



Asian Disaster Reduction Center

Visiting Researcher Program Final Report

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(OCD-NDCC) Philippines



Outline of Presentation

I. General Information

- Republic of the Philippines
- Japan

II. The Philippine Disaster Management System

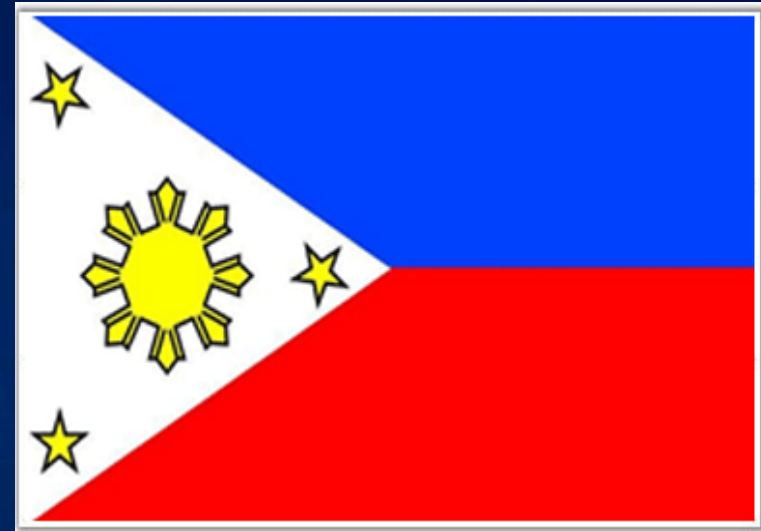
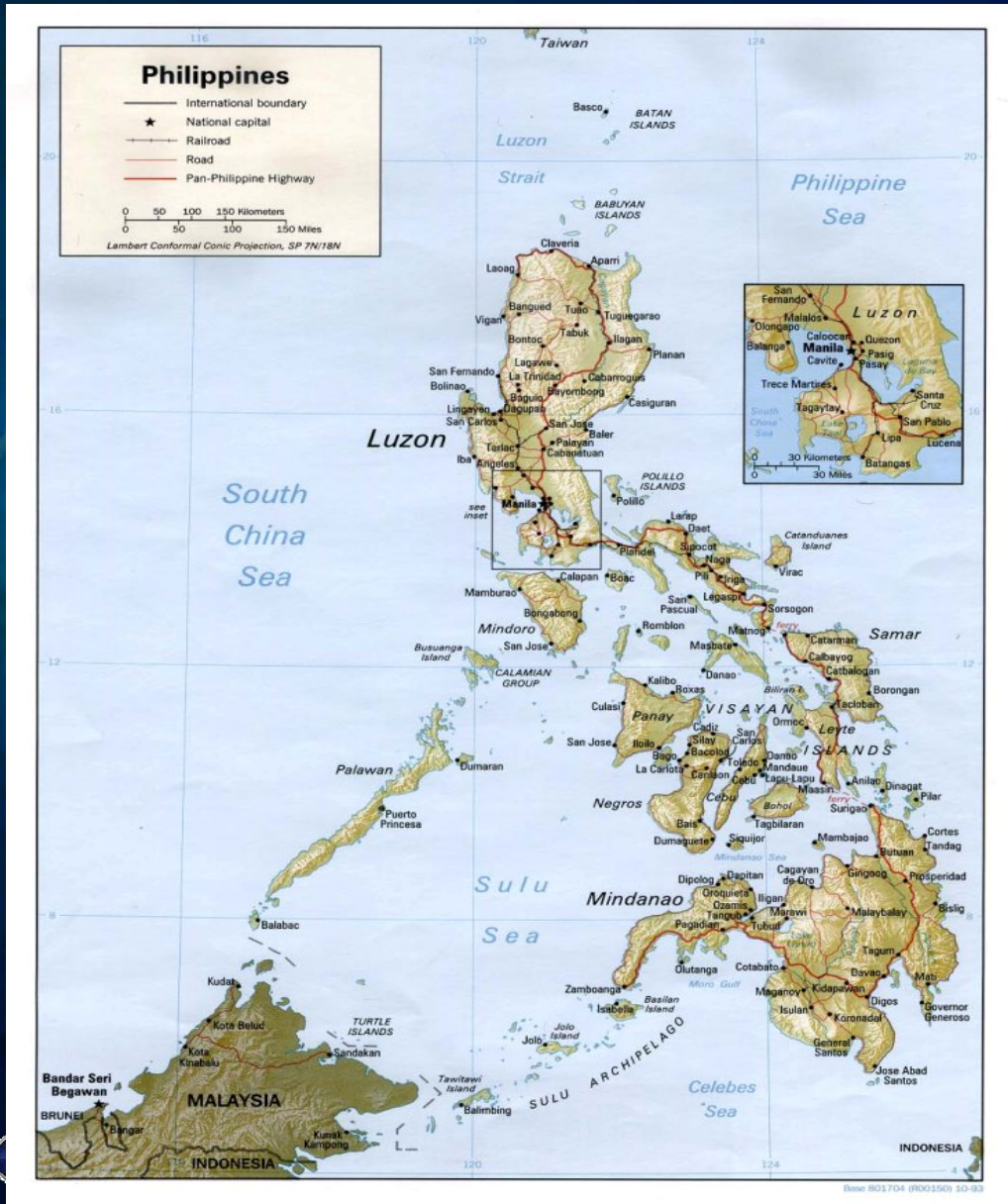
III. Disaster Management of Japan

