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## Study on Knowledge, Attitudes & Practices of Fisherfolk Communities about Fisheries and Mangrove Resources

**Sonmiani**  
(Final Report)



2005

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## Acronyms

|         |   |
|---------|---|
| BHU     | Basic Health Unit   |
| CBO     | Community Based Organization                                  |
| CIR     | Center for Information and Research                           |
| EEZ     | Exclusive Economic Zone                                       |
| EPA     | Environmental Protection Agency                               |
| FCS     | Fishermen Cooperative Society                                 |
| FDO     | Fisherfolk Development Organization                           |
| GOP     | Government of Pakistan  |
| GOS     | Government of Sindh   |
| KPT     | Karachi Port Trust  |
| KWSB    | Karachi Water and Sewerage Board                              |
| LHV     | Lady Health Visitor   |
| LHW     | Lady Health Worker  |
| NGO     | Non-Governmental Organization                                 |
| NIC     | National Identity Card  |
| PLA     | Participatory Learning & Action                               |
| PRA     | Participatory Rural Appraisal                                 |
| RCD     | Regional Cooperation for Development                          |
| RHC     | Rural Health Center   |
| SCLP    | Sustainable Coastal Livelihood Project                        |
| SDO     | Sonmiani Development Organization                             |
| SZABIST | Shaheed Zulfikar Ali Bhutto Institute of Science & Technology |
| UC      | Union Council   |
| WAPDA   | Water & Power Development Authority                           |
| WWF     | Worldwide Fund for Nature                                     |

## Glossary of Local Terms

|            |  |
|------------|--|
| Bunder     | Sea Port                                 |
| Chhapra    | Shed (For Fish Cleaning)                 |
| Chowki     | picket                                   |
| Ghatoo     | Experienced Fisherman                    |
| Ghattoo    | Most experienced fishermen               |
| Ghut       | Long fishing trip                        |
| Goth       | Village                                  |
| Hello      | One Day Fishing Effort                   |
| Horho      | Boat mostly used for fishing             |
| Jaar       | Net                                      |
| Jawar      | Half Moon                                |
| Jawar      | High Sea Tide                            |
| Jhenga     | Shrimps                                  |
| Karigar    | Expert in any Profession                 |
| Karkhano   | Factory                                  |
| Katra      | Surrounding Net                          |
| Khalasi    | Helper                                   |
| Khalasi    | Fishing Boat Crew Member                 |
| Laro       | Fishing Effort without Success           |
| Madarssah  | Religious School                         |
| Mallah     | Fishermen                                |
| Mangro     | Shark Fish                               |
| Mirbahar   | Fisherman                                |
| Nakho      | Boat Captain                             |
| Nakho      | Captain of the Boat                      |
| Otaq       | A common village place where guests stay |
| Paras      | Locality                                 |
| Paro       | Locality in Village                      |
| Patti      | Share (of Fish Catch)                    |
| Rachh      | Gillnet mainly for fish                  |
| Taluka     | Subdivision                              |
| Thukri     | Entangle Gillnet                         |
| Tonga      | Horse cart                               |
| Zikirkhana | Worship place of Zikris                  |
| Zikri      | A religious sect                         |

## 1. Introduction

Pakistan has a coastline of about 1050 km along the Arabian Sea. It extends from Sir Creek on the Indian side in the east to Gwatar Bay on the Iranian border in the west. It has a territorial coastal zone of 23,820 sq. km and an Exclusive Economic Zone (EEZ) of more than 266,650 sq. km. The coast of Pakistan is divided into the coasts of Sindh and Balochistan. This coastal zone is endowed with abundant natural resources, especially fisheries resources and mangrove forests.

The total population living along Sindh coast (up to 2-5km inland) is estimated to be about 1,000,000. Similarly, the total population living along Balochistan coast is about 250,000. Accordingly, the average population density in densely populated area is 1785/sq.km, while the average population density in scarcely populated area is about 87/sq.km. The Karachi coastal belt has a population of about half a million. The local inhabitants are mostly fishermen, professional grazers and agriculturists.

The Balochistan coast extends to 770 kilometres from the mouth of Hub River in the east to the Iranian border in the west. Ancient raised beaches mark the landward boundary of the Balochistan coastal zone about 20 kilometres from the present coastline. The Makran Coastal Range, which closely parallels the coast, effectively defines the zone and separates it physically, socially and economically from the rest of the province. A narrow continental shelf – in much of the area, only 15-50 kilometres wide at the 200-metre isobaths – defines the extent of the coastal waters. From here the continental slope dips sharply, delimiting an extensive, deep offshore zone. The only large island is Astola, near Pasni. It has an area of 20 square kilometres and is uninhabited. One smaller island lies just off the coast, but it has disappeared.

Majority of the coastal communities are solely dependent on the fisheries resources. The coastal waters of Pakistan are bestowed with a variety of fish and shrimp resources. The commercially important marine fisheries resources of Pakistan comprise about 350 different species. Some 240 are demersal fish, 50 are small pelagic, 10 are medium sized pelagic and 18 are large pelagic fish. In addition, there are 15 species of shrimps, 12 of squid/cuttlefish/octopus and 5 species of lobsters [Mangroves: Status and Management IUCN 2004].

The other important natural resources, on which the coastal communities largely depend, are the mangrove forests. These forests constitute an important productive ecosystem of the coastal region of Pakistan. They provide a range of valuable forest products such as timber, fuel-wood and fodder. They also provide shelter and serve as nursery and breeding grounds for prawns, crabs and many species of fishes as well as habitat for certain species of birds and mammals. They bind silt, accrete shorelines, halt erosion of beaches and of coastline and buffer the impacts of cyclones, storms and tsunamis.

Both the fisheries and the mangrove resources are under grave stress due to a variety of factors which have resulted in their rapid degradation as well as impacted the livelihood and socio-economic conditions of dependent coastal communities.

WWF Pakistan is implementing European Commission supported “Tackling Poverty in Coastal Area of Pakistan through Sustainable Coastal Livelihood Project” which is being implemented with the participation of coastal communities of Sindh and Balochistan. The targeted areas are Ketu Bunder, Sandspit in the Sindh province, Sonmiani and Kalmat Khor in the Balochistan province, covering the population of about 30,000. The project has a number of important components and activities. This project is aimed at improving livelihoods of these communities by achieving sustainable use of the mangrove and fishing ecosystems on which their livelihood depends. Besides, WWF is also engaged in mangrove resource conservation activities in *Korangi Phitti* Creek along the Karachi Coast.

One of the major components of the projects is to conduct “Baseline Research on Knowledge, Attitudes and Practices of Fisheries and Mangrove Forests” in the target communities/ areas. For this purpose, WWF engaged SZABIST Center for Information and Research (CIR) to conduct objective and systematic baseline research in the project areas, using the Participatory Learning and Action (PLA) process for documenting knowledge, attitude and practices of local communities towards fisheries and mangrove resources.

## **2. Study Objectives**

The research activity was aimed at understanding target communities’ attitudes and knowledge about their livelihood resources, besides collection of vital information about their socioeconomic conditions and poverty levels. The research will also facilitate in understanding and involving the local communities in data collection as well as preparation of community-based management and conservation plans for forestry and fisheries resources of these communities to ensure sustainable livelihood for them through mitigation of threats resulting in natural resources degradation and poverty.

## **3. Methodology**

A participatory method, PLA (Participatory Learning and Action) was adopted in the research process. PLA is an umbrella term used for a wide range of similar approaches and methodologies, including Participatory Rural Appraisal (PRA), Rapid Rural Appraisal (RRA), Participatory Learning Methods (PLM), Participatory Action Research (PAR), and Farming Systems Research (FSR). The common theme to all these approaches is the full participation of people in the processes of learning about their needs and opportunities, as well as the actions required to address them.

Participatory approaches offer creative opportunities for investigating issues of concern to the people, and for planning, implementing, and evaluating development

activities. They challenge prevailing biases and preconceptions about people's knowledge. The methods used range from visualization, to interviewing and group work. The common theme is the promotion of interactive learning, shared knowledge, and flexible, yet structured analysis. PLA has frequently been used for appraisal, analysis and research in natural resources including forestry, fisheries and environment. This tool helps in participatory appraisal and planning as well as participatory implementation, monitoring and evaluation of programs. PLA tools also help in the formulation of Village Development Plans.

### **3.1 Team- Formation & Training**

A rigorous exercise was done for selecting a skilled and experienced team to conduct field study. To ensure the participation of all community groups of the project areas, male and female teams were formed separately. Each team included field researchers, community development professionals and natural resource management experts. The selected team was imparted two days PLA/ PRA training at SZABIST Center for Information and Research to refresh their PLA skills before sending them in the field.

### **3.2 Research Process**

A participatory approach was adopted to initiate research activities in the village by informing in advance the village CBO and other stakeholders about the research team visit and its objectives. Five days research activities were planned and carried out in the coastal villages, Sonmiani, Dam Bunder, Baloch Goth and Bhira.

A number of research tools were used to collect data from the villages. For example, village map was the key tool, which both, male and female teams of researchers used to collect accurate information about the background of the village including the history of the area. The female and male community members of the village separately conducted this exercise. The village men and women were facilitated by the team to prepare village map. This exercise proved to be ice-breaking step, as it was during this process that the villagers and the research team came closer to each other. Preparation of village social map by the villagers generated ample information about the demographic characteristics of the village. The information was further supplemented with two other important PLA tools i.e. semi-structured interviews, timeline matrix, direct observations and transect walks.

The PLA tools helped in generating data about the key capital assets of the community including their human, physical and social capital. For example, village map and social map generated data about different assets available with the communities and preparation of mobility map by both women and men of the village helped in generating information about social capital including the levels of cooperation and conflict in the village.

Besides the preparation of village map and village resource map by the village women, the participatory exercises of resource picture cards and benefit analysis flow generated information about the gender based status and differences in the village.



Such data was further supplemented with the preparation of separate daily activity clocks by male and female of the village. Semi- structured interviews of the women of the village also helped in the data generation and analysis.

