

COUNTRY PRESENTATION

Asian Disaster Reduction Center (ADRC, Japan)
Visiting Researcher 2009

The Philippine Disaster Management System

by:

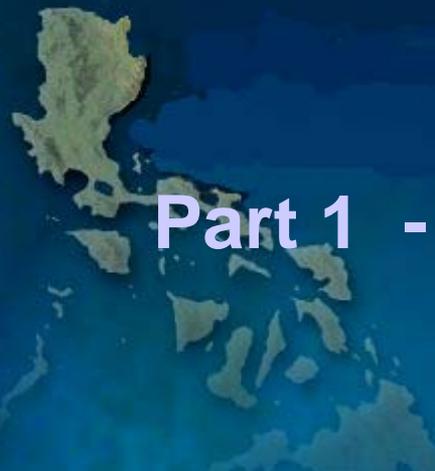
Josefina T. Porcil

Civil Defense Officer, Planning Division

**Office of Civil Defense-National Disaster Coordinating Council
(OCD-NDCC)**



Scope of Presentation



Part 1 - General Information on the Philippines

Part 2 - RP Disaster Profile

Part 3 - The Philippine Disaster Management System: An Overview



Introduction



The Philippines is an archipelagic nation located in Southeast Asia, comprising 7,107 islands, spanning 1,840 kms from north to south.

- Total land area - 300,000 sq. kms.
- Coastlines - 36,000 kilometers, the longest coastlines in the world
- Bounded by three large bodies of water:
 - on the west and north - by the South China Sea
 - on the east - by the Pacific Ocean
 - on the south - by the Celebes Sea and the coastal waters of Borneo



Topography

Large mountainous terrain, narrow coastal plains and interior valleys and plains make up the country's topography.



- **Three major island groups:**
 - Luzon** - largest island group with 141,000 sq. kms.
 - Mindanao** - second with 102,000 sq. kms.
 - Visayas** - third with 57,000 sq. kms.
- **Luzon** is the most mountainous with extensive valleys and plains running through its interiors
- Three major mountain ranges in the area: the Sierra Madre, the Central Cordillera and the Caraballo Mountains
- The southern portion of the island has a dominantly volcanic topography with ridges and valleys of gentle slope and generally accordant drainage
- Active volcanoes such as Mt Pinatubo, Mayon Volcano and Mt Bulusan are found in this group of islands



Topography

- **Visayas** Island - located in the central Philippines, has a severe dissection of topography due to its exposure to typhoons from Pacific and torrential rains
- characterized by mountains and hills (where peaks reach 900m), river basins, floodplains, plateaus and valleys
- **Mindanao** - has diverse structural elements and different forms of physiographic development including fault block mountains, volcanic peaks, uplifted plateaus, low flat basins, a notable fault zone which also cuts through Luzon and Visayas, fissure low masses, and incised valleys and canyons.
- Major mountain ranges: the Eastern or Pacific Cordillera, the Bukidnon-Davao Range



Climate

- Tropical marine climate (has high temperature and warm air currents flow over its land masses)
- Dominated by two major seasons: wet and dry seasons
- The summer (southwest) monsoon brings heavy rains to most of the archipelago from June to November
- The winter (northeast) monsoon brings cooler and drier air from December to May
- Mean annual temperature is 26.6°C
- 28.3°C during summer months



Climate

- 25.5°C during rainy months
- Rainfall is the most important climatic element in the Philippines.
- Rainfall distribution throughout the country varies from one region to another, depending upon the direction of the moisture-bearing winds and the location of the mountain systems.
- Mean annual rainfall varies from 965 to 4,064 millimeters annually



Mabuhay!

Population - **88.57 million** as of August 2007

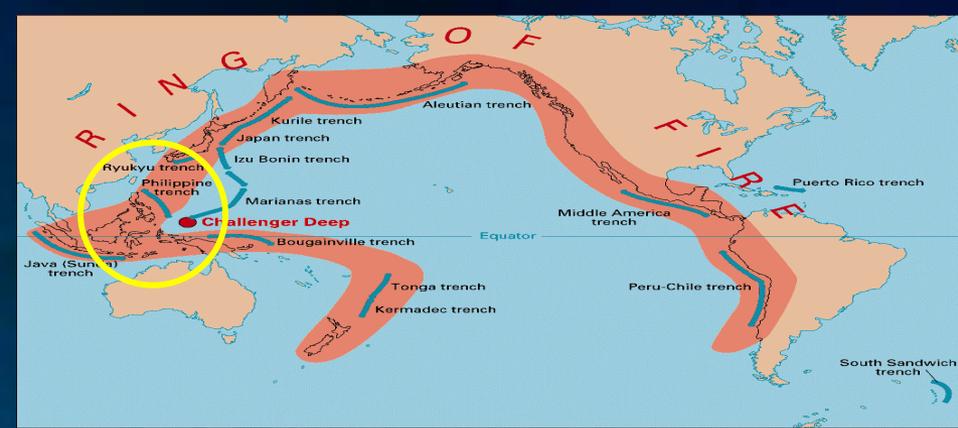
Filipino – official language

90% of the population are Christians

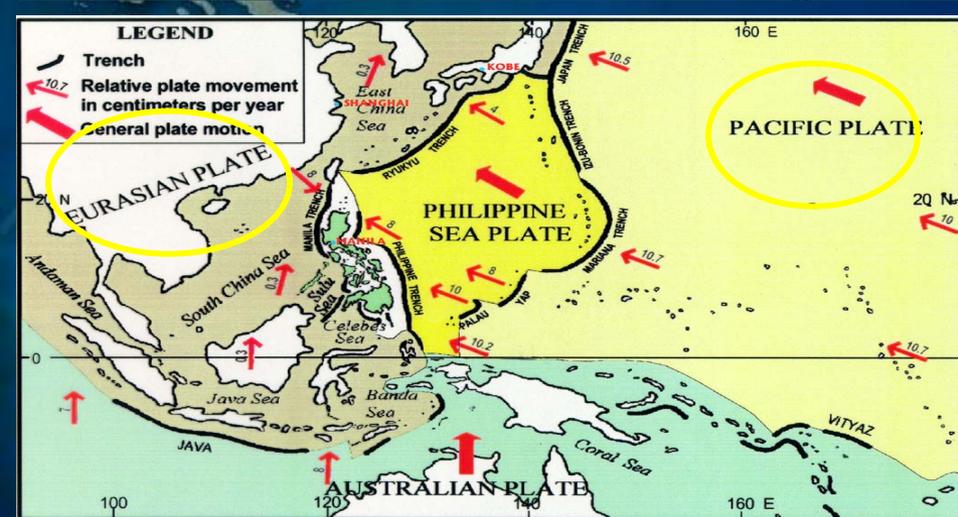
80% are Roman Catholics

The Philippines is a newly industrialized country, with an economy anchored on **agriculture** but with substantial contributions from **manufacturing**, **mining**, **remittances from overseas Filipinos**, and **service industries** such as **tourism**, and **business process outsourcing**.

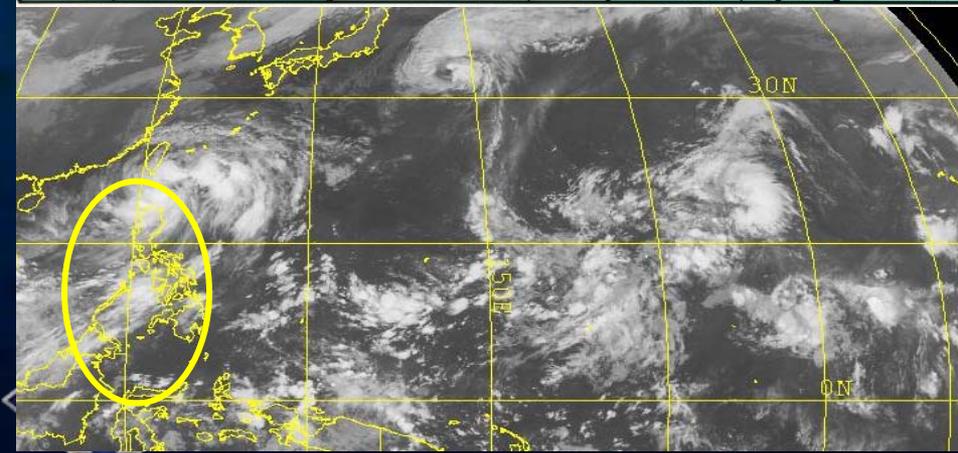


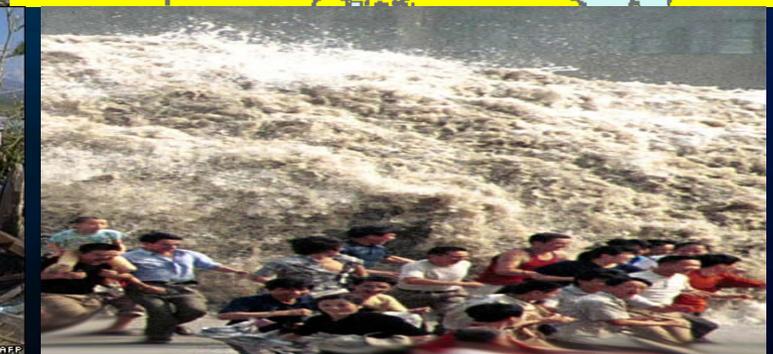
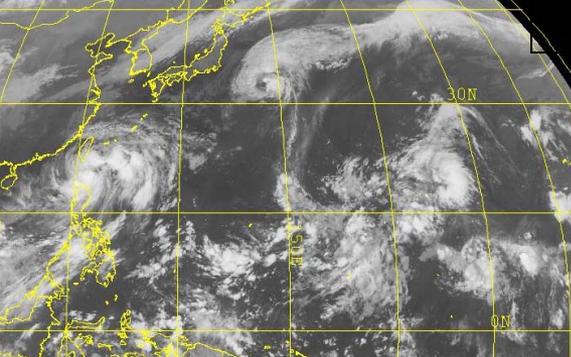