IV. Knowledge and Experiences Gained thru the ADRC Visiting Researcher Program

V. Climate Change



Republic of the Philippines

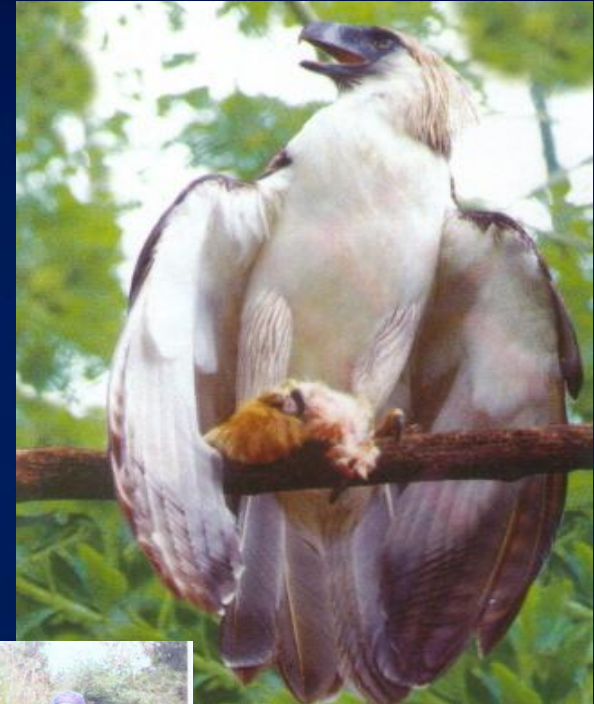


Republic of the Philippines

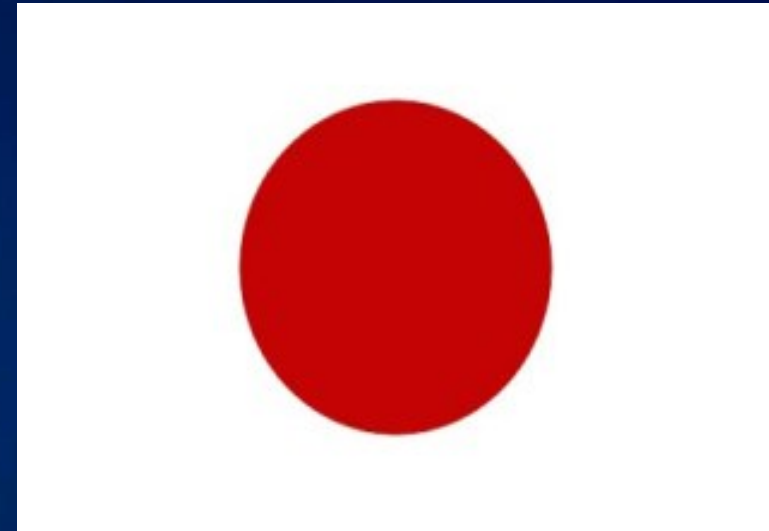


Republic of the Philippines

- Land area: 299,764 sq.kms.
- Major Islands: Luzon, Visayas and Mindanao
- 7,100 islands
- Capital: Manila
- Population: 88.57 million (as of August 2007)
- Climate: Tropical and maritime



Japan

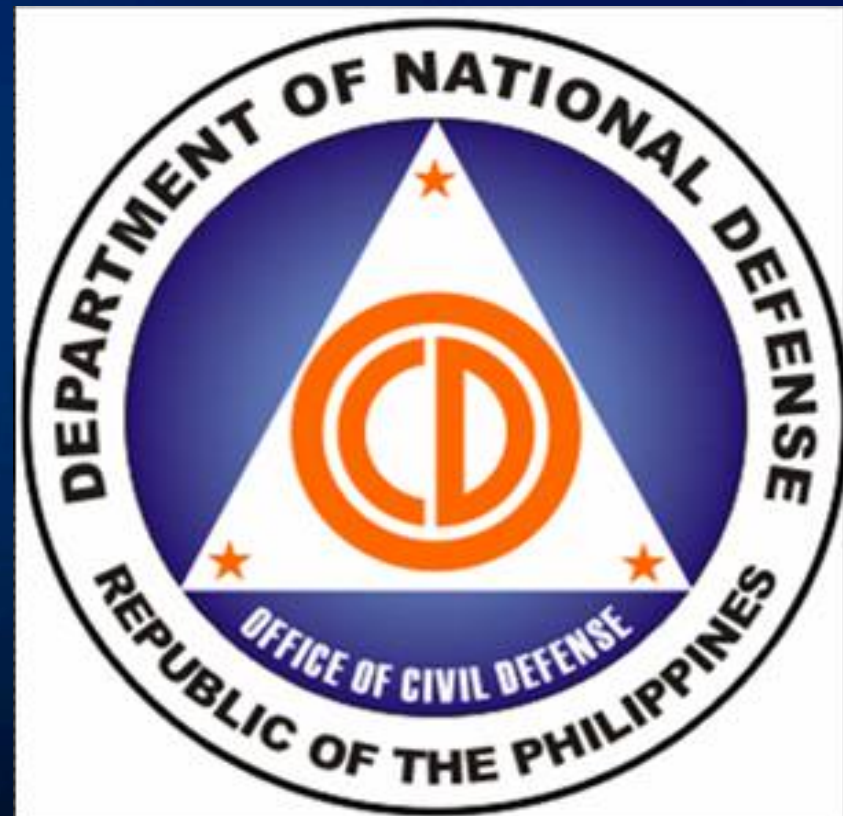


Japan

- Land area: 378,000 sq.kms.
- Major Islands: Honshu, Shikoku, Hokkaido, and Kyushu
- Capital: Tokyo
- Population: 127.77 million
- Climate: Clear-cut temperature changes between the four seasons
- Religions: Shintoism and Buddhism



The Philippine Disaster Management System



Natural Hazards in the Philippines



Recent Disasters in the Philippines

Typhoon Ketsana

- 464 dead
- Affected:
 - 997,983 families
 - 4,929,382 persons
- Damage:
 - PhP11.106 Billion (US\$236.3M)
- Damaged houses:
 - 27,808 totally destroyed
 - 130,736 partially damaged



Typhoon Parma

- 465 dead
- Affected:
 - 954,087 families
 - 4,478,284 persons
- Damage:
 - PhP25.195 Billion (US\$536M)
- Damaged houses:
 - 6,253 totally destroyed
 - 48,120 partially damaged
- A nationwide state of calamity has been declared.



Proposed DRRM Bill/ DRM Act of 2009

- *"Philippine Disaster Risk Reduction, Management and Recovery Act of 2009"*
- **Senate Bill No. 3086** entitled *"An Act Strengthening the Philippine Disaster Risk Reduction, Management and Recovery Capability by Institutionalizing the National Disaster Risk Reduction, Management and Recovery Framework, Appropriating Funds Therefor and For Other Purposes"*



Proposed DRRM Bill/DRM Act of 2009



➤ **Declaration of Policies:**

Mainstream disaster risk reduction and climate change in development processes such as policy formulation, socio-economic development planning, budgeting, and governance, particularly in the areas of environment, agriculture, water, energy, health, education, poverty reduction, land-use and urban planning, and public infrastructure and housing, among others.

➤ **Scope:**

Bill/Act provides for the development of policies and plans and the implementation of actions and measures pertaining to all aspects of disaster risk reduction, management and recovery, including good governance, risk assessment and early warning, knowledge building and awareness raising, reducing underlying risk factors, and preparedness for effective response and early recovery.



