

Disaster Risk Reduction and Climate Change Adaptation¹

Local Government Experiences from Albay Provincial Government, Philippines

Basic Principle

Disaster risk reduction and climate action are components of the central economic strategy, not the contingency plan.

We have learned ...

- ✓ In the long run, Albay is depended on calamity funds for disaster response and DRR initiatives while drawing on the national government and international aid for extreme calamities.
- ✓ Albay pursues a **zero casualty goal** during disaster and practices **preemptive evacuation** as its principal strategy for disaster response proving successful in three recent cases.
- ✓ Albay is practitioner of climate change adaptation and has integrated DRR and CRR in all its programs. There is a 70% overlap between adaptation and disaster risk reduction in the Albay context.

Disaster & Development lessons (these are things that have worked for us ion Albay)

1. Disaster Recovery and Development

This includes humanitarian resources that can be considered as resources for development. This means also that rehabilitation should be pursued in the context of a development strategy.

2. Building back better, and possibly building back elsewhere? This is a basic tenet.

3. Disaster proofing of development

- a. Disaster risk reduction must be a basic input to the Regional Master Plan
- b. CLUP or zoning policy is key DRR instrument
- c. ECC/EIA is second line of defense
- d. Engineering intervention should be last recourse.

That is: **Disaster preparedness = development preparedness**

Without a disaster, DRR = economic expansion

¹ Much of the above material has been drawn from presentations made by the Albay Provincial Governor Joey Salcedo, and from information available on the various websites of partners to this comprehensive approach to disaster risk reduction in the province.



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Key Elements of Albay DRR Strategy

- ✓ **Risk Reduction:** This includes risk mapping, geostrategic intervention, adjusting the Comprehensive Land Use Plan (CLUP), and Climate change adaptation
- ✓ **Disaster Preparedness:** This requires close work with warning agencies and installing workable community-based warning systems
- ✓ **Disaster Response:** We use an Info board, we have organized preemptive evacuation, and we are prepared to undertake the necessary damage and needs assessment
- ✓ **Relief Operations:** This is undertaken based on needs and a demand-side approach
- ✓ **Recovery:** We use a basic principle of building back better, and using a cluster approach

Resources for Risk Reduction

Risk and resource mapping

- **PHIVOLCS** can provide earthquake mapping and Volcanic Hazard Mapping as well as REDAS training for LGUs , **PAGASA** - flood mapping, **Mines and Geo-Sciences Bureau** - landslide mapping, the **Manila Observatory** for mudflow (Lahar) mapping and the **LGU** for population and resource mapping and the Comprehensive Land Use Plan.

Risk mapping is a common resource to all phases of DRR-risk mitigation, preparedness, damage assessment, response, relief and recovery!!

Investing in disaster risk reduction

Risks can also be reduced by both structural (hard) and non-structural (soft) interventions such as: **Structural** (Geostrategic Interventions, Dike construction, Levees, Slope protection, Roads and Bridges, River control) and **Non-Structural** (Comprehensive Land Use Plan, Environmental protection including Coastal Resource Management).

In Albay, the **Guicadale Business Platform** is also both an economic strategy as much as it is a disaster risk reduction strategy. This includes household relocation and resettlement, a new airport, additional road networks and a new Government Centre, all funded from various sources over the coming years. In short, investments in disaster risk reduction have a positive **economic expansion** impact in times without a disaster, and to reduce losses on times of disaster.

We have also embarked on a comprehensive early warning system with DOST PHIVOLCS, PAGASA, the DCCs, the broadcast media and of course all the way to the communities themselves (see Preparedness below).



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Comprehensive Land Use Plan (CLUP)

This can be one of the most useful exercised for **long-term disaster risk reduction** – to incorporate DRR into the main body of the CLUP for all development sectors. DRR info can inform planning and vice versa.

We have trained 18 municipalities in preparing their CLUPS and this is integrated also at Provincial level. We have found it necessary to carry out soil analyses to provide a firm basis of development planning and to avoid “underlying” risks.

