

# PROVINCE OF ALBAY, PHILIPPINES: RESPONDING TO THE CHALLENGE OF DISASTER RISK REDUCTION AND CLIMATE CHANGE ADAPTATION



Strengthening  
Climate  
Resilience

**SCR**

Case Study  
Summary  
PHILIPPINES

## Provincial Government of Albay and the Center for Initiatives and Research on Climate Adaptation

*Which of the three pillars does this project or policy intervention best illustrate?*

- Tackling Exposure to Changing Hazards and Disaster Impacts**
- Enhancing Adaptive Capacity**
- Addressing Poverty, Vulnerability and their Causes**

In 2008, the Province of Albay in the Philippines was declared a **"Global Local Government Unit (LGU) model for Climate Change Adaptation"** by the UN-ISDR and the World Bank. The province has boldly initiated many innovative approaches to tackling disaster risk reduction (DRR) and climate change adaptation (CCA) in Albay and continues to integrate CCA into its current DRM structure. Albay maintains its position as the first mover in terms of climate smart DRR by implementing good practices to ensure zero casualty during calamities, which is why the province is now being recognized throughout the world as a local government exemplar in Climate Change Adaptation. It has pioneered in mainstreaming CCA in the education sector by developing a curriculum to teach CCA from the primary level up which will be implemented in schools beginning the 2010 school year. Countless information, education and communication activities have been organized to create climate change awareness in the province. Albay has proactively partnered and cooperated with educational institutions, various government agencies and departments, scientific organizations, international and local NGOs, private/business sectors to implement climate change adaptation actions all over the province. Albay continues to invest in strengthening its capacity to use modern technology for climate forecasting, early warning, and land use planning. The province has also successfully integrated resilient livelihood into its climate change adaptation strategy through programs like "river and canal clean-up" coupled as a "food for work" activity. It has actively supported changes in policy to support CCA and contributed to calls for the enactment of several bills on climate change at the national level.



***"Think Global Warming. Act Local Adaptation."***

*-- Provincial Government of Albay*

Through the leadership of **Gov. Joey S. Salceda**, Albay province has become the first province to proclaim climate change adaptation as a governing policy, and the Provincial Government of Albay (PGA) was unanimously proclaimed as the first and pioneering prototype for local Climate Change Adaptation. Ms. Nileema Noble of the UNDP Millennium Development Goal Fund also stated that *"Albay is a model province for climate change adaptation."* The Albay Agenda set aims to improve on the environment, education and economy, and is a framework for other national climate change initiatives. The Albay Strategy is devoted to economic development, social development and socio-economic growth. The province has launched the **Albay in Action on Climate Change (A2C2)** program and embedded disaster risk reduction to promote climate-proofing and disaster-proofing into its development. Through it, the province has spearheaded several programs and activities on promoting and mainstreaming disaster risk reduction (DRR) and climate change adaptation (CCA) into its development plans; climate smart programs on information and awareness raising; climate smart programs for health, quality education, housing for resettlement, water, sanitation and hygiene; resilient livelihood programs and agriculture, fishery and forestry support; and local policy building. The Philippines' **Climate Change Act of 2009** took inspiration from the **Albay Declaration**, the outcome document of the **First National Conference on Climate Change Adaptation in 2007** which the Albay province initiated, calling for "the passage of a policy prioritizing climate change adaptation in the national agenda". The Albay Declaration catalyzed the mainstreaming of climate change into the local and national development policies as both Congressional houses recognized the declaration as the national framework for the mainstreaming of global warming leading to climate change adaptation. In 2009, the Second National Conference on Climate Change Adaptation has seen the turnover of the 2009 Manila Declaration on Climate Change Adaptation to the country's former President Gloria Arroyo.

# Albay - a Province of “firsts” in Climate Change Adaptation

## *Institutional Initiatives in DRR and CCA*

### **PDMO and APSEMO**

The **Provincial Disaster Management Office (PDMO)** in Albay effectively coordinates the various stakeholders to promote an efficient intervention on disaster preparedness and emergency response and recovery. Albay is the **first** and only province in Bicol that has an institutionalized office to coordinate such tasks.

