Policy Priorities and Data availability for Ecosystem Accounting in Laguna Lake Basin and Southern Palawan

WAVES

Wealth Accounting and Valuation of Ecosystem Services

Policy Issues

1. Palawan – accounting for land use options
2. Resource/water user fees/pricing
3. Benefits sharing in protected areas
4. IEM (sustainable financing of river basins)
5. Policy evaluation (suspension or continuation of logging ban; incentivize land managers e.g.)
6. Expansion of plantations and encroachment in conservation areas, mining in protected areas; science based policies
7. Reclaim dried up areas in Laguna lake; measure the extent of these dried up areas

Levels of Policy Decisions

Decision Level	Policy Instruments	Remarks
National Government		
• Executive Branch		
Office of the President	Executive Orders	PEENRA, (PES)
Departments	Administrative Orders, Circulars	
• Legislative	Republic Acts	
• Judicial	General Resolutions	
Local Government Units		
• Executive	Executive Orders	
• Legislative	Local Ordinances	

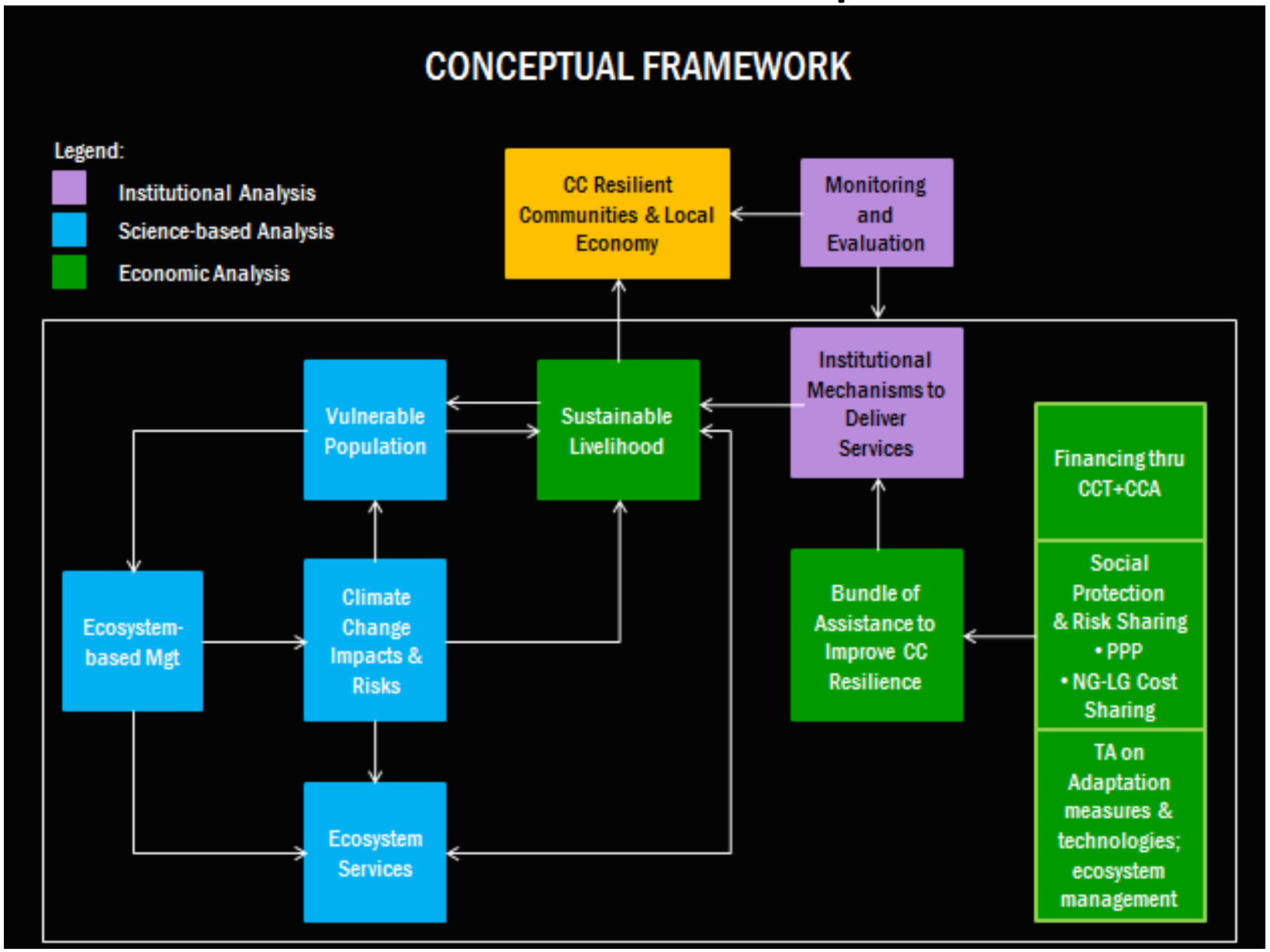
Specific Policy Needs

- Planning by Local Government Units
  - assessment of ecosystems in LGUs will support identification of priority ecosystem services and help inform land use and land use plans
  - Inputs to FLUPs and CLUPs
  - Identification of areas for protection, development or multiple uses

Integrated Ecosystems Management or River Basin Planning

- Integrated ecosystem management approaches
  - understanding of ecosystems and their interrelations with the economy is central to this approach
  - this approach requires the development of environmental statistics using a comprehensive and coherent framework based on the concept of ecosystems and linked to socioeconomics data

