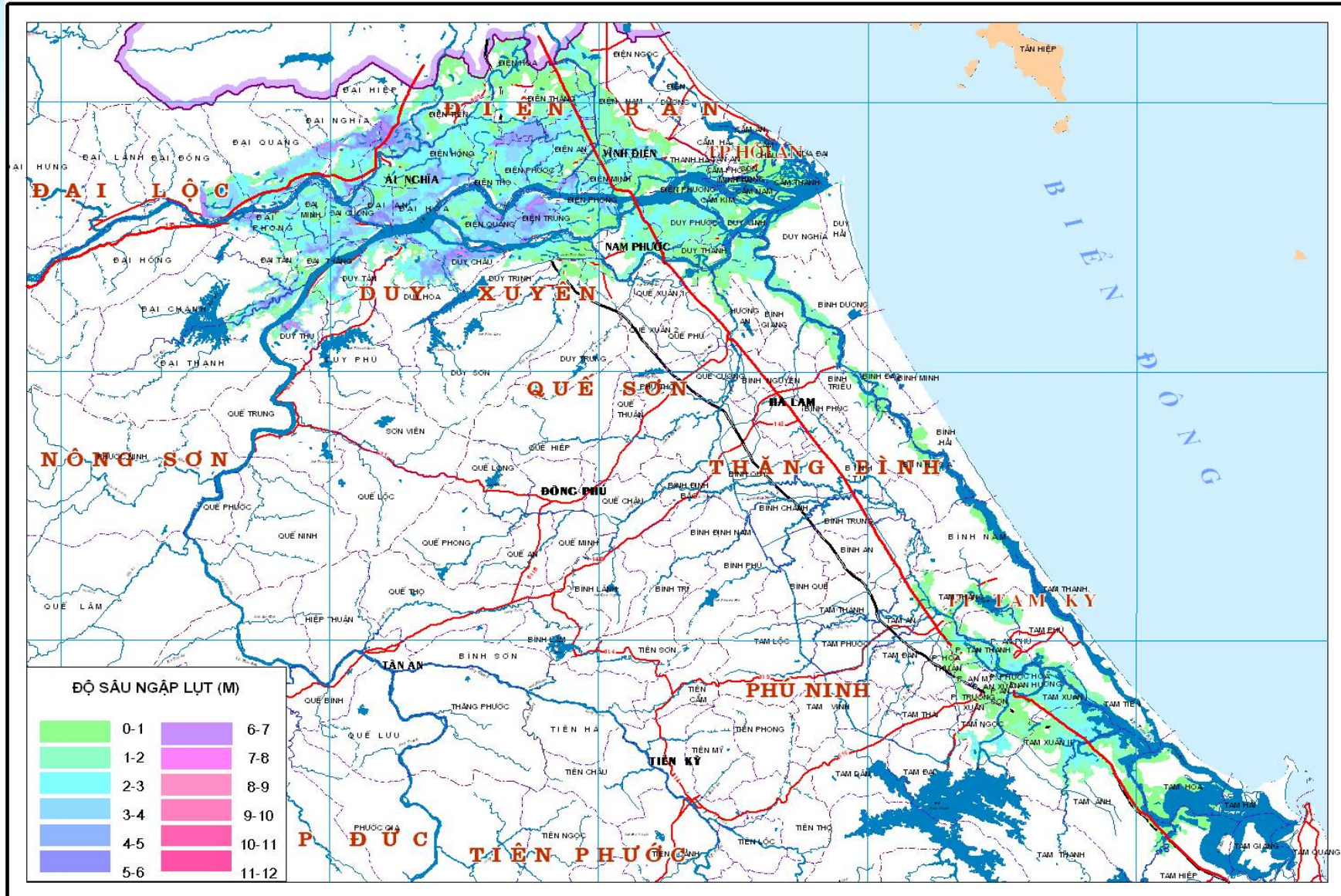
Landslide data





IV. INFORMATION SUPPORT SYSTEM FOR DECISION MAKING

2. Flood map





IV. INFORMATION SUPPORT SYSTEM FOR DECISION MAKING

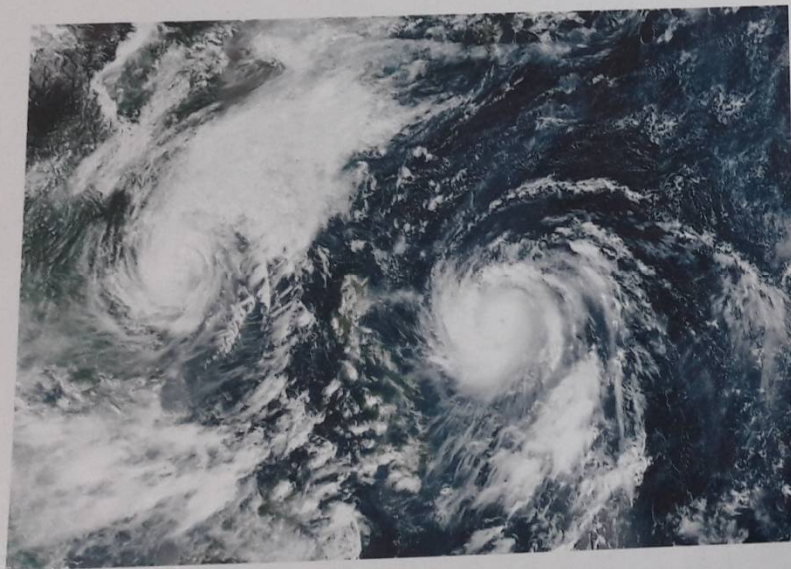
3. Storm and super storm response plan



BAN CHỈ ĐẠO TRUNG ƯƠNG
VỀ PHÒNG CHỐNG THIÊN TAI

TẬP BẢN ĐỒ NGẬP LỤT DO NƯỚC BIỂN DÂNG
TRONG TÌNH HUỐNG BÃO MẠNH VÀ SIÊU BÃO
(TƯƠNG ỨNG VỚI CÁC KỊCH BẢN)

TỈNH QUẢNG NAM



BAN CHỈ ĐẠO TRUNG ƯƠNG
VỀ PHÒNG CHỐNG THIÊN TAI

TẬP BẢN ĐỒ NGẬP LỤT DO NƯỚC BIỂN DÂNG
TRONG TÌNH HUỐNG BÃO MẠNH VÀ SIÊU BÃO
(TƯƠNG ỨNG VỚI CÁC KỊCH BẢN)