Proposed DRRM Bill/DRM Act of 2009

- Once enacted, the new law shall adopt and adhere to principles and strategies consistent with the international standards set by the Hyogo Framework for Action (HFA).
- The present National Disaster Coordinating Council (NDCC) shall henceforth be known as the National Disaster Risk Reduction, Management and Recovery Council (NDRRMRC) or the Council.
- Secretary of National Defense as Chairman with 17 other departments and agencies as members



Powers and Functions of the NDRRMRC

- Develop, formulate, and implement a National Disaster Risk Reduction, Management and Recovery Framework and Plan (NDRRMRF and NDRRMRP).
- Recommend to the President the declaration of a State of Calamity and submit remedial proposals.
- In coordination with the Climate Change Commission, formulate and implement a framework for climate change adaptation and disaster risk reduction, management and recovery.



Office of Civil Defense (OCD)

- Shall have the primary mission of administering a comprehensive national civil defense and disaster risk reduction, management and recovery program
- Serve as the Executive Director of the Council
- Establish a "National Disaster Risk Reduction, Management and Recovery Operations Center (NDRRMROC) which shall operate 24/7
- Evaluate, assess local government plans; conduct trainings
- Establish Councils at the regional, provincial, municipality, city, and barangay levels



Strategic National Action Plan (SNAP)

- A long term plan developed by NDCC, thru OCD, with technical support from UNISDR and UNDP
- A “road map” indicating the vision and strategic objectives of the Philippines for the next 10 years while pursuing the strategic goals of the Hyogo Framework for Action (HFA)
- It aims to build the resilience of communities to disasters, reduce disaster losses in lives, in the social, economic and environmental assets of communities and countries.
- The SNAP objectives provide support to strengthen cooperation and coordination mechanisms among various sectors and stakeholders.



Strategic National Action Plan (SNAP)

- It will sustain disaster risk reduction initiatives in the country and promote good practices of individuals, organizations, local government units, and the private sector.
- SNAP takes off from the Four-Point Plan of Action on Disaster Preparedness (4PPADP) of the NDCC and contains 18 priority programs and projects from 2009 to 2019 based on 150 strategic actions gathered after several consultations with stakeholder groups.
- To better implement SNAP, the Philippine legislature must enact a progressive bill to amend the reactive stance that PD 1566 posits.
- Approval of SNAP is in progress.



Strategic National Action Plan (SNAP)



Five strategic objectives under which the 18 priority SNAP programs/projects are classified

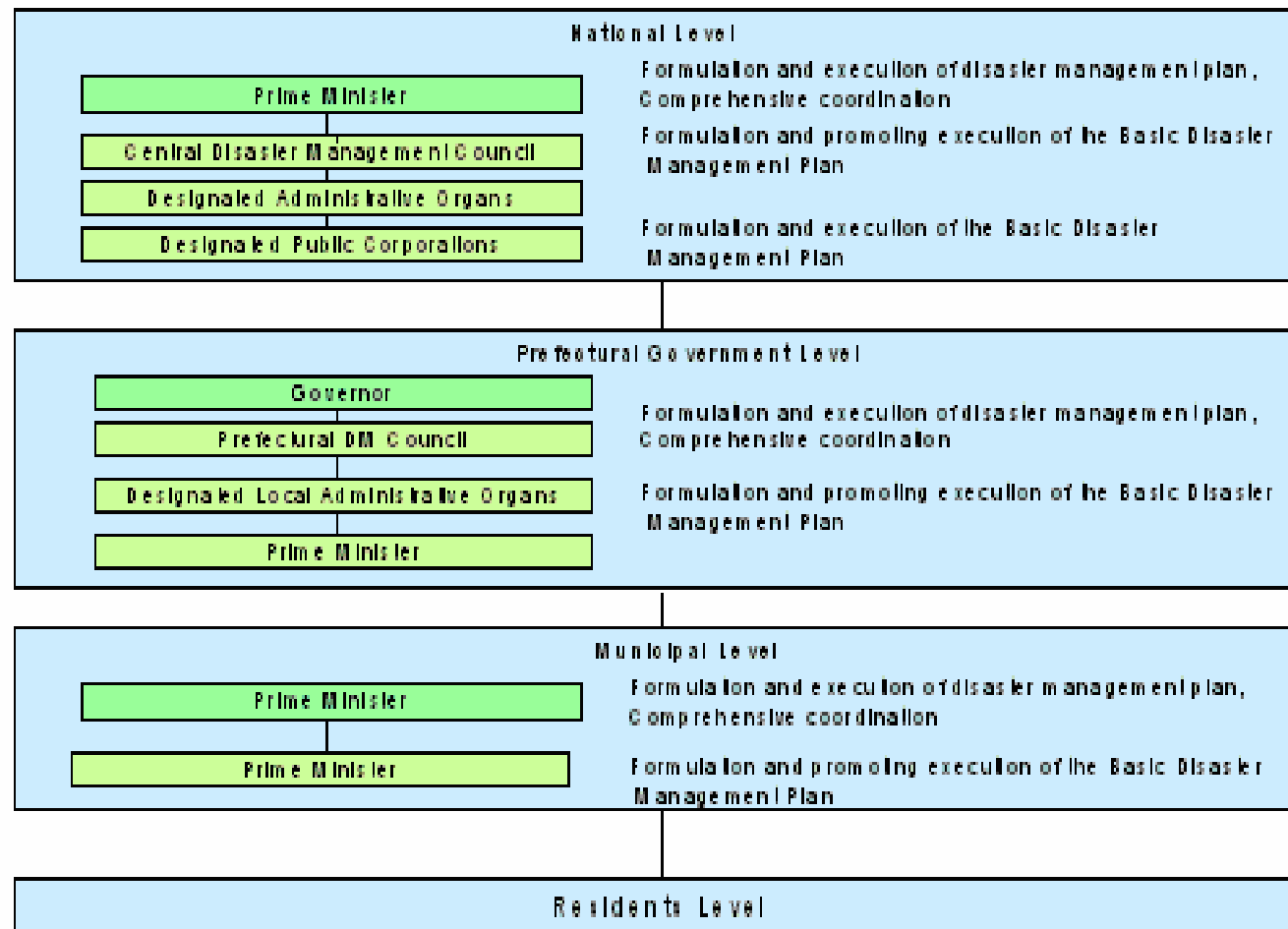


Natural Hazards in Japan



Disaster Management of Japan

Responsibilities by Administrative Level



Disaster Management of Japan

Disaster Countermeasures Basic Act (1961)

