CASE STUDY PHILIPPINES

Lessons in Coastal Community Business Models

ABALONE & SEAWEED FARMING SIARGAO ISLAND

East Asian Seas Congress
Investing in Blue Economy for Conservation and Impact
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Siargao Island | Philippines

Philippine's Climate Change Adaptation Project

PHILCAPP

Background of Study

- Community-based cooperative on Siargao Island (BACAMA)
- Active in fishing mainly, side activity of abalone ranching
- Plan for an abalone hatchery as basis for abalone farming

Objectives of Study

- Structuring of cooperative's business model
- Analysis of technical and economic feasibility
- Determination of key parameters of viability
- Business and financial planning
- Lessons learned for knowledge management

Overview of Supply and Value Chain

CURRENT STATUS ABALONE RANCHING BY COOPERATIVE

Wild Collection < 2 Inch

> 2 Inch

Sea Ranching

Pre-Processing > 2 Inch [Whole Round]

> 20 g [C G&G]

Local Trader

Final Processing & Export

Collectors (Fishermen, Women, Children)

Collect Abalone in the wild and sell to BACAMA

BACAMA (Cooperative Members)

Buy juvenile Abalone (< 2 inch) for sea ranching
Ranch Abalone to minimum market size (> 2 inch)
Process all Abalone into gilled & gutted, cooked product (C G&G)
Sell pre-processed products to local trader in Surigao City

Trading Companies (Surigao City)

Buys pre-processed Abalone (C G&G) from fishermen / cooperatives and sells to processing company (trading only!)

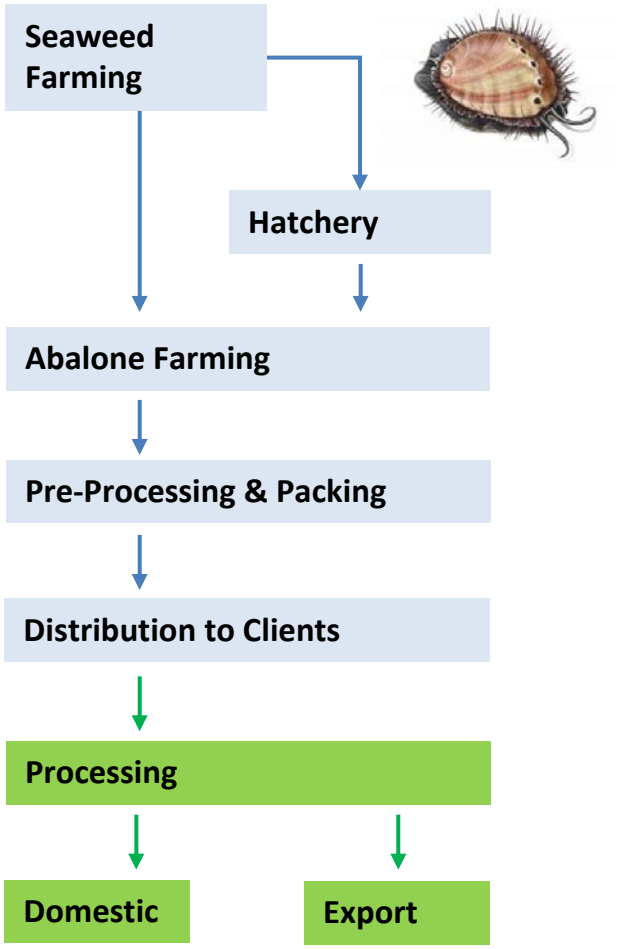
Processing Companies (Philippines)

Buys pre-processed Abalone from Traders and process into final frozen products for export or domestic market