Ecotown Concept



Source: REECS presentation for Climate Change Commission

Integrated Programs of National Government Agencies

- National Convergence Initiative
- Disaster Risk Reduction and Management Coordinating Council
  - Identification of natural hazards and damage prediction tools based on ecosystem goods and services accounts
  - Baseline accounts can be basis for assessment of environmental liabilities in cases of anthropogenic damages
- Private Sector Partnerships and Investments in Environment Management
  - Information from the accounts in cost-benefit analysis, multi-criteria analysis and investment analysis

Clean Air, Clean Water and Solid Waste Management Acts

- Support regulatory analysis, including providing information for development of compensation mechanisms and environmental assessment
- Ecosystem accounts would make it possible to evaluate the efficiency of compensation mechanisms with regard to the conservation of ecosystems and to the preservation of ecosystem services at national and regional levels
- Assessment of impacts of development projects.
- Policy Options: (a) avoidance, (b) mitigation, (3) compensation
- Help identify high ecosystem functions and resources of high value

Proposed Steps in Assessing Data Availability

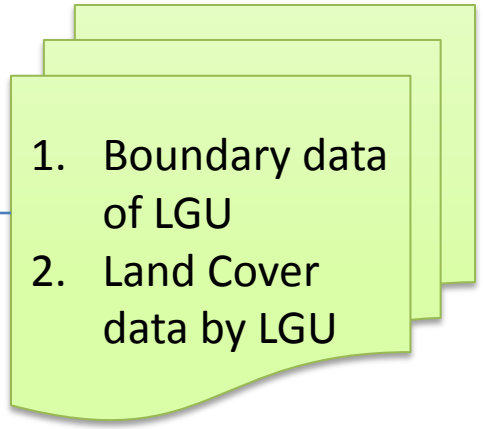
Step 1: Determine the boundary of the analysis and overlay land cover data

Land Cover	Area, hectares
Forest	
Wetlands	
Urban settlements	
Prime agricultural lands	
Etc.	

Digital maps with corresponding attribute tables

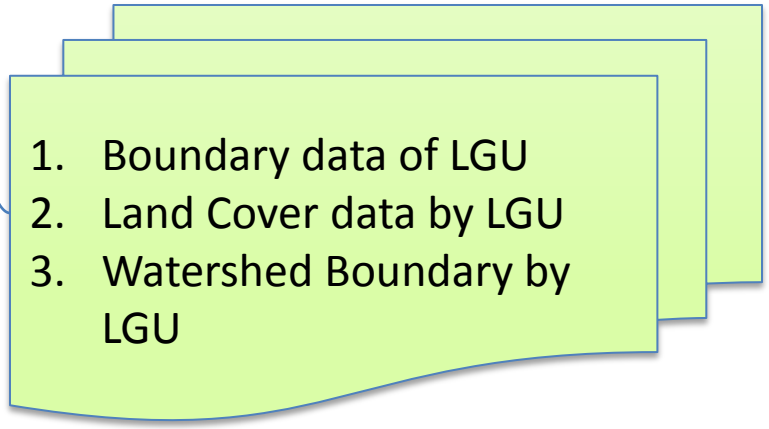
Step 2 – Overlay Boundary, land cover and political boundary

Land Cover	Area		
	LGU1	LGU 2	LGU 3
Forest			
Wetlands			
Urban settlements			
Prime agricultural lands			
Etc.			