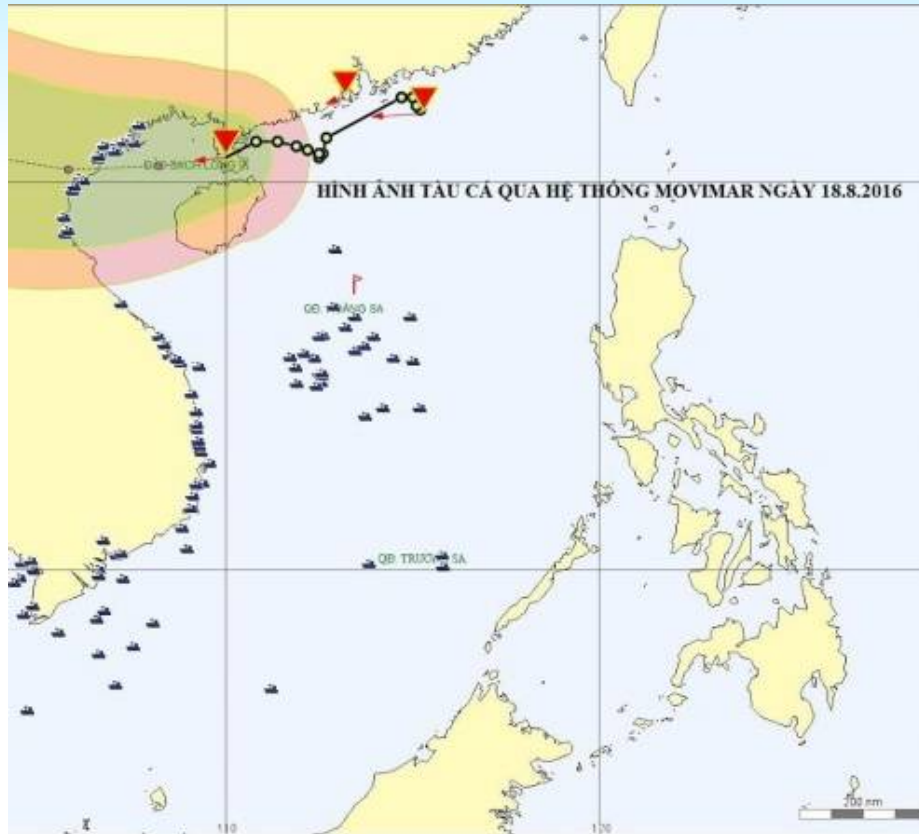
TỈNH NINH THUẬN





IV. INFORMATION SUPPORT SYSTEM FOR DECISION MAKING

4. Management of fishing vessel information



Shore station system



Moviva System



IV. INFORMATION SUPPORT SYSTEM FOR DECISION MAKING

5. System of mobile/satellite communication





V. NATIONAL OPERATIONAL CENTER FOR DISASTER MANAGEMENT

1.Meeting room



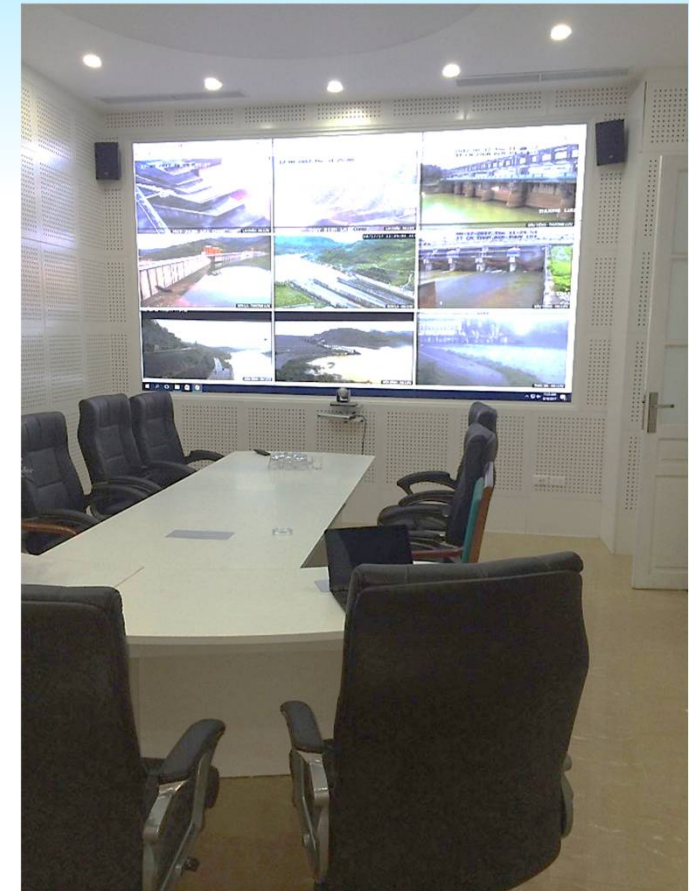
The meeting room is 55m² and equipped:

- 1 large screen, size 150inch; 1 television 100inch, 2 television 55inch, 2 projector, map of natural disaster prevention of 3 regions, map of dykes system of red river, Thai Binh river, model of northern flood control system, sounds system, camera and two computers.