SUPPLY CHAIN

Overview of Supply and Value Chain

INTEGRATED FARMING MODELL FOR COOPERATIVE



Feasibility Analysis and Business Viability Modelling

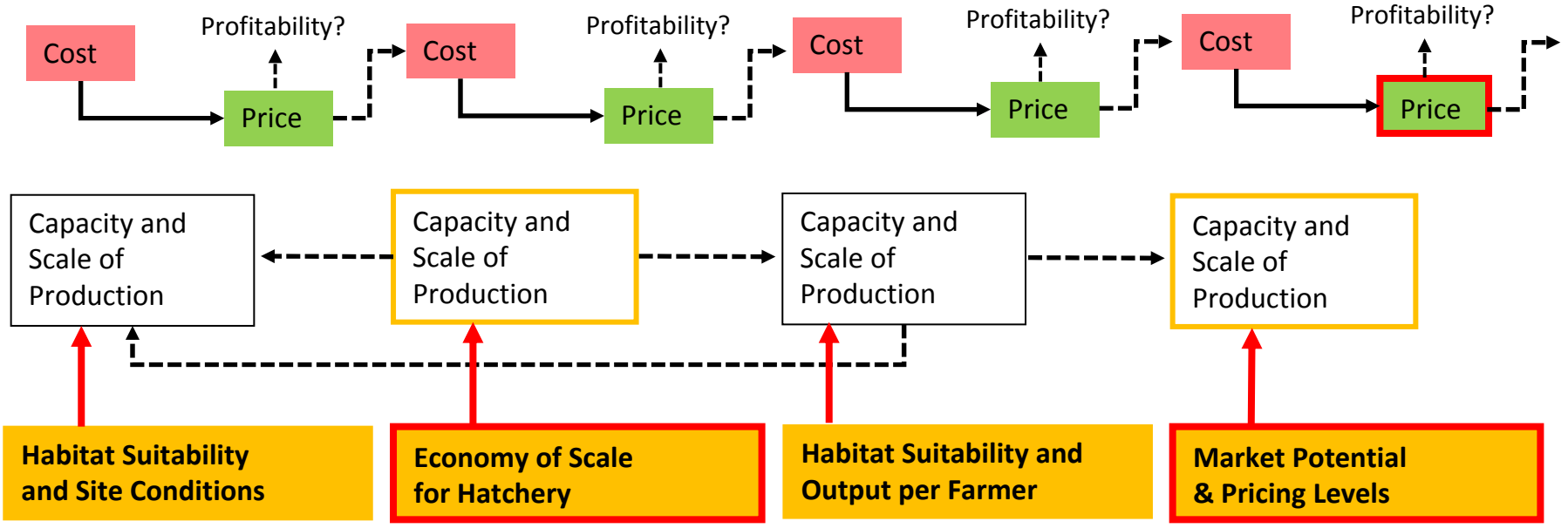
KEY QUESTIONS AND PARAMETERS OF CONCERN

Seaweed Farming
-Species?
-Farming Systems?
-Farming Capacity?
-Work Effort required?
-Performance?
-Cost?
-Pricing and Profits?

Abalone Hatchery
-Capacity?
-Systems?
-Mortalities?
-Personnel?
-Economy of Scale?
-Cost?
-Pricing and Profits?