In addition, both male and female teams conducted exercise of natural resource mapping as well as developing livelihood system diagram to generate information about the main natural resources of the area. Tools like seasonal calendar, transect walks towards the natural resources as well as daily activity clock also supplemented the data. Similarly, Village Resource Map, Livelihood System Diagram, coupled with semi-structured interviews, generated information about the pattern of natural resource exploitation. While, the participatory exercise of historical timeline of natural resource status provided valuable information about temporal status of the natural resources.

Community practises toward the natural resources conservation were analysed through the tools such as, direct observations, semi-structured interviews as well as daily activity charts of male and female members of the village. The exercise of transect walks also supplemented information in this regard. The key tool used in PLA exercise to analyse the village problems was Problem–Cause–Solution Matrix. This exercise was carried out with the male and female members of the village. Other PLA tools including semi-structured interviews etc. also supplemented the information.

Preparation of the village development plan through Community Based Planning process was the important phase of PLA process in the village. The exercises for this phase were done on the last day of the PLA process after the collection of comprehensive information about the village, the people, the resources and the problems. For this purpose, separate gatherings of male and female were arranged, as the local traditions prohibit sitting of both men and women together. Before initiating the exercise, all the problems of the village, including social and natural resource problems, were written on a sheet of paper and presented before the villagers to show them whether their problems were properly reported and analysed by the PLA team.

After going through these problems, an exercise of Venn Diagram of stakeholders and institutions was carried out with the villagers to know about the influence of different stakeholders on the issues and their expected role in the solution of these problems. After the completion of such exercise, problem prioritisation and solution exercises were done with the help of PLA tool, Problem Ranking and Pair-wise Ranking Matrix.

In the end, through the PLA tool of Problem –Cause- Solution Matrix, first the solution of the problems, already prioritized by the local community, was identified and written into specific Matrix column and then the roles of community, local CBO, WWF and the Government were identified. The community gathering to prepare this community planning was joined by a large number of community members, office – bearers of local CBO, WWF - Pakistan staff and the councilors of local government.

## 4. Socio-economic Background of the Area

### 4.1 Sonmiani

Sonmiani is situated in *Lasbela* district of Balochistan. Notified as district in 1954, Lasbela derives its name from *Las* signifying a plain and *Bela* [jungle] its principal town with *Uthal* its headquarters. The district is situated on the southern coast of Balochistan. It is bounded on the north by *Khuzdar* district, on the east by *Dadu*, *Malir* and *Karachi* districts of Sindh province, on the south by the Arabian Sea, and on the west by *Gwadar* and *Awaran* districts.

Topographically, *Lasbela* district can be divided into three parts, the north-eastern mountains and hilly areas, the southern western hilly areas and the central plains. The main drainage of the district is carried out by the *Porali* River and its tributaries, the *Winder* and the *Wirhab* rivers. The *Phor* and the *Hingol* Rivers rise from the hills of *Awaran* district and flow for a short distance in *Lasbela* before falling into the Arabian Sea. The social set up in the district is tribal. All the tribes other than Baloch and Brahui, Med, Khoja and Hindus who have settled in Lasbela are known as *Lasi*.

| Table: 1                        |   |
|---------------------------------|---|
| Historical Timeline of the Area |   |
| Year                            | Event   |
| 1947-48                         | Large scale migration of Hindus from Sonmiani                 |
| 1950                            | Primary School was established in Dam village                 |
| 1951                            | Houses left by Hindus were allotted to the locals             |
| 1953                            | Tehsil headquarter shifted to Winder                          |
| 1957                            | Middle School established in Sonmiani                         |
| 1966                            | Water flow increased in Winder river due to high floods       |
| 1968                            | Sonmiani was made tehsil                                      |
| 1972                            | Road was constructed between Sonmiani and Winder              |
| 1973                            | Drinking water was supplied through pipeline from Winder town |
| 1978                            | Drastic reduction in Winder River due to lack of rains        |
| 1986                            | Hospital for women was constructed in Sonmiani town           |
| 1989                            | Electricity was provided to Sonmiani                          |

Sonmiani is one of tehsils of District *Lasbela*. Sonmiani town is located some 95 km from Karachi near Winder River Delta. It is 13 km from RCD Highway in the west. It is linked with RCD by road which passes from the center of the village and terminates at Dam Bunder some 3 km in the West from Sonmiani. Winder River forms its delta in South –east of the village. The village is spread over 127 acres. Presently there are about 300 households in the town with the total population of 3000. The village has five mosques, one Dargah and three *Chhapras* for purchasing fish. These *Chhapras* are called *companies* in the local language.

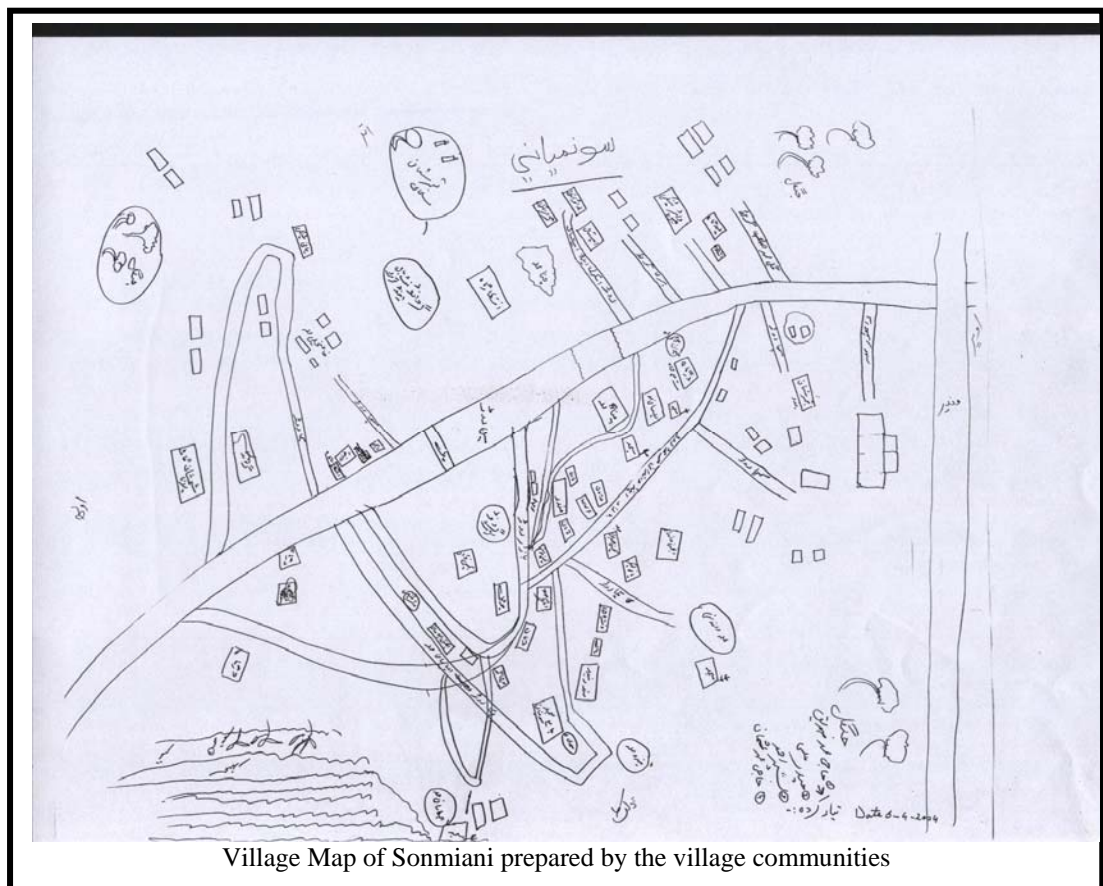
Historically Sonmiani was a place of considerable importance and much of the trade from Central Asia, which is now carried to Karachi by the railway, made its way

through Kalat to the coast at Miani. According to the historical record in Sonmiani's palmy days, 500 boats were engaged in fishing and 250 large native crafts in the carrying trade to Muscat, Karachi, Bombay and elsewhere. Pearl oysters were found in the bay. About the year 1805 the *Joasmi* pirates of *Ras-ul-Khima*, known as *Uttumi* sacked and burned the town.

On the construction of the Indo-European Telegraph lines, a large bungalow was built by the telegraph department. At one time Sonmiani was surrounded by a mud wall, but this was allowed to fall, and by 1838 scarcely a vestige of it remained. The remains of a small fort in the suburbs, built in former times to resist the attacks of pirates, were visible till 1840. However, it was later on completely destroyed.

There are different stories about how the village was named as Sonmiani. According to one such story, *Jam* family, the traditional historical rulers of this region, collected tax from the village Port in the form of gold. It is said that the area was so prosperous that *Jam* Rulers collected one kg gold daily as tax from the port. As “son” is Sindhi word for gold, the village was named as Sonmiani i.e. port of the gold. However, according to another aphorism, more than a century back there lived a woman named “Soan”. She was a hospitable woman, who would serve the travelers traveling from long distance as well as the poor fishermen fishing in the area, with meals. Thus, the village was later on named after that generous woman.

According to community elders' view, historically Sonmiani was a large and prosperous sea port of Balochistan. Business activities also boomed in this port town as the town bazaars were existed more than 600 shops. The village population had



Village Map of Sonmiani prepared by the village communities

soured to 10,000. Hindus were engaged in business and trade while the Muslim minorities did fishing as well as worked as laborers. Even before the independence of Pakistan, Sonmiani was a busy business and trade centre, with Hindus dominating the trade activities. However, the town received a big jolt as Hindus migrated from the area soon after the partition of the subcontinent.

The fate of the town was also being sealed gradually by another important factor. The Winder River mouth (Delta) area had also started silting with the passage of time. Interestingly, such silting process also reached at its peak at the same period when the town was facing the economic jolt due to the migration of Hindu businessmen. As a result, fishermen communities of the town were deprived of their fishing port as well as a major shallow water fishing ground. The siltation blocked water into Sonmiani Port, resultantly; the boats could not be anchored. This was a great economic shock for the villagers, who had no other option but to find another fishing ground as well as port. *Dam Bunder*, a very small village and fishing port was the only alternative being in the proximity of Sonmiani village. A number of villagers of Sonmiani village had to migrate to *Dam Bunder* to continue their fishing activities.