- situated along two major tectonic plates of the world – the EURASIAN and PACIFIC Plates

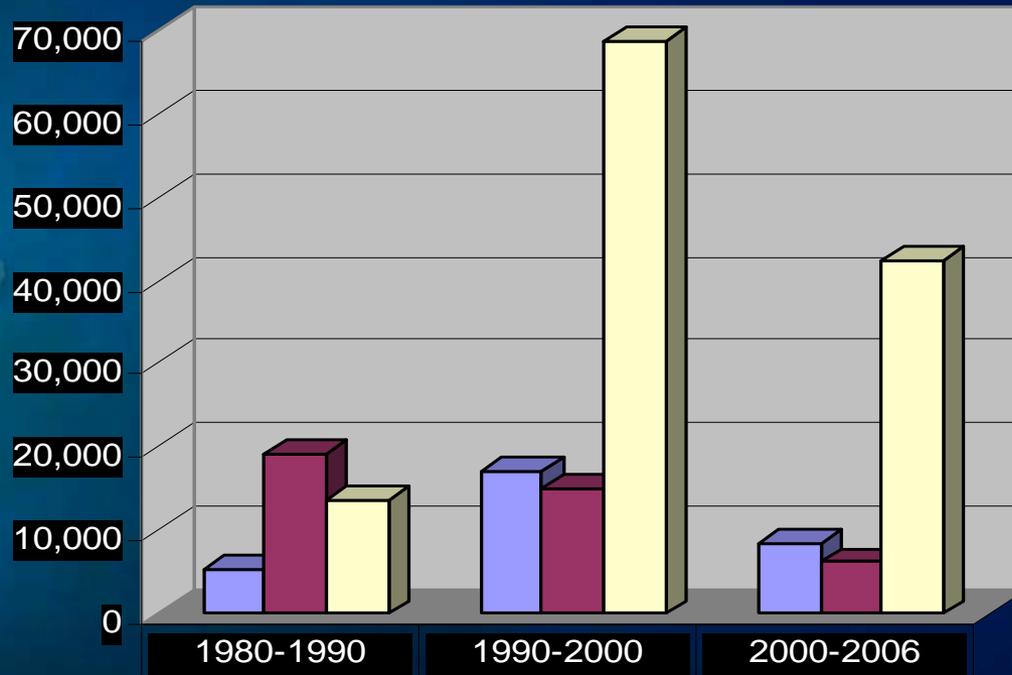


- 300 volcanoes, 22 as active
- average of 20 quakes per day
- average of 20 typhoons a year, five (5) of these are destructive
- 36,289 kms. of coastline vulnerable to tsunami





RP's No. of deaths, injuries and affected persons, 1980-2006



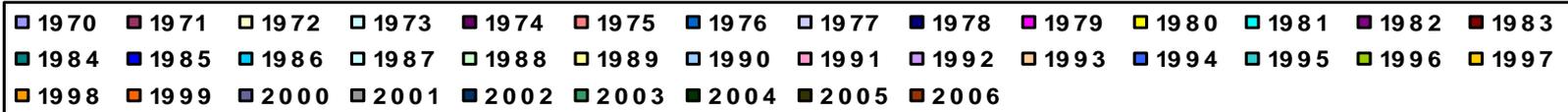
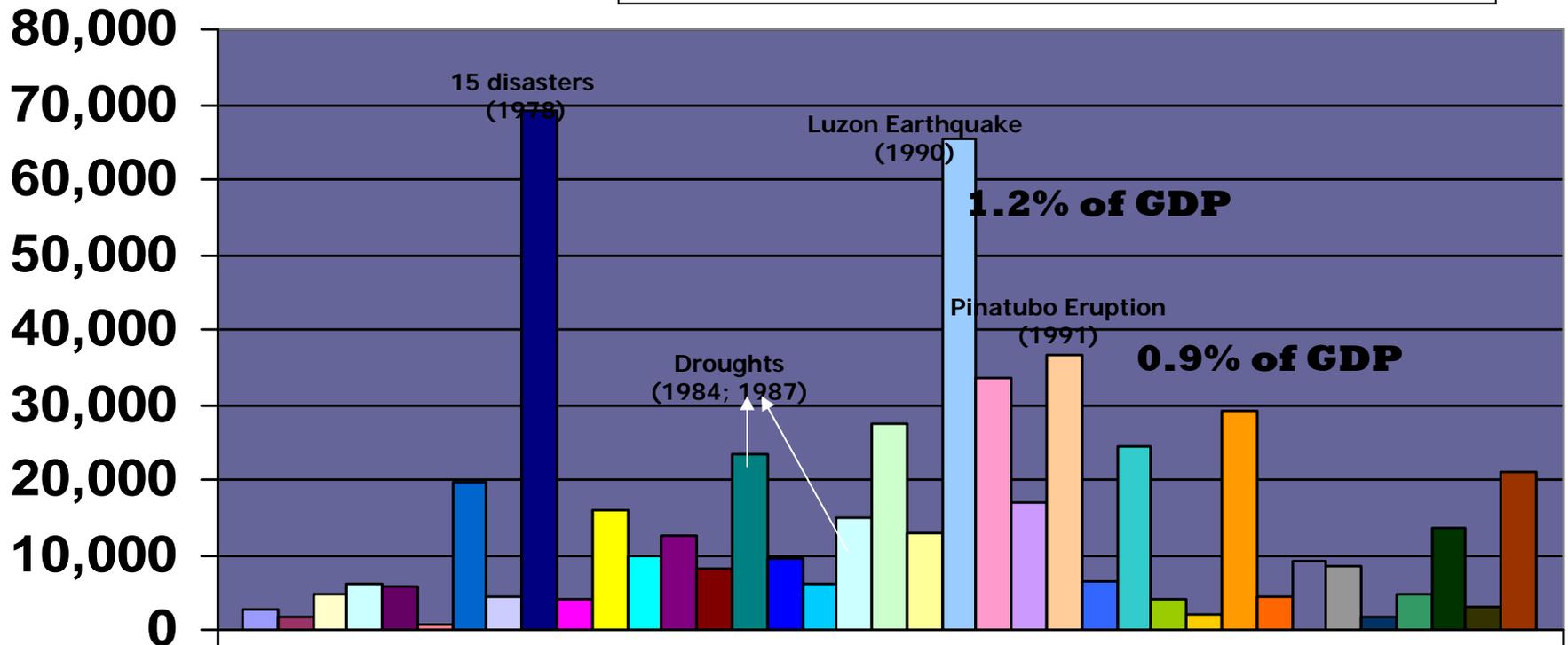
	1980-1990	1990-2000	2000-2006
■ Deaths	5,220	17,249	8,555
■ Injured	19,315	15,166	6,201
■ Affected ('000 persons)	13,713	68,911	42,543



