Embracing the Value Chain Framework for Post-Disaster Livelihood Interventions: The Milkfish Industry in a Haiyan-affected Area in Leyte, Philippines

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Haiyan wind speed: 300 km/hr with surges over 4 meters

Impact of Haiyan:
16 m people affected
4.1 m displaced
1.1 m houses damaged
More than 6,300 deaths
85.64% of Leyte fishers affected
(15,913 registered fishers)
Objectives

- To determine the shared experiences of women processors of softbone bangus (milkfish) in Barangay Sta. Cruz, Tanauan Leyte regarding building back better after Haiyan

- To describe the value chain upgrading strategy of the small-scale milkfish industry in the locale

**Eastern Visayas (Leyte & Samar islands)**

**TANAUAN** – 2nd class municipality with 6 coastal barangays

**STA. CRUZ** – Smallest coastal barangay

**Pre-Haiyan scenario: Eastern Visayas, 2012**
- Poverty rates = 45.2%
- Poverty incidence among women = 37.4%
- Highest hunger incidence = 14.5%
- Second highest in child mortality

**Post-Haiyan scenario**
- Poverty rates = 54.9%
- Drop in fishery production = 14%
  - aquaculture = 10.8%
  - Municipal = 10.2%
  - Commercial = 27.9%
- >500 fish cages destroyed
Post-Haiyan Recovery Road Map

- December 2013: Reconstruction Assistance on Yolanda (RAY) – Build Back Better, to serve as basis for government interventions

- October 2014: Comprehensive Rehabilitation and Recovery Plan (CRRP) with total funding requirement of US$4B
  - Leyte requirement for livelihood = PhP14.57M (US$0.3M)

Post Disaster Needs Assessment (Bureau of Fisheries and Aquatic Resources)

PROGRAMS IDENTIFIED
- rehabilitation of fish sanctuaries and fish cage operation
- restoration of environment-friendly mud crab culture livelihood
- repair of boats and/or provision of new ones
- fishing gear and post-harvest facilities distribution
- product development and marketing assistance
- Insurance and credit facilitation
- basic start-up materials and structure for milkfish (locally called, bangus), tilapia, oyster and seaweed farming
**Assistance to Brgy Sta. Cruz**

- provision of basic start-up materials and structure (fishpens) for milkfish culture in cages
- provision of fingerlings for fish cage operation
- rehabilitation of community-based multi-species hatcheries
- stock enhancement activities

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**Ms Menchie Maca**
President, Sta. Cruz Women Fisherfolk Association

- represents the group in sectoral meetings called by government and NGOs
- makes business calls to retail stores
- ensures that any new information she gets is shared with the other members of the association
- leads in the planning for the operation of the softbone bangus business
Operational Plan: Sta. Cruz Softbone Bangus Business
Managed by the Sta. Cruz Women Fisherfolk Association

**CURRENT STATUS**
- 700kg/year product sale to barangay and nearby towns
- 500kg/year product sale to barangay and nearby towns
- 4,680kg/year raw material fish from the barangay fish prost
- 3,600kg/year raw material fish from the market

**TRANSITION** (DEC 2016) with technical support from FIC/DOST
- Temporary production hut
- License To Operate (LTO)
- Minimum equipment
- Association formed within a year
- No division of labor in management
- Procure fish from market
- Barangay and nearby sales

**FUTURE PLAN** with Permanent Processing Building
- 2,625kg/year product sales to 5 contracted outlets
- 5,200kg/year product sale with 6-7 contracted outlets in regions

**Operational Details**
- 3.680 kg/year raw material fish from the barangay fish pens at P110/kg
- 4.680 kg/year raw material fish from the market at P150/kg
- 0.500 kg/year raw material fish from the market at P120-150/kg
- Labor wage P95/day
Start-up scenario: 5 months after Haiyan
(women’s houses still unrepaired; rescue and relief phase)

- 2 pressure cookers of 40 liters capacity each
- 1 Refrigerator
- 1 Vacuum sealer
- Bangus and ingredients all came from outside the municipality
- No license from the Food and Drug Administration
- All sales on cash basis
- 85% of production was sold within the municipality
- Production = 700kg on the 1st year → required 2 to 3 Styrofoam boxes of fresh bangus at 30kg/box
- Women got $0.21 incentive per piece of softbone bangus sold
- Women workers were volunteers; with free meals and drinks

Transition stage: 1.5 years after Haiyan
(some women’s houses still unrepaired; recovery phase)