The PDMO has since been institutionalized into what is now known as the **Albay Public Safety and Emergency Management Office (APSEMO)**. Established in 1994, the APSEMO was organized as an independent department that serves as the technical secretariat and administrative arm to support the *Provincial Disaster Coordinating Council of Albay*. It administers and supervises the systematic delivery of services to the public in terms of disaster risk management and public safety in coordination with the Local Disaster Coordinating Councils (LDCCs),

PHIVOLCS, PAGASA, Governor’s Office and NGOs. It also facilitates the restoration and rehabilitation of disaster-stricken communities. Albay is the only province in Bicol that has an institutionalized disaster management office at the provincial level to coordinate such tasks.

The APSEMO performs various activities on disaster preparedness & mitigation, climate risk / disaster risk management, disaster risk reduction, disaster response operations, and recovery, such as hazard assessment; documentation of risk areas and mapping, research & planning for crisis administration; education & training / drills in LGUs, road safety and technical assistance to cities; policy development, policy on geo-strategic interventions; community training and public awareness on disaster mitigation; overall administration/ coordination of disaster response activities; and many others. It also provides technical support to LGU’s and NGOs on disaster risk reduction strategies.

### **CIRCA**

The provincial government of Albay established the **Center for Initiatives and Research on Climate Adaptation (CIRCA)** in 2008, a living research and training institution, in collaboration with the Environment Management Bureau (EMB), World Agroforestry Centre (ICRAF), Bicol University (BU) and the University of the Philippines Los Banos (UPLB), and the Albay in Action on Climate Change (A2C2) of the Provincial Government of Albay.

CIRCA is the **first** institution of its kind not only in the Philippines but also in the Southeast Asian Region set up to deal with climate change adaptation. Its goal is to enhance the ability of Albay residents and Filipinos in general to cope with climate risks. It also aims to strengthen the capacity for research and project/program implementation in sustainable agriculture, forestry, fisheries, energy and eco-cultural tourism in the light of growing challenges due to climate change.

CIRCA is now one of the leading authorities when it comes to climate change in the region, with comprehensive ties to other local government units and educational institutions. Specifically, the Centre aims to enhance awareness of the various sectors of the threats by a changing climate; enhance the capabilities of farmers and fisherfolk to adapt to climate change; promote climate risk adaptation by enhancing resilience of the most vulnerable groups; mainstream climate change adaptation in the basic academic curricula for the primary, secondary, tertiary, vocational and technical institutions in the province; enhance the interdisciplinary knowledge-base of the province on climate change adaptation; conduct and explore concrete policy studies that will support better climate risk adaptation; and support mitigation projects and initiatives in the province of Albay.

The institutionalization of the PDMO into APSEMO as one independent department has strengthened the disaster management capability of the provincial government of Albay. The establishment of this independent body has ensured the continuity of the province’s programs on disaster management and strengthened the effective coordination of the various institutions for more efficient management.

### **Albay MDG Office**

The province has adapted the Millenium Development Goals (MDG) as the basis of analysis of the potential impacts of climate change which has greatly influenced the formulation of its CCA strategies on extreme poverty and hunger; universal education; gender equity and empowerment; and health and mortality. In line with this, Albay is the **first** in the world to establish a **Millenium Development Goal (MDG) Office**.

Formerly the “*Albay Maybuhay May Hanapbuhay*” (social and socio-economic development) Office, the Albay MDG Office seeks to ensure that the province, through its programs, activities and strategies are in line with the country’s Millenium Development Goals targeted to be achieved by 2015.