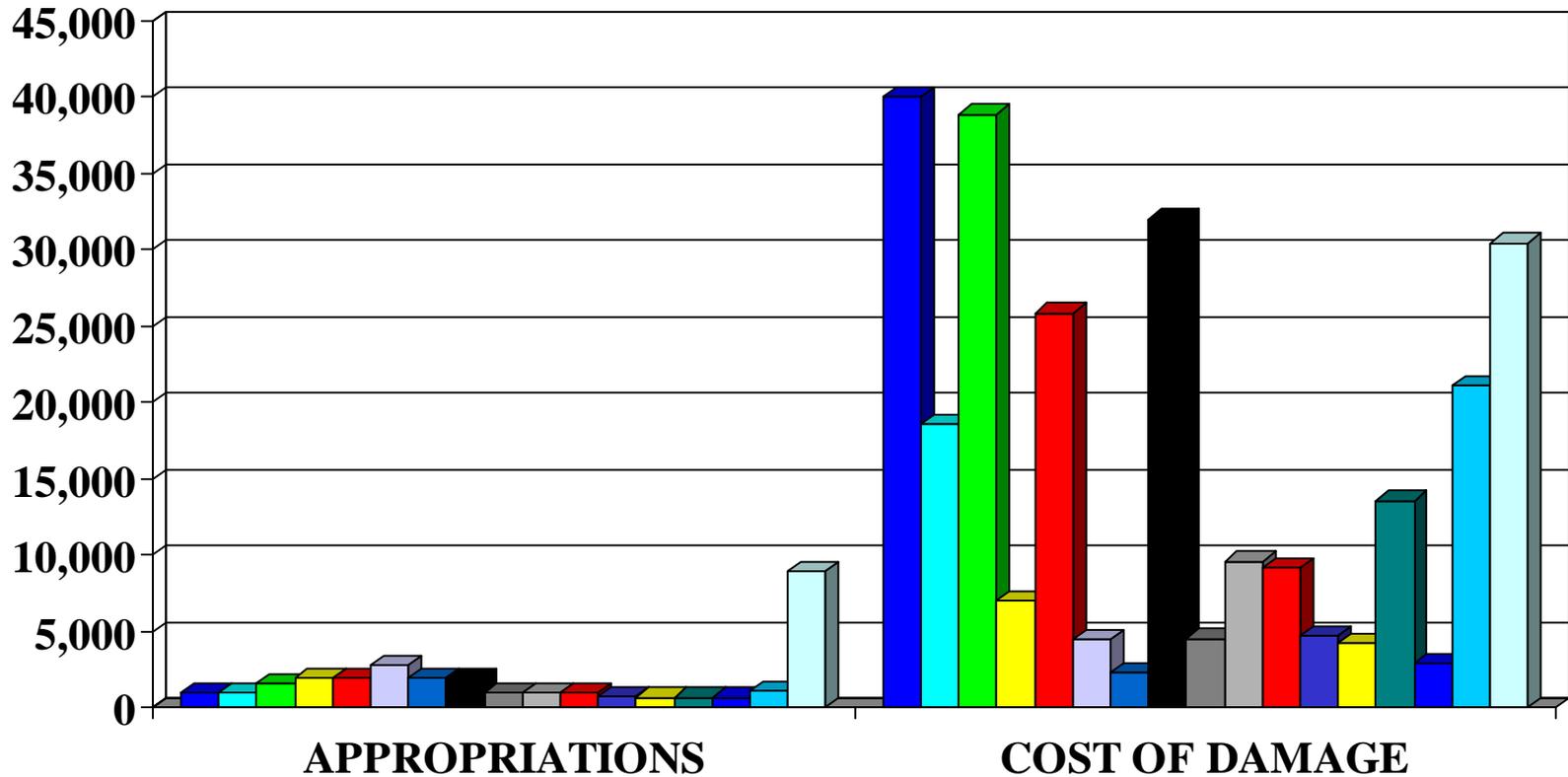
Estimated Damage of Disasters in RP (In M P @ 2000 Prices)

On the average, annual **direct damage** is P15 B

For typhoons, average of 0.5% of GDP every year



CALAMITY FUND APPROPRIATIONS VS. COST OF DIRECT DAMAGE (1991-2007)*



- 1991 ■ 1992 ■ 1993 ■ 1994 ■ 1995 ■ 1996 ■ 1997 ■ 1998 ■ 1999 ■ 2000
- 2001 ■ 2002 ■ 2003 ■ 2004 ■ 2005 ■ 2006 ■ 2007

* January to June 2007. Appropriations include 8 billion CARE fund





The Philippine Disaster Management System



LEGAL AUTHORITY

PD 1566

- *JUNE 11, 1978*
- **Strengthening the Philippine Disaster Control Capability and Establishing the National Program on Community Disaster Preparedness**



PD 1566, Sec. 1 Declaration of Principles



RESPONSIBILITY FOR LEADERSHIP RESTS ON THE PROVINCIAL GOVERNOR, CITY MAYORS, AND MUNICIPAL MAYORS, (AND BARANGAY CHAIRMAN), EACH ACCORDING TO HIS AREA OF RESPONSIBILITY.



PD 1566, Sec. 1 Declaration of Principles



EACH POLITICAL AND ADMINISTRATIVE SUBDIVISION OF THE COUNTRY SHALL UTILIZE ALL AVAILABLE RESOURCES IN THE AREA BEFORE ASKING FOR ASSISTANCE FROM NEIGHBORING ENTITIES OR HIGHER AUTHORITY



PD 1566, Sec. 1
Declaration of Principles



❑ THE PRIMARY RESPONSIBILITY RESTS ON THE GOVERNMENT AGENCIES IN THE AFFECTED AREAS IN COORDINATION WITH THE PEOPLE THEMSELVES.



PD 1566, Sec. 1 Declaration of Principles



❑ SELF RELIANCE SHALL BE DEVELOPED BY PROMOTING AND ENCOURAGING THE SPIRIT OF SELF HELP AND MUTUAL ASSISTANCE AMONG THE LOCAL OFFICIALS AND THEIR CONSTITUENTS.



PD 1566, Sec. 1
Declaration of Principles



- ❑ THE NATIONAL GOVERNMENT EXISTS TO SUPPORT THE LOCAL GOVERNMENTS IN TIMES OF EMERGENCIES AND ACCORDING TO THEIR LEVEL OF ASSIGNMENT, ALL NATIONAL GOVERNMENT OFFICES IN THE FIELD SHALL SUPPORT THE OPERATIONS OF THE LOCAL GOVERNMENT.





❑ IT IS RESPONSIBILITY OF ALL GOVERNMENT DEPARTMENTS, BUREAUS, AGENCIES AND INSTRUMENTALITIES TO HAVE DOCUMENTED PLANS OF THEIR EMERGENCY FUNCTIONS AND ACTIVITIES.



DCC ORGANIZATIONAL NETWORK

NATIONAL DISASTER COORDINATING COUNCIL

17 REGIONAL DISASTER COORDINATING COUNCILS

81 PROVINCIAL DISASTER COORDINATING COUNCILS

113 CITY DISASTER COORDINATING COUNCILS

1,496 MUNICIPAL DISASTER COORDINATING COUNCILS

41,956 BARANGAY DISASTER COORDINATING COUNCILS



The National Disaster Coordinating Council



- HIGHEST POLICY MAKING, COORDINATING AND SUPERVISING BODY AT THE NATIONAL LEVEL FOR DISASTER MANAGEMENT IN THE COUNTRY
- ADVISES THE PRESIDENT ON THE STATUS OF NATIONAL DISASTER PREPAREDNESS AND MANAGEMENT PLAN
- RECOMMENDS TO THE PRESIDENT THE DECLARATION OF STATE OF CALAMITY AND RELEASE OF NATIONAL CALAMITY FUND AS NEEDED



Secretary, National Defense - Chairman

Secretary, Interior & Local Gov't- Member
Secretary, Public Works- Member
Secretary, Transportation & Communication - Member
Secretary, Social Welfare & Development - Member
Secretary, Agriculture - Member
Secretary, Education - Member
Secretary, Finance - Member
Secretary, Labor & Employment - Member
Secretary, Trade & Industry - Member
Secretary, Health - Member
Secretary, Science & Technology - Member
Secretary, Budget - Member
Secretary, Justice - Member
Secretary, Natural Resources – Member
Secretary, Foreign Affairs - Member
Director, Phil. Information Agency - Member
Sec-Gen, Phil National Red Cross - Member
Chief of Staff, AFP - Member