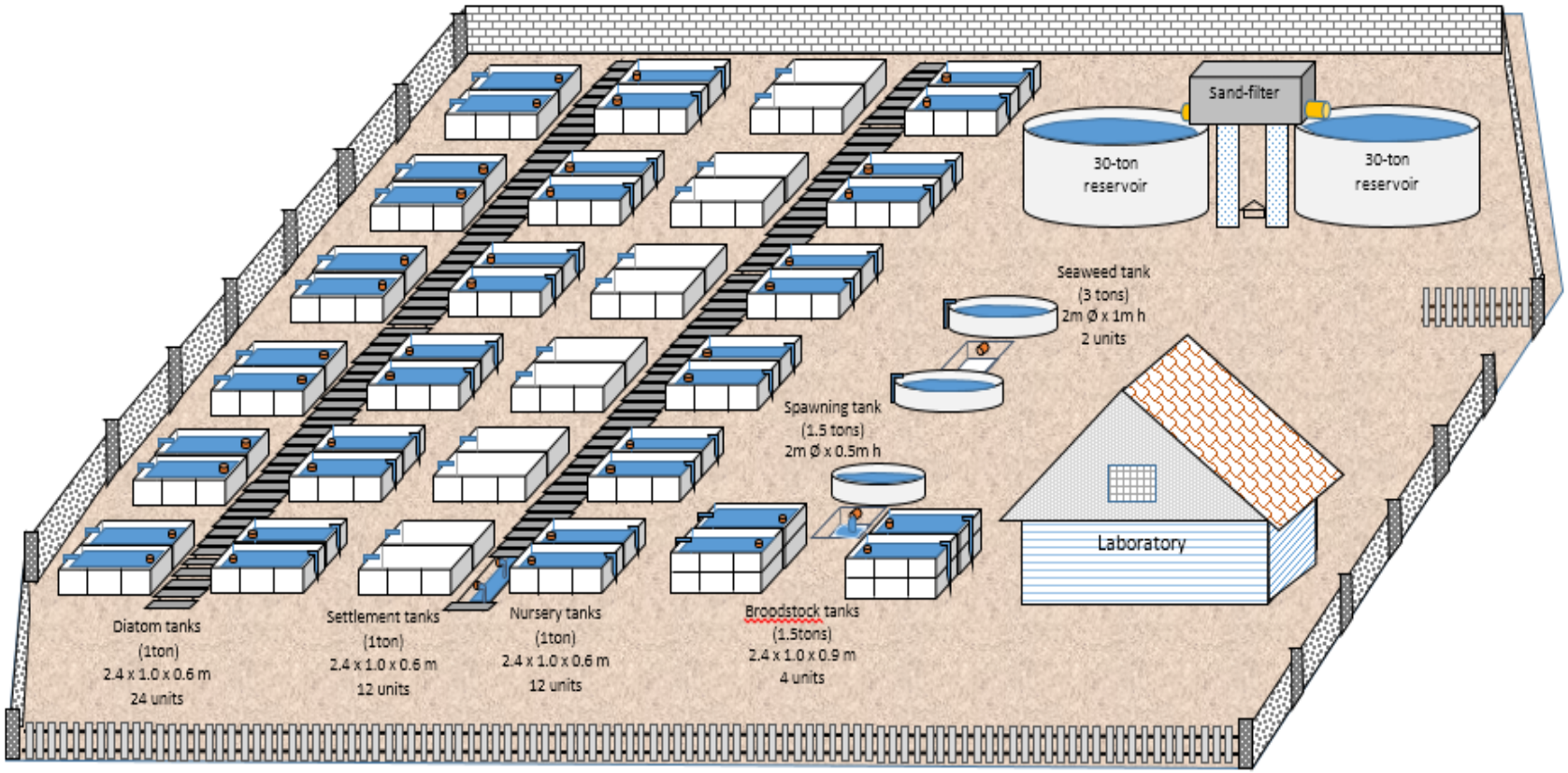
Abalone Farming
-Farming Systems?
-Farming Capacities?
-Suitable Habitats?
-Site Conditions?
-Feed Requirement?
-Cost?
-Pricing and Profits?

Marketing & Sales
-Product Forms?
-Markets?
-Distribution?
-Processing Yields?
-Food Safety? Quality?
-Cost?
-Pricing and Profits?