The risk to human life due to natural disasters in the Philippines has increased dramatically. From 1990 to 2000, natural disasters killed or disrupted the lives of 35 million people. It is expected that climate change will exacerbate existing stresses in the country. Recent studies in the Philippines showed that water resources, natural ecosystems and local communities are vulnerable to climate change. The Philippines has a long history of adapting to climate variability and extremes. The Bicol region where Albay province is located suffers the brunt of tropical cyclones which annually hit the country. The province of Albay is located between the provinces of Camarines Sur on the north and Sorsogon on the south. It is bounded on the east by the Pacific Ocean,

## Albay Action on Climate Change (A2C2)



Albay has implemented a **pioneering** programme on climate change adaptation called the “**Albay in Action on Climate Change (A2C2).**” It aims to embed disaster risk reduction to enforce climate-proofing and disaster-proofing of development. It does so by spearheading local

initiatives to address problems related to climate change. The initiative not only localizes the responses to the problems of climate change but also helps inform the public of the negative impacts of climate change on their lives and communities.

The A2C2 approach includes the implementation of CCA programs in the curricula of all schools, colleges and universities in Albay, IEC drive on climate change, and disaster risk mitigation and policy formulation in addressing the potential impact of climate change. Some of the other programs under the A2C2 initiative include the Rapid Earthquake Devise Assessment System (REDAS) with Phivolcs; Climate Proofing program under the United Nations Development Program (UNDP) and the formulation of a Comprehensive Land Use Plan (CLUP) for the province and for all towns and cities; and the SMART Infoboard where some 15,000 SIM cards were distributed to village officials for fast disaster information services.

The A2C2 initiative also serves as a local network in the province that would guide officials in crafting policies and legislation on climate change. One of the policies established under this strategy is Special Proclamation Resolution 2007-04 which stipulates that all businesses to be established in the province should be consistent with climate change adaptation otherwise it will not be granted a business permit to operate. Albay, through CIRCA and the A2C2 initiative, hosted two separate national conferences that resulted in the **Albay 2007 and Manila 2009 Declarations** which has become a tool for the early passage of the **Climate Change Act** and the creation of the **Climate Change Commission** which is the sole national-level policy-making body tasked to coordinate, monitor and evaluate the programs and action plans of the government relating to climate change. Through CIRCA, the province of Albay continues to implement programs on CCA under this initiative.



### CHANGE STRATEGY FOR CLIMATE CHANGE

Make it a goal  
Ordain policies (including budget)  
Execute programs and projects  
Build institutions



### OVERARCHING GOVERNING PHILOSOPHY OF ALBAY

Strong on Economy  
Strong on Education  
Strong on Environment  
Strong on Ethics



### ALBAY'S DEVELOPMENT STRATEGY

Albay Mabuhay (economic strategy)  
Albay May Buhay (social development)  
Albay May Hanapbuhay (socio-econ plan)



on the northeast by Lagonoy Gulf, west and southwest by Burias Pass. Albay has a land area of 2,552.6 square kilometers. About 50% of its total land area is mainly devoted to agriculture – with coconut and coco-based products as its major commodities, followed by corn and rice. As of May 2000, Albay has a total population of circa 1 million, which makes it the 22nd most populous province in the country. Given its geographical location, Albay along with the rest of Bicol region is highly vulnerable to natural disasters.

Albay is especially vulnerable to tropical storms and cyclones, which bring destructive winds, heavy rainfall and storm surges several times a year.

Typhoons affecting

the province and the Philippines as a whole, form in the Pacific Ocean, and move in a west-northwest direction, many times the wind intensifying to speeds of 200 kph.

Each year, circa 198,000 houses are at risk of destruction from storm surges and at least 350,000 people need to be evacuated. Another 300,000 of the population are at risk of tsunami. And with an active volcano in its midst, three cities and five municipalities are at risk of volcanic eruptions. An estimated 127 villages or 11,000 to 12,000 families are also at risk of mudslides and eight municipalities and two cities are at risk of floods.

