



USAID
FROM THE AMERICAN PEOPLE

PATHWAYS OUT OF POVERTY

CASE STUDY

IMPROVING THE EMPLOYABILITY OF THE POOR WHILE STRENGTHENING THE MARICULTURE INDUSTRY¹

INTRODUCTION

Capture fishery is a major economic activity for coastal communities in the Philippines, but unsustainable fishing practices have resulted in the decline of the quality and quantity of daily fish caught from 20 kg/day to an average of 2 kg/day. Target groups consisting of coastal households in 6 villages along the Davao Gulf earned an average of \$57 per month² prior to involvement in the project. Of these households, 47 percent were not able to send children to school and 67 percent had no permanent source of income. The coastal communities are generally made up of various migrant and Muslim groups. For many of the poor households, fishery activities are regarded as viable options for survival since there is open access to the sea. Migration has contributed to high population density—more than 70 fisher folk per kilometer of coastline—and, consequently, fierce competition over access to and use of resources. Root causes of vulnerability in coastal communities include seasonal variation in livelihood returns; limited access and ownership of resources (other than open access resources); dependence on natural resources for subsistence and the overuse of these resources; lack of information to make better livelihood decisions; and social and economic power imbalances and marginalization. These vulnerable households generally choose livelihood activities based on the ease of access to information from the immediate social environment (family or neighbors), and the extent that the activity facilitates access to daily food. Further, because of the scarcity of cash, households are only able to access livelihood activities that use inputs gathered from the sea or that do not require an actual outlay of cash.

The potential of mariculture to reduce poverty is closely linked to its ability to create jobs and self-employment in the communities. This case study describes strategies and lessons in facilitating the inclusion of the very poor, primarily via employment/self-employment promotion using a value chain approach. It is based on the three-year project being implemented by Strategic Development Cooperation - Asia (SDCAsia) entitled “Integrating Coastal Communities into the Mariculture Industry.” The examples are drawn primarily from the project’s work in the milkfish value chain. The project started in 2009 and is primarily funded by ICCO/Kerk en Actie Netherlands. The project is being implemented in Southern Mindanao, Philippines, with the objectives of coastal resource rehabilitation, poverty alleviation, and supply chain development. As of June 2011, the project was reaching 2,500 households and indirectly benefitting 10,344 individuals. The average income of target groups increased by 81 percent, from \$57 to \$103. The majority of beneficiaries, primarily Muslim women, are earning their own income for the first time and contributing an average of 30 percent to total household income. Key activities and outcomes include:

- a) Facilitated access of micro-pond owners to hatchery-bred milkfish seed stock by developing a nursery pond³ specializing in fry production in proximity to the mariculture zone and fingerling pond cluster. This mitigated the

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² Note: all monetary values in this document are denoted in U.S. dollars.

³ The nursery pond, which is operated by the social enterprise unit of SDCAsia in partnership with coastal households and the Southeast Asian Fisheries Development Center, aims to promote the use of hatchery-bred fries over wild seed stocks and promote the viability of fry production as a livelihood.

seasonality of operations, promoted optimal utilization of ponds, and reduced production costs and fingerling mortality.

- b) Promoted simplified Good Aquaculture Practices (GAqP) protocols anchored on indigenous technology and training of community-based providers to facilitate implementation and compliance among farmers. This has helped fingerling operators to increase the survival rate from 50 percent to 70 percent. For the grow-out (from fingerlings or juveniles to marketable size) cage operators, production yields increased by an average of 10 percent, which in turn benefited caretakers or those hired by owners to take care of the fishes and daily maintenance of the cage or pond. The introduction of GAqP also spurred the demand for: a) net makers, cleaners and lifters; b) divers to monitor water quality, cage condition, sampling; and c) bamboo cage builders.
- c) Facilitated upgrading of post-harvest facilities and the capacity of the coastal poor to provide post-harvest and other logistical services. This has reduced post-harvest losses, and provided employment and a venue for trading activities involving the poor.
- d) Supported the set-up of community-based processing of milkfish products, which provides employment for women, promotes value addition, facilitates market entry, and provides a healthy protein source to consumers.
- e) Supported a gradual transition to an all-natural farming system to reduce production costs and environmental degradation while strengthening Davao's unique selling position as a supplier of all-natural milkfish.
- f) Improved flow of information, collaboration, and shared standards along the chain. Feed companies are providing embedded services to clients, and grow-out cage operators coordinate stocking and harvesting schedules to prevent surplus in the market.

