

DIRECTORATE GENERAL AGRICULTURE ENGINEERING & WATER MANAGEMENT SINDH HYDERABAD



SINDH IRRIGATED AGRICULTURE PRODUCTIVITY ENHANCEMENT PHASE - I PROJECT

FINAL FEASIBILITY REPORT

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Social Impact Assessment

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G3 ENGINEERING CONSULTANTS (PVT.) LTD.

Head Office:

32-A/2, Zafar Ali Road, Gulberg-V, Lahore

Tel: + 92 (42) 35779413, 35779414, Fax: +92 (42) 35779415

Web: www.g3ec.com Email: info@g3ec.com

Hyderabad Office:

7/B, Unit No. 3, Latifabad, Hyderabad

Tel: +92 (22) 3813293, 3813294, Fax: +92 22 3813295

Field Office Matli:

House No 92/17,
Wadha Mohallah, Near Rais Ali Akbar
Nizamani Banglow, Matli,
Phone: +923332512684

Field Office Mirpur Khas:

House No. C-14, Block No 02,
Unit No. 03, Satellite Town
Mirpur Khas
Phone: +92233860026

Field Office Sanghar:

House No. 346/347, Cooperative Housing
Society
Sanghar
Phone: +92235542512

Field Office Ghotki:

House No. 03,
Shanti Nagar Colony,
Ghotki
Phone: +927236842121



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ABBREVIATIONS

ADG	Additional Director General
AWB	Area Water Board
BCR	Benefit Cost Ratio
BOQ	Bill of Quantity
BP	Bank Procedure
CC	Cement Concrete
CIF	Cost Insurance & Freight
CMR	Complaints Management Register
CNIC	Computerized National Identity Card
DBG	Drainage Beneficiary Group
DD	Deputy Director
DG AE&WM	Director General Agriculture Engineering & Water Management
DO	District Officer
EA	Environmental Assessment
EIRR	Economic Internal Rate of Return
EMMP	Environmental Management and Monitoring Plan
ESMP	Environmental/Social Management Plan
FAQs	Frequently Asked Questions
FFS	Farmer Field School
FO	Farmer Organization
FOB	Free On Board
FTI	Field Team Incharge
GCA	Gross Command Area
GIS	Geographical Information System
GoS	Government of Sindh
GP	Good Practices
GPS	Global Positioning System
GRC	Grievance Redress Committee

GRM	Grievance Redressal Mechanism
GVP	Gross Value of Product
GW	Ground Water
HEIS	High Efficiency Irrigation System
I & D	Irrigation & Drainage
IBIS	Indus Basin Irrigation System
ICB	International Competative Bidding
IDA	International Development Association
IDMT	Irrigation and Drainage Management Transfer
IF	Inter-Farm
IPM	Integrated Pest Management
IPSNM	Integrated Plant and Soil Nutrient Management
IRR	Internal Rate of Return
ISEA	Integrated Social and Environmental Assessment
LBOD	Left Bank Outfall Drain
NCB	National Competitive Bidding
NGO	Non Governmental Organization
NPIW	National Programme for the Improvement of Watercourses
NPV	Net Present Value
NVP	Net Value of Production
O & M	Operation and Maintenance
OF	On-Farm
PAD	Project Appraisal Document
Pak EPA	Pakistan Environmental Protection Agency
PAP	Project Affected People
PCCL	Precast Concrete Lining
PCPL	Precast Parabolic Lining
PD	Project Director
PDO	Project Development Objectives

PEC	Pakistan Engineering Council
PIU	Project Implementation Unit
RAP	Resettlement Action Plan
RBOD	Right Bank Out Fall Drain
RPF	Resettlement Policy Framework
SCF	Standard Conversion Factor
SIDA	Sindh Irrigation and Drainage Authority
SIMF	Social Impact Management Framework
SOWMAEP-I	On-Farm Water and Agriculture Productivity Enhancement Phase-I Project
IPM	Integrated Pest Management
SS	Scoping Session
SWMO	Sindh Water Management Ordinance
TDS	Total Dissolved Solids
TOR	Terms of Reference
TS	Technical Sanction
USAID	United States Assistance for International Development
VO	Variation Order
WAPDA	Water & Power Development Authority
WC	Watercourse
WCA	Watercourse Association
WST	Water Storage Tanks

4 SOCIAL IMPACT ASSESSMENT

4.1 PROJECT BACKGROUND

Pakistan relies on the largest contiguous irrigation system in the world, namely the Indus Basin Irrigation System (IBIS) to provide basic food security (90 percent of food production and 25 percent of the Gross Domestic Product). Agriculture is the single most important source of employment and exports (two thirds of employment and 80 percent of exports) and irrigation represents more than 95 percent of the total consumptive use of water.

The World Bank has financed two SOFWM Projects in the province of Sindh, Pakistan, the first 4 year project and second 2.5 year additional financing. In Sindh, under various projects and programs 28,856 WCs have been aligned mostly upto 30% of their total length till September 2013. Out of the remaining 17,843, about 6,000 will be improved through the provision of lining (corresponding to 30% of all watercourses) under this project. The earthen and unlined water courses resulting into heavy seepage and leakages. The evaluation studies regarding OFWM projects have been carried out by various agencies. Findings of these impact assessments indicate significant benefits accruing from OFWM activities. Studies have shown average reduction of 33 percent in water conveyance losses and increase in delivery efficiency of 38.5 percent. Increase in cropping intensity of 20 percent and an overall increase in crop yields estimated around 24 percent. The Government of Sindh in its continuation of ongoing long term efforts desire to scale up the watercourse improvement and agricultural productivity enhancement program in irrigated agriculture in entire province of Sindh

4.2 THE PROJECT

Project Development objective: The project development objective is to improve agriculture productivity for small and medium size farmers in Sindh.

Project description:

Component A: Community Water Infrastructure Improvement. This component covers the improvement of watercourses in irrigated areas. Water users' associations are to be established at the watercourse level and with project support undertake the improvement of about 5,500 watercourses. Component A also

provides communities in the most vulnerable areas with 432 flood shelters to reduce the amount of time it takes for the poor to recover from natural disasters and improve their resilience.

Component B: Promotion and Installation of High Efficiency Irrigation Systems. This component will include construction of high efficiency systems including drip, bubbler, and sprinkler irrigation covering an area of about 1400 ha. (35,000 acres).

Component C: Improved Agriculture Practices. This component supports improvement in irrigation agronomy and demonstration of modern technologies and methods to increase agricultural productivity – with assistance to those who adopt them. Component C also entails training in crop protection and diversification and input applications, including training of trainers and service providers and farmers. Information kiosks for farmers will be established. It supports provision of precision land leveling and deep ripping equipment to improve the efficiency of irrigation.

And the component covers monitoring of project impacts and of the environmental and social action plans.

Component D: Project Management, Supervision, Technical Assistance, Monitoring and Evaluation, and Strategic Studies. This component supports the Government of Sindh's efforts in project management, construction supervision, quality control and delivery of works, certification of payments, strategic studies, technical assistance, monitoring and evaluation, etc.

Project Relationship to Country Partnership Strategy 2010-14

The proposed project is fully consistent with the FY10-14 Country Partnership Strategy (CPS), which is organized around four main pillars: (a) improving economic governance; (b) improving human development and social protection; (c) improving infrastructure to support growth; and (d) improving security and reducing the risk of conflict. Specifically, the project supports the strategic principles of the third pillar by financing a program that will improve irrigation infrastructure and increase agricultural competitiveness in Pakistan. By supporting water use efficiency and encouraging technology that will promote crop diversification and increase productivity, the proposed project supports the Bank's emphasis on improving the efficiency of irrigation systems. It will also support efficient management of the country's water resources and help in its adaptation to future climate change scenarios. It will strengthen the basis for long term growth and provide near term employment opportunities.

4.3

PURPOSE OF SOCIAL ASSESSMENT:

The main objective of the Social Assessment (SA) is to analyze socioeconomic and cultural characteristics of the intended project beneficiaries in order to understand their interrelationships, dynamics, inequalities and to identify opportunities and constraints in accessing project benefits by all beneficiaries or a segment of them (based on gender, ethnicity, level of income, geographical remoteness etc.). SA will provide information to the project design in order to make project interventions

more effective, socially acceptable, culturally appropriate, gender sensitized and politically viable. It aims to promote, within the scope of the project, inclusion, equity and equality of opportunity and access; improve targeting, transparency and social accountability of project implementers, and social impact monitoring and evaluation.

One of the key objectives of the SA is to promote more sustainable and equitable development through adequate social risk management by identifying and assessing negative and positive impacts caused by a project, to design and implement measures to prevent, reduce or compensate adverse impacts and enhance positive ones. The information will be used to design an overall SOWAEP Environmental and Social Management Framework (ESMF), which will be used for sub-project selection and implementation. Detailed TORs of the SA have been given in Annexure -B

4.3.1 PROJECT IMPACT ON POVERTY:

Social Assessment reaffirms that half of the Sindh population lives in rural areas and about 37% of the rural population lives below poverty line. Rural households including the landless derive 56% of their income from agriculture directly or indirectly. Around 70% of the rural population is landless and is mainly employed as agriculture wage workers and a large part is categorized as poor. The major characteristics of rural poverty stemmed from the complex social, cultural, legal, and political environment, with the feudal relationship between landlords, tenants, and landless laborers at its core. A sharecropping tenancy system prevailed in Sindh, and changes in the tenancy system over time worked to the disadvantage of the haris (sharecropper and tenants). The haris become "bonded", in the sense that their right to move and seek employment freely is restricted until their debts are settled. Low levels of compliance hampered the effectiveness of the Sindh Tenancy Act (STA), 1950, which was enacted to regulate the tenancy arrangements and protect the rights of the cultivators. The project is designed to reduce poverty in Sindh by improving water and agriculture productivity of small and medium size farmers, but improving agriculture productivity will boost the rural economy and contribute to poverty reduction.

4.4 PROJECT LOCATION:

The proposed project has been prepared for 24 districts of Sindh located on both left and right banks of Indus (Figure 2). These districts are located in the command area of Guddu, Sukkur and Kotri barrages and main canals and their distributaries. The project districts include Karchi, Jamshoro, Dadu, Larkana, Kamber shadad kot, Jaccobabad, Shikarpur, Kishmore, Ghotki, Sukker, Matiari, Sajawal, Thatha, Badin, Tharparkar, Umerkot, Mirpur Khas, Tando Allahyar, Naushahro Feroze, Tando Mohammad Khan, Hyderabad, Sanghar, Khairpur, Shaheed Benazirabad.

Figure 4.1: Map of Sindh with districts detail



4.4.1

SOCIO-ECONOMIC PROFILE OF SINDH

Location of Sindh Province: Sindh is located on the western corner of South Asia, bordering the Iranian plateau in the west. Geographically it is the third largest province of Pakistan, stretching about 579 km from north to south and 442 km (extreme) or 281 km (average) from east to west, with an area of 140,915 square kilometres (54,408 sq mi) of Pakistani territory. Sindh is bounded by the Thar Desert to the east, the Kirthar Mountains to the west, and the Arabian Sea in the south. In the centre is a fertile plain around the Indus River.

Figure 4.2: Map showing Location of Sindh Province



Population: The projected population of Sindh province as of 2009 is 41.245 million. The present human population of the study extrapolated on the basis of 1998 by applying the growth rate of 2.80 is about 43.421 million. Men constitute 21.670 million whereas women are 19.575mmillion as of 2009 extrapolation. Sindh Province has 23.8 percent of Pakistan's population.

Land ownership and tenure pattern:: The land tenure system in Sindh has regulated ownership, tenancy and inheritance rights. The system has undergone several changes since the days of the British rule. Recognizing the need for more equitable distribution of agricultural land and security of tenancy, the Government of Pakistan (GOP) has attempted reforms, with varying degrees of success. Large landlords 'Waderas' unwilling to surrender their rights to landless tenants 'haris'. They have mostly distributed their lands among the family members equitably to avoid any problem may occur by adopting the Land Reforms laws imposed by GOP. However, natural succession has resulted in some division and fragmentation of land. About 50% of the farms, representing about 59% of the total farm area, are operated by owners, while 42% of the farms which representing 29% of the total farm area, are operated by tenant/ sharecroppers, who are locally known as hari but they got no right of ownership even after passing unlimited time of tenantship or as a share cropper. The remaining 8% of the farms, representing 12% of total farm area, are operated by owners-cum-tenants. The skewed nature of the landholdings has tended to make large holdings unproductive as considerable land is left fallow, particularly in the case of absentee landlords.

Land Holdings: Land holding classified into two categories according to size of holdings. Those who are holding the 5.06 hectares (12.5 Acres) or less then that fall under the category of small holders and mostly they themselves cultivates their lands. Where as large size or large unit starts above 5.06 hectares (above 12.5 acres). The average farm size is small (4.3 ha), land ownership is in the favour of large land owners. There are over 800,000 farms with a total area of about 3.5 million ha. Over 93% of the farms are small (less than 7 ha) and represent 64% of the total farm area. Large farms (greater than 7 ha) are only 7% in number but represent nearly 36% of the total farm area. The owners who have got large holdings are nowadays stepping towards self cultivation by mechanical means engaging the labor on a daily basis. However, if someone acquires very large holding in the case farmers on shared crop basis are temporary or permanently engaged to cultivate their lands for kharif & Rabi seasons. Also there is tendency to give up their lands on Tenancy basis i-e a Tenant to hires the land on rental basis for some period that may be for two to three years on agreement can again be renewed or cancelled. Also it is pertinent to note here that rights of a owner or landlord are always reserved, no one can occupy the land until and unless it is not sold by the owner of property (Land). Government of Pakistan did land reform during the seventies and also landlords distribute land among family members changing title from one person to all family members.

Irrigation Facilities: Irrigaion System in Sindh: Sindh is one of the major beneficiaries of the Indus Basin Irrigation System (IBIS) which is life line of Pakistan's economy. About 80% of agricultural land of Sindh is cultivated through controlled irrigation system. The irrigation comprise of three barrages at Sukkur, Guddu and Kotri having a gross command area of six million ha, 14 main canal commands and draws about 48 million acre feet of water annually. The canal system have an aggregate length of 11,916 miles (19,066 km) serving a gross command area (GCA) of 14.391 million acres (5.8 million ha). There are 46,699 watercourses which have aggregate length of about 75,000 miles (120,000 km). One of the major issues with the irrigation distribution system is that its designed capacity cannot meet the crop water demands. The growth in agriculture sector and its increasing commercial orientation resulted increase in cropping intensity, crop diversification and shift to high yielding hybrid varieties that consume more water.

Due to arid and desert like climate of Sindh, agriculture without irrigation is not possible. Surface water is even more important in Sindh as most of its lands are underlain by saline groundwater. Despite importance of surface water resources, they are managed very inefficiently. The water use efficiency is low (around 35 percent) and inequity in its distribution is pervasive leading to a several social and economic problems adversely affecting the long term sustainability of the irrigated agriculture. The deteriorating irrigation infrastructure poses a major challenge to the sustainability of Sindh's irrigated agriculture which is the single most important source of employment and livelihood. Sindh also has a major problem of waterlogging and salinity due inefficient use of water resources and lack of adequate drainage network. Progress in revamping the essential infrastructure is constrained by weak institutions, lack of proper governance and inappropriate cost recovery and financing polices.

Participatory Irrigation Management: In 1981, an On-Farm Water Management Project was launched by the Government of Sindh. The project mainly focused on small-scale farms of less than 5 ha that relied on irrigation. It was revealed that poor watercourse maintenance was affecting efficiency of irrigation systems, thus the objective was to increase agricultural production by improving water management practices. Irrigation channels were rebuilt, improved and cleaned, and demonstration plots to show farmers benefits of good irrigation maintenance/practices. Land leveling equipment was also provided, along with fertilizer and seed inputs. The project served as a role model for future water management projects to be replicated in other parts of Pakistan. Water Course Associations (WCA) constituted at the watercourse level, to rehabilitate and manage watercourses. By 1991, there were some 17,000 WUAs, representing about 16% of all watercourses, with a membership of 85,000 farmers.

After transferring the responsibility of management and development of water resources to provinces they started their own On Farm Water Management Projects. In 2003-04 NPIW was started and continued till June 30, 2012. Government of Sindh started Sindh On Farm Water Management Project and continues with Additional Financing from the World Bank. The project includes; lining of conveyance system in order to reduce water courses losses, precision land leveling for improved application efficiency, and demonstration plots for farmers training.

The ultimate aim of these projects was to improve water productivity in irrigated agriculture resulting in increased agricultural output per unit of water used. Government of Sindh realizing the scarcity of water available for agriculture productivity is planning to improve remaining 17,843 watercourses in the province in next 20 to 25 years. The lining of 5000 watercourses is proposed under the Phase - 1 of the proposed program namely Sindh On Farm Water and Agriculture Productivity Enhancement Program (SIAPEP-I).

Agriculture issues in Sindh: Agriculture issues in Sindh are complex with inter-related problems requiring action on several fronts. Sindh's agriculture productivity per unit of land is higher than other provinces of Pakistan. The other major contributor to Pakistan's agriculture output, that the Sindh has great productive potential. However problems persist and growth is sluggish. In broad terms, there is need for: intensifying the use of improved water management techniques; building on already comparatively high crop yield with knowledge and technology-driven higher crop productivity and cropping intensity, starting with areas where water supply is reliable; and strengthening of value chains through improved connection of the industrial base to agriculture and diversification towards high value crops.

Crops and Cropping Pattern: The major crops of Sindh are: rice, wheat, cotton, sugarcane, oilseeds, variety of vegetables and fruits such as banana, mangoes, guava, and date palms. Rice and wheat are the food crops grown in kharif and Rabi seasons, respectively. They are important both in value and volume. Sugarcane and cotton are important cash crops of Sindh. The major vegetable crops include onion, garlic, chilli, coriander, tomato, turmeric and brinjal.

Livelihood: 70% population is inhabited in rural areas and is dependent on irrigated agriculture as their main source of livelihood is agriculture. Agriculture provides both the employment and livelihood opportunities for the people of the province. It is the single most important source of employment and livelihood in Sindh. Agriculture not only provides food for the people but also It supports other associated sectors of development such as livestock, industries and others.

Agriculture generates productive employment opportunities for 45% of the country's labor force and 60% of the rural population depends upon this sector for its livelihood. It has a vital role in ensuring food security, generating overall economic growth, reducing poverty and transforming towards industrialization. Data shows that rural households, including the landless, derive 56% of their income from agriculture, directly or indirectly. A typical poor household in rural Sindh has little assets or land, depends on wage income, and is significantly larger than the non-poor or even compared to the average poor household of Pakistan. The rural poor tend to be employed mostly as agriculture wage workers. The concentration of poor is the highest among categories of households where the head is an unpaid family worker, sharecropper, or owner-cultivator owning less than 2 hectares of land. The poverty headcounts in these categories are 60%, 50% and 40% respectively. Rural Sindh is highly dependent on public services with little role of the private sector. In this context our project aims to bring the major reforms to improve the public service delivery, job creation and trained labor at village level, Employment in agro based industry, increase in labor wages and stimulate rural growth, that will raise the agricultural and nonagricultural wages which are fundamental for reducing poverty in rural Sindh and unpaid persons of poor families can earn a respectable amount for their livelihood.

Poverty: A major part of the population (over 60 percent) lives in rural areas. Poverty is pervasive and deep in rural Sindh. About 37% of the rural population lives below the poverty line compared to 33% in Pakistan on an overall basis. Over 70% of the rural population is landless. Analysis of the 2001 Pakistan Rural Household Survey data, however, shows that rural households, including the landless, derive 56% of their income from agriculture, directly or indirectly. A typical poor household in rural Sindh has little assets or land, depends on wage income, and is significantly larger than the non-poor household in Sindh or even compared to the average poor household of Pakistan. The rural poor tend to be employed mostly as agriculture wage workers. The concentration of poor is the highest among categories of households where the head is an unpaid family worker, sharecropper, or owner-cultivator owning less than 2 hectares of land. The poverty headcounts in these categories are 60%, 50% and 40% respectively. Rural Sindh is highly dependent on public services with little role of the private sector. Thus reforms to improve the public service delivery and stimulate rural growth, that raise agricultural and nonagricultural wages are fundamental for reducing poverty in rural Sindh.

Access to Credit: The rural poor of Sindh, like in the rest of Pakistan, have limited access to credit through formal/public sector. Collateral requirements and high transaction costs of public sector banks and financial institutions have prevented

the rural poor from accessing these institutions. These costs include: filling in lengthy application forms; land ownership documentation; cost of multiple trips to banks; lengthy and protracted time for loan processing; kickbacks to bank officials, etc. Furthermore, these costs, which are considerable, have to be incurred before the loan is sanctioned. Lack of access to the formal sector has resulted in restricting borrowing by the poor in rural Sindh to informal sources including waderas (landlords), shopkeepers and money lenders (Pedis and Diwuns) who often buy standing crops themselves and market them. Rates of interest of the informal sector have been usurious, ranging from 80% - 120% per annum - consequently this source of credit proves very expensive for the poor and leaves little for savings or investment. Past efforts by the Government to help and reach the poor using subsidized and directed credit have mostly failed. Concessionary rates have meant that credit had to be rationed and its hijacking by influential groups could not be checked. Loan recoveries too have been poor resulting in making these loans far more concessionary and requiring large infusions of public resources periodically.

Access to land for cultivation: In Sindh province the land is cultivated under four main systems of land tenure. They are explained as under:

Self cultivation: Land is self cultivated by the land owner by engaging labor either on daily wages or monthly basis.

50% crop sharing: This system is based on crop output which is divided equally between the land owner and tenant. In this system the inputs are also shared between the two parties.

Crop sharing on 25% share basis: Crop-sharing on 25% basis means that crop production is shared between landowners and tenants as 75% and 25%, respectively. All expenses are met by the landowner and the labor is provided by the tenant.

Leasing of land: Leasing of land for cultivation in return for payment of rent in cash exists in Sindh. The land owners who can not cultivate land, leases the land for certain period of time at settled amount per ha and time frame. This system is usually practiced by the absentee landlords.

Low Social Capital: Most of the rural Sindh suffers from low social capital. It is an agrarian and feudal society structured around complex temporal and spiritual leadership dynamics. The encompassment of a given leadership can range from a single village to several districts in Sindh. Temporal power is derived from the ownership of land and the traditional tribal system prevalent in an area. The spiritual system, on the other hand, draws its authority from religion and is either institutionalized through claiming direct descent from the Holy Prophet of Islam or through descent from a Sufi saint. Men exercise both types of power and leadership.

Profile of agricultural laborers, both local and migratory: Migration of laborers for cultivation is seasonal. During the wet or dry periods the people from the problem areas migrate temporarily either to cultivate lands on share basis or as laborer on cash wages or crop yield basis. This system is common in the katcho area.

of Dadu and Jamshoro districts and desert areas from where people temporarily migrate to irrigated area so as to either earn money or food grains. This activity is for limited time and cropping season.

Cultural Heritage: The project area is rich in cultural and religious heritage sites. The information on these aspects of the project will be collected from concerned departments, review of published documents and by meeting the concerned people.

4.5

STAKEHOLDER ANALYSIS:

A stakeholder analysis was conducted under the SA, the project stakeholder include direct beneficiaries who are the small and medium size land owners, local communities in the project area, provincial government departments and NGOs. The project will have a strong impact on the small and medium level farmers who cannot afford to bear the cost of these improvements and also lack technical knowhow. The indirect beneficiaries include marginal owners-cum-tenants, tenants and agricultural laborers, and small village-based artisans. The project focused is needed particular on women as the most disadvantaged among the target groups. Consultations with intended beneficiaries, landless and female farmers were conducted on project interventions. It was found that there is a strong demand among farmers for the project interventions. In farmers' view the lining of watercourses is their priority need. The benefits of water course lining will go to farmers at the tail end, who are often deprived of irrigation water and thus excluded from benefits. They were well aware of its benefits as it is a well-tested activity in Sindh. In their view, watercourse lining will enhance equity in water distribution between head and tail farmers, which will reduce conflicts and promote social cohesion among them and also reduce stealing of water by big land owners. The farmers' whose water courses are not lined up to 30%, strongly desired to construct remaining part of their water courses. They showed their willingness to share their contribution. Following stakeholders have been identified who will directly or indirectly be benefited from the project or will have impact in its successful implementation. The major stakeholders include Agriculture Department, Government of Sindh; administrative, management and executing field staff of Agriculture Engineering & Water Management Wing; Sister Wings of Agriculture Department and Water Management, Farming Community (share croppers), Water Course Associations; Civil Society Organizations; Male and female farmers; Community Groups; Stakeholders directly involved in the marketing of supplies and service providers and Project Supervision and Implementation Consultants and Monitoring and Evaluation Consultants and contractors.

Agriculture Department, Government of Sindh: Agriculture department is the key government organization of the Government of Sindh. It constitutes mainly three wings as under:

- Agriculture Extension Wing
- Agriculture Research Wing
- Agriculture Engineering and Water Management Wing

Agriculture Engineering & Water Management Wing: The Department of Agriculture-represented by the Director General Agriculture Engineering and Water Management is the leading implementation agency and has overall responsibility for social mobilization to establish WCA, implementing watercourse improvements and the productivity enhancement program through WCAs, maintaining a MIS/GIS data for the project, quality assurance, establishing and operating an M&E system; supervision the Project Implementation Assistance and Monitoring & Evaluation Consultants. Also coordinate overall project activities in Sindh Province. This wing carries out watercourse improvement works through the Director On-farm water Management (OFWM). The Director OFWM has under his supervision 16 District Teams and 50 Field Teams, comprising District Government Staff.

Farming Community (Water Course Association- WCA): The major assignment pertains to social development for agriculture sector, uplift of farming communities in Sindh province to enhance farm their productivity. The development attributes are both a means and ends in themselves. The development process takes place with the creation of higher-level social organizations in communities which are capable of accomplishing new opportunities with efficient use of harmonious social interaction process reflecting local aspirations. Organizations are instrumental for achieving development goals. Social organizations pertain to the capacity to mobilize all available knowledge, material resources, technology, infrastructure and human abilities to meet challenges and avail the opportunities. Once social organizations become social institutions by qualifying adaptation, goal attainment, integration and pattern maintenance, social institutions become autonomous identities at the local and regional levels. They do not require outside technical, financial and managerial assistance for their survival at the WCAs and FOs levels, because the development norms are unconsciously transformed by the family to the new generation as a cultural pattern.

In case of rural Sindh, this would entail appropriate levels of awareness, aspiration and value system (by developing horizontal and vertical social capital) through formation of watercourse, minor/distributaries and canal level WCAs/FOs in the project area. Once any development activity, say WCAs is accepted in the community, it establishes its own norms to support the new activity towards its completion. There onwards, the specific development activity becomes an essential structural and functional component of an institution.

The degree of social development increases as awareness of opportunities spread, aspiration increases, and conscious knowledge of organization grows, attitude becomes progressive and infrastructure is put in place. This is what briefly could be said on the basic philosophy of social assessment study for Sindh On-Farm Water Management Project. Potential beneficiaries' awareness, comprehension and active participation are the determinants of a successful completion of the project. The society got well aware about the institutional reforms in irrigation water management, equitably distribution of water from the head to tail of the channel from Canal to Watercourse level, water user become able to manage their

watercourse association (WCA) through an autonomous body designed by the project implementers/ Government of Sindh and manages accordingly.

Local people became able to access the other stakeholders and claim their rights pertaining to water, agriculture, fisheries, livestock and many other factors of routine lives. The big change through social interventions is made that a small farmer is now able to speak on any forum to present his socio- economic issues and demand his share legally.

The Water Course Association may be formed, on a voluntary basis, by the water users of any area. These associations are not fully independent. The Director On Farm Water Management, a government appointee, has supervisory and controlling authority over these associations, he has substantial powers relating to the following matters;

- a. Registration of the Associations.
- b. Supervision of the maintenance of the watercourse done by the associations.
- c. Inquiries into the affairs of the Associations.
- d. Preparation of model bylaws of the Associations.
- e. Approval of the bylaws framed by the Associations.

The Water users' Associations have the status of corporate bodies with the power to hold, purchase and dispose of property, and to sue or be sued, in their own names. They also have the power to collect and manage funds, rocer dues through the Collector and acquire land for watercourses/ tube wells.

At least 51% of water users of a watercourse may apply to the Director On Farm Water Management for registration. The Director On Farm Water Management is required to call a meeting of all the water users of the said water course within 60 days. Section 4 (2) refers to a resolution passed by 66% of the water users of the watercourse, the significance of such a resolution is not clear, whether it is a precondition for registration, or otherwise, entails some meaningful consequences. The provision appears to have been adopted from the NWFP Water Users Assocaiton Ordinance (1981), where it clearly specifies the effect of such a resolution.

The Water Course Association (WCA) has been granted substantial powers relating to maintenance and the improvement of a watercourse, fixing water schedules, employing of labour and general, or dpecial, assessment, etc. Section 7 of the ordinance enumerates the following powers of the Water Course Association:

- a. Operate, maintain, improve and rehabilitate the watercourses;
- b. Improve the water supply from surface or sub-soil water sources;
- c. Sanction upgrading and maintenance of farm ditches and field out-lets;
- d. Locate, own, operate and maintain tube wells/ lift pumps;
- e. Adopt practices of improved on farm water use and management, and agricultural input practices;
- f. Establish schedule of water deliver and supervise water allocation and distribution;

- g. Ensure that each member gets his fair share of water at the appropriate time;
- h. Locate, install and maintain drains for fields;
- i. Remove obstructions in the water course during realignment, operation and maintenance;
- j. Employ labour for general, or emergency, repairs of the watercourse, or other allied purposes;
- k. Determine and collect general, and special, assessment;
- l. Ensure that all members of the association contribute their shares of labour, or money, for improvement, maintenance and operation of the watercourse in the prescribed manners;
- m. Enter into contracts to obtain loans and grants and to set a repayment schedule; and
- n. Participate in programmes to improve watercourse, land leveling and agronomic practices, and lease, own, operate and maintain equipment, structures and other material associated with improvement efforts.

However, these powers are subject to the rules framed by the provincial government under the ordinance. Therefore, the provincial Government can curtail these powers through the Rules.

Out of the above powers of the Water Course Association, some powers are exercisable by the General Body of the Association and others by the Board; broadly speaking, the policy matters are given to the General Body and implementation aspects to the Board.

Irrigation Institutions: Traditionally from the system development stage the O&M of a watercourse is carried out by the farmers themselves. The institutional reform program formalizes these arrangements in the form of watercourse association (WCA) and uses to build upon institutions at higher levels of the system such as distributaries and minors. The other body formed in case of Sindh where drainage is a major issue is Drainage Beneficiary Groups (DBGs) including stakeholder (also the leaseholders of agricultural lands). DBGs that are still to be formed would have a Chairman, Secretary and a Treasurer and they are entrusted with functions to operate, maintain, improve and rehabilitate the drainage operations.

4.5.1

OTHER STAKEHOLDERS

Other stakeholders i.e. Land & revenue, irrigation, Environment, Agriculture Research, Drainage Departments also play pivotal role in the successful implementation of the water and agriculture sector projects. Their coordination in the implementation phase shall also be solicited.

Other stakeholders have also been listed in this chapter who are directly or indirectly involved in various aspects of the project management, execution, monitoring and evaluation, advocacy, participatory support, etc.

4.5.2

CONSULTATION AND PARTICIPATION

Formal and informal community consultations were conducted particularly with potential beneficiaries and other stakeholders to discuss and determine the design of project interventions. Meetings held with key officials and opinion leaders to gauge level of awareness and involvement with the project, concerns of project implementation, and to obtain relevant documents or baseline information. The lists of meetings and participants contacted and issues discussed are recorded and presented in the public consultations reports.

Consultations revealed that indirect beneficiaries of the project stated that they will benefit from the impact of the project on irrigation and agricultural production which is expected to increase on farm and off farm job opportunities for the landless/village based artisans. The project will also impact positively on social dynamics of rural society in Sindh; it will support social mobilization of farmers and organization in the form of Water Course Associations which will be registered under Sindh Irrigation and Drainage Authority Act under Sindh Water Management Ordinance 2002 and 2004, to ensure their institutional sustainability. Social mobilization activities of the project will enhance participation of small farmers, landless and female farmers in agriculture and irrigation. Small farmers showed limitations in getting benefit from project interventions due to their small land holdings and limited financial capacity. An option of group formation was discussed with small farmers to fulfill beneficiary selection criteria. They were of the view that if they will be assisted in group formation and laying down mechanism for collecting and using their resources collectively, they can benefit from project interventions. Vulnerable communities, who are under high risk of flooding, suggested that they can use the shelters to keep their food stock and livestock during flood, and other community development activities during normal days such as skill development, information and knowledge sharing. Farmers' participation is a key to the success of this project. Consultations with stakeholders particularly the direct beneficiaries of the project interventions to be conducted throughout the project implementations to enhance transparency and gather feedback from them. Female farmers showed keenness in getting training in agriculture productivity enhancement practices. The project implementation process should be consultative and participatory and the involvement of beneficiaries through participatory monitoring and evaluation of project interventions is an option to effectively improve project implementation mechanisms.

4.5.3

STAKEHOLDER RECOMMENDATIONS

As the strong need emerges for the community following recommendations are given:

- i. The improvement of Watercourses through the lining and rehabilitation is obvious to be done because of high demand from the community in the project area as a project tool for savings on Farm water.
- ii. The previous indicators show that High Efficiency Irrigation Systems

(HEIS) resulted in successful saving of water in orchards and vegetables. This activity where ever feasible in the area may be performed for better yields and higher water savings. Since his activity is very expensive and farmers do not have affordable capacity for sharing, therefore it may be subsidized absolutely at low rates of not more than 10% as farmer share.