- 4 pressure cookers of 40 liters capacity each
- 2 Refrigerators
- 2 Vacuum sealers
- 2 deep freezers
- Bangus were produced by the Sta Cruz Fishpen Operators Association
- Sales were on cash, credit and consignment basis
- Production increased by 600%
- Management incentives were paid; 7 women-processors per day were paid
- Dividends distributed at the end of the year
- Product name was registered; with proper labelling and nutritional analysis
- Filing for trademark and patent started (assisted by DOST, DTI, and academe)
Future Plans

- to process softbone *bangus* regularly for 5 days a week with an input of 30 kg of milkfish per day
- male fishpen operators in the village will be invited to become co-investors in the processing business
- Cash, credit and consignment sales will be continued but to a larger market
- contracted outlets linked and a possible export to a partner in Japan
- management and processing incentives can be increased to standard rates in the market, and to more women workers
- More women entrepreneurs are developed

Upgrading the Milkfish Value Chain

- Value Chain Analysis made the stakeholders realize the importance of bringing all the actors for consultation, validation, planning, and moving forward together

- Workshops were conducted to:
  - determine the status of the milkfish industry
  - identify the strengths and weaknesses of the value chain
  - plan corresponding interventions

- Requires a lot of coordination, cooperation, and communication among all sectors.
Value Chain is …

- a sequence of related business activities (functions) from the provision of specific inputs for a particular product to primary production, processing, marketing & up to the final sale to consumers.

- the set of enterprises (operators) performing these functions linking and coordinating producers, processors, traders and distributors of a particular product.
### Softbone Bangus Value Chain: Opportunities and Constraints

#### Functions

**Input Provision**
- Potential for a hatchery business
- Available insurance coverage
- Full support from government agencies: BFAR, DOST, DTI

**Production**
- Fish farmers are interested to operate fishpens
- Assistance from international organizations

**Processing**
- Organized processors can produce volume required by buyers
- The recipe is unique

**Trading**
- Softbone bangus is increasingly an item for gifts or pasalubong
- Softbone bangus is part of restaurant menu

**Consumption**
- Softbone bangus suits the taste of the locals
- Presence of technical and financial support

#### Opportunities

- Potential market in Japanese households
- Softbone bangus is increasingly an item for gifts or pasalubong
- Softbone bangus is part of restaurant menu
- Full support from government agencies: BFAR, DOST, DTI
- Available insurance coverage
- Potential for a hatchery business
- Presence of technical and financial support
- Softbone bangus can be built up as “brand product”
- Organized processors can produce volume required by buyers
- The recipe is unique
- Assistance from international organizations

#### Constraints

- Tastes vary; low quality control
- Competition from close substitutes
- No certificate of product registration from the government
- Low level of trust among members in the association
- Low processing and/or management incentives
- Difficulty in accessing loans for operations
- Low survival rate of fries
- High cost of transporting fingerlings
- High cost of feeds

- Softbone bangus is not yet well-known as a product
- Insufficient marketing channels
- Limited number of contract retailers
- Present packaging does not give an idea about the product
- Commercial loans require collaterals
- Oversupply of bangus from non-Haiyan areas
- Weather conditions and high incidence of typhoons
- Insufficient marketing channels
Milkfish Value Chain Upgrading Action Plan

VALUE CHAIN FUNCTIONS

- Input Provision
  - develop local hatcheries for fingerling production
- Production
  - improve access to finance, and human resource development
- Processing
  - improve the quality of the product (e.g. shelf life)
- Trading
  - Advocacy/lobby for the inclusion of fish pen operations for insurance coverage
- Consumption
  - Good and updated sex-disaggregated database
  - Access to markets thru selling missions, joining product fares
  - social media to improve marketing channels
  - effective promotions, labelling, packaging and market penetration
  - improve the skills of the women processors
  - Obtain requirements of various buyers
  - Regular production
  - Advocacy/lobby for the inclusion of fish pen operations for insurance coverage
  - Low cost of production inputs

VC Upgrading Strategies: Roles of Enablers

(a) human resource development through coaching, values orientation, and the conduct of organizational and entrepreneurial trainings;
(b) information dissemination through information networking using market info databases;
(c) conduct of updated market research on softbone bangus;
(d) wider insurance coverage to fishers’ enterprises in the value chain;
(e) policy creation and enforcement through ordinances and other regulatory requirements;
(f) access to finance particularly loans without collaterals; and
(g) investment promotion, and market matching
Lessons Learned

- Enhanced VC governance (for economies of scale)
- Identification of lead enterprises/lead actors who will ensure that industry standards are followed, and industry practices are continually being upgraded
- Draw the VC monitoring tools on how success will be measured in quantifiable terms
- Well-planned exit program of disaster responders

A chain is only as strong as its weakest link …

Salamat at Mabuhay!

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