Green Growth Initiatives in the Philippines:
Demonstration of the ECO-TOWN FRAMEWORK
• Acknowledge that local government units are the frontline agencies in the formulation, planning and implementation of climate change action plans

Republic Act 9729
Climate Change Act of 2009

• Provides funding support for climate change adaptation programs at the local level

National Climate Change Action Plan

• Outlines the specific long program and strategies for adaptation and mitigation, spanning across three political administrations

Republic Act 10174
Peoples Survival Fund
At A Glance: Philippine CC Policy Initiatives

**2007**
- A.O 171 amended with PTFCC Chairmanship transferred from DENR to DOE (A.O. 171-2007)

**2009**
- Climate Change Act of 2009 (RA 9729)

**2010**
- Philippine Strategy on Climate Change Adaptation
- National Framework Strategy on Climate Change
- Cabinet cluster on CC Adaptation and Mitigation

**2011**
- National Climate Change Action Plan

**2012**
- Amendments to the CC Act and the inclusion of the Peoples' Survival Fund (RA 10174)
## Philippine CC Policy Initiatives

**Goal:**
To build the adaptive capacities of women and men in their communities, increase the resilience of vulnerable sectors and natural ecosystems to climate change, and optimize mitigation opportunities towards a gender-responsive and rights-based sustainable development.

<table>
<thead>
<tr>
<th>Year</th>
<th>Initiatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>• A.O. 171 amended with PTFCC Chairmanship transferred from DENR to DOE (A.O. 171-A)</td>
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</table>
Successful transition towards climate-smart development.

Enhanced adaptive capacity of communities, resilience of natural ecosystems, and sustainability of built environment to climate change.

**NCCAP’ S ULTIMATE GOAL**

*Build the adaptive capacities of women and men in their communities, increase the resilience of vulnerable sectors and natural ecosystems to climate change, and optimize mitigation opportunities towards gender-responsive and rights-based sustainable development.*

**Intermediate Outcomes**

- Ecosystem and Environmental Stability
- Human Security
- Climate-Smart Industries and Services
- Sustainable Energy
- Knowledge and Capacity Development

**Ultimate Outcomes**

- Food Security
- Water Sufficiency
- Enhanced adaptive capacity of communities, resilience of natural ecosystems, and sustainability of built environment to climate change.
- Successful transition towards climate-smart development.
NCCAP: Means of Implementation

**Financing**
- GAA, Climate Financing and ODA, Private Sector

**Valuation**
- Natural Resource Accounting, Total Economic Valuation

**Multi-stakeholder Partnerships**
- Mechanism of ensuring inclusiveness and buy-in; Encourage Public-Private Partnership

**Policy and Planning Mainstreaming**
- Capacity Assessment and Development
NCCAP Implementation at the Field Level

Build adaptive capacities of communities and ecosystems.

Ecologically Stable

Economically Resilient

Eco-town
WHAT IS AN ECO-TOWN?

• An eco-town is a planning unit composed of municipalities or a group of municipalities located within and around boundaries of critical key biodiversity areas, which are at high risk to climate change. It will be built around protected areas and key biodiversity areas, using ecosystem based approach that will scale up best practices.

• There are ten (10) municipalities that were identified by CCC for the implementation of the eco-town project. Initially, the project will be demonstrated in the Municipalities of Del Carmen, Pilar San Benito, and San Isidro, Siargao Island, San Vicente, Palawan and Borongan, Llorente, Can-avid, and Guiuan, Province of Eastern Samar.
Project Sites

- Batanes
- Upper Marikina Riverbasin
- Siargao Islands, Surigao del Norte
- San Vicente, Palawan
Eco-town Components

1. Vulnerability Assessment
   - Natural Resource Assessment
     - Socio-ecological profiling
     - Determine the natural resources and ecosystems
     - Identify management regimes
     - Renewable energy potential

2. ENR Accounting
   - Determine how vulnerable the different sectors in relation to the impacts of climate change
   - Sectors include socio-economic, agriculture, coastal and marine, and health
   - Monetary value of goods and services the ecosystems provide
   - Determine the contribution of the ecosystems to local economy
   - Develop menu of options on adaptation and mitigation based on the results of the NRA, VA and ENRA
   - Interim compensation for engaging in sustainable management of resources/use of ecosystem services
   - Livelihood and capacity building
   - Sustainable financing to implement adaptation/mitigation measures
   - PES, PPP, Cost sharing

3. Adaptation Measures
   - Development of climate adaptation support service
   - Rural economy
   - Customized climate adaptation support service and protection work

4. Climate Adaptation Support Service
   - Development of the ecosystems to local economy
   - Interim compensation for engaging in sustainable management
   - Livelihood and capacity building
   - Sustainable financing to implement adaptation/mitigation measures

5. Finance Schemes
   - LCCAP

Conclusion

- A comprehensive approach to climate change adaptation
- Integration of natural resource assessment, vulnerability assessment, and climate adaptation support service
- Sustainable financing and compensation for ecosystem services
- Development of a menu of adaptation measures based on assessment results
Development of the local climate change action plan

- Climate-smart plans (CLUPs)
- Best practices and lessons learned
## Vulnerability Assessment

### Total Land Area (km²)

<table>
<thead>
<tr>
<th>Municipalities</th>
<th>Total land Area (km²)</th>
<th>Affected Areas (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>High</td>
</tr>
<tr>
<td>Del Carmen</td>
<td>123.174</td>
<td>56.56</td>
</tr>
<tr>
<td>Pilar</td>
<td>61.784</td>
<td>45.76</td>
</tr>
<tr>
<td>San Benito</td>
<td>58.671</td>
<td>25.50</td>
</tr>
<tr>
<td>San Isidro</td>
<td>61.871</td>
<td>31.27</td>
</tr>
</tbody>
</table>

### Map: San Benito Flood Hazard Map

#### Legend / Susceptibility
- **Low**
- **Moderate**
- **High**
- Flash Flood
- Barangay Boundary
- Municipal Boundary

#### Methodology
- The map was generated using GIS software to analyze flood risk areas.
- Data was collected from historical flood events and current land use conditions.
- Risk categories were determined based on the potential for flooding and population density.