## Some Local Adaptation Actions

- ◆ Albay is the first province to mainstream climate change adaptation in the education sector, having incorporated CCA in the basic education curriculum and trained teachers to use it. In line with this, a Memorandum of Agreement and Understanding was established between the Province of Albay-CIRCA and the University of the Philippines Los Baños-UPLBFI for the Mainstreaming of Climate Change into Curriculum of primary, secondary and tertiary education to be replicated in all provinces across the country.
- ◆ First Mural Painting Competition on Climate Change Adaptation among colleges and universities in Albay with the theme: *Ten Commandments for Sustainable Development* which encompasses ten primary measures to build resilience through climate adaptation.
- ◆ CRABS Project to enhance the Eco-Cultural Tourism potential of the islands of Cagraray, Rapu-Rapu, Batan and San Miguel;
- ◆ Ten Million Mangrove Trees project to protect the Coastal areas of Albay
- ◆ Training / Workshop for 720 representatives of barangays / communities on Climate Change Adaptation in partnership with the Department of Interior and Local Government (DILG)-Albay
- ◆ First Scientist and Community Development Practitioners on DRR and Climate Change Adaptation roundtable discussion
- ◆ Albay is the first LGU to sign a MOA with the Department of Energy through its Philippine Efficient Lighting Transformation Project for the effective implementation of its campaign on Energy Efficient Lighting Systems (EEL) “PALIT-ILAW” promoting compact fluorescent Lamp (CFL)
- ◆ Mobile phone sim pack (SMART) made publicly available for the EARLY WARNING MONITORING SYSTEM
- ◆ LINIS KALOG or the Linis Kanal at Ilog (Clean up of Rivers, Canals, Shorelines) to promote environmental conservation and at the same time to support a “food for work” program for river cleanup
- ◆ Palanog Cement Factory (Business Sector) is practicing the substitution of fossil fuels by rice hull to reduce greenhouse gas emissions
- ◆ Albay Integrated Agricultural Rehabilitation Program (AIARP) established to form farm clusters to assist farmers and fisher folks in their agricultural needs, food assistance, technological and training needs.
- ◆ Rapid Earthquake Damage Assessment System (REDAS) Software Training in

*continued on page 5*

*From topmost right, clockwise: During the training of teachers for mainstreaming CCA in education; First-prize winner of the Mural Painting competition; Mangrove planting in Polanqui Bay; First Mayon Trail Run in celebration of the 1st Anniv. of the Natl. Conf. on CCA; Communities doing their part during the Linis Kalog or Clean up of Rivers, Canals, Shorelines project*



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partnership with the Department of Science and Technology-PHILVOCS. Localized Climate Forecasting and Statistics with PAG-ASA-DOST.

- ◆ Institutionalization of local policies that support climate change adaptation such as SP Ordinance 2007-51, a policy that pertains to the updating and review of Albay's Comprehensive Land Use Plan (CLUP) for disaster risk reduction and climate change adaptation, and the use of clean energy for all energy users within 5 years; SP Ordinance to strengthen Sec. 48. Item 3 Chapter 6 of RA 9003 or the Solid Waste Management law for the banning of "open burning" and provision of local mechanism for enforcement; etc.

- ◆ The provincial Government of Albay and CIRCA in partnership with the University of the Philippines in Los Banos, University of Sunshine Coast Australia, APN and the Millennium Development Goal Fund have initiated the first application of the world leading SimCLIM technology in the country. LGUs were trained to operate and utilize the customized SimCLIM software, a computer model system for examining the effects of climate variability and change over time and space, making Albay the first LGU in the country to use the SimCLIM for climate change adaptation and mitigation, and disaster risk management. SimCLIM is an open framework modeling system which allows users to customize the model for geographical area and spatial resolution and to attach models. It has the capacity to assess baseline climate and current variability and extremes, present and future risks, investigate present and future adaptation, create scenarios of climate and sea level change, conduct sensitivity analyses, impact and others. CIRCA in Albay is proposing to the national government to create a customized SimCLIM software modeling system for the Philippines. Albay is also the only province in the country using the SimCLIM software for revisiting the Comprehensive Land Use Plan.

- ◆ The Center for Initiatives and Research for Climate Adaptation (CIRCA) is now pushing for the establishment of the first Disaster Risk Reduction and Climate Change Academy for local government units. This will be the first academy on climate change adaptation which will serve all vulnerable groups/sectors, from the local to national level bearing the brunt of climate change through Capacity Development for Better Governance.



From topmost left: 1st Scientist and Community Development Practitioners on DRR/CRR and Climate Change Adaptation roundtable discussion; 1st National Conference on Climate Change Adaptation initiated by Albay province; Training on Climate Change Impacts and Vulnerability Assessments using SimCLIM software.

