THE ROLE OF LOCAL GOVERNMENT UNITS IN MAINSTREAMING CLIMATE CHANGE ADAPTATION IN THE PHILIPPINES

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OUTLINE OF PRESENTATION

1.0 Introduction

2.0 Vulnerability of Albay Province to Climate-Related Disasters

3.0 Provincial Disaster Risk Management Approach

4.0 Lessons Learned

Introduction

- Philippines one of the most disaster-prone countries in the world (Bildan, 2003; World Bank, 2005)

- Average of 20 tropical cyclones annually

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Introduction

- From 1971 to 2000, natural disasters killed about 34,000 people
- 1990 to 2000, natural disasters killed or disrupted the lives of 35 million people.
- Philippine agriculture greatly affected by climate variability and extremes

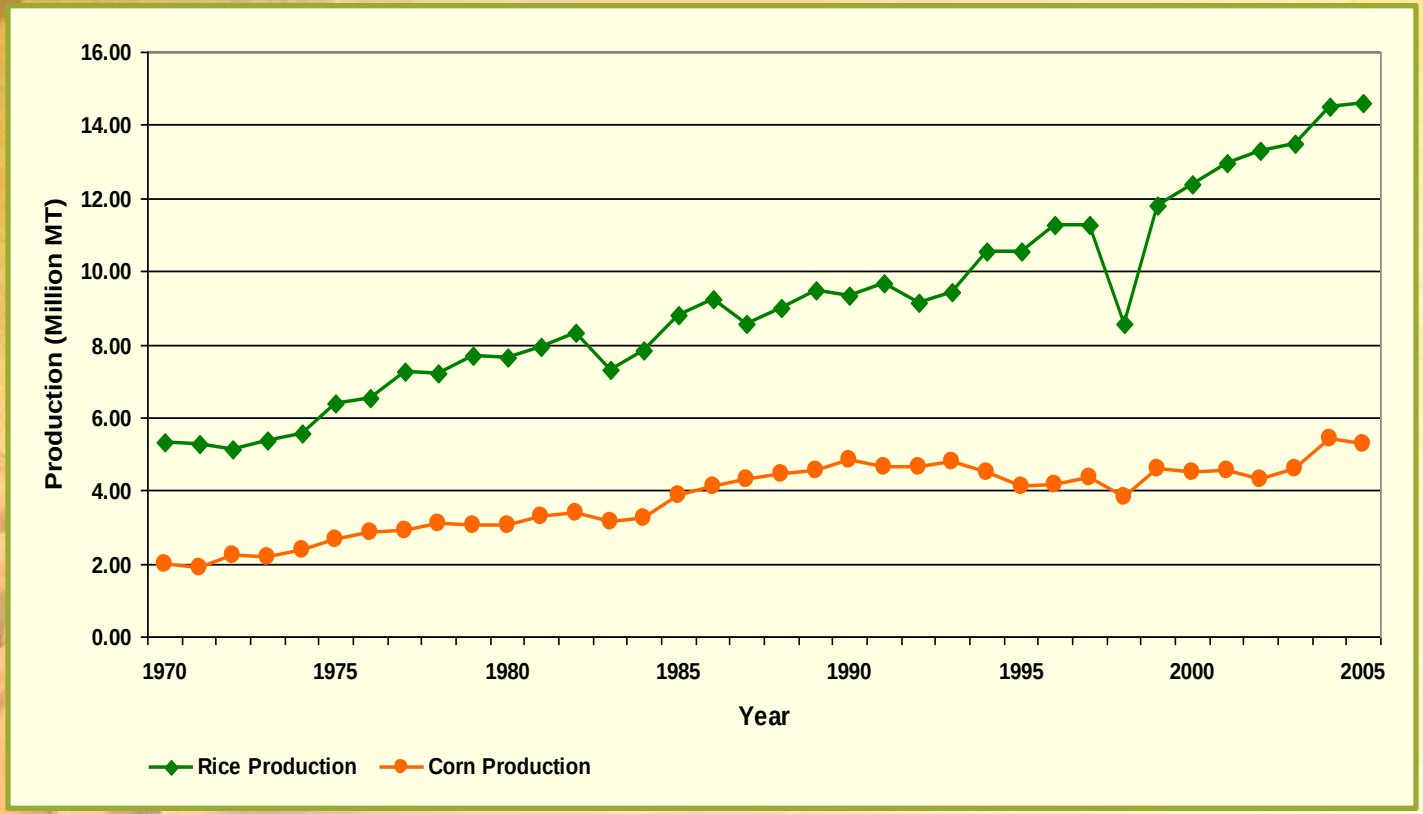
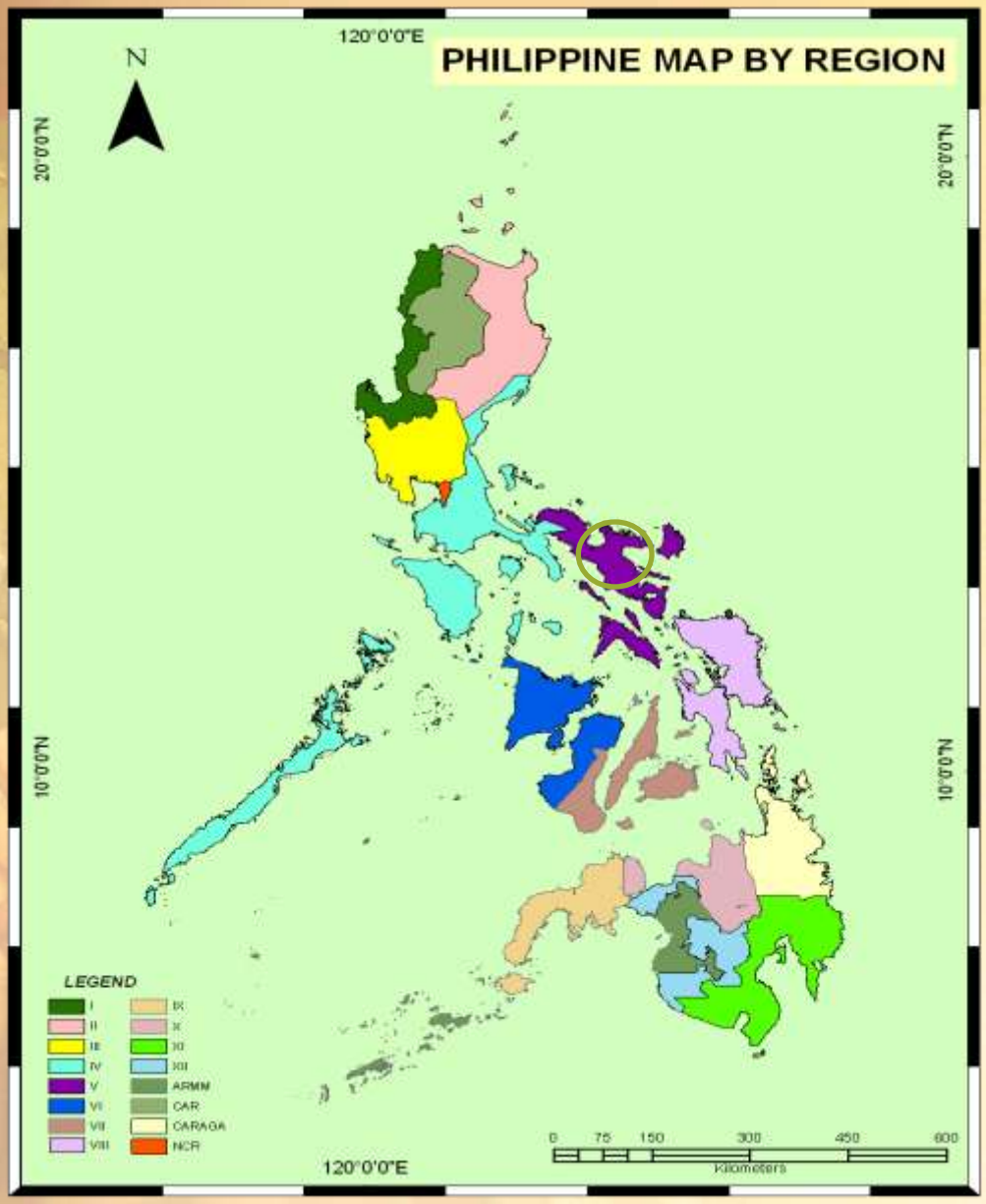