**Administrator, Office of Civil Defense –
Member & Executive Officer**

NDCC MEMBERS



TYPICAL ORGANIZATION OF DISASTER COORDINATING COUNCIL

DISASTER COORDINATING COUNCIL
CHAIRMAN

DCC
ASST. CHAIRMAN

DISASTER OPERATIONS CENTER

STAFF ELEMENTS

INTELLIGENCE AND DISASTER ANALYSIS

PLANS AND OPERATIONS

RESOURCES

TASK UNITS

COMMO & WARNING

TRANSPOR TATION

EVAC UATION

RESCUE & ENG'G

HEALTH

FIRE

POLICE

RELIEF

REHABI LITATION

PUBLIC INFO

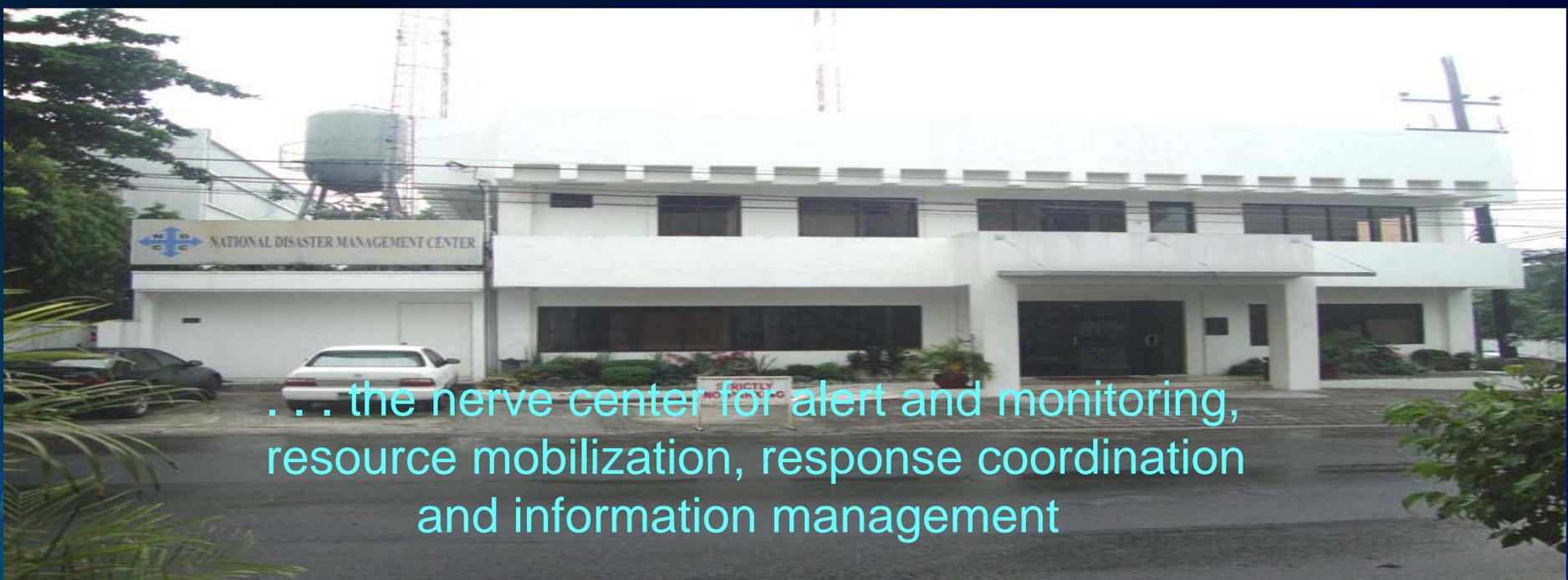


 NATIONAL DISASTER MANAGEMENT CENTER



STRICTLY
NO PARKING





... the nerve center for alert and monitoring,
resource mobilization, response coordination
and information management



Operates on a 24/7 basis

Manned by OCD personnel
round-the-clock, with
complementation from selected
NDCC member-agencies such as
DSWD, DOH, AFP, DPWH,
PNRC during emergency
situations



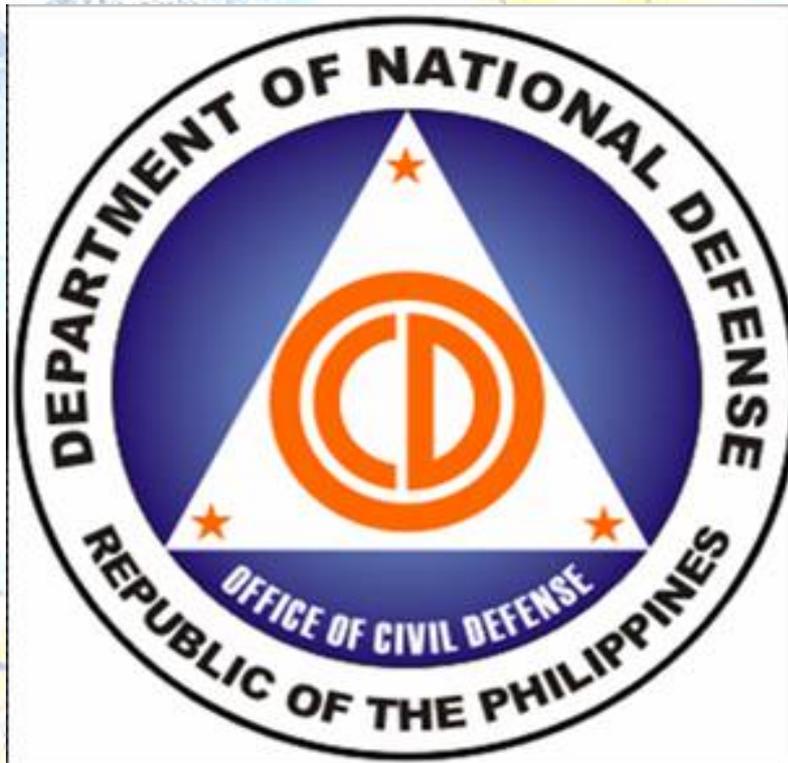


Core Functions

- Alert and Monitoring
- Multi-agency Operational Coordination
- Response Resource Mobilization
- Information Management, and
- Program Coordination for Operations Capability Upgrade



OFFICE OF CIVIL DEFENSE



- One of the five (5) bureaus of DND (PD No. 1 as implemented by LOI No. 19, s-1972, and DND Order Nos. 737 and 737-A, s-1973)
- Officially established on July 1, 1973
- The operating arm and secretariat of the National Disaster Coordinating Council per PD 1566 issued on June 11, 1978
- It has the primary task of coordinating the activities and functions of various government agencies and instrumentalities, private institutions and civic organizations for the protection and preservation of life and property during emergencies...

VISION

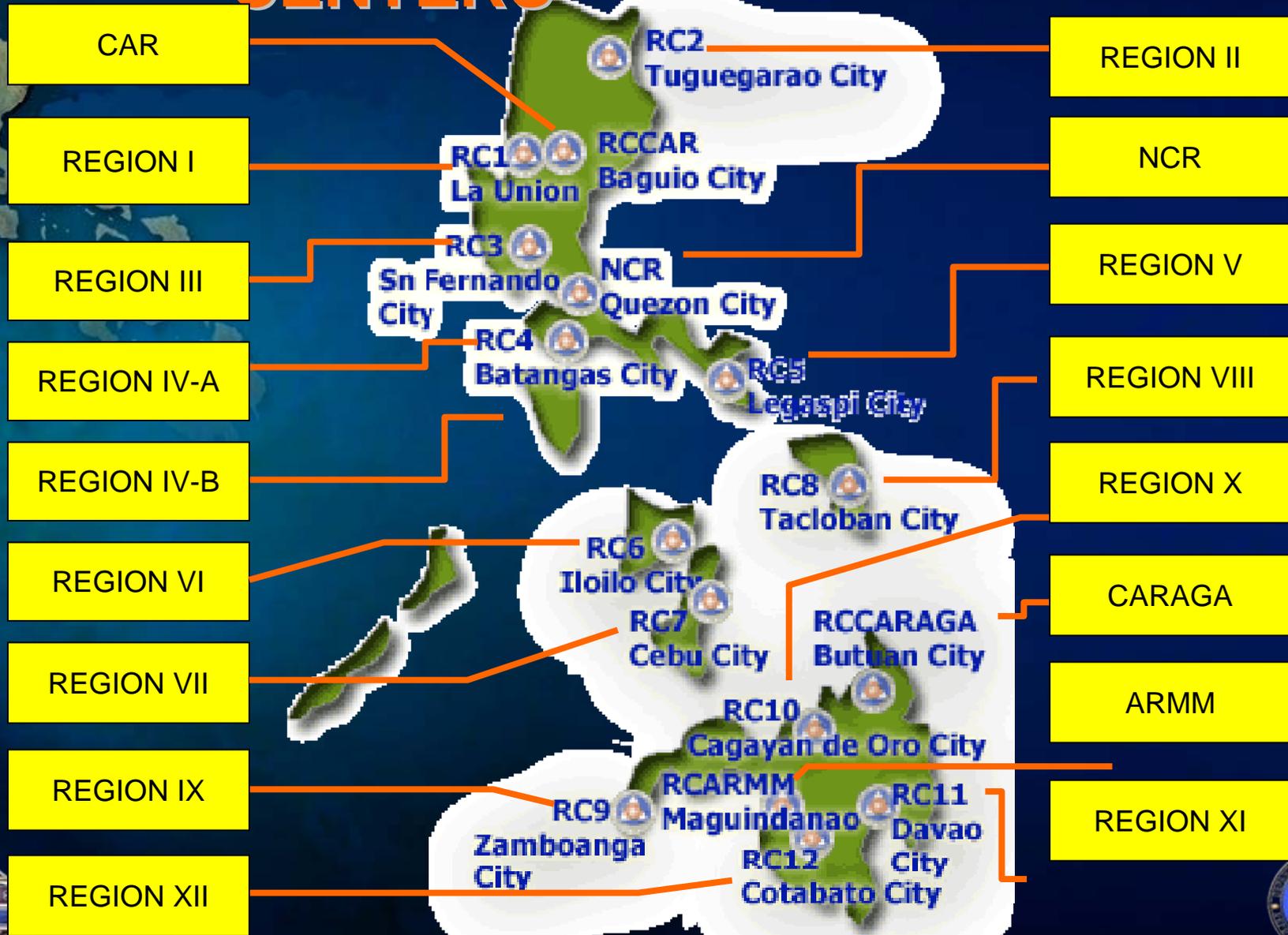
- A service – oriented organization
- A prepared population
- A safe nation