TARGETING AND VALUE CHAIN SELECTION

Target Groups: Helping households to move out of poverty does not necessarily entail working exclusively with the poor or in areas where they live. It is not enough to provide the poor with skills to improve income generation and asset building capacities; the environment and market system around their livelihoods must be growing and vibrant, which requires the concerted efforts of stakeholders. The project thus decided not to limit the target groups to the very poor. This way, the more progressive, and often wealthier, members of the community could “pull” the most vulnerable and champion the change process by showcasing the benefits of the initiatives. To encourage ownership over the activities, the project had households self-enroll. The project also did not want to explicitly categorize households into levels of poverty since this would negatively impact their confidence, and promote self-pity and expectations of dole-outs.

Although the project did not work exclusively with the poor, a mapping was conducted prior to the start of the project to identify specific villages with a high incidence of poverty using government statistics and the USAID poverty assessment tool. To promote participation of the very poor, the project held competitions on skills related to mariculture opportunities as an entry point to promote self-enrollment in skills training. The competitions usually attracted the very poor since they had the opportunity to stand out in the community and earn small prizes. The project also held regular livelihood and business orientations targeting the very poor. Initially, these were orientation meetings for applicants of micro-franchise packages offered by the project. However, micro-franchising to encourage enterprise creation was discontinued in the second year of the project due to low repayment rates, cheating and the high cost of transactions vis-à-vis outreach. The project thus shifted the focus of orientations to employment/self-employment opportunities and related trainings. Invitations were given in collaboration with local leaders. In the end, the very poor comprised 85 percent of the target groups, with the majority Muslim.

Value Chain Selection: The main criteria used during the selection process revolved around the growth potential of the shortlisted subsectors, and whether growth in these sectors would lead to high employment or enterprise creation. In emerging industries, backward and forward linkages are usually still being established, providing room for new entrants. In SDCAsia's experience, the ability of a subsector to accommodate new entrants hinges on market growth and the capacity of the chain to respond to changes in market trends. Further analysis was carried out on shortlisted subsectors related to: a) employment/self-employment opportunities and entry barriers for the very poor; b) proximity and familiarity of the very

poor to the work environment; and c) potentials for the poor to take on critical functions in the value chain or support markets rather than marginal activities. Based on these criteria, the mariculture industry was selected. The project took a multi-species/multi-value chain focus (milkfish, seaweed, high-value fish species) to reduce risks, mitigate seasonality, and provide diversified income opportunities for the very poor.

FACILITATING THE GAINFUL PARTICIPATION OF THE POOR

SDCAsia’s intervention model, aimed at enabling the coastal poor to step out of extreme poverty, is anchored on the participatory identification of constraints in the mariculture industry that have the greatest impact on improving its competitiveness and creating eco-friendly income-generation opportunities for the poor. The project also aimed to provide the coastal poor with the means and platform to build assets and maximize those available (human capital, financial, social, physical, and environment/natural) in order for them to take on critical value chain or support market functions. At the same time, the project worked to strengthen the ability of the value chains to penetrate more lucrative or differentiated markets and thus enable them to provide more opportunities for the gainful participation of the poor.

BUILDING BLOCKS TO PROMOTING AND IMPROVING EMPLOYABILITY OF THE VERY POOR

Identification and selection of livelihood opportunities for promotion. In collaboration with industry actors, the project identified business solutions to gaps in the industry, including parameters and standards required. *Appendix A.1* highlights the key constraints and corresponding opportunities in the Davao mariculture industry—particularly the milkfish subsector. Several key factors had to be considered in selecting the livelihood opportunities to promote. The majority of operators of cages and fishponds do not live near their farms. At the time when the Mariculture Zone was set up in 2007, the tendency was for cage operators, traders, and consolidators to bring in their own workers whom they trust even though households in the area understood the local ecology better than the “outsiders.” This highlights the importance of trust in addition to technical competence when looking at employment, since labor plays a central role in production risk management. Since the majority of the poor do not own cages or farms, the benefits to the poor from new or improved technology lie in employment generation potential. Thus in addition to assessing the contribution of new technology in increasing the profitability of operations, utmost consideration was given to its effect on employment generation. Together with representatives of the target groups and industry actors, livelihood options were assessed during the market and value chain analysis based on: social/cultural viability; technical and economic feasibility; absorption capacity of the industry; institutional sustainability; and environmental sustainability.