Main features:

- Responsibilities of national and local governments as well as the private sector and the people
- Organization of multi-sectoral coordination bodies for disaster risk management at the national and local levels
- Disaster risk management planning system
- Basic actions to be taken in each phase of the disaster management cycle: prevention/preparedness, emergency response, and recovery/rehabilitation
- Annual Government Official Report on Disaster Countermeasures



Disaster Management of Japan

Events	Disaster Management Acts	Disaster Management Plans and Systems
1940		
46 · Nankai Earthquake	47 · Disaster Relief Act	
48 · Fukui Earthquake	49 · Flood Control Act	
1950		
59 · Typhoon Ise-wan	50 · Building Standard Law	
1960		
61 · Heavy Snowfalls	60 · Soil Conservation and Flood Control Urgent Measures Act	61 Designation of Disaster Reduction Day
	61 · Disaster Countermeasures Basic Act	62 Establishment of Central Disaster Management Council
	62 · Act on Special Financial Support to Deal with Extremely Severe Disasters	63 Basic Disaster Management Plan
	· Act on Special Measures for Heavy Snowfall Areas	
64 · Niigata Earthquake	66 · Act on Earthquake Insurance	
1970		
73 · Mt. Sakurajima Eruption	73 · Act on Special Measures for Active Volcanoes	
76 · Seismological Society of Japan's report about the possibility of Tokai Earthquake		
78 · Miyagi-ken-oki Earthquake	78 · Act on Special Measures for Large-scale Earthquakes	79 Tokai Earthquake Countermeasures Basic Plan
1980		
	80 · Act on Special Financial Measures for Urgent Earthquake Countermeasure Improvement Projects in Areas for Intensified Measures	
	81 · Amendment of Building Standard Law	
1990		
95 · Great Hanshin-Awaji Earthquake	95 · Act on Special Measures for Earthquake Disaster Countermeasures	95 Amendment of Basic Disaster Management Plan
	· Act on Promotion of the Earthquake-proof Retrofit of Buildings	Designation of Disaster Reduction and Volunteer Day
	· Amendment of Disaster Countermeasures Basic Act	
	· Amendment of Act on Special Measures for Large-scale Earthquakes	
	96 · Act on Special Measures for Preservation of Rights and Profits of the Victims of Specified Disasters	
99 · Torrential Rains in Hiroshima	97 · Act on Promotion of Disaster Resilience Improvement in Densely Inhabited Areas	
· JCO Nuclear Accident	98 · Act on Support for Livelihood Recovery of Disaster Victims	
	99 · Act on Special Measures for Nuclear Disasters	
2000		
00 · Torrential Rains in the Tokai Region	00 · Act on Promotion of Sediment Disaster Countermeasures for Sediment Disaster Prone Areas	01 Establishment of the Cabinet Office
	02 · Act on Special Measures for Promotion of Tonankai and Nankai Earthquake Disaster Management	03 Policy Framework for Tokai Earthquake Policy Framework for Tonankai and Nankai Earthquakes
04 · Niigata-ken-Chuetsu Earthquake	03 · Specified Urban River Inundation Countermeasures Act	04 Tonankai and Nankai Earthquake Countermeasures Basic Plan
05 · Typhoons and Torrential Rains	04 · Act on Special Measures for Promotion of Disaster Management for Trench-type Earthquakes in the Vicinity of the Japan and Chishima Trenches	05 Tokai Earthquake Disaster Reduction Strategy Tonankai and Nankai Earthquake Disaster Reduction Strategy
	05 · Amendment of Act on Promotion of the Earthquake-proof Retrofit of Buildings	Policy Framework for Tokyo Inland Earthquakes
	· Amendment of Flood Control Act	06 Policy Framework for Trench-type Earthquakes in the Vicinity of the Japan and Chishima Trenches Countermeasures Basic Plan for Trench-type Earthquakes in the Vicinity of the Japan and Chishima Trenches
	· Amendment of Act on Promotion of Sediment Disaster Countermeasures for Sediment Disaster Prone Areas	Tokyo Inland Earthquake Disaster Reduction Strategy
		Basic Framework for promoting a Nationwide Movement for Disaster Reduction

※10 typhoons, the largest number in a single year on record, landed on Japan (an average of 2.6 typhoons per year)