MISSION

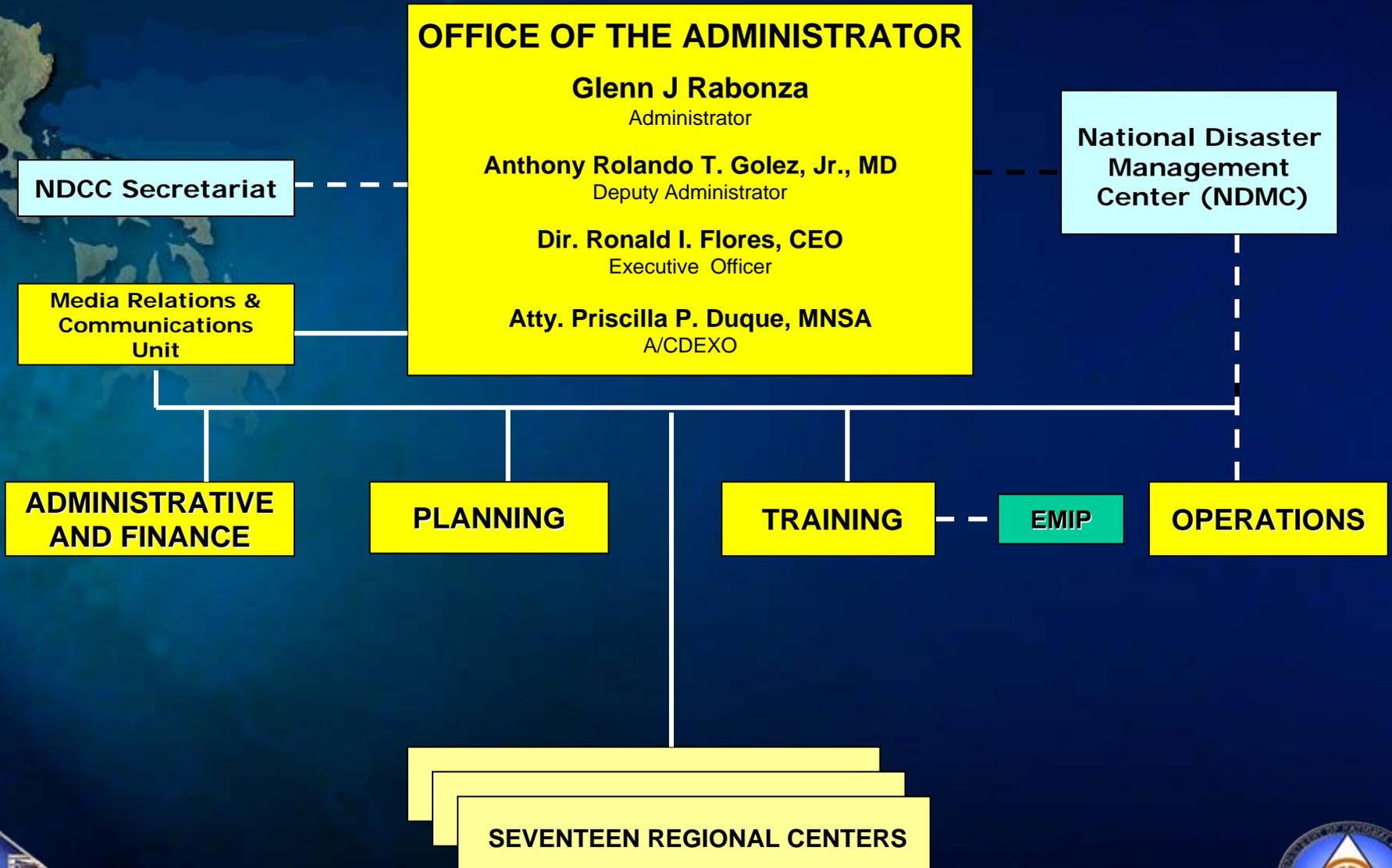
To administer a comprehensive national civil defense and civil assistance program by providing leadership in the continuous development of measures to reduce risk to communities and manage the consequence of disasters



17 OCD REGIONAL CENTERS



OCD Organizational Structure



Civil Defense
War Emergency
Mode

Milestones and Trends in DM

'70's - '80's

Disaster Preparedness
Disaster Response

- Typhoon "Yoling"
- Birth of OCD
- AEGDM
- PD 1566

'90's - 2003

Disaster Management

- 1990 EQ
- Pinatubo Eruption
- RA 7160
- IDNDR
- 1997 Nat'l. DM Trng. Framework
- 1998 GAA
- EO 137 dtd Aug. 10, 1999
- ACDM / ARPDM
- ISDR

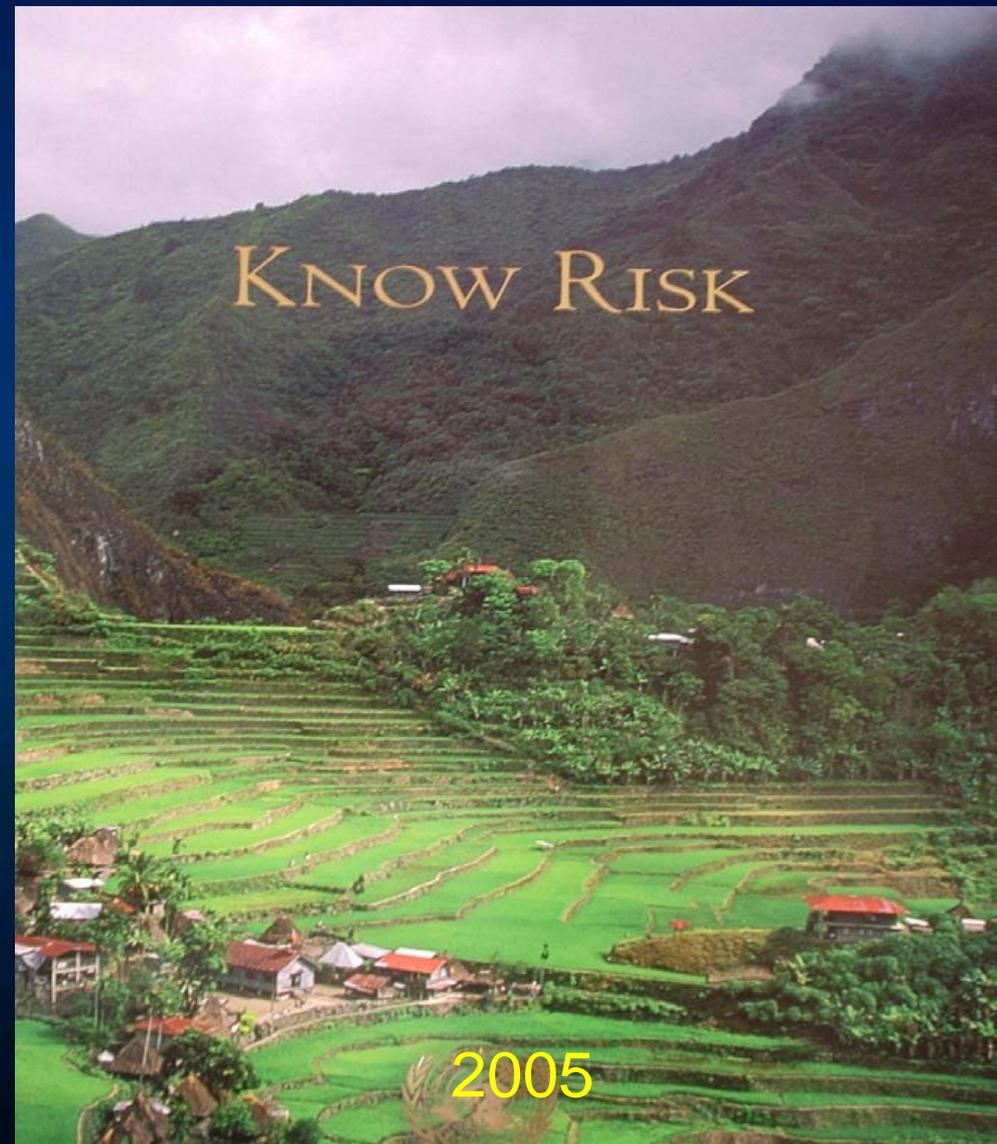
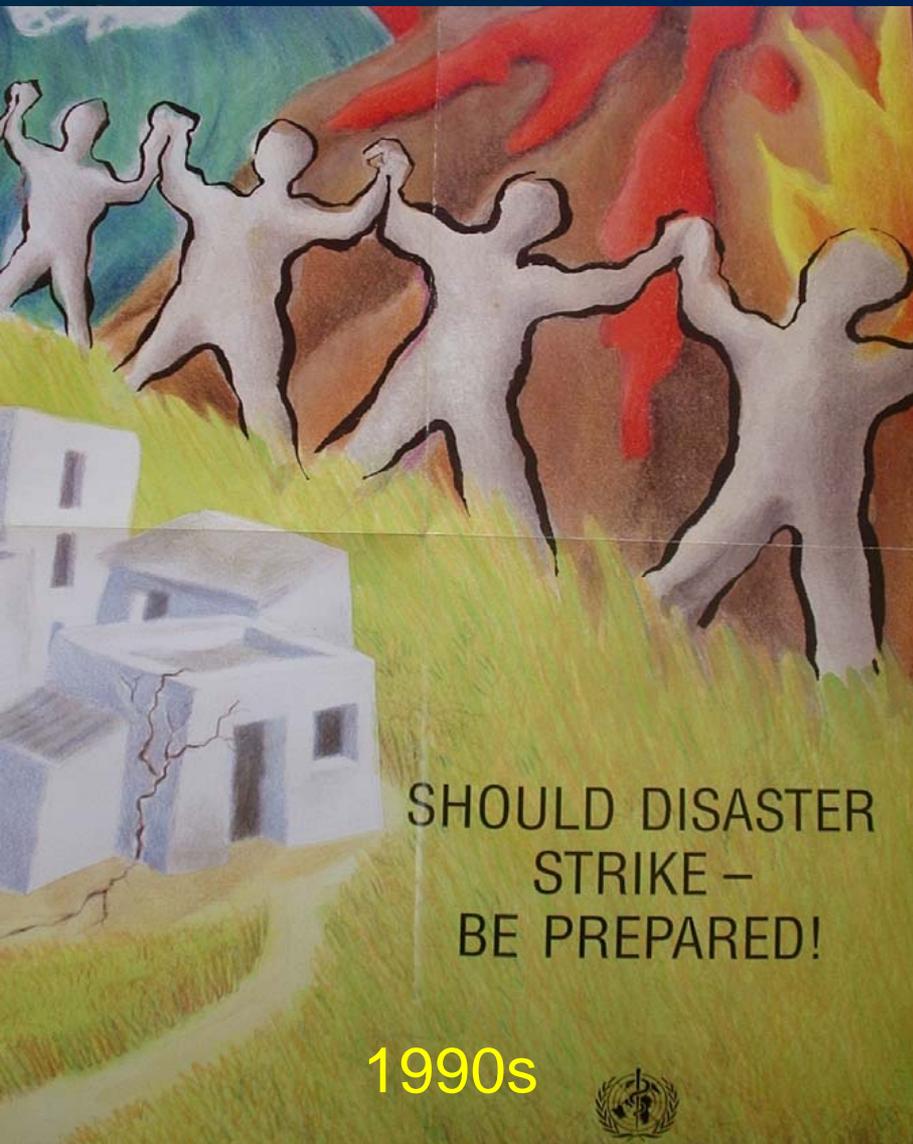
2004 - Present