#### LOCATOR MAP

- Scale: 1:50,000
- Datum: Universal Transverse Mercator (UTM)
- Projection: Clarke 1866
- Vertical Datum: Mean Sea Level

### Acknowledgment

- The authors acknowledge the data provided by the local government units for this study.
- Special thanks to [Government Agency] for support.

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*Image and data source: [Government Agency]*
Natural Resource Assessment

NRA is conducted to determine the natural resources and renewable energy potential of the Ecotown

Outputs:
- Integrated Geographic Information System-Remote Sensing (GIS-RS) and Participatory Resource Mapping (PRM)
- Natural Resource Assessment and Socio-Ecological Profiling
- Renewable Energy Assessment
Natural Resource Assessment

– Main objective
  • To determine the natural resources and renewable energy potential of the eco-town

– Subcomponents
  • Integrated Geographic Information System-Remote Sensing (GIS-RS) and Participatory Resource Mapping (PRM)
  • Natural resource assessment and socio-ecological profiling
  • Renewable energy assessment
Natural Resource Assessment

Integrated GIS-RS and PRM

- Aims to develop resource map(s) using GIS/RS techniques and participatory approaches.
- Participatory resource mapping & FGDs with the 9 LGUs to validate maps
- Consolidated in geo-data base the thematic maps identified as follows: (i) administrative boundary (municipal level), (ii) slope, (iii) land cover, (iv) elevation, (v) soil and (vi) satellite imagery of the areas
Natural Resource Assessment

Renewable Energy Assessment

• Baseline determination of maximum capacities of RE sources in Siargao
• Conducted reconnaissance and field investigations
• RE resources covered include: water (hydro), wind, biomass, solar and geothermal (if feasible)
• Among the resources, Siargao has the potential for microhydro in Socorro, biomass in Del Carmen and wind in Sta. Monica (needs further study)
Natural Resource Assessment

Natural Resource Assessment and Socio-ecological Profiling

• Conducted inventory (land cover, stock) and assessment through characterization and identification of critical issues and future opportunities

• Natural resource assets, existing management regimes, climate change risk areas, potential for ecotourism, and other relevant uses.

• Assessment of the following sectors: (1) forestry and water; (2) agriculture; (3) coastal and fisheries; and (4) urban
Environment and Natural Resources Accounting

- Initial estimate of the contribution of ENR to municipal income
- Develop simple and localized ecosystem accounts relevant to the eco-town that will help local leaders make policy, investment, and climate change adaptation decisions
- Accounts that will be developed are:
  - Forestry and water
  - Agriculture and land use
  - Fisheries
  - Municipal income
  - Environmental waste disposal services (pollution account)
Environment and Natural Resources Accounting

- Secondary data and key informants interview conducted to determine the conventional income and expenditure of each LGU
- Households (HH) survey conducted to determine socio-economic information, economic activities and environmental threats
Rain-induced Landslide

Rain Induced Landslide Hazard Map
Del Carmen, Surigao del Norte
Date Prepared: October 2012
Projection: Universal Transverse Mercator (UTM)
Datum: WGS 1984

Legend:
- None
- Low
- Moderately Low
- Moderate
- Moderately High
- High
- Very High

Location Map

Map showing geographic areas at various risk levels for rain-induced landslides.
Storm Surge
Flood Hazard Map
Del Carmen, Surigao del Norte

Date Prepared: October 2012
Projection: Universal Transverse Mercator (UTM)
Datum: WGS 1984

Location Map

LEGEND
- Municipality
- Barangay
- River
- Flood Hazard
  - Low
  - Moderate
  - High

Flood Hazard Map

- San Benito
- San Isidro
- Baban Lagoon
- San Fernando
- San Jose
- San Jovani
- San Isidro
- San Roque
- New Campo
- Lantocan
- Tubabao
- Tamocan
- Macayan
- Nacoy Camp
- Baclayon
- Pangil
- San Isidro
- Mal-langi
- Gascudon
- Tusung
- San Antonio
- Taboan
- Aitbaan
- San Jose
- San Francis
- Malpassad
- Magatit
- El Carmen
- San Isidro
- Del Carmen
- Lahugan
- Del Carmen
- Del Carmen
Crucial role of capacitating local government and involving them in all the process

Showed the importance of convergence among government, private sector, academe and civil society

Appreciation and linking of science and policy making and implementation

Recognition that climate change is happening and will affect their development

Ecotown Experience

Change in perception of planning – going for long term planning, beyond political terms and boundaries

Strengthened inter-government coordination among local chief executives

Crucial role of capacitating local government and involving them in all the process

Showed the importance of convergence among government, private sector, academe and civil society
Partners in Implementation

- Academe, Private Sector & NGOs
- LGU
- Climate Change Commission
- Communities
- NGAS
MARAMING SALAMAT PO!!