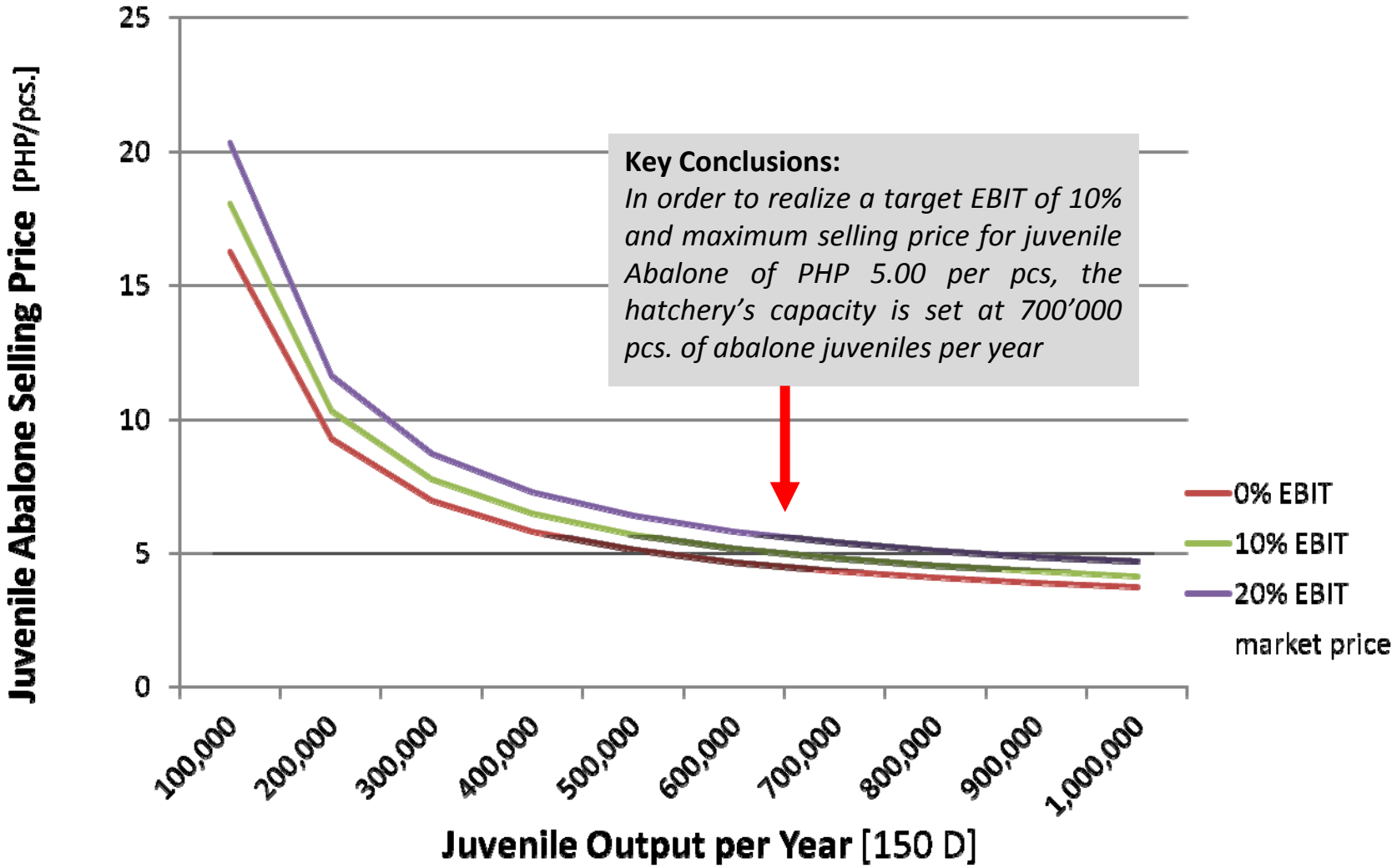
Abalone Hatchery for Community Farming Modell

ECONOMY OF SCALE & ECONOMIC VIABILITY?