#### **4.2 Dam Bunder**

*Dam Bunder* is located in Union Council and tehsil Sonmiani. It is 100 km from Karachi on the coast of Arabian Sea in the west. It is 3 km in the west from Sonmiani. The village is surrounded by the sea in west and north while in the northwest there are huge sand dunes. The town is spread over 200 acres. It is divided into two blocks. The town has 800 households with the population of 7000. There are 30% *katcha* houses in *Dam Bunder*. Besides a good number of *pucca* houses there are 15-16 bungalows in *Dam Bunder*. The standard of these bungalows is not less than the Bungalows of any prosperous town of Pakistan. Majority of these bungalows is owned by fish traders. .

About a century old *Dam Bunder* town is named after a fisherman named *Damb*, who first settled here. Afterwards slowly and gradually his family increased and other fishermen also started settling there. However, *Dam Bunder* saw its boom when the mouth of Winder River started silting destroying Sonmiani Port. As a result, the fishermen from *Sonmiani* started migrating to *Dam Bunder*.

Some fishermen of Karachi also came here and with the passage of time this small village was converted into a big commercial town. Contrary to the sleepy town of Sonmiani, *Dam Bunder* is a Port town with hectic local level business activities. These activities reach at their peak during the fishing season, when a large number of outsiders temporarily settle in the village and earn their livelihoods by working as laborer on the fishing boats.

It is about 100 km from Karachi, and about 4 km from Sonmiani. It is connected with sea from North and West, whereas, from South-eastern side it is surrounded by big sand dunes. 40 percent of the houses are made of cemented blocks in the town while the rest of the houses are like small huts which shows that majority of those living in

*Dam Bunder* belong to poor labour class. Some big bungalows are also there which belong to influential fish traders.

The main occupation of the villagers is fishing. The season of the fishing starts from August to May. Most of the people are Sindhi speaking. In the fishing season about 3000 people come from other areas for earning their livelihood from fishing. They come from the areas like Uthal, *Lakhara*, *Bela*, *Sonmiani*, *Khuzdar*, *Hingol* in Balochistan; Rahimyar Khan, Multan, Lahore, Rawalpindi in Punjab; Karachi, Hyderabad, Jati, Thatta, Mirpurekhas, Larkana in Sindh and Peshawar, Bannu in NWFP and from Azad Kashmir. Bengalis and Burmese also through the areas in fishing season. The number of Afghanis and Bengalis is more than the others in fishing season.

The town is practically divided into two parts i.e. commercial part close to the Bunder and the residential portion. The seasonal migrants live in small huts owned by the locals. The locals rent out these huts to the seasonal migrants. To keep their cultural and traditional entities alive and intact, the local people do not allow the outsiders to visit their residential areas. They remain confined to the commercial area. The intensity of the local commercial activities can be judged from the fact that there are about 100 small and big shops, cabins and grocery shops etc in the town. Both dish antenna and cable system is available in the town. Besides, there is also a good transport business as many buses, taxis, Datsuns etc run between the town and Winder, Karachi, Hub etc.

#### **4.3 Bhira & Baloch Goth**

*Bhira* and *Baloch Goth* are not as old settlements as *Sonmiani* or *Dam Bunder* are. *Baloch Goth* is situated between *Sonmiani* and *Dam Bunder*. *Baloch* village is also known as “*Washi village*”. It is not as old as other settlements like *Sonmiani* or *Dam Bunder*. The villagers settled here some 14 years back. There are 70 households in the village with overall population of 400. The village, like other fisherfolk villages of the area, is divided into localities. There are three main localities in the village. They are: *Sangoor* locality, *Dagarzai* locality and *Lahooti* locality. *Dagarzai* locality is the major locality of the village, *Sangoor Baloch* locality being the second biggest locality. The third locality *Lahooti* has only 6 households. There are separate *Zikirkhanas* in both *Dagarzai* and *Sangoor* localities. However, *Sangoor* locality has also a mosque.

The inhabitants of the village are mostly poor and they are “*Zikri*” by religion. They had migrated from Kalamat (near Pasni) on Makran coast to settle here. There are mostly wooden houses in *Bhira* village. Majority of the villagers are fishermen. One or two persons of the community are influential and have decision power. This community is very conservative. They live in closed atmosphere and are very reluctant to mingle with the community other than those belonging to *Zikri* sects. Although the main profession of the community is fishing, yet all of them do not have their own boats.

*Bhira* village is about 2½ km away from Dam Bunder in the north. According to the villagers of *Bhira*, it is about 200 years old, however, no historical document or report authenticate such claims. *Baloch Goth* was established at least 14 years back.

There are 171 households in the villages. The village population is 803 with 405 male and 388 female. The coast in the west hounds the village and there is a series of big sand dunes from east to south. The households of the village are separate and are built at some distance from each other. Only extended families have their households close to each other, while others live at a distance from each other.



Baloch Goth Village Map Prepared by the Village Women

All the houses of the village are *Katcha*. The only school building, dispensary and two *Zikirkhanas* in the village are *pucca*. The villagers originally belong to Makran, Layari, Kalamat and Sangoor. The village is divided into two parts i.e. *Murad Ali Para* and *Bagarzai* locality. According to the local communities the government has sanctioned 200 acres of land for the village; however, individual village households have no ownership documents.

The villagers belong to *Zikri* sect. There is no mosque in the village. However, there are two *Zikirkhanas*, one for the male and other for the female. The villagers including male and female perform *Zikir* regularly. Migration is reported from the village contrary to other villages of the area. Each year, about 5-6 families migrate. The basic cause of migration is lack of drinking water and unreliable passage to the village as the passage leading to the village is usually inundated during high sea tides.



All the villagers are fishermen. About 50 villagers are matriculate and five have passed their Intermediate, out of which two are teachers. Only five villagers have government jobs i.e. one is Dispenser, one is midwife, two are teachers and one is peon in the school. There is one community organization in the village: *Maheeger Tarqiyati Tanzeem*. However, the organization has no strong roots among the villagers because it has still not played any considerable role in the welfare of the local villagers. There are about 100 small and big boats of the villagers.

## 5. Social Setting

### 5.1 Sonmiani

The village is divided into eight localities on the basis of casts. These localities called as *Para* in the local language are: *Wandani, Tipaee, Rajput, Raeesani, Soomra, Saman, Mahairi* and *Channa/Wadda*. Each locality has its own leader/influential personality. As per local tradition, people refrain from going to each other's *Para* frequently and there is strict *Pardah* system in the village. However, on the collective issues of the village the villagers seem to be united. Majority of people living in and around Sonmiani is Sindhi speaking. Before partition, the village was dominated by Hindu community who migrated from the village in 1947 and people from the adjacent areas settled there.



Local Communities Preparing Village Map in Bhira Village

### 5.2 Dam Bunder

*Dam Bunder* town is divided into a number of localities and small villages. Some of the localities and small villages of the town are: *Shaikh Abad, Usman Mohala, Haji Ahmed Village, Ramvani Mohala, Fadlani Mohala, Nakhuda Sadih Village, Talbani Mohala, Illayasni Mohala, Vingora Mohala, Mandrah Mohala* etc.

People of different tribes live in *Dam Bunder* including *Sanghoor, Jorozei, Khaskheli, Qureshi, Lasi, Mandhra, Bheel, Pathans* and *Wingro*. *Qureshis* are said to be old inhabitants of *Dam Bunder* while *Wingoros* originally belong to *Kharochhan* area of Sindh who migrated and settled at *Dam Bunder*. Contrary to *Sonmiani*, a large number of the people from different areas have migrated and settled in *Dam Bunder*.

People here speak Sindhi, Laasi, Urdu, Marwari, Pashtu and Balochi. Only Muslims live in Dam Bunder while Hindus have only few shops in the Market and they live in Sonmiani.

### 5.3 Baloch Goth & Bhira

Majority of the people living in Baloch Goth belong to *Zikri* sect who came from Hingol and Bhira villages. There are three *Paras* in this village including *Sanghoor Para*, *Dagarzai Para* and *Lahooti para*. 50 percent of the houses in the village are made of wood, while some houses are cemented.

The Baloch village communities originally belong to Hangoor, Layari, Makran and other areas of Balochistan and Sindh. Some of them came here in the search of livelihood while other migrated due to conflicts with other communities in their areas.

Meanwhile, people living in Bhira village have migrated from Makran, Liyari, Kalamat and Sanghoor and settled there. The village is divided into two localities i.e. *Murrad Ali Para*, which is also called Sanghoor Baloch Para and Laghar Para.

## 6. Livelihood Resources

90% of the inhabitants living in Sonmiani are fishermen who are mainly dependent on fishing but there are few who have other source of livelihood. At least 1% of them are in government services. About two dozen people have taxis. Similarly about 20 people have small-scale business like hotels, grocery and Paan shops etc. The agriculture, which is mostly dependent on rainfall, was also one of the livelihood resources of the people here. However, due to continuous drought situation, agricultural activities have come at almost standstill. They are employed in government, semi-government and private departments/ firms. Details of such employees are given in table -2:

**Table: 2 List of Clans Living in Dam Village**

| S# | Name of Clan | S# | Name of Clan   |
|----|--------------|----|----------------|
| 1  | Ronjah       | 17 | Deryo          |
| 2  | Baloch       | 18 | Mondrah        |
| 3  | Khaskhelly   | 19 | Shaikh         |
| 4  | Bhangwar     | 12 | Hindu          |
| 5  | Brohi        | 21 | Jamote         |
| 6  | Punjabi      | 22 | Shahook        |
| 7  | Pathan       | 23 | Mandro         |
| 8  | Magsi        | 24 | Channa         |
| 9  | Khosa        | 25 | Angaria        |
| 10 | Zahiri       | 26 | Soad           |
| 11 | Sabra        | 27 | Sethar         |
| 12 | Masoor       | 28 | Gonga Mirbahar |
| 13 | Zikri        | 29 | Laasi          |
| 14 | Mirbahar     | 30 | Jagdal Baloch  |
| 15 | Soomra       | 31 | Mandhra        |
| 16 | Qureshi      |    |                |

**Table: 2 Details of the Sonmiani Villagers Employed in Different Departments**

| Department/Profession              | No |
|------------------------------------|----|
| Male teachers                      | 20 |
| Female teachers                    | 15 |
| Balochistan Levis                  | 3  |
| Employment at water supply scheme  | 4  |
| Employment in Health Department    | 5  |
| Employment in Fisheries Department | 2  |
| Employment in Lasbela Industries   | 2  |

The main source of livelihood of the people of Dam Bunder is fishing along with small-scale business like hotels; cabins, shops while some have taxis and *Tongas*.