Awareness campaign on livelihood opportunities. At the start of the project, a campaign was conducted to disseminate information on income generation opportunities, motivate the poor to search for their own mariculture opportunities, and instill hope among the target groups since the majority had a fatalistic attitude (“I will die as a poor fisher folk,” “God/Allah will take care of us”) or had bad experiences (like non-payment by investors when harvest was less than break-even). As of December 2011, this campaign was taken over by the administrator (from within the target group community) of the post-harvest facilities and the logistics association. Aside from the prestige of being trustworthy, the logistic providers are also able to earn commissions from suppliers or paid by investors for sourcing labor.

Facilitate skills acquisition through set-up of BDS delivery schemes. SDCAsia engaged in the participatory development of training modules with the target groups as well as industry actors who set standards. Training included GAqP and Good Manufacturing Practices. The project then trained providers to ensure alignment with the learning aptitude of target groups. Services are generally delivered via peer coaching, embedded services (from input suppliers, feed companies, traders, cage investors, etc.), government extension services, and apprenticeship programs in collaboration with polytechnic and vocational schools. Training on farm production and GAqP are now handled by the private sector.

Table 1: Project-Promoted Livelihood Activities

LOGISTIC SERVICES: caretakers, harvesters, net makers, sorters
ENTERPRISE VENTURES: Fishponds/ fingerlings, fresh fish trading, processing plants, processed fish products trading
SIDE ACTIVITIES: poultry, swine, crab fattening

Facilitate access to tools and infrastructure necessary to pursue livelihoods. This is usually done by establishing common service facilities co-funded by the private and public sectors, with a one-time project contribution of \$6,000 to \$8,000. These facilities are self-financing through fees. The Mariculture Association, which owns the facilities, has agreed to provide 15 percent of the harvest rental fees to the harvesters group as a community development fund. The harvesters group in turn provides the labor for the daily maintenance of the facilities. Employers (cage owners) provide small equipment like outriggers (\$1,200) that are crucial for caretakers and are necessary for the transport of feed and other materials.

Build-up social and human capital through promotion of collective groups. The formation of collective groups provides the platform for promoting compliance to service performance and quality standards (enforcing labor supply chain governance), exchanging and sharing experiences, information and skills, reducing power asymmetries (with employers), and promoting peer support and access to social services such as health insurance.

Marketing campaign on available skilled labor. The project held a marketing campaign that not only promoted the services offered by the poor and how these can benefit businesses, but also intended to reduce the aversion of industry actors to hiring people/ethnic groups from poor communities due to trustworthiness and reliability issues. Now, about 90 percent of the workers in the Panabo-Davao Mariculture Zone are residents in nearby communities. This activity was complemented with behavior change interventions to reduce or avert cheating (e.g., harvesters keep some fish for selling).

Promotion of win-win/interdependent relationships between employers and the coastal poor. The project takes advantage of festivals and social events as venues for value chain actors to socialize in informal settings and discuss issues that affect their business and the industry. During these events, the project organizes activities aimed at disseminating best practices and sensitizing the actors on how their actions affect their own businesses and others in the industry. Through the promotion of improving relationships for mutual gains, 85 percent of the cage operators offer rice subsidies (or something equivalent) to caretakers to ensure they can eat three meals. Caretakers became motivated to attend trainings to improve yields as operators offered a fixed salary plus incentives based on harvest results. Similarly, fish sorters strive to be fair so as to gain the trust of, and thus repeat engagements with, traders and cage growers. It has also become standard practice for traders and growers to give the small fishes to harvesters and sorters along with their fees.

Promotion of group savings. Among the main activities of groups initiated by the project is the set-up of group savings known as the “Paluwagan System.” Under this system, members pool money (\$1/week) and take turns bringing home the accumulated amount every week, which individuals usually allocate for a planned expense such as repair of the house, start-up capital for a small business, etc. After each member has their turn, the group may opt to invest the money accumulated in a small business. The aim is not only to save, but to help empower each other to initiate developmental strategies through collective action.

