Ecosystem-based Business Development (EbBD) Approach for coastal communities
ASSISTING COMMUNITIES & GOVERNMENT TO STRENGTHEN COASTAL MANAGEMENT. TOOLS FOR...

ANALYSING SYSTEMS, PRESSURES, RESOURCES & MODELLING IMPACTS
- SESAMME
- System Simulation Model
- SYSTORY

DEVELOPING BUSINESSES THAT WORK IN HARMONY WITH COASTAL ECOSYSTEMS
- Ecosystem-based Business Development
- Eco-Biz Challenge

ENCOURAGING GOVERNMENT & COMMUNITY TO WORK TOGETHER TO MANAGE COASTAL ECOSYSTEMS
- FishCollab

FOSTERING SUSTAINABLE BEHAVIOURS THROUGH UNDERSTANDING BENEFITS & REMOVING BARRIERS
- My Future, My Oceans

PLANNING FOR HEALTHY REEFS & FISHERIES THROUGH MORE EFFECTIVE MPAs
- Rebuilding Fisheries MPAs toolbox:
  - Policy brief: Healthy Fisheries through marine reserves
  - MPA placement optimization tool
  - MPA size optimization tool
  - Policy brief: Priority reefs for conservation and fisheries replenishment
  - Fish SPACE
  - Policy brief: Reduced pathogenic bacteria through seagrass protection
  - ReefReact
  - Coastal Protection

Gain, understanding, and collaboration to foster sustainable development and environmental stewardship in coastal communities.
The aim of the CCRES business development activity

To forge community-led innovations by generating model frameworks for business development linked to ecosystem services
Demonstrate how coastal communities can contribute to local economies by sustaining and supporting marine Ecosystem Services.

CCRES BD design framework

**Problem Articulation**
- Systems Analysis
- Local system problems
- Marine Spatial Mapping
- Multi-systemic problem flows
- BIOLEWIE
- Economic scenario assessment

**Opportunity Identification**
- New business concepts
- Global Case Studies
- Linking BD to ES
- Constraints Matrix
- Existing business concepts
- Mapping of Local Business Environment

**Opportunity Prioritisation I**
- Internal and External Business and Social Factors
- Value Creation and Capture
- Market Access

**THE TOOL:**
- EbBD (Ecosystem based Business Development)

**Eco-Biz Challenge**
CCRES BD design incorporated

Global and national solutions for supporting the local economy and protecting ecosystems

Outside in.

Local solutions for supporting the local economy and protecting ecosystems

Inside in.
Ecosystem-based Business Development (EbBD) Approach

The use of ecosystem services and biodiversity as part of an overall sustainable development strategy to help support sustainable livelihoods and local economic development.
Ecosystem services – benefits people derive from nature

- Raw materials
- Shoreline protection
- Tourist attraction
- Recreation
- Carbon sequestration
- Biodiversity
- Navigation
- Genetic resources
- Food production
- Aesthetic
- Flood protection
- Water quality
- Micro-climate
- Habitat
- Livelihoods
- Shelter for marine life
EbBD Approach

Local Environmental Challenges

Regional and Global Success Stories

Complementary Industry Sectors

Ecosystem Services

Value Capture

Market Access

Sustainable Livelihood Pathways

Likely Adopters
Step 1

Identify key Environmental and Socio-ecological challenges at specified location
The CCRES project has identified the following ecological and socio-economic challenges on Selayar

- Fish catch decline
- Destructive fishing practices
- Unsustainable supply chains
The CCRES project has identified the following ecological and socio-economic challenges on El Nido

- Mangrove loss
- Water quality
- Fisheries decline
- Food insecurity
Step 2

Identify case studies and examples of initiatives and business models that support local economies and help sustain ecosystem services
Identification process for Selayar for example included

Solutions and initiatives that support ecosystem services in coastal and remote communities

87 examples from 44 countries
Step 3

Likely adopters

Identify individuals or businesses likely to embrace a new opportunity

Likely adopters of business models that allow ecosystems and local economies to mutually reinforce one another

Examples from Selayar:
- Fishermen’s cooperative
- Sunari beach resort
- Coconut producers
A *livelihood* is *sustainable* when it can cope with and recover from the stresses and shocks and maintain or enhance its capabilities and assets both now and in the future without undermining the natural resource base (Chambers & Conway)
Pathways that demonstrate sustainable revenue streams which both protect and enhance natural capital