About 55 people of the village are in government service. About 50 local people are involved in fish trade. The source of livelihood of the people of Bhira village is also fishing. Only two persons are government teachers and one is working as dispenser in government hospital while one is peon.

About 35 community members of Dam village are employed in Government Departments. Details of the employments are given in table 2. Besides, there are 7 Hotels, 80 shops are also in Dam Bunder. There is a Petrol Pump (selling only diesel) and shops selling diesel to the boat owners in the town. There are six Boat-making factories in Dam Bunder town. There are also some influential people living in the town.

**Table:3 Details of the Dam Villagers Employed in Different Departments**

| S.N | Department    | No of Employees |
|-----|---------------|-----------------|
| 1   | Teachers      | 15              |
| 2   | Lady Teachers | 2               |
| 3   | Nursing/LHV   | 15              |
| 4   | Water Supply  | 6               |
| 5   | Pakistan Nevi | 7               |
| 6   | Levis         | 11              |

*Mohammad Hussain Jamote*

is one of such influence persons. He owns about 35 fishing boats. Besides his bungalow, there are about 20 such other bungalows in the town. There is one *Madarsah* and one mosque in the village.

Meanwhile, almost all the villagers of Baloch Goth are solely dependent on fishing. There is no other alternative livelihoods resource for the villagers. Being directly involved in fishing, the skills of the local communities centre around fishing and other related activities like boat making, boat repairing, net making and net repairing etc. Some people in Sonmiani have agriculture cultivation skills. Similarly, people in Sonmiani and Dam Bunder have urban market skills i.e. motor mechanics, carpenters etc.

In the past when rainfall was frequent, there were green grasses and pastures in the area. Livestock was in large numbers in the area. The people would keep cows, goats and sheep. Nomad tribes also brought the herds of sheep in the area. Resultantly, ghee and other products prepared from ghee and milk were the key exports from the area. However, with the passage of time rainfall drastically decreased and the local communities started losing the livestock- one of the key alternative sources of food and income.



Fishermen cleaning and mending the net in Dam Bunder

## 7. Wealth and Poverty Profile

“Poor man’s organs (arms and legs) and rich man’s money earns for him” was the common perception about the difference between the poor and rich by the local communities. As per this definition, those fishermen who have neither boats nor nets of their own and work as labourers are in fact poor fellows. According to the community perception, those fishermen who have their own boat and at least two to three nets are in fact middle class fellows and the rich are those who have alternative livelihoods except fishing. This alternative livelihood can be a shop in the village, one or more than one taxis, or a government job etc.

The overall socio-economic condition and living standard of the local communities of Sonmiani is far better than other coastal areas. Almost 90 percent of the houses in Sonmiani are made of cemented blocks, which is none of the indicator that the communities are not well-off. However, according to the community estimates more than 20% households of Sonmiani are poor, 60% belong to middle class and only 20 percent are rich.

During the PLA exercise in Dam Bunder, 50% of the villagers are poor, 40% belong to middle class while only 10% are rich. Besides, almost 60 percent of the households in Baloch Goth as well as Bhira village are poor and 40% belong to middle class, while no household in both the villages can be called as rich. Fishing is their only livelihoods and during the off-season there is no alternative livelihood activity for them and they are compelled to take loans from the middlemen and fish traders.

## 8. Key Capital Assets of the Community

### 8.1 Human Capital

Education and health are the basic human capitals of any society. Following is the status of education and health in *Sonmiani*, *Dam Bunder*, *Baloch Goth* and *Bhira* village:

#### 8.1.1 Education / Literacy

Male literacy ratio in Sonmiani is about 12 percent. However, women literacy is hardly 3 percent. There is one Boys' Middle School and one Girls' Middle School in the village. The boys after passing eighth class also go to *Winder* for continuing studies in secondary classes. When the boys complete secondary education in *Winder*, they have to go for higher secondary education either at Karachi or *Uthal*. Therefore, generally the students discontinue their education after passing matriculation as their parents cannot afford or like to send their children to far flung areas for further studies. Rather, they prefer to involve their children into ancestral fishing practices/profession. Only seven boys have completed graduation and post-graduation. Eight boys have gone up to intermediate and 20 boys have completed their matriculation whereas, 60 to 70 boys are enrolled in primary and middle level.

Girls Middle School was established in the village in 1982. Nine lady teachers teach 190 girl students in this eleven –room school building. A large number of boys and girls of school age are out of school in the village. According to the local communities, about 150 school age children of the village are deprived of education. Similarly, about 200 girls of school age have not been enrolled in the school. Poverty and lack of awareness about education are the key causes of keeping children out of school.

Meanwhile, literacy ratio in Dam Bunder is only 10 percent among the male and hardly one percent among the female. Primary school has been established in Dam Bunder in 1950. High School has also been established in the same school. At present 325 children are enrolled in the school which imparting education from primary to metric level. There are 17 teachers in the school. There are also two girls' schools in the village. The village has one *Madarsah*- the religious school.

While education ratio, in both Baloch Goth and Bhira villages, is only five percent among the male and less than one percent among the female. The Baloch village has only Girls' school. There is no Boys school in the villages. Boys are also imparted education jointly with the girls in the Girls' school till class three. Afterwards keeping their growing age in view they are transferred to Boys school *Dam Bunder*. There are two lady teachers belonging to Sonmiani town who impart education to about 120 girls and boys in the village school.

Meanwhile, there is only one govt. primary school in the village. Boys and girls study together. The ratio of boys and girls is 80:20. There are two local teachers employed by the govt. The qualification of the teachers is Matriculation and FA (Intermediate) respectively. Both are trained teachers and have Primary Teaching Certificate (PTC). For higher education boys go to *Winder, Dam, Bela* and Karachi while girls are not allowed to go outside the village except for health purpose.

There is a primary school in Bhira village. However, school building is in a deteriorate condition. There is no furniture in the school and the school children sit on the ground using mats. Out of 300 children of the village only 70 children including girls and boys are enrolled in the school. After having completed primary education few of those children continue their education in the secondary school of Dam Bunder.

### 8.1.2 Health

Different kinds of diseases are common in *Sonmiani* including malaria, hepatitis; TB, allergy, diarrhoea etc are common in the area including Sonmiani, Dam, Bloch Village and Bhira Village. The unhygienic atmosphere in the village persists mainly due to *paan* (betel leaf) chewing and spitting all over. The betel leaf chewing also causes dental problems. The sewerage water also flows everywhere that makes the villages dirty and unhygienic. The villagers have also reported some cases of cancer due to frequent use of *guttka*. The women of the area face leucorrhoea and other health problems. Due to non-availability of lady doctor, women face host of problems in access to health facility. There is one Basic Health Unit in Sonmiani where one MBBS doctor comes twice a week while rest of the time it is run by dispensers and other lower medical staff. The treatment in BHU is free. Averagely 10 to 40 patients visit the hospital per day. People of adjacent villages also visit the hospital for treatment.

There is one Basic Health Unit in Dam Bunder in which a qualified doctor is available. However, it lacks basic facilities like medicines, X-ray machine etc. In case of emergency, the patients are taken to Karachi hospitals for which the family has to pay 1000 rupees for taxi fare. Averagely, 60 to 80 patients visit the BHU daily. There is no lady doctor available in Dam Bunder.

*Baloch Goth* lacks basic health facilities and the villagers go to Dam Bunder for the treatment. However, there is one Rural Health Centre, which is run by a dispenser. One MBBS doctor belonging to Windor town visits the RHC only once a week. Malaria and allergy are common diseases in the village.

There is a Basic Health Unit (BHU) in Bhira village. However, the In-charge of the BHU, an MBBS Doctor visits the units only for one day in a week. A Dispenser runs the BHU. There is also severe shortage of medicines in the BHU. Ignorance to health and unhygienic conditions is causing health problems. They keep livestock inside the houses without managing the sanitation properly. There is no system for solid waste disposal and it is dumped inside the living premises for several days.

The women are the worst sufferers because of many gynaecological problems and due to cultural norms they hesitate to tell their sufferings to male members of the family. Untrained midwives handle the maternity cases in the village. For delivery in the hospital, one has to take the pregnant woman to Karachi, which becomes expensive for them. Therefore, they prefer to give birth to child at home.

Besides the gynaecological problem the women encounters diseases like blood pressure, arthritis (backache), jaundice, tonsillitis, digestive problem, migraine, dental problems etc. like males, females also chew betel leaf (*paan*) too much, which leads to dental problems. A woman usually takes 7-8 *paans* daily.

The infants at the age of one to twelve months mainly suffer from diarrhoea, fever, cough and cold, pox, polio, Bronchitis, ear, throat, stomach pain and jaundice. Sometime the disease is fatal. There is no vaccination arrangement for newborn babies. Non adoption of cleanliness and hygiene practices by mothers also creates health problem for children.

## 8.2 Physical Capital

### 8.1.3 Land

Some communities of Sonmiani own rain fed agriculture lands near Sonmiani town. However, due to continuous drought conditions the lands have become barren. Local communities of Sonmiani and other surrounding villages historically own the lands of their residences land. However, they have still not been provided lease documents.