TRAJECTORY OF HOUSEHOLDS

SDCAsia defines poverty based on a hierarchy of concerns (see *Appendix A.II* for graphic). The first is food security, followed by education of children, based on the belief that investing in education provides a more secure pathway out of poverty. The third step is shelter security, and households consider investments related to livelihoods only after the basic needs are met. The quickest way to facilitate the gainful participation of the very poor in the value chain was to enable them to provide critical services/labor where they already had some basic experience. With further training, they developed some degree of specialization and, consequently, received higher incomes. Once they gain confidence and are exposed to various opportunities in the chain, the project builds up their skills to perform specialized or multiple tasks.

The regularity of predictable payments insures against risks and enables the poor to move into activities with higher returns. Women in the target groups began to diversify into livelihood activities outside of the aquaculture sector, such as Avon dealerships and food stalls, to mitigate risks from natural disasters. Men more frequently diversified their sources of income by acquiring skills to provide a wide range or a package of services to the same set of clientele. (See *Appendix B* for trajectory graphs of the target groups.)

CONCLUSIONS

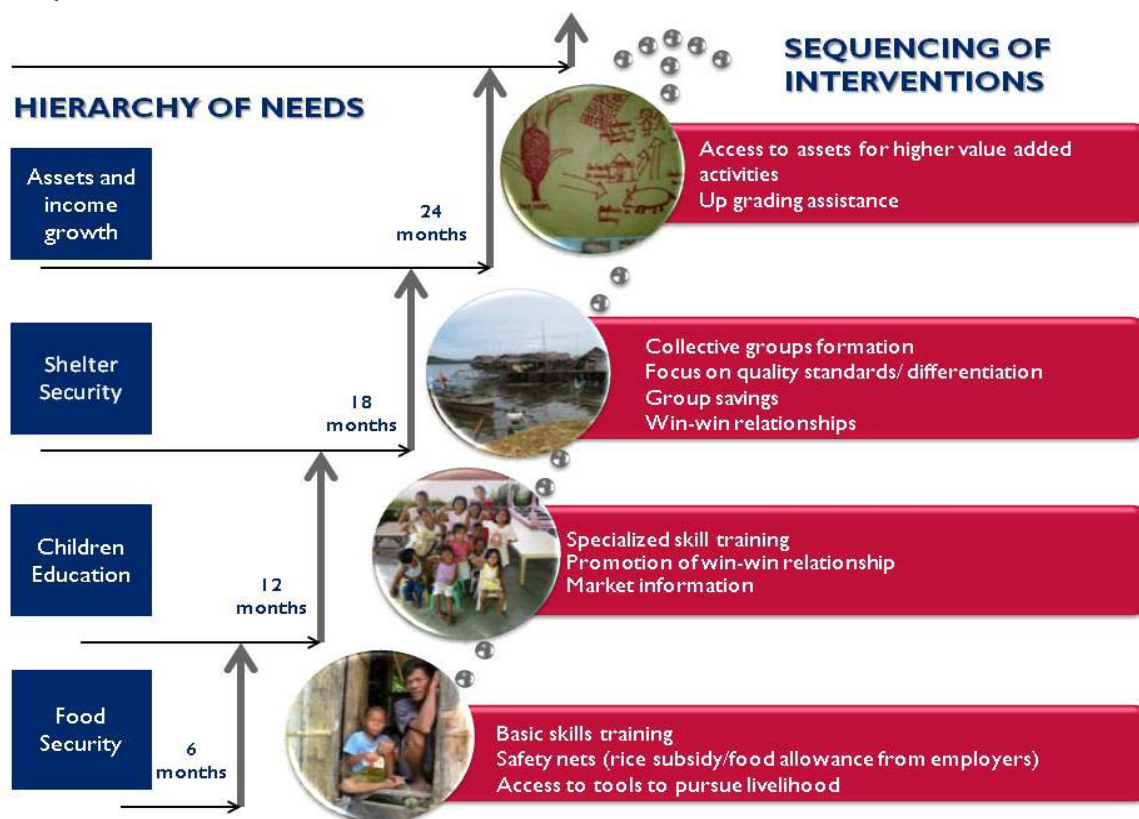
1. For welfare programs, targeting is an effective mechanism to channel public subsidies to the extreme poor and minimize the leakage of the benefits to others. In projects using a value chain approach, including only the very poor can isolate them from the most dynamic actors in society and from mainstream economic growth. At the same time, it is important to put in place measures that promote the participation of the very poor. Their extreme vulnerability and high aversion to risks (or activities considered non-productive, like attending meetings) often renders them unwilling to participate in project activities. For the very poor to participate, it is often important to first build up their confidence.
2. To facilitate the graduation of households from extreme poverty, attention must be given to the expected growth of the sector as well as the quality and nature of employment being generated. A common trade-off is the quantity of workers absorbed versus their vertical position along the value chain. In crafting strategies to improve value chain competitiveness, consideration should be made towards making it more “pro-poor,” which entails understanding the structure of rewards for participation. Assisting firms to move into differentiated products or premium markets can improve their capability to offer better income and working conditions to the poor.
3. A focus on the creation/promotion of jobs and enterprises vital to the competitiveness of an industry provides the platform for sustainability. In this project, enabling the poor communities to meet the standards of the healthy food market secured their position in the chain and restored coastal resources to provide for future generations.