From topmost right: Climate Risk Reduction & Climate Change Adaptation Training for Agriculture; Rapid Earthquake Damage Assessment System (REDAS) Software Training in partnership with Department of Science and Technology-PHILVOCS; Albay Gov. Joey Salceda during the 2nd National Conference on Climate Change

## Lessons Learned

The experience of the province of Albay shows the key role that local governments can play in promoting climate change adaptation. Several lessons emerge from their experience.

- ◆ **First**, provinces which experience frequent and severe climate hazards are more likely to be aware and responsive to the need for climate change adaptation. Since Albay is already experiencing climate-related disasters, its leadership realizes the importance of building resilience to climate risks. It doesn't take a great leap of imagination for them to see how climate change could make the situation worse. Thus, in prioritizing areas for implementing climate change adaptation programs, focus should be on those areas already experiencing climatic stress. Aside from being more receptive, they also need assistance in many cases to cope with current climatic stresses. By building their resilience through innovation and holistic programming—lessons learnt can be replicated and scaled up.
- ◆ **Second**, local government units at the provincial level (meso level) do have resources to commit to climate change adaptation. In a very short period of time, the Albay local government has mobilized significant financial resources from the public and private sector mainstreaming climate change in the Philippines. An added advantage is that the provincial level has the political clout to ensure action at the local level. Since there relatively few provinces (73 in the Philippines) working with at that level could be the most cost-effective way as opposed to thousands of municipalities and villages. In short, the meso level administrative level (such as a province) could provide the most effective means of mainstreaming climate change.
- ◆ **Third**, “champions” from meso level government units such as Albay province could be key to mainstreaming climate change adaptation in at risk countries. The governor of Albay has a very high awareness of climate change issues vis-à-vis sustainable development. He was willing to commit time and resources to prioritize and address climate change not only in the provincial agenda but also in the national development and policy agenda.
- ◆ **Fourth**, there is opportunity to integrate climate change adaptation in existing disaster risk management (DRM) institutions and programs and this provides an opportunity to build from existing structures and actors to holistically address climate risks.

## Good Practices on DRR

- ◆ Organized Local DCCs and redefined functional roles and responsibilities of the DCC members and task units
- ◆ Established Policy on Operational Control and Protocol
- ◆ Hazard awareness through Community-Based trainings and seminars
- ◆ DRR integration in the Comprehensive Land Use Plan (CLUP)
- ◆ Institutionalization of the Albay PDMO now APSEMO
- ◆ Community-Based Early Warning System, Communication Protocol and Evacuation Procedures
- ◆ Good working relationship between APSEMO, Warning Agencies and the Local Media
- ◆ Established Disaster Operation Center as the hub of action and the center for emergency coordination and communication
- ◆ Cluster Approach on Recovery Program
- ◆ Conduct of “pre calamity work” by evacuating people in high risk areas even at the early stage of an impending hazard event. This practice has met the province's target of **zero casualty** during a recent hazard event.

### Resources:

“The Role of Local Government Units in Mainstreaming Climate Change Adaptation in the Philippines” by RD Lasco, M Rangasa, FB Pulhin, RJ Delfino, World Agroforestry Centre (ICRAF), Laguna, Philippines; Centre for Initiatives and Research on Climate Adaptation (CIRCA) Albay, Philippines

News / Articles from the website of the Albay Provincial Government website at <http://www.albay.gov.ph/>

For more information on Albay, please contact:

**Centre for Initiatives and Research on Climate Adaptation**  
Albay Capitol Annex 2, Legazpi City, Albay, Philippines

**Mr. Manuel “Nong” Rangasa**  
Executive Director, CIRCA  
Phone: (+63-52) 480-3649 / 435-0260  
Fax: (+63-52) 480-3444



Strengthening Climate Resilience

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For more information on SCR, please contact Mr. Atiq Kainan Ahmed, Plan International, Asia Regional Office, email: [atiq.ahmed@plan-international.org](mailto:atiq.ahmed@plan-international.org)