伊勢湾台風，1959
写真提供：岐阜県

Ise-wan Typhoon, 1959
Photo: Gifu Prefecture



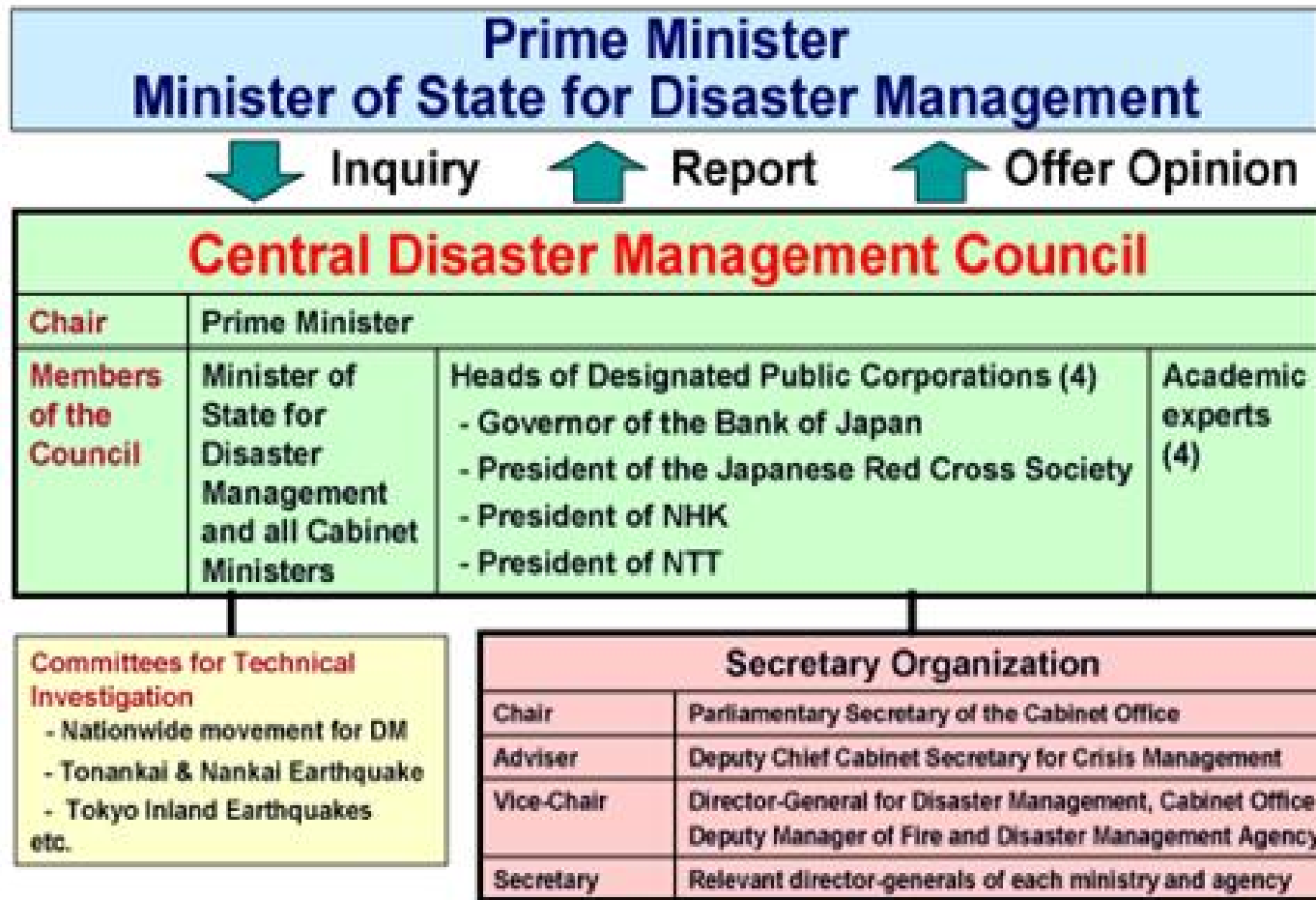
長崎豪雨災害，1982
写真提供：長崎市

Torrential Rains in Nagasaki, 1982
Photo: Nagasaki City



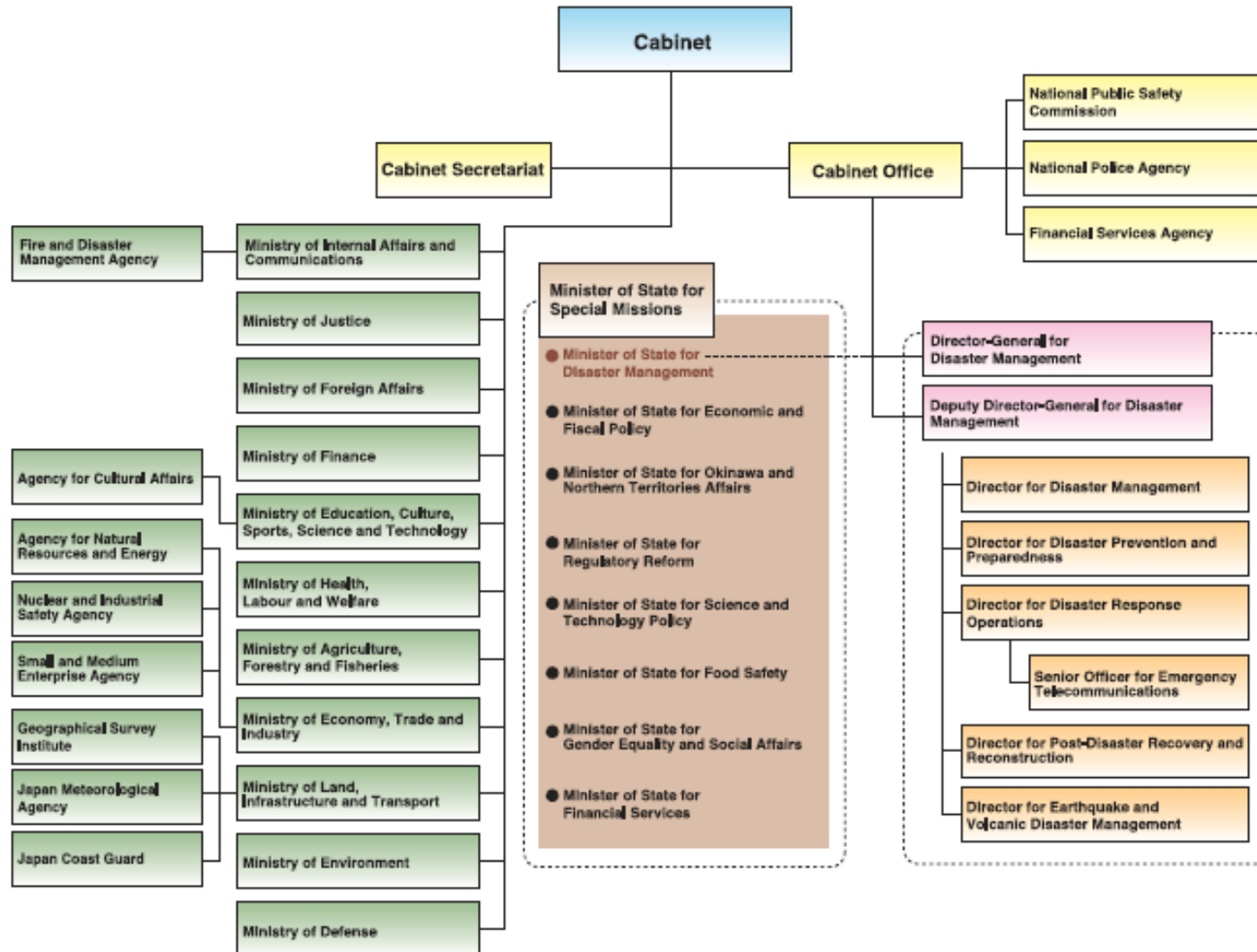
Disaster Management of Japan

Organization of Central Disaster Management Council



Disaster Management of Japan

Organization of National Government and Cabinet Office (Disaster Management)