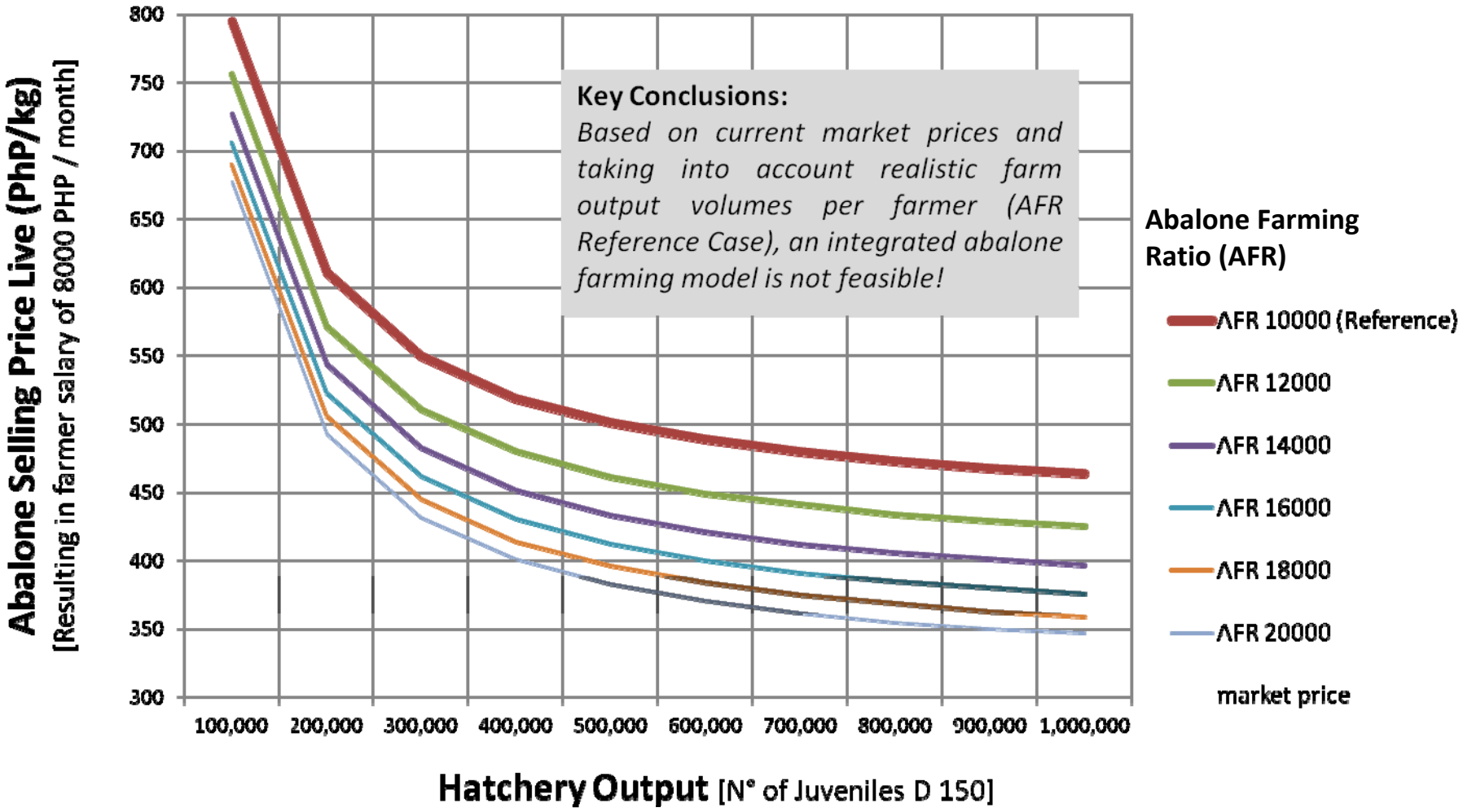
Abalone Hatchery for Community Farming Modell

