

# **"How to Develop Capacity and Resilience"**

Workshop on "Metaguidelines" for Water and Climate Change Adaptation



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**PAGASA-DOST**

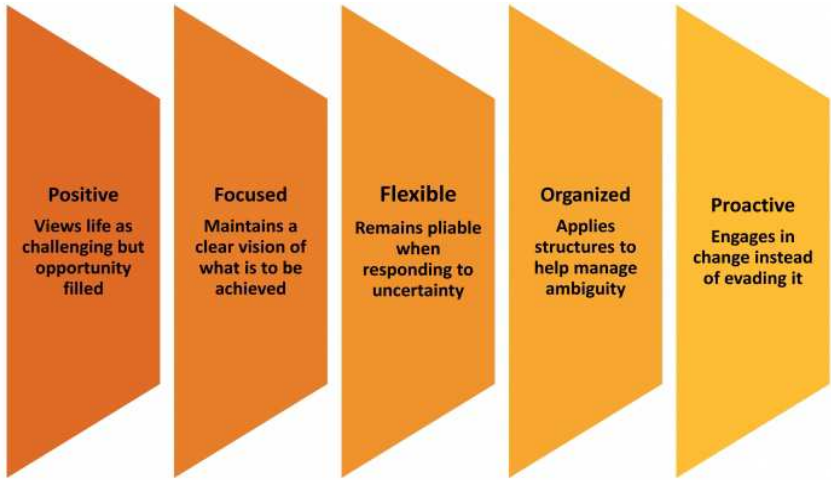
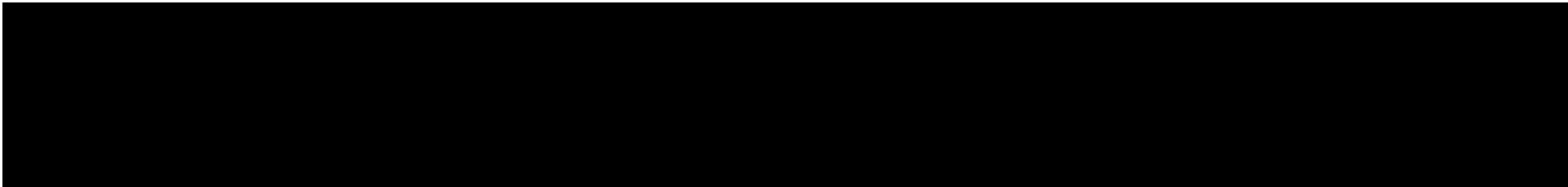
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# RESILIENCE

## What is resilience?

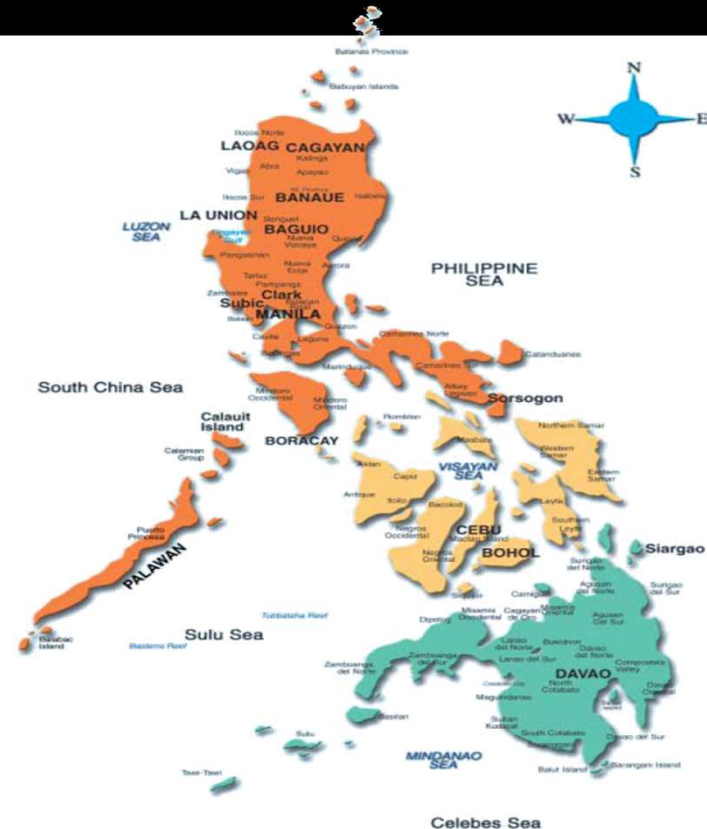
From psychology and sociology, it is described as the human capacity to remain both flexible and strong in the midst of ambiguity, stress, and change. Resilient people are able to remain calm in unpredictable environments, maintain their balance while being adaptive, and spring back quickly after being subjected to the stresses of change.