**Knowledge and
Experiences Gained
thru the ADRC
Visiting Researcher Program**

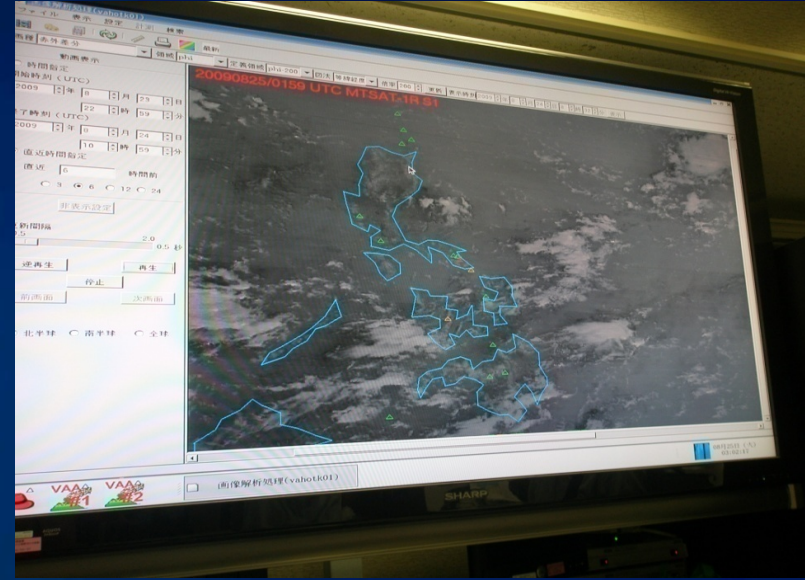


Field Trips/Visits/ Educational Tours

- **Japan Meteorological Agency (JMA)** – monitors extreme natural phenomena, such as, earthquake, tsunami, typhoon, and heavy rains.
- Focuses its efforts on monitoring the earth's environment and forecasting natural phenomena in the atmosphere, oceans and earth.
- Conducts research and technical development in relevant fields.
- Prevention and mitigation of natural disasters



Japan Meteorological Agency (JMA)



Cabinet Office Government of Japan

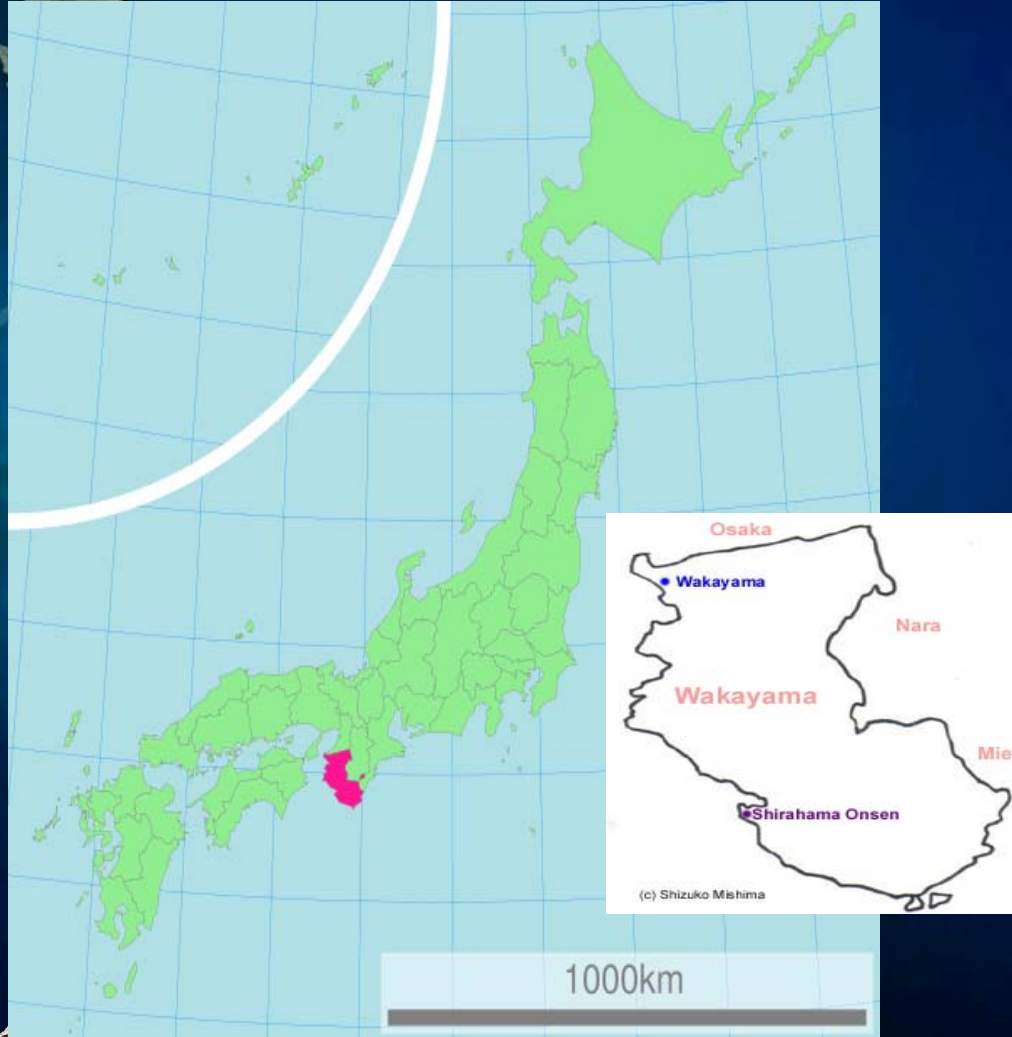
The Cabinet Office is responsible for formulating basic policies, strategies and guidelines for disaster reduction and for securing coordination of government disaster reduction activities.



Cabinet Office Government of Japan



Wakayama Prefecture



Tsunami Risk Reduction Educational Center

Earthquake and tsunami monitoring instruments



Hamaguchi Goryo Memorial Center Inamura-no-Hi Story



Tsunami Simulation



NHK Japan Broadcasting Corporation

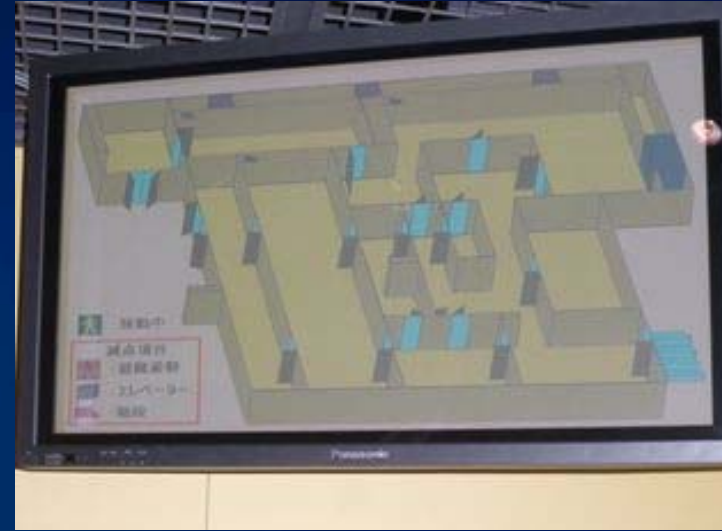
- NHK Disaster Broadcast
- Enhanced data broadcasting system
- State-of-the-art equipment
- Digital satellite broadcasting
- Emergency early warning system