Figure 1. Impact of El Nino on production of rice and corn



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Approaches to Disaster Risk Management and Climate Change Adaptation

2.1 Vulnerability of Albay Province to Climate-Related Disasters

- Has area of 2,552.6 km^2
- About 50% of total land area mainly devoted to agriculture
- Coconut and coco-based products major commodities

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2.1 Vulnerability of Albay Province to Climate-Related Disasters

- As of May 2000, total population 1 million, 22nd most populous province in the country

- Has 2 types of climate: Climatic type II - has no dry season but there is very pronounce maximum rainfall from November to January
  Climatic type IV –rainfall evenly distributed throughout the year

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2.1 Vulnerability of Albay Province to Climate-Related Disasters

- Average monthly rainfall 233 mm, minimum rainfall 130 millimeters
- Average monthly temperature 28.1°C, minimum temperature 25°C
- Suffers the brunt of tropical cyclones which annually hit the country

Table1 Summary Report: Disaster Occurrences in the Province of Albay (1994 – 2006).Source: APSEMO (2007)

	Typhoon Occurences	Year	Affected Population				Total Damages (US$)
			Persons	Dead	Injured	Missing	
1	Typhoon Akang	1994	18,036	47	112	1	2,211,904
2	Typhoon Gading	1994	6,799	1	2	1	1,546,644
3	Typhoon Mameng	1995	10,126	0	0	0	1,588,884
4	Typhoon Rosing	1995	440,372	44	20	2	11,991,106
5	Typhoon Pining	1997	1,800	0	0	0	836,956
6	Typhoon Loleng	1998	201,834	1	7	1	6,754,448
7	Typhoon Sendang	1999	1,122	0	0	0	2,444
8	Typhoon Reming	2000	27,547	12	1	2	7,188,989
9	Typhoon Senyang	2000	22,882	0	0	0	91,111
10	Typhoon Dindo	2004	33,892	0	6	1	5,038,046
11	Typhoon Unding	2004	1,744	0	0	0	942,094
12	Typhoon Yoyong	2004	18,372	0	10	1	1,124,229
13	Active Low Pressure – ITCZ	2005	19,062	4	0	0	3,099,983
14	Tropical Storm Caloy	2006	47,065	0	5	0	2,207,708
15	Typhoon Milenyo	2006	698,460	14	176		37,007,025
16	Typhoon Reming	2006	1,060,875	604	1465	419	71,787,460
	TOTAL						**153,419,031**

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2.2 Provincial Disaster Risk Management Approach

1992 - Provincial Disaster Operation Center (PDOC) established to provide technical and administrative functions of emergency-related services

1994 - Albay Provincial Public Safety and Emergency Management Office (PPSEMO) institutionalized by virtue of Sangguniang Panlalawigan Resolution (SPA) No. 155-94

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2.2 Provincial Disaster Risk Management Approach

Activities of the PPSEMO

- Disaster Preparedness
- Disaster Mitigation
- Disaster Response Operations
- Recovery
- Issuance of certification on danger and hazard zones

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2.2 Provincial Disaster Risk Management Approach

15 rain gauges installed on the slopes of Mt Mayon - an early warning system against deadly floods

Pre-emptive evacuations - November 2007 and February 2008, hundreds of thousands of residents ordered to leave homes for safety before arrival of large storms

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Plans on Disaster Risk Management

- Community based training and public information on the importance of disaster management concepts
- Issuance of timely warning on impending threat of hazard
- Strengthening of the LGU capabilities on disaster management