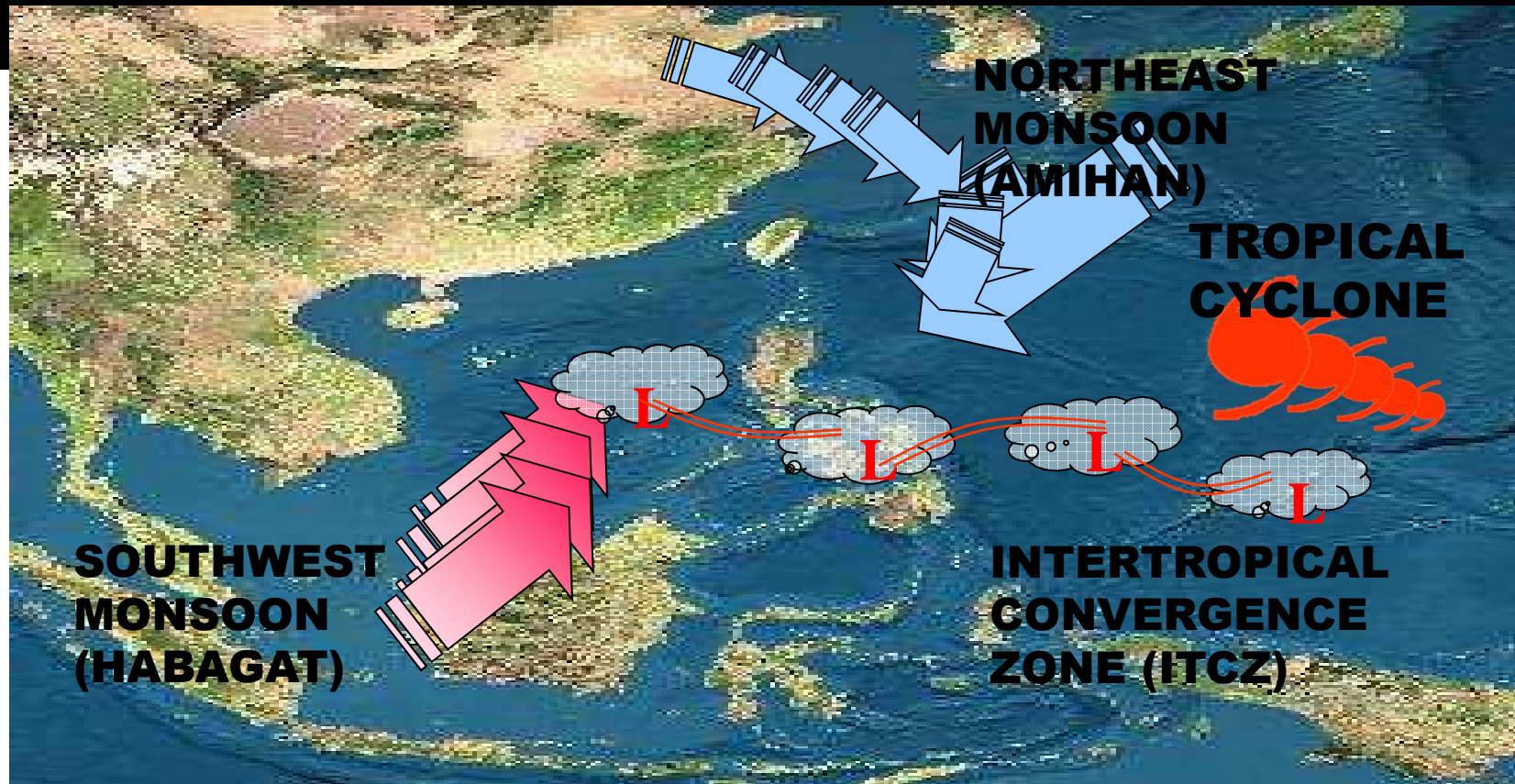


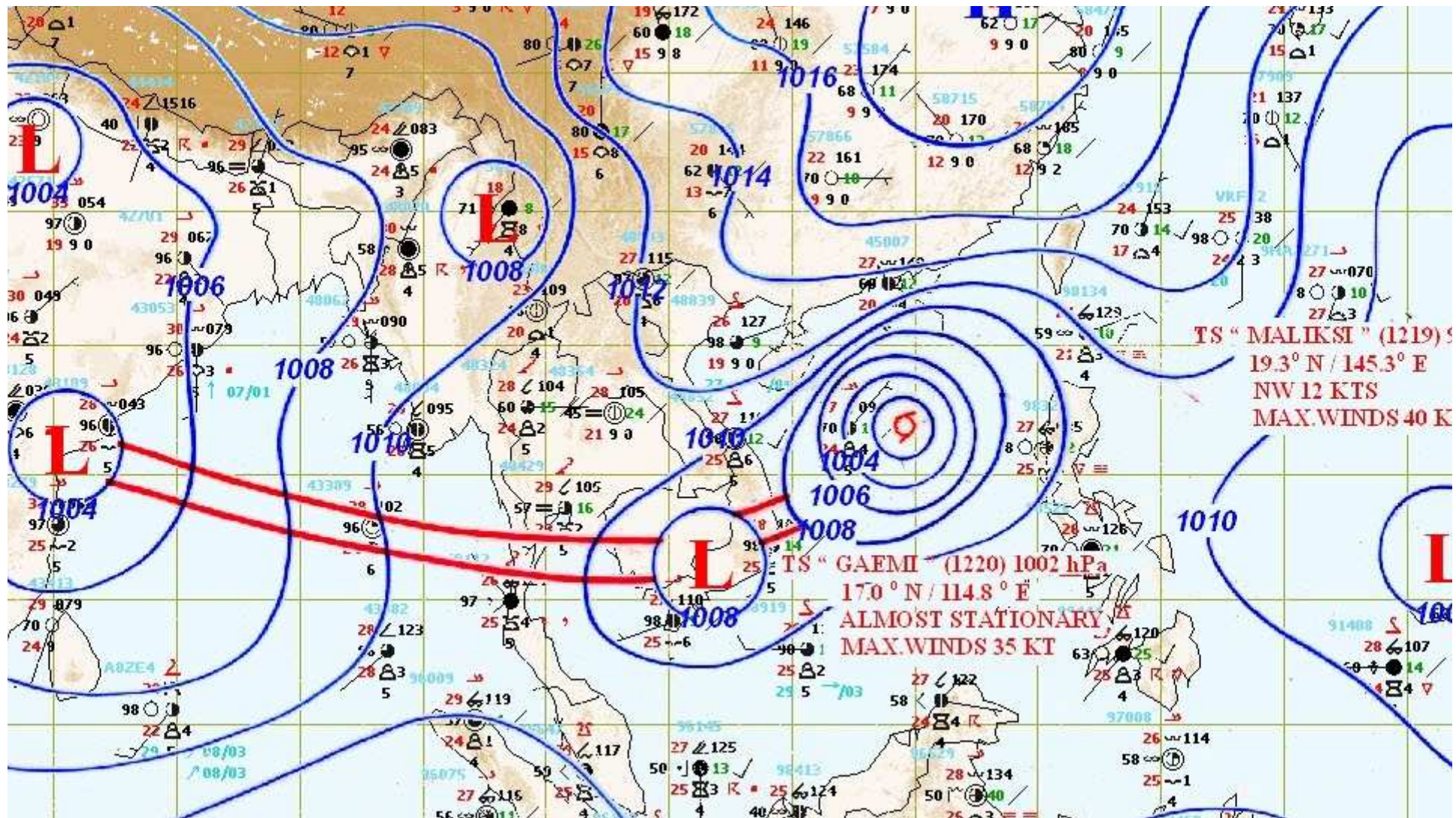
# Philippine geography & topography

- Archipelago, composed of 7,100 islands with low lying areas
- Due to its geographical setting, it is considered as one of the countries of the world most prone to extreme climatic events.
- Among longest coastlines in the world with 32,400 kms (susceptible to storm surges)
- Highly susceptible to sea level rise