Tokyo Metropolitan Government



Honjo Life Safety Learning Center



Shizuoka Prefecture



Earthquake Disaster Risk Reduction Center



Shizuoka City's Disaster Management System

- Involvement of citizens in disaster management activities
- Earthquake Disaster Prevention Guidebook, flyers, magazines and other materials
- Preparedness/countermeasures for a future Tokai Earthquake and tsunami
- 3 keywords for disaster management: self aid, mutual aid, and public aid



Nagasaki Prefecture

➤ 2 disaster symbols
in Nagasaki:

- atomic bomb
- elementary school buried in pyroclastic flows from a volcano



Nagasaki

- Urakami Cathedral
- Atomic Bomb Explosion Hypocenter
- Peace Park



Nojima Fault Preservation and Museum



Nigawa-Yurino-cho Landslide Museum



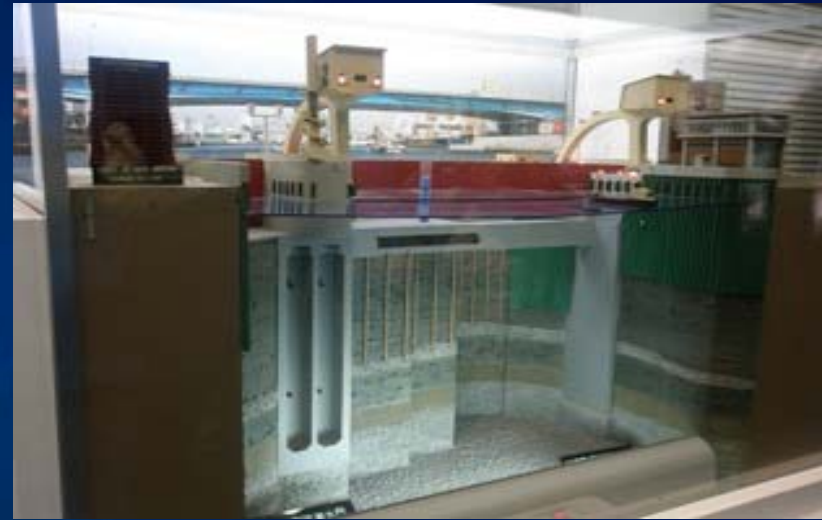
Tsunami Storm Surge Disaster Prevention Station (Osaka)

Mitigation and Preparedness Projects/Programs

- Water contingencies
- Construction of floodgates, dikes
- Anti-tidal measures/tidal surge protection facilities



Tsunami Storm Surge Disaster Prevention Station (Osaka)



Educational/Informative Programs and Activities

Earthquake Simulation Truck Experience



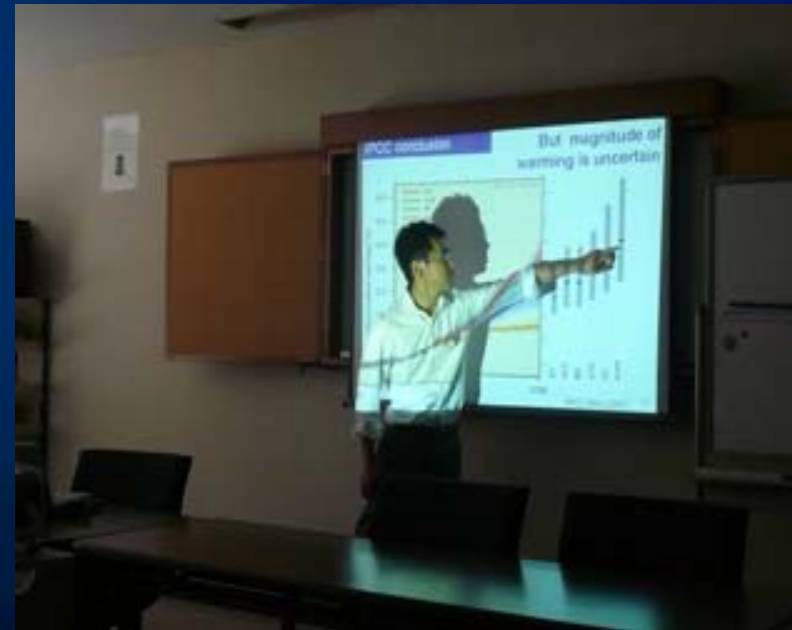
Disaster Reduction and Human Renovation Institution (DRI) Earthquake Memorial Building



Port of Kobe Earthquake Memorial Park



JICA Seminar on Climate Change





Workshops/ Trainings/Drills Attended



JICA Training Course

"Dissemination and Establishment
of Disaster Prevention Culture
for Asian Countries"



Joint Emergency Drills

Comprehensive Disaster Management Drills by Hyogo Prefecture, Sumoto City, Minami Awaji City, and Awaji City at Awaji Island



Drills in Miki City

Miki Fire Training Center



Drills in Kobe on Terrorism Attacks



United Nations Centre for Regional Development (UNCRD)

- Disaster Management Planning Hyogo Office 10th Anniversary
- International Symposium on Disaster Management for Sustainable Regional Development



GIS Application Training



Kobe University

“Public Reporting Sessions on the Recent Disasters in Indonesia, the Philippines, and Taiwan”



IRP Regional Workshop

- “Action by Stakeholders for Effective Management of Post-Disaster Recovery”, Yogyakarta, Indonesia
- Early Recovery Initiatives of the Republic of the Philippines on the Effects Brought About by Typhoons “Ketsana” and “Parma”



IRP Regional Workshop Indonesia
3-5 November 2009

calista





Disaster Mitigation Education



Support to Disaster Mitigation Education

- Hyogo Board of Education programs that raise awareness of students and the people on various disasters in Japan
- Promoting Earthquake Disaster Mitigation Education (2005) – with brochures for elementary and High School to enhance awareness of Disaster Mitigation
- New Disaster Mitigation Curriculum
- School Disaster Mitigation Manual (as Guide)
- Schools and government cooperate to create disaster mitigation system



Promoting Seismic Retrofitting of School Buildings in Japan by MEXT

- School Safety Initiatives in Japan
- Promotion of earthquake-resistant/resistance evaluation of school buildings in Japan
- Effectiveness of Structural Seismic Retrofitting of school buildings