ECONOMY OF SCALE



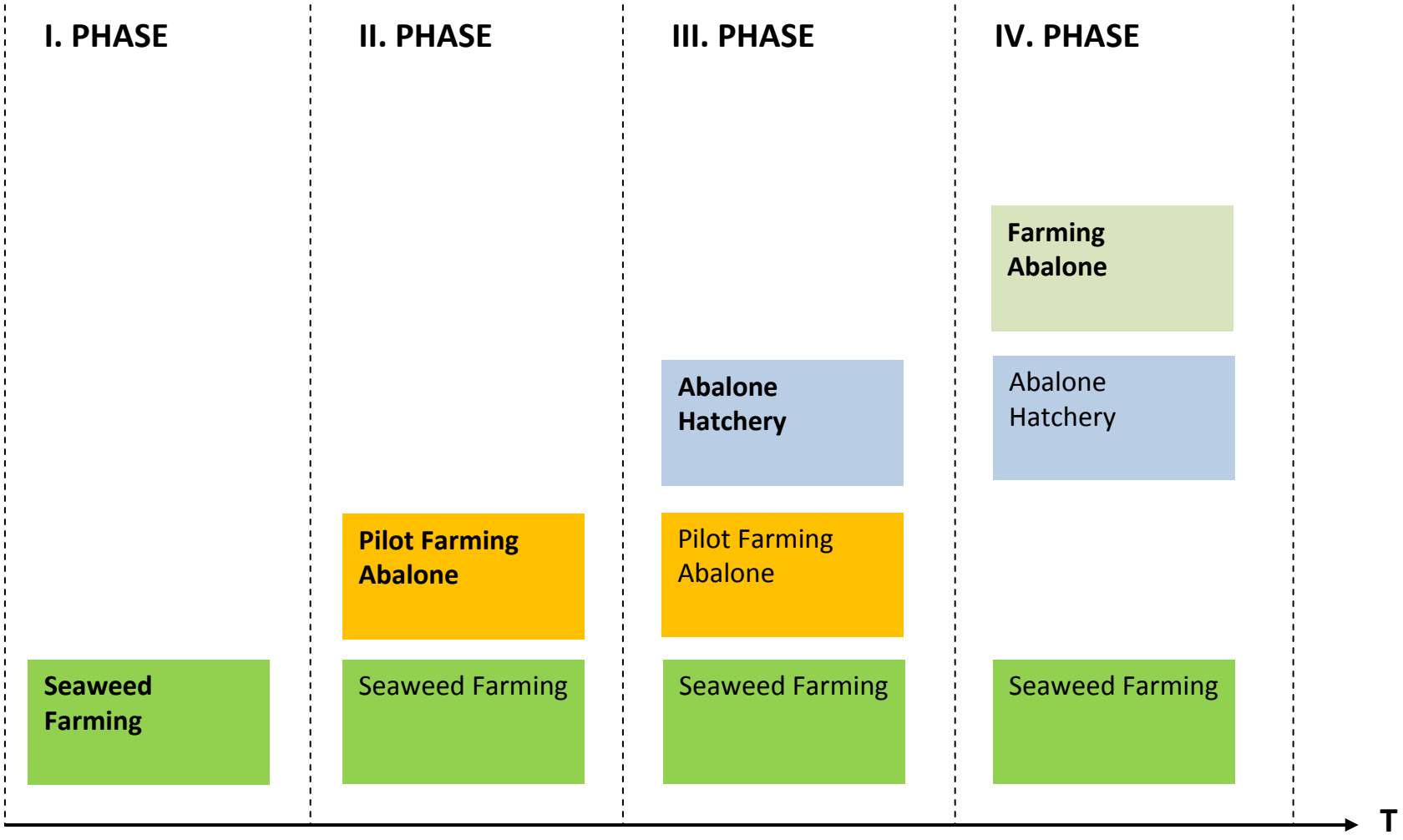
Abalone Hatchery for Community Farming Modell