Examples

- Local managed marine areas (LMMA)
- Community based tourism
- Ecotourism
- Microfinance
- Small scale production
- Waste recycling
- Small scale farming, fishing, or mariculture
- Sustainable commercial fishing
- Aquaculture
- Artisans
Step 5

Identify sectors that have the potential to:
- enhance primary income and support ecosystem based management
Supporting economic development, ecosystem services and community wellbeing

1. Ecosystems Goods and Services

Sustainable and Resilient Ecosystems

Community livelihoods
Resilient local economy

2. Sustainable and Adaptive Management
Ecosystem-based Business Development model for Selayar

Sustainable small scale fisheries

Ecosystems Goods and Services

Sustainable and resilient ecosystems

Community livelihoods
Resilient local economy

Sustainable Adaptive Management

Value added products

Responsible tourism
Complementary sectors

Underpinned by key sustainability principles:
- Environmental
- Economic
- Social

Complementary industry sectors aimed at supporting:
- Coastal ecosystems
- Primary income
- Community wellbeing

Sustainable small scale fisheries
Value-added products
Sustainable tourism
Supporting economic development, ecosystem services, and community wellbeing

**Sustainable Small Scale Fisheries (SSF)**
- Sustainable livelihoods
- Contribution to food security
- Socio-cultural benefits
- Local seafood linked to responsible tourism sector
- Sustainable fishing practices
- Sustainable fish processing
- Links fishing, conservation and tourism
- Helps maintain identities of fishers adding to social cohesion

**Value-added Products**
- to enhance primary income and support local livelihoods through value capture and sustainability
  - Sustainable food production
  - Culture innovation
  - Sustainable livelihoods
  - Local sustainable food

**Responsible Low-Impact Tourism**
- To supplement primary income & increase social value of the sector
  - Strengthening sense of place
  - Sense of ownership and greater protection of natural and cultural assets
  - Supplement primary income
  - Connecting tourists with local culture, food, and livelihoods
  - Support for SSF sector
  - New products and activities
  - Educational experiences

**Environmental Sustainability**
- Safeguarding biodiversity and ecosystem processes and functions that support ecosystem services which humans rely upon

**Social Sustainability**
- Social cohesion, local empowerment, social capital, and community resilience

**Pathways**
- Shortening the supply chain
- Effective promotion and marketing
- Skill development, capacity building, technical production
- Small business enterprise management skills training

**Benefits**
- Development of distinct and differentiated identity to attract visitors
- Reducing waste and pollution
- Awareness raising in host communities of the value of healthy ecosystem services

**Beneficiaries**
- Resort operators
- Support staff
- Dive tour operators
- Boat operators
- Transport (Drivers)
- Restaurants
- Villages (cultural edu-tourism)
- Homestay

**EbBD Model - Selayar**
Things to consider when selecting sectors

Does the livelihood sector....

✓ Enhance primary income
✓ Has a business angle and/or financial viability
✓ Can provide sustainable revenue streams
✓ Offers respect for and encouragement of equitable participation of local community
✓ Can help in the conservation of natural capital and promotion of living cultural heritage
✓ Offers education of visitors about culture and nature
✓ Demonstrates or can integrate good management practices
✓ Support local economic development through diversification of employment
Sustainable small scale (Artisanal) fisheries help enhance primary income

Who are the beneficiaries / actors?

- Fishers
  - Fishermen and their families
  - Fishermen cooperatives
  - Fishermen groups
- Small scale fish processing
- Women’s groups involved in primary processing
- Small to medium enterprise owners
- Community
Sustainable small scale fisheries

Pathways:

• Scientific support (MPA, catch limits)
• Strategic coastal planning
• Community-based implementation and enforcement
• Fisher’s cooperatives
• Improved cold chain and ice production
• Exclusive fishing zones for artisanal fleets, vessel license
• Utilizing local knowledge for sustainable resource management
• Access to sustainable exporters
• Commercially sponsored supply chain management
• Capture and re-investment of wasted value
Sustainable small scale fisheries

Links to other sectors

- Sustainable tourism
  - Local seafood
  - Cultural and ecotourism
- Fish processing and value-added products
- Festivals and events showcasing local seafood
Role of small scale fisheries and healthy ecosystems

Research has shown that artisanal fisheries are the entry points for sustainable management of fish stocks - potential to restore ecosystems and increase global fish catch by an estimated 20% (Worm et al., 2009)
Role of small scale fisheries and healthy communities

- Support sustainable livelihoods
- Contribute to food security
- Socio-cultural benefits
- Sustainable fishing practices
- Sustainable fish processing
- Support conservation and tourism
- Help maintain identities of fishers
Small-scale fishers are part of the solution for healthy marine ecosystems