- iii. Because of the common problem of water poundings mostly in the areas where high delta crops are grown this activity of Rehabilitation of Existing On-Farm and Inter-Farm Drains is necessary to be carried out. The cost sharing of farmer may be minimized as much as possible because of the poverty of relevant community engaged in the agriculture sector.
- iv. The general perception has already been proved that due to laser land leveling on one hand it saves the water and on other hand it makes the tillage and other field operations very smooth and finally improves the yield of crop. The enhancement in productivity through production and protection technology with better field management may also be done as provided in the scope of project.
- v. The provision of Elevated Platforms/ Flood Emergency Shelter & Community Centers is necessary for the vulnerable communities living to the flood prone areas. This activity is recommended to be done by the donor or Government entirely with its own expenses rather than expecting any cost sharing from the farming poverty ridden people.
- vi. The women in the communities is worst affected and is devoid of education and health facilities. Though she is contributing a lot at home and farm but still she is not getting due place in the family and society as a man has. The woman is largely deprived from the participatory decisions within family. She is also deprived from right of the property shares which she inherits in the family. It is recommended that under the umbrella of project the women community may be mobilized to have awareness regarding her rights and appropriate position in the family & society. Certain tangible activities like provision of washing pads, hand pumps may be included in the project. The local women needs to be trained through training, workshops and seminars in the area of health, education, early birth, early marriages and exposure visits to the other women neighbor communities working as community activists in same society.
- vii. A broad based training programme shall be devised for the skill development of project staff, Water Course Associations, Community women. A training team shall be formed under the proposed project operated by the Project Consultants; such important topics related to the project components/ interventions shall be proposed for the capacity building & training programme.

4.5.4

SELECTION CRITERIA

Transparency in selection of project beneficiaries: Keeping in view the power structures in rural Sindh, farmers emphasized in transparency in selection of beneficiaries, which could be influenced as a result of political interference and social pressures that may prevent benefitting the neediest communities/beneficiaries. To mitigate this, beneficiary selection criteria has been developed for each intervention. These criteria has been agreed with the Government, and selection of beneficiaries will be monitored throughout the project. Detail is as under:

Selection Criteria as per feasibility main report

Selection Criteria Guidelines: For the selection of vulnerable area following aspects were studied to provide relief shelters.

- ▶ Data collected from NDMA;
- ▶ Hydrological maps were prepared;
- ▶ Areas identified for heavy rainfall and flooding;
- ▶ Rapid social assessment carried out in flood effected area;

Typical Design: Typical designs of shelters have been prepared for different number of families for which relief is to be provided in emergency. Three different options are recommended according to site conditions, number of families and live stocks to be accommodated. The brief general description of each option is as under. The summary cost estimate has been attached as Table 4.1.

Option No.1

- ▶ Total area of Elevated platform = 1500 sqm.
- ▶ Capacity of elevated platform = 270 Person
- ▶ No. of families (consisting of 06 members) that could be accommodated = 40 families
- ▶ No. of livestock that could be accommodated on terrace (2.5 sqm/Animal =300 Nos.
- ▶ Engineer Estimate for civil work cost = 2,728,432 PKR

Option No.2

- ▶ Total Area of Platform (2 meter) = 600 sqm.
- ▶ Capacity of platform = 300 Persons
- ▶ No. of families (consisting of 06 members) that could be accommodated during flood with PVC open able partition = 50 families

- ▶ No. of live stock could be accommodated on one terrace = 300 Nos.
- ▶ Engineer Estimate for civil work cost = 2,700,966 PKR

Option No.3

- ▶ Double storied structural-raised ground floor for livestock's & upper floor for community/ flood relief centers
- ▶ Half area of community center = 288 sqm.
- ▶ Capacity of hall if used as community center = 150 Person
- ▶ No. of live stock that could be accommodated on one terrace = 300 Nos
- ▶ Engineer Estimate for civil work cost = 7,818,746 PKR
- ▶ Public Health work =746,712
- ▶ Electrical work =1,459,000
- ▶ TOTAL =10,024,458

This option is near District headquarter and will work Community Center for local area and as store in off flood season.

Proposed Target for Community / Flood Shelters: The distribution of Flood Shelters in 7 vulnerable districts is shown in table 4.1

Table 4.1: Distribution of Flood Shelters in 7 vulnerable district.

District	Option - I	Option – II	Option – III	Total
Badin	50	40	5	95
Thatta	30	30	2	62
Mirpur Khas	20	10	1	31
TM Khan	30	30	1	61
T. Allahyar	30	30	1	61
Umerkot	30	30	1	61
Sanghar	30	30	1	61
			Total	432

Selection Criteria Guidelines: For the selection of farms under HEIS based on previous execution, experience and data analysis, following guidelines are

prepared for consideration by Field Staff for individual farm selection with its identification:

- ▶ Progressive farmers should be approached to convince for new intervention;
- ▶ Any farmers having WST should be preferred;
- ▶ Farmers in barani area having WST should be preferred
- ▶ Perennial canals' watercourses should be preferred for 10,25,64 and 100 acres farm;
- ▶ Farmers having less than 25 acres holding would be preferred for 5 acre farm system;
- ▶ Farmers having orchards should be approached on priority basis.
- ▶ For demonstration purposes farms near / passing through or nearby villages / farmers' settlements should be preferred;
- ▶ High value cash crops districts should be approached on priority;
- ▶ Farmers in water scarce districts should be approached on priority basis;
- ▶ Farmers showing willingness for HEIS farm from anywhere in Sindh province should be given preference.
- ▶ Farmers willingness for the supply of labor for the trenching, excavation and back filling of WST and distribution lines should be preferred, and the proportionately cost will be reduced;
- ▶ Farmers ready to take loan from ADB, SMEDA or commercial bank should be facilitated and given preference

4.5.5

FARMERS' PARTICIPATON

The installation of HEIS with cost sharing, participatory approach and with sense of ownership will be a key to success. So awareness to farmers about saving of water and benefits of installation of HEIS is perquisite. Skilled and unskilled labor from farmer should be encouraged to participate in the installation process. The further coordination recommended is as under:

- ▶ The Farmer will be responsible to provide/arrange the reliable and dependable water source. The farmer must agree to give land for the construction of water storage tank.
- ▶ The Farmer will deposit his cost share before issuance of work order and start of work but after Tri partite Agreement (i.e. between PD as the First Party, SSC as Second Party and Farmer/ WCA as the Third Party) and , through a demand draft / pay order in favor of Service Provider.
- ▶ The Farmers/ WCA will provide assistance and unrestricted accessibility to the SSC representatives, Project Director's Staff and Consultants at all the time during survey of site as well as during installation of system and warranty periods.

- ▶ The farmers/ WCA will inform the PD in writing about issues and dispute between him and SSC.
- ▶ Subsequent to installation of HEIS; the farmers/ WCA will maintain and operate the system by themselves and acquire necessary training, instructions, literature etc, from the First and Second Party.
- ▶ The Farmers/ WCA will settle all disputes with the other farmers/land users regarding any nature. The First and Second party would not be a party in such disputes.
- ▶ The Farmers/ WCA will provide in writing about their satisfaction on the performance of installed HEIS

4.5.6

AWARENESS, INFORMATION DISSEMINATION AND COMMUNICATION:

SA identified need to design a gender sensitized awareness / information dissemination campaign throughout the project implementation to provide an equal opportunity to farmers to access the project benefit from the project particularly the small, landless and female farmers. Information dissemination will enhance transparency in selection of beneficiaries against developed criteria. Awareness campaigns can also be used as a tool to disseminate knowledge to improve irrigation and agriculture practices. The campaign should include production and distribution of printed material in the form of information brochures and leaflets, use of electronic and print media, display of tickers on local cables in rural Sindh, radio programs, farmer field days, male and female farmers' information kiosks, information dissemination seminars and male and female farmers' field schools. Information dissemination will also include messages to encourage women farmers to access project benefits.

4.5.7

DISCLOSURE OF SOCIAL ASSESSMENT:

The World Bank policies require that social reports for projects are made available to project affected groups and other stakeholders and the public at large. Disclosure is also requirement of procedures of the concerned ministries and departments of the federal and provincial levels. Social Assessment report will be displayed on the websites of DAE&WM and World Bank.

4.5.8

SOCIAL IMPACTS/RISKS AND THEIR MANAGEMENT:

The table below shows the project risks, their mitigation measures and ratings, these include country and/or province risks, political economy risks, institutional risks, exogenous risks, and vulnerability risks.

Table No.4.2: Social Risk and Rating

Risks	Risk Mitigation Measures	Risk Rating
Potential lack of demand by farmers for the proposed interventions, especially in the event of another natural disaster where farmers cannot afford the cost sharing and in the case of adoption of new technology such as high efficiency irrigation systems because earlier government programs introducing high efficiency have largely failed in the Province for various reasons.	Regular meetings and coordination with the other development partners to check overlap and duplication. Mapping of activities by the government and various development partners. doubts	Moderate
Capturing of the project benefits by the powerful land owners at the expense of small and medium farmers	<ul style="list-style-type: none"> • Provide community shelters where farmers can store their seed, agriculture inputs, food stock, and livestock to avoid total loss of livelihoods and give opportunities to the farmers to quickly overcome the impacts, in the event of a natural disaster such as flooding. • In the irrigated areas, provide a flexible program with reasonable cost sharing where farmers' financial capacity and ownership of the technology is balanced to help to make the intervention sustainable in the irrigated areas. Such an effort would respond to the lessons from earlier failures of the government in introducing high efficiency irrigation systems. • In other target areas (that is, those not served by the irrigation system and groundwater is suitable for irrigation, where farm sizes are small, and on the outskirts of cities, where farmers have easy access to the market), use a variety of communication channels and an awareness campaign to educate the farmers about the advantages of HEIS technology and crop diversification. • Develop selection criteria for each intervention to ensure participation of the small and medium size farmers as well as the larger farmers; thus everyone can be satisfied 	Moderate

Risks	Risk Mitigation Measures	Risk Rating
	while the agriculture sector benefits.	
Security risks	The security situation in most parts of the province is not ideal; however, the current project is being implemented successfully even in parts where the security situation is not quite good. Due to the farmers' demand for project work and high degree of ownership, implementation continues with normal pace.	Substantial
Governance risks, i.e procurement & financial management	Because the project would be implemented through thousands of mainly community contracts, good management is essential. Given the nature of project, procurement of materials and implementation of construction works on watercourses would be carried out by the farmer/communities, which would implement the works. Thus, there would be internal checks and balances and self-interest to carry out procurement properly. In addition, there will be supervisory consultants, a third party monitoring of all activities under the project, which will supervise the project on a regular basis, and certify the quantity and quality of works. In addition, independent M&E consultants among others would carry out spot checks [SAA1] and technical audits. Monitoring would be done through a web-based GIS system. The disbursements would be on a unit rate basis for total outputs and would not be made for works that are not completed properly. Additional staff in contract management and financial management extension services to, if needed, would be provided given the large scale of the project. Despite all these measures, the risk rating is Substantial.	Substantial Low
DGAWM's capacity to manage such a sizeable investment	DGAWM office has a long history of on-farm water management in Sindh, and has working experience with farmers and water users, formation of watercourse associations, and with the Bank and other donor-financed projects. Their performance is good, but can improve with creation of a specific unit/group within the directorate for all project activities given the experience under the on-going project. The director of the unit should be responsible solely for all project activities, rather than the decentralized nature of the implementing unit currently. The capacity of the DGAWM would be strengthened by provision of supervision and M&E consultants as described in the institutional arrangements. There would be enough monitoring by the Project Steering Committee (PSC) to identify any performance and capacity issues on a timely basis. The Project would have enough resources to complement the need for capacity at all levels. Moreover, much of the works under the project would be carried out by the farmers, suppliers and service providers, who would be provided proper training and given support by the consultants and the staff of the Government.	Moderate Low

Risks	Risk Mitigation Measures	Risk Rating
Project Deign Risks	Watercourse improvements have been well tested and improved over time, the choice of the material for lining currently are PCPLs or brick lining. The HEIS have been tested to some extent in the country and the venders are experienced in providing the technology. There will be a supply and installation contracts with provision of training for a period to the farmers. Project consultants would also include the M&E consultants which would oversee the process, making sure performance is according to the standards. The work related to rehabilitation of existing drainage infrastructure is simple as it will only include rehabilitation and cleaning of the existing drains and bringing them to the original design capacity. Also, flood community flood shelters/centers would have simple and a few prototypes given the size of the community would be designed and approved before construction.	Low
Social risks	The works are demand driven and participatory; farmers participate through their Watercourse Associations. There will be a Grievance Redress Mechanism (GRM) under the project to address any social issues that cannot be resolved by the communities. The limited risks would be mitigated through implementation of Social and Environmental Management Plans under the project.	Low
Overall Risk Rating:	Every effort has been made to learn from past experiences and plan accordingly, including detailed design of the project construction works, implementation plans, construction plans, and operational plans. The overall risk ratings at preparation is Moderate and for implementation is Substantial because: (a) the extent of the project areas; (b) number of users involved; (c) number of transactions involved; and (d) the operating environment in Sindh. Otherwise the risk rating would be "Low." These risks would be addressed by having supervision by independent consultants, audits, and technical audits. The Bank also would bring to bear the best expertise possible to support project implementation.	Substantial Moderate

4.5.9 SOCIAL SAFEGUARD RISKS:

Social Screening Process: The purpose of the screening process is to determine whether project components and its sub-projects are likely to have potential negative social impacts, to incorporate mitigation measures into the sub-projects design; to review and approve suproject proposals and to monitor social parameters during implementation. The screening process will determine the extent of social aspects of project prior to implementation. Some interventions and associated activities will have non-significant adverse impacts on the social environment and some risks which will be mitigated through improved management and actions during implementation.

Expected scope of Negative Impacts: There are no potential significant or irreversible adverse social impacts associated with the SIAPE-Project; however there are potential minor risks or negative impacts that could arise from the various project interventions during implementation.

4.5.10

ASSESSMENT OF POTENTIAL SOCIAL IMPACTS AND SIGNIFICANCE:

It is essential to determine the Social significant impacts. The actual impact significance rating depends on many factors including;

- The magnitude of impact
- The sensitivity and value of the resource affected significance
- Compliance with relevant laws, regulations and standards
- Views and concerns of stakeholders
- Overall worker/public comfort
- Likelihood of occurrence

Categories of Impact significance:

A '**negligible or nil impact or an impact of negligible significance**' is where a resource will not be affected in any way by a particular activity, or the particular activity, or the predicted effect is deemed to be imperceptible or is indistinguishable from natural background levels.

A '**minor impact or an impact of minor significance**' is one where an effect will be experienced, but the impact magnitude is sufficiently small and well within accepted standards, and/or the receptor is of low sensitivity/value. In such instances, standard construction/operational practices can address such impacts.

A '**moderate impact or an impact of moderate significance**' is where an effect will be within accepted limits and standards. Moderate impacts may cover a broad range, from the threshold below which the impact is minor, up to a level that might be just short of breaching an established (legal) limit. In such cases, standard construction practices can take care of these impacts but mitigation measures may also be required.

A '**major impact or an impact of a major significance**' is one where an accepted limit or standard may be exceeded, or large magnitude impacts occur to highly valued/sensitive resource/receptors. In such cases alternatives are required to address such impacts otherwise mitigation measures should be adopted with strict monitoring protocols.

Risks to management or mitigation of negative impacts: The successful management of social risks depend on the commitment of the DAEWM, Government of Sindh and related departments/institutions, the capacity within the departments/institutions and the appropriate and functional institutional arrangements among others. Several risk factors could affect exacerbate or inhibit the management of negative social impacts associated with the proposed project activities.

They include:

- Lack of adequate capacity for social screening and management of technology generation, dissemination and activities;
- The regional nature of program and the involvement of numerous of institutions and actors, which may complicate efforts to coordinate mitigation efforts.
- Specific capacity building and monitoring activities will be required in order to minimize such risks

General Social impacts and mitigation measures

Negative Impacts Identified	Mitigation Measures
Cutting of trees and shrubs	The trees and shrubs cut will be re-planted in double or more quantities and maintained. Healthy and large size trees shall be planted
Land degradation due to the rehabilitation of small scale irrigation systems	Land disturbed by the project intervention activities shall be brought back to normal by regular land development operations
Modern methods will increase energy consumption and lead to social problems	Energy saving methods will be used to avoid excessive uses of energy consumption of all types required to execute the modern methods in growing of agricultural crops
Modern methods will lead to social problems due to reduced employment in agriculture	Alternate employment opportunities shall be worked out and assured so that the people could be engaged for their livelihood and social needs
Displacement or Impact on Livelihoods	Resettlement Action Plan shall be prepared for the activities of legal or illegal nature so as to assure the livelihood to the affected people due to project activities.
Social acceptability- Acceptability of the project interventions	All the interventions are acceptable to the people except that they have some reservations on flood shelters
Sustainability – interventions are sustainable to be adopted by the	Interventions from which the farmers will be benefited directly such as water course improvement and the interventions which were already tested in the previous projects are sustainable

people	
Gender mainstreaming	A gender mainstreaming action plan has been developed for the project.
Poverty – Is the project interventions so designed that they will either improve or otherwise	In most of the interventions the poverty will improve as the ultimate beneficiaries are both the owners and the people engaged in various works of the project interventions. Care will be taken to engage local people in the project works for employment generation
Assurance of the project interventions – Will they be for the group of people i.e. poor or otherwise	Both the poor and the owners will be benefited but there will be a mechanism to assure the beneficiary from all sections of society
Hotspots hampering implementation of interventions with respect to adverse social problems and law and order problems	The hotspots from law and order are the northern districts i.e. Jacobabad, Kandhkot, Shikarpur and Qamber/Shahdadkot where the crime rate is high. The project interventions be executed considering the hotspots through participation of law enforcing agencies of the districts.
Cross cutting areas of project – Impacts on education, health, accessibility, cultural aspects	These aspects will be significant in establishment of flood shelters as the people will be displaced from their original villages for shorter periods The shelters will be used as community centers but not the ownership of an influential person
Technical acceptance of project interventions by the stakeholders/farming community	Capacity building of stakeholders will be made essential. Local/indigenous construction materials will be used instead of high-tech or non local materials
Relevance with existing laws/regulations – In case any activity requires new legal requirement shall not be taken up	The projects and the mitigation measures relevant to the existing legal instruments will be executed
Public Comfort – Overall stakeholders satisfaction about the	Only those interventions will be executed from which the stakeholders are satisfied. This be discussed with the stakeholders through public consultation

project interventions

4.6

COMMUNITY IRRIGATION IMPROVEMENT (IMPROVEMENT OF WATERCOURSES):

ISSUE	COMPLIANCE	VIEW OF THE COMMUNITY	REMEDIAL MEASURES
Community Mobilization of the project.	<ul style="list-style-type: none"> - OFWM Department - Project Consultants 	<ul style="list-style-type: none"> - The community emphasized the need to promote awareness regarding Project Activities. 	<ul style="list-style-type: none"> - Conducting the consultative meetings. - To organize the awareness campaign through workshops, seminars, electronic/ print media and local FM Radio programs/ local TV channels etc.
Formation and Registration of WCAs	<ul style="list-style-type: none"> - OFWM Department - Project Consultants 	<ul style="list-style-type: none"> - Farming community shown their full interest to cooperate for this activity to be mobilized as an institution. 	<ul style="list-style-type: none"> - Since the On-Farm Activities are run from very long time, most of the watercourses have already organized WCAs and having their legal entity; - If any of the activity is carried out at the watercourses where WCA does not exist, new WCA shall be organized according to the said procedures;
Financial Operations	<ul style="list-style-type: none"> - OFWM Department - WCA - Project Consultants 	<ul style="list-style-type: none"> - Community emphasized for proper training in financial matter. 	<ul style="list-style-type: none"> - The community shall be provided trainings for financial matters i.e. account opening in the bank, books keepings, Bank accounts transaction/ statements, bank reconciliation, financial utilization of routine expenses internal/external audits.

Physical works	<ul style="list-style-type: none"> - OFWM Department - Project Consultants 	<ul style="list-style-type: none"> - The community emphasizes the need for proper training and operation of works etc. 	<ul style="list-style-type: none"> - To carry out the civil works and related activities on the part of the WCA working scope, these (WCAs) shall be given comprehensive trainings through workshops, seminars and routine meetings.
Need Assessment	<ul style="list-style-type: none"> OFWM Department and Project Consultants 	<ul style="list-style-type: none"> - There is exists a lot of scope for improvement of watercourses, therefore chances of selection or significantly higher. 	<ul style="list-style-type: none"> - From our field surveys in the area it has happened to have an information that the majority of the growers is ready for the improvement of watercourses. - In the project area a comprehensive needs assessment shall be carried out in the wake of the implementation.
Capacity Building of WCA	<ul style="list-style-type: none"> - OFWM Department - Project Consultants 	<ul style="list-style-type: none"> - The thirst for learning regarding watercourse improvement activity was observed from the farming community 	<ul style="list-style-type: none"> - The comprehensive seminars, workshops at the district level shall be conducted to train the WCAs. - Such important topics related to the project components/ interventions shall be proposed for the capacity building programme; - - Preparation of training manual and annual training calender shall be ensured for a large scale of training programme under the SOWAPEP-I. - The capacity development shall also be carried out through individual meetings, exposure visit etc. - An awareness campaign shall also be initiated through radio programmes, local tv channels, pamphlets as per the analogy of the

			existing OFWM Project.
Capacity Building of Project Staff	- Project Consultants	-	<ul style="list-style-type: none"> - The manuals shall comprehensively be developed regarding project activities for the training of the project and the department. - The exposure visits shall be conducted within the country and abroad. - It is proposed that a certain amount of money may be spared for the training of the staff in higher education like MSc & PhD from abroad.
Law & Order	- Law enforcement agencies	-	<ul style="list-style-type: none"> - In certain districts of Sindh Province i.e. Larkana, Qambar Shehadrkot, Jacobabad, Shikarpur, Sukkur, Kashmore, Ghotki the cases of snatching of bike and vehicle and cases of kidnaping are very common. - The Law and Order Enforcement agencies shall be coordinated and safety measures for the movement of staff implementation phase of the project.
Resettlement Issues	<ul style="list-style-type: none"> - OFWM Department - Project Consultants - World Bank 	<p>Positive:</p> <ul style="list-style-type: none"> - The community categorizes this issue as a minor one. At certain stages the issue of alignment of Watercourses occurs but that is settled amicably by the WCAs. 	<ul style="list-style-type: none"> - The issue is uncommon. In the case if any issue emerges that will be harmoniously settled by the Social Organizers/ Social Development Specialists during the implementation as per World Bank Guidelines.
Unforeseen	- OFWM	- The farming	- The social mobilization

Community Conflicts	Department - Project Consultants - WCA	community was optimistic to view that any unforeseen conflict shall be resolved under the umbrella of guidance by department, consultant and forthcoming bodies of WCA.	component of the project shall be in its place to resolve day to day issues of the WCA with close coordination during implementation phase.
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4.7

PROMOTION OF HIGH EFFICIENCY IRRIGATION SYSTEMS

ISSUE	COMPLIANCE	VIEW OF THE COMMUNITY	REMEDIAL MEASURES
Community Mobilization of the project.	- OFWM Department - Project Consultants	- The community emphasized the need to promote awareness regarding Project Activities).	- Conducting the consultative meetings. - To organize the awareness campaign through workshops, seminars, electronic/print media and local FM Radio programs/local TV channels etc.
Formation and Registration of WCAs/Individual Growers	- OFWM Department - Project Consultants	- Since the HEIS is a sort new project activity majority of growers shown unfamiliarity with this. However, the growers of water deficient areas and others having orchards growing vegetables shown inclination in the installation towards this activity). - The growers were of the view to have no grower share or at least very minimize on their part to be paid.	- Since the On-Farm Activities are run from very long time, most of the watercourses have already organized WCAs and having their legal entity; - If any of the activity is carried out at the watercourses where WCA does not exist, new WCA shall be organized according to the said procedures; - HEIS is a new activity being included in the project shall require awareness and confidence building

			<p>for the farmers .</p> <p>- It is suggested that the farmer sharing may be kept as minimum as possible.</p>
Financial Operations	<ul style="list-style-type: none"> - OFWM Department - WCA - Project Consultants 	<ul style="list-style-type: none"> - (Community emphasized for proper training in financial matter). 	<ul style="list-style-type: none"> - The community shall be provided trainings for financial matters i.e. account opening in the bank, books keepings, Bank accounts transaction/statements, bank reconciliation, financial utilization of routine expenses internal/external audits.
Physical works	<ul style="list-style-type: none"> - OFWM Department - Project Consultants 	<ul style="list-style-type: none"> - Because it is an activity which growers did not experience widely in the past, therefore they emphasize the need for technical training for operation and maintenance of relevant High Efficiency Irrigation Systems (HEIS). 	<ul style="list-style-type: none"> - Though the HEI System shall be installed by the Farms but its comprehensive trainings and manuals shall be provided to the growers for operation and maintenance.
Need Assessment	<p>OFWM Department and Project Consultants</p>	<ul style="list-style-type: none"> - During our need assessment survey 67% opted for HEIS while the response from another part of the community was cool. 	<ul style="list-style-type: none"> - It was observed that the growers were partially ready for the installation of HEIS. - The growers of following districts having orchards or vegetable fields shown their interest: <ul style="list-style-type: none"> a) Karachi, b) Jamshoro, c) Thatta, d) Tando Allahyar, e) Umerkot, f) Larkana, g) Nawabshah, h) Sanghar, i) Mirpurkhas, j) Matiari,

			<p>k) Dadu, l) Tando Muhammad Khan, m) Badin, n) Noshero Feroz, o) Sukkur (Salehpat Area).</p>
Participation of WCA/Individual Growers in HEIS Installation	<ul style="list-style-type: none"> - OFWM Department - Project Consultants - Service Providers 	<ul style="list-style-type: none"> - The farmers were positive for this activity and demanded need for higher awareness and learning. 	<ul style="list-style-type: none"> - The growers where HEIS shall be installed will be given training by the service providers and consultants.
Capacity Building of WCA/Individual Growers	<ul style="list-style-type: none"> - OFWM Department - Project Consultants - Service Providers 	<ul style="list-style-type: none"> - The growers interested in HEIS desired for wide-ranging training in the activities. 	<ul style="list-style-type: none"> - The comprehensive seminars, workshops at the district level shall be conducted to train the WCAs/Individual growers on HEIS aspects. - Such important topics related to the HEI System shall be included in the main capacity building programme; - Preparation of training manuals and annual training calenders shall be ensured for a large scale training programmes including HEIS under the SOWAPEP-I. - The capacity development shall also be carried out through individual meetings, exposure visit etc. - An awareness campaign shall also be initiated through radio programmes, local tv channels, pamphlets as per the analogy of the

			existing OFWM Project.
Capacity Building of Project Staff	- Project Consultants	-	<ul style="list-style-type: none"> - The manuals shall comprehensively be developed regarding project activities for the training of the project and the department. - The exposure visits shall be conducted within the country and abroad. - It is proposed that a certain amount of money may be spared for the training of the staff in higher education like MSc & PhD from abroad.
Law & Order	- Law enforcement agencies	-	<ul style="list-style-type: none"> - In certain districts of Sindh Province i.e. Larkana, Qambar Shehadkot, Jacobabad, Shikarpur, Sukkur, Ghotki the cases of snatching of bike and vehicle and cases of kidnaping are very common. - The Law and Order Enforcement agencies shall be coordinated and safety measures for the movement of staff implementation phase of the project.
Unforeseen Community Conflicts	<ul style="list-style-type: none"> - OFWM Department - Project Consultants - WCA 	<ul style="list-style-type: none"> - The farming community was optimistic to view that any unforeseen conflict shall be resolved under the umbrella of guidance by department, consultant and forthcoming bodies of WCA. 	<ul style="list-style-type: none"> - The social mobilization component of the project shall be in its place to resolve day to day issues of the WCA with close coordination during implementation phase.

4.8

IMPROVED AGRICULTURE PRACTICES:

ISSUE	COMPLIANCE	VIEW OF THE COMMUNITY	REMEDIAL MEASURES
Community Mobilization of the project.	<ul style="list-style-type: none"> - OFWM Department - Project Consultants 	The community emphasized the need to promote awareness regarding Project Activities.	<ul style="list-style-type: none"> - Conducting the consultative meetings. - To organize the awareness campaign through workshops, seminars, electronic/ print media and local FM Radio programs/ local TV channels etc.
Formation and Registration of WCAs	<ul style="list-style-type: none"> - OFWM Department. - Agriculture Extension Department. - Project Consultants 	Farming community shown their full interest for participation in the Agriculture Promotional activities.	<ul style="list-style-type: none"> - The productivity enhancement has already been practiced in the On-Farm Project which resulted in better farm management and improved crop production and protection technology. - General Body of the WCAs shall be provided with technical field services for their crop problems at the doorstep with the coordination of the Agricultural Extension Department.
Need Assessment	OFWM Department and Project Consultants	A strong demand prevails from the community for Laser Land Leveler Equipment, improved crop	- The detailed Need Assessment (NA) shall be worked out during the implementation phase of the

		protection and production technology.	project for provision of Laser Land Levelor Equipment and adoption of improved agricultural practices.
Development of Farmer Information Kiosks	<ul style="list-style-type: none"> - OFWM Department - Project Consultants 	<ul style="list-style-type: none"> - The feedback from the community regarding previous Kiosk was significantly positive. - They were of the view to develop more centers for the better information to the growers. 	<ul style="list-style-type: none"> - More information center has been proposed to be provided updated information to the growers of Agriculture.
Training of Trainers (TOT)	<ul style="list-style-type: none"> - OFWM Department - Project Consultants - Agriculture Extension Department 	-	<ul style="list-style-type: none"> - The Training of Trainers shall be conducted as per lines being carried out in the existing OFWM Project (AF).
Crop Diversification	<ul style="list-style-type: none"> - OFWM Department - Project Consultants - Agriculture Extension Department 	<ul style="list-style-type: none"> - Community Desires to have less delta crops with high yield potentials to be introduced and adopted. 	<ul style="list-style-type: none"> - Efforts shall be taken to coordinate with Agricultural Research, Pakistan Agriculture Research Council and other Line Departments to look to the chances for the introduction of diversified crops (Exotic or home).
Integrated Pest Management (IPM)	<ul style="list-style-type: none"> - OFWM Department - Project Consultants - Agriculture Extension Department 	<ul style="list-style-type: none"> - Certain communities surveyed expressed regarding good results of yield crops through IPM approach. 	<ul style="list-style-type: none"> - The existing On-Farm IPM approach shall be extended in the project coming forth. - The Training to the

			growers regarding pesticide residual effect and health hazards shall be provided.
Capacity Building of WCA (Growers)	<ul style="list-style-type: none"> - OFWM Department - Project Consultants - Agriculture Extension Department 	<ul style="list-style-type: none"> - The community expressed requirement regarding learning about agriculture and its new crop production/ protection technologies. 	<ul style="list-style-type: none"> - The comprehensive seminars, workshops and Trainings at the district level shall be conducted to train the WCAs. - Such important topics related to the project components/ interventions shall be proposed for the capacity building programme; - - Preparation of training manual and annual training calender shall be ensured for a large scale of training programme under the SOWAPEP-I. - The capacity development shall also be carried out through individual meetings, exposure visit etc. - An awareness campaign shall also be initiated through radio programmes, local tv channels, pamphlets as per the analogy of the existing OFWM Project.
Capacity Building of	<ul style="list-style-type: none"> - Project Consultants 	-	<ul style="list-style-type: none"> - The manuals shall comprehensively

Project Staff			<p>be developed regarding project activities for the training of the project and the department.</p> <ul style="list-style-type: none"> - The exposure visits shall be conducted within the country and abroad. - It is proposed that a certain amount of money may be spared for the training of the staff in higher education like MSc & PhD from abroad.
Law & Order	<ul style="list-style-type: none"> - Law enforcement agencies 	Partially negative:	<ul style="list-style-type: none"> - In certain districts of Sindh Province i.e. Larkana, Qambar, Shehadkot, Jacobabad, Shikarpur, Sukkur, Ghotki the cases of snatching of bike and vehicle and cases of kidnaping are very common. - The Law and Order Enforcement agencies shall be coordinated and safety measures for the movement of staff implementation phase of the project.
Unforeseen Community Conflicts	<ul style="list-style-type: none"> - OFWM Department - Project Consultants - WCA 	<ul style="list-style-type: none"> - The farming community was optimistic to view that any unforeseen conflict shall be resolved under the 	<ul style="list-style-type: none"> - The social mobilization component of the project shall be in its place to resolve day to day issues

		umbrella of guidance by department, consultant and forthcoming bodies of WCA.	of the WCA with close coordination during implementation phase.
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4.9

REDUCE RISK OF FLOODING FOR THE POOR (CONSTRUCTION OF EMERGENCY FLOOD SHELTERS, ELEVATED PLATFORMS COMMUNITY CENTERS):

ISSUE	COMPLIANCE	VIEW OF THE COMMUNITY	REMEDIAL MEASURES
Community Mobilization of Reducing Risks of Flooding to the Poor	-OFWM Department -Project Consultants	-The community expressed keen interest in the construction of Elevated Platforms, community Centers/ Emergency Flood Shelters.	- Thirty (30) villages of seven (07) districts comprising of Thatta, Badin, T. M. Kan, Shaheed Benazirabad, Sanghar, Mirpurkhas, Tando Allahyar hit by the previous flood of 2010-11 were visited. - Most of the villagers having losses in the flood disasters were in the favour of Flood Emergency Shelters and Community Center. - After launching of the project the Need Assessment (NA) for the selection of exact location shall sorted out.
Formation of Vulnerable Community Groups (VCGs)	-OFWM Department -Project Consultants	-The Flooded Community surveyed proposed the formation of Vulnerable Community Groups (VCGs) for the consultation and participation in this project activity.	- This activity is a novel one in its nature which have never been practiced in the past. The community has optimistic for the flood emergency shelters/ community shelters.

			<p>- This activity will be the multi-purpose activity and will support the community in their other social activities and may be utilized as Community Centers, mainly to rescue the lives of vulnerable villagers to reduce risks of flood for their valuable assets, grains and livestock.</p>
Design of Flood Emergency Shelters	<p>-OFWM Department</p> <p>-Project Consultants</p> <p>-VCGs</p>	<p>-The community was very positive about this activity.</p>	<p>The designs proposed in the feasibility report shall be followed by the features:</p> <ul style="list-style-type: none"> . Easy access to the community; . Raised quite at high locations; . Provision of family separators for privacy; . Location of kitchen away from male mobility; . The provision of separate washrooms/ toilets for male and female. . Provision of safety measures for children may be included. . Shelters should be well aerated placed.
Resettlement/ Acquiring the land for construction of Flood	<p>-OFWM Department</p> <p>-Project Consultants</p> <p>-VCGs</p>	<p>-The community was of the view that other structures may be raised on public property (Government land)</p>	<p>- The issue of land acquisition strongly prevails.</p> <p>- Either the Government Land if available shall be</p>

Emergency Structures		<p>or land may be acquired through purchase.</p> <p>-However at certain places the community offer the land for this activity.</p>	<p>utilized for the construction of Flood Emergency Shelters or the land shall be acquired through purchase by the community.</p> <p>- The opportunity of the land if offered by the community shall also be utilized.</p>
Physical works	<p>-OFWM Department</p> <p>-Project Consultants</p>	<p>-The community desired the participation in the shelter construction works.</p>	<p>- During implementation and construction of the Flood Emergency Shelter structures the community shall be involved with work and skilled and unskilled labour.</p>
Economic Opportunities for Local Communities	-	<p>-The community was hopeful to have an economic opportunity for skilled and non skilled labor in the construction works.</p>	<p>- Certain economic activities for local people shall emerge in the case of engagement with civil works as skilled and unskilled labour etc.</p> <p>- The local shopkeepers will enhance their business income in daily sale my.e.local hotels, tea shops, communication shops and mobile sellers.</p>
Need Assessment	<p>-OFWM Department</p> <p>-Project Consultants</p>	<p>-The desire prevails from the pertaining communities of the relevant vulnerable districts for this activity.</p>	<p>- During the implementation phase of the project a comprehensive site specific needs assessment shall be</p>

			carried out the proposed shelter structures in the flood affected indicated.
- Capacity Building of Vulnerable Community Groups (VCGs)	-OFWM Department -Project Consultants	-Community desired to have awareness on Disaster Risk Management with special reference to the Emergency of Flood & heavy rains previously affected in the year 2010-11.	<p>The vulnerable community people shall be given awareness on the following aspects:</p> <ul style="list-style-type: none"> - The comprehensive trainings will be given to the vulnerable communities regarding Disaster Risk Reduction (DRR), Emergency First Aid Medicines, Fire Fighting etc. on a community level. - Such more important topics related to the Disaster Risk Reduction and Emergency Response shall be included in the main capacity building programme; - The capacity development shall also be carried out through individual meetings, exposure visit etc.
Capacity Building of Project Staff	-Project Consultants	-	- The project concerned staff to be involved in the construction of structures shall be given training properly as required.

Law & Order	-Law enforcement agencies	Partially negative:	- In certain districts of Sindh Province i.e. Larkana, Qambar Shehadkot, Jacobabad, Shikarpur, Sukkur, Ghotki the cases of snatching of bike and vehicle and cases of kidnaping are very common. - The Law and Order Enforcement agencies shall be coordinated and safety measures for the movement of staff implementation phase of the project.
Unforeseen Community Conflicts	-OFWM Department -Project Consultants	-The vulnerable community was optimistic to view that any unforeseen conflict shall be resolved under the umbrella of guidance by department, consultant and forthcoming bodies of VCGs.	- The social mobilization component of the project shall be in its place to resolve day to day issues of the VCGs with close coordination during the implementation phase if any.

4.10 RESETTLEMENT POLICY FRAMEWORK (RPF)

4.10.1 INTRODUCTION OF RPF:

This Resettlement Policy Framework (RPF) has been prepared by Directorate General of Agriculture Engineering and On-farm Water Management (DAE&WM), Sindh Agriculture Department for the Sindh Irrigated Agriculture and Productivity Enhancement Project (SIAPEP) as required under the World Bank policy for Involuntary Resettlement. The project may require acquisition of private land for the construction of 432 flood shelters under Component A. Implementing Agency (IA) agreed to make all possible efforts to use the free of cost lands through voluntary donations of communities' common lands, lands donations by local/district governments or other government line agencies. But in case of non-availability, there is a remote possibility of acquiring private lands through Land Acquisition Act of Pakistan for the construction of new flood shelters. The

borrower has developed a Resettlement Policy Framework to fully and sufficiently mitigate any possible adverse impacts associated with lands need.

The purpose of this RPF is to provide policy and legal framework and procedures to manage Land Acquisition and Resettlement (LAR). These procedures are to be in conformity to the World Bank Operational Policy 4.12 on Involuntary Resettlement, as well as the applicable laws and regulations of Government of Sindh. Consultations with potential affected persons and beneficiaries were carried out including needy communities, potential affectees, district governments and provincial line departments, and further consultations will be carried out particularly with project affected persons and other key stakeholders during preparation and implementation of RAPs. This RPF has been fully endorsed by DAE&WM. The RPF will be disclosed on the DAE&WM and the World Bank websites.

4.10.2 THE SCOPE OF LAND ACQUISITION AND RESETTLEMENT:

The scope of land acquisition and resettlement under sub-component A2 Flood Risk Reduction for the Poor will be limited as DAE&WM will make all efforts to arrange provision of lands through local/district government or other provincial line departments. DAE&WM will ensure to select unencumbered government lands. The community flood shelters/centers to be built on-demand basis with communities/public sector providing the land to facilitate construction. The construction activities may also involve use of some lands for temporary purposes, such as storage of construction material. In case of temporary or permanent land acquisition, the IA will be responsible for undertaking social impact assessment and preparing a Resettlement Action Plan (RAP) for each sub-project in line with this RPF and submit to the World Bank for review and approval, prior to award of the civil works contract for the respective subprojects. IA will also engage a third-party for validation of RAP implementation.

4.10.3 RESETTLEMENT PROCESSING REQUIREMENTS:

Resettlement Due Diligence Report (RDDR) will be prepared in case of acquiring donated lands by communities or government, where the World Bank resettlement policy is not triggered and lands are acquired without any safeguard impacts. Detailed information will be provided in the RDDR on how land will be procured in consultation and agreement with local people.

In case of land acquisition, land will be acquired by following the Land Acquisition Act of Pakistan 1894 (LAA) with provincial amendments in the rules and World Bank Policy 4.12 on Involuntary Resettlement. In some cases the preparation of a RAP or RDDR may have to wait until the exact locations requiring land acquisition and detailed design are known. Early screening will be undertaken to select sites where land acquisition and consequent involuntary resettlement are to be avoided or, where this is not possible, then minimized. Options assessment with relevant data will be presented in each RAP. If resettlement impacts are likely to occur, a social impact assessment survey will be conducted to assess the type and

likely magnitude of resettlement impacts. And as a result, a Resettlement Action Plan (RAP) will be prepared based on the detailed design of the proposed flood shelters, by following the principle laid down in RPF. The RAP with a detailed compensation and/or rehabilitation plan to be implemented before access to the land for civil works is allowed.

4.10.4

LEGAL AND POLICY FRAMEWORK

The Land Acquisition Act (LAA) 1894 of Pakistan: The law that governs land acquisition in Pakistan is the Land Acquisition Act of 1894 (LAA) and successive provincial amendments. The LAA regulates the land acquisition process and enables the federal and provincial governments to acquire private land for public purposes through the exercise of the right of eminent domain. Land acquisition is a provincial responsibility and each province has its own interpretation of the Act. Some provinces also have their own province specific implementation rules. The LAA and its Implementation Rules require that, following an impact identification and valuation exercise, land and crops are compensated in cash at the current market rate to titled landowners. The LAA mandates that land valuation is to be based on the last 3 to 5 years average registered land sale rates. However, in several recent cases the median rate over the past 1 year, or even the current rates, have been applied with an added 15% Compulsory Acquisition Surcharge according to the provision of the law.

In addition to the provisions of the LAA, rules and regulations setting out the procedure for land acquisition have also been adopted by provinces according to their province specific conditions. The LAA lays down definite procedures for acquiring private land for projects and payment of compensation. The rights of people whose land is to be acquired are fully safeguarded. For entering private land or carrying out surveys and investigations, specified formalities have to be observed and notifications to be issued. Damage to any crops during survey and investigations has to be compensated. The displaced persons, if not satisfied, can go to the Court of Law to contest the compensation award of the Land Acquisition Collector (LAC).

The law deals with matters related to the acquisition of private land and other immovable assets that may exist on it when the land is required for public purpose. A listing of the Sections of the Act and their salient features is given in Table 4.3. The right to acquire land for public purposes is established when Section 4 of the LAA is triggered. The LAA specifies a systematic approach for acquisition and compensation of land and other properties for development projects. It stipulates various sections pertaining to notifications, surveys, acquisition, compensation and apportionment awards, along with disputes resolution, penalties and exemptions. Surveys for land acquisition are to be disclosed to the displaced persons.

Table 4.3: Salient Features of the Land Acquisition Act (LAA) 1894 and Successive Amendments

Key Sections	Salient Features of the LAA (1894)
Section 4	Publication of preliminary notification and power for conducting survey.
Section 5	Formal notification of land needed for a public purpose. Section 5a covering the need for enquiry
Section 6	The Government makes a more formal declaration of intent to acquire land.
Section 7	The Land Commissioner/District Officer shall direct the Land Acquisition Collector (LAC) to take order the acquisition of the land.
Section 8	The LAC has then to direct that the land required to be physically marked out, measured and planned.
Section 9	The LAC gives notice to all APs that the Government intends to take possession of the land and if they have any claims for compensation then these claims are to be made to him at an appointed time.
Section 10	Delegates power to the LAC to record statements of APs in the area of land to be acquired or any part thereof as co-proprietor, sub-proprietor, mortgagee, and tenant or otherwise.
Section 11	Enables the Collector to make enquiries into the measurements, value and claim and then to issue the final "award". The award includes the land's marked area and the valuation of compensation.
Section 16	When the LAC has made an award under Section 11, he/she will then take possession and the land shall thereupon vest absolutely in the Government, free from all encumbrances.
Section 17	In cases of urgency, whenever the Government can take possession of any land needed for public purposes or for a Company. Such land shall thereupon vest absolutely in the Government, free from all encumbrances:
Section 18	In case of dissatisfaction with the award, APs may request the LAC to refer the case onward to the court for a decision. This does not affect the Government taking possession of the land.
Section 23	The award of compensation for the owners for acquired land is determined at its market value plus 15% in view of the compulsory nature of the acquisition for public purposes.
Section 28	Relates to the determination of compensation values and interest premium for land acquisition
Section 31	Section 31 provides that the LAC can, instead of awarding cash compensation in respect of any land, make any arrangement with a person having an interest in such land, including the grant of other lands in exchange.

Legislation Relevant to Land Classification: In terms of application of this LARF, identifying the type of land affected will be an important step in determining eligibility for compensation for land. Rural land includes irrigated land and un-irrigated land and is governed by the Land Revenue Act (1967) which must be read in conjunction with the LAA and other legislation that may also apply, including

for example the Colonization of Government Lands Act (1912) and the various Land Reform Regulations. Rural land falls under the jurisdiction of revenue districts. Land, other than rural land, is urban and including all permutations there-under such as residential, commercial, built upon and build-able, and is governed by various regulations and ordinances including the People's Local Government Ordinance (1972) for each province, Cantonments Act (1924), and Land Control Act (1952). Urban land falls under the jurisdiction of municipal and local/city government authorities.

While there are broad definitions of rural and urban land in the People's Local Government Ordinances, such classifications are not immutable and have been, and are, changed by the Collector of Revenues and provincial governments over time. In general it is either the People's Local Government Ordinances or the Land Revenue Act that determines the classification of land, however there are some cases where both applies and other cases where different legislation altogether can dictate jurisdiction and classification over land. Hence there is neither a universal classification nor legislation pertaining to the land that will be potentially affected under the project.

Therefore an initial step in LARP preparation will require that DAE&WM work with the Patwari (registrar or keeper of land records) to identify the regulations that govern the land within a subproject area and provide the classification of that land according to the applicable acts and regulations in that area.

Katchi Abadis Act, 1987 (KAA): The Katchi Abadis Act (KAA) covers the urban squatter's rehabilitation rights by providing plots in public resettlement areas or cash assistance. Based on the KAA, the DAE&WM will provide rehabilitation compensation to eventual squatters/encroachers affected by the project.

World Bank Involuntary Resettlement Policy (OP 4.12): The WB's experience indicates that involuntary resettlement under development projects, if unmitigated, often gives rise to severe economic, social, and environmental risks: production systems are dismantled; people face impoverishment when their productive assets or income sources are lost; people are relocated to environments where their productive skills may be less applicable and the competition for resources greater; community institutions and social networks are weakened; kin groups are dispersed; and cultural identity, traditional authority, and the potential for mutual help are diminished or lost. This policy includes safeguards to address and mitigate these impoverishments risks.

Scope and Triggers: The involuntary resettlement safeguards covers physical displacement (relocation, loss of residential land, or loss of shelter) and economic displacement (loss of land, assets, access to assets, income sources, or means of livelihoods) as a result of (i) involuntary acquisition of land, or (ii) involuntary restrictions on land use or on access to legally designated parks and protected areas.

The overall objectives of the Policy are given below.

- Involuntary resettlement should be avoided where feasible, or minimized, exploring all viable alternative project designs.
- Where it is not feasible to avoid resettlement, resettlement activities should be conceived and executed as sustainable development programs, providing sufficient investment resources to enable the persons displaced by the project to share in project benefits. Displaced persons should be meaningfully consulted and should have opportunities to participate in planning and implementing resettlement programs.
- Displaced persons should be assisted in their efforts to improve their livelihoods and standards of living or at least to restore them, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher.
- The Policy defines the requirement of preparing a resettlement plan or a resettlement policy framework, in order to address the involuntary resettlement. For the proposed project, land will need to be acquired for the establishment of the new grid stations. During the site/route selection, settlements are generally avoided, however at some places acquisition of cultivable land – though temporary - cannot be ruled out. Similarly, crops along the proposed transmission lines may be damaged during the construction and operation phases of the proposed project. . if unmitigated, often gives rise to severe economic, social, and environmental risks: production systems are dismantled; people face impoverishment when their productive assets or income sources are lost; people are relocated to environments where their productive skills may be less applicable and the competition for resources greater; community institutions and social networks are weakened; kin groups are dispersed; and cultural identity, traditional authority, and the potential for mutual help are diminished or lost. This policy includes safeguards to address and mitigate these impoverishment risks.

The key Principles of World Bank Involuntary Resettlement Policy are;

1. The need to screen the project early on in the planning stage,
2. Carry out meaningful consultation,
3. At the minimum restore livelihood levels to what they were before the project, improve the livelihoods of affected vulnerable groups (IV) prompt compensation at full replacement cost is to be paid,
4. Provide displaced people with adequate assistance,

5. Ensure that displaced people who have no statutory rights to the land that they are working are eligible for resettlement assistance and compensation for the loss of no-land assets and
6. Disclose all reports.

Comparison between LAA (1894) and the World Bank Involuntary Resettlement policy principles and Practices:

Table 4.4 compares the LAA (1894) and the World Bank Involuntary Resettlement policy principles specifically related to land acquisition and resettlement aspects. The object of this exercise is to identify if and where the two sets of procedures are in conformity with each other and more importantly where there are differences and gaps.

Table 4.4: WB OP 4.12 Involuntary Resettlement & Pakistan Land Acquisition Act

S#	WB Involuntary Resettlement Policy Principles	Pakistan Land Acquisition Act	Approaches to Address the GAPS
1	Screen the project early on to identify past, present, and future involuntary resettlement impacts and risks. Determine the scope of resettlement planning through a survey and/or census of displaced persons, including a gender analysis, specifically related to resettlement impacts and risks.	No equivalent requirements.	Screened and categorized. Scope defined, social assessment and gender analysis undertaken.
2	Carry out meaningful consultations with affected persons, host communities, and concerned nongovernment organizations. Inform all displaced persons of their entitlements and resettlement options. Ensure their participation in planning, implementation, and monitoring and evaluation of resettlement programs. Pay particular attention to the needs of vulnerable groups, especially those below the poverty line, the landless, the elderly, women and children, and Indigenous Peoples, and those without legal title to land, and ensure their participation in consultations. Establish a grievance redress mechanism to receive and facilitate resolution of the affected persons' concerns. Support the social and cultural institutions of displaced persons and their host population. Where involuntary resettlement impacts and risks are highly complex and sensitive, compensation and resettlement decisions should be preceded by a social preparation phase.	Land Acquisition Collector (LAC) is the final authority to decide disputes and address complaints regarding quantification and assessment of compensation for the affected lands and other assets.	Complaints and grievances are resolved informally through project grievance redress mechanisms Consultations conducted, vulnerable groups identified and supported as relevant
3	Improve, or at least restore, the livelihoods of all displaced persons	No equivalent	Livelihoods restoration is

	through (i) land-based resettlement strategies when affected livelihoods are land based where possible or cash compensation at replacement value for land when the loss of land does not undermine livelihoods, (ii) prompt replacement of assets with access to assets of equal or higher value, (iii) prompt compensation at full replacement cost for assets that cannot be restored, and (iv) additional revenues and services through benefit sharing schemes where possible.	requirements.	required and allowances are provided. Provided as relevant.
4	Provide physically and economically displaced persons with needed assistance, including the following: (i) if there is relocation, secured tenure to relocation land, better housing at resettlement sites with comparable access to employment and production opportunities, integration of resettled persons economically and socially into their host communities, and extension of project benefits to host communities; (ii) transitional support and development assistance, such as land development, credit facilities, training, or employment opportunities; and (iii) civic infrastructure and community services, as required.	No equivalent requirements.	Support provided commensurate with impacts
5	Improve the standards of living of the displaced poor and other vulnerable groups, including women, to at least national minimum standards. In rural areas provide them with legal and affordable access to land and resources, and in urban areas provide them with appropriate income sources and legal and affordable access to adequate housing.	No additional support to vulnerable households	Vulnerable households identified and support provided
6	Develop procedures in a transparent, consistent, and	Equivalent, negotiation	Procedures put in place.

	equitable manner if land acquisition is through negotiated settlement to ensure that those people who enter into negotiated settlements will maintain the same or better income and livelihood status.	responds to displaced persons requested price but no clear procedure.	
7	Ensure that displaced persons without titles to land or any recognizable legal rights to land are eligible for resettlement assistance and compensation for loss of non-land assets.	Land compensation only for titled landowners or holders of customary rights.	Non-title holders are provided with resettlement and rehabilitation support. Provide with compensation for non-land assets.
8	Prepare a resettlement plan elaborating on displaced persons' entitlements, the income and livelihood restoration strategy, institutional arrangements, monitoring and reporting framework, budget, and time-bound implementation schedule.	No resettlement Plans prepared	Plans prepared and disclosed
9	Disclose a draft resettlement plan, including documentation of the consultation process in a timely manner, before Project appraisal, in an accessible place and a form and language (s) understandable to affected persons and other stakeholders. Disclose the final resettlement plan and its updates to affected persons and other stakeholders.	No plans prepared.	Plans prepared and disclosed
10	Conceive and execute involuntary resettlement as part of a development project or program. Include the full costs of resettlement in the presentation of project's costs and benefits. For a project with significant involuntary resettlement impacts, consider implementing the involuntary resettlement component of the project as a stand-alone operation.	No equivalent requirement	Addressed as relevant.
11	Pay compensation and provide other resettlement entitlements before physical or economic displacement.	No equivalent requirement	Compensation payments paid before damages occur.

	Implement the resettlement plan under close supervision throughout project implementation.		Implementation monitored and reported. Based on WB policy all land impacts are to be compensated. The same will happen in the case of rural/agricultural land when the land under a tower is no longer usable or access is restricted.
12	Monitor and assess resettlement outcomes, their impacts on the standards of living of displaced persons, and whether the objectives of the resettlement plan have been achieved by taking into account the baseline conditions and the results of resettlement monitoring. Disclose monitoring reports.	Monitoring reports not required	Monitoring reports prepared and disclosed

Remedial Measures to Reconcile Gaps between the LAA and WB Policy: Project specific resettlement issues have been addressed to assist non-titled persons and bridge the gap between existing practice and the guidelines of the WB Involuntary Resettlement Policy. To reconcile the inconsistencies between the LAA (1894) and WB OP 4.12 the DAE&WM has drafted this LARF for the sub-component A2 Flood Risk Reduction for the Poor of the SIAPEP, ensuring that compensations are provided at replacement cost for all direct and indirect losses so that no one is worse off as a result of the project. Provision of subsidies or allowances will need to be given for affected households that may be relocated, suffer business losses, or may be vulnerable

Sindh Local Government Act 2013: This Act defines the role of “Council” for granting, selling or leasing land for public purpose. A Council has been defined as a Corporation, Municipal Committee, Town Committee, District Council or Union Council. Sub-section (4) of the Act states that a Council may grant, sell or lease out land at rates to be fixed in consultation with the Government, to- (i) associations, organizations, individuals or any department or institution of the Federal or a Provincial Government for establishing, maintaining or extending educational, religious and charitable institutions or for such other purposes for the benefit of the public, subject to the condition that if the land is not used for the purpose it was granted, the Council may after affording such association organization, individual

or department or institution, as the case may be, an opportunity to show-cause against the proposed action, resume such land along with structures, if any, without any compensation. Provided that the land allotted under clause-5 to any association, organization and individual may only be allotted if the organization or the institution is able to establish to the satisfaction of the Government that it has already established such institutions and presently managing the same.

4.10.5

COMPENSATION ELIGIBILITY AND ENTITLEMENTS FOR DPS:

Eligibility: The project-affected persons, including displaced persons, eligible for compensation or rehabilitation provisions under the SIAPEP are:

All land owning displaced persons losing land or non-land assets, i.e., crops and trees whether covered by legal title or traditional land rights, whether for temporary or permanent acquisition.

All non-titleholders losing land or non-land assets i.e. squatters, vendors, tenants, encroachers

Tenants and share-croppers, whether registered or not; for all non-land assets, based on prevailing tenancy arrangements.

Displaced persons losing the use of structures and utilities, including titled and non-titled owners, registered, unregistered, tenants and lease holders plus encroachers and squatters.

Displaced persons losing business, income and salaries of workers, or a person or business suffering temporary effects, such as disturbance to land, crops, and business operations both permanently and also temporarily during construction.
Loss of communal property, lands and public infrastructure.

Vulnerable displaced persons identified through the social impact assessment (SIA).

In the event of relocation, all displaced persons will receive transitional and other support to reestablish livelihoods.

Compensation eligibility will be limited by a cut-off date for each subproject on the day of the beginning of the census survey for the impact assessment in order to avoid an influx of outsiders. Each displaced person will be identified and issued with a household identification which confirms their presence on the site prior to the cut-off date. The cut-off date will be announced through the mass media and local means of communication including face-to-face communication. Displaced persons who settled in the affected areas after the cut-off date will not be eligible for compensation.

The following entitlements are applicable for displaced persons losing land, houses and incurring income losses. These displaced persons are eligible for rehabilitation

subsidies and for the compensation of lost land, structures and utilities along with loss of livelihood. There will also be special provisions for vulnerable displaced persons.

Agricultural Land Impacts will be compensated as follows:

Permanent Losses: legal/legalizable landowners (legalizable owners assessed by the DPAC include those who may have customary rights to their land which could be converted to statutory rights) are compensated either in cash at replacement cost plus a 15% compulsory acquisition surcharge (CAS) free of taxes and transfer costs; or through land for land compensation mechanisms with plots comparable in area, productivity and location to the plots lost. Leaseholders of public land will receive rehabilitation in cash equivalent to the market value of the gross yield of lost land for the remaining lease years (up to a maximum of three years). Encroachers will instead be rehabilitated for land use loss through a special self-relocation allowance (additional to all allowances detailed below) corresponding to one year of agricultural income or through the provision of a free or leased replacement plot comparable in area, productivity and location to the plots lost.

Temporary Land Loss: legal/legalizable owners and tenants assessed by the District Price Assessment Committee (DPAC) or encroachers will receive cash compensation equal to the average market value of each lost harvest for the duration of the loss, and by the restoration of both, cultivable and uncultivable land, to pre-construction conditions. Through specification in the contract agreements, contractors will be required to carry out restoration works before handing land back to the original occupiers, or APs will be provided with cash to rehabilitate the land.

Severely Displaced Persons: Vulnerable households, legal/legalizable owners, tenants or encroachers will be entitled to one severe impact allowance equal to the market value of the harvest of the lost land for one year (rabi and kharif seasons), in addition to the standard crop compensation. The aim of this payment is to assist severely displaced persons to overcome the short term adverse impacts of land and asset loss, and help them to readjust to their changed circumstances while they are making replacement earning arrangements. There will be a need to closely monitor such severely displaced people. The onetime payment should, at the absolute minimum be adequate to provide them with equivalent level of livelihood than they had previously. Other options can be considered, including non-cash based livelihood support and employment, both temporary and permanent. Other additional income restoration measures can be considered based upon the findings of the Social Impact Analysis.

Residential and Commercial Land will be compensated at replacement value for each category of the APs. Assessments will be conducted by the DPAC. There are complex issues when an AP may not lose all of their residential and commercial land but it is significant enough for them to consider relocating. The detailed socio-economic household surveys will need to identify when such situations occur. In such cases compensation may need to be made for all of their land even though not all of it has to be acquired. Residential and commercial land owners will be entitled to the following:

Legal/legalizable owners will be compensated by means of either cash compensation for lost land at replacement cost based on the market value of the lost land plus a 15% CAS, and any applicable taxes and transfer costs; or in the form of replacement land of comparable value and location as the lost asset.

Renters are compensated by means of cash compensation equivalent to three months of rent or a value proportionate to the duration of the remaining lease, including any deposits they may lose.

Non-title holders including encroachers/squatters are compensated through either a self-relocation allowance covering six months of income or the provision of a leased replacement plot in a public owned land area. They will be compensated for the loss of immovable assets, but not for the land that they occupy.

Agricultural Land Impacts: Agricultural Land Impacts will be compensated as follows:

Permanent Losses: legal/legalizable landowners (legalizable owners assessed by the DPAC include those who may have customary rights to their land which could be converted to statutory rights) are compensated either in cash at replacement cost plus a 15% compulsory acquisition surcharge (CAS) free of taxes and transfer costs; or through land for land compensation mechanisms with plots comparable in area, productivity and location to the plots lost. Leaseholders of public land will receive rehabilitation in cash equivalent to the market value of the gross yield of lost land for the remaining lease years (up to a maximum of three years). Encroachers will instead be rehabilitated for land use loss through a special self-relocation allowance (additional to all allowances detailed below) corresponding to one year of agricultural income or through the provision of a free or leased replacement plot comparable in area, productivity and location to the plots lost.

Temporary Land Loss: legal/legalizable owners and tenants assessed by the District Price Assessment Committee (DPAC) or encroachers will receive cash compensation equal to the average market value of each lost harvest for the duration of the loss, and by the restoration of both, cultivable and uncultivable land, to pre-construction conditions. Through specification in the contract agreements, contractors will be required to carry out restoration works before handing land back to the original occupiers, or APs will be provided with cash to rehabilitate the land.

Severely Displaced Persons: Vulnerable households, legal/legalizable owners, tenants or encroachers will be entitled to one severe impact allowance equal to the market value of the harvest of the lost land for one year (rabi and kharif seasons), in addition to the standard crop compensation. The aim of this payment is to assist severely displaced persons to overcome the short term adverse impacts of land and asset loss, and help them to readjust to their changed circumstances while they are making replacement earning arrangements. There will be a need to closely monitor such severely displaced people. The onetime payment should, at the absolute minimum be adequate to provide them with equivalent level of livelihood than they had previously. Other options can be considered, including non-cash based livelihood support and employment, both temporary and permanent. Other

additional income restoration measures can be considered based upon the findings of the Social Impact Analysis.

Residential and Commercial Land will be compensated at replacement value for each category of the APs. Assessments will be conducted by the DPAC. There are complex issues when an AP may not lose all of their residential and commercial land but it is significant enough for them to consider relocating. The detailed socio-economic household surveys will need to identify when such situations occur. In such cases compensation may need to be made for all of their land even though not all of it has to be acquired. Residential and commercial land owners will be entitled to the following:

Legal/legalizable owners will be compensated by means of either cash compensation for lost land at replacement cost based on the market value of the lost land plus a 15% CAS, and any applicable taxes and transfer costs; or in the form of replacement land of comparable value and location as the lost asset.

Renters are compensated by means of cash compensation equivalent to three months of rent or a value proportionate to the duration of the remaining lease, including any deposits they may lose.

Non-title holders including encroachers/squatters are compensated through either a self-relocation allowance covering six months of income or the provision of a leased replacement plot in a public owned land area. They will be compensated for the loss of immovable assets, but not for the land that they occupy.

All other Assets and Incomes: Houses, buildings and structures will be compensated for in cash at replacement cost plus 15% CAS. There will also be a 10% electrification allowance and the any transaction costs will be paid. Material that can be salvaged is allowed to be taken by the owner, even if compensation has been paid for them. For evaluation of replacement costs, a survey will be conducted to obtain the current prices for calculation of compensation.

Renters or leaseholders of a house or structure are entitled to cash compensation equivalent to three months' rent or a value proportionate to the duration of the remaining lease period, whichever is greater.

Crops will be compensated for to owners, tenants and sharecroppers based on their agreed shares. The compensation will be the full market rate for one year of harvest including both rabi and kharif seasons.

Fruit and other productive trees will be compensated for based on rates sufficient to cover income replacement for the time needed to re-grow a tree to the productivity of the one lost. Trees used as sources of timber will be compensated for based on the market value of the wood production, having taken due consideration of the future potential value.

Businesses will be compensated for with cash compensation equal to six months of income for permanent business losses. For temporary losses, cash compensation equal to the period of the interruption of business will be paid up to a maximum of six months or covering the period of income loss based on construction activity.

Workers and employees will be compensated with cash for lost wages during the period of business interruption, up to a maximum of three months or for the period of disruption.

Relocation assistance is to be paid for APs who are forced to move from their property. The level of the assistance is to be adequate to cover transport costs and also special livelihood expenses for at least 1 month or based on the severity of impact as determined on a case by case basis and included in the LARP.

Community Structures and Public Utilities, including mosques and other religious sites, graveyards, schools, health centers, hospitals, roads, water supply and sewerage lines, will be fully replaced or rehabilitated to ensure their level of provision is, at a minimum, to the pre-project situation.

Vulnerable people are defined as households who have a per capita monthly income of below PRs. 7,000 (or provincial figures relevant at the time of subproject preparation) and those who are headed by a widow or identified as vulnerable through the SIA. This figure is based on the provincial poverty line using the minimum wages that are fixed by the GOP. These vulnerable people will be identified through the Social Impact Assessment (SIA) process and will receive a lump sum allowance, or additional assistance, to enable them to restore their livelihoods. They must be compensated and supported to improve their living standards to at least national minimum standards in accordance with the World Bank standards for involuntary resettlement.

Detailed household level socio-economic surveys will need to be carried out prior to any land acquisition activity in order to fix the baseline condition. At this time an assessment is to be carried out to determine the nature and level of household losses and the likely impact on livelihoods. The range of options available, including relocation, will be outlined to the displaced persons. These surveys of all displaced persons will need to be repeated at appropriate times. Such times are normally immediately after relocation and then immediately after construction has been completed followed by an appropriate period into the operational stage.

Compensation and rehabilitation entitlements are summarized in the Entitlement Matrix in Table 4.5.

Table 4.5: Entitlement Matrix

Asset	Specification	Affected People	Compensation Entitlements
Arable Land	Access is not restricted and existing or current land use will remain unchanged	Farmer/Titleholder	No compensation for land provided that the land is rehabilitated/restored to its former quality following completion of works; Compensation, in cash, for all damaged crops and trees as per item below plus 15% compulsory acquisition surcharge
		Leaseholder (registered or not)	No compensation for land provided that the land is rehabilitated/restored to its former quality following completion of works; Compensation, in cash, for all damaged crops and trees as per item below
		Sharecroppers (registered or not)	Compensation, in cash or kind, for all damaged crops and trees as per item below
		Agricultural workers	Compensation, in cash or kind, for all damaged crops and trees as per item below

Asset	Specification	Affected People	Compensation Entitlements
		Squatters	Compensation, in cash, for all damaged crops and trees as per item below
Arable Land where access is restricted and/or land use will be affected	All adverse effects on land use independent of severity of impact	Farmer / Titleholder	Land for land compensation with plots of equal value and productivity to the plots lost; or; Cash compensation for affected land at replacement cost based on market value ^a free of taxes, registration, and transfer costs
		Leaseholder (registered or not)	Renewal of lease in other plots of equal value/productivity of plots lost, or cash equivalent to market value of gross yield of affected land for the remaining lease years (up to a maximum of 3 years).
		Sharecroppers (registered or not)	Cash compensation equal to the market value of the lost harvest share once (temporary impact) or twice (permanent impact)
		Agricultural workers losing their contract	Cash indemnity corresponding to their salary (including portions in kind) for the remaining part of the agricultural year.
		Squatters	1 rehabilitation allowance equal to market value of 1 gross harvest (in addition to crop compensation) for land use loss.
	Additional provisions for severe impacts (more than 10% of land loss)	Farmer/Titleholder Leaseholder	1 severe impact allowance equal to market value of gross harvest of the affected land for 1 year (inclusive of winter and summer crop and additional to standard crop compensation)
		Sharecroppers (registered or not)	1 severe impact allowance equal to market value of share of harvest lost (additional to standard crop compensation)
		Squatters	1 severe impact allowance equal to market value of gross harvest of the affected land for 1 year (inclusive of winter and summer crop and additional to standard crop compensation)
Houses and Structures		All relevant APs (including squatters)	Cash compensation at replacement rates for affected structure and other fixed assets free of salvageable materials, depreciation and transaction costs. In case of partial impacts full cash assistance to restore remaining structure.
Crops	Crops affected	All APs (including squatters)	Crop compensation in cash at full market rate for one harvest (either winter or summer) by default for impacts caused by tower bases, stringing and access. All other crop losses will be compensated at

Asset	Specification	Affected People	Compensation Entitlements
			market rates based on actual losses.
Trees	Trees affected	All APs (including squatters)	Cash compensation shall reflect income replacement
Community assets			Rehabilitation/substitution of the affected structures/utilities (i.e. mosques, footbridges, roads, schools, health centers, etc.)
Vulnerable AP livelihood		AP below poverty line	Employment priority in project-related jobs.

4.10.6 VALUATION AND REPLACEMENT OF ASSETS:

The following methodology will be adopted for assessing unit compensation rates:

Land will be valued at replacement cost based on current market values by carrying out a survey of transactions in the year previous to the date of invoking Section 5 and subsequent sections.

Houses, buildings and other structures will be valued at replacement cost plus labor cost based on the area, type and material of the affected item. No deductions will be made for depreciation, salvageable materials or transaction costs and taxes. Rates for building structures will be evaluated by the Works and Services Department using the latest/current Composite Schedule Rates that are regularly published by the Works and Services Department, Government of Sindh.

Crops will be valued at current market rates of gross value of harvest as valued by the Agricultural Department.

The loss of fruit bearing trees will be compensated for based on their type, productive age and the market value of the produce for the remaining period of its average life. The value of younger fruit trees will be based on the expenditure made to bring the tree to its current state. This will be assessed by the Horticultural Wing of the Agriculture Department.

The value of trees that would have been used for timber will be calculated based on the average volume and quality of wood produced and taking into consideration the size classes as determined by girth, diameter at breast, height and volume as assessed by the Forest Department.

Land for Land Compensation: Land for land compensation has significant advantages in that it reduces the chance of displaced people spending their compensation on items that will not provide them with an alternative economic livelihood. The difficulty is that in the location of the proposed sub-projects there are not that many areas of suitable productive land that are not already owned. In cases where displaced persons desire land for land compensation, then the process by which replacement land is identified needs to be recorded. When land for land

compensation is used, along with provision of replacement housing, then the replacement plots are to include facilities and services such as water supply, sanitation, roads, drainage and electricity. The LARP will detail the costs for site preparation and for the provision of these basic facilities. The LARP will clearly detail site preparation and resettlement schedules and tenure arrangements. In managing the land for land relocation, the socio-cultural and religious characteristics of the displaced persons and host communities will be taken into consideration and the distance between the old and new locations should be minimized as far as is possible. If land for land cannot be found, the LARP will clearly demonstrate the lack of land

4.10.7

IMPACT ASSESSMENT AND RAP PREPARATION

Impact Assessment: RAP preparation activities will be initiated as part of the preparation of each new subproject involving land acquisition and resettlement. The requirement will be to take the completed detailed design of the flood shelters and carry out a measurement survey and enumeration. The relevant Board of Revenue approved rates will be included in the RAP. An outline for preparing a resettlement plan based on the Bank's standards of Resettlement Policy is attached as annex with this RPF, the appraisal will entail the following studies and investigations:

Socioeconomic Survey: A socio-economic survey will be carried out to provide a detailed socio-economic profile of the population in the project areas. The information gathered will focus on: (i) household composition and demography; (ii) ethnicity; (iii) education; (iv) livelihood patterns and income baseline; (v) land ownership patterns; (vi) displaced persons income levels and expenditure patterns; (viii) displaced persons views on the subproject and various resettlement and rehabilitation options; (viii) specific impacts on the poor, indigenous people, women and other vulnerable groups. The data will be gender disaggregated to identify specific gender related issues. The survey will be used to investigate the displaced persons socio-economic condition, identify the project impacts on displaced persons and to establish a benchmark for monitoring and evaluating the implementation of a subproject's compensation and rehabilitation program.

Census Survey: A census of all AHs and displaced persons will be undertaken based on the categorizations in the entitlement matrix. The Census will determine the exact number of AH/displaced persons and how they are affected by the specific land acquisition requirements of a subproject. The Census will also identify all severely displaced and vulnerable AHs.

Impacts Assessment and Inventory: This task will be based on a Detailed Measurement Survey (DMS) which identifies the nature and magnitude of loss. The survey will include all losses including land (residential and agricultural), immovable structures, communal, public and cultural/religious facilities, crops, trees and business incomes and wages. The impact assessment will also include a survey of compensation rates as detailed above and also the incomes of the AHs.

H-V Updating of land records with the support of the collector: land records will be updated with the help of collector of that subproject district.

Gender Impacts and Mitigation Measures: RAP will include measures ensuring that the socio-economic needs and priorities of women are identified, addressed and mitigated. The following gender provisions will be incorporated to safeguard the specific needs and problems of women displaced persons during subproject implementation.

The socio-economic data gathered will be gender-disaggregated. Gender roles analyzed and if women and the needs, aspirations and priorities of women will be taken into consideration during consultation and preparing mitigation measures and reported in the RAP. Female staff will be hired to collect data and assist women in resettlement activities.

Female household heads will be registered as the recipients of compensation and rehabilitation measures due to their households. Land titles and use rights to replacement land will be registered in the name of women if the land lost to a subproject was legally owned by women.

Women will be included in the consultation process through meetings held with women and will be encouraged to participate in the LARP planning and implementation process.

Due consideration will be given to complaints and grievances lodged by women displaced persons following the procedures outlined in this LARF.

4.10.8

RESETTLEMENT ACTION PLANS PREPARATION

All RAPs will be based on the provision outlined in this RPF. RAPs may need to be updated to take into account changes in the final designs. If needed, the RAP should be updated (i) on the completion of detailed engineering design but prior to the award of civil works contracts and (ii) during the subproject civil works where design changes during construction result in changes to the resettlement impacts. Land will not be possessed until all amended RAPs are approved by the World Bank, payments made, replacement land found, replacement structures provided and displaced persons relocated. The RAPs will include a time bound program which is related to the date that the land is required for construction purposes.

4.10.9

CONSULTATION, PARTICIPATION AND DISCLOSURE/ACCESS TO INFORMATION

Stakeholder Consultation: Consultations with potential affected persons and beneficiaries were carried out including needy communities, potential affectees, district governments and provincial line departments, and further consultations will be carried out particularly with affected persons and other key stakeholders during preparation and implementation of RAPs. The timing and nature of these consultations will vary depending upon the implementation program. Stakeholders will be identified through the initial social impact assessment for subprojects. Stakeholder consultations will be carried out over the preparation of

the subproject through community meetings, focus group discussions and interviews of key informants for their views and recommendations for the subproject preparation.

Specific consultations will be carried out with the displaced persons to identify their needs and preferences for compensation and rehabilitation measures. In this regard the affected persons, including the displaced persons, will be thoroughly informed on the results of the census and impact assessment and their preferences for compensation and other resettlement assistance will be given due consideration. The processes and mechanisms ensuring the active involvement of displaced persons and other stakeholders will be detailed in the RAPs, which will include an Appendix with the list of participants, the location, date and minutes of consultation meetings.

Information Disclosure Plan: The entire RPF, after its clearance from the World Bank, will be translated into Urdu/Sindhi and disclosed to the public through websites of the DAE&WM and the World Bank. Before implementation of the project, a communications strategy will be developed for addressing the requirement for public consultation and participation. The Social Specialist of the IA (DAE&WM) will be responsible to ensure that all LAR information is properly and meaningfully disclosed to the DPs/APs, their concerns addressed and necessary changes made in the subproject design for this purpose.

Before the socio-economic baseline surveys are mobilized, the IA will need to have developed a workable strategy for public consultation and information disclosure, the Social Specialist of the project will take lead assuming this responsibility. During the census and DMS, each affected household will be directly informed about the subproject entitlements and procedures.

The entire RPF will be translated in Urdu/Sindhi and/or other local languages and disclosed to displaced persons and kept in relevant government departments for the DPs/APs to access. Arrangements would also be made to provide information through educational institutions and also for disadvantaged groups. The PMU will take a significant role in this process. The entire RAPs will be translated in Urdu or Sindhi language and will be provided to all displaced persons.

The consultation process will need to outline the legal procedures that are to be followed for land acquisition and relocation. The details of the process will have to be clearly communicated to any displaced/affected people and in a form that can be easily understood. The information given should also include the provisions of the Resettlement Policy Standards and outline the rights and obligations of any displaced people. The consultation process for any displaced people will need to establish the degree to which any lost land and assets contributed towards their livelihood. The range of options for compensation can be identified, along with their entitlements for lost assets that are outlined in Table 4 of this RPF.

4.10.10 **INSTITUTIONAL ARRANGEMENTS**

The roles and responsibilities for the design, implementation and supervision of land acquisition and resettlement functions involve a number of different

institutional actors as outlined below and shown in Figures 1 and 2. The Director General (DG) of DAE&WM as the IA will be overall responsible for the land acquisition and resettlement as per the principles and legal framework, laid down in RPF. The Project Director will be responsible for timely preparation, disclosure and implementation of RAPs. The Executive District Officer of Revenue Department, along with his staff, will be responsible for the acquisition of private land under Land Acquisition Act of Pakistan. The Social Specialist of PMU will be responsible for coordination with the Revenue Department and internal monitoring and reporting of RAPs implementation. The Social Specialist under PSIC will assist PMU in the preparation of RAPs and thier implementation in a timely, transparent and efficient manner including reporting on progress. The Social Specialist of M&E consultants will be responsible for third party/external monitoring of the RAPs implementation and fair reporting. The World Bank will supervise implementation of RAPs implementation and also provide support to the PMU, if needed, to ensure effective implementation of RAPs. A coordination mechanisms given in the sections below.

Requirements under the RPF for institutional arrangements and resources would be reflected in the governments PC-1, with dated milestones as appropriate.

Department of Agriculture Engineering and Water Management (DAE&WM)

The DG of DAE&WM has overall responsibility for the project including preparation/implementation and financing of all LAR tasks and cross-agency coordination. DAE&WM will exercise its functions through the Project Management Unit (PMU) which will be responsible for general project execution, and through the Project Field Implementation Units (FIU) which will be tasked with day-to-day Project activities at district/subproject level. Within the PMU, LAR tasks will be managed by Social Specialist of the PMU, which will organize and internally monitor RAP preparation and implementation (including surveys, asset valuation, and community consultation), LAR-related cross-agency coordination, and RAP approval. In the implementation of these tasks the DAE&WM will receive specific technical assistance from:

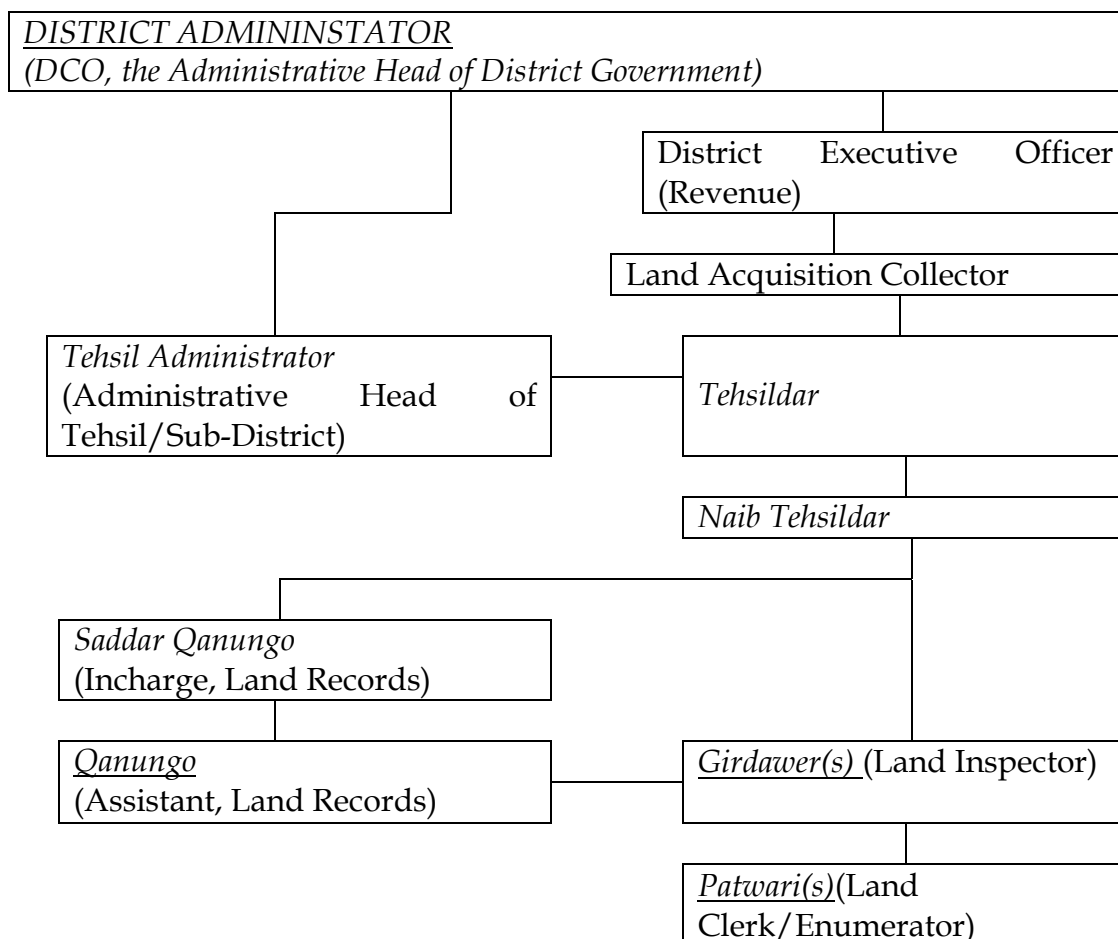
- i. A Social Specialist will also be hired under the Project Supervision and Implementation Consultants contract. It will assist in LAR planning/implementation, internal M&E, and training of DAE&WM and districts on impact assessment and the World Bank resettlement policy requirements;
- ii. The Monitoring and Evaluation Consultants will play a role of External Monitoring Agency (EMA), and will conduct periodic monitoring and evaluation/3rd party validation of implementation of the RAP activities.

District Governments

District governments and relevant line departments have jurisdiction for land administration, valuation and acquisition. At Provincial level these functions rest on the Board of Revenue while at District level they rest on the District Coordination Officer (DCO) and, within the DCO, on the Land Acquisition

Collector (LAC). Several minor agents, most notably the Patwari, (land records keeper), carry out specific roles such as titles identification and verification (see Figure 1). Functions pertaining to compensation of assets different from land (i.e. buildings and crops) or income rehabilitation also fall on the local governments, more specifically on the relevant District Department.

Figure 4.3: Organization of District Land Acquisition Collector Office



As noted above it will be important for DAE&WM to work with the Patwari to clearly identify urban and rural areas. For rural land affected DAE&WM and the Social Specialist will work with the land users concerned to determine that access and use is not restricted and cultivation can continue. In cases where either land access or use is restricted this impact will require compensation as per the matrix.

Coordination Initiatives

The agencies and actors above identified will be carefully coordinated to obtain effective, smooth and timely DP/APs compensation and RAP implementation. In case of land acquisition for a number of flood shelters, a LAC will be directly assigned to the PMU by the Board of Revenue and 2 coordination/consultation committees will be included at the top and bottom levels of the LAR organization as follows:

The PSIAC will be hired by DAE&WM to assist in the RAP implementation process. DAE&WM will announce the cut-off-date based on the date of census for the proposed subproject based on the eligibility criteria defined in this RPF. The APs of affected structures/assets (houses, shops, etc.) will be paid their due compensations at least 1 months (30 days) prior to demolition of the structures from the affected land. This time will allow them to dismantle and remove all salvageable material for rebuilding of houses and re-establishment of businesses. However, DAE&WM reserves the right of directly demolishing such structures if this has not been done by the AP by the agreed deadline. Grievances or objections may be referred to the project Grievance Redress Committees to be established.

LRA Related Steps:

The basic LAR-related steps are summarized on Box 1 below. The Process combines in a single sequence steps required by the LAA and by the Bank policy.

Box 1 LAR tasks Process

<u>Step</u>	<u>Action</u>	<u>Responsibility</u>
A)	Subproject PREPARATION	
1	Subprojects identification	PIU/PSIAC
2	Review and update of RPF	PIU/PSIAC
3	Initial screening indicating for a specific subproject whether LAR is needed. If so, a scheduled action plan detailing RAP tasks to be assigned to Social Specialist of PMU, consultants, local government and the formation of coordination committees at subproject level is initiated.	PIU/PSIAC
B)	RAP PREPARATION	
1	Proposal to Revenue Department with Brief Description of IA subproject including LAR.	
2	Publication of Notice expressing the intent to Acquire Land under Section 4 of LAA.	Revenue Department
3	Prepare impacts/AP surveys forms, train impact assessment and valuation teams, and establish coordination with relevant local government agencies.	PIU/PSIAC
4	Verify land records in affected areas, update cadastral maps and carry out impacts and valuation surveys, identify land classification for affected areas	LAC, Patwari/PPPIU/PSIAC
5	Check surveys and, if necessary, request additional fieldwork to improve them.	PSIAC
6	Conduct public consultations and negotiations.	PIU/LAC/PSIAC/ NGO
7	Integrate impacts base-line and results of consultations/negotiations into the RAP.	PIU/PSIAC
8	Submission of RAP to PMU approval and send to Bank for clearance.	PSIAC/PMU/WB
C)	RAP IMPLEMENTATION	
1	RAP disclosure: Distribution of RAP and information pamphlets in Urdu/Sindhi in the affected communities; posting of RAP in English on the DAE&WM and Bank's websites	PSIAC/Loc.Gov./PIU/DAE&WM/ WB
2	Approval of Contract awards	Bank

Step	Action	Responsibility
A)	Subproject PREPARATION	
1	Subprojects identification	PIU/PSIAC
2	Review and update of RPF	PIU/PSIAC
3	Initial screening indicating for a specific subproject whether LAR is needed. If so, a scheduled action plan detailing RAP tasks to be assigned to Social Specialist of PMU, consultants, local government and the formation of coordination committees at subproject level is initiated.	PIU/PSIAC
B)	RAP PREPARATION	
3	Distribution of Relocation Notices to APs	PIU
4	Award of Checks for Land Compensation	PIU/LAC/AP
5	Award of Checks for other Compensation & Assistance/ Rehabilitation	PIU/PIUs/AP
5	Demolishing/ Relocation of Affected Structures/Assets	PIU, NGO
6	Review of RAP Implementation.	PIU/WB /NGO/PSIC/M&E Consultants
7	If RAP Implementation found satisfactory, notice to proceed for Civil works is issued	Bank /PIU
D)	POST-IMPLEMENTATION TASKS	
1	Independent evaluation of RAP/implementation	M&E Consultants (as a EMA)
E)	CYCLICAL/CONTINUOUS TASKS	
1	Internal monitoring. Quarterly reporting on LAR to the Bank	PIU/PSIC
2	External Monitoring. Semi-annual reporting to the Bank	M&E Consultants/PIU
3	Grievances Redress/Law Suites	PIU/LAC/ COURT
4	Inter-agency coordination and Communication with AP	PIU/LAC/

4.10.11

COMPLAINTS AND GRIEVANCES REDRESS

A grievance redressal mechanism is built in the Land Acquisition Act of Pakistan. The District Executive Officer (DEO), Revenue will be responsible to redress grievances related to land acquisition through LAC or directly. The grievances related to land acquisition, will be reported to LAC or the DEO, of the Revenue Department. But to redress complaints that could not be resolved at the district level of the Revenue Department, a Grievance Redress Mechanism (GRM) will exist at the project level with Grievance Redressal Committees (GRCs) set up at the field level and project level for expeditious. The aim of the GRM and GRCs is to provide the mechanism whereby any displaced/affected persons who are dissatisfied with their entitlements can seek redress. However, with careful observance of the provisions of the RPF and RAPs by all stakeholders involved, grievances should be avoided. If necessary, the aggrieved displaced/affected persons will approach the subproject/field level grievance committee headed by the Deputy Director of DAE&WM, whose officers will strive for an informal settlement within 10 days of lodging of the complaint. The Deputy Director of the district office of DAE&WM will coordinate with the Revenue Department and PIU

for the resolution of complaints. If the complaint cannot be settled, the grievance will be referred to the GRC at the PIU level, headed by an independent retired judge.

The GRC will have to address the complaint within 15 days, If the grievance redress mechanism fails to resolve the complaint or satisfy the aggrieved displaced/affected person, they can submit the case to the appropriate court of law as set out in Sections 18 to 22 of the LAA (1894).

This grievance mechanism will be developed in full for each individual subprojects. These will be detailed out in the Operations Manual of the project. The grievances will be attempted appropriate resolution in the following manner.

Table.4.6: Grievance resolution process

Land and other compensation issues	Project/other items compensation issues
1. First, complaints resolution will be attempted at the local level through the involvement of the field officers at PIU, project Social Specialist, NGO and informal mediators. The field officers will strive for an informal settlement within 10 days of lodging of the complaint, decision must be in compliance with this LARF provisions.	1. If complaint cannot be settled within 10 days by the field staff, it will be referred to the LAC for all compensation related matters.
2. The LAC will have 15 days to decide on the case, decision must be in compliance with this LARF provisions.	2. If still unsettled, the complaint can be lodged to the Chairperson of GRC.
3. The Chairperson of GRC will provide the decision within 7 days of registering the complaint. The decision must be in compliance with this LARF provisions.	3. The AP must lodge the complaint within 1 month of lodging the original complaint with the LAC and must produce documents supporting his/her claim. The Chairperson of GRC will provide the decision within 7 days of registering the complaint who will consult project level GRC before making decision. The decision must be in compliance with this LARF provisions.
4. Should the grievance redress system fail to satisfy the AP, they can further submit their case to the appropriate court of law as per the process set out in Sections 18 to 22 of the LAA (1894).	4. The court decision will be considered as a final decision and will be implemented by DG-AE&WM.

4.10.12

RESETTLEMENT BUDGET AND FINANCING

Due to the participatory approach and nature of flood shelters, it is not possible to identify locations of flood shelters during the project preparation. Consequently it is difficult to calculate the quantities of adverse impacts and any estimate the cost of resettlement.

The detailed cost estimation will be carried out when preparing LAR in line with this RPF. All LAR preparation and implementation costs, including cost of compensation, various eligible allowances, monitoring, evaluation, grievances redress and LAR administration, as well as contingencies, will be estimated and included in the LAP and they will be considered an integral part of Project cost. Each RAP will include a budget section indicating (i) unit compensation rates for all affected items and allowances, (ii) methodology followed for the computation of unit compensation rates, and (iii) a cost table for all compensation expenses including contingencies.

Finances for LAP cost, including compensation, allowances, and administration of RAP preparation and implementation, will be provided by the Government as counterpart funds. Costs for external monitoring tasks can be allocated under the loan. In order to ensure that sufficient funds are available for LAR tasks, the local governments will have to allocate 100% of the cost of compensation at replacement cost and expected allowances estimated in each RAP plus 5% of contingencies before RAP implementation.

Being the project owner, DAE&WM is responsible for the timely allocation of the funds needed to implement the RAPs. Allocations will be reviewed twice a year based on the budget requirements indicated by the RAPs.

As per the flow of LAR finances it is noted that the budget for land, crops, trees, structures compensation will be disbursed by DAE&WM to the District Collector Office which in turn, through the LAC will disburse the compensation to the APs. For what concerns compensation funds for other items such as documented structures (houses, shops, etc.), house restoration, shops, employment, income loss, etc. will go from PIU of DAE&WM, which will disburse the funds to the APs with assistance from the PIU.

4.10.13

MONITORING AND REPORTING

LAR tasks under the Project will be subjected to both internal and external monitoring. Internal monitoring will be conducted by the Social Specialist of PIU, assisted by the Social Specialist of Supervision and Implementation Consultants (PSIAC). External monitoring will be assigned to a Monitoring and Evaluation (M&E) Consultants who will play the role of External Monitoring Agency (EMA) to be hired by PIU, and approved by the World Bank. The EMA will be chosen among local consultants. DAE&WM will prepare the terms of reference (TOR) for the EMAs before RAP implementation begins, which has to be cleared by the Bank.

N-I Internal Monitoring: The entire entitlement matrix and all its components will be monitored along with the status of resolution of all complaints (with details) and also the consultation plan. Internal monitoring will be carried out routinely by the Social Specialist of PIU and PSIAC, results will be communicated to concerned Affected People and to the Bank through quarterly progress reports. Indicators for the internal monitoring will be those related to process and

immediate outputs and results. This information will be collected directly from the field and reported monthly to the Social Specialist of PMU to assess the progress and results of RAP implementation, and to adjust the work Program, if necessary. The monthly reports will be consolidated quarterly in the standard progress and supervision reports to the World Bank. Specific monitoring benchmarks will be information campaign and consultation with APs; status of land acquisition and payments on land compensation; compensation for affected structures and other assets; relocation of APs; payments for loss of income; selection and distribution of replacement land areas; and income restoration activities. This information will be collected by the field offices, responsible for monitoring the day-to-day resettlement activities of the subproject through the review of census information for all APs; consultation and informal interviews with APs; in-depth case studies; sample survey of APs; key informant interviews; and community public meetings.

N-II External Monitoring: The external monitoring will need to monitor the entire process of PAPs implementation including impacts and outcome indicators of the framework and these indicators will be specified in RAPs. External monitoring will be carried out twice a year, and its results will be communicated to all concerned APs, the PMU and the Bank through semi-annual reports. Subprojects whose implementation time-frame will be under 6 months will be monitored only once. Indicators for External Monitoring tasks include review and verify internal monitoring reports prepared by field offices and Social Specialist of PIU; review of the socio-economic baseline census information of pre-displaced persons; identification and selection of impact indicators; impact assessment through formal and informal surveys with the affected persons; consultation with APs, officials, community leaders for preparing review report; and assess the resettlement efficiency, effectiveness, impact and sustainability, drawing lessons for future resettlement policy formulation and planning.

The EMA will also assess the status of subproject affected vulnerable groups such as female-headed households, disabled/elderly and families below the poverty line. The EAM will consider indicators in monitoring and evaluation of the project such as socio-economic conditions of the APs in the post-resettlement period; communications and reactions from APs on entitlements, compensation, options, alternative developments and relocation timetables etc.; changes in housing and income levels; rehabilitation of squatters; valuation of property; grievance procedures; disbursement of compensation; and level of satisfaction of APs in the post resettlement period.

The EMA will carry out a post-implementation evaluation of the RAP about a year after completion of its implementation. The compelling reason for this study is to find out if the objectives of the RAP have been attained or not. The benchmark data of socioeconomic survey of severely affected APs conducted during the preparation of the RAP will be used to compare the pre and post subproject conditions. The EMA will recommend appropriate supplemental assistance for the APs should the outcome of the study show that the objectives of the RAP have not been attained.

APPENDIX I: OUTLINE OF A RESETTLEMENT PLAN

This outline is part of the Safeguard Requirements. A resettlement plan is required for all subprojects with involuntary resettlement impacts. The level of detail and comprehensiveness is commensurate with the significance of potential involuntary resettlement impacts and risks. The substantive aspects of the outline will guide the preparation of the resettlement plans, although not necessarily in the order shown.

Executive Summary: This section provides a concise statement of subproject scope, key survey findings, entitlements and recommended actions.

Project Description: This section provides a general description of the project, discusses project components that result in land acquisition, involuntary resettlement, or both and identify the subproject area. It also describes the alternatives considered to avoid or minimize resettlement. The section is also to include a table with quantified data and provide a rationale for the final decision.

Scope of Land Acquisition and Resettlement: This section discusses the subproject's potential impacts, and includes maps of the areas or zone of impact of subproject activities; describes the scope of land acquisition (provide maps) and explains why it is necessary for the subproject; summarizes the key effects in terms of assets acquired and displaced persons; and provides details of any common property resources that will be acquired.

Socioeconomic Information and Profile: This section outlines the results of the social impact assessment, the census survey, and other studies, with information and/or data disaggregated by gender, vulnerability, and other social groupings, including: define, identify, and enumerate the people and communities to be affected; describe the likely impacts of land and asset acquisition on the people and communities affected taking social, cultural, and economic parameters into account; discuss the subproject impacts on the poor, indigenous and/or ethnic minorities, and other vulnerable groups; and identify gender and resettlement impacts, and the socioeconomic situation, impacts, needs, and priorities of women.

Information Disclosure, Consultation, and Participation: This section: identifies subproject stakeholders, especially primary stakeholders; describes the consultation and participation mechanisms to be used during the different stages of the subproject cycle; describes the activities undertaken to disseminate subproject and resettlement information during subproject design and preparation for engaging stakeholders; summarizes the results of consultations with displaced persons (including host communities), and discusses how concerns raised and recommendations made were addressed in the resettlement plan; confirms disclosure of the draft resettlement plan to displaced persons and includes arrangements to disclose any subsequent plans; and Describes the planned

information disclosure measures (including the type of information to be disseminated and the method of dissemination) and the process for consultation with displaced persons during project implementation.

Grievance Redress Mechanisms: This section describes mechanisms to receive and facilitate the resolution of displaced persons' concerns and grievances. It explains how the procedures are accessible to displaced persons and gender sensitive.

Legal Framework: This section: describes national and local laws and regulations that apply to the subproject and identify gaps between local laws and World Bank policy requirements; and discuss how any gaps will be addressed; describes the legal and policy commitments from the IA for all types of displaced persons; outlines the principles and methodologies used for determining valuations and compensation rates at replacement cost for assets, incomes, and livelihoods; and set out the compensation and assistance eligibility criteria and how and when compensation and assistance will be provided; describes the land acquisition process and prepare a schedule for meeting key procedural requirements.

Entitlements, Assistance and Benefits: This section defines displaced persons' entitlements and eligibility, and describes all resettlement assistance measures (includes an entitlement matrix); specifies all assistance to vulnerable groups, including women, and other special groups; and outlines opportunities for displaced persons to derive appropriate development benefits from the project.

Relocation of Housing and Settlements: This section: describes options for relocating housing and other structures, including replacement housing, replacement cash compensation, and/or self-selection (ensure that gender concerns and support to vulnerable groups are identified); describes alternative relocation sites considered; community consultations conducted; and justification for selected sites, including details about location, environmental assessment of sites, and development needs; provides timetables for site preparation and transfer; describes the legal arrangements to regularize tenure and transfer titles to resettled persons; outlines measures to assist displaced persons with their transfer and establishment at new sites; describes plans to provide civic infrastructure; and explains how integration with host populations will be carried out.

Income Restoration and Rehabilitation: This section identifies livelihood risks and prepare disaggregated tables based on demographic data and livelihood sources; describes income restoration program, including multiple options for restoring all types of livelihoods; outlines measures to provide social safety net through project funds; describes special measures to support vulnerable groups; explains gender considerations; and describes training programs.

Resettlement Budget and Financing Plan: This section provides an itemized budget for all resettlement activities, staff training, monitoring and evaluation; describes the flow of funds (the resettlement budget should show the budget-scheduled expenditure for key items) includes a justification for all assumptions made in calculating compensation rates and other cost estimates (taking into account both physical and cost contingencies), plus replacement costs includes information about the source of funding for the resettlement plan budget.

Institutional Arrangements: This section describes institutional arrangement responsibilities and mechanisms for carrying out the measures of the resettlement plan; includes institutional capacity building program, including technical assistance, if required; describes role of NGOs, if involved, and organizations of displaced persons in resettlement planning and management; and describes how women's groups will be involved in resettlement planning and management,

Implementation Schedule: This section includes a detailed, time bound, implementation schedule for all key resettlement and rehabilitation activities. The implementation schedule should cover all aspects of resettlement activities synchronized with the subproject schedule of civil works construction, and provide land acquisition process and timeline.

Monitoring and Reporting: This section describes the mechanisms and benchmarks appropriate to the project for monitoring and evaluating the implementation of the resettlement plan. It specifies arrangements for participation of displaced persons in the monitoring process. This section will also describe reporting procedures.

APPENDIX II: POLICY PRINCIPLES

Screen the project early on to identify past, present, and future involuntary resettlement impacts and risks. Determine the scope of resettlement planning through a survey and/or census of displaced persons, including a gender analysis, specifically related to resettlement impacts and risks.

Carry out meaningful consultations with displaced persons, host communities, and concerned non-government organizations. Inform all displaced persons of their entitlements and resettlement options. Ensure their participation in planning, implementation, and monitoring and evaluation of resettlement programs. Pay particular attention to the needs of vulnerable groups, especially those below the poverty line. These include the landless, the elderly, women and children. Specific safeguards cover Indigenous People, including those without statutory title to land, including those having communal rights, and ensure their participation in consultations. Establish a grievance redress mechanism to receive and facilitate resolution of the displaced persons' concerns. Support the social and cultural institutions of displaced persons and their host population. Where involuntary resettlement impacts and risks are highly complex and sensitive, compensation and resettlement decisions should be preceded by a social preparation phase.

Improve, or at least restore, the livelihoods of all displaced persons through (i) land-based resettlement strategies when affected livelihoods are land based and where it is possible to give cash compensation at replacement value for land when the loss of land does not undermine livelihoods, (ii) prompt replacement of assets with access to assets of equal or higher value, (iii) prompt compensation at full replacement cost for assets that cannot be restored, and (iv) additional revenues and services through benefit sharing schemes where these are possible.

Provide physically and economically displaced persons with needed assistance, including the following: (i) if there is relocation, secured tenure to relocation land, better housing at resettlement sites with comparable access to employment and production opportunities, integration of resettled persons economically and socially into their host communities, and extension of project benefits to host communities; (ii) transitional support and development assistance, such as land development, credit facilities, training, or employment opportunities; and (iii) civic infrastructure and community services, as required.

Improve the standards of living of the displaced poor and other vulnerable groups, including women, to at least national minimum standards. In rural areas provide them with legal and affordable access to land and resources, and in urban areas provide them with appropriate income sources and legal and affordable access to adequate housing.

Develop procedures in a transparent, consistent, and equitable manner if land acquisition is through negotiated settlement to ensure that those people who enter into negotiated settlements will maintain the same or better income and livelihood status.

Ensure that displaced persons without titles to land or any recognizable legal rights to land are eligible for resettlement assistance and compensation for loss of non-land assets.

Prepare a resettlement plan elaborating on displaced persons' entitlements, the income and livelihood restoration strategy, institutional arrangements, monitoring and reporting framework, budget, and time-bound implementation schedule.

Disclose a draft resettlement plan, including documentation of the consultation process in a timely manner, before project appraisal, in an accessible place and a form and language(s) understandable to displaced persons and other stakeholders.

Disclose the resettlement plan and its updates to displaced persons.

Conceive and execute involuntary resettlement as part of a development project. Include the full costs of resettlement in the presentation of project's costs and benefits. For a project with significant involuntary resettlement impacts, consider implementing the involuntary resettlement component of the project as a stand-alone operation.

Pay compensation and provide other resettlement entitlements before physical or economic displacement. Implement the resettlement plan under close supervision throughout project implementation.

Monitor and assess resettlement outcomes, their impacts on the standards of living of displaced persons and whether the objectives of the resettlement plan have been achieved by taking into account the baseline conditions and the results of the resettlement monitoring. Disclose monitoring reports.

4.11

GENDER MAIN TREAMING

Gender Mainstreaming: According to OP/BP 4.20 it is crucial for the Bank operations to periodically assess the gender dimensions of development. Moreover under IDA commitments gender considerations are to be incorporated into the analysis, content, design of the programs and results frameworks. In the context of Sindh it is crucial to address gender dimensions both from economic reasons and efficiency point of view. This is especially true in the agriculture sector, where large number of women is participating in the labor force and gender inequalities in access to and control over resources are persistent, undermining a sustainable and inclusive development of the sector. Gender differences, arising from the socially constructed relationship between men and women, affect the distribution of resources between them and cause many disparities in development outcomes. Sindh has an increasing demand for high-value products such as local crops in expanding urban markets, however the challenge is to ensure that women retain

control over their production, processing, and marketing; product quality and reliability must be enhanced. As part of the social assessment of the project a Gender Assessment (GA) was carried out during the appraisal to identify the gender inequalities in resources and voice addressed (agency of women) and to identify differential needs of women and men and to design accordingly. The assessment provides an overview of Sindh concluding that engagement and participation of women farmers is one of the major challenges that need to be mitigated in the project design due to the socio economic and cultural limitations and challenges associated with their participation. More specifically, gender analysis in a project setting helps both project staff and beneficiaries identify and analyse, within a community:

- Factors that limit or facilitate equal participation of men and women in development processes;
- Who does what within the household and within the community;
- Right in the decision making within household and family.
- What access and control men and women have over resources and income; and
- Their needs and priorities.

Together, these variables can be called the “gender organization” of a community and are context-specific. Since in gender relations are a social construct, they can be changed. It is therefore within our means and our responsibility as “development agents” to support the transformation of communities towards more democratic and equitable societies. Projects are instruments for the implementation of national and international policies and are created to induce or strengthen processes of change.

Although societies are based on traditions and customs, these eventually change with time. The same is true for gender relations. Thus rural development projects should ensure gender-mainstreaming in all activities in order to contribute to the creation of a more equitable society.

It is also worth noting that a “gender perspective” encompasses two dimensions: the material and the ideological. In rural development, the material dimension refers to an instrumental approach that seeks to correct the manifestations of gender inequities; whereas the ideological dimension refers to a transformative approach that attempts to tackle the root causes of gender inequities. If they are to contribute to changing rural peoples’ living conditions in a substantial way, development projects should attempt to address both the material and ideological dimensions.

Aggregate data shows that women comprise about 43 percent of the agricultural labour force globally and in developing countries. But this figure masks considerable variation across regions and within countries according to age and social class. Time use surveys, which are more comprehensive but typically not nationally representative, add further insight into the substantial heterogeneity among countries and within countries in women’s contribution to agriculture. They show that female time-use in agriculture varies also by crop, production

cycle, age and ethnic group. A few time-use surveys have data by activity and these show that in general weeding and harvesting were predominantly female activities.

Social scientists of consultant under Sindh Irrigated Agriculture Productivity Enhancement Project (SIAPEP) observed during Social Impact Assessment that roles for men and women were quite different when it comes to the context of Sindh. Overall the labour burden of rural women exceeds that of men, and includes a higher proportion of unpaid household responsibilities related to preparing food and collecting fuel and water. The contribution of women to agricultural and food production is significant but it is impossible to verify empirically the share produced by women. Women's participation in rural labour markets varies considerably across regions, but invariably women are over represented in unpaid, seasonal and part-time work, and the available evidence suggests that women are often paid less than men, for the same work.

Gender Analysis was one of the key activities of Social Assessment under this Feasibility Study of SIAPEP and required the identification and analysis of differential role and responsibilities of men and women of Sindh Province. The analysis provides an overview of the gender inequities and limitations on access of basic services including education, health, employment, crime against women and other concerns.

4.11.1

ROLE & RESPONSIBILITIES OF MEN & WOMEN IN SINDH

It is observed that in most of the societies (historical, current, developing, developed) men have certain roles and responsibilities in the productive sphere while women have nurturing and caretaking responsibilities in the domestic sphere. One of the crucial elements in the context of Sindh is the gendered division of labor in agriculture. With majority of Sindhi women working in the informal economy, a better understanding of the different roles of men and women in agricultural production can be achieved through formal surveys and field studies, as well as informal interactions between agricultural researchers, extension workers, and farmers.

Gender roles in agricultural production: The focus for gender analysis is on men and women's productive roles and the activities that men and women carry out in the agricultural process come under this category. Through this analysis and in the light of past experiences a better picture of gender roles in agriculture is emerging. In some cases, women and men might grow separate crops, as in the example of tomatoes, chili and cotton. However, study indicates that it should not always be assumed that there is a sharp gender division between growing cash crops and domestic crops. Men and women may work on the same crop on the same field, but perform different tasks, for example: Land preparation by men and planting and weeding by women. Various tasks may be performed either by all family members, or assigned to different members of the family. The men usually play the role of superior to lead and supervise the tasks due to more ability of knowledge and experiences by sharing in their social lives i.e. sharing with other farmers

through formal and informal get to-gathers and allowed to work beyond the working hours (night hours).

Female headed farms: When analyzing men and women farmers' productive roles, it is also important to realize that farming families are increasingly involved in the cash economy, so some members work outside of the farm for wages.

Gender analysis shows that in most south Asian countries, including Pakistan, it is men who tend to be involved in working for wages. For families in the agricultural sector, this means that women have to take more responsibility for agricultural tasks while their husbands are occupied or away in wage labor.

Source: "THE ROLE OF WOMEN IN AGRICULTURE" ESA Working Paper No. 11-02 March 2011- Agricultural Development Economics Division. The Food and Agriculture Organization of the United Nations www.fao.org/economic/esa).

The number of female headed families, and female headed farms, is consequently rising quite rapidly; the percentage of female headed rural households in Pakistan is about 24.7. It is becoming of increasing concern to policy makers that this growing group of farmers faces considerable constraints that affect women in particular.

Reproductive/ domestic and community (Dual role farm and household production): It is evident that both women as well as men play important roles in agricultural production. But men and women farmers do not just carry out their agricultural activities in a vacuum. The daily needs of farming families have to be looked after; like everyone else, farmers have to eat, wash their clothes, and raise and educate their children. Farming families also participate in community life, for example, in their religious events and places, in social activities, and in various community organizations.

Gender analysis tries to take account of these roles on other fronts in the lives of farmers, since an understanding of the overall commitment of time and energy is a prerequisite to a better identification of their needs.

Theorists in gender analysis use the term reproductive roles in a much wider sense than biological reproduction alone; referring rather to the full set of activities related to meeting family members' needs and the management of the household. But the responsible for home economics comes in the women role in major cases.

Gender analysis also shows that in addition to the activities that women farmers carry out in the agricultural production sphere, they are at the same time heavily involved in these reproductive/ domestic roles. Thus, time studies show that women spend numbers of hours not only in agricultural tasks, but also in cooking, and caring for children, as well as chores such as fetching water and firewood (wooden fuel) which are needed to carry on domestic tasks for the household. Some estimates are that these combined responsibilities all add up to as much as 14-16 hours for women's workday.

Gender analysis also reveals that women have heavy time commitments in their community roles, such as visiting the sick, attending funerals, and so on. Of course, men have community roles as well; however it is the overall commitment of daily time and energy by women farmers that is an important consideration for those who are preoccupied with agricultural development.

Key Objectives:

Gender mainstreaming is a holistic, comprehensive and multidimensional process that is public and political, but also personal. The objectives of mainstreaming gender issues in rural development projects are to:

- Identification and analysis of inequitable allocation of human and financial resources that lead to disparities
- Reduce gender inequities that may exist in SIAPEP-I given project area;
- Encourage both men and women to participate in project activities equally; ensure that their specific needs are satisfied, that they benefit from the project and that the project impacts positively on their lives;
- Create the conditions for the equitable access of men and women to project resources and benefits;
- Create the conditions for the equitable participation in project implementation and decision making processes.

Key Indicators:

In order to achieve its objectives regarding gender, a project should ensure that:

- There is a strategy for mainstreaming gender;
- Project Staff have an awareness of gender sensitive issues;
- The project incorporates methods which will facilitate the representation and participation of both men and women;
- The monitoring and evaluation system incorporates gender disaggregated data and provides gender impact indicators;
- Adequate human and financial resources are available.

(Source: Poverty dynamics of Female-headed Households in Pakistan: Evidence from PIHS 2000-01 and PSLM 2004-05 or PIHS 2000-01 and PSLM 2004-05.)

Process of Community Consultation: The consultant team coordinated with the local NGO (s) working in various districts within the study area to ensure their cooperation for conducting the consultative meetings with the women communities for the Gender Assessment to ensure representation and participation of women in the design phase. The National Rural Support Programme (NRSP) has a network of rural women communities throughout the Pakistan including Sindh Province. The consultant meets with rural women in the villages where already WCA exists. Consultation and dialogues with the women farmers in all the districts was challenging due to traditional boundaries and stereo types attached with interaction with the females, however the social team of consultant made it with the support of NRSP in few districts and in other districts male

members represented their women as male to female interaction is an issue in majority of the locations here in Pakistan, with the result of consultation and coordination with other organization such as NRSP the social team made it through the female staff member (s) to make it possible where they could support, although there should have had a female staff member to interact with the females in the communities to ensure participation in all over the targeted districts by the study team.

District	No. of villages participated	Venue (workshop held at)	No. of Participants		
			Male	Female	Total
Mirpurkhas / Tando Allahyar, Sindh	1. Manik Lanjwani 2. Daood Qumbhar 3. Masoo Bozdar (03 Nos of Villages)	Village Muhammad Siddique Sand, UC Chambar-1	20	28	48
Thatta, Sindh	1. Hot Norio 2. Haji Usman 3. Allah Rakhio mallah 4. Hussain Mallah 5. Ramzan Dario 6. Haji Shahdad Jat (06 Nos of Villages)	Hot Norio, UC Gul Muhammad Baran, Taluka Jati.	23	11	34



Figure 4.4: Community consultation with Women Farmers at District Mirpurkhas/ Tando Allahyar.



Figure 4.5: Community Consultation Meeting with Women Farmers in District Mirpurkhas/ Tando Allahyar.

4.12 COMMUNITY CONSULTATION (COMPONENT WISE):

The consultant team conducted a series of community consultation followed by the detailed project briefing and discussion on the forum with men and women accordingly. Through sharing the information regarding the project component in detail Gender Assessment and Social Impact Assessment enabled to get clear opinion of the community people/ project beneficiaries on Watercourse level. People shared their opinion, demands, values and importance regarding project components for Social Impact Assessment (SIA) given below:

4.12.1 COMPONENT- A: COMMUNITY WATER INFRASTRUCTURE IMPROVEMENT

Subcomponent A1. Community Watercourse Improvement:

Community people are willing to be mobilized for the project execution. Since the On-Farm Activities are run from very long time, most of the watercourses have already organized WCAs and having their legal entity; If any of the activity is carried out at the watercourses where WCA does not exist, new WCA shall be formed according to the procedures and women participation must be ensured where women land owners exists WCA agreed. To carry out the civil works and related activities on the part of the WCA working scope, these (WCAs) shall be given comprehensive gender sensitive trainings through workshops, seminars and routine meetings. The WCA also emphasized to provide trainings for operational and financial matters i.e. account opening in the bank, books keepings, Bank accounts transaction/ statements, bank reconciliation, financial utilization of routine expenses internal/external audits and also can have gender sensitive material to sensitize men about the gender dimensions of the above mentioned issues. A gender sensitive awareness campaign shall also be initiated through radio programmes, local TV channels, pamphlets as per the analogy of the existing OFWM Project. Community ensured that there is no any resettlement issue on the watercourse level throughout the Sindh province.

Subcomponent A2: Mitigating Flood Risk for the Poor:

Thirty (30) villages of seven (07) districts comprising of Thatta, Badin, T. M. Kan, Shaheed Benazirabad, Sanghar, Mirpurkhas, Tando Allahyar hit by the previous flood of 2010-11 were visited. Most of the villagers having losses in the flood disasters were in the favour of Elevated Platforms to rescue their lives and valuable assets i.e. livestock, stored grains, poultry and other equipment. The Flooded Community surveyed, proposed the formation of Vulnerable Community Groups (VCGs) for the consultation and participation in this project activity. The formation of vulnerable community groups (VCGs) is a novel one in its nature which has never been practiced in the past. Community people showed their interest to form community cluster amongst 6 to 10 villages which will be benefitted by the Elevated Platforms in the flooded area and also can perform as collective community network at the same time.

During consultation workshop (s) with the communities gathered from various villages usually hit by the flood emphasized that provision for boys and girls school in the elevated platforms must be included in the design so that children's education should not suffer during the flood season. The community members also shared the need for health facility and requested the team to coordinate with the health department or other development partner i.e. UNICEF, Marie Stopes etc. to establish a health center for the same during flood season. Communities were in the interest to make sure the family separations for women and children privacy and there should be a provision of segregated latrines and kitchens to provide privacy to women and children. The safety measure for children may be ensured and platforms should be at well aerated place. People offered their land to be donated for the elevated platforms if required.

4.12.2

COMPONENT- B: PROMOTION OF HIGH EFFICIENCY IRRIGATION SYSTEMS (HEIS):

Since the HEIS is a sort new project activity majority of growers shown unfamiliarity with this. The growers of water deficient areas and others having orchards or growing vegetables shown inclination in the installation towards this activity. The growers were of the view to have no grower share or at least very minimize on their part to be paid. HEIS is a new activity being included in the project shall require awareness and confidence building for the farmers. It is suggested that the farmer sharing may be kept as minimum as possible. Though the HEI System shall be installed by the Farms but its comprehensive trainings and manuals shall be provided to the growers for operation and maintenance. During our need assessment survey 67% opted for HEIS while the response from another part of the community was cool. It was observed that the growers were partially ready for the installation of HEIS. The growers from some districts of Sindh province having orchards or vegetable fields shown their keen interest such as Karachi, Jamshoro, Thatta, Tando Allahyar, Umerkot, Larkana, Nawabshah, Sanghar, Mirpurkhas, Matiari, Dadu, Tando Muhammad Khan, Badin, Noshero Feroz, Sukkur (Salehpat Area). The comprehensive seminars, workshops at the district level shall be conducted to train the WCAs/Individual growers on HEIS aspects. Such important topics related to the HEI System shall be included in the main capacity building programme. In Sindh women do not operate the machineries for the agriculture development, However under this project priority should be given to involve and train the women and increase their participation in the use of technical machineries with the engagement of their guardians (male members). To ensure the gender based participation there should be a formal requirement of the HEIS benefits if the application submitted by a women farmer belongs to the WCA as compulsory project beneficiary criteria.

4.12.3

COMPONENT- C: IMPROVED AGRICULTURE PRACTICES:

Subcomponent C-1: laser land leveling and deep plowing

Subcomponent C-2: improved agriculture production technology.

Farming community shown their full interest for participation in the Agriculture Promotional activities. The productivity enhancement has already been practiced in the On-Farm Project which resulted in better farm management and improved crop production and protection technology. The community groups demanded that the General Body of the WCAs shall be provided technical field services for their crop problems at the doorstep with the coordination of the Agricultural Extension Department. A strong demand prevails from the community for Laser Land Leveler Equipment, improved crop protection and production technology. It was also discussed that the detailed Need Assessment (NA) shall be worked out during the implementation phase of the project for provision of Laser Land Leveler Equipment and adoption of improved agricultural practices. The feedback from the community regarding the establishment of Information Kiosks Centers was significantly positive. They were of the view to develop more centers for the better information to the growers and the female staff should be appointed to operate the Information Kiosks Centers for the facilitation of women farmers and visitors to ensure the gender friendly for the women visitors & beneficiaries. Community desires to have less delta crops with high yield potentials to be introduced and adopted. Efforts shall be taken to coordinate with Agricultural Research, Pakistan Agriculture Research Council and other Line Departments to look to the chances for the introduction of diversified crops (Exotic or home). The existing On- Farm IPM approach shall be extended in the project coming forth. The Training to the growers regarding pesticide residual effect and health hazards shall be provided. The community expressed requirement regarding learning about agriculture and its new crop production/ protection technologies. Such important topics related to the project components/ interventions shall be proposed for the capacity building programme.

Gender Equality and Social Inclusion Action Framework- GESIAF: A detailed Gender Action Plan (Gender Equality and Social Inclusion Action Framework- GESIAF) with Gender responsive qualitative and quantitative indicators have been drafted to capture gender based results of the project (Implementation Matrix showed in Table 1). Led by the PD, PIU in the Department of Agriculture the GESIAF will be the road map for social inclusion and engagement of women and marginalized groups in the project design and implementation within the various project components. This plan will be monitored by a Social and Gender specialist who will ensure that gender is mainstreamed during implementation of the project. The Action Plan is not designed to replace the gender mainstreaming strategy of department, but rather to advance its implementation. The Plan defines concrete one-year actions to intensify the implementation of the gender mainstreaming of the project. Execution of this plan with multi-pronged strategies would give gender issues more traction institutionally and would position the department to incorporate women concerns in the project.

Implementation Matrix of Gender and Development Action Plan

Impact: World Bank performance in gender mainstreaming for the achievement of greater gender equality and the empowerment of women and girls in Sindh Province.

Output	Activity	Performance Indicators	Implementation Role
Output 1: Improve nt of community water course through engagement of women	Formation and Strengthening of Women Farmers Groups (WFG) for gender balanced participation	- Proportion of women to all participants in the groups.	- AE&WM Department. - Project Consultant. - WCA
		- A minimum quota for women representation.	
		- The formed women groups will be able to help other new groups to be formed.	
		- # of meetings, # of females attending the meetings , and what is the contribution in terms of decision making etc.	
Output 2: Social mobilization and capacity building.	1. Social and technical capacity building of the staff improved	- The project team will be well known/ aware about project objectives and achieve the 100% of the set targets to be assigned in the project implementation plan.	- Project Consultant
		- The team will know how to conduct various gender sensitive trainings, workshops and seminars for the awareness campaigns and capacity building for farmers (men & women).	
		- The time and resources will be controlled and utilized properly.	
		- Gender sensitive curricula and training material will be used.	
	2. Capacity building of the farmers through social mobilization and training	- Consultation with women in the development of the material.	- District Offices/ Field Teams of AE&WM Department. - Project Consultant.
		- The women farmers will conduct their routine meetings on Watercourse level for sharing their issues and ideas.	
		- The male members of WCA will realize the importance of women role in agriculture.	
		- The farmer and local people will be able to get benefits from other projects, organizations and line departments accordingly being an organizing body.	
		- Women will have access to all training programs and at least 50 percent or more training opportunities will be provided to women.	
		- Consultation with women in the development of the material.	

		<ul style="list-style-type: none"> - The visual tele-sessions through multi-media, movies, documentaries in the context of gender related best practices globally learning will provide the latest leanings to the farmers and project teams. - Selection of training cites e.g. 1/3 of the trainings will be conducted in local communities at times that will be suitable to women and men's availability by the project male and female staff. 	
Output 3: Coordination and linkage development.	Re-appropriating and diverting project resources to women farmers.	<ul style="list-style-type: none"> - Number/ Percent of women will be consulted about how agricultural support will be made beneficial to them. - Women farmers will be given the priority if they come forward to avail the project benefits from i.e. HEIS, Laser land Leveler or demonstration plots by fulfilling the beneficiary selection criteria developed for project potential beneficiaries. - The privacy and security for the women farmers and all other benefits pertaining to the Flood emergency shelters will be taken on top priority to make the benefited. - The boys and girls of flood affected families will not lose their education during staying in Flood Shelters as the schools for the boys and girls of flood affectees will also be provided under flood shelter component. - Segregated kitchen and wash room will be constructed at the side where male mobility would not disturb the privacy. - The provision for family separators and safety boundaries for children will be given in the flood shelter design. - More organizations will come to execute their projects and will work with the men and women farmers. - The access of credit will be easier for the small farmers particularly female farmers from microfinance banks and organizations. - The Community Physical Infrastructure providers will contact the community based organization for their schemes of street brick pavement roads, drinking water tanks etc. 	<ul style="list-style-type: none"> - District Offices/ Field Teams of AE&WM Department. - Local NGOs/ NGOs Network. - Women Development Department, Govt. of Sindh.
Output 4: Sustainability of GAP	Continuity of action plan	The Sindh Agriculture Department will continue Action Plan in its SIAPE Project.	AE&WM Project, Govt. of Sindh

- i. Strengthening AE&WM Department commitment to implementing gender equality in developing and improving its institutions on Agriculture and Rural Development.
- ii. Strengthen the capacity of gender mainstreaming for empowering the rural women the contribution in society as planners, decision makers, managers and public service providers at all levels.

1. Process and Partners:

The preparation of the Action Plan, was a consultative and collaborative process with internal and external stakeholders (Agriculture Department, Consultants, WCAs & World Bank). The consultations were also launched with separate brainstorming sessions, stakeholder consultation workshops, and awareness campaigns with women farmers under project areas to ensure that women participants defined their priorities, needs and instruments for the Plan.

2. Project Executing Agency:

Sindh Agriculture Engineering & Water Management Department, Government of Sindh Pakistan.

3. Estimated Project (Component) cost:

PKR: 1 Million

4. Implementation Period:

60 Months.

5. Consultancy Services:

6.

Consultancy Expert duration: 12 months, in which

- Gender Specialist, 1 person for 12 months
- Trainings to the project staff in the context of gender mainstreaming.

Action areas and expected results

Output 1: Improvement of community water course through engagement of women Formation and Strengthening of Women Farmers Groups (WFG)

During 1st six months of the project 144 Women Farmers Groups will be formed within all three Area Water Boards (Nara, Ghotki Feeder and Left Bank Canal Area Water Boards). At-least one WFG will be formed by each district field team per month with the support of Gender Coordinators (each from upper and lower Sindh region) and other project female staff under the supervision of Sr. Gender Specialist (appointed by the project consultant). The breakup of monthly and field

team wise targets are tentative and will be divided subject to the local community traditions and differences between upper and lower Sindh in the light of community consent. These groups will complement the existing formed groups under SOFWM Project by SIDA and can be coordinated and activated with the mobilization process and consultation under SIAPEP. Through the engagement of men of the community/ WCAs these groups will be mobilized to perform active role in WCAs. A significant increase in the number of women farmers groups will lead to benefit large number of women users in organized manner and strengthen their position in decision making at grass root level (WCA) as . These groups will be formed by existing district field teams of the department and two Gender Coordinators dealing with the project area of upper Sindh and lower Sindh region equally under the supervision of a Sr. Gender specialist hired by the Project Consultant with the close coordination of communities.

Some of the indicators that might be worth exploring under this output would be:

- Proportion of women to all participants in the groups
- A minimum quota for women representation
- The formed women groups will be able help other new groups to be formed.
- An indicator for their participation in these bodies – both qualitative and quantitative e.g # of meetings, # of females attending the meetings , and what is the contribution in terms of inputs in decision making etc.

Output 2: Social Mobilization And Capacity Building

Action: 2 (a) : Social and technical capacity building of the staff improved

Action: 2 (b) : Capacity building of the farmers through social mobilization and training (By Project Field based teams)

Social mobilization and capacity building is one of the all major components of the project. To improve the knowledge and capacity of women users will be the main focus, under this action plan. The trainings and other capacity building activities under all project components will support the Gender mainstreaming operationally and financially and the same trained staff/ team members who have been gender sensitized will train the farmer (women farmers) at district level. It will further be ensured that women farmers may also be nominated to participate in regular training programs by stakeholders. However, under this plan, one domestic or national trip will be organized for study purpose, for potential and progressive women farmers/ activists particularly along with the other project staff from the budget allocated for main capacity building programme of overall project staff.

Quantifiable indicators are required for these outcomes from capacity building programme:

- The project team will be oriented about project objectives and achieve the 100% of the set targets to be assigned in the project implementation plan accordingly

- The team (s) will be able to conduct various trainings, workshops and seminars for the awareness campaigns and capacity building for farmers (with minimum quota for women).
- The time and resources will be controlled and utilized properly which will benefit to all the dimensions of the project components including gender mainstreaming.
- The women farmers will conduct their routine meetings on Watercourse level for sharing their issues and ideas.
- The male members of WCA will be sensitized to realize the importance of women role in agriculture.
- The women farmers and local people will be able to get benefits from other projects, organizations and line departments accordingly being an organizing body.
- Women will have access to all training programs and at least 50 per cent or more training opportunities.
- Gender sensitive curricula and training material will be used.
- Consultation with women in the development of the material
- The visual tele-sessions through multi-media, movies, documentaries in the context of best practices globally learning will provide the latest learnings to the farmers and project teams.
- Selection of training sites e.g 1/3 of the trainings will be conducted in local communities at times that will be suitable to women and men's availability by the project male and female staff.

Output 3: Coordination and linkage development.

Re-appropriating and diverting project resources to women farmers.

It is widely observed that women farmers are not benefiting directly out of the project resources because of the community of Sindh province and even though out of the Pakistan the women farmers do not operate the machineries and lead the farming advancement activities, but in the case of any farmer women are interested to participate the all interventions and avail the project benefits would be appreciated and prioritized. Moreover, the action 3 proposes, first, to divert the project resources like land laser leveler, demonstration plots, watercourses improvement, flood shelters, HEIS etc to women farmers as direct beneficiaries by giving especial provisions, and second, to respond women water needs (esp. drinking water, cloth washing hats) by improved irrigation infrastructures and service delivery. It is expected that this action not only benefit women water users, but would also improve the efficiency of irrigation infrastructures and contribute for the achievement of the major objectives of the project. All major stakeholders would be responsible for the implementation of this action particularly.

During consultation process with women farmers, the major problem identified by them would be the drinking water facility on the level of Watercourse/ villages. It is believed that under this action plan, Women Farmers Groups will be provided drinking water facility: i.e. installation of hand pumps, repair of existing water ponds, construction of water storage tanks and model washing ghats etc. WCA and Women Farmers Group (s) will be responsible for site selection and

maintenance of the provided facility. The women groups will be coordinated with the other local NGOs, CBOs, Line departments for other development benefits and credit facility through linkages development on village or cluster basis.

Indicators in this case would be:

- Percentage of women consulted about how agricultural support will be made beneficial to them
- Women farmers will be given the priority if they come forward to avail the project benefits from i.e. HEIS, Laser land Leveler or demonstration plots by fulfilling the beneficiary selection criteria developed for project potential beneficiaries.
- The privacy and security for the women farmers and all other benefits pertaining to the Flood emergency shelters will be taken on top priority to make the benefited.
- The boys and girls of flood affected families will not lose their education during staying in Flood Shelters as the schools for the boys and girls of flood affectees will also be provided under flood shelter component.
- The kitchen and wash room will be constructed at the side where male mobility would not disturb the privacy.
- The provision for family separators and safety boundaries for children will be given in the flood shelter design.
- More organizations will come to execute their projects and will work with the men and women farmers.
- The access of credit will be easier for the small Women Farmers from microfinance banks and organizations. The Community Physical Infrastructure providers will contact the community based organization for their schemes of street brick pavement roads, drinking water tanks etc.

Output 4: Sustainability of GAP.

Continuity of action plan

The Sindh Agriculture Department will continue Action Plan in its SIAPE Project.

Project Stakeholders:

- Sindh Agriculture Engineering & Water Management (AE&WM) Department, Government of Sindh.
- Women Development Department, Government of Sindh.
- Community Development Department, Govt. of Sindh.
- Farming communities.
- Local NGOs, CBOs and International donors.

Staffing and financing arrangements

The successful implementation of this Action Plan would depend on addressing two major constraints: staffing and financial resources. The existing staff will be used and other female community volunteer would also be hired, preference will be given to local communities. The Action Plan would be funded from SIAPEP- I.

Estimated Budget Provision:

Sr. No.	Description/ Staffing	Unit	Unit Cost	Total Cost / Annum	Remarks
A	Staffing:				
1	Gender Specialist	1	-	-	will be included under project cost
2	Gender Coordinator	2	-	-	
B	Action 1: Formation				
1	Action 1: Formation of Women Farmer Groups (WFGs)	-	-	1,000,000	Lump sum amount
C					
1	Training	20	-	-	The training and capacity building activities would be sponsored by all project components OR Project Training programme.
2	Orientation Workshops/ Seminars/ Campaigns	10	-	-	
3	Local & National Study Tours	10	-	-	
4	National & International Tour (each trip for 6 persons)	2	-	-	
D					
1	Re-appropriate and divert project resources (Drinking water facility - hand pumps/pond repair/model and washing ghats)	100	-	-	
E					
1	Agricultural/ Livestock & productivity enhancement/ input support/ grant for women farmers	-	-	-	
	Total Cost			1,000,000	

Implementation Matrix Of Gender And Development Plan Of Action:

Impact: World Bank performance in gender mainstreaming for the achievement of greater gender equality and the empowerment of women and girls in Sindh Province.

Output	Activity	Performance Indicators	Implementation Role
Output 1: Improvement of community water course through engagement of women	Formation and Strengthening of Women Farmers Groups (WFG) for gender balanced participation	- Proportion of women to all participants in the groups.	- AE&WM Department. - Project Consultant. - WCA
		- A minimum quota for women representation.	
		- The formed women groups will be able to help other new groups to be formed.	
		- # of meetings, # of females attending the meetings, and what is the contribution in terms of decision making etc	
Output 2: Social mobilization and capacity building.	3. Social and technical capacity building of the staff improved	- The project team will be well known/ aware about project objectives and achieve the 100% of the set targets to be assigned in the project implementation plan	- Project Consultant
		- The team will know how to conduct various gender sensitive trainings, workshops and seminars for the awareness campaigns and capacity building for farmers (men & women).	
		- The time and resources will be controlled and utilized properly.	
		- Gender sensitive curricula and training material will be used.	
		- Consultation with women in the development of the material	
	4. Capacity building of the farmers through social mobilization and training	- The women farmers will conduct their routine meetings on Watercourse level for sharing their issues and ideas.	- District Offices/ Field Teams of AE&WM Department. - Project

		<ul style="list-style-type: none"> - The male members of WCA will realize the importance of women role in agriculture. - The farmer and local people will be able to get benefits from other projects, organizations and line departments accordingly being an organizing body. - Women will have access to all training programs and at least 50 percent or more training opportunities will be provided to women. - Consultation with women in the development of the material - The visual tele-sessions through multi-media, movies, documentaries in the context of gender related best practices globally learning will provide the latest leanings to the farmers and project teams. - Selection of training sites e.g 1/3 of the trainings will be conducted in local communities at times that will be suitable to women and men's availability by the project male and female staff. 	Consultant.
Output 3: Coordination and linkage development.	Re-appropriating and diverting project resources to women farmers.	<ul style="list-style-type: none"> - Number/ Percent of women will be consulted about how agricultural support will be made beneficial to them - Women farmers will be given the priority if they come forward to avail the project benefits from i.e. HEIS, Laser land Leveler or demonstration plots by fulfilling the beneficiary selection criteria developed for project potential beneficiaries. - The privacy and security for the 	<ul style="list-style-type: none"> - District Offices/ Field Teams of AE&WM Department. - Local NGOs/ NGOs Network. - Women Development Department, Govt. of Sindh.

		<p>women farmers and all other benefits pertaining to the Flood emergency shelters will be taken on top priority to make the benefited.</p>	
		<ul style="list-style-type: none"> - The boys and girls of flood affected families will not lose their education during staying in Flood Shelters as the schools for the boys and girls of flood affectees will also be provided under flood shelter component. 	
		<ul style="list-style-type: none"> - Segregated kitchen and wash room will be constructed at the side where male mobility would not disturb the privacy. 	
		<ul style="list-style-type: none"> - The provision for family separators and safety boundaries for children will be given in the flood shelter design. 	
		<ul style="list-style-type: none"> - More organizations will come to execute their projects and will work with the men and women farmers. 	
		<ul style="list-style-type: none"> - The access of credit will be easier for the small farmers particularly female farmers from microfinance banks and organizations. 	
		<ul style="list-style-type: none"> - The Community Physical Infrastructure providers will contact the community based organization for their schemes of street brick pavement roads, drinking water tanks etc. 	
Output 4: Sustainability of GAP	Continuity of action plan	The Sindh Agriculture Department will continue Action Plan in its SIAPE Project.	AE&WM Project, Govt. of Sindh.

Existing Women Farmers Groups:

During Feasibility Study the Social Scientists of consultant came to know the women farmer groups were also identified by the Social Development Cell,

Transition Wing SIDA under Sindh On-Farm Water Management (WOFWM) Project. The gender team of project identified about 2243 women farmers in all three Area Water Board (AWBs) from 924 WCAs in which 240 women farmers were registered for 19 Women Farmers Groups (WFGs). As the activity was held a long time ago and due to absence of gender policy and its implementation the women farmer groups were not followed properly to keep them active and functioning. The tentative figures given in the following tables are produced by Transition Wing, SIDA during study.

(A) Gender Mainstreaming in Water Management

S#	AWBs	Field Station	Identification	Membership in		
				WCAs	Women Groups	Women Groups
1	Nara Canal AWB	Sanghar	679	224	100	9
2		Kot Ghulam Muhamamd	679	454	70	5
3		Mirpurkhas	449	109	33	1
4		Choondko	52	26	10	2
5		Umerkot	266	36	16	1
6	Left Bank Canal AWB	Badin	76	62	0	0
7	Ghotki Feeder Canal AWB	Ghotki	42	13	11	1
Total:			2243	924	240	19

(B) Women in General Body and Board of Management of FOs : Leadership and Active Participation

The women farmers are not only participating in the WCAs management, but they are also holding the position in Farmer Organizations (FOs) level on ground, which shows the scope to work for the Gender mainstreaming for the implementation of above given Gender Action Plan as proposed.

S.#	Name	FO	Position in FO	Position in WCA
1	Ms. Soomal	Bagi Minor	Board of Management	Member WCA
2	Ms. Sumera Bibi	Saifal Minor	General Body	WCA Secretary
3	Ms. Pathani Khosh	Gohram Minor	General Body	WCA Chair Person
4	Ms. Parveen Leghari	Duthro Minor	General Body	WCA Chair Person
5	Ms. Farzana Khalid	Nabisar Minor	General Body	WCA Member
6	Irshad Bibi	Rawatiyani Minor	Board of Management	WCA Secretary
7	Ms. Pathani Leghari	Bareji Minor	General Body	WCA Member
8	Ms. Zareena	Rawatiyani	Board of Management	WCA Member

		Minor		
9	Ms. Saima Naz	RD 205	Board of Management	WCA Chair Person

C. Capacity Building and Awareness

S.#	Women Group/ Field Station	Trainings	Seminars	Conventions	Participants	Date	Organized by
1	WG Sarki Minor	1	-	-	30	24-1-06	
2	WG Bareji Minor	1	-	-	30	25-4-06	
3	WG Rawatiyani	1	-	-	25	5/12/2006	
4	WG Duthro Minor	1	-	-	25	19-4-06	
5	WG Simini Minor	1	-	-	35	28-12-06	
6	Sanghar		2		100	8-8 06 8-8-07	
7	Mirpurkhas		1		100	28-9-05	
8	Kot Ghulam Mohd			1	200	24-11-07	
9	Kot Ghulam Mohd	1			50	24-06-08	
10	Sanghar	1			28	30-8-08	
11	Hyderabad		1		3000	20-05-2009	

List of villages visited/ interviewed during assessment for primary data collection.

Sr. No	District	Taluka	Union Council	Village
1	Thatta	Jati	Gul Mohammad Baram	Hot Norio
2				Haji Usman
3				Allah Rakhyo Malah
4				Hussain Mallah
5				Ramzan Dario
6				Haji Shahdad Jat
7	Badin	Badin	Nindo	Mohammad Mosa Khaskheli
8				Golo Malah
9				Long Malah
10				Mohamad Bachal
11				Bachal Dario
12	T.M Khan	Bulri Shah Kareem	Jaeel Mato	Gul Hassan
13			Saeed Mato	Mohammad Ameen

14				Raheem Dad
15				Mohammad Hanif Sathyo
16				Jeay Shah
17				Mohammad Bux Sthiyo
18				Ghulam Hussain Sthiyo
19		Tando Ghulam Haider	Nazarpur	Bachal Barani
20				Urjan
21				Rasool Bux Barani
22				Bachal Laghari
23	Shaheed Benazirabad	Daur	Jamal Shah	Nathyani
24		Khipro	Khahi	Haji Ameen Mari
25				Haji Murad Ali Mari
26				Haji Salih Khan Mari
27	Sanghar	Tando Adam	Kombaro Daro	Kazi Mohammad Taki
28	Mirpurkhas	Sindhri	Phulleli	Saleh Bhambro
29	Mirpurkhas	Jhudo	Ahori	Sher Mohammad Laghari
30	Tando Allahyar	Chamber	Chamber-II	Manik Lanjwani

Annexure- III

PROFILES OF WOMEN FARMER GROUPS (WFGs)

Women Group: Women Farmer Group Duthro Minor
 Date of formation: 11-11-2005
 Name of FO: Duthro Minor
 Village: Jaffar Khan Leghari
 Field Station: Sanghar

S#	Name	Designation	Education	Profession	WCA	Training Availed
1	Dr. Najma	Chair person	M.B.B.S	Medical Professional	6L	Nil
2	Ms. Sughra	Secretary	M.A	Teaching	1L	-
3	Shireen Bano	Treasurer	M.A	House Hold	6L	-
4	Ms. Amna	Member	M.A	-	40A-1L	-
5	Ms. Hameeda	-	M.A	-	40A-1L	-
6	Ms. Umema	-	M.A	-	40A-1L	-
7	Ms. Hussan Bano	-	Primary	-	5L	-
8	Hajiani Bhag bhari	-	Primary	-	6L	-
9	Ghulam Fatima		Intermediate	-	6L	-
10	Salma	-	Intermediate	-	6L	-
11	Khairree	-	Matric	-	6L	-
12	Sara	-	Matric	-	6L	-40A-1L

PROFILES OF WOMEN FARMER GROUPS (WFGs)

Women Group: Women Farmer Group Duthro Minor
 Date of formation: 11-11-2005
 Name of FO: Duthro Minor
 Village: Tharo Khan Leghari
 Field Station: Sanghar

S#	Name	Designation	Education	Profession	WCA	Training Availed
1	Ms. Parveen	Chairperson	Intermediate	House Hold		02
2	Ms. Shahnaz Begum	Secretary	Primary	-	7L	02
3	Hajiani Hamida	Treasurer	-	-	7L	02
4	Hajiani Bakhan	Member	-	-	7L	-
5	Ms. Gulshan Ara	-	-	-	7L	-
6	Ms. Bhag Bhari	-	-	-	6L	-
7	Hajiani Beeban	-	Primary	House hold	7L	-
8	Ms. Hajra	-	Matric	-	6L	-
9	Afroz Bano	-	Matric	-	6L	-
10	Kazbano	-	M.A	-	6L	-
11	Khairee	-	Matric	-	6L	-
12	Zarina	-	Matric	-	6L	-02
13	Bashiran	-	Illiterate	-		02

PROFILES OF WOMEN FARMER GROUPS (WFGs)

Women Group: Women Farmer Group Sarki Minor
 Date of formation: 16-11-2005
 Name of FO: Sarki Minor
 Village: Yousuf Jingh

S#	Name	Designation	Education	Profession	WCA	Training Availed
1	Nasima	Chairperson	M.A	House Hold	1AR	01
2	Ms. Saeeda	Secretary	Illiterate	-	6R	01
3	Ms. Malookan	Treasurer	-	-	8T	01
4	Ms. Safooran	Member	-	-	3L	01
5	Ms. Sabul	-	-	-	3L	01
6	Ms. Rashida	-	-	-	5L	01
7	Ms. Noor Bai	-	-	-	5L	01
8	Ms. Hanifa	-	-	-	10T	01
9	Ms. Janat	-	-	-	10T	01
10	Ms. Soni	-	-	-	10T	01
11	Ms. Shrimitee Bai	-	-	-	10T	01
12	Ms.Zubeda	-	-	-	8T	01
13	Ms. Bachai	-	-	-	8T	01
14	Ms. Bhagbhari	-	-	-	8T	01
15	Mankoo	-	-	-	5L	01
16	Amees	-	-	-	6R	01

Field Station: Sanghar

PROFILES OF WOMEN FARMER GROUPS (WFGs)

Women Group: Women Farmer Group Kunro Minor
 Date of formation: 17-01-2006
 Name of FO: Kunro Minor
 Village: Kareem Dino Wasan
 Field Station: Sanghar

S#	Name	Designation	Education	Profession	WCA	Training Availed
1	Ms. Bhiri	Chairperson	Illiterate	House Hold	2AR	Nil
2	Ms. Shahbaz Begum	Secretary	Primary	-	2R	-
3	Ms. Hoor Bano	Treasurer	Illiterate	-	3L	-
4	Ms. Hawa	Member	-	-	2R	-
5	Ms. Jadul	-	-	-	2R	-
6	Ms. Habib Khatoon	-	Primary	-	2R	-
7	Ms. Suhtal	-	Primary	House hold	2R	-
8	Ms. Bhural	-	Primary	-	2R	-
9	Ms. Shah Khaton	-	Primary	-	2R	-
10	Ms. Bhirai	-	Illiterate	-	3A	-

PROFILES OF WOMEN FARMER GROUPS (WFGs)

Women Group: Women Farmer Group Bijar Minor
 Date of formation: 14-01-2006
 Name of FO: Bijar Minor
 Village: Bachayo Rind
 Field Station: Sanghar

S#	Name	Designation	Education	Profession	WCA	Training Availed
1	Ms. Samina	Chairperson	B.A	House Hold	9T	Nil
2	Ms. Shahnaz Kousar	Secretary	Matric	-	5L	-
3	Ms. Jamzadi	Treasurer	Primary	-	4AL	-
4	Ms. Wadan	Member	Illiterate	-	5R	-
5	Ms. Parveen	-	Matric	-	4R	-
6	Ms. Gulzar Begum	-	Matric	-	4R	-
7	Ms. Ameenat Qureshi	-	Matric	House hold	4R	-
8	Ms. Shah Jehan	-	Matric	-	4R	-
9	Ms. Latifan	-	Matric	-	4R	-
10	Ms. Yasmeen	-	Matric	-	4R	

PROFILES OF WOMEN FARMER GROUPS (WFGs)

Women Group: Women Farmer Group Rawatiynai Minor
 Date of formation: 27-05-2006
 Name of FO: Rawatiyani Minor
 Village: Chak No.23
 Field Station: Sanghar

S#	Name	Designation	Education	Profession	WCA	Training Availed
1	Ms. Irshad Bibi	Chairperson	Intermediate	House Hold	-	02
2	Ms. Balqees Begum	Secretary	-	-		02
3	Ms. Rukhsana	Treasurer	Illiterate	-		02
4	Ms. Allah Rakhi	Member	-	-		02
5	Ms. Sakina	-	-	-		02
6	Ms. Khursheed	-	-	-		02
7	Ms. Sajda	-	-	House hold		02
8	Ms. Asma	-	B.A	-		02
9	Ms. Amtal Parveen	-	Inter	-		02
10	Ms. Irshad Begum	-	Primary	-		01
11	Bashiran Bibi	-	Illiterate	-	-	01

PROFILES OF WOMEN FARMER GROUPS (WFGs)

Women Group: Women Farmer Group Rind Minor
 Date of formation: 27-05-2006
 Name of FO: Rindh Minor
 Village: Sinjhor
 Field Station: Sanghar

S#	Name	Designation	Education	Profession	WCA	Training Availed
1	Ms. Serwat	Chairperson	Intermediate	House Hold	-	Nil
2	Ms. Khadija	Secretary	B.A	-		-
3	Ms. Zulekhz	Treasurer	Primary	-		-
4	Ms. Koser	Member	Intermediate	-		-
5	Ms. Shakila	-	-	-	-	-
6	Ms. Naziran	-	-	-		-
7	Ms.Soria	-	Primary	House hold	-	-
8	Ms. Kaneez	-	Primary	-		-
9	Ms. Asary	-	Primary	-		-
10	Ms. Amna	-	-	-		-
11	Ms. Khatoon	-	Middle	-	-	-

PROFILES OF WOMEN FARMER GROUPS (WFGs)

Women Group: Women Farmer Group Liary Minor
 Date of formation: 18-12-2007
 Name of FO: Liary Minor
 Village: Kurkali
 Field Station: Sanghar

S#	Name	Designation	Education	Profession	WCA	Training Availed
1	Ms. Najma	Chairperson	-	House Hold	-	Nil
2	Ms. Nasreen	Secretary	-	-	-	-
3	Ms. Tasleem	Treasurer	-	-	-	-
4	Ms. Bkhtawar	Member	-	-	-	-
5	Ms. Kulsoom	-	-	-	-	-
6	Ms. Lal Khatoon	-	-	-	-	-
7	Ms. Siyani	-	-	-	-	-
8	Ms. Fatima	-	-	-	-	-
9	Ms. Shahnaz	-	-	-	-	-
10	Ms. Bhag Bhari	-	-	-	-	-
11	Ms. Hakima	-	-	-	-	-
12	Ms. Apri	-	-	-	-	-
13	Ms. Gandi	-	-	-	-	-
14	Safooran	-	-	-	-	-

PROFILES OF WOMEN FARMER GROUPS (WFGs)

Women Group: Women Farmer Group Santoor Minor
 Date of formation: 27-06-2007
 Name of FO: Santoor Minor
 Village: Manik Chandio
 Field Station: Sanghar

S#	Name	Designation	Education	Profession	WCA	Training Availed
1	Ms. Khadija	Chairperson	M.A	Teaching	1BR	01
2	Ms. Nasim	Secretary	Illiterate	House Hold	1BR	01
3	Ms. Hidayat Khatoon	Treasurer	-	-	1AR	Nill
4	Ms. Rukhsana	Member	-	-	1BR	-
5	Ms. Janat Khatoon	-	-	-	2AR	-
6	Ms. Zebunisa	-	-	-	1BR	-
7	Ms. Eid Bano	-	-	-	1R	-
8	Ms. Zenab	-	-	-	1R	-
9	Ms. Badshah Zadi	-	-	-	3L	01
10	Ms. Mumtaz Begum	-	-	-	1AR	01
11	Ms. Elaan	-	-	-	3L	Nill

PROFILES OF WOMEN FARMER GROUPS (WFGs)

Women Group: Women Farmer Group Simni Minor
 Date of formation: 05-07-2006
 Name of FO: Simni Minor
 Village: Qadir Bux Aradin
 Field Station: Sanghar

S#	Name	Designation	Education	Profession	WCA	Training Availed
1	Ms. Sharifan	Chairperson	Illiterate	House hold	5R	01
2	Ms. Zubeda	Secretary	Illiterate	House Hold	6L	01
3	Ms. Aminat	Treasurer	-	-	3L	01
4	Ms. Sara	Member	-	-	3L	-
5	Ms. Ladan	-	-	-	2R	-
6	Ms. Zulekha	-	-	-	10T	-
7	Ms. Jamal Khaton	-	-	-	10T	-
8	Ms. Ghulam Zehra	-	-	-	10T	-
9	Ms. Elman	-	-	-	10T	-
10	Ms. Whahid Khaton	-	-	-	4R	-
11	Ms. Elman	-	-	-	3L	Nil

PROFILES OF WOMEN FARMER GROUPS (WFGs)

Women Group: Women Farmer Group -1 Kot Ghulam Muhammad
(KGM) -1 Minor
Date of formation: 27-11-2006
Name of FO: KGM Minor
Village: KGM City

S#	Name	Designation	Education	Profession	WCA	Training Availed
1	Ms. Farzana	Chairperson	HSC	House hold	331/2	01
2	Ms. Shahneela	Secretary	SSC	House Hold	331/2	01
3	Ms. Shumaila	Treasurer	B.Com	-	331/2	01
4	Ms. Batool	Member	Illiterate	-	331/2	-
5	Ms. Zulekha	Member	-	-	331/2	-
6	Ms. Hanifa	Member	-	-	331/2	-
7	Ms. Naseem	Member	-	-	331/2	-
8	Ms. Akhtar Bano	Member	-	-	331/2	-
9	Ms. Nasreen Javed	Member	-	-	331/2	-
10	Ms. Shamim	Member	-	-	331/2	-
11	Ms. Sheri Mati Gulal	Member	-	-	331/2	-
12	Ms. Shahnaz Akhtar	Member	-	-	331/2	-
13	Ms. Shabana	Member	-	-	-	-
14	Ms. Afzana	Member	-	-	-	-
15	Ms. Shahnaz	Member	-	-	331/2	-
16	Ms. Fozia	Member	-	-	331/2	-
17	Ms. Fatima	Member	-	-	331/2	-
18	Shahnaz W/O Usman	Member	-	-	331/2	-
19	Ms. Jamshad Khanim	Member	-	-	331/2	-

Field Station: KGM

PROFILES OF WOMEN FARMER GROUPS (WFGs)

Women Group: Women Farmer Group-2 Kot Ghulam Muhammad
(KGM) Minor
Date of formation: 27-11-2006
Name of FO: KGM Minor
Village: Gaman Kalro
Field Station: KGM

S#	Name	Designation	Education	Profession	WCA	Training Availed
1	Ms. Zulekha	Chairperson	Illiterate	House hold	331/2	-
2	Ms. Rukhsana	Secretary	-	House Hold	330/1	-
3	Ms. Mariam	Treasurer	-	-	332/3	-
4	Ms. Zanab	Member		-	332/3	-
5	Ms. Niamat	Member	-	-	332/3	-
6	Ms. Hakeema	Member	-	-	332/3	-
7	Ms. Sabhai	Member	-	-	331/2	-
8	Ms. Sahiban	Member	-	-	332/2	-
9	Ms. Hurmat	Member	-	-	332/3	-
10	Ms. Nazeeran	Member	-	-	330/2	-
11	Ms. Hanifan	Member	-	-	331/2	-
12	Ms. Hawa	Member	-	-	330/1	-
13	Ms. Khani	Member	-	-	330/1	-
14	Ms. Rahmat	Member	-	-	330/2	-
15	Ms. Zareena	Member	-	-	330/1	-

PROFILES OF WOMEN FARMER GROUPS (WFGs)

Women Group: Women Farmer Group-3 Kot Ghulam Muhammad
(KGM) Minor
Date of formation: 27-11-2006
Name of FO: KGM Minor
Village: Deh: 33
Field Station: KGM

S#	Name	Designation	Education	Profession	WCA	Training Availed
1	Ms. Shabeeran	Chairperson	SSC	House hold	333/3	-
2	Ms. Mumtaz	Secretary	SSC	House Hold	333/3	-
3	Ms. Zubeda	Treasurer	SSC	-	333/3	-
4	Ms. Shazia	Member	Illiterate	-	333/3	-
5	Ms. Fozia	Member	SSC	-	331/2	-
6	Ms. Naseem	Member	Illiterate	-	331/1	-
7	Ms. Shamim	Member	-	-	332/3	-
8	Ms. Shaheen	Member	-	-	333/4	-
9	Ms. Nasreen	Member	-	-	332/3	-
10	Ms. Kulsoom	Member	-	-	333/3	-
11	Ms. Parveen	Member	-	-	332/3	-
12	Muhammad Bibi	Member	-	-	333/3	-
13	Ms. Hameeda	Member	-	-	333/3	-
14	Ms. Shahnaz	Member	-	-	331/3	-
15	Ms. Safia Bibi	Member	-	-	331/2	-
16	Ms. Rehana and Ms. Farzana	Member	-	-	333/4 - 331/2	-

PROFILES OF WOMEN FARMER GROUPS (WFGs)

Women Group: Women Farmer Group Bagi Minor
 Date of formation: 27-11-2006
 Name of FO: Bagi Minor
 Village: Ahmed Khan Khoso
 Field Station: KGM

S#	Name	Designation	Education	Profession	WCA	Training Availed
1	Ms. Allah Bachai	Chairperson	Primary	House hold	317/3R	-
2	Ms. Latifan	Secretary	Primary	House Hold	317/3R	-
3	Ms. Mahnaz	Treasurer	Primary	-	317/3R	-
4	Ms. Hajaran	Member	Illiterate	-	317/3R	-
5	Ms. Mariam	Member	-	-	317/3R	-
6	Ms. Khudija	Member	-	-	317/3R	-

PROFILES OF WOMEN FARMER GROUPS (WFGs)

Women Group: Women Farmer Group Junas Minor
 Date of formation: 7-7-2006
 Name of FO: Junas Minor
 Village: Junas , Pano Akal

S#	Name	Designation	Education	Profession	WCA	Training Availed
1	Ms. Bhoori W/O Mohd Alam	Chairperson	Illiterate	House hold	-	-
2	Ms. Shahzadi W/O Imam Bux	Secretary	-	House Hold	-	-
3	Ms. Mai Nawab	Treasurer	-	-	-	-
4	Ms. Hayatan	Member	-	-	-	-
5	Ms. Naghma W/O Ubedullah	Member	-	-	-	-
6	Ms. Zahida D/O Imam Bux	Member	-	-	-	-
7	Ms. Zarina W/O Ghulam Murtaza	Member	-	-	-	-
8	Ms. Zeba W/O Ghulam Hyder	Member	-	-	-	-
9	Ms. Shamma D/O Muhammad Ali	Member	-	-	-	-
10	Ms. Hajran D/O Yar Muhammad	Member	-	-	-	-
11	Ms. Kamul W/O Yar Muhammad	Member	-	-	-	-

Field Station: Ghotkee

PROFILES OF WOMEN FARMER GROUPS (WFGs)

Women Group: Women Farmer Group Bareji Distributary
 Date of formation:
 Name of FO: Bareji Distributary
 Village: 78 Mori
 Field Station: Mirpurkhas

S#	Name	Designation	Education	Profession	WCA	Training Availed
1	Ms. Pathani	Chairperson	Illiterate	House hold	-	-
2	Ms. Fatima	Secretary	-	House Hold	-	-
3	Ms. Zarina	Treasurer	-	-	-	-
4	Ms. Zulekha	Member	-	-	-	-
5	Ms. Nasiban	Member	-	-	-	-
6	Ms. Shakeela	Member	-	-	-	-
7	Ms. Mariam	Member	-	-	-	-
8	Ms. Merhunisa	Member	-	-	-	-
9	Ms. Moran	Member	-	-	-	-
10	Ms. Rozina	Member	-	-	-	-
11	Ms. Bashiran	Member	-	-	-	-
12	Ms. Sita	Member	-	-	-	-
13	Ms. Zainab	Member	-	-	-	-
14	Ms. Bhagul	Member	-	-	-	-
15	Ms. Gulzar	Member	-	-	-	-
16	Ms. Hasina	Member	-	-	-	-
17	Ms. Hakima	Member	-	-	-	-
18	Ms. Bibi	Member	-	-	-	-
19	Ms. Lalee	Member	-	-	-	-
20	Ms. Rahima Odd	Member	-	-	-	-
21	Ms. Sara Odd	Member	-	-	-	-
22	Ms. Tarsee	Member	-	-	-	-
23	Ms. Hoori	Member	-	-	-	-
24	Ms. Meeran	Member	-	-	-	-
25	Ms. Meena	Member	-	-	-	-

PROFILES OF WOMEN FARMER GROUPS (WFGs)

Women Group: Women Farmer Group Laiwari Minor
 Date of formation: 13-06-2009
 Name of FO: Liawari Minor
 Village:
 Field Station: Choondko

S.#	Name	Designation	Land Holding	WC #	Qualification
1	Ms. Rahima	Chairperson	10 Acre	9-L	Matriculation
2	Ms. Imam Khatoon	Secretary	6 Acre	9-L	Matriculation
3	Mariam Khatoon	Treasurer	5 Acre	9-L	Middle Pass
4	Ms. Amna	Member	8 Acre	9-L	B.A
5	Ms. Hanifa	Member	4 Acre	9-L	Primary Pass
6	Ms/ Nasiat Khatoon	Member	5 Acre	9-L	Illiterate
7	Ms. Mat Bhari	Member	4 Acre	9-L	Illiterate
8	Ms. Nazan	Member	5 Acre	9-L	Illiterate
9	Ms. Robina W/O Abdul Mutlab	Member	5 Acre	9-L	Middle Pass
10	Ms. Aziza	Member	5 Acre	9-L	Illiterate
11	Ms. Sahiban	Member	6 Acre	9-L	Middle Pass
12	Ms. Kamal Khaton	Member	8 Acre	9-L	Illiterate
13	Ms. Suhagan Khatoon	Member	10 Acre	10-R	Illiterate
14	Ms. Saghiran	Member	15 Acre	10- R	Primary Pass
15	Ms. Sodhina w/o Allah Rakhio	Member	6 Acre	10-R	Primary Pass
16	Ms. Latifan	Member	16 Acre	11/L	Illiterate
17	Ms. Singhar Khatoon	Member	8 Acre	11/L	Illiterate
18	Ms .Nasiban Khatoon	Member	8 Acre	10-R	Illiterate
19	Ms. Zulekha Kahtoon	Member	4 Acre	8-R	Illiterate

20	Ms. Amna	Member	4 Acre	8-R	Primary Pass
21	Hajani Nazan	Member	2 Acre	8- R	Illiterate

4.13

GRIEVANCE REDRESSAL MECHANISM RATIONALE

The social and resettlement issues relating to the implementation of project works and their mitigation will be identified in the Feasibility Study. However, in spite of best efforts, there is every chance that the individuals / communities affected by the project are dissatisfied with the measures adopted to address the adverse social impacts of the project. In this situation an effective Grievance Redressal Mechanism (GRM) will ensure the timely and successful implementation of the project. It will also provide a public forum to the aggrieved to raise their objections and through conflict resolution, address these issues adequately.

The main objective of the GRM is to make a systematic way of irregularities and complaints received from the Project Affected Persons (PAPs) and provide an early, transparent and fair resolution. The findings of the Feasibility Study will focus the ground facts regarding the nature of such complaints will relate to project benefits by the project functionaries. Some of the grievances that may arise are listed as follows:

- Consent/ willingness of the WCA were not obtained.
- The General Body of the WCA did not get involved in the process.
- Certain WCA has no legal entity due to expiration of their legal tenure.
- Losses (such as damage to crops) not identified correctly,
- The name of such WCA did not mention in the project.
- Any other issue arising during the project implementation.

To address any project related complaints in an effective and efficient manner, it has been agreed that a Grievance Redressal Mechanism (GRM) would be established under the project. Accordingly, a multi-tiered step-by-step Grievance Redressal Mechanism has been developed for the project for receiving complaints, concerns, feedback, inquiries and suggestions with multiple uptake grievance locations from local level to the head office level. It will be a comprehensive system to redress all types of grievances including technical, social, environmental, procurement and financial management aspects of the project. Multiple means will be used to provide easy access to aggrieved persons/parties to register complaints i.e. verbal or written complaints to any of the project staff, placement of complaint boxes in each project district office, project will assign a specific e-mail ID, fax number and a mobile number (to receive complaints through calls or messages), creation of sub-window at the AEWM website including a section on FAQs (right to register a complaint and procedures). A Grievance Redressal Committee will be formed at the head office level to redress major complaints while minor complaints will be resolved at the district level by the Deputy Directors. The aggrieved persons/parties can choose any of the locations/means to register complaints.

GRC will be headed by a retired judge of Session or High Court. The project will hire the judge through a transparent and competitive process. The project will widely disseminate information/publicize GRM through the website, pamphlets, posters, print and electronic media and outreach campaigns by project staff. GRC will review the progress of GRM on a monthly basis and report a summary of grievances received with detail of actions and time taken, in a separate section in the project quarterly reports.

4.13.1

GRIEVANCE REDRESS COMMITTEE (GRC)

The purpose of grievance redresses mechanism /complaint handling system is generating public awareness about the project and its objectives; detaining fraud and corruption; mitigating risks; providing project staff which practical suggestions/feedback that allow them to be more accountable, transparent, and responsive to beneficiaries; assessing the effectiveness of internal organization processes; and increasing stakeholder involvements in the project. The GRM will catch problems arise during the implementation of the project as soon as they are reported before they become serious and widespread. GRM will be accessible by all stakeholders irrespective of the remoteness of area they live become serious and widespread, and their level of education or income. Grievances will be treated confidently, assessed impartially and handled transparently. The GRM will operate independently half all interested parties to guarantee fair, objectives, and impartial treatment to each compliant. GRM will be made part of the objective staff job description and staffs will the trained to handle grievances effectively. GRM officials, GRC members and chair will have adequate means and powers to investigate grievances.

Any person/stakeholder has a right to file a complaint against allegation of intended beneficiaries being denied the expected project benefits; corruption/fraud allegation; seek queries, suggestion and concerns or give feedback about the project. GRM will allow a complainant to address any disagreeable decision, practice or activity arising from the project. In order to ensure that complaints/grievance are addressed in a timely and satisfactory and manners, and feedback suggestion are received on a regular basis, a GRM has been designed to function at the local, district, AEWM Head Office and provincial/level. Mainly the Director General (DG)-Agriculture engineering and water Management (AEWM) Department will be responsible for the compliance of GRM under the project, assisted by the Director-On Farm Water Management (OFWM) at Head Office level, Deputy Directors at district level. Assistant Directors, Water Management Officers and other filed staff at field and community level. A detailed description and step-by- step Grievance Redress Mechanism has been established by the agriculture Engineering and Water Management Department.

Multiple Uptake Grievance Locations to Receive Complaints: multiple locations will be available by which the project will collect/receive grievances (community, district and Head Office level).

Assistant Directors and Water Management Officers will be the focal points to receive grievance at the local/**community** level while Deputy Directors will be focal

point to receive grievance at district level While Director-ONWM will focal to receive grievances at the project level and ADG-AEWM and DG-AWWM at the department level. But the complaints can be made to any of the project staff who will be obligated to pass on complaints to the appropriable level.

Grievance Redressed Committee: A Grievance Redressal Committee (GRC) will be formed under the project to resolve comprises of ADG-AEWM, DG-AEWM, team leader of consultants and chaired by a retired judge of high are civil court. The chairperson will act as independent third party in GRC. All complaints, which could not be resolved by GRC, will pass on by the GRC chairperson to the²**projectsteering committee (PSC)** for resolution; PSC will act as higher level grievances Redressal committee (GRC) to resolve major and compliance grievances which could not be resolved to the GRC level. A copy of such complaints will also be sent to World Bank.

Multiple uptakes channels / Means to register complaints: Multiple means will be available to registered grievances verbally are in writing. Through project staff are can be dropped in the complaint boxes places at district meaning / SMS on Specified address / numbers. The project will set up a complaint ?/ suggestion box at the reception / waiting area of each district office that is easy. Grievances log books will be places at the district reception / waiting area of each district office that is easy to access. Grievances log books will be places at the distract project steering committee does not exist under the current project but will be formed for next phase of project. Grievances under current project will be dealt up to the GRC level.

The offices to register grievances manually: At the Head Office level, the department/project will a specific e-mail I, phone and fax number for receiving grievances feedback, inquiries, suggestions and concern. A permanent sub-window will be created at the project and Department website that will facilitate grievances collection; including a section of Frequently Asked Questions (FAQs) associated with providing different forms of grievances, registration and monitoring database (this can be converted into a real-time web-based database if the number of grievances will be high.)

Dissemination of GRM: All stakeholder especially beneficiary communities will be fully informed of their rights and the procedures for addressing grievances, verbally and in writing during the project period. As part of communications strategy, project will publicize GRM. The communication strategy will also reach out to poor and marginalized groups, who often face the most obstacles in accessing and using GRM. Poor and marginalized groups will be encouraged to bring grievances and comments to the attention of project authorities. Project will stimulate demand of GRM through communication and dissemination of GRM i.e. communication material in local languages, project and department's website, pamphlets, bulletin boards and communities, electronic and print media and outreach campaigns by water management field staff. Care will always be taken to prevent grievances through careful implementation of the project in an efficient and transparent manner, by ensuring full consultation and participation of the beneficiary communities and other stakeholders, and also by establishing extensive communication and coordination between the key stakeholder's beneficiary communities. It will be mandatory for all project staff to pass on verbal and written

complaints to the most appropriate level. Grievances receive against one level of staff will be registered and addressed at the higher level.

4.13.2

DETAIL DESCRIPTION FOR HANDLING THE MAJOR AND MINOR GRIEVANCES

MINOR / SIMPLE GRIEVANCES	MAJOR / COMPLEX GRIEVANCES
<p>STEP-1 Registration of Complaint: Aggrieved community/ party/person can launch verbal or written complaints to any of the grievances uptake locations through a convenient up-take channel / mean. Each complaint will be recorded and pass on to the appropriate level of grievances focal point (GFP). GFP shall record all grievances whether they are referred from other recipients or directly, in a register to be maintain in a secure location in his/her on office.</p>	<p>STEP-1 Registration of Complaint: All minor unresolved major grievances will pass on to the project management at the department's Head Office level. ADG-AEWM will act as grievances focal person at the Head Office level. Aggrieved communities / parties will be encouraged to share such complaints in written with ADG-AEWM. ADG-AEWM will authorize to make decision to resolve minor or major complaints. She/he will also act as facilitating body towards resolution of major complaints. Written record of all major grievances will be maintained at the project Head Office level.</p>
<p>Step 2 Acknowledgment and Follow up: GFP shall acknowledge receipt in writing to the complainant within a period of 5 working days of receipt of complaint in a communication indicating that he/she has passed on grievance to the Deputy Director and she/he in considering the issues raised and will discuss with the concerned officials of the project, outlines the grievance process; provide his/her contact details and how long it is likely to take to resolve the grievance.</p>	<p>Step 2 Acknowledgment and Follow up: ADG-AEWM shall acknowledge receipt in writing to the complainant within a period of 5 working days after receipt of complaint in a communication indicating that he/she in considering the issues raised and will discuss with the concerned officials of the project, outlines the grievance process; provides his/her name, designation and contact details and how long it is likely to take to resolve the grievance.</p>
<p>Step 3 Sorting and Processing: All complaints will be categorized assigned priority and routed to appropriate level of project management. Each complaint will be categorized into minor/simple or major/complex. Minor grievances are straightforward (such as queries and suggestions) and could be resolved quickly maximum within 10 days after receipt of Complaint at field office level by the deputy</p>	<p>Step 3 Sorting and Processing: All unresolved minor and major complaints will be assigned priority and routed the level of DG-AEWM or as appropriate.</p>

Directors, by mean of simple explanation or taking a set of immediate actions.	
<p>Step-4 verification investigation and actions:</p> <p>Deputy director of concerned district office will gather information about the grievance and</p> <p>Determine their validity, the merit of grievances will be judged objectively against clearly defined standards. If resolution requires consultation with complainants, deputy director or his/her designated officer will discuss the issue with complainants and try to seek solution. Assistant directors, water management officers or any other project staff will be facilitating bodies towards collecting and registering grievances but will not authorize to invest iGATE or make any decisions; they can help in exploring the options for solutions. Deputy directors will resolve minor grievances with in a period of 10 days after receipt of complaints and in form complainants about action taken within a period of 3 working days after receipt of complaints about action taken within a period of 3 working days after making decision.</p>	<p>Step-4 verification, investigation and actions:</p> <p>The ADG-AEWM will appears grievance with the help of appropriate project staff or any other third party within 10 working days after receive of complaint and if found justified, she / he will ensure immediate action of redress within 15 working days, after the date of decision, taken for redresses. She / He will inform the aggrieved parties in writing with details of decision taken within 3 working days after the decision and again inform within 3 working days after complete resolution of complaint with necessary details (actions taken, dates etc.) she / he will copy all correspondence to the members of GRC.</p>
<p>Step-5 : If aggrieved parties / persons would not satisfy with the explanation and decision of duty director the complaint will be referred to director-OFWM who will appears complaints and resolve at his / her level. Director – OFWM shall consult with the aggrieved persons / parties and relevant project officers, and after the thorough review of the fact shall make a judgment to the validity of the complain and shall instruct the relevant officer to take remedial action within 5 days. Director – OFWM shall inform complainant within 3 working days of decisions. If complainant would not satisfy with the decision / action taken on minor complaints the complaint will pass on to ADG-AEWM for resolution.</p>	<p>Step-5: if aggrieved parties / persons would not satisfy with the explanation and decision of the ADG-AEWM, the complaint will be referred to the GRC. GRC will consult with the aggrieved parties / persons and relevant officers of the project and, after a thorough review of the fact within 10 days after receipt of complaints. GRC chair can engage and independent third party for investigation and will have write to make recommendations for final decisions.</p> <p>GRC chair will inform complainant about decision within 3 working days of the decisions.</p>
	Step-6: if a grievance could not be

	resolved at the level of GRC or aggrieved parties / persons are not satisfied with the action taken, the grievance will pass on the project steering committee (PSC). The PSC will take necessary action within 15 working days to resolve such complaints and also inform the aggrieved parties about the action taken within 3 working days after the decision date. Complainants / aggrieved parties have a write to seek periodic updates on the status of their grievance from the project staff and chair of GRC.
	Step-7: If PSC would fail to satisfy the aggrieved parties, he / She / They can further submit their case to the provincial of ombudsmen or court of law.
<p>Step-8: Monitoring and evaluation: ADG-AEWM will manage monitoring and evaluation of GRM. Project management will regularly review feedback received, Number and nature of complaints received, complaints resolved, and GR TRENDS(e.g., average time to resolve grievance, percentage of complaints satisfied with action taken, number of grievances resolve at first point of contact or management level / GRC level, or PSC level or registered with provincial ombudsmen of court of law etc.) PSC will also review such date in its meetings GRC will provide management with insights into effectiveness of the project and use to identify problem areas, improve internal processes, enhance service delivery make policy changes and reduce the incidence of grievances in future. The project will include reporting on GRM data in its progress reports to share with the stake holders.</p>	

4.13.3 COMPLAINTS MANAGEMENT REGISTER (CMR):

The Deputy Director will maintain a CMR to record grievances brought forward by affected communities, and ensure that these are appropriately addressed. The complaint register will provide for the date and particulars of the complaint; description of the grievance; follow-up action required; name of person responsible for implementing the action; and a target date for redressal. The Deputy Director will be supported by the Resettlement Expert for this purpose. The actual measures taken to mitigate the concerns will also be recorded in the register. The complainant's views on the remedial action taken will also be documented in the Register. All complaints received in writing or received verbally will be (written), properly recorded and documented.

4.13.4 CONFLICT RESOLUTION PROCEDURE:

The Deputy Director will be the initiating authority to address the issues. He will be bound to forward the compliant to the Project Director {Director SOFWM (AF) Project} within 3 days. The PD will again take a decision on the compliant within 3 days on receipt of compliant and will inform the complainant through Director (Sociologist). If complainant is not satisfied with his decision / action, the PD will refer the case to GRC. The Committee will review the matter keeping in view its nature and suggest a remedial action within 4 days. If considered necessary, the Committee will consult the complainant as well. Once the Committee decides the remedial action, the Deputy Director will implement it within a week. In case response on the complaint is not received within 15 days of the lodging of the complaint, the complainant may also send a reminder to the GRC with 07 days notice to take legal remedial measures.

In case of complainant's disagreement with the decision of the GRC, the PD, as Chairman of the Committee, will send the case to the DG AE&WM Department, Govt. of Sindh. The DG will respond within 07 days. If the complainant is not satisfied, the complainants will have the option to go to the court of law. In case of such eventualities, all affected persons will be exempted from legal and administrative fees made / paid / incurred pursuant to the grievance redressal procedures. The conflict resolution process at project level would be prepared during the detailed feasibility study on the basis of ground situation.

4.13.5 MAJOR FINDINGS

- The data from different sources is not very reliable and the government departments are most often unwilling to share their data as a number of variation and errors have been observed from the data collected by the official web sites of Sindh Government PDMA Department.

- Existing emergency relief activities apparently seem sufficient to meet the urgent needs of the affectees (mainly their food needs), but at the end there may not be enough government resources left for rehabilitation activities.
- Most of the community people have no any safe and higher topographic place to migrate during flood, to reduce their losses, they are in need to have such plate-forms nearby to secure their lives, assets, livestock and necessary valuable belongings.
- A training program may be initiated to train the people on Disaster Risk Reduction, Emergency Response, Fire Fighting, Medical First Aid etc to rescue their lives, children, women, livestock, Food etc other valuable belongings at the moment when the emergency is declared by PDMA, Government of Sindh for flood OR any other disaster in all the vulnerable districts.
- Local Communities may be mobilized by a Social Mobilization Programs to keep in touch with each other regularly through conducting routine meetings among their villages and share various issues based on community level for their development and improvement and a community center may be provided to take place such kind of meetings with furnished setup and long term maintenance.
- A Training component as Training Cell may be formed in the next phase of the project to conduct the capacity building programmes for farmers, staff and other stakeholders on various project components under the Social Development Cell.
- A series of awareness campaign is needed to be executed in the project areas to expand the knowledge for Disaster Risk Reduction. The campaign for awareness may be implemented through print and electro media, display banners, posters and pamphlets within project area to give the DRR awareness door to door and to those people who do could not participate in other awareness programs/ activities.

4.14

SOCIO-ECONOMIC BASELINE SURVEY:

A Socioeconomic Field-Survey was conducted in the project area by the Social Team of Consultants to glance to the social setup of the project area and share ideas with team regarding following Interventions of the forthcoming project and to solicit ideas of the community regarding following project components:

4.14.1

ASSESSMENT AND FINDINGS:

A survey was conducted through pro-forma developed by the Social Taem. The pro-forma contained following parameters was developed for collecting the primary data from the targeted beneficiaries village-wise:

- i. Number of Households;
- ii. Ethnicity & Population;
- iii. Languages
- iv. Availability of Utilities;
- v. Education Facilities;
- vi. Education Status of Inhabitants;
- vii. Health Facilities;
- viii. Disease incidences (During five years);
- ix. Occupational Status ;
- x. Irrigation & Water Resources
- xi. Land Statistics of Village
- xii. Animal Population

i. Number of Households;

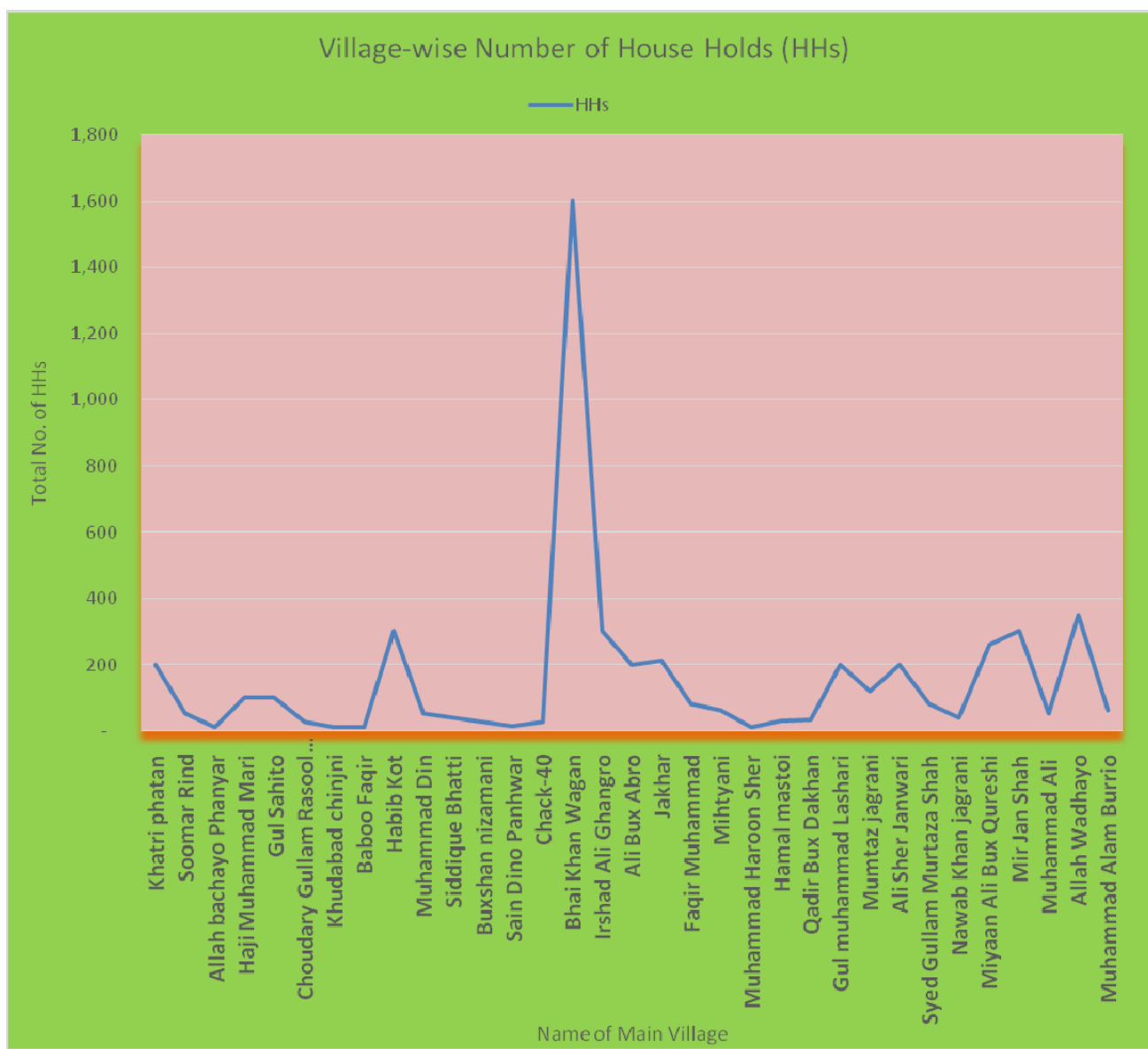
Overall 33 villages were randomly selected in the project area to look to their Household numbers. The maximum no of 1600 households were observed in one of the villages (Village Bhai Khan Wagan, UC Rasheed Wagan, District Larkana) while minimum numbers of 10 households were recorded at three villages i.e. Allah Bachayo Panhwar, District Sanghar, Khuda abad Chinjni, District Qambar Shehdadkot and Babu Faqir, Jacobabad. The average village size as per households 156 was recorded.

Table 4.7: showing Village-Wise Number of House Holds.

Village No.	Name of Main village	Name of UC	District	Total No. of HHs in village
1	Khatri phatan	Mad	Khairpur	200
2	Soomar Rind	Aamri	Jamshoro	50
3	Allah bachayo Phanyar	Sui Kandhar	Sanghar	10
4	Haji Muhammad Mari	Balouchabad	Mirpurkhas	100
5	Gul Sahito	Bhitshah	Matari	100
6	Choudary Gullam Rasool Arain	Piyaro Goth	Dadu	25
7	Khudabad chinjni	Miandad chinjni	Qambar Shehdadkot	10
8	Baboo Faqir	Ramzan Pur	Jacobabad	10
9	Habib Kot	Habib Kot	Shikarpur	300
10	Muhammad Din	Mula Katyar	Tando Mohd Khan	50
11	Siddique Bhatti	Patayoon	Mirpurkhas	40
12	Buxshan nizamani	Tando Gullam Hyder	Badin	25

13	Sain Dino Panhwar	Haji Sawan	Badin	12
14	Chack-40	Ahmed Raju	Badin	25
15	Bhai Khan Wagan	Rasheed Wagan	Larkana	1,600
16	Irshad Ali Ghangro	Thebo	Larkana	300
17	Ali Bux Abro	Waris Dino Machi	Larkana	200
18	Jakhar	Bero Chandio	Larkana	210
19	Faqir Muhammad	Gerolo	Larkana	80
20	Mihtyani	Dili Pota	Noshero Feroz	60
21	Muhammad Haroon Sher	Bharia	Noshero Feroz	10
22	Hamal mastoi	Bhorti	Noshero Feroz	30
23	Qadir Bux Dakhan	Kamal Dero	Noshero Feroz	32
24	Gul muhammad Lashari	Patni	Sukkur	200
25	Mumtaz jagrani	Kandhra	Sukkur	120
26	Ali Sher Janwari	Patni	Sukkur	200
27	Syed Gullam Murtaza Shah	Babarolo	Khairpur/ Sukkur	80
28	Nawab Khan jagrani	Kandhara	Sukkur	40
29	Miyaan Ali Bux Qureshi	Hamerlo	Sukkur	260
30	Mir Jan Shah	Patni	Sukkur	300
31	Muhammad Ali	Patni	Sukkur	50
32	Allah Wadhayo	Patni	Sukkur	350
33	Muhammad Alam Burrio	Patni	Sukkur	60
Average				156

Fig 4.6: Village-wise Number of House Holds (HHs)



ii. Ethnicity & Population;

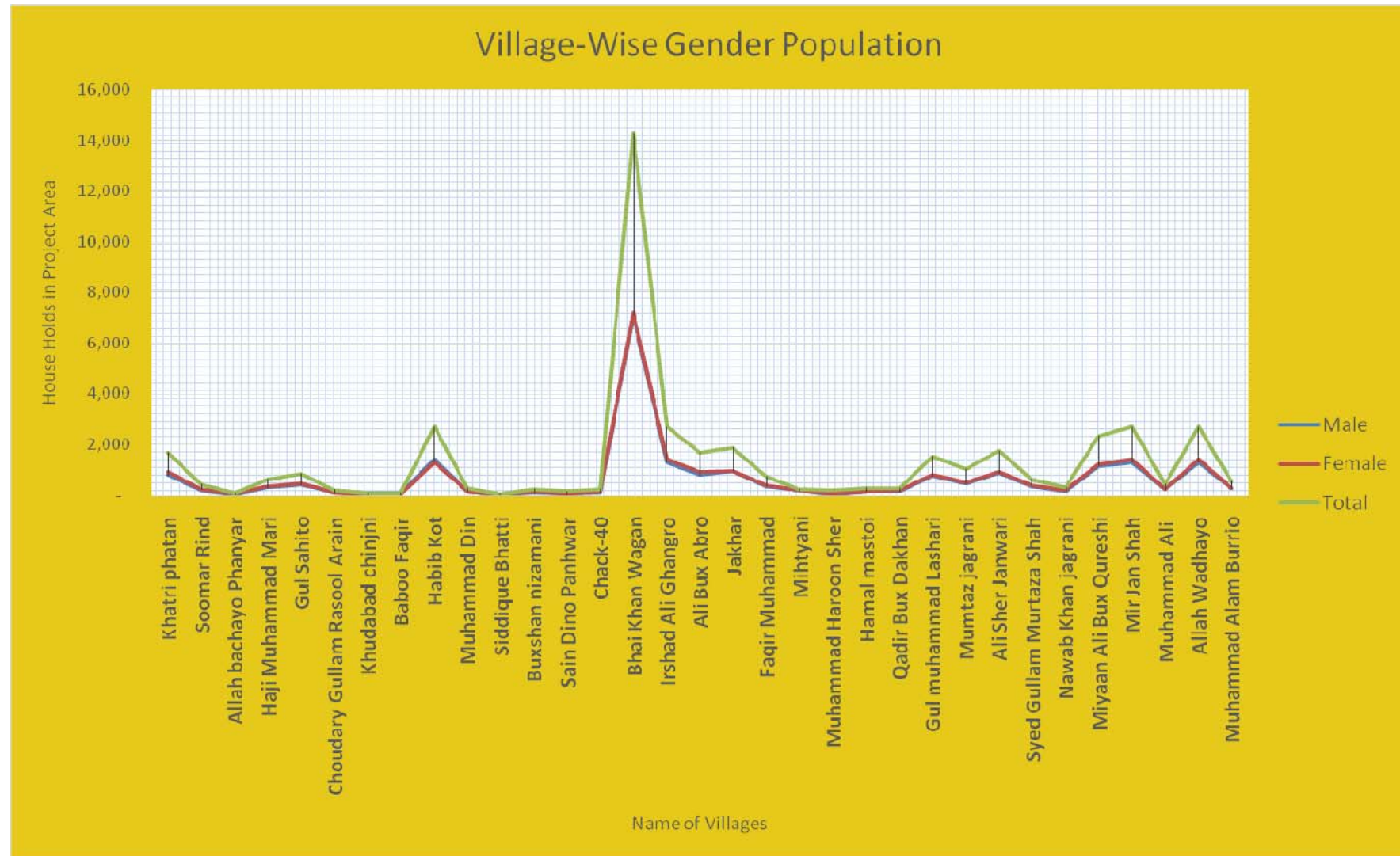
Across 33 village average population of 1,335 habitants per village were recorded. Out of which 652 (49%) were males and 683 (51%) were females. Thus female ratio exceeds at tune of 2.3% than the male population. It was also observes that the project area has mixed population belonging to the different casts and creeds living historically with each other since very long. Thus have same harmonized traditions and cultural setup.

Table 4.8: showing Ethnicity and Population Gender Ration

Ethnicity & Population								
Village	Name of Main village	Name of UC	District	Name of main caste	Name of elderly people	Male	Female	Total
1	Khatri Phatan	Mad	Khairpur	Larik	Bahdur Larik	800	900	1,700
2	Soomar Rind	Aamri	Jamshoro	Rind	Ali Shair Rind	200	230	430
3	Allah bachayo Phanyar	Sui Kandhar	Sanghar	Phanyar	Mithu Phanyar	40	50	90
4	Haji Muhammad Mari	Balouchabad	Mirpurkhas	Mari	Mari	300	320	620
5	Gul Sahito	Bhitshah	Matari	Sahito	Sahito	400	450	850
6	Choudary Gullam Rasool Arain	Piyaro Goth	Dadu	Arain	Arain	100	120	220
7	Khudabad chinjni	Miandad chinjni	Qambar Shehdadkot	Buber	Buber	50	40	90
8	Baboo Faqir	Ramzan Pur	Jacobabad	Khosa	Khosa	50	40	90
9	Habib Kot	Habib Kot	Shikarpur	Maher	Maher	1,400	1,300	2,700
10	Muhammad Din	Mula Katyar	Tando Mohd Khan	Solangi	Solangi	130	140	270
11	Siddique Bhatti	Patayoon	Mirpurkhas	Kolhi	Siddique Bhatti	30	25	55
12	Buxshan nizamani	Tando Gullam Hyder	Badin	Nizamani	Buxshan Nizamani	110	125	235
13	Sain Dino Panhwar	Haji Sawan	Badin	Panhwar	Panhwar	70	80	150
14	Chack-40	Ahmed Raju	Badin	Cheema	Cheema	110	130	240
15	Bhai Khan Wagan	Rasheed Wagan	Larkana	Waghan	Waghan	7,100	7,200	14,300
16	Irshad Ali Ghangro	Thebo	Larkana	Ghangro	Ghangro	1,300	1,400	2,700
17	Ali Bux Abro	Waris Dino Machi	Larkana	Abro	Abro	800	900	1,700
18	Jakhar	Bero Chandio	Larkana	Jakhar	Jakhar	930	950	1,880
19	Faqir Muhammad	Gerolo	Larkana	Khokhar	Khokhar	350	380	730
20	Mihtyani	Dili Pota	Noshero Feroz	Solangi	Solangi	170	190	260

21	Muhammad Haroon Sher	Bharia	Noshero Feroz	Sher	Sher	40	50	190
22	Hamal mastoi	Bhorti	Noshero Feroz	Mastoi	Mastoi	130	150	280
23	Qadir Bux Dakhan	Kamal Dero	Noshero Feroz	Somoro	Somoro	140	160	300
24	Gul muhammad Lashari	Patni	Sukkur	Lashari	Lashari	750	800	1,550
25	Mumtaz jagrani	Kandhra	Sukkur	Jagirani	Jagrani	450	480	1,030
26	Ali Sher Janwari	Patni	Sukkur	Janwari	Janwari	850	900	1,750
27	Syed Gullam Murtaza Shah	Babarolo	Khairpur/ Sukkur	Janwari	Janwari	350	370	620
28	Nawab Khan jagrani	Kandhara	Sukkur	Jagirani	Jagrani	160	170	330
29	Miyaan Ali Bux Qureshi	Hamerlo	Sukkur	Maher	Maher	1,130	1,200	2,330
30	Mir Jan Shah	Patni	Sukkur	Shah	Shah	1,300	1,400	2,700
31	Muhammad Ali	Patni	Sukkur	Chadhar	Chadhar	220	230	450
32	Allah Wadhayo	Patni	Sukkur	Gangra	Gangra	1,300	1,400	2,700
33	Muhammad Alam Burrio	Patni	Sukkur	Gangra	Gangra	250	270	550
Average						652	683	1335

Fig 4.7: Village-Wise Gender Population



iii. Languages

The Sindhi Languages is widely spoken in the project area. The other languages like Siraiki, Balochi and Punjabi are also spoken in certain villages.

Table 4.9: showing the languages being spoken in the project area.

Language Spoken in the village							
Sr. No.	Name of Main village	Name of UC	District	Sindhi	Siraiki	Punjabi	Balochi
1	Khatri phatan	Mad	Khairpur	Yes	No	No	No
2	Soomar Rind	Aamri	Jamshoro	Yes	No	No	Yes
3	Allah bachayo Phanyar	Sui Kandhar	Sanghar	Yes	No	No	No
4	Haji Muhammad Mari	Balouchabad	Mirpurkhas	Yes	No	No	Yes
5	Gul Sahito	Bhitshah	Matari	Yes	No	No	No
6	Choudary Gullam Rasool Arain	Piyaro Goth	Dadu	No	No	Yes	No
7	Khudabad chinjni	Miandad chinjni	Qambar Shehdadkot	Yes	No	No	No
8	Baboo Faqir	Ramzan Pur	Jacobabad	Yes	No	No	Yes
9	Habib Kot	Habib Kot	Shikarpur	Yes	No	No	No
10	Muhammad Din	Mula Katyar	Tando Mohd Khan	Yes	No	No	No
11	Siddique Bhatti	Patayoon	Mirpurkhas	Yes	No	No	No
12	Buxshan nizamani	Tando Gullam Hyder	Badin	Yes	No	No	No
13	Sain DiNo Panhwar	Haji Sawan	Badin	Yes	No	No	No
14	Chack-40	Ahmed Raju	Badin	No	No	Yes	No
15	Bhai Khan Wagan	Rasheed Wagan	Larkana	Yes	No	No	No
16	Irshad Ali Ghangro	Thebo	Larkana	Yes	No	No	No
17	Ali Bux Abro	Waris DiNo Machi	Larkana	Yes	No	No	No
18	Jakhar	Bero Chandio	Larkana	Yes	No	No	No
19	Faqir Muhammad	Gerolo	Larkana	Yes	No	No	No
20	Mihtyani	Dili Pota	Noshero Feroz	Yes	No	No	No
21	Muhammad	Bharia	Noshero Feroz	Yes	No	No	No

	Haroon Sher						
22	Hamal mastoid	Bhorti	Noshero Feroz	Yes	No	No	No
23	Qadir Bux Dakhan	Kamal Dero	Noshero Feroz	Yes	No	No	No
24	Gul muhammad Lashari	Patni	Sukkur	Yes	No	No	No
25	Mumtaz jagrani	Kandhra	Sukkur	Yes	No	No	No
26	Ali Sher Janwari	Patni	Sukkur	Yes	No	No	No
27	Syed Gullam Murtaza Shah	Babarolo	Khairpur/ Sukkur	Yes	No	No	No
28	Nawab Khan jagrani	Kandhara	Sukkur	Yes	No	No	No
29	Miyaan Ali Bux Qureshi	Hamerlo	Sukkur	Yes	No	No	No
30	Mir Jan Shah	Patni	Sukkur	Yes	No	No	No
31	Muhammad Ali	Patni	Sukkur	Yes	No	No	No
32	Allah Wadhayo	Patni	Sukkur	Yes	No	No	No
33	Muhammad Alam Burrio	Patni	Sukkur	Yes	No	No	No

iv. Accesss to Utilities;

All of the villages are devoid of facilities like Village Water Supply, Village drainage system, village waste disposal, gas, PTCL, Post Office and Bank facilities. However the villages are facilitated with supply of Electricity. The facility of Mobile phone was commonly observed in every village.

Table 4.10: Showing the utilities available in the project area.

Available Utilities															
Sr. No.	Name of Main village	Name of UC	District	Village Water Supply	Village Drainage System	Village Waste Disposal	Electricity	Gas	PTCL Land Line Phone	Mobile	Post Office	Bank	Mosque	Graveyard	Others
1.	Khatri phatan	Mad	Khairpur	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
2.	Soomar Rind	Aamri	Jamshoro	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
3.	Allah bachayo Phanyar	Sui Kandhar	Sanghar	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
4.	Haji Muhammad Mari	Balouchabad	Mirpurkhas	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
5.	Gul Sahito	Bhitshah	Matari	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
6.	Choudary Gullam Rasool Arain	Piyaro Goth	Dadu	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
7.	Khudabad chinjni	Miandad chinjni	Qambar Shehddadkot	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
8.	Baboo Faqir	Ramzan Pur	Jacobabad	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
9.	Habib Kot	Habib Kot	Shikarpur	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
10.	Muhammad Din	Mula Katyar	Tando Mohd Khan	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
11.	Siddique Bhatti	Patayoon	Mirpurkhas	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
12.	Buxshan nizamani	Tando Gullam Hyder	Badin	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No

13.	Sain Dino Panhwar	Haji Sawan	Badin	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
14.	Chack-40	Ahmed Raju	Badin	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
15.	Bhai Khan Wagan	Rasheed Wagan	Larkana	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
16.	Irshad Ali Ghangro	Thebo	Larkana	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
17.	Ali Bux Abro	Waris Dino Machi	Larkana	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
18.	Jakhar	Bero Chandio	Larkana	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
19.	Faqir Muhammad	Gerolo	Larkana	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
20.	Mihtyani	Dili Pota	Noshero Feroz	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
21.	Muhammad Haroon Sher	Bharia	Noshero Feroz	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
22.	Hamal mastoi	Bhorti	Noshero Feroz	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
23.	Qadir Bux Dakhan	Kamal Dero	Noshero Feroz	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
24.	Gul muhammad Lashari	Patni	Sukkur	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
25.	Mumtaz jagrani	Kandhra	Sukkur	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
26.	Ali Sher Janwari	Patni	Sukkur	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
27.	Syed Gullam Murtaza Shah	Babarolo	Khairpur/ Sukkur	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
28.	Nawab Khan jagrani	Kandhara	Sukkur	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
29.	Miyaan Ali	Hamerlo	Sukkur	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No

	Bux Qureshi														
30.	Mir Jan Shah	Patni	Sukkur	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
31.	Muhammad Ali	Patni	Sukkur	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
32.	Allah Wadhayo	Patni	Sukkur	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No
33.	Muhammad Alam Burrio	Patni	Sukkur	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No

v. Education Facilities

In the villages 6.06% have girls primary schools while 94% boy's primary schools. The average no. of enrollment of girls in each school was observed to be 13.97 and boy's 29.52. The average no. of deployment of male & female teachers at schools was found 2.0 and 1.82 respectively. It may be noted that in most of the boy's schools, girls are also enrolled. There are no education facilities beyond primary education.

Table 4.11: Showing the Education Facility in the project area.

Education Facility									
Sr. No.	Name of Main village	Name of UC	District	Primary School		No. of Enrolment		No. of Teachers	
				Girls	Boys	Girls	Boys	Male	Female
1.	Khatri phatan	Mad	Khairpur	No	Yes	20	50	4	2
2.	Soomar Rind	Aamri	Jamshoro	No	Yes	5	15	2	1
3.	Allah bachayo Phanyar	Sui Kandhar	Sanghar	No	Yes	7	13	2	1
4.	Haji Muhammad Mari	Balouchabad	Mirpurkhas	Yes	Yes	35	40	3	2
5.	Gul Sahito	Bhitshah	Matari	No	Yes	20	50	3	1
6.	Choudary Gullam Rasool Arain	Piyaro Goth	Dadu	No	Yes	5	10	1	2
7.	Khudabad chinjni	Miandad chinjni	Qambar Shehdadkot	No	Yes	5	10	1	2
8.	Baboo Faqir	Ramzan Pur	Jacobabad	No	No	8	16	2	2
9.	Habib Kot	Habib Kot	Shikarpur	Yes	Yes	100	80	5	3
10.	Muhammad Din	Mula Katyar	Tando Mohd Khan	No	Yes	5	20	1	0
11.	Siddique Bhatti	Patayoon	Mirpurkhas	No	No	7	20	2	2
12.	Buxshan nizamani	Tando Gullam Hyder	Badin	No	Yes	5	15	1	0
13.	Sain Dino Panhwar	Haji Sawan	Badin	No	Yes	10	25	1	2

14.	Chack-40	Ahmed Raju	Badin	No	Yes	8	15	1	1
15.	Bhai Khan Wagan	Rasheed Wagan	Larkana	No	Yes	20	60	4	3
16.	Irshad Ali Ghangro	Thebo	Larkana	No	Yes	10	40	3	2
17.	Ali Bux Abro	Waris Dino Machi	Larkana	No	Yes	10	20	2	2
18.	Jakhar	Bero Chandio	Larkana	No	Yes	10	40	1	2
19.	Faqir Muhammad	Gerolo	Larkana	No	Yes	10	20	1	2
20.	Mihtyani	Dili Pota	Noshero Feroz	No	Yes	20	50	3	2
21.	Muhammad Haroon Sher	Bharia	Noshero Feroz	No	Yes	8	10	1	1
22.	Hamal mastoi	Bhorti	Noshero Feroz	No	Yes	8	20	3	2
23.	Qadir Bux Dakhan	Kamal Dero	Noshero Feroz	No	Yes	20	30	1	2
24.	Gul muhammad Lashari	Patni	Sukkur	No	Yes	10	40	3	3
25.	Mumtaz jagrani	Kandhra	Sukkur	No	Yes	15	35	3	2
26.	Ali Sher Janwari	Patni	Sukkur	No	Yes	10	30	1	2
27.	Syed Gullam Murtaza Shah	Babarolo	Khairpur/ Sukkur	No	Yes	10	25	1	2
28.	Nawab Khan jagrani	Kandhara	Sukkur	No	Yes	10	20	1	1
29.	Miyaan Ali Bux Qureshi	Hamerlo	Sukkur	No	Yes	20	50	3	2
30.	Mir Jan Shah	Patni	Sukkur	No	Yes	10	30	3	2
31.	Muhammad Ali	Patni	Sukkur	No	Yes	5	15	1	2
32.	Allah Wadhayo	Patni	Sukkur	No	Yes	10	40	1	3
33.	Muhammad Alam Burrio	Patni	Sukkur	No	Yes	5	20	1	2

Fig 4.8: Village-Wise No. of Enrolement of Boys and Girls in Primary Schools

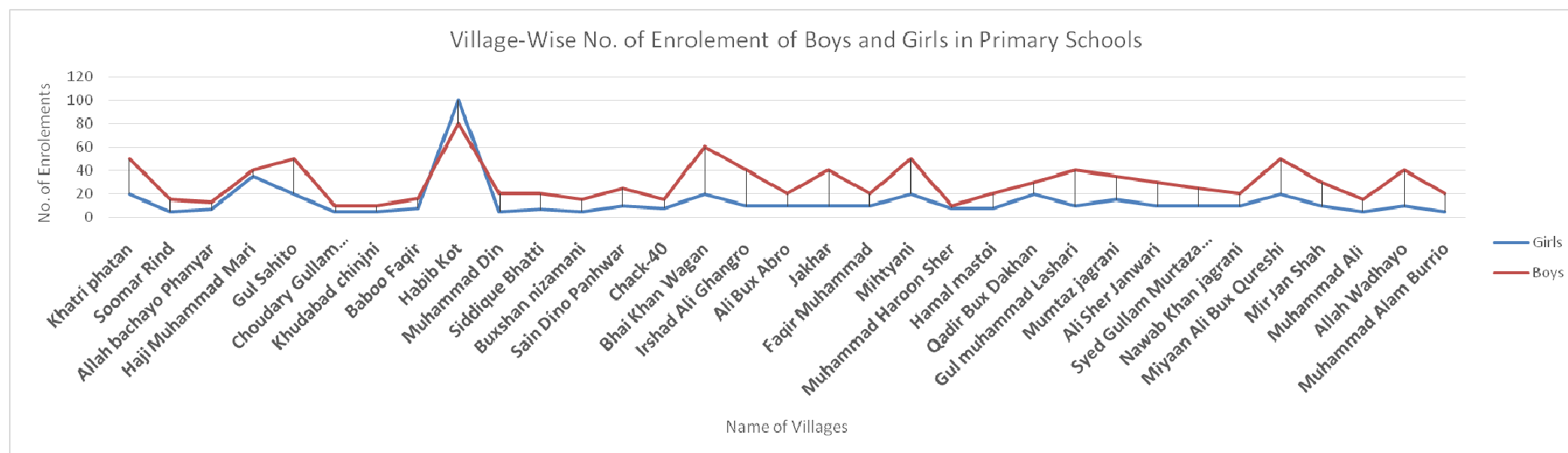
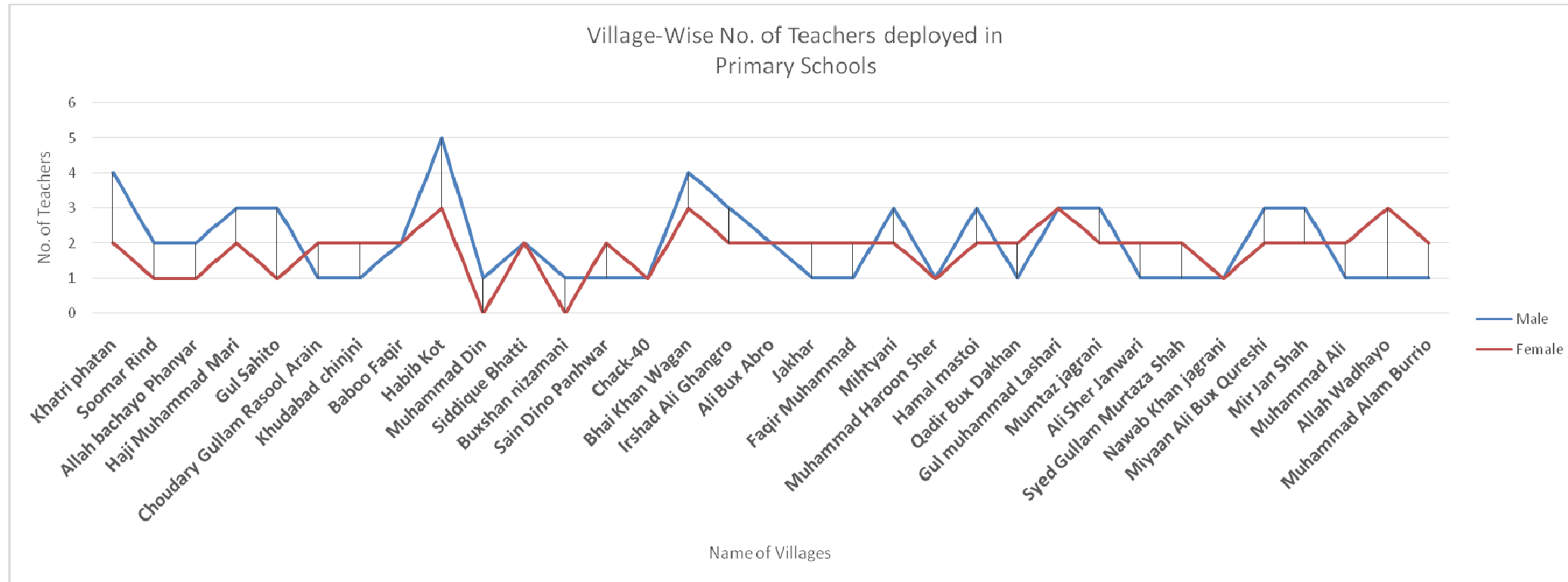


Fig 4.9: Village-Wise No. of Teachers deployed in Primary Schools



vi. Literacy Rate in Project Area

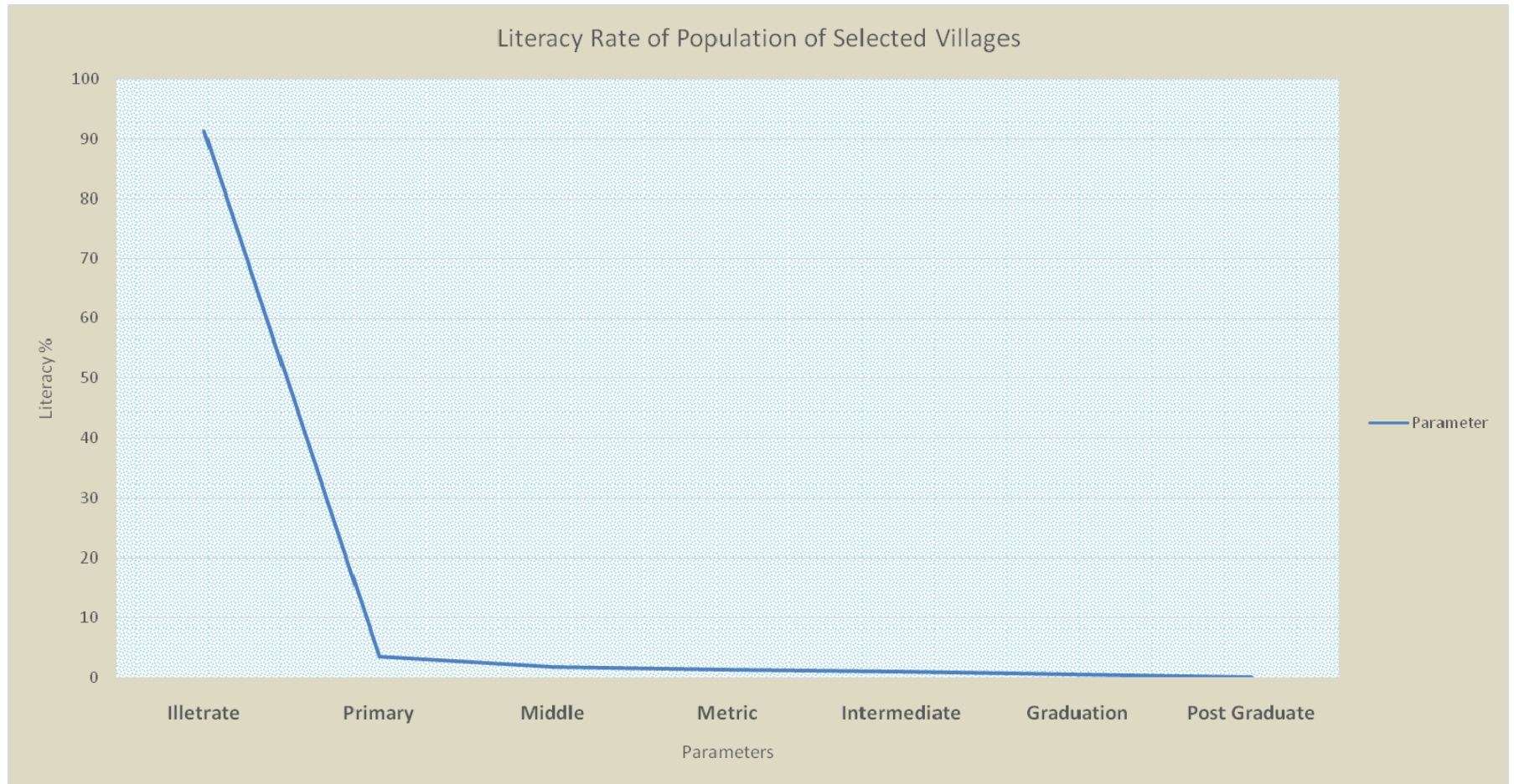
It was observed that majority of the population in the villages (91.32%) is illiterate while population ranging from 3.64% to 0.13% are literate from primary to post graduate level.

Table-4.12 showing the literacy rate in the project area.

Literacy Rate in the village												
Village No.	Name of Main village	Name of UC	District	Total No. of HHs in village	Total Population	Illiterate	Primary	Middle	Metric	Intermediate	Graduation	Post Graduate
1.	Khatri phatan	Mad	Khairpur	200	1700	1,547	80	30	22	12	7	2
2.	Soomar Rind	Aamri	Jamshoro	50	430	343	30	18	17	12	7	3
3.	Allah bachayo Phanyar	Sui Kandhar	Sanghar	10	90	35	13	12	13	12	5	0
4.	Haji Muhammad Mari	Balouchabad	Mirpurkhas	100	620	483	70	25	15	17	8	2
5.	Gul Sahito	Bhitshah	Matari	100	850	696	80	30	20	15	7	2
6.	Choudary Gullam Rasool Arain	Piyaro Goth	Dadu	25	220	140	30	15	15	12	7	1
7.	Khudabad chinjni	Miandad chinjni	Qambar Shehdadkot	10	90	15	25	15	15	14	6	0
8.	Baboo Faqir	Ramzan Pur	Jacobabad	10	90	35	12	12	13	12	6	0
9.	Habib Kot	Habib Kot	Shikarpur	300	2700	2,553	60	30	20	20	13	4

10.	Muhammad Din	Mula Katyar	Tando Mohd Khan	50	270	172	40	20	15	13	7	3
11.	Siddique Bhatti	Patayoon	Mirpurkhas	40	55	1	12	12	13	12	5	0
12.	Buxshan nizamani	Tando Gullam Hyder	Badin	25	235	163	20	15	15	13	7	2
13.	Sain Dino Panhwar	Haji Sawan	Badin	12	150	71	25	18	17	12	7	0
14.	Chack-40	Ahmed Raju	Badin	25	240	152	30	20	17	13	7	1
15.	Bhai Khan Wagan	Rasheed Wagan	Larkana	1600	14300	14,043	120	70	40	15	7	5
16.	Irshad Ali Ghangro	Thebo	Larkana	300	2700	2,555	70	30	20	15	7	3
17.	Ali Bux Abro	Waris Dino Machi	Larkana	200	1700	1,554	60	40	20	15	7	4
18.	Jakhar	Bero Chandio	Larkana	210	1880	1,730	70	30	25	15	7	3
19.	Faqir Muhammad	Gerolo	Larkana	80	730	628	40	25	17	12	7	1
20.	Mihtyani	Dili Pota	Noshero Feroz	60	260	133	60	25	20	15	7	0
21.	Muhammad Haroon Sher	Bharia	Noshero Feroz	10	190	131	15	12	13	12	7	0
22.	Hamal mastoi	Bhorti	Noshero Feroz	30	280	192	30	20	18	12	7	1
23.	Qadir Bux Dakhan	Kamal Dero	Noshero Feroz	32	300	213	30	20	17	12	8	0
24.	Gul muhammad Lashari	Patni	Sukkur	200	1550	1,405	70	30	20	15	7	3
25.	Mumtaz jagrani	Kandhra	Sukkur	120	1030	896	60	30	20	15	7	2
26.	Ali Sher Janwari	Patni	Sukkur	200	1750	1,621	60	25	20	15	7	2

27.	Syed Gullam Murtaza Shah	Babarolo	Khairpur/ Sukkur	80	620	501	50	25	20	15	7	2
28.	Nawab Khan jagrani	Kandhara	Sukkur	40	330	235	40	20	15	12	7	1
29.	Miyaan Ali Bux Qureshi	Hamerlo	Sukkur	260	2330	2,129	90	50	30	20	7	4
30.	Mir Jan Shah	Patni	Sukkur	300	2700	2,542	60	40	25	15	13	5
31.	Muhammad Ali	Patni	Sukkur	50	450	361	35	20	15	12	7	0
32.	Allah Wadhayo	Patni	Sukkur	350	2700	2,540	70	40	25	15	7	3
33.	Muhammad Alam Burrio	Patni	Sukkur	60	550	446	50	20	15	12	7	0
Average					1336	1220	49	36	19	14	7	2
Percentage						91.32%	3.64%	1.91%	1.41%	1.04%	0.54%	0.13%

Fig 4.10: Literacy Rate of Population of Selected Villages

vii. Health Facility in Project Area

It was found that there are no health facilities in the villages like hospitals, health units, mother child care centers, Child immunization centers. Only child birth attendants are present in most of the villages. Since the villages are devoid of basic health facilities, therefore the incidents of mortality during child birth were commonly complained.

Table 4.13: Showing The Health Facility In The Project Area.

Health Facility								
Sr. No.	Name of Main village	Name of UC	District	Hospital	BHU	Mother Child Care Center	Child Immunization Center	Child Birth Attendant
1.	Khatri phatan	Mad	Khairpur	No	No	No	No	No
2.	Soomar Rind	Aamri	Jamshoro	No	No	No	No	No
3.	Allah bachayo Phanyar	Sui Kandhar	Sanghar	No	No	No	No	No
4.	Haji Muhammad Mari	Balouchabad	Mirpurkhas	No	No	No	No	Yes
5.	Gul Sahito	Bhitshah	Matari	No	No	No	No	Yes
6.	Choudary Gullam Rasool Arain	Piyaro Goth	Dadu	No	No	No	No	Yes
7.	Khudabad chinjni	Miandad chinjni	Qambar Shehdadkot	No	No	No	No	Yes
8.	Baboo Faqir	Ramzan Pur	Jacobabad	No	No	No	No	Yes
9.	Habib Kot	Habib Kot	Shikarpur	No	No	No	No	No
10.	Muhammad Din	Mula Katyar	Tando Mohd Khan	No	No	No	No	Yes
11.	Siddique Bhatti	Patayoon	Mirpurkhas	No	No	No	No	Yes
12.	Buxshan nizamani	Tando Gullam Hyder	Badin	No	No	No	No	Yes
13.	Sain Dino Panhwar	Haji Sawan	Badin	No	No	No	No	Yes
14.	Chack-40	Ahmed Raju	Badin	No	No	No	No	Yes
15.	Bhai Khan Wagan	Rasheed Wagan	Larkana	No	No	No	No	Yes

16.	Irshad Ali Ghangro	Thebo	Larkana	No	No	No	No	Yes
17.	Ali Bux Abro	Waris Dino Machi	Larkana	No	No	No	No	Yes
18.	Jakhar	Bero Chandio	Larkana	No	No	No	No	Yes
19.	Faqir Muhammad	Gerolo	Larkana	No	No	No	No	Yes
20.	Mihtyani	Dili Pota	Noshero Feroz	No	No	No	No	Yes
21.	Muhammad Haroon Sher	Bharia	Noshero Feroz	No	No	No	No	Yes
22.	Hamal mastoi	Bhorti	Noshero Feroz	No	No	No	No	Yes
23.	Qadir Bux Dakhan	Kamal Dero	Noshero Feroz	No	No	No	No	Yes
24.	Gul muhammad Lashari	Patni	Sukkur	No	No	No	No	Yes
25.	Mumtaz jagrani	Kandhra	Sukkur	No	No	No	No	Yes
26.	Ali Sher Janwari	Patni	Sukkur	No	No	No	No	Yes
27.	Syed Gullam Murtaza Shah	Babarolo	Khairpur/ Sukkur	No	No	No	No	Yes
28.	Nawab Khan jagrani	Kandhara	Sukkur	No	No	No	No	Yes
29.	Miyaan Ali Bux Qureshi	Hamerlo	Sukkur	No	No	No	No	Yes
30.	Mir Jan Shah	Patni	Sukkur	No	No	No	No	Yes
31.	Muhammad Ali	Patni	Sukkur	No	No	No	No	Yes
32.	Allah Wadhayo	Patni	Sukkur	No	No	No	No	Yes
33.	Muhammad Alam Burrio	Patni	Sukkur	No	No	No	No	Yes

viii. Occurrence of Diseases

The villagers are facing fatal diseases like Malaria, Typhoid, Cholera, T.B, Diarrhea, and Hepatitis etc. The incidents of HIV are not recorded and there was no polio reported by the villagers during last five years.

Table 4.14: Showing The Occurrence Of Diseases During Last Five Years In The Project Area.

Occurrence of Diseases During Last Five Years													
Sr. No.	Name of Main village	Name of UC	District	Malaria	Typhoid	Cholera	HIV	Measles	Polio	T.B.	Diarrhea	Hepatitis	Others
1.	Khatri phatan	Mad	Khairpur	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	No
2.	Soomar Rind	Aamri	Jamshoro	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
3.	Allah bachayo Phanyar	Sui Kandhar	Sanghar	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	No
4.	Haji Muhammad Mari	Balouchabad	Mirpurkhas	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	No
5.	Gul Sahito	Bhitshah	Matari	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
6.	Choudary Gullam Rasool Arain	Piyaro Goth	Dadu	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
7.	Khudabad chinjni	Miandad chinjni	Qambar Shehdadkot	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
8.	Baboo Faqir	Ramzan Pur	Jacobabad	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
9.	Habib Kot	Habib Kot	Shikarpur	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
10.	Muhammad Din	Mula Katyar	Tando Mohd Khan	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
11.	Siddique Bhatti	Patayoon	Mirpurkhas	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
12.	Buxshan nizamani	Tando Gullam Hyder	Badin	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
13.	Sain Dino Panhwar	Haji Sawan	Badin	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
14.	Chack-40	Ahmed Raju	Badin	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No

15.	Bhai Khan Wagan	Rasheed Wagan	Larkana	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
16.	Irshad Ali Ghangro	Thebo	Larkana	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
17.	Ali Bux Abro	Waris Dino Machi	Larkana	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
18.	Jakhar	Bero Chandio	Larkana	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
19.	Faqir Muhammad	Gerolo	Larkana	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
20.	Mihtyani	Dili Pota	Noshero Feroz	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
21.	Muhammad Haroon Sher	Bharia	Noshero Feroz	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
22.	Hamal mastoi	Bhorti	Noshero Feroz	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
23.	Qadir Bux Dakhan	Kamal Dero	Noshero Feroz	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
24.	Gul muhammad Lashari	Patni	Sukkur	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
25.	Mumtaz jagrani	Kandhra	Sukkur	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
26.	Ali Sher Janwari	Patni	Sukkur	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
27.	Syed Gullam Murtaza Shah	Babarolo	Khairpur/ Sukkur	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
28.	Nawab Khan jagrani	Kandhara	Sukkur	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
29.	Miyaan Ali Bux Qureshi	Hamerlo	Sukkur	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
30.	Mir Jan Shah	Patni	Sukkur	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
31.	Muhammad Ali	Patni	Sukkur	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
32.	Allah Wadhayo	Patni	Sukkur	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No
33.	Muhammad Alam Burrio	Patni	Sukkur	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No

ix. Occupational Status

The primary occupations of majority of the local adult population within sample area were found to be engaged in Agriculture sector primarily at the tune of 44%. The other population is engaged in different occupations i.e. shopkeepers (1.00%), transporter (0.32%), traders (0.33%), livestock (5.27%), public employment (0.5%), private employment (0.59%), daily wagers/ labour (5.13%), poultry forming (0.15%), moved to cities (0.17%) and overseas Pakistan (0.15%).

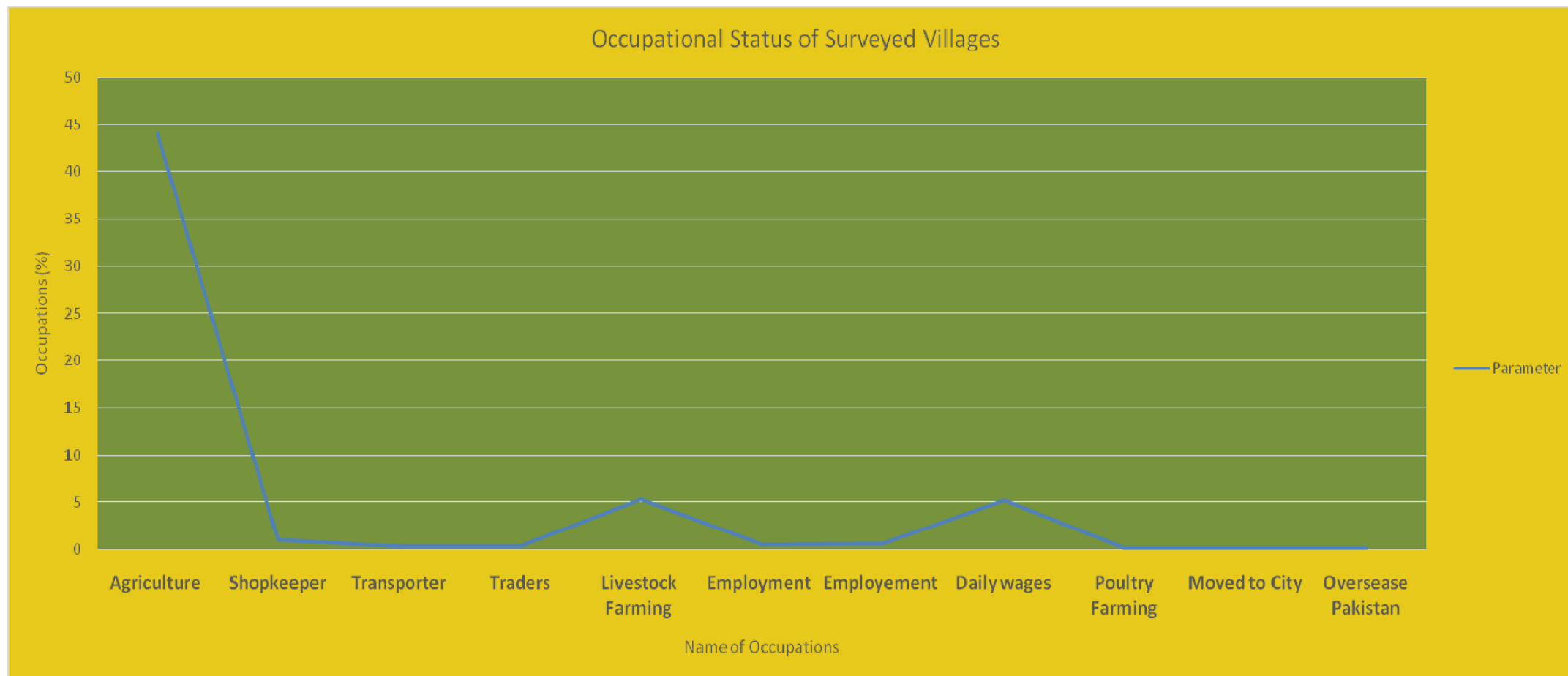
Table 4.15: Showing The Occupational Status in The Project Area.

Occupational Status (No of HHs with Main and secondary source of income)															
Sr. No.	Name of Main village	Name of UC	District	Total Population	Agriculture (Primary Source)	Shopkeeper	Transporter	Traders	Livestock	Employment (public)	Employment (Private)	Daily wage earners/ Labour	Poultry Farmers	Moved to City	Overseas Pakistan
1.	Khatri phatan	Mad	Khairpur	1700	756	10	5	2	150	10	4	30	2	2	2
2.	Soomar Rind	Aamri	Jamshoro	430	150	5	4	2	90	5	3	20	2	2	2
3.	Allah bachayo Phanyar	Sui Kandhar	Sanghar	90	15	10	3	4	15	10	4	8	2	2	2
4.	Haji Muhammad Mari	Balouchabad	Mirpurkhas	620	205	15	7	3	130	15	3	40	2	2	2
5.	Gul Sahito	Bhitshah	Matiari	850	330	10	5	4	120	20	2	35	2	2	2
6.	Choudary Gullam Rasool Arain	Piyaro Goth	Dadu	220	61	5	3	4	60	5	2	15	2	2	2
7.	Khudabad chinjni	Miandad chinjni	Qambar Shehdadkot	90	14	4	3	4	30	3	2	10	2	2	2
8.	Baboo Faqir	Ramzan Pur	Jacobabad	90	10	2	3	4	15	2	2	11	2	10	2
9.	Habib Kot	Habib Kot	Shikarpur	2700	1244	30	10	15	100	10	5	85	2	2	2

10.	Muhammad Din	Mula Katyar	Tando Mohd Khan	270	80	5	6	7	40	3	2	45	2	2	2
11.	Siddique Bhatti	Patayoon	Mirpurkhas	55	4	2	2	2	30	2	2	2	2	2	2
12.	Buxshan nizamani	Tando Gullam Hyder	Badin	235	75	5	5	2	35	3	2	30	2	2	2
13.	Sain Dino Panhwar	Haji Sawan	Badin	150	38	6	2	2	20	2	2	35	2	2	2
14.	Chack-40	Ahmed Raju	Badin	240	80	10	5	4	30	4	5	20	2	2	2
15.	Bhai Khan Wagan	Rasheed Wagan	Larkana	14300	6981	30	10	6	60	20	30	450	2	2	2
16.	Irshad Ali Ghangro	Thebo	Larkana	2700	1219	10	3	10	80	10	40	150	2	2	2
17.	Ali Bux Abro	Waris Dino Machi	Larkana	1700	769	15	4	3	50	5	30	80	2	2	2
18.	Jakhar	Bero Chandio	Larkana	1880	878	5	3	4	40	10	20	70	2	2	2
19.	Faqir Muhammad	Gerolo	Larkana	730	310	3	3	4	70	5	30	2	2	2	2
20.	Mihtyani	Dili Pota	Noshero Feroz	260	49	5	3	3	100	3	3	40	2	2	2
21.	Muhammad Haroon Sher	Bharia	Noshero Feroz	190	11	3	3	2	60	30	10	55	2	2	2
22.	Hamal mastoi	Bhorti	Noshero Feroz	280	82	3	4	3	40	5	4	55	2	2	2
23.	Qadir Bux Dakhan	Kamal Dero	Noshero Feroz	300	87	4	3	2	60	5	4	45	2	2	2
24.	Gul muhammad Lashari	Patni	Sukkur	1550	720	7	4	3	70	3	6	40	2	2	2
25.	Mumtaz jagrani	Kandhra	Sukkur	1030	441	8	5	6	80	6	4	51	2	2	2
26.	Ali Sher Janwari	Patni	Sukkur	1750	785	6	4	5	110	4	6	70	2	2	2
27.	Syed Gullam Murtaza Shah	Babarolo	Khairpur/ Sukkur	620	212	4	3	4	96	3	4	85	2	2	2

28.	Nawab Khan jagrani	Kandhara	Sukkur	330	67	3	4	3	100	4	5	74	2	2	2
29.	Miyaan Ali Bux Qureshi	Hamerlo	Sukkur	2330	1110	4	3	4	75	3	4	55	2	2	2
30.	Mir Jan Shah	Patni	Sukkur	2700	1270	5	4	5	60	4	6	120	2	2	2
31.	Muhammad Ali	Patni	Sukkur	450	87	4	3	3	110	3	5	145	2	2	2
32.	Allah Wadhayo	Patni	Sukkur	2700	1224	7	9	11	114	6	7	140	2	2	2
33.	Muhammad Alam Burrio	Patni	Sukkur	550	149	3	3	4	85	3	4	150	2	2	2
Average				1336.06	591.24	7.52	4.27	4.36	70.45	6.85	7.94	68.58	2.00	2.24	2.00
Percentage					44%	1%	0.32%	0.33%	5.27%	0.51%	0.59%	5.13%	0.15%	0.17%	0.15%

Fig 4.11: Occupational Status of Surveyed Villages



x. Irrigation Water Courses and Area Irrigated

The dependants of the farming community in the surveyed area found generally on the canal water, though the majority of small land owners complaint largely regarding the shortage of the water. At certain areas the scope of installation of tube wells for supply of irrigation water as an alternate arrange of canal water exists, but the growers are very poor to afford the installation and running of tube wells because of high installation costs and electricity running expenses.

This shows the urgency of lining of watercourses and other water saving irrigation systems being proposed in the project under reference.

Table 4.16: Showing The Irrigation Water Courses And Area Irrigated In The Project Area.

Irrigation Water sources and Area Irrigated						
Sr. No.	Name of Main village	Name of UC	District	Canal	Tube Well	Barani
1.	Khatri phatan	Mad	Khairpur	Yes	No	No
2.	Soomar Rind	Aamri	Jamshoro	Yes	No	No
3.	Allah bachayo Phanyar	Sui Kandhar	Sanghar	Yes	No	No
4.	Haji Muhammad Mari	Balouchabad	Mirpurkhas	Yes	No	No
5.	Gul Sahito	Bhitshah	Matari	Yes	No	No
6.	Choudary Gullam Rasool Arain	Piyaro Goth	Dadu	Yes	No	No
7.	Khudabad chinjni	Miandad chinjni	Qambar Shehdadkot	Yes	No	No
8.	Baboo Faqir	Ramzan Pur	Jacobabad	Yes	No	No
9.	Habib Kot	Habib Kot	Shikarpur	Yes	No	No
10.	Muhammad Din	Mula Katyar	Tando Mohd Khan	Yes	No	No
11.	Siddique Bhatti	Patayoon	Mirpurkhas	Yes	No	No
12.	Buxshan nizamani	Tando Gullam Hyder	Badin	Yes	No	No
13.	Sain Dino Panhwar	Haji Sawan	Badin	Yes	No	No
14.	Chack-40	Ahmed Raju	Badin	Yes	No	No
15.	Bhai Khan Wagan	Rasheed Wagan	Larkana	Yes	No	No
16.	Irshad Ali Ghangro	Thebo	Larkana	Yes	No	No
17.	Ali Bux Abro	Waris Dino Machi	Larkana	Yes	No	No

18.	Jakhar	Bero Chandio	Larkana	Yes	No	No
19.	Faqir Muhammad	Gerolo	Larkana	Yes	No	No
20.	Mihtyani	Dili Pota	Noshero Feroz	Yes	No	No
21.	Muhammad Haroon Sher	Bharia	Noshero Feroz	Yes	No	No
22.	Hamal mastoi	Bhorti	Noshero Feroz	Yes	No	No
23.	Qadir Bux Dakhan	Kamal Dero	Noshero Feroz	Yes	No	No
24.	Gul muhammad Lashari	Patni	Sukkur	Yes	No	No
25.	Mumtaz jagrani	Kandhra	Sukkur	Yes	No	No
26.	Ali Sher Janwari	Patni	Sukkur	Yes	No	No
27.	Syed Gullam Murtaza Shah	Babarolo	Khairpur/ Sukkur	Yes	No	No
28.	Nawab Khan jagrani	Kandhara	Sukkur	Yes	No	No
29.	Miyaan Ali Bux Qureshi	Hamerlo	Sukkur	Yes	No	No
30.	Mir Jan Shah	Patni	Sukkur	Yes	No	No
31.	Muhammad Ali	Patni	Sukkur	Yes	No	No
32.	Allah Wadhayo	Patni	Sukkur	Yes	No	No
33.	Muhammad Alam Burrio	Patni	Sukkur	Yes	No	No

xi. Land Statistics of Village