Step 3 – Overlay Land cover, political boundary and watershed/sub-watershed

Land Cover	LGU1	LGU 2	LGU 3
Watershed 1			
Forest			
Wetlands			
Urban settlements			
Prime agricultural lands			
Watershed			
Forest			
Wetlands			
Urban settlements			
Prime agricultural lands			



Step 4 – Overlay land cover, political boundary, watershed, and property rights/land allocation

Land Cover	LGU 1				LGU 2			LGU 3		
	Protected Area	Ancestral Domain	Titled lands	Geothermal Reservation						
Watershed 1										
Forest										
Wetlands										
Urban settlements										
Watershed 2										

1. Boundary data of LGU
2. Land Cover data by LGU
3. Watershed Boundary by LGU
4. Boundary of tenured lands, property rights, and land allocation

Step 5 – Overlay land cover, political boundary, watershed, and property rights/land allocation, integrated other GIS layers

Other Datas and Attribute tables

1. Topographic map
2. Hydrology (springs, streams, rivers)
3. Slope, elevation
4. Soil map
5. Soil erosion
6. Coral cover
7. Land classification
8. DENR tenured areas
9. DA-BFAR Fishpond lease agreements
10. Fishpens, fish cages
11. Settlements (including population density
12. Infrastructures (roads, water treatment, canals, etc.)
13. Biological resource assessments
14. Socio-economic information (CBMS or socio-econ profile)

Integration of Information

Administrative, Political, Property Rights Maps

1. Boundary data of LGU
2. Land Cover data by LGU
3. Watershed Boundary by LGU
4. Boundary of tenured lands, property rights, and land allocation

Other Map Data

1. Topographic map
2. Hydrology (springs, streams, rivers)
3. Slope, elevation
4. Soil map
5. Coral cover
6. Etc.

Policy Analysis

1. *Characterization of the Ecosystem*
   - *Structure, composition, and process*
   - *Ecosystem capacity*
   - *Identify key ecosystem services related to policy*
2. *Accounting of ecosystems and ecosystem services*
3. *Policy Options*

   Non-negotiable areas (conservation, hazard areas, prime agricultural lands, fish pen/fish cage zones, etc.)

   *Zoning, Compensation/PES, benefits sharing, PPP, Land use options, e*xpansion of conservation areas, water pricing, financing
4. Policy Dialogue
5. Policy decision
6. Policy instrument
7. Policy Implementation and monitoring

Data Inventory for Southern Palawan

Data Requirements	Concerned Agencies	Availability for the training	
Updated land cover change matrix	FMB	/	
Land Cover maps	NAMRIA	/	
Comprehensive Land Use Plan (CLUP) of 5 LGUs (for land use data)	PCSD and municipalities	To be requested from LGUs by FASPO thru PCSD	
Ancestral Domains Map	NCIP (check NCIP website)	/	
Prime Agricultural Land Map	DA or PPDO	/ to be requested from DA-BSWM	
Fishpond Lease Agreements	BFAR or BMB thru CMMO	To be requested from BFAR by BMB	
PA and KBAs map	BMB	/	
Foreshore Lease Agreements	LMB	To be coordinated by LMB	
Mineral map (e.g. mineral availability, tenement map)	MGB	To be checked	
Geohazard map	MGB	To be checked	
Vulnerability assessment map	ERDB (to be confirmed)	x	
Socioeconomic data	LGUs or PCSD	/	
Coral reef map/data	BMB	To be checked	
Soil Map		To be checked from BSWM and local DA thru PCSD	
Watershed characterization data	FMB		
Water quality data	EMB/ PCSD	To be checked	

Data Inventory for LLDA

Data Requirements	Concerned Agencies	Availability for the training	
Water budget			
Sedimentation rates			
Sources of sedimentation			
Rate of sedimentation			
Hotspots assessment			
Water permits			
Pollution discharges (types?)			
Discharges monitored (by sources)			
Water flow			
Fishpens/fish cages			
Socio-economic proflie			
Industry profile (firms and enterprises)			

1. What data for each ecosystem?
2. Who is the source of the data (supplier)?
3. Who consolidates and process data?
4. Who stores the data?
5. What policy analysis? (Policy analysis tools, modelling, CBA)