Value Chain/Subsector Analysis A Socio-Econ Tool for Conservation

Presented by

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Subsector Analysis (SSA)

- **What it is:** A subsector is the network of firms that supply raw materials or services, transform them, and distribute finished goods and services to a particular consumer market.
- **What SSA does:** SSA evaluates the network of firms in the context of the "environment in which it operates" (natural resources, policy, social, macro-economics, market forces, etc.) to identify opportunities for improving sector dynamics.
- **What SSA can do:** Subsector analysis offers a framework for rapidly evaluating firm dynamics and the prospects for cost-effective interventions and/or interventions that intersect with conservation, health, education and non-economic goals.
- **Similar tools:** SSA, commodity chain, value chain, *filiere analysis*, value stream, and nature, wealth and power analysis are all similar tools. In economic circles these are familiar analyses with slight differences only in major concepts, but terminology can vary for same concepts.

The Name Game

- Different and competing terms for similar concepts
- Lack of agreed upon definitions for terms – Payment for ecosystem services, sustainability, green markets, etc.
- We will not resolve this, instead concentrate on main functions (production, marketing, monitoring) and how to improve to achieve Nature, Wealth and Power goals defined in each context.

How Does Subsector Analysis Work?

- Organizes data and information about individual "entities" within the "larger production/service and distribution systems" in which they operate
- Larger production/service and distribution systems include:
  - Function, participants, technologies (hard and soft), and explicit assumptions on markets

Subsector Key Concepts

- Vertical Supply Chains
- Competition
- Coordination (horizontal and vertical)
- Leverage
- Growing Market

Threats Based Approach and Subsector Analysis

Examples of Threats to Forest Biodiversity

- Illegal Logging
- Charcoal making
- Over exploitation of nontimber forest products
- Overgrazing and livestock expansion
- Bushmeat hunting

Subsector Examples

- Timber and Wood Sector
- Charcoal and stoves subsectors
- Rattan, medicinal and aromatic plants subsectors
- Dairy and meat sectors
- Bushmeat sector

Analytical Procedures

- Step 1: Select a subsector and define
- Step 2: Introduce yourself to subsector
- Step 3: Draw preliminary subsector map
- Step 4: Specify subsector's environment
- Step 5: Refine the subsector map
- Step 6: Quantify overlays of interest
- Step 7: Analyze dynamics
- Steps 8&9: Identify leverage opportunities

Examples from Forest Products Subsectors

Step 1: Select a subsector and define

- For example choose rattan because: 1) threat analysis showed over-harvesting a major threat; 2) many people, including poor forest stewards employed by the sector; 3) good markets, but being compromised by lack of quality rattan
- Establish product boundaries: Rattan sector defined as furniture and handicrafts made from rattan
- Establish geographic boundaries for study (typically bound by markets)

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Step 2: Introduce to subsector

- Complete subsector matrix with small group working on forest landscape/chosen subsector issues
- Do secondary review of literature; may yield conflicting data
- Use experts in the group to gain more information

Subsector Matrix for Essential Oils in Nepal

	Participants													
Functions	Nepal Govt.	Int'l Bodies	Universities	Researchers	Local people	District Trader	City Trader	Indian Wholesaler	Distiller	Dom. PC*	Exporters	Importers	Foreign PC*	*Technologies*
Sales to consumers										x			x	marketing
Blending of oil into consumer product													x	formulas, containers
Sale of oil to PC*												x		market contacts, variety
Sale of oil to export market									x		x		x	market contacts, variety
Blending of oil into consumer product									x	x				formulas, containers
Sale of oil to domestic Indian Market									x	x				market contacts, variety
Distillation of plant to essential oil									x	x			x	Steam distillation
Sale to essential oil distiller							x	x						market contacts, variety
Consolidation of supply/offers variety								x						Storage working capital
Sale to wholesale market							x	x						Storage working capital
Transport to India							x	x						trucks
City level trade							x	x						Horse cart, storage
Transport to city						x	x							Airplane
Payment of forest royalties	x					x								Working capital
District level trade						x								Working capital, storage
Sorting and Cleaning					x	x								Sacks, hand sort
Transport					x	x								Carry, animals
Trade Finance						x								Working capital
Plant Harvesting					x									Hand tools
Managed Regeneration					x									Test plots, rotations
Resource Management	x				x									Plans, monitoring
Research	x	x	x	x										Studies
Policy	x	x												Advocacy

*PC = Personal Care Company

Step 3: Draw preliminary subsector map

- Takes the functions and participants from the matrix exercise and relates them to market channels
- A market channel is the path a service or product takes as they are transformed and sold to a final market

Example of Subsector Mapping

- The handout shows market channels
- Shows value chain for each market channel
- Overlays with number of key participants and economic values are shown

Step 4: Specify subsector's environment

- **Regulations:** extraction permits, taxes, royalties, keep in mind formal and informal regulations
- **Policies:** land tenure, zoning, etc.
- **Macro issues:** tariffs, international treaties, global commodity situation, etc.
- **Natural resources:** biodiversity, sustainable harvests, ecosystem services, etc.
- **Social norms:** cultural, religious, subsistence interactions, etc. with subsector
- **Markets:** specialized certifications, unique produce stories

Step 5: Refine the subsector map

- To refine understanding of subsector flows, clear up ambiguities and uncertainties revealed by preliminary subsector map
- Interview representative participants
- Revise and streamline map

Step 6: Quantify overlays of interest

- Overlays summarize information in an easy to understand form
- Concentrate on orders of magnitude not exact figures
- Overlays of interest could be:
  - Land tenure status of NTFP collectors, percentage of income from subsector, number and gender of persons employed, etc.

Step 7: Analyze dynamics

- This step is vital to move from analysis to action
- Look at what channels are growing most rapidly
- Identify driving forces and constraints responsible
  - Market demand and segmentation, technological change, costs of different functions, risk, barriers to entry, large-firm behavior, input supply, policies

Steps 8 & 9: Identify leverage opportunities

- Identify source of leverage:
  - System nodes
  - Geographic clustering
  - Policies
- Explore opportunities for leveraged interventions

Why the VC/SSA tool for landscape level conservation

- Economic sectors that contribute to threats are often at national and international scales and overlap at the landscape level often considered in conservation
- Governments, who have primary environment enforcement role, operate at landscape scale, but have competing and sometimes contradictory land use policies (SSA takes this into account)
- SSA requires integration of resource, social, policy/governance, and economic issues to assess the sector
- SSA has established history of being used at larger scales (national and regionally)

Scaling up Subsector Interventions to a Landscape Level

Local Level or Site Level Examples

- Work in a district with community forest groups
- Target conservation of forest ecosystem with emphasis on specific species
- Work on economic interventions within a subsector context
- Define and promote local enforcement mechanisms
- Coordinate with other local stakeholders in the community forest context

Landscape Level Examples

- Federate multiple districts of community forest groups
- Target multiple ecosystems and products and services within a landscape
- Aggregate economic producers and work to educate all actors within the subsector context
- Advocate for local and national policies and enforcement mechanisms
- Coordinate with other stakeholders in the ecosystem context (park managers, government lands, etc.)

Conclusions

- Value chain/Subsector analysis is a robust tool with a long track record
- Has been used to integrate natural resource and governance issues along with other development goals
- Can be done in rapid assessment fashion to get contextual overview quickly at planning stages of a project or in greater detail to fine tune project implementation activities
- Once matrix is completed can also assist monitoring – gives concise framework to review periodically and check where subsector dynamics have changed and relate changes to biodiversity threats