• Voluntary Guidelines for Securing Sustainable Small-scale Fisheries in the Context of Food Security and Poverty Eradication (the SSF Guidelines)
  http://www.fao.org/3/a-i4356e.pdf

• Community-based natural resource management
Promoting the role of women in artisanal fisheries

A strategy for supporting women is essential to help enable them to develop capacities to integrate in the promotion of artisanal fisheries in the context of MPAs

Key enablers
- Strengthening financial autonomy for women either individually or collectively
- Helping women get involved in the efficient management of artisanal fisheries
Sustainable tourism sector
Responsible low-impact tourism

**Beneficiaries / actors**

- Resort operators
- Hospitality staff
- Dive tour operators
- Boat operators
- Transport (drivers)
- Restaurants
- Village economy (cultural and eco-tourism)
- Homestay owners
Sustainable tourism

Pathways

• Ecotourism
• Edu tourism
• Cultural tourism
• Adventure tourism
• Homestays
• Development of distinct and differentiated destination
• Destination management plan
Sustainable tourism

Opportunities and benefits

• Supplement primary income and increase social value
• Sense of ownership and greater protection of natural and cultural assets
• Strengthen sense of place
• Connecting tourists with local culture, food, and livelihoods
• Support for SSF sector
• New products and activities
• Educational experiences
• Reducing waste and pollution
• Awareness raising in host communities of the value of healthy ecosystem services
Differences between mass tourism and sustainable tourism include scale and attitude towards conservation.

Tourism

Sustainable Tourism

Ecotourism
Adventures
Educational
Cultural

Mass Tourism

Large scale
## Comparison between standard and responsible tourism

<table>
<thead>
<tr>
<th></th>
<th>Mass tourism</th>
<th>Ecotourism</th>
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<tbody>
<tr>
<td><strong>Economic impacts</strong></td>
<td>• A lot of profit kept by the large travel companies</td>
<td>• Creates jobs for local people (e.g. guides, homestays)</td>
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<tr>
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<td>• Creates jobs, boosts local economy</td>
<td>• Diversification of primary incomes</td>
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<td></td>
<td>• Local people not directly employed in tourism can also make money by selling local crafts, food, etc.</td>
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<tr>
<td><strong>Social impacts</strong></td>
<td>• Jobs are seasonal</td>
<td>• Many ecotourism schemes can fund community projects</td>
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<td></td>
<td>• Traffic congestion</td>
<td>• Respect for local community</td>
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<td></td>
<td>• Cultural inconveniences</td>
<td></td>
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<tr>
<td></td>
<td>• Behaviour of some tourists</td>
<td></td>
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<tr>
<td><strong>Environmental impacts</strong></td>
<td>• Pollution</td>
<td>• Conservation focused</td>
</tr>
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<td></td>
<td>• Land clearing for hotels</td>
<td>• Minimal waste</td>
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<td></td>
<td>• Sanitation, wastewater</td>
<td>• Local people are encouraged to conserve the environment</td>
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<td>• Destruction of local wild life</td>
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<td></td>
<td>• Damage to coral reefs</td>
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What is Responsible Tourism?

Travel that minimizes negative social, economic and environmental impacts

- is culturally sensitive, encourages respect between tourists and hosts, and builds local pride and confidence
- generates greater economic benefits for local people and enhances the well-being of host communities
- improves working conditions and access and involves local people in decisions
- makes positive contributions to the conservation of natural and cultural heritage embracing diversity
- provides more enjoyable experiences for tourists through more meaningful connections with local people, and a greater understanding of local cultural, social and environmental issues

Cape Town Declaration (2002)
Planning development of local resources in a way that will be sustainable in the long term.

Sustainable tourism

Ecotourism
Ecotourism is one of the most effective activities which can contribute to conservation and local economic development.

Encouraging local residents to conserve historical, natural, and cultural sites as active custodians of their heritage.
Livelihood diversification for fishers and farmers

In addition to primary fishing/farming activities, fishers and farmers can choose to gain additional income through complementary tourism packages and educational experiences:

- Wildlife tours
- Sea angling
- Accommodation
- Local seafood
- Knowledge, coastal or rural heritage
- Conservation tourism
Protecting marine ecosystems through tourism

Helping marine ecosystems also helps the people who benefit from them

- Ecotourism (specifically diving) within marine reserves can bring more than 20 times higher revenue to fishermen than unrestricted fishing

- Restoring marine ecosystems can boost the local economy through ecotourism
Developing a strong sense of place and destination image by supporting ecosystem services