Disaster Risk
Management

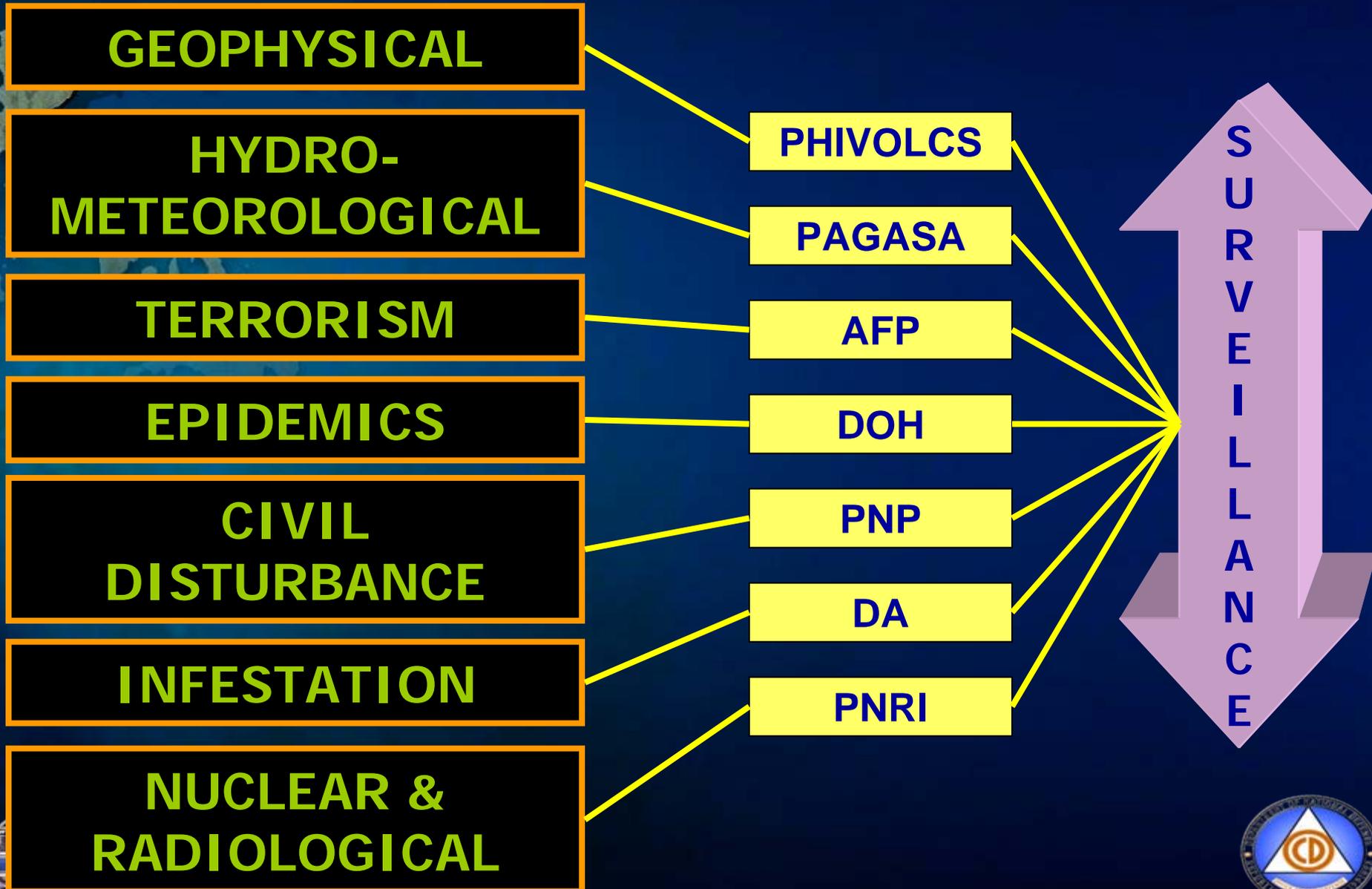
- REINA / Guinsaugon Landslides
- 'Milenyo, Paeng, Reming, Seniang'
- Guimaras Oil Spill
- 'Cosme'
- 'Frank'
- MV Princess of the Stars Tragedy
- Indian Ocean EQ & Tsunami
- Hurricane 'Katrina'
- Cyclone 'Nargis'
- Sichuan EQ
- DRR Initiatives
 - AADMER
 - HFA
 - 'READY' Project



IDNDR to ISDR: Focus on reducing disaster risks.



HAZARDS



PARADIGM SHIFT FROM REACTIVE
TO PROACTIVE MODE. . . .