Some basic principles for the CLUPs are:

1. No investment or selective investment in High Risk Zone
2. Maximum Protection in the low to moderate risk zone
3. Safe zone as the site for new development investments (GUICADALE Platform in Albay)

Eventually the CLUP and soils analyses will be integrated into a comprehensive **GIS mapping** when funds are available. This will be an important baseline of information for the Rapid Earthquake Damage Assessment System (REDAS) software in partnership with PHIVOLCS.

Preparedness Needs

Continuous **training and education** is possible one of the most important preparedness needs. This would include for example: Household, Community and LGU preparedness, Updating of Contingency Plans, Skills development for government and volunteers, Warning System Communication Protocol and Evacuation Procedures, Mountain Survival and compass reading, Critical Incidence Stress Debriefing, Community Risk Mapping and Contingency Planning, Education-On-Air with local broadcast media, Conduct of drills and exercises in schools, hospitals, hotels, malls and communities to pre-test the hazard specific contingency plan on volcanic eruption, earthquake typhoon and fire, Review of policies and regulations with LGUs.

We have started the **INFOBOARD** where over 15000 free SMART SIM cards have been issued to officials for the **Disaster and Climate Risk Monitoring** system. It is a SMS broadcast facility for early warning. Already we have undertaken training workshops in 720 barangays.

We have also dedicated energy and time to prepare for **critical response needs** such as evacuation centers, relief supplies, search and rescue retrieval, security, price monitoring of basic and prime commodities, water health sanitation and nutrition needs, and management of the disaster Operations Centre. **Preemptive evacuation** is a big issue in Albay with our active volcanoes.

Climate change adaptation is going to be more and more important to the province and local governments. *“The province has also recently entered to a memorandum of agreement with the Department of Environment and Natural Resources (DENR) for the P2 million joint projects on mangrove plantations and development in hundreds of hectares of swamp areas in various provincial coastlines,”* Salceda said.



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Disaster Risk Assessment is critical to a solid recovery

A risk assessment during the **pre-disaster** phase will establish the “before” situation. This can be done during normal season. It then enables the well-targeted damage assessment (time, manpower and MOOE) and will also determine size and location of the threatened population (area and hazard specific) as well as allowing us to determine critical resource needs (area and hazard specific).

In the immediate Post Disaster Phase damage assessment (often completed within 5 days of the calamity) will allow us to:

1. Determine potential location of problem
2. Determine the magnitude of problem.
3. Determine the immediate priorities

There are protocols to be observed: While PHO secures on-the-ground data and provides basic information on casualties; DOH is the sole source of official source of this data. PEO concentrates on provincial facilities and DPWH on national infrastructure. Apsemo coordinates the aggregation and reconciliation of data on physical damages. PAS relies mainly on LGU submissions and aggregates data for reporting to DA RFU.

Links to additional information include the following:

SCALING UP RESOURCES FOR DISASTER RISK REDUTION: THE PRACTICES OF ALBAY

Key Elements of Albay DRR Strategy. ■ Risk Reduction. ■ Risk Mapping. ■ Geostrategic Intervention. ■ CLUP. ■ Climate change adaptation ... PDF/Adobe Acrobat <http://www.unescap.org/Albay Province DRR CCA Salcedo.pdf>

Local Government Climate Change Adaptation Toolkit

This toolkit is intended to build councils' capacity to make decisions using, local and national data/projections or other climate change data. <http://www.iclei.org/Local Government AdaptationToolkit.pdf>

See ICLEI Local Governments for Sustainability <http://www.iclei.org/index.php?id=800>

See also additional Info Kits on the following relevant topics:

- Info Kit #14 – Mainstreaming for LGUs
- Info Kit #15 – Early Warning Systems for LGUs
- Info Kit #14 – Climate Risk Assessments for LGUs
- Info Kit #14 – Disaster Preparedness for LGUs
- Info Kit #14 – Risk Assessments for LGUs



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