# Weather Causing Phenomena in the Philippines





TS "MALIKSI" (1219) S  
 19.3° N / 145.3° E  
 NW 12 KTS  
 MAX. WINDS 40 K

TS "GAEMI" (1220) 1002 hPa  
 17.0° N / 114.8° E  
 ALMOST STATIONARY  
 MAX. WINDS 35 KT

# The Community-Based Concept

BAYANIHAN

community

People-centered

institutions

instrumentations



# Why pursue a CBEWS?

- Local government units (LGU's) empowerment
- Communities protect against floods
- The community and LGUs are in the best position to undertake preparedness measures against floods



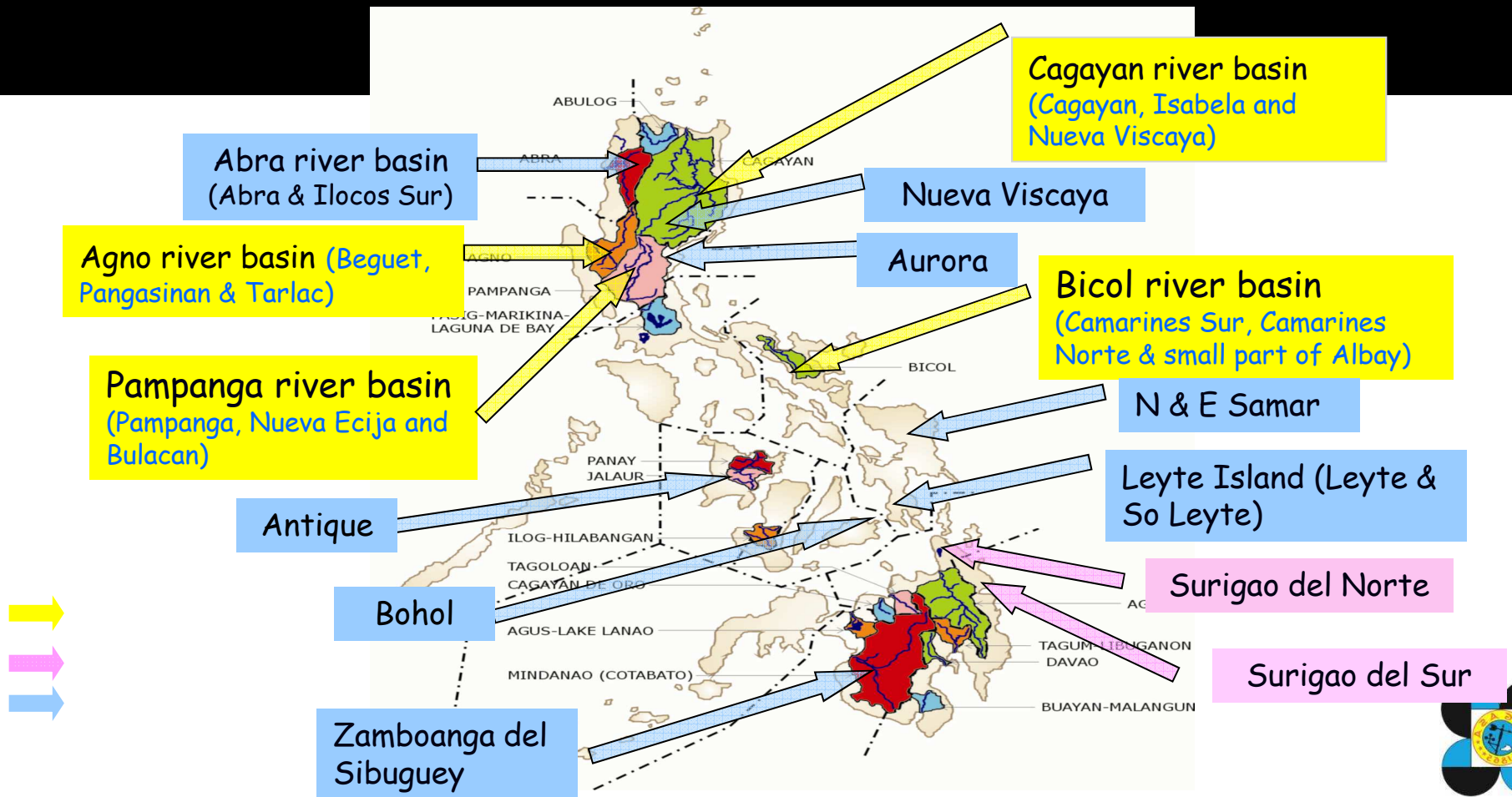


# Why pursue a CBEWS?

- Promotes sense of LGUs' ownership
- Easier to sustain
- PAGASA expands its services to the countryside (reaching/rolling out)