ECONOMIC & TECHNICAL VIABILITY CHART



Community-based Abalone Farming Enterprise

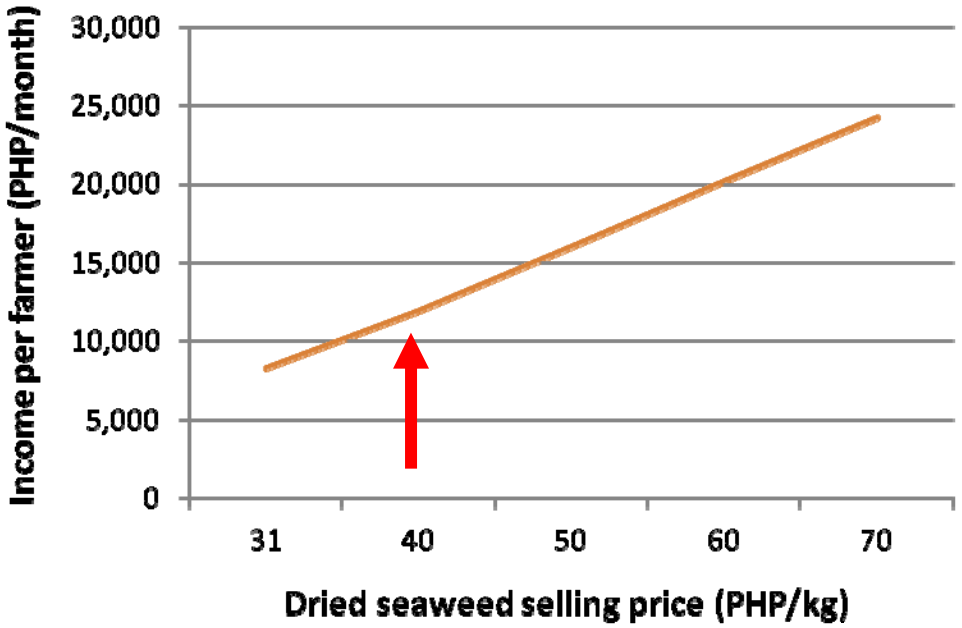
PROPOSED PHASES OF PROJECT DEVELOPMENT



Seaweed Farming as First Business Activity

OUTLINE OF POTENTIAL SCALE AND PRODUCTIVITY

	Year 1	Year 2	Year 3	Year 4	Year 5
N° of farming units	**4**	**6**	**8**	**10**	**10**
N° of new farming units	4	2	2	2	0
Total productive surface [m²]	20'000	30'000	40'000	50'000	50'000
Total Farm Surface [m²]	40'000	60'000	80'000	100'000	100'000
Total seaweed wet weight [t]	**196.6**	**294.9**	**393.2**	**491.5**	**491.5**
Total seaweed dry weight (10%)	19.7	29.5	39.3	49.2	49.2