### 8.1.4 Boats & Nets

Eighty percent of the local fishermen of Sonmiani own boats and fishnets. The cost of small boat of 26 ft ranges from Rs. 150,000 to Rs. 200,000 while the price of big boat

#### Box: 2

#### Religious Harmony in the Villages

The village communities in Baloch village prefer to live separately. Each family has its separate house. They usually prefer to sit on the ground in place of any cot etc. The villagers are religiously divided into *Zikris* and *Sunni Muslims*. *Sunni Muslims* are called *Nimazis* in the village as the *Zikris* prefer doing *Zikir* in place of praying *Namaz*. However, both the sects live in peace in the village. Persons belong both the sect even are found, one family i.e. the male being *Zikri* and the female being *Namazis*, however, their religious sects are never any hindrance in their social relations. There is a slight difference in *Namaz* and *Zikir*. *Zikir* is also performed five times a day like *Namaz*; however, in *Zikir* there is no concept of *Pesh Imam* separately standing before the row of the worshipers. In the *Zikir* *Pesh Imam* also stands in the row of other worshipers. The *Zikris* also recite Ouranic verses during their *Zikirs*.

of 36 ft is between Rs.700,000 to Rs.800,000. The fishermen, who do not possess their own boats, work as labourers on the boats of others.

The fishermen of Sonmiani use different kinds of fishnets including *Rach Lara*, *Makhan* and *Thukree*, which they consider environment friendly nets. The price of *Rach Lara* is about Rs. 50,000 while small net costs Rs. 11,000 to Rs. 12,000.

Meanwhile, there are more than 300 small boats and 200 big boats in Dam Bunder. The small boats belong to local fishermen while majority of the big boats is the property of fish traders. There are about six boat-making factories in Dam Bunder. Different kinds of wood are used in making boat including *Dayal*, *Chilgozo*, *Talhi*, *Saag* and *Chandan*. At least four boats can be prepared at one time in the factory. A labourer who was preparing the boat told the PLA team that a 26 feet boat takes 35 days in the preparation. It costs about Rs. 100,000 whereas, the boat of 32 feet costs Rs.200,000 to Rs.400,000 and the 46 feet *Hora* costs about Rs.800,000 to Rs.20,00,000.

The fishermen of Dam Bunder use different kinds of fish nets including *Thukree*, *Rach Lara* and plastic net. The fishermen were very much concerned over the large-scale use of Boolo-Gujjo net. They were of the view that Boolo-Gujjo net can be stopped if local people unite against its use. According to the local communities, all the influential people of the area use Boolo-Gujjo net.

Majority of the boats anchored at Dam Bunder, are big boats ranging from 32 to 46 ft. These boats have the capacity of taking about 40,000 kg load. There are about 300 boats in Dam Bunder. Out of which 200 are big boats. Fish market is close to the Bunder. There are 35 local fish purchasing traders, which call their fish purchasing

shops as “companies”. After purchasing fish, they supply the same to the big and export oriented companies in Karachi.

## 8.3 Social Capital

### 8.3.1 Social Cooperation

Although, Sonmiani is divided into different localities where visiting each other's *Para* without any purpose is restricted but there is also a close cooperation among the inhabitants living in the village. On collective issues of the village, all villagers are united. The head of the village settles the minor disputes. Majority of the people of Sonmiani belong to *Sunni* sects who are religiously opposed to *Zikris*. According to their perception, the *Zikris* are non-Muslim.

### 8.3.2 Social Conflicts

The social conflicts in the area are centred on the livelihood resources. The key conflict of the local communities is with the fishermen of Karachi Sindh, who according to the local communities, illegally fish in their fishing grounds by using harmful nets. According to the local communities, the influential fishermen, of Sindh who own big and modernized fishing trawlers usually bribe Balochistan Fisheries Department officials and continue fishing in the local fishing grounds and deprive the local communities from their livelihoods and also cause depletion of fish resources. The local communities are also in conflict with the Bengali and Afghani people who settle in Dam town during fishing season.

### 8.3.3 Institutional Cooperation

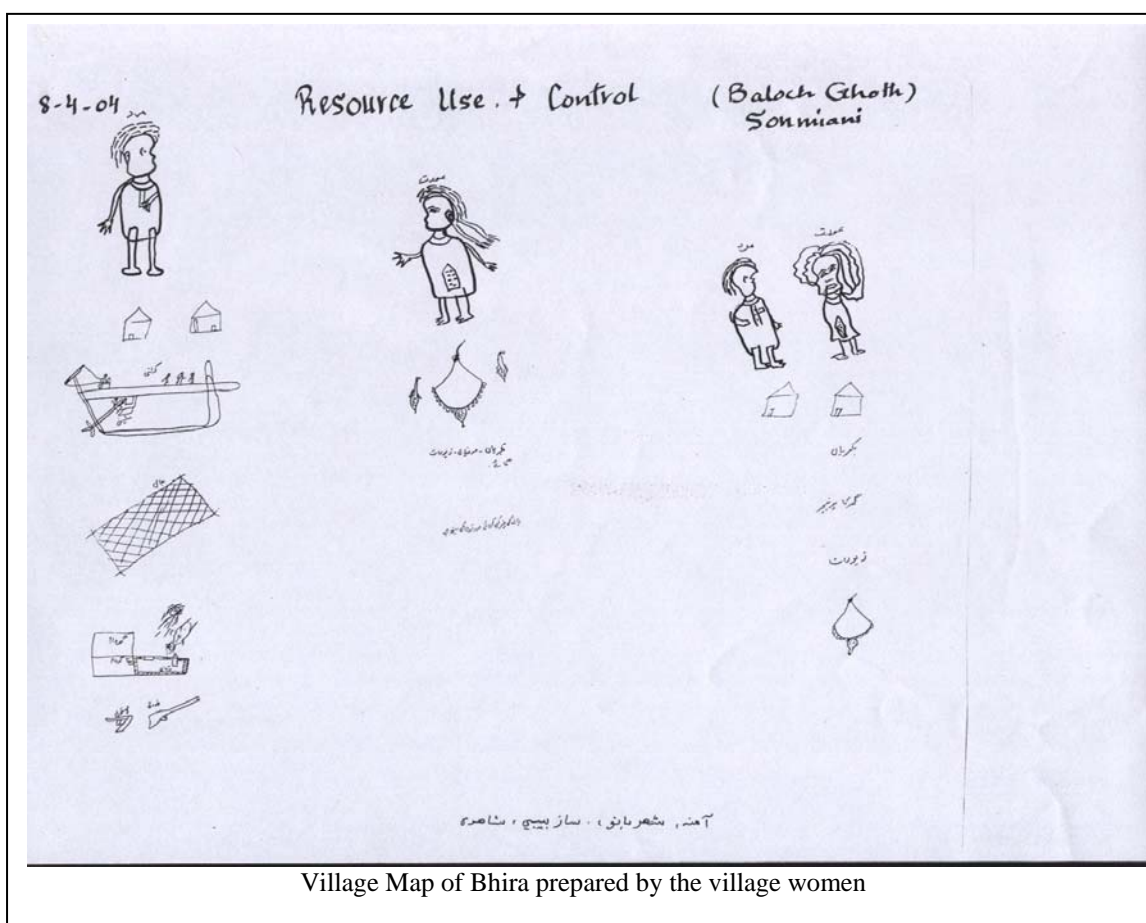
There is one CBO in Sonmiani named Sonmiani Development Organisation (SDO), which is actively involved in the social work as well as natural resource protection of the village. WWF-Pakistan has also been working in the village since last eight years, striving for the preservation and protection of natural resources of the village. It has established a small office in Sonmiani where local people including a lady worker have been hired to mobilise the people regarding the protection of mangroves.

WWF-Pakistan is also actively engaged for the preservation and protection of natural resources in Dam Bunder. It is working along with one CBO, SSDCN, which is registered CBO working in the village since 1997. There is only one CBO *Maheeger Tarqiati Tanzeem* in *Bhira* Village. However, there is no any CBO in Baloch Village.

## 9. Gender Analysis

### 9.1 Gender & Social Status

The status of women in Sonmiani and surrounding areas is the same as it is in other areas of Balochistan. Men hold a monopoly of economic and social power. The literacy rate among women is very low. This is due to socio-cultural values in the area. Medical facilities for women in the area are very limited. Women visit *Pir* and *Molvies* for their general treatment and call traditional birth attendants for the delivery of babies. Generally, women observe *purdah* however the tradition of *purdah* is decreasing in the towns like Sonmiani.



Violence against women is observed in the area, but it is never reported. Women think that men have the right to beat them so they do not seek any legal aid in this respect. The entire Baloch society is of tribal nature where mostly girls are killed in the name of honour. However, in Sonmiani and its surrounding areas, situation is different where no incident of honour killing has ever occurred. Denial of women's rights in matters of property and inheritance as recognized by Islam is due to the cultural code of honour. Women are rarely allowed to own productive assets such as land or livestock. And they generally lack control over their labour and its proceeds.



## 9.2 Gender & Empowerment

Majority of women of Sonmiani are housewives limited to their houses and household chores. There is strict *Pardah* system in the village. Majority of women does not work outside their homes. During PLA exercise, it was observed that there are some families in the village where parents still differentiate between son and daughter. They feel happy over the birth of son as they consider him the sole owner of the property while girl, according to them, has to go to her own house after marriage. However, in few families the girls are also being considered equal to boys as they take care of their parents more than sons.

The marriages usually take place between 14 to 20 years of age and mostly they are held within families. The women of Sonmiani along with their household chores do other kinds of work for their earning like making Rilhi, doing embroidery work, sewing cloths etc. They save their earnings and spend the same in purchasing household goods.

Similarly, majority of women in Dam Bunder are housewives while few of them work outside in other houses. Some girls work as Lady Health Worker (LHW) in government hospital and some are teachers in government school. They do embroidery and the work of sewing cloths in their houses and make earnings.

The women spend their savings in their houses or purchase clothes for themselves and for their children. The girls and boys in Dam Bunder are considered equal. The marriages usually take place between 16 to 20 years, within the families as well as outside the family. There is no trend of honour killing in Dam Bunder.