Earthquake-resistant Construction Method



Attach steel frame braces to columns and beams



Reinforced concrete walls inside the building



Column reinforcement by attaching steel plate of carbon fiber



Reinforced components outside the building

Education

- Disaster Mitigation Education – Maiko High School
- Disaster Management Course – Fuji Tokoha University



Climate Change



Climate Change Mitigation Measures in Japan

- Shifting to a Low-Carbon Society
- Reduction of emissions
- Enhancement of the removals of greenhouse gases



Climate Change Adaptation Measures in Japan

- Review of past floods/categorize flooding patterns
- Runoff analysis and flood analysis
- Categorize flooding pattern/Divide flooding patterns into blocks by land features and river
- Calculate damage and effect/description of disaster risk into Risk Map by blocks – e.g. prediction of victims
- Consider effective and efficient adaptation measures – bank strengthening, disaster prevention station, new road embankment, drainage pump



Adaptation Using Structures

- Constructing new structures
- High standard embankments
- Flood control (dams)
- Underground Discharging Channel
- Storage facilities



Assistance of the Japanese Government

- The Government of Japan has been providing funds on the scale of US\$10Billion for the next five years to assist developing countries in making efforts to reduce GHGs emissions and achieve economic growth in a compatible way.
- Transfer Japanese technology and promote GHGs emission reductions at global level (e.g. improvement in energy efficiency of power generation)



Japan International Cooperation Agency (JICA)

- Promotion of adaptation measures to climate change, based on the concept of “human security” as a critical basic policy for development assistance
- Provision of development assistance to developing countries thru technical cooperation projects
- Strengthening the capacity for adaptation of countries and sectors where serious climate change impacts are expected
- **Mitigation:** protection and conservation of forests, diversification of energy resources, promotion of energy efficiency
- **Adaptation:** preparation for weather disasters, establishment of organizations/systems for integrated water management, improving access to water supply and sewerage, strengthening irrigation management/facilities and agricultural leadership structures, introduction of crop varieties for arid regions, and disaster management



JICA Projects on Climate Change Mitigation

- Zafara Wind Power Plant Project (Egypt)
- Metro Manila Transport Project (Philippines)
- Environmentally Friendly Solutions Fund (E-Friends) Project (Sri Lanka)
- Master Plan Study for Utilization of Solar Energy (Nigeria)
- Support on Forest Resources Management through Leveraging Satellite Image Information (Indonesia)
- Project for Implementation Support for 3R Initiative in Hanoi City to Contribute to the Development of a Sound-Material Society (Vietnam)



JICA Projects on Climate Change Adaptation

- Various Training Courses
- Iloilo Flood Control Project (Philippines)
- Bali Beach Conservation Project (Indonesia)
- Construction of Multi-purpose Cyclone Shelters, Emergency Disaster Damage Rehabilitation Project (Bangladesh)
- Brantas River Middle Reaches Improvement Project (Indonesia)
- Study on Sahel Oasis Development (Nigeria)
- Project for Strengthening Malaria Control (Solomon Islands)



Climate Change Act of 2009



➤ **Republic Act No. 9729**

An act mainstreaming climate change into government policy formulations, establishing the framework strategy and program on climate change, creating for this purpose the climate change commission, and for other purposes.

➤ **Signed on 23 October 2009**

➤ **Declaration of Policy**

- The State has adopted the Philippine Agenda 21 framework
- As a party to the United Nations Framework Convention on Climate Change, the State adopts the ultimate objective of the Convention which is the stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.



Climate Change Act of 2009

- As a party to the Hyogo Framework for Action, the State likewise adopts the strategic goals in order to build national and local resilience to climate change-related disasters.
- The State shall cooperate with the global community in the resolution of climate change issues, including disaster risk reduction.
- It is the policy of the State to enjoin the participation of national and local governments, businesses, non-government organizations, local communities and the public to prevent and reduce the adverse impacts of climate change and, at the same time, maximize the benefits of climate change.
- Further recognizing that climate change and disaster risk reduction are closely interrelated and effective disaster risk reduction will enhance climate change adaptive capacity, the State shall integrate disaster risk reduction into climate change programs and initiatives.



Creation of the Climate Change Commission

- The Commission shall be attached to the Office of the President.
- The Commission shall be the sole policy-making body of the government which shall be tasked to coordinate, monitor and evaluate the programs and action plans of the government relating to climate change pursuant to the provisions of this Act.



Composition of the Climate Change Commission

- President of the Republic of the Philippines – Chairperson
- Three (3) Commissioners to be appointed by the President, one of whom shall serve as the Vice-Chairperson of the Commission.
- The Commission shall have an advisory board composed of the following: almost all Secretaries and Heads of government departments and agencies; Representative from the academe; Representative from the business sector; and Representative from non-governmental organizations.

At least one (1) of the sectoral representatives shall come from the disaster risk reduction community.

*** Secretary of the Department of National Defense, in his capacity as Chairman of the National Disaster Coordinating Council**



Framework Strategy and Program on Climate Change

- The Commission shall, within six (6) months from the effectivity of this Act, formulate a Framework Strategy on Climate Change.
- The Framework shall serve as the basis for a program for climate change planning, research and development, extension, and monitoring of activities to protect vulnerable communities from the adverse effects of climate change.
- The Framework shall be formulated based on climate change vulnerabilities, specific adaptation needs, and mitigation potential, and in accordance with the international agreements.
- The Framework shall be reviewed every three (3) years, or as may be deemed necessary.



National Climate Change Action Plan

The Commission shall formulate a National Climate Change Action Plan in accordance with the Framework within one (1) year after the formulation of the latter.



Local Climate Change Action Plan

The local government units shall be the frontline agencies in the formulation, planning and implementation of climate change action plans in their respective areas, consistent with the provisions of the Local Government Code, the Framework, and the National Climate Change Action Plan.



Current Initiatives of the NDCC

- Integration of DRR/M programs/projects with Climate Change initiatives
- Adaptive Capacity Assessment of Concerned Agencies



Action Plan

- **Submit Report to the Chairman and Executive Officer of the NDCC**
- **Echo Learnings, Knowledge and Experiences Gained from the ADRC Visiting Researcher Program to colleagues**
- **Participate/be involved more on programs/projects on Climate Change**



Recommendations for the ADRC VR Program

- Visiting Researcher Program/Schedule of Activities be distributed properly during the entire duration of the program
- Creation of a network of previous and present VRs



Sayonara!

Hope to see you again!