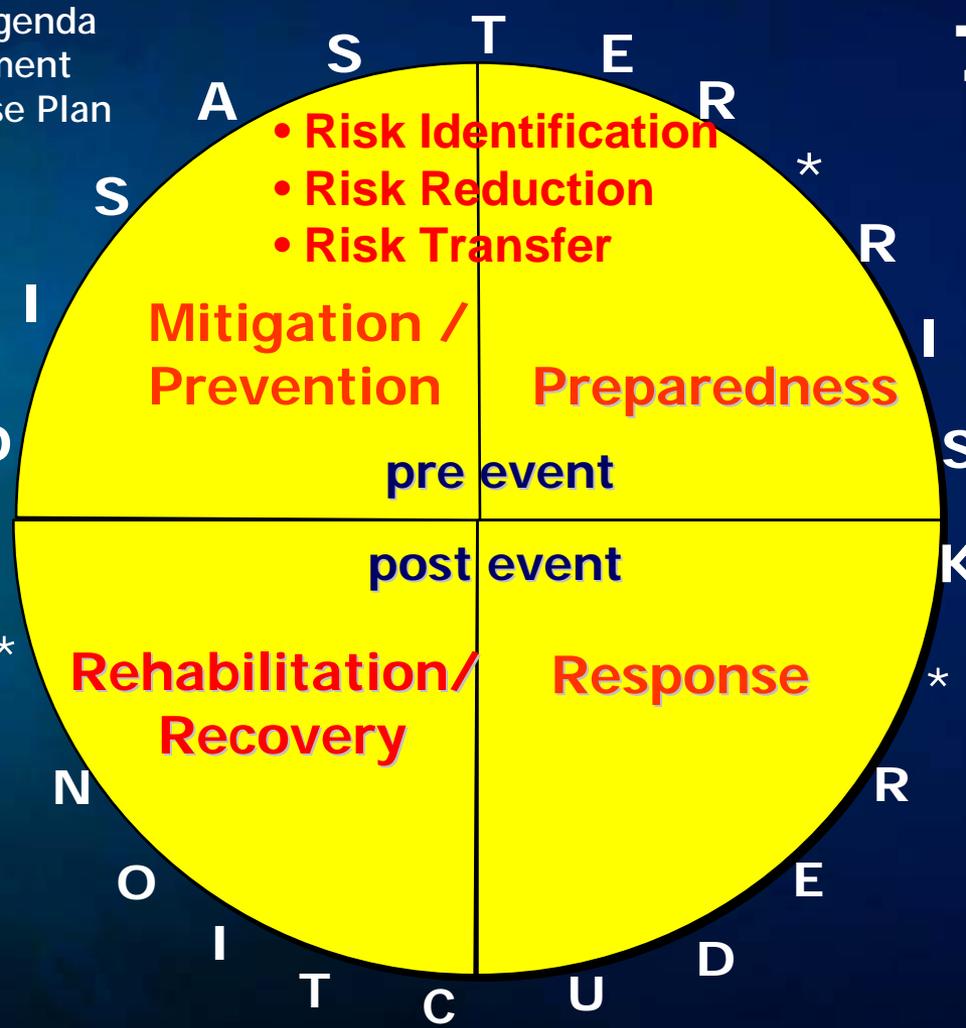
**DISASTER RISK MANAGEMENT
FRAMEWORK**



$$R = \frac{H \times V}{C}$$



Comprehensive Disaster Risk Management Framework



- Risk Identification
- Risk Reduction
- Risk Transfer

Mitigation / Prevention Preparedness

pre event

post event

Rehabilitation / Recovery Response

- Awareness
- Public commitment (institutional /legal, framework)
- Community actions
- Knowledge development thru education & training, research & information
- Early warning system
- Plans / SOPs
- I C S Development
- Drills / Exercises
- Damage Assessment & Needs Analysis
- Relief
- Search & Rescue
- Incident Command System
- WATSAN / Health
- Temp. Shelter

- Dev. Plan
- Executive/Legislative Agenda
- Environmental Management
- Comprehensive Land Use Plan
- Critical infra
- Financial tools
- Risk Assessment & Analysis
- Hazard ID / Analysis & Monitoring
- Vulnerability/capacity ID & analysis
- Livelihood
- Housing
- Lifelines
- Education
- Infrastructure




$$R = \frac{H \times V}{C}$$

R = Risk

the probability of harmful consequences or expected losses, resulting from interaction between natural or human-made hazards and vulnerable conditions.

H = Hazard

a potentially damaging phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption and environmental degradation.



V = Vulnerability

set of conditions resulting from physical, social, economic, and environmental factors which increase susceptibility to losses from the impact of natural or human-made hazards. It is important to remember that incidence, especially of natural events that could cause disasters lie beyond our control, while vulnerability can be controlled.



C = Capacity

refers to the ability of people, organizations and society as a whole to manage their affairs successfully.

Capacity Development

refers to the process whereby people, organizations and society as a whole unleash, strengthen, create, adapt and maintain capacity over time.



Disaster Risk Management

is the systematic process of using administrative decisions, organization, operational skills and capacities to implement policies, strategies and coping capacities of the society and communities to lessen the impacts of natural hazards and related environmental and technological disasters. This comprises all forms of activities, including structural and non-structural measures to avoid (prevention) or to limit (mitigation and preparedness) adverse effects of hazards.



World Conference on Disaster Reduction 2005

Kobe, Hyogo, Japan



UN ISDR
World Conference on Disaster Reduction
18-22 January 2005, Kobe, Hyogo, Japan



Hyogo Framework for Action (HFA)

- A comprehensive, action-oriented response to international concern about the growing impacts of disasters on individuals, communities and national development
- Adopted by 168 Governments at the World Conference on Disaster Reduction (WCDR) held in Kobe, Japan, on January 18-22, 2005
- A global print for disaster risk reduction efforts during the next decade (2005 – 2015)





Hyogo Framework for Action (HFA)

GOAL: To substantially reduce disaster losses by 2015 – in lives, and in the social, economic and environmental assets of communities and countries



Hyogo Framework for Action (HFA) 2005 - 2015

Building the resilience of nations & communities to disasters

Strategic Goals

- Integrate disaster reduction into sustainable development
- Strengthen institutions and mechanisms to build resilience
- Incorporate risk reduction into emergency management and recovery



Hyogo Framework for Action priorities for action

1 Make Disaster Risk Reduction a Priority

Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation

2 Know the Risks and Take Action

Identify, assess, and monitor disaster risks - and enhance early warning

3 Build Understanding and Awareness

Use knowledge, innovation, and education to build a culture of safety and resilience at all levels

4 Reduce Risk

Reduce the underlying risk factors

5 Be Prepared and Ready to Act

Strengthen disaster preparedness for effective response at all levels



Philippines



Current Disaster Risk Reduction Strategies / Initiatives



Governance

1. Development of Policies and Guidelines

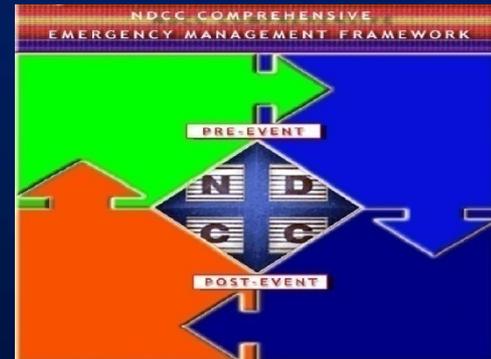
- *Forging of national and regional agreements (e.g. AADMER, IHAN, SASOP, Cluster Approach) to define the detailed procedures and mechanism in facilitating accommodation of international humanitarian assistance*
- *Advocacy for the passage of the DRM Bill (S.B. No. 3086 entitled: "An Act Strengthening the Philippine Disaster Risk Management Capability by Institutionalizing the National Disaster Risk Management Framework, Appropriating Funds Therefor and For Other Purposes*

2. National Assessment of the State of DRM in the Philippines (ADB/UNDP)

- *Assessment of DRM Issues in the Phil.*
- *Formulation of 50 Community Contingency Plans*
- *Documentation and Dissemination of Lessons Learnt*
- *Preparation of DRM Framework*

3. Strategic National Action Plan (SNAP) Project (EU/UNISDR/UNDP)

- *Establishment of a Multi-stakeholder Consultative Mechanism on DRR*
- *Formulation of a Strategic National Action Plan in the Phil.*
- *Development of DRR Capacity Building Programme for Selected Sectors*
- *Support to Mainstreaming of DRR in Selected Sectors*



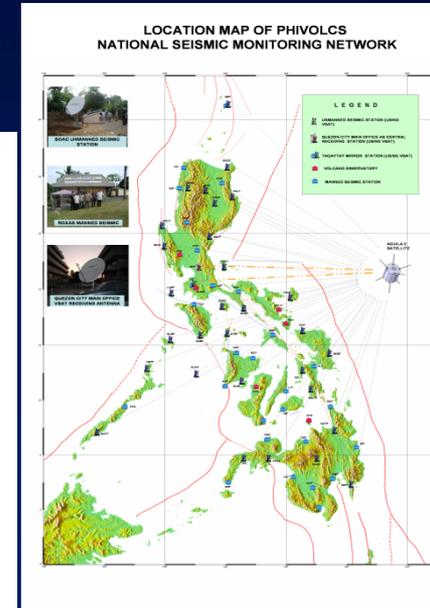
Governance

4. **Supporting Local Government Capacity to Manage Natural Disaster Risks in the Philippines (World Bank/DILG)**
5. **Mainstreaming Disaster Risk Reduction in Local Governance (GTZ/DILG/ECHO)**
6. **Partnership for Disaster Reduction in Southeast Asia (PDRSEA) Phase 4 Project (ECHO/ADPC)**
 - *National Strategic Plan on CBDRM*
 - *CBDRM Pilot Project in Albay Province*
 - *CBDRM Training for Local Authorities*
 - *Integration of CBDRM Recognition Scheme in the Gawad Kalasag*
7. **Learning From Good Practices in DRM (ECHO/OXFAM GB)**
 - *CBDRM Case Studies Development and Publication*
 - *Promotion and replication of CBDRM Good Practices and Institutionalization of DRM Office*