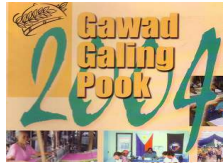


# Areas of CBFEWS



## Municipality of Dumangas, Iloilo

# INTEGRATED DISASTER MANAGEMENT PROGRAM



DUMANGAS IS A third class municipality with 45 barangays, an area of 12,870 hectares, and a population of 59,291 as of 2000. It is prone to two extreme conditions: flooding during rainy seasons and drought during dry season.

and trained community volunteers; procured equipment, tools and materials; constructed infrastructures such as dikes, cut-off channels,



Crop damages from floods cover vast farmlands more than 50% of the municipality and reach up to several million pesos. Damages to properties are mostly individual households. But droughts have longer and more extensive damage. They bring heavy losses to farmers, fishpond operators, and fishermen.

Established a community-based flood and drought forecasting and warning system; and institutionalized a communication system with a repeater VHF radio handset in every barangay.



To address the problems, the government reorganized the Municipal Disaster Coordinating Council (MDCC) in August 1998 and also organized a disaster

coordinating council in every barangay to ensure the participation of

Livelihoods are now more protected and have become gainful. Areas planted to crops (watermelon, mango, mungo beans, fruits and vegetables) increased from 276 hectares in 1998 to 1,642 hectares in 2003. The value of crops harvested in 2003 amounted to P165.6 million.

A lesson learned from the program is that an informed community becomes productive.



# LEGISLATIVE SUPPORT

Ordinance No 2005-01 entitled  
“An Ordinance Providing an Annual  
Appropriation for the Maintenance and other  
Operational Expenses of the Community-  
based Flood and Drought Forecasting and  
Warning System in Dumangas, Iloilo”.



# SUSTAINABILITY

## Sources of Funds:

5% calamity funds (30% Rehabilitation / 70% Mitigation and Preparedness)

20% IRA Development Funds.

General Fund

Financial Assistance from outside sources (Provincial, National & International Partners)

Enactment of ordinance appropriating the amount of P 200,000.00 per annum for the operation of Dumangas Agro Met Station.

Financial and Technical supports from **Asean Disaster Preparedness Council** (ADPC) for the development and sustainability of Agro Met and its services



# Strategy - River Basin Approach



“tracking the sky...helping the country”



# Community-based Flood Early Warning Drills



# Initiatives/Programs by PAGASA during ECEs

- **Early warning system:**

  - Flood Bulletins - telemetered river basins

  - Flood Advisories - non-telemetered river basins

  - Flood Situationer - Metro Manila

  - Seasonal Weather Outlooks and El Nino and La Nina Updates

- Public Information Drive / Seminars/Workshops on meteorological and hydrological phenomena i.e. floods and drought.

- Technical support in terms of installation of instruments, training on operation and maintenance and actual field observation and reporting





## The Way to achieve resilience (Albay Case)

- ❑ Given rising climate risks, MDGs can not be achieved without adaptation.
- ❑ Adaptation is an investment in development.
  - ❑ If climate impacts don't occur, then DRR/CCA builds local capability. *(no regrets)*
  - ❑ If climate disasters occur, adaptation reduces the need for reconstruction and results in zero or less *casualty*.
  - ❑ It reduces risks, hence, increases business returns and enhances socio-economic welfare.



## The Way to achieve resilience (Albay Case)

- ❑ “Adaptation begins with disaster risk management. Mitigation is integral to environment protection. All four - CCA, DRR, EP and climate mitigation- reduce poverty through good governance. “
- ❑ The key is local ownership of MDGs as goal and adaptation as means.
- ❑ It is a feasible platform for local governance.



An *adaptive* and *resilient* community on disaster risks and climate change related hazards becomes a progressive and productive community.



***Impacts of **Climate Change** can be mitigated through proper **disaster risk management and climate change adaptation and innovation**. So let us not worry of the cost of **disaster risk reduction and climate resiliency programs** but let us be concerned of **protecting and uplifting the lives of our people**. (Mayor Ronaldo Golez)***





“tracking the sky . . . helping the country”

***Thank you***