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Plans on Disaster Risk Management

- Update hazard profile of all municipalities in Albay and analyze data on man-made disasters for public safety studies
- Risk reduction and disaster response – mitigation of damages caused by debris and landslide and prevention of loss of lives/damages to properties

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Plans on Disaster Risk Management

- Modernization/refurbishing of disaster operation center
- GIS risk assessment/communication and warning system
- Safety management program

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Programs on Climate Change Adaptation

1.“National Conference on Climate Change Adaptation (NCCCA)” in October 2007

- Participated in by high level government officials , academe, researchers, NGOs, business sector, local community representatives, and donor community

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NCCCA

- Key output "*Albay Declaration on Climate Change Adaptation*"

- Highlight of the declaration: mainstreaming climate change in policies, plans and programs

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NCCCA - received widespread media coverage both in local and national media

The Albay Declaration also featured in full page advertisements sponsored by the provincial government.

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2. Albay in Action on Climate Change (A2C2)

Aims to embed disaster risk reduction to enforce climate-proofing and disaster-proofing of development

Components:

- Information, Education and Communication (IEC)

- Essay writing and poster making contests, viewing of documentaries and conduct of seminars, integration of cc in primary and secondary curricula

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2. Albay in Action on Climate Change (A2C2)

- **Policies**

-Sanguniang Panlalawigan (SP) Resolution - *Proclaims the Province of Albay as one of the first and pioneering prototype province that will adopt climate change adaptation* wherein all behavior, projects, programs grants of license and permits should be consistent with adaptation

Approaches to Disaster Risk Management and Climate Change Adaptation

2. Albay in Action on Climate Change (A2C2)

- **Policies**

-SP Ordinance 2007-01 – appropriation for A2C2 activities

-SP Ordinance - Ban of “open burning “and provides local mechanism for enforcement i.e. *barangay* (village) *tanods* (guards) to record in a logbook any violations

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2. Albay in Action on Climate Change (A2C2)

- **Programs and Projects**

- LINIS KALOG or the *Linis Kanal at Ilog* (Clean-up of Rivers and Creeks)

Aims to promote environmental conservation and at the same time is a “food for work” program for river cleanup in two cities and one municipality (Legazpi and Tabaco City; and Daraga)

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2. Albay in Action on Climate Change (A2C2)

- **Programs and Projects**

- AIARP (Albay Integrated Agricultural Rehabilitation Program) establishes farm clusters to prevent scarcity of agricultural commodities and accelerate food production; pump-prime the Agricultural Industry in the Province; and speed up rehabilitation of upland agricultural areas in Albay

Approaches to Disaster Risk Management and Climate Change Adaptation

2. Albay in Action on Climate Change (A2C2)

- **Programs and Projects**

- Barangay Level Composting aims to reduce the volume of garbage dumped at the land fill and process the compost into organic fertilizer to reduce methane emissions from agricultural lands

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2. Albay in Action on Climate Change (A2C2)

- **Programs and Projects**

- Palanog Cement Factory (Business Sector) is practicing the substitution of fossil fuels by rice hull

- Reforestation activities such as mangrove tree planting

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Institutional Initiatives

1.Establishment of “Center for Initiatives and Research on Climate Adaptation” (CIRCA) in 2008

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Other efforts

- The Albay leadership also sought to influence national policy by supporting several bills in the Philippine Congress that pertain to climate change.

Lessons Learned

- Provinces which experience frequent and severe climate hazards more likely to be aware and responsive to the need for climate change adaptation

- In prioritizing areas for implementation climate change adaptation programs, focus should be on those areas already experiencing climatic stress

Lessons Learned

- Local government units at the provincial scale have resources to commit to climate change adaptation hence could provide the most effective means of mainstreaming climate change
- “Champions” from meso scale government units such as Albay province could be key to mainstreaming climate change adaptation in developing countries

Lessons Learned

- There is opportunity to integrate climate change adaptation on existing disaster risk management (DRM) institutions and programs

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