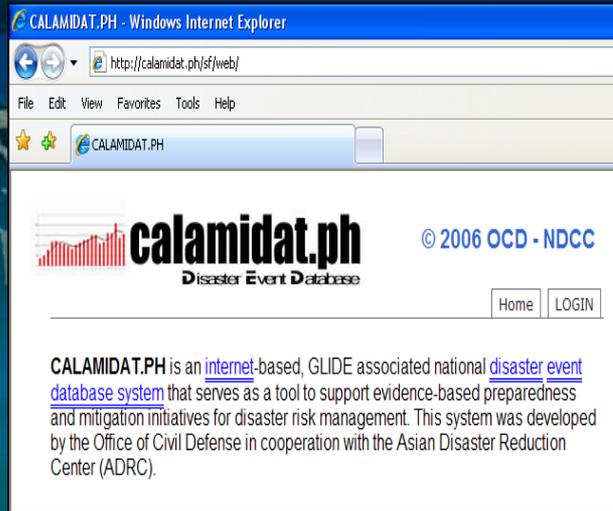


Risk Assessment and Early Warning

- 1. Hazards Mapping and Assessment for Effective Community-based Disaster Management (READY) (UNDP/AusAID/DOST/DENR).**
Covers 27 vulnerable provinces
- 2. National Disaster Coordinating Council – Collective Strengthening of Community Awareness to Natural Disasters (NDCC-CSCAND)**
(AUSAID – DFAT/PHIVOLCS/PAGASA/NAMRIA/MGB)
- 3. GoP Harmonization and Prioritization of Hazard Mapping to complement efforts of READY project. Covers additional 16 provinces**
- 4. Climate Change Adaptation Project (Spanish Government/World Bank/ DENR) Study to establish impact of climate change in the agriculture sector in two pilot areas (Bicol Region and Region 2).**



Knowledge Management and Education



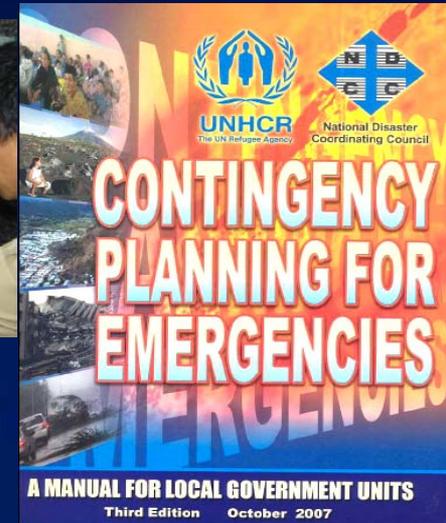
1. **Development of a web-based GLIDE associated national disaster event database under the CALAMIDAT.ph collaborative project of with ADRC.**

2. **NDCC – WBI web-based DRM Courses**



Knowledge Management and Education

3. Mainstreaming DRR into the Education Sector, in partnership with ECHO and ADPC, which aims to develop DRM modules into the secondary school curriculum and undertake research on the impact of disasters to the education sector
4. Stepping up of Department of Education's efforts on production and distribution of Educational Multi-media on natural and man-made hazards
5. Continuous conduct of hazard-specific multi-sectoral Contingency Planning Workshops
6. Enhancing effective incident management through conduct of Incident Command System (ICS) trainings
7. Introduction of the ASEAN Rapid Damage Assessment and Needs Analysis (RDANA) Training for effective response



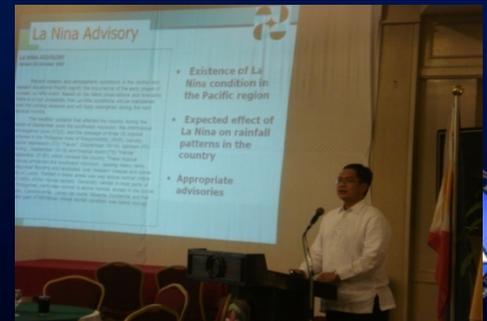
The Association of Southeast Asian Nations (ASEAN)

Rapid Damage Assessment and Needs Analysis Manual



Knowledge Management and Education

7. **Continuous conduct of Collapsed Structure Search and Rescue (CSSR) and Medical First Responders (MFR) trainings under the Program for Enhancement of Emergency Response (PEER) project (NSET/USAID)**
8. **Conduct of Nationwide Water Search and Rescue (WASAR) Training for local government and volunteer rescue groups in order to enhance their response capacity for flooding and landslide incidents**
9. **Capacity-building of health personnel through skills development courses (e.g. Basic Life Support) and management courses (e.g. Hospital Preparedness for Emergency – HOPE Course)**
10. **PHIVOLCS, PAGASA, and DENR continue to hold Seminars/Trainings on Seismic and Hydro-Meteorological Hazards Awareness and Preparedness**
11. **Development of training modules on DRM**



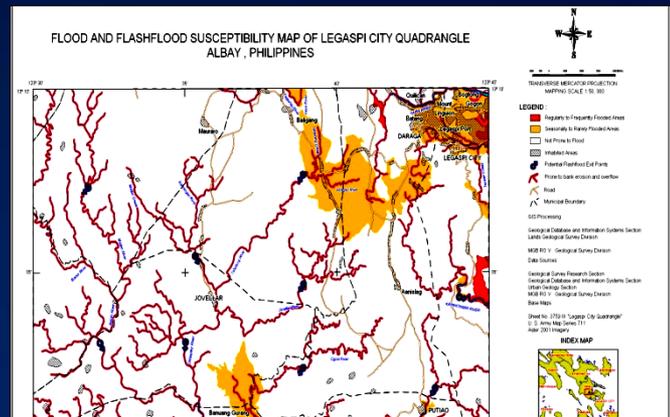
Risk Management and Vulnerability Reduction

- 1. Mainstreaming Disaster Risk Management in Sub-national Development and Land Use/Physical Planning in the Philippines (ECHO/UNDP/NEDA)**
 - *Formulation of Guidelines*
 - *Formulation of DRR-enhanced plans (Region 1 and Surigao del Norte)*
 - *Documentation of the application of the risk assessment methodology (Leyte, Southern Leyte, Surigao del Sur, and REINA)*
 - *Training of 400 regional and provincial land use planners nationwide*
- 2. Priority Implementation Project on Mainstreaming DRR in the Infrastructure Sector (ADPC/DPWH) by incorporating Risk Impact Assessment procedures into planning process before construction of new roads and bridges**



Risk Management and Vulnerability Reduction

4. Mines and Geosciences Bureau - Department of Environment and Natural Resources (MGB-DENR) carries out the National Geohazards Mapping; Suitability Assessment of Relocation Sites; and Environmental Impact Assessment.
5. Implementation of the “*Be Better, Build Better*” program that envisions the construction of innovative school buildings that are not only conducive for learning but also safe from disasters.



Disaster Preparedness

NDCC's Four-Point Plan of Action on Disaster Preparedness

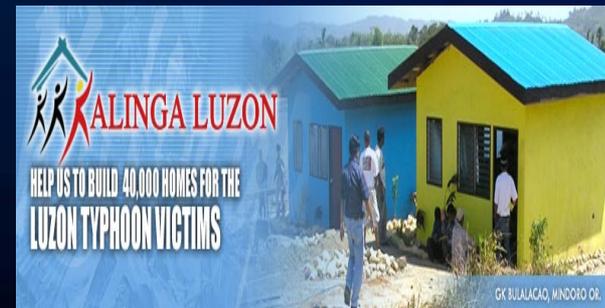
1. **Upgrading the forecasting capability of warning agencies for hydro-meteorological and seismological hazards through improved equipment and staff development as well as networking with foreign forecasting institutions**
2. **Promoting an integrated and coherent strategic public information campaign on disaster preparedness through the conduct of nationwide tsunami and earthquake drills; distribution of posters and flyers on natural hazards; and other IEC through the tri-media.**



Disaster Preparedness

NDCC's Four-Point Plan of Action on Disaster Preparedness

3. Enhancing capabilities of Local Chief Executives (LCEs) and their respective Disaster Coordinating Councils (DCCs) in identified vulnerable areas through the conduct of DM-related trainings.
4. Strengthening mechanisms for government and private sector partnership in relief and rehabilitation.



Disaster Preparedness

1. Annual Observance of National Disaster Consciousness Month (July)
2. Search for Excellence in Disaster Management and Humanitarian Assistance (Gawad Kalasag)
3. National campaign to “Keep the Philippines Bird Flu Free” through the National Avian Influenza Task Force and the civil society organizations led “AI/PI Network.”
4. Institutionalization of the Cluster Approach in the Phil. DM System





“ and we must, as a people, seek to do more to preserve our precious natural resources because at the end of the day, many of these great calamities are coming because of **CLIMATE CHANGE**. So if we are going to talk about disaster mitigation, we have to talk about addressing climate change.”

- President Gloria Macapagal Arroyo
National Multi-Stakeholder Dialogue on
Disaster Risk Reduction, July 25, 2007

“ *CLIMATE CHANGE is the most severe problem we are facing today, more serious even than the threat of terrorism.*”

- Sir David King, Chief Scientist of the
Prime Minister of England (2004)

**Decaying solid waste in
landfills emits methane**

**Decomposing waste in
water also emits methane**





NDCC video





Thank You!

Visit us @ www.ndcc.gov.ph
Email: dopcen@ndcc.gov.ph

SMS: +63 (917) 891-6322

Telephone: +63 (2) 912-2665

+63 (2) 912-5668

+63 (2) 911-5061 to 64

Telefax: +63 (2) 911-1406