• Sense of place and cultural innovation within the community

• Increasing visibility of the destination

Some examples:
  – Seafood or farming festivals
  – Restoring ecosystems (such as mangroves)
  – Cultural excursions
  – Volunteer trips
Destination Management Plan
(vision and criteria)

Local employment, entrepreneurship and capacity-building

Some things to consider:
- transportation
- resources
- culture
- reputation
- waste management
- sustainable food supply
- infrastructure
- water
- DMP committee
Value-added products

Creating and capturing more value through sustainability and business skills

Beneficiaries / actors
Farmers, producers (e.g. coconut, cashew, nutmeg, clove, vanilla, coffee, seaweed)
Food processing sector
Value-added products

**Pathways**

- Effective promotion and marketing
- Skill development
- Capacity building
- Technical production
- Small business enterprise management skills training
- Women's groups
Value-added products

Opportunities and benefits

• Sustainable food production
• Cultural innovation
• Sustainable markets
• Local sustainable food
• Small business enterprise skills
Step 6
Value capture
Capturing the value you create

Value created by producer

Value captured

Costs
Middleman
Aggregator

=
Typical small scale fisheries supply chain

Capturing more value for the fishermen

- Management improvements
- Infrastructure improvements
- Equity improvements, particularly in regards to the middlemen
**Unsustainable supply chains: contributing factors**

- Minimal access to markets
  - (for many small-scale fishermen illegal export markets are often easier to access than the legal ones)
- Lack of cold chain integrity
  - (limited access to cold storage)
- Lack of capacity building initiatives
- Opportunistic collectors, aggregators and predatory middlemen
- Lack of skill training and access to information
- Poor participation in local governance
Loss through the value chain example - Thailand
Shorter supply chain
best case scenario

Fee paid by processor

Collector

Processor/ exporter

Export customer
Steps towards value creation across the supply chain

- Streamlining – removing extra steps
- Direct access to market information
- Working with sustainable exporters
- Minimizing over fishing / over harvesting
- Upgrading quality – cold storage, paid for grade schemes
- Finding a solution to fish / product spoils in route to markets
- Traceability – vessel tracking systems
- Stewardship – community surveillance and enforcement
- Access to capital – microfinance, sponsorship
Value-added products

Scalability and shortening the supply chain
Value adding

Value creation (amount of value added)

Margin

Sales revenue

Cost of production

Value adding

[Diagram showing the relationship between value creation and margin, with lines for revenue and cost of production meeting at 'Margin']
Example:

90% of cashews grown by Indonesia’s farmers are exported before processing

Most of the value in cashews can result from processing
Value adding cashews

Increasing market price per cashew

Margin

Cost of production

Amount of value added
Cashew Nut Processing

Quality Control Process

Cleaning, Roasting Cooling

Shelling, Drying, Peeling

Grading and Packing

Quality Processing stages
- Sun drying
- Storage

Before Processing
- Moisture test
- Nut Count test
- Nut-Out Turn

The steps
- Cleaning
- Roasting
- Cooling

Hygiene Practices
- Shelling/Cutting
- Drying
- Peeling

Grading Specified
- Size
- Shape
- Color
- Count
- Vacuum packing
Value adding coconuts
Virgin coconut oil processing technologies – an easy first step into VCO

1. Fresh kernel
2. Grating
3. Drying 10%–12% moisture content
4. Manual pressing
5. Coconut meal
6. White oil with feet
7. Settling and low temperature oil drying
8. VCO
Value adding fish

Sales revenue

Cost of production

Margin

Amount of value added
Step 7
Market access
Finding opportunities

- Selling to the right customers
- Direct sales
- Certification
- Fair trade
- Quality, including hygiene
- Licensing
- Sustainable packaging
Making your product stand out from the crowd

• Branding and marketing
• Different grades/products for different markets
• Getting more value from existing markets, while building new ones
• Quality control
• Working with others to establish standards
Quality requirements differ substantially between local, regional and international markets

Understanding your markets and market segments
Steps towards accessing new markets

- Effective promotion and marketing
- Skill development
- Hygiene, quality control
- Capacity building
- Technical production, processing
- Sustainable packaging
- Small business enterprise management skills
Packaging and branding
Whoever owns the brand wins the value

**Brands** distinguish your product
It is an immediate means of gaining power in your value chain and adding value to your product
Collective brands can have much more impact

Using geographical indications

Products associated to a particular region (for instance, South Sulawesi or preferably Selayar)
Geographical Indications (GIs)

- Geographical Indications (GIs) are place names or words used to identify products that come from specific geographical areas, which have special quality, characteristics and reputation that are directly linked to their origin, due to natural factors as well as traditional production practices.