V. NATIONAL OPERATIONAL CENTER FOR DISASTER MANAGEMENT

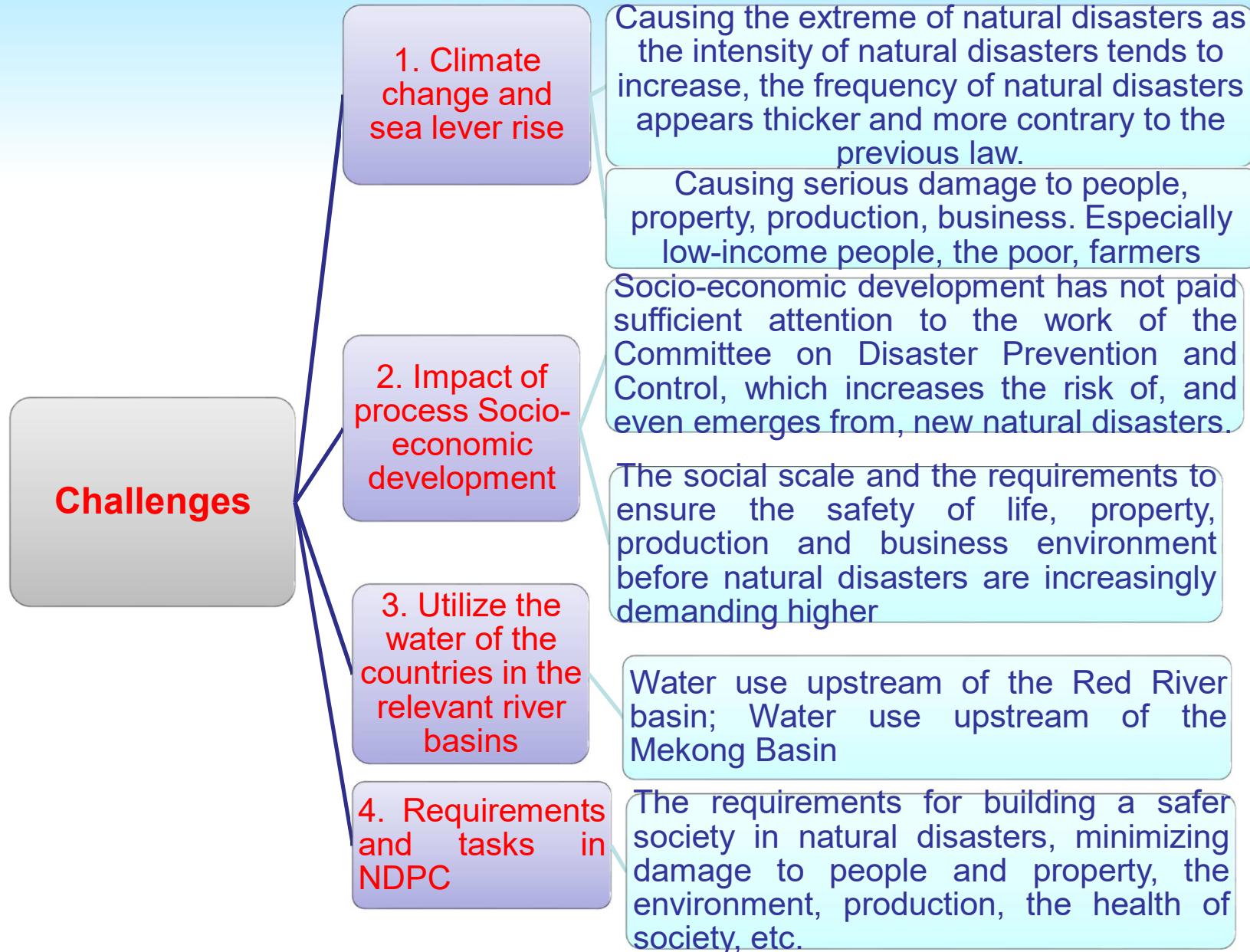
2. Concierge room 24/24h



The room is 30m², equipped 02 telephones, 01 mobile, 03 computers, 02 printers, 02 fax machine, 01 television 86 inch; 1 bedroom



VI. CHALLENGES





**THANK YOU FOR YOUR
KIND ATTENTION!**

**MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT
VIETNAM DISASTER MANAGEMENT AUTHORITY**

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TEL: (84-4) 37338780 FAX: (84-4) 37335701**