4. It is critical to assess the market throughout the project cycle to ensure that livelihood generation activities do not create market saturation. On a regular basis, the project should monitor the capacity of the industry to absorb new entrants. SDCAsia’s employment and enterprise creation activities are done in phases to align them with growth trends, market absorption, and carrying capacity of eco-systems.
5. The project has more success engaging value chain actors in asset transfer initiatives and provision of safety nets to the poor if these are promoted within the context of business gains rather than philanthropy. Asset transfers and safety nets should be designed in a way that is beneficial to both the actors and the poor households. Lead firms that are less constrained by competition have a higher likelihood of playing a more exploitative role in the chain. It is also necessary to make the poor “attractive” to the industry actors. This can be done by increasing the traditional knowledge and skills of the very poor, and then building the actors’ confidence in them through sensitization and demonstration.
6. Social capital (formal and informal networks) is very important for the coastal poor on positive trajectories and is an important buffer against downward mobility. As the poor climb the economic ladder, it becomes more important for them to be part of economic networks to develop joint interests and access more opportunities. Through exposure to other actors in the chain, harvesters were able to diversify into other activities such as becoming intermediaries between fingerlings consolidators and cage investors. For the poor to participate in networks consisting primarily of non-poor, it is important that they have something attractive to offer.
7. The following conditions and characteristics seemed to shape individual trajectories and separated the “fast climbers” from the “slow climbers:” being outgoing/entrepreneurial and aggressive in pursuing market opportunities by linking up with peers that can complement or strengthen their offers to the market; having strong family support and fewer dependents; and having diversified income streams or multiple household members contributing to income.
8. For risk-averse households, traditional self-help savings systems such as the “paluwagan” or “merry-go-round” may be more viable mechanisms than formal microfinance programs in enabling the poor to access lump sums for investment or consumption, since they do not entail interest payments or risk of debt. Group savings have also promoted investment planning, which can serve as a stepping stone to the more formal financial services.
9. Our experience has shown there is a fundamental need to increasingly integrate behavior change interventions in value chain development projects, and to be sensitive about the role deep poverty can sometimes play in reinforcing behaviors that will negatively impact an individual’s ability to transition upwards out of poverty.

APPENDIX A:

I. CONSTRAINTS IN THE MILKFISH SUBSECTOR AND ITS IMPLICATIONS TO TARGET GROUPS

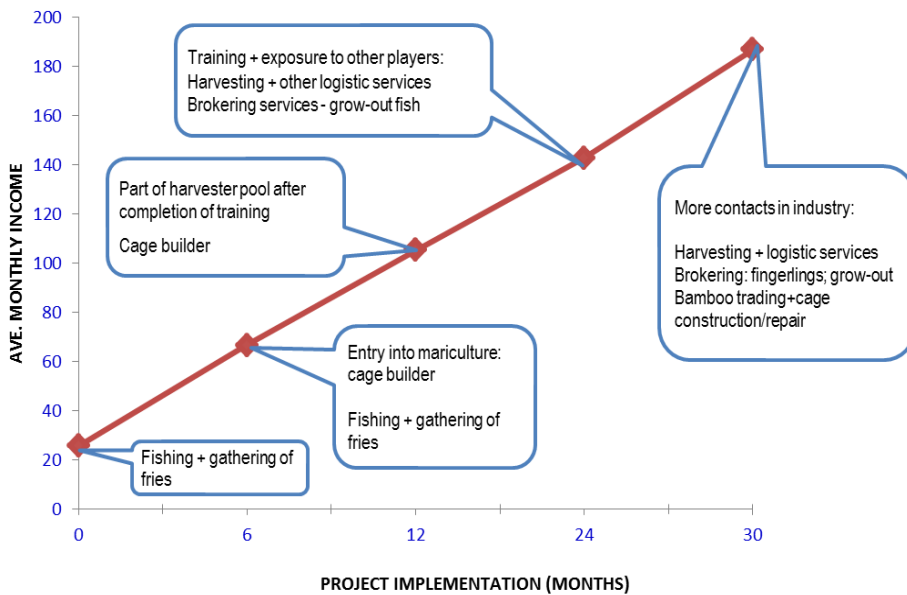
Constraints	Opportunities/Implications to Target Groups
<ul style="list-style-type: none"> Unstable supply of fingerlings due to dependence on wild fries/ shortage of fingerlings some months Poor-quality fingerlings High cost of fingerlings due to transport and production inefficiencies 	<ul style="list-style-type: none"> Target groups with Fishpond Lease Agreement may want to shift to fingerlings production. Grow-out of brackish water milkfish has a longer culture period, higher production costs, and lower market price compared to marine culture Involvement in fry production and distribution Development of pool of local harvesters Development of expanded base of skilled and trustworthy caretakers to encourage those who have left their ponds to resume operations
<ul style="list-style-type: none"> Poor feed management/increasing cost of feeds resulting in low profitability and decreasing numbers of grow-out investors 	<ul style="list-style-type: none"> Technical and skills upgrading of caretakers; improved profitability of cages can lead to increased incomes for caretakers Improve skills and demonstrate trustworthiness of local people to motivate grow-out investors to hire labor from nearby communities Promotion of natural feeds, which will reduce cost by 15% and provide employment and business opportunities for communities.
<ul style="list-style-type: none"> Weak compliance to GAqP, which undermines sustainability and profitability of operations 	<ul style="list-style-type: none"> Implementation of GAqP will increase the demand for the following services: weaving and installation of nets, net lifting and cleaning, water/fish sampling, cage repairs, maintenance of outriggers
<ul style="list-style-type: none"> Poor harvest facilities (e.g. makeshift tents) and practices result in quality deterioration No regular pool of trained harvesters and sorters 	<ul style="list-style-type: none"> Align indigenous skills of coastal households to GAqP and GMPG to boost demand of services as harvesters and sorters Potential business in food catering during harvests Encourage ice plant to set up satellite retail unit within the mariculture zone – employment opportunity for coastal households
<ul style="list-style-type: none"> Lack of value adding; fish mainly sold fresh within Davao. When there is an abundant supply of fish from the wild, price of milkfish decreases significantly. 	<ul style="list-style-type: none"> Women can be trained in processing of gourmet milkfish products Common service facilities for deboning and degutting More households could do value adding activities (retail; supply of raw materials) Added-value in forward linkages is likely to have a positive gender bias for women.

II. SEQUENCING OF INTERVENTIONS AND CONCERNS



APPENDIX B: TRAJECTORY GRAPHS OF TARGET GROUPS

FISHERFOLK GROUP



Fisher folks (Male): 85% of target

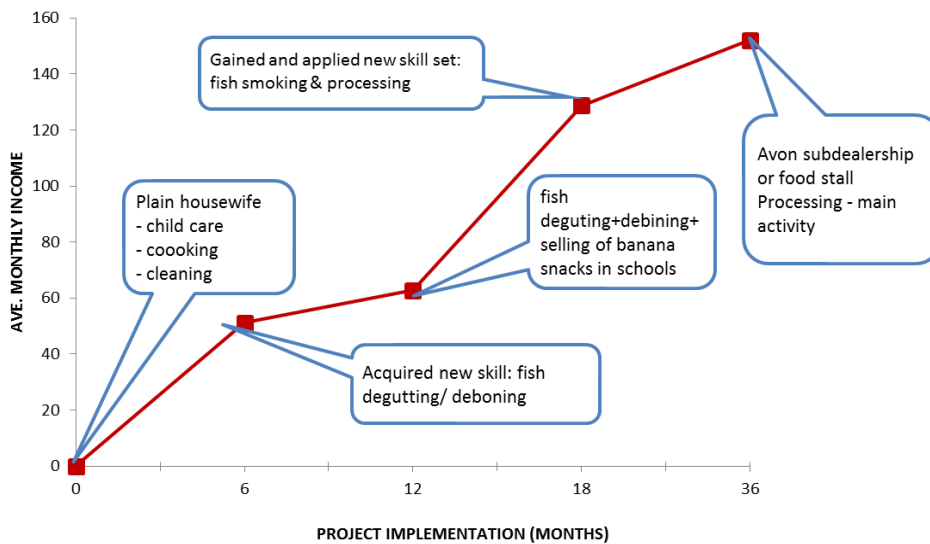
Occupation at Start of Project: Fishing, tricycle driver, odd jobs

The trajectory is for those who opted to be engaged in mariculture logistics services. Others are engaged in seaweed production, fishpond operations, and mud crab growing.

General Trend: a) Starts in one job which has the lowest entry barrier; b) Learns another skill – 2nd income. 50% content at this stage; c) Expands income by offering wide range of service to their existing clients; d) Forms friendships with various suppliers/actors and offers to broker negotiations between existing clients and suppliers.

Common causes of descent back to former conditions: Cheating, job negligence, quarrel with peers.

HOUSEWIVES/WOMEN GROUP



Housewives (female; Muslim): 10% of target groups

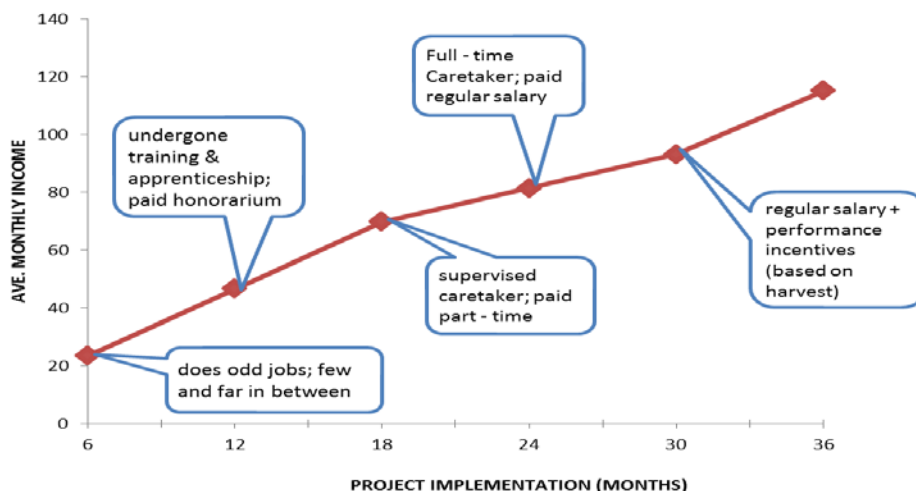
Occupation at Start of Project: None

The trajectory is for those engaged in processing. Other groups are involved in seaweed production and mud crab fattening.

General Trend/Pattern: a) Starts as part-time job; b) Spends more time on the job—full time (majority remains at this level); c) As soon as they accumulate some savings, they invest in setting up own business outside of mariculture (about 10% of women)

Common causes of descent back to former conditions: Pregnancy—had to take care of the baby; laziness.

OUT OF SCHOOL YOUTH GROUP



Out-of-School Youth: 5% of target groups

Occupation at Start of Project: Odd jobs

Current Job: Caretakers

About 15% have gone back to school (night classes or weekends—vocational course).

Common causes of descent back to former conditions: Cheating, negligence