- GIs have the potential to create an economic force for the remote regions, contributing to job creation, increasing the incomes of farmers and producers and contributing to GDP, as well as to the social strength of communities.

Trademarks

- A trademark is a sign capable of distinguishing the goods or services of one enterprise from those of other enterprises. Trademarks are protected by intellectual property rights.

- Trademarks can be registered, but don’t have to be. It is important to develop a distinct logo that doesn’t look like another existing logo.
Management Design Techniques and Quality Control

Using basic metrics for grading product

✓ Having a grading system for products supports quality by ensuring the size and look of the product is consistent

✓ Consumers don’t like surprises, grading information on packaging gives clarity to consumers

✓ It also shows that the production process is established on a commercial footing, which is a further indicator of quality and consistency
Different grades for different products and markets

High grade cashews

High value uses for other grades of cashew
Different microfinance models

**Microfinance Delivery Model**

- **Self Help Groups**
  - Home grown, cooperative
  - Savings based / led
  - Meeting diverse needs
  - Promoted by NABARD, PSU Banks, NGOs
  - Performance – mixed

- **MFI/Grameen Replica**
  - Group Lending and Regimented
  - Focused on self-sufficiency
  - NGO-MFI and NBFC-MFI
  - Pace of growth - cause for concern

- **Grameen II**
  - Individual lending
  - NBFC-MFI
  - Progressive Loan focused on enterprise
  - Future of Microfinance

- **Wholesome Microfinance Services**
  - Regulation
  - Specialized activities
  - Cost is major factor
  - Distant dream

**Legal Forms of MFIs**

- NGO MFIs (Societies Registration Act, 1860 or Provincial Acts and/or Indian Trust Act, 1882)
- Non-profit Companies (Section 25 of the Companies Act, 1956)
- Financial Corporations - Specialized entities focusing on specific segments like SC/ST, Minorities
- Mutually Aided Credit Society (MACS) - community owned & popular in Andhra Pradesh
- Cooperative MFIs (Cooperative Societies Acts of the State & Central Governments)
- Non-Banking Financial Companies (NBFCs) (Indian Companies Act, 1956, RBI Act, 1934)
Market access for small-scale fisheries
attracting sustainable commercial exporters
Moving towards integrated small-scale fisheries management

- Transparent Traceability
- Reliable data Tracking units
- Exclusive Fishing Zones
- Government supported
- Commercially Sponsored Supply Chain Management
- Community-based Implementation and Enforcement
- Cooperative based management

- Cold chain integrity
- Mini-processing
- Ice production
- Fishing gear
- Education

- Fully-traceable Seafood Exporters
  - Buy direct
  - Pay for Grade
  - Reinvest in the Supply chain
  - Market Access
Traceability is the new normal

Why do we need traceability?

**Informational demands:** Limit and target reference points, by-catch, food safety, IUU, provenance, benefit allocation and conservation burden, employment and food security

**Challenges**
Varying levels of availability, transparency and literacy
Indonesia/information poor ... fish rich?
Private sector starting to face barriers to export markets (market demand is increasing)
Sustainable seafood is the future

Three billion people depend on seafood for their survival, and hundreds of millions depend on the oceans for their livelihood.

Consumers demand for sustainable seafood is increasing in larger markets, (especially in Europe, US, Australia and New Zealand)

- The number of programs to certify and rate the sustainability of seafood is growing rapidly
- Responsible practices are now a viable and necessary part of the industry
Towards ecologically and economically sustainable coastal fisheries

**FISH FOREVER: THE ELEMENTS OF SUCCESS**

- Community Support
- Fishery Management
- Links to Markets
- Fisheries Policy
- Exclusive Access Privileges
- Fish Recovery Zones
- Monitoring & Evaluation
- Local Enforcement System

Source: [www.fishforever.org](http://www.fishforever.org)
Getting ready - identifying market access points
information needed to attract sustainable exporters

- Supply chain map
  - What does it look like
- Landing history
  - How much fish, when, and what size
- Infrastructure map
  - How is the fish handled
- Vessel ownership vs fishers breakdown
  - Who makes the decisions
- Existing fisher organizations
  - Coops and informal rules
Healthy ecosystems are personal savings accounts for communities

**EbBD** approach increases the local capacity for knowledge and business skills and helps support the local economy and ecosystems services
Thank you