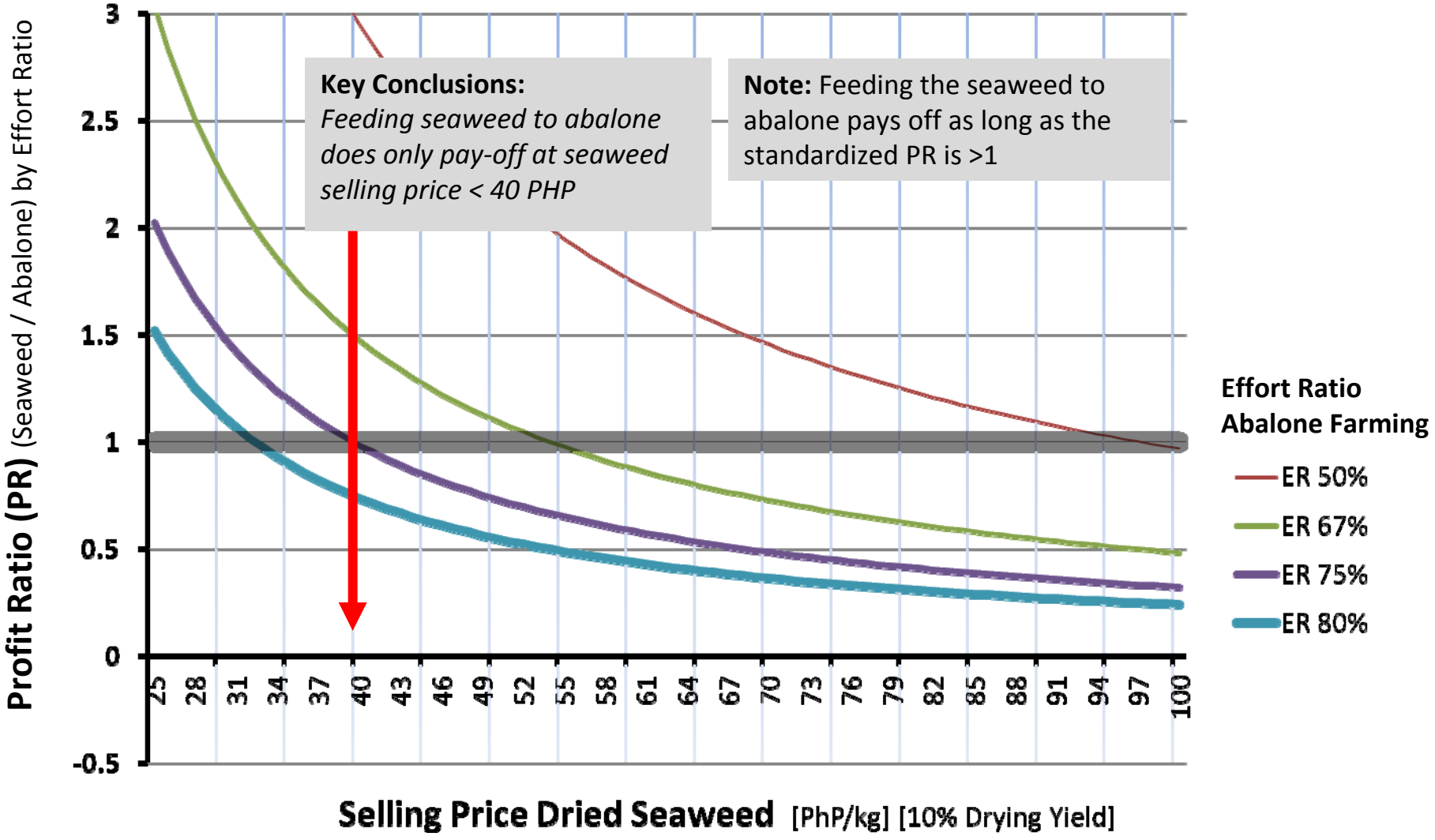
Key Conclusions Seaweed Farming:

For a cooperative model of seaweed farming with 10 farming units of 1 ha each (1 farmer handling 1 ha), the monthly income of a farmer can reach a target monthly income level of 8 – 10'000 PHP at market selling price of 40 PHP / kg dried seaweed.

Seaweed farming as community-based enterprise model therefore is profitable and seems feasible!

Value Up-Grading of Seaweed by Abalone Farming?

ECONOMIC TRADE-OFF CHART



Lessons Learned: Abalone and Seaweed Farming

KEY CONCLUSION FROM CASE STUDY IN PHILIPPINES

1. According to current market conditions and value chains, an abalone hatchery can only be economically viable at scale > 700’000 pcs. juveniles per year
2. The corresponding farming units and farming capacities are deemed not feasible and there is a lack of seaweed production in order to feed the abalone shells
3. A seaweed farming project at a scale of 10 ha production surface involving 10 farmers seems feasible as a first step of business. Such an operation would result in attractive returns and income for farming communities
4. The value up-grading of farmed seaweed by raising abalone is only viable at low seaweed market prices (< 40 PHP / kg dried)

Lessons Learned for Community-based Enterprises

COMPONENTS OF VIABLE COMMUNITY BUSINESS MODELS

1. Understand People's Needs and Visions
2. Communities' Capacities and Capabilities
3. Local Site Conditions
4. Business Model: Business Case vs. Development Project
5. Proper Value Chain Analysis
6. Understanding Markets and Supply Chains
7. Data Availability and Critical Verification
8. Realistic Assumptions for Planning
9. Critical Risk Analysis
10. Importance of Management and Organization