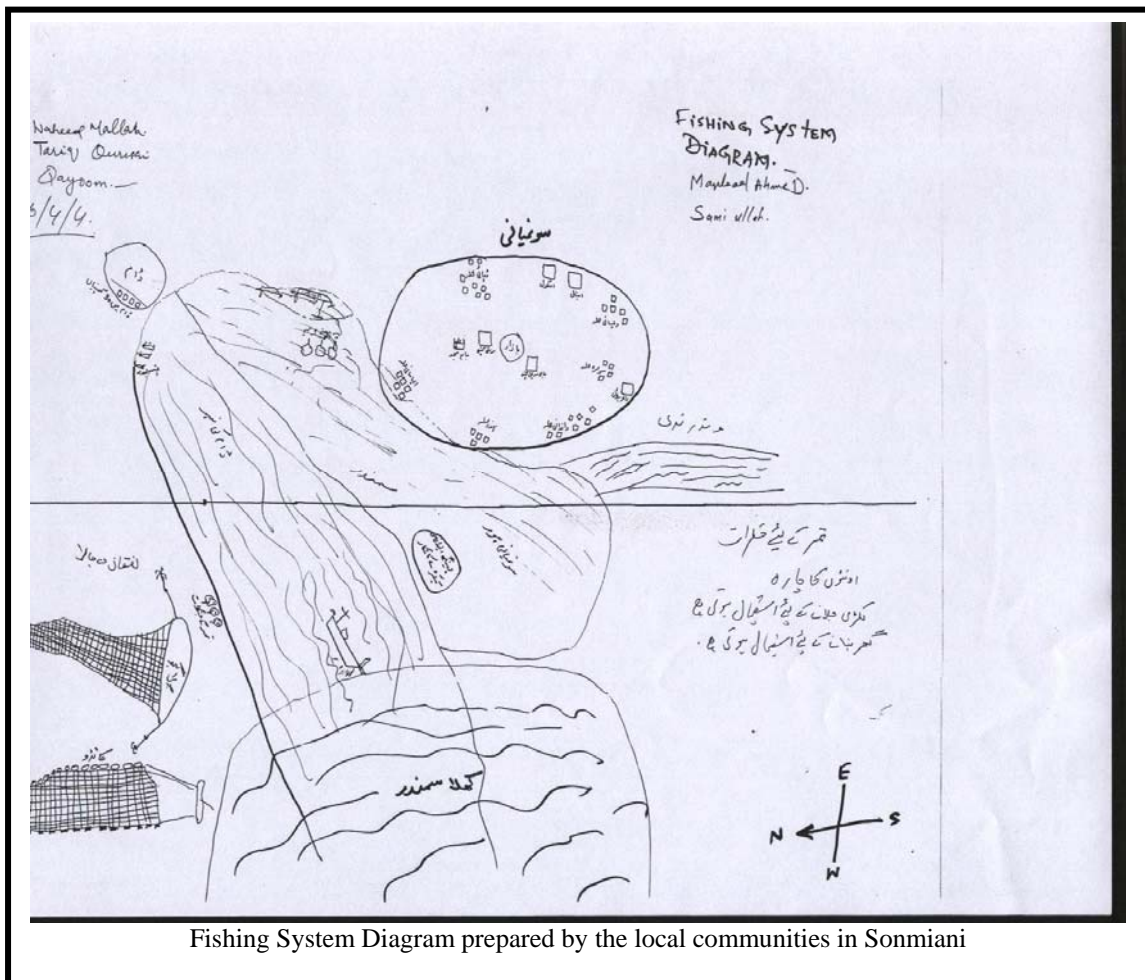
Despite strict *Pardah* system in Sonmiani, women are not confined only to their homes. They are allowed by their male members to go outside of the village for their treatment or for shopping and meet with their relatives. They go to *Windor*, *Dam Bunder*, *Uthal*, *Lakhro*, *Liyari* Karachi and *Bela*, whereas, within the village premises, they go to each other's houses on different occasions like marriage or death.

Similarly, women of Dam Bunder also enjoy mobility to other towns like *Uthal*, *Las Bela*, *Rana Bunder*, *Ormara*, *Hub*, Karachi and Hyderabad. They also go to the shrines of *Qalander Lal Shahbaz* in *Sehwan* and *Bhit Shah* once in a year. They are not allowed to go outside alone; they go along with their male members. Four women of Dam Bunder are working as Lady Health Worker (LHW) in the government hospital while two girls are teachers in the government schools. The women of Dam Bunder were looking more empowered and well off than Sonmiani.

There is heavy workload on the women of Bhira village. Women usually visit the mangrove forest at least one km from village to bring fodder for the animals as well as woods to use as firewood. Another important work is to fetch water from the village wells some three km from the village. It is also one of the key responsibilities of the women who fetch water usually with the help of donkeys.

## 10. Key Natural Resources of the Area

Fish, shrimp and mangroves are the key natural resources of Sonmiani and surrounding villages. Mangrove forests are considered to be breeding grounds for fish and shrimp species.



Fishing System Diagram prepared by the local communities in Sonmiani

### 10.1 Fish Resources

Different kinds of fish and shrimp species are found in the coastal waters of Sonmiani as well as Dam Bunder. The major fish species, according to local communities, are *Loor*, *Mor Manger*, *Bhanbhor*, *Dandiyoon*, *Mushkan*, *Ghore*, *Khaga*, *Paplet*, *Chodi* and others while the shrimp species including *Patas*, *Jairo*, *Kiddi* and *Kaket*.

The fishing season starts from month of August and continues up to the mid of March while in June and July the fishing is off due to high tides in the sea and official breeding season ban. In summer season as the sea is closed for fishing due to high tides, the fishermen catch different kinds of crabs including Blue and Red Crab.

**Box: 3****Vanishing Palla Fish**

Due to incessant rains, the Winder River continued its flow, most of the time bringing millions of cusecs of fresh water as well as thousands of tons silt to push back the sea currents and expending Winder Delta area. *Palla*, the traditional delta fish was abundant. However, with the drastic reduction in Winder flow due to constant decrease in rains in the region, *Palla* fish species has almost vanished from the fishing grounds of Sonmiani.

There are almost fifteen kinds of fish that are found in the area. Six kinds of poisonous fish are also there. The catch of *Palla*, *Pomfret* (black and white), *Surmai*, *Kiga* (Singal or Singar), *Sood*, *Mungro* and other fish species has drastically declined in the area. A number of fish and shrimp species are presently caught from the coastal water.

- *Loowar*, a small fish is usually used in feed for poultry farms. It is called as “*Gand*” in the local language. Due to increase in the poultry product production, sufficient quantities of trash fish like *Loowar* in demand. This induces the fishermen to catch *Loowar*.
- Shrimps locally known as “*Sana*” are also in good demand in the fish industry especially due to its growing export. There are four major species of *Sana*. They are: *Jaira*, *Kalri*, *Kiddi* and *Tiger*.
- *Sua* fish is one of the delicious and price-worthy fishes. The fishermen who catch *Sua* fish during any fishing trip are considered as “fortunate fisherman”. Usually whenever it is caught, it is caught in large numbers. According to the fisherman, this year one fishing boat caught about 500 pieces of *Sua* fish with the overall weight of 15500 kg and earned the total price of Rs 4 million. Another fishing party was fortunate enough to catch 900 pieces with the weight of 27000 kg and earned Rs 7 million.

## 10.2 Mangrove Resources

Mangrove forests are the key natural resources of the area. These forests are found in Miani Hor area, which is a swampy lagoon situated in 90 km from Karachi on the eastern-north part of Balochistan coast. This 60-km long and 7-km wide tortuous and contorted body of water is connected to the sea by a 4-km wide mouth. Porali and Windor rivers are the main source of freshwater for Miani Hor, which enter into the bay. The total area of the bay is about 125.5 sq. km and the shelf adjacent to it is about 80 km wide.

According to the locals there are three species of mangroves in *Maini Hore* area. They are locally known as *Timar*, *Kumri* and *Kain*. The local communities say that out of these species *Timar* is not facing severe decreases, as there is little pressure of cutting and chopping on this species. Its fodder is nutrient for the cattle; therefore communities’ prefer to use it as fodder. However, the *Kumri* species is certainly on decline. It is because the *Kumri* wood is straight and is used in building houses etc. Similarly, *Kain* is also on decline due to cutting and browsing by the animals especially camels, belonging to Layari, Bhira and other villages.

Due to frequent cutting of mangroves, the forest is decreasing rapidly. However, with the conservation activities of WWF and the local CBOs, the awareness scale of the villagers with regard to the mangrove forests has increased to a considerable level and people cut the mangroves only when there is dire need of firewood.

### **10.3 Agricultural Resources**

Along with fishing, some community members of Sonmiani are engaged in agriculture livelihood. However, its cultivation depends upon rainfall. According to local farmers, the agricultural year is divided into two seasons namely: *Waskaro* and *Wando* seasons. The *Waskaro* season consists of five months i.e. August to December in which people start sowing different kinds of crops including *Jawar*, *Guwar*, *Mong*, *Bajara*, Melon and Water melon. These crops become ready for harvesting within four months. Similarly, the *Wando* season also depends upon winter rains. The season is called *Wando* [Literally idle] because very few crops are cultivated compared to the *Waskaro* [literally rainy] season due to lesser scale of winter rains. The crops cultivated during this season include *Jawar*, *Mong*, Melon and Water Melon etc. The main market of these crops is in *Winder*.

## **11. Resource Exploitation and its Impact**

### **11.1 Exploitation of Fish Resource and its Impact**

Coastal waters near Winder River delta are the common fishing ground. In summer season, due to high tides, the fishermen do not go into the deep-sea and they prefer to go to the channels of Winder River. In fishing season, which usually starts from August to March, fishermen of Sonmiani go to Dam Bunder and into open sea. Dam Bunder has facility of Jetty and many fish purchasing companies are also there. Different kinds of nets are used by the fishermen of Sonmiani both in shallow water as well as in the sea. Those fishing gears are *Thukri*, *Raybiyoon*, *Makhan rach* etc.

The local fishermen are very much concerned on the use of unsustainable fishing gears as they consider it a great harm to fishing resources of the area. According to the local communities, *Nazim* of District *Lasbela* has been insisting local fishermen to refrain from the use of unsustainable methods. However, such kinds of nets are still in use despite his repeated insistence. They were of the view that these harmful nets can be stopped if local people stand united and struggle against the unsustainable fishing methods. They should also come into contact with the concerned authorities as well as the influential people of the area as majority of those using such harmful nets are the influential people of the area.

During the fishing season, people from upland countryside as well as illegal immigrants from Bangladesh, Burma and Afghanistan fish in the area using harmful nets. They also cut mangrove trees. Similarly, the local fishermen complain that Sindh's fish trawlers over-exploit the fish resources by using trawl nets. According to

them the Balochistan Fisheries Department does not take serious action to resolve this issue.

According to the locals, Fisheries Department, Government of Balochistan and Marine Fisheries Department are not taking any serious action for the sustainability of fisheries resources of the area. Details of the exploitation and present status of various fish and shrimp species are as under:

#### **Decline in Different Fish Species Suggested by the Local Communities**

| <b>S #</b> | <b>Fish</b>     | <b>Status during last 5 years</b> | <b>Causes of Reduction</b>  |
|------------|-----------------|-----------------------------------|-----------------------------|
| 1          | Sua             | 50% reduction                     | Over fishing, harmful nets  |
| 2          | All             | 50% reduction                     | Over fishing , harmful nets |
| 3          | Dangro          | 25 percent reduction              | Harmful nets                |
| 4          | Paplet          | 50 percent reduction.             | Bolo-Gujjo                  |
| 5          | Seeari          | 25 percent reduction              | Over fishing                |
| 6          | Manger          | 50 percent reduction              | Deep sea trawlers           |
| 7          | Soeeri          | 25 percent reduction              | Over fishing                |
| 8          | Gore Surmai     | 75 percent reduction              | Deep sea trawlers           |
| 9          | Seeari (Ranwas) | 25 percent reduction              | Deep-sea trawlers           |
| 10         | Seengari        | 50 percent reduction              | Deep-sea trawlers           |

#### **Shrimps**

| <b>S#</b> | <b>Name of Shrimp</b> | <b>Status during last 5 years</b> | <b>Causes of Reduction</b> |
|-----------|-----------------------|-----------------------------------|----------------------------|
| 1         | Jaero                 | 80 percent reduction              | Bolo-Gujjo                 |
| 2         | Kalree                | 80 percent reduction              | Bolo-Gujjo, Kado           |
| 3         | Patas                 | 60 percent reduction              | Bolo-Gujjo, Kado           |
| 4         | Kiddi                 | 60 percent reduction              | Bolo-Gujjo, Kado           |
| 5         | Kiddo                 | 80 percent reduction              | Bolo-Gujjo, Kado           |
| 6         | Kaket                 | 50 percent reduction              | Coastal pollution          |

#### **Crabs**

| <b>S#</b> | <b>Name of Crab</b> | <b>Status during last 5 years</b> | <b>Causes of Reduction</b> |
|-----------|---------------------|-----------------------------------|----------------------------|
| 1         | Sodho               | No reduction                      | No reduction               |
| 2         | Tika wala           | No reduction                      | No reduction               |
| 3         | Jaero Crab          | 50 percent reduction              | Bolo-Gujjo                 |

## **11.2 Exploitation of Mangrove Resources & its Impact**

Mangrove resources of the area are exploited by the local communities for their use as firewood as well as fodder for their livestock. Some communities in the remote areas also own camels, which are also dependent on mangroves. However, the key threat to the mangrove resources of the area is the illegal commercial harvesting. Despite the awareness to some extent among the local communities, there are still some groups which are involved in the illegal cutting of mangrove trees. However, according to the local communities due to the community awareness and resistance being offered to



such groups, there has been at least 15 to 20 percent decrease in the illegal cutting of mangroves.



A woman of Baloch Goth, carrying a heap of mangrove leaves talks with one of Women PLA Members

## 12. Problems' Analysis

The problem-Cause-Solution matrix was used in PLA exercise to analyse the key problems of *Sonmiani* and the adjacent villages including *Dam Bunder*, *Baloch Goth* and *Bhira Goth*. The team comprised of male and female members, which separately carried out this exercise. Besides, other PLA tools including semi-structured interviews etc were also used to gather information. Following information came out as a result of the above-mentioned exercises:

### 12.1 Use of Harmful Nets by Karachi Trawlers

Majority of local fishing communities have been involved in sustainable methods of fishing. However, the fishing grounds of the local communities face threat from the trawlers from Sindh province. These trawlers use harmful nets i.e. trawl net and wire net, which cause depletion of fishery resources and deprive the local fisherfolk communities from their only livelihoods.

According to the local communities there are certain interest groups in Balochistan Fisheries Department. Sindh province fishing trawlers, with destructive nets are permitted to fish in Balochistan Coastal waters while collecting monthly bribe of Rs 30,000 to 35,000 per trawler. There is corruption and commission involved in Fisheries Department to such a scale that the ministry is virtually auctioned to higher bidder to become the Minister of the Department.

The community still strongly resists the use of trawl net and wire net, which are still harmful for the breeding grounds of fish and shrimp resources in the coastal water. They, while putting their lives in jeopardy, catch those outsider fishermen, who use such nets. They hand over those caught to the elected representatives. However, they usually become depressed and dejected when the local elected representatives set those outsider fishermen free on the pressure of influential people.



Women in Bhira Village Discuss their Problems with PLA Team

## 12.2 Over-exploitation of Fish Resources by Deep Sea Trawlers

Deep-sea trawlers licensed by Pakistan government to fish in deep-sea water of the coast are considered as the key problem by the local fishermen of Sonmiani, Dam Bunder and other areas. According to the communities, the deep sea trawlers have long nets and these trawlers are involved in fishing day and night. They complained that fish catch has been drastically reduced to continuous fishing by these trawlers. Besides, over fishing, these trawlers also pollute the coastal water by discarding the fish catch which has little market price or export value. These deep sea trawlers, according to the local communities also violate their jurisdiction and fish near the coast, which are traditional grounds of local fishermen.

## 12.3 Reduction in Fish & Shrimp Catch

Drastic reduction in fish and shrimp species is the main concern of the fishermen of Sonmiani, Dam Bunder, Baloch Goth and Bhira village as it is directly linked with their livelihood resources. The main causes of the reduction, according to fishermen of the area, is the frequent use of harmful nets including *Bolo-Gujjo*, *Katra* net and

the deep-sea trawlers. The reduction in fish and shrimp catch has drastically reduced the incomes of local fishermen. Such a situation is pushing them towards poverty.

#### **12.4 No Employment in Local Industries**

A number of industrial units are working at *Hub Winder* and *Uthal* towns of District *Lasbela*. The ratio of local population employed in these industrial estates is as meager as 10 to 15 percent. No practical steps are being taken for the skill development of the local people to ensure that they receive more skilled jobs in the industries.

Local communities of Sonmiani are not given jobs in the factories and industries situated at Windor Industrial Zone. On the contrary, people from Karachi are provided jobs in these industries and they are also provided transport facilities for daily out back.

#### **12.5 Inadequate Education Facilities**

Educational facilities in Sonmiani village are only up to middle school level both for boys as well as for girls. The teaching -staff in the schools is also inadequate. Therefore, the students do not receive proper education. Same is the situation in other towns and villages including Dam Bunder, Baloch Goth and Bhira, where, there is a lack of both educational institutions as well as staff.

#### **12.6 Lack of Health Facilities**

There is one Basic Health Unit (BHU) in Sonmiani village where a doctor comes twice a week. There is no lady doctor available in BHU and only one LHV is appointed in the dispensary. It also lacks basic facilities like X-Ray plant, Ultra-sound machine and medicines due to non-availability of lady doctor women face hardships. They are compelled to go to Karachi for their treatment. Snakebite cases are also common in this village as it is a sandy area. However, no snakebite vaccination is available in BHU. The villagers usually go to Winder village for purchasing medicines. Similarly, there is a lack of health facilities in Dam Bunder, Baloch Goth and Bhira.

#### **12.7 Lack of Gas Facility**

The entire *Las Bela* district including Sonmiani, which is the home district of the sitting Chief Minister of Balochistan *Jam Yousif* has no gas facility. Due to non-availability of gas in Sonmiani, women face lots of difficulties in cooking. Lack of gas facility also compels the villagers to cut mangrove trees to use as fuel wood.



## 12.8 Drinking Water Shortages

Previously due to constant fresh water flow of Winder River and rains in the area ground water aquifers near village in East and North were sweet while in the West the ground water aquifers being in the proximity of the sea were saline. Sweet water was made available in the east and north of the village by digging only 10 to 12 ft wells.

There is lack of drinking water facility in Baloch Village. Drinking water pipeline for Dam Bunder town passes near the village. Some influential villagers have made holes in the pipeline and fitted them with walls and are receiving water from that pipeline. However, the poor communities of the village fetch water from Sonmiani while traveling for two km. The women bear the brunt of lack of drinking water as they are mainly responsible for bringing water by carrying water drums on donkeys.

The community members of Bhira village have dug wells for drinking water purpose one 3 km away from the village. As the ground water aquifers are saline in the village, the villagers have dug during water wells on some distance in the east of village. The villagers reach these wells after crossing large sand dunes. And the wells are also situated in the sandy land. Usually wells are dug up to 8 ft as below this, ground water aquifers are again saline. These wells need frequent repayment as they are covered by the sand storms.

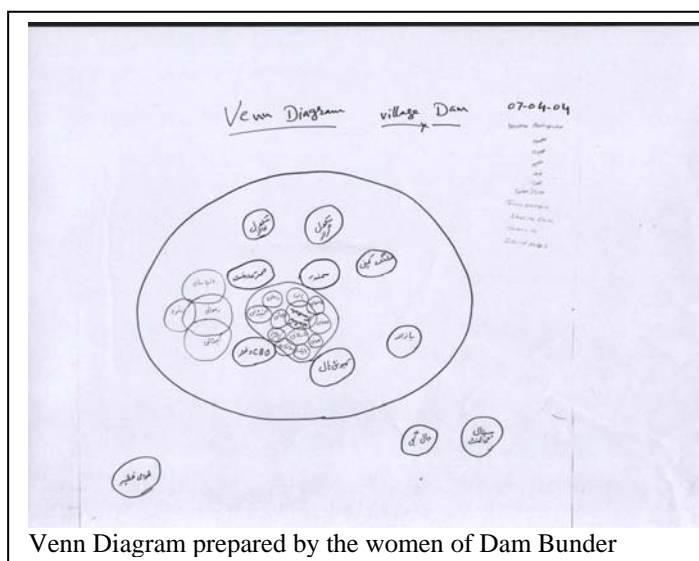
## 12.9 Poor Electricity System

The poor electricity is also a key problem of Sonmiani village. The electric wiring has been outdated. As a result, the villagers face hardships because the breakdown of electricity has become a routine. There is no mechanism to correct the wiring.

### 13. Village Development Plan: Community based Planning

### 13.1 Stakeholder Analysis

The local fishermen are the key stakeholder of *Sonmiani* and its surrounding areas. The influential persons, who own big and small boats and also launches, are important stakeholders. In the entire coastal area, the middlemen play key role in fishing business and they are also the key stakeholders who purchase fish and shrimps from local fishermen. In Sonmiani and the adjacent



villages e.g. *Dam Bunder*, *Bhira* and *Baloch Goth*, the middlemen hold important position who provide loan to the fishermen and in return purchase their fish catch during fishing season. Sonmiani itself is sub-division and has status of Union Council whose headquarter is Winder. Fisheries Department and Government of Balochistan, are also the main stakeholders of Sonmiani. The non-governmental organisations like WWF-Pakistan, which is working in the village for the last eight years for conservation of mangroves and other natural resources of the area is also an important stakeholder of the village.

### **13.2 Prioritisation of the Problems by Male**

- **Sonmiani**

1. Unemployment
2. Lack of high school
3. Insufficient health facilities
4. Reduction in fish and shrimp catch
5. Houses are not leased
6. Illegal cutting of mangroves
7. Problem of sand dunes in *Windor* Delta
8. Lack of water for agricultural lands
9. Lack of gas facilities
10. Lack of sewerage system
11. Lack of drinking water facilities
12. Lack of sports ground
13. Lack of alternative sources of livelihoods
14. Problem of channels
15. Lack of Vocational Training Institute

- **Dam Bunder**

1. Use of harmful nets
2. Unemployment
3. Sea intrusion
4. Lack of Jetty
5. Non-availability of lady doctor/lack of medicines in the hospital
6. Lack of drinking water
7. Lack of girls' middle school
8. Solid waste management problem
9. Cutting of mangroves
10. Movement of sand dunes
11. Reduction in fish and shrimp catch
12. Lack of sewerage system

### 13.3 Prioritisation of the Problems by Female

- **Sonmiani**

1. Drinking water
2. Health
3. Education
4. Problems in cooking
5. Filth in the streets
6. Unemployment
7. Drugs problem
8. Reduction in fish catching
9. Pollution in sea

- **Dam Bunder**

1. Lack of lady doctor
2. Shortage of drinking water
3. Lack of gas
4. Growing use of drugs
5. Unemployment
6. Lack of Girl' High School
7. Lack of Training Centre for girls
8. Reduction in mangroves
9. Shortage of teachers in Primary School
10. Reduction in fish catch
11. Problems of lack of sanitation

## 14. Community Based Planning by Male

| S# | Problem                      | Solution  | Community Role                              | CBO Role   | WWF Role                                | Government Role                                      |
|----|------------------------------|---|---|--|---|--|
| 1  | Unemployment                 | Employment to outsiders should be banned and locals should be hired. Establish Technical Institutions | Contact with leaders and Nazim of the area  | Raise awareness for the rights of local people   | Coordination                            | Provide jobs. Order factories to employ local people |
| 2  | Lack of Education Facilities | School should be activated  | Meet with elected representatives           | Coordination with concerned authorities          | Coordination with concerned authorities | Provide school and staff                             |
| 3  | Lack of Health Facilities    | Appointment of qualified male and female doctor. Provide medicines and other facilities               | Build pressure                              | Coordination                                     | Coordination                            | Provide doctors and medicine                         |
| 4  | Reduction of fish catch      | Stopping the use of harmful nets  | Coordination                                | Raise awareness against such nets                | Coordination                            | Implement ban  |
| 5  | Houses are not leased        | Ownership rights should be given  | Struggle through processions/demonstrations | Coordination                                     | Coordination                            | Start leasing process                                |
| 6  | Reduction in mangroves       | Raise awareness. Plantation   | Plant mangroves                             | Help in plantation<br>Take care of the mangroves | Help in plantation<br>Training          | Protect forests                                      |

## 15. Community Based Planning by Female

| S# | Problem                 | Solution  | Community Role                     | WWF Role  | Government Role                                 |
|----|-------------------------|---|------------------------------------|---|---|
| 1  | Drinking water          | Water lines should be provided                                      | Join hands with each other         | Raise issue up to concerned authorities                     | Provide water lines                             |
| 2  | Health                  | Appointment of qualified lady doctor. Availability of medicines etc | Join hands with each other         | Raise issue up to concerned authorities                     | Appoint lady doctor                             |
| 3  | Education               | Provide High School for girls                                       | Approach to government             | Help in opening school                                      | Construct high school for girls                 |
| 4  | Problems in cooking     | Provide gas facility  | Would give application.            | Raise issue up to concerned authorities                     | Provide gas connections                         |
| 5  | Filth in the streets    | Provide drainage system   | Raise issue up to local government | Raise issue up to concerned authorities                     | Provide sewerage and drainage system            |
| 6  | Unemployment            | Provide alternative jobs  | Join hands                         | Help in opening training centres                            | Provide alternative jobs                        |
| 7  | Drugs problem           | Imposition of ban on drugs  | Join hands                         | Raise awareness etc   | Take strict action against those who sell drugs |
| 8  | Reduction in fish catch | Imposition of ban on such nets                                      | Join hands                         | Help in eliminating such nets. Hold workshops for awareness | Impose and implement ban on harmful nets        |
| 9  | Pollution in sea        | Pollution should be controlled                                      | Would help                         | Raise issue up to concerned authorities                     | Take action to stop pollution                   |

## **16. Training Needs Assessment**

### **16.1 Training Needs of the local Communities**

With day-to-day decrease in the natural resources especially the fish resources, the key training and capacity building, the local communities needs are, the trainings in alternative livelihoods/ job skills. There are a number of industrial units in *Windor* industrial area. However, the local people are usually not preferred for jobs in the industries on the pretext that they have no skills. Therefore, people belonging to Karachi and other urban centres are provided jobs. In such a situation there is a dire need to provide skill development / capacity building trainings to the local communities. Some of the training needs of the local communities are as under:

- Fish Farming
- Grading Packing and Marketing of Fish
- Apiculture: Honey Bee Keeping
- Poultry Management
- Skills in Rural Marketing
- Mangrove Reforestation
- Establishment of Mangrove / Fish Sanctuaries
- Fishing Effort Diversification
- Alternative Livelihood Skills
- Saving and Credit Management
- Market Access and Mechanism

### **16.2 Training Needs of local CBOs and NGOs**

The local NGOs and CBOs have been partners of WWF in its efforts for the preservation of natural resources especially mangrove forests. These organizations have also received a number of trainings. However, these trainings have been confined to the preservation and management of natural resources. However, the local CBOs and NGOs still need following trainings:

- Organisational Management
- Financial Management
- Project Planning and Preparation
- Project Management
- Office Management
- Community Development
- Sustainable Development
- Social / Community Mobilization
- Mangrove Management Techniques
- Mangrove Ecosystem
- Assessing, Monitoring and Conserving Biodiversity
- Sustainable Management of Natural Resources & Gender
- Fisheries Resource Management

### **16.3 Training Needs of Line Departments and WWF**

Following trainings are needed for the line departments as well as for WWF staff:

- Community based natural resource management
- Nexus between the natural resource degradation and poverty
- Community Based Coastal Fisheries Monitoring, control and Surveillance
- Community based natural resource management
- Coastal Resource Management
- Mangrove Management Techniques
- Assessing, Monitoring and Conserving Biodiversity
- Organizational Management
- Sustainable Management of Natural Resources & Gender
- Fisheries Resource Management
- Integrated coastal resource management
- Participatory planning processes

### **17. Conclusion**

Sonmiani and surrounding areas have been witnessing civil society organizations' activities for many years. WWF has been the key civil society organization active in the area. However, the activities of the civil society had had little relevance with the day-to-day socio-economic problems of the local people. Majority of the organizations had confined their work purely to the preservation and protection of mangrove forests.

Although the local communities had been beneficial to some extent by receiving awareness on some critical natural resources as well as by receiving small scale remuneration for planting mangroves on different occasions. At least two community members received jobs as WWF opened its field office in Sonmiani village.

However, according to the community perception, the civil society organizations work including the activities of WWF have not brought any positive change in their socio-economic profile, as their activities never addressed their core socio-economic and livelihood problems. As such, the scale of community cooperation with the civil society organization has drastically reduced.

To bring change in such community thinking about the civil society organizations, there is dire need that multifaceted efforts should be carried out by the civil society organizations for socio-economic uplift of the local people. Efforts should be made for solving their day-to-day problems and side-by-side working on the natural resource conservation to gain the lost credibility.

## **Annex: I: Study Team**

- Sikander Brohi                      Principal Researcher
- Syed Ali Hasnain                Natural Resource Management Expert
- Ishak Soomro
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- Hamida Maznani
- Saveeta Kiani
- Fakhrunisa Jatoi
- Rubina Bhatti
- Shaista Shaikh

## **Annex: II: List of PRA Tools Used in the Field**

The teams used following key tools to collect data from the field:

- Observation
- Semi-structured interviews of individuals, key informants and groups
- Focus Group Discussions
- Village Social Maps
- Village Resources Maps
- Transect walks
- Timeline
- Trend Lines
- Venn Diagrams
- Wealth Ranking
- Daily Activity Clocks
- Seasonal Calendars
- Resources Picture Cards
- Income & Expenditures Matrices
- Pair-wise Ranking / Problem Ranking
- Problem Analysis Chart
- Community Action Plan