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Livelihoods Supporting Conservation in Indus Ecoregion Case Studies



Indus for All Programme
WWF - Pakistan



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Foreword

Natural resources in the Indus Ecoregion have undergone degradation from economic activity and construction of a vast irrigation system. Habitat loss, natural disasters, sea intrusion, salinity and desertification are some of the significant threats to its ecosystems, associated biodiversity and livelihoods of local communities.

The Indus for All Programme (2007-2012) helped reverse the loss through addressing the poverty-environment nexus. Improving livelihoods has translated into socio-economic empowerment that has led local communities be actively involved in conservation initiatives.

The current Programme is the first phase of a 50-year Indus Ecoregion Conservation Programme. Its vision was developed in collaboration with Government of Sindh and its relevant departments, and was implemented in four of the fourteen prioritized ecosystems, namely Keti Bunder (coastal area) and Keenjhar Lake (freshwater wetland) in Thatta District, Chotiari Reservoir (desert wetland) in Sanghar District, and Pai Forest (inland forest) in Shaheed Benazirabad District. The Programme has been acknowledged to be innovative in its approach towards environmental management. It was able to involve and catalyze those groups who can ensure its sustainability through upscaling. However, our field experience has demonstrated the power of the community and we realize that the success of any project depends on the willingness of its target community.

WWF and its partners stand proud of Programme achievements and would like others to benefit from our experiences. This publication presents results of our endeavors in Indus Ecoregion. The case studies of various interventions undertaken in the four sites were geared towards providing alternate livelihood opportunities to natural resource dependent communities. We hope that the document will be useful for stakeholders engaged in tackling poverty reduction and conservation. Lessons learnt and initiatives shared can be replicated. The road to sustainability is long and with our collective efforts we can overcome the gaps.



Rab Nawaz
Regional Director/ Team Leader
Indus for All Programme

Preface

With the successful completion of our first phase, I wish to thank our partners, especially the 43 community based organizations for ensuring that we invest in contextually relevant and viable livelihood interventions. Their feedback and commitment has been vital in designing the livelihood schemes for men and women in selected villages. Social mobilization combined with community will has set the direction for sustainable development in Indus Ecoregion, such as through the revival of traditional fields including matka fishing and indigo plantation, and introduction of new schemes including bakery, small shops for women, crab culture and model livestock farms.

With the experience gained in implementing livelihood development plans, we hope to scale up and replicate our efforts to benefit a larger group with the help of public sector and civil society.



Shahzadi Tunio
Programme Sociologist
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Acronyms

| | |
|---------|---|
| ATT | Aurat Tarkayati Tanzeem |
| AWAS | Women Action and Satiability |
| CBO | Community Based Organization |
| CDO | Chotiari Development Organization |
| DCC | District Coordination Committee |
| JMWDO | Jhol Maari Welfare and Development Organization |
| KMDDO | Keenjhar Mahol Dost and Development Organization |
| KMWDO | Keenjhar Maroo-Ara Welfare and Development Organization |
| KWDO | Keenjhar Welfare and Development Organization |
| KYWDO | Keenjhar Youth Welfare and Development Organization |
| LCBO | Local Community Based Organization |
| MATT | Marvi Aurat Trakayati Tanzeem |
| MDWO | Marooara Development and Welfare Organization |
| NGOs | Non Governmental Organization |
| PMC | Project Management Committee |
| PPAF | Pakistan Poverty Alleviation Fund |
| SAFWCO | Sindh Agricultural and Forestry Workers Coordinating Organization |
| SSTT | Sindhu Sujag Tarqiati Tanzeem |
| ToP | Terms of Partnership |
| VWA | Village Welfare Association |
| WWF - P | World Wide Fund for Nature - Pakistan |

Organizing women CBOs



Our field experience has suggested that community participation helps create ownership of local projects, increase participation in decision making, and improve access to social and productive resources. Hence, grassroots level Community Based Organizations (CBOs) were established and strengthened under Indus for All Programme (8 for females and 33 for males), to achieve its conservation objective. Social mobilization was carried out at two levels: firstly in settlements where no village or community organization existed and secondly with existing CBOs. Capacity of defunct CBOs was also enhanced.

For WWF – P, the male and female CBOs have played a critical role in conservation. Frequent meetings with staff, participation in trainings and site specific projects have all helped the community understand the importance of natural resource management for better lives.

Formation of women CBO, who manage the women oriented initiatives of the Programme, was particu





largely valuable in terms of value added in social empowerment. For instance, support of male community members strengthened with the initiation of women run livelihood schemes. Other benefits accrued have been in the form of livelihood provision, entrepreneurship skills and school enrollment. Social mobility of women has also enhanced considerably. This is reflected through their participation in meetings, such as those held by District Coordination Committee (DCC) and with Non Governmental Organizations (NGOs). Women beneficiaries are now progressing towards self sufficiency through earnings made. Dependency on male members is being decreased, such as for getting products from the market to run the shop, visiting a hospital in an emergency, or going to attend trainings in bigger cities.

Women CBOs success is most pronounced in Pai Forest, one reason for which is the relatively high rate of female literacy in the area.

Marvi Aurat Tarakayati Tanzeem

MATT is a registered CBO with thirty members and six executive directors who play an active role in the undertakings of the CBO. While its scope covers a broad range of socio-economic and ecological objectives, its special focus is small home based shops, vocational training center, micro credit (loans start from PKR 500 to PKR 2,000 with a repayment period of six to twelve months on a nominal service charge), livestock rearing and management, bakery projects and kitchen gardens.

Ms Hafeeza Jalbani who like other women did not have easy access to education was lucky enough to complete her master's degree in Journalism from University of Sindh, Jamshoro. Due to restrictions put on her from pursuing further studies, she became a Primary School Teacher. She had always wanted to do something for the underprivileged women but she could not do so because of restrictions on their movements. The Marvi Aurat Tarakayati Tanzeem (MATT) established with the help of the Programme, and continued efforts of Programme staff have enabled local women to realize their dreams.

Another poor woman from Mari Jalbani was provided a loan of PKR 35,000 for a small home based shop. MATT ensured that the woman started repayment PKR 1,500 per month as per Terms of Partnership signed with the beneficiary. This helped the CBO provide a similar service to other deserving women in the village.

To enhance its role in future, the CBO needs training on IT, micro-credit and financial management training, and market links in nearby towns for vocational centre products. With these skills, the CBO will be able to expand its area of operations.

Crafts for future



Residents of Pai Forest vicinity earn through agriculture and livestock rearing. Women are involved in vegetable picking and crop harvesting, as well wood collecting for sale and fuelwood use. These women are also skilled in handicraft making, such as ralli (on appliqué and patch work), dress making (with variety of techniques), and mirror work on topi and crochet work. However, mismatching color scheming, inferior quality material, limited knowledge of market trends and inaccessibility to markets, the craft industry has not flourished. As a result, dependency on forest resources has increased for sustenance and as a source of livelihoods.

Amongst the Programme's sustainable livelihoods schemes in Indus Ecoregion (for reduced dependency on dwindling natural resources), a successful venture has been the establishment of a total of six vocational centres for local women at the four sites. The centres are now self sufficient and are independently covering their operational expenses. They offer six-month courses. About 500 females have been trained in the four sites, women trained in sewing are earning about 4000-6000 per month (this earning reached



at 8,000-10,000 during eid and other occasions) and artisans trained in hand embroidery are earning around 3000-3500 per month. Most of the trained women have their own sewing machines, whereas programme has also provided 28 machines to needy women to carry on their work. These women are offering tailoring services from home. Women believed that, this helped them improve living standards and contribute in family income.

The initiative received great success in Pai Forest area, as women CBOs formed in the area are well organized and active in undertaking activities. Three centres were established at this site. One such center was set up in Mari Jalbani. Earlier, community mobilization efforts by the Programme meant enthusiastic support by the village people. A newly constructed building was donated by a resident while machinery, furniture, raw material, technical support and salary was provided through the Programme, for a period of one year, in addition to a grant that waives the monthly fee charged to trainees.

The vocational center offers training courses in machine and hand embroidery (appliqué work, hand embroidery designs and crochet work), and tailoring (cutting and sewing). Knitting, weaving, designing and product innovation is also taught in value addition trainings. Priority to marketable products, local and regional trends -such as through involvement of Karachi based designer trainers, helps increase product sale. To date, the centre services have helped uplift economic conditions of around 250 households at village Mari Jalbani and Mari Allam Jalbani through skill development for enhanced market competency and knowledge. The business has opened new avenues for women to market their handicraft. These trained women are now aware of price trends of raw material that translate into competitive prices for their handmade products. Some trainees have planned to purchase own embroidery and peko machines. The result of these changes has been a steady household income (PKR 3,500 per month), knowledge of financial capital, as well as development of entrepreneurship skills and confidence. The decision making role of women has thus emerged since their acquired status as wage earners.

To realize these gains, the Programme staff has worked relentlessly to organize the women under the umbrella body, MATT in Mari Jalbani. In the early days of the Programme, local men restricted movement of women in their families and discouraged them to participate in any meetings or activities. The center therefore faced difficulties in enrollment. However, the eventual positive impact of various livelihood interventions intro-

duced in the village helped change the attitude of community members towards women empowerment activities. Advocacy meetings by Programme staff also meant a change in attitudes and behavior. Women beneficiaries are now advocates for conservation; they persuade men to refrain from deforestation and exploitation of Pai Forest resources.

Certain external factors also account for the success of the vocational center. Firstly, MATT a registered CBO - with 46 members and six directors - effectively manages the vocational center and motivates local women to join the training courses. Moreover, the lady instructor, who comes to the center from Hala, is well-trained and has good contacts in the market which helps bring orders for the trainee's work.

Improvement plans can include purchasing own premises, providing training in big cities, hiring more professional staff, introducing modern techniques and machines, and systemized marketing of the handicrafts. Efforts are being made by the CBO to get bulk orders from nearby cities for school uniforms. This will help local women to earn more and compete in local markets. The organizational capacity should also be improved for effective management of records and dealings of the center. Likewise, provision of embroidery and peecko machines will not only add value to the training courses but will also attract more women from adjacent villages and have a positive impact on the livelihood of rural women living around Pai Forest.





Women as Entrepreneurs



In the rural communities of Sindh, the men work as farmers or daily wage earners and the women look after the home and livestock owned by the family. This is mainly due to lack of opportunities and the low rate of literacy. Like other rural communities, the women of the Pai Forest area are very skilled in making rille work (bed spread and bed covers), hand embroidery on dresses, pillow covers and other household items. Other skills include basketry making from wheat straw and other thatch material like laee (a kind of bush plant). The rural community purchases raw material for most of these embroidery products from nearby towns at higher prices. This makes it difficult for rural women to make handicrafts on a commercial basis. Moreover, they do not have their own shops for raw material in the village due to lack of funds.

Keeping in view these factors, the Programme decided to support local CBOs and women through entrepreneurship development. During consultation meetings, local communities suggested small home based shops as an alternate means of livelihood, which would help diversify income base as well as reduce



dependency on natural resources as a means of sustenance or earning.

The Programme provided 80 percent funds for establishment of the shops (e.g. provision of raw material and furniture) whereas 20 percent was provided by the selected female beneficiaries. The beneficiaries return the 80 percent of the given funds to the local CBO within two years. This amount is utilized for scaling up the business through other village women in the next phase. Apart of this financial support women were also given entrepreneurship development trainings to run their business successfully.

The criteria for selection of women that would receive assistance were varied. Key categories included level of poverty, income dependency of the candidate, provision of place for a shop, literacy, membership in a local CBO, and between 25 to 40 years of age.

The fourteen shops established have not only helped conserve biodiversity; it has also provided financial relief to the family. Since most beneficiaries have returned the principal amount loaned by the Programme, it is evident that they are earning enough to repay the amount. With the profit earned, these business women are focusing on increasing business volume, which will help long term sustainability. Many have expanded their business to include petrol and grocery items, which serve as easily sold products.

Working as entrepreneurs has also improved the social status of women; they are now valued as decision makers of the household. Women are now comfortable travelling to cities for purchases and meetings. Likewise, easy and direct access to raw material products has meant less delays and dependency on males. Moreover, benefits of this Programme accrued in context of easy access to raw handicraft input for local female artisans; this enables them to prepare more handicrafts and sell them in the nearby towns.

Based on the successful operation of the small business model introduced by the Programme, some families have also opened shops with their own investment and CBOs also have replicated five more shops (in Pai Forest area) with amount recovered from the Programme supported shops.

The villagers were grateful to see the revival of handicrafts in their area. However, in order to create a



larger market for these products, comprehensive promotion campaigns should be organized for the publicity of handmade products of rural areas. A village exhibition can be organized to attract financial sponsors from larger cities. More training in finance and accounts management will also help organize the business and boost sales. Furthermore, role of women should also be ensured in community consultations to get their input in project design.

The project for small enterprise shops for women has been implemented in all sites; but the achievement of Pai Forest area has been remarkable. Even though these women are not highly educated, they still managed to make the business profitable. Majority of the beneficiaries have repaid the principal amount of the small shops financed by the Programme. All women beneficiaries have either repaid their loan amount in full or are paying their installments regularly. The amount received has been reallocated to other eligible women in the village.

The home-based shops have provided alternative means of livelihood in Mari Jalbani, Mari Alam Jalbani, Ghulam Hyder Bhutto, Murad Keerio and Haji Keerio villages. The collaborating CBOs are MATT, Association for Women Action and Satiability (AWAS), Aurat Tariqati Tanzeem (ATT), and Village Welfare Association (VWA). The success story has encouraged the local CBOs to undertake other projects. Five more shops have been opened by other women in the area. MATT from Mari Jalbani, for instance, has introduced the concept of micro-credit, and is successfully managing a vocational training center.

Four home based shops have been established at Keenjher Lake with collaboration of Keenjhar Welfare and Development Organization (KWDO) in Sonheri village. Programme has provided 80 % funding, whereas 20 % funding was contributed by beneficiaries in cash. These shops are selling raw material for handicrafts and other grocery item of daily use. Strain on fish resource has reduced as a result of this sustainable livelihood source. Residents now understand the importance of wildlife preservation and the protection of natural resources and exploring other livelihood option also.

At Chotiari site, Programme has set up 8 shops, with cooperation of the following CBOs: ATT, Makhi Development Organization and Sustainable Development Foundation (SDF). All eight entrepreneur women running small shops have expanded their business and repaying their fixed installment to their organizations.



Keeping diseases free livestock



Keeping in consideration people's dependency on livestock for income, the need to ensure livestock health was identified in consultation meetings with Programme staff. Hence, two cycles of vaccination was undertaken in 100 villages of the four sites, for protection from contagious diseases i.e. hemorrhagic septicemia, foot and mouth disease and enterotoxaemia. Awareness was created on livestock feed, management practices and precautionary measures against contagious diseases. In addition to this, local youth was trained as extension workers. Training topics covered importance of vaccination, vaccine techniques, diagnosis and treatment of common disease, and increasing milk productivity through nutrition. The workers and CBOs have also been linked to Agriculture and Livestock Department. The livestock vaccination campaigns were thus held in collaboration with District Govern

ment, Agriculture and Livestock Department, and local organizations. Around 31,000 animals were treated for hemorrhagic septicemia, enterotoxaemia and foot and mouth disease. It is estimated that livestock mortality has reduced by 40 - 50%. The vaccination exercise has now become an annual feature, jointly managed by the relevant government department and CBOs.

To further improve the condition of the livestock, the livestock department should arrange awareness programmes for proper livestock treatment and vaccination, in addition to supporting livestock extension volunteers by providing vaccines and other material for livestock treatment. There should be addition of women livestock extension workers who can provide help to women for livestock management.



Rearing livestock for livelihood



Women living around Keenjhar are often confined to their home. Even in female headed households, women rely on relatives or creditors for loans to feed their family. They often lose their homes for the high interest loans they cannot repay.

To improve the living conditions of female headed households, a livestock provision project was initiated in partnership with two CBOs, Keenjhar Maroo-Ara Welfare and Development Organization (KMWDO), Amirpir; and Jhol Maari Welfare and Development Organization (JMWDO), Chull site. Twenty eight women were provided female cows for milking and breeding. The calves born are given to other eligible women in the same village. A male calf is reared for at least one year before being sold in the market. With

the money earned, a female cow is bought and then handed over to other eligible women. The CBOs are responsible for revolving livestock and creating opportunities for vulnerable families in target villages.

By creating an income opportunity for poor women, access to formal and informal education has improved. Although most rural women possess livestock management skills, formal training on livestock rearing and vaccinations has helped improve health condition and hence productivity of livestock. Under the better management practices scheme, women have adopted model farm techniques for livestock management. These model farms form a market chain – the milk produced in these model farms is sold to local milk shops where milk chillers have been provided for better quality milk storage. Moreover, manure generated is being used for biogas use.

The intervention is planned to be scaled up. However, there is concern over shortage and high price of fodder, and the shortage of grass in the area. Micro-credit loans may help address this concern.



Marketing milk



The cattle in Pai Forest is considered to be amongst the best in Pakistan. People own various breeds of buffalo, cow, goat and sheep. On an average, each household keeps at least one milking animal. A survey conducted by Pakistan Dairy Development Company shows that out of the total milk produced, 97% is in the informal sector (i.e. loose milk consumed in the villages or sold in Sakrand town through gawallas in unhygienic conditions and without any quality standards). Exploitation by middle man means milk providers are not paid the reasonable rates to the milk producers. The milk producing community did not receive proper and timely price due to high transport charges. Often the milk would get spoilt due to unavailability of transport, translating into a loss of approximately PKR1,200 per month.

To meet the needs of the local population, a milk marketing facility was established. The main objectives of the intervention were to promote a dairy enterprise and provide a profitable milk market to the community living in villages around Pai Forest area. Support provided include provision of a milk chiller plant, glass wears, gruber machines, measurement tools, steel tanks for shops four collection points, furniture for the milk shop, Qinqi motorcycle for transportation, generator and staff (supervisor and salesmen). Moreover training on milk fat testing was conducted for ten persons from four collection points and the milk shop. Three months financial support, including salaries, was also arranged, in addition to training

on testing milk fat.

The intervention is serving about 400 households in the target villages. Through the service, milk is purchased after fat testing and sold in market for about PKR 50 per kg. Proper marketing is available for the milking community. Small livestock owners and milk producing community earn an additional PKR 5 - 10 per kg and also a daily or weekly earning rather than on a monthly basis as done earlier. Milk storage is available to avoid spoilage of milk and community. PKR 1200 is saved from transportation cost. Women are also being involved in this process through one milk collection point in village Talli - this collection point is purely managed by a female organization. The CBO is planning to initiate more dairy products such as lassi, milk bottles, kulfi etc. the CBO is also planning to provide small loans of PKR 20,000 to females for setting up home based small shops.

Sindhu Sujag Tarqati Tanzeem (SSTT), a local CBO in Sakrand is the implementing partner. The CBO has formed a Project Management Committee (PMC) comprising of five people. After conducting a field survey, the PMC has established four milk collection points in the Morio Lakho, Ghulam Qadir Jatoi Stop, Mehmood Keerio and Talli villages. The 2010 and 2011 floods, however, disrupted milk collection temporarily. The collection points were closed and milk was being collected by a Qinqi driver.

Needs identified include training in sales, marketing and fat ratio testing system. Moreover, the collection points need to be made functional and the location of the shop ought to be more accessible to its target audience. A management committee should be formed with members from CBO network, community (preferably milk sellers) and Programme team. The committee should make annual business plans with projections of sales and returns. The operations of the milk chiller unit should be handled by a network of local CBOs and the local community should also be involved in the operations of the unit.



Revival of ancestral occupation



The fish stock at Keenjhar Lake began to decline in the 1980s; the local fishing community suffered losses and ultimately sold or rented out their fishing equipment. People started to work in coal mines and stone crushing industry in nearby areas of Keenjhar Lake. Some provided support to hunters of migratory birds at Keenjhar Lake.

In Sonehri (the word means 'golden' - local residents reminisce the rich natural heritage which is now facing threat from overexploitation, population increase and lack of infrastructure), one of the historical villages of district Thatta, fishing has been the main source of livelihood. However, dwindling fish resources have meant that a majority of the fishermen have turned to stone mining, stone crushing, hunting of migratory birds and illegal deforestation.

To improve the living standard of fishermen living alongside Keenjhar Lake, an indigenous fishing technique was promoted. The fishermen here use copper pitchers (matka) to catch fish. Matka is considered by the fishing community as an easy and safe technique for catching fish. It is used by experienced fishermen who earn significant amounts by catching 3 to 10 kg fish in a single day. Matkas enable fishers who navigate through narrow passes of reeds that are otherwise difficult to pass through on a boat. The fishermen install fishing nets by floating this matka and catch the fish using the same. A fisherman can earn PKR 500-2,500 in a single day if he has access to a net and a matka. However, as the cost of copper has increased manifold and that labor costs are also on the rise, poor fishermen are finding it very difficult to afford matkas which are sold at a market rate of PKR 30,000 - 35,000. Most of the fishermen do not have sufficient funds to own a small boat or invest in fishing equipment.

After consultation with the community, the Programme in cooperation with KDWO at Sonehri, developed a project to provide legal fish net and matka to the poor fishermen of Sonehri village. Twenty fishermen were selected. Special priority was given to unemployed fishermen who had abandoned fishing for other seasonal occupations. The beneficiaries were bound not to hunt migratory birds or use any harmful means of fishing.

The benefits of the project were manifold. Through self-employment opportunities in a sustainable livelihood source, hunting of migratory birds, use of illegal nets to catch juvenile fish and deforestation was reduced, and land encroachment was controlled. With the provision of legal nets, a downward trend in the catching of juvenile fish was observed. Average family income of poor fishermen also experienced a boost. Some fishermen with small families managed to save money for a small boat to go deep sea fishing.

In future, the option of using fiber matkas will be explored as a lighter and cost effective alternative. Moreover, possibility of involving PPAF and SAFWCO for micro-credit is being considered. The role of middlemen needs to be revered, as small fishermen, who catch 3 - 4 kg fish on average, per day do not get a fair price for their catch.



Fish delights by the lakeside



Fish Point livelihood initiative was designed mainly for women living in villages close to Keenjhar Lake. They prepare fish dishes in various indigenous forms, such as kebabs, meat balls (kebab), mince (qeema), fried etc.

It was agreed that out of the earnings, 30 percent will be given to women, 30 percent reinvested in raw material, 25 percent to the operating CBO, Keenjhar Mahol Dost and Development Organization (KMDDO), and 15 percent would be secured for maintenance of the fish corner at the initial stage. After discussion with local community, five women were selected as direct beneficiaries. A rotational system was agreed upon, such that after two years other women from the village will take up this job.

For the restaurant, KMDDO voluntarily offered a place at the lake side. KMDDO played a key role in community mobilization and construction. Since its inception, the unique concept has been providing hygienic homemade food to visitors and promoting traditional dishes. Peak months are June, July and August, as well as weekends and national holidays. The management of the CBO introduced additions such as tandoor. Chapattis being made in the tandoor (oven) are in great demand for families who bring their own food; they have created an extra source of income which will support the issue of sustainability of the Point. The CBO is also planning to build a family room for indoor dining.

Women have hitherto not been involved in hospitality sector or food industry. This initiative has thus opened new avenues for them, which utilizes their existing skills. However, for better business, media should be used to promote ecotourism activities and Fish Point. The management should also receive training on hospitality, business management and ecotourism. Some challenges faced include the recurring floods and low water release at KB feeder. However, the President of the CBO was optimistic about the centre's future.



Fish farming at Chotiari Wetlands Complex



Chotiari Wetland Complex hosts a range of valuable biodiversity, which also face risk of extinction. With WWF presence in the area, there is been considerable improvement in community understanding of ecosystem value and preservation. There used to be around 22 different types of fish in the lake. These different species have vanished from the lake. According to the socio-economic assessment in 2007 conducted under the Programme, the households dependent on fishing in Chotiari Wetland Com

plex earn up to PKR 6,000 per month. Income from a good catch ranges between PKR 20,000 to PKR 138,000.

Other environmental issues also prevail. With the increasing loss of forest cover, tree cutting is strictly prohibited; only Devi tree cutting is allowed for fuel purposes. There is social pressure to hunt crocodile or smooth coated otter (ludhro) as the skin of the crocodile and otter fetch lot of money. Despite the ban, poor fishermen are forced to catch turtles and crocodiles illegally due to unavailability of fish.

Fishermen also face concerns from absence of a fish market in the area. Hence, fish marketing was undertaken in seven villages, in addition to fish release in the reservoir. As a result of restocking, stock depletion has been reversed – Keenjhar (60,000) and Chotiari (30,000), Partnership Fund (50,000). Also, better management practices in fish resource management (including juvenile fish prohibition) was introduced, in addition to fish farming and cage and pen culture as a sustainable livelihood source. After a harvesting period of six months, a PKR 12-15 seedling becomes 1.5-2kg in weight and gets PKR 250 per kg to the local fishermen.

Additionally, two fish collection marketing points were constructed in Phulal village, with five ice boxes (80 kg storage capacity) at each center. These centers are running under Pakistan Fisherfolk Forum. Around 150 fishermen have benefitted from this facility – they are able to preserve their fish catch and sell it at a comparatively higher price.

Five fish ponds were also built in Bakar and Abdul Qadir Mallah villages. 34,800 fish seeds (Kuriro, Morakho and Thelhi species) were released in these ponds. The community contributed around 15 to 20 percent in the cost of fish seed. 24 existing and prospective fish farmers participated in the fish farming training workshop organized under the Programme. The other part of the intervention was enriching five fish ponds in Bakar Lake. The community contributed around 20 percent of fish seed supplied in the fish ponds. The fish seed release was expected to deliver high margin financial profits. However, due to floods in 2011, water level increased in the reservoir and crossed over to the fish ponds in Bakar Lake which then overflowed resulting in the fish moving in to the lake. However, replication is being planned.



Adding value to fish catch



eti Bunder hosts a fishing community at large, and disposable income is meagre. People cannot afford the extra expense of improving fishing practices. Most poor fishermen have small boats and cannot go deep sea as they have to rush back inland to sell their daily perishable catch. When there is a decreased demand for fish, middlemen offer an extremely low price and the fishermen are left with no choice but to discard their catch, as they do not have access to a storage facility.

In order to address this gap, small cold storage boxes with a capacity of around 60kg were distributed among fishermen in inland and creek villages to alleviate their debt and increase the profit margin. Now

fishermen can stay at sea for a longer period, catch more fish and store their catch in good condition. Their monthly savings have increased considerably. They can also negotiate better rates with middlemen and sell their catch to the highest bidders since the fish can be properly stored. The ability to store catch has helped reduced wastage of fish resources.

Initially, 120 cold storage boxes were distributed in creek villages. However, after repeated demand and need, an additional 70 additional cold storage boxes were given to fishermen from Dablo, Yusuf Dablo, Bhor, Haji Moosa Jat, Ali Bux Jat, Gurnb, Haroon Lakhio, Timaan, Haji Mamoo Dablo, and Gili Sholani villages.



Additional support and fishing equipment is still required, hence replication efforts are needed. A short training workshop on business management should be organized and fishermen be made aware of self help techniques.



Revival of ecofriendly fishing practices



While fishing in deep sea, fishermen often face power engine failure or run out of fuel. Wind sails help them not get stranded in the sea. Hence, the Programme staff distributed twenty wind sails and ten boat engines, in addition to providing training wind sail use and fishing practices. Beneficiaries included the most economically deprived households in Turchan, Haji Mamoo, Haji Sheedi Dabblo, Cham Bearim, Yosuf Dablo, and Khober Gilli Sholani creeks, and the village of Keti Bunder. A local CBO, Marooara Development and Welfare Organization (MDWO) in Turchan helped in project implementation. The community also participated actively at each stage of the project.

The activity has helped provide a regular source of income to families. Provision of wind sails has helped



bring fuel consumption down by 50-60%, helping reduce carbon footprint and increase savings. With this cost effective alternative energy source, fishermen now make frequent fishing trips, especially during the windy season from June to August. Scaling up this scheme can provide similar benefits to a larger group.

Ginning factory: a door step facility to cotton growers



With agriculture being the main stake of communities in Chotiari town (major cash crops: cotton and wheat), there was a need for accessible facilities to local farmers. People had to go Sanghar to separate seed from cotton. Middlemen in the area had monopolistic control on the provision of seeds to farmers. Most of the seed supplied was non-certified and poor farmers had no alternative to its purchase.

Introduction of information technology



Present day white collar jobs require computer literacy, which communities in Programme sites often do not have access or ability to such a skill. Those who manage to attain matriculation or intermediate certification can often not compete for jobs in offices and even schools. Hence, the literate youth is destined to face vulnerability of farming and daily wage, which translates into ecological vulnerability from increased dependency for sustenance. During consultation, the local community requested WWF to set up an information technology center where computer courses can be taught. Two centres were therefore established in partnership with local CBOs. Fixed assets and other items were provided in addition to a mechanism for revolving fund through a minimum fee charged to students. In the first six months, staff, operations and main

tenance cost was covered by WWF - P. After the initial support by the Programme, the responsibility of managing the centres lies completely with the respective CBOs who also cover the computer labs' operational and maintenance cost. There are plans of improving the fee collection process and accounts management.



The centres have space capacity for fifteen students. They hold three sessions daily in Microsoft Office, Typing Tutor and English grammar. As a result, employment opportunities have been enhanced for the literate population, such as after attaining the skill of data entry.

The viability of the center is now being addressed through registration with universities and linkage with local donors. Further improvement is being planned through further training of instructors, and provision of internet and advanced level courses (such as programming and software development) for better job prospects in larger towns.

In Shaheed Benazirabad, the center was established in partnership with Pai Forest Network (a CBO network). The centre's first batch had twenty five students, twenty of whom were sponsored through the Programme. To date, upto fifty males and females have graduated.



In Jhimpir Town, the center was established in partnership with Keenjhar Youth Welfare and Development Organization (KYWDO). Jhimpir, a small town with 500 households, has a higher secondary school where students come from 23 adjoining villages. The

computer lab has enabled students them to get data processing jobs in local industries, such as Zolo Industrial Unit and the industrial zone of Nooriabad. The first batch had forty students. To date, more than 300 males and females have graduated from the centre.

Way forward

With a fifty year vision of Indus Ecoregion Programme, WWF – P is paving way for participatory development in priority sites to ensure continuation of its conservation initiatives. The partner CBOs have helped achieve this vision through ownership of livelihood initiatives that address contextual needs of local communities. The livelihood options introduced provide alternate and sustainable earning opportunities. They also support natural resource management, such as in the case of matka fishing and wind sails. Stakeholder involvement, such as relevant government departments, NGOs, private sector and educational institutes further buttress the viability of livelihood schemes for a common goal of Indus Ecoregion protection.



Our Mission

WWF - Pakistan aims to conserve nature and ecological processes by:

Preserving genetic, species and ecosystem diversity;

Ensuring that the use of renewable natural resources is sustainable,

both now and in the longer term; and

Promoting actions to reduce pollution and the wasteful exploitation and consumption of resources and energy

Vision of the Indus Ecoregion Programme

“People coexist with nature in complete harmony and biodiversity flourishes in its entirety”

Indus For All Programme, WWF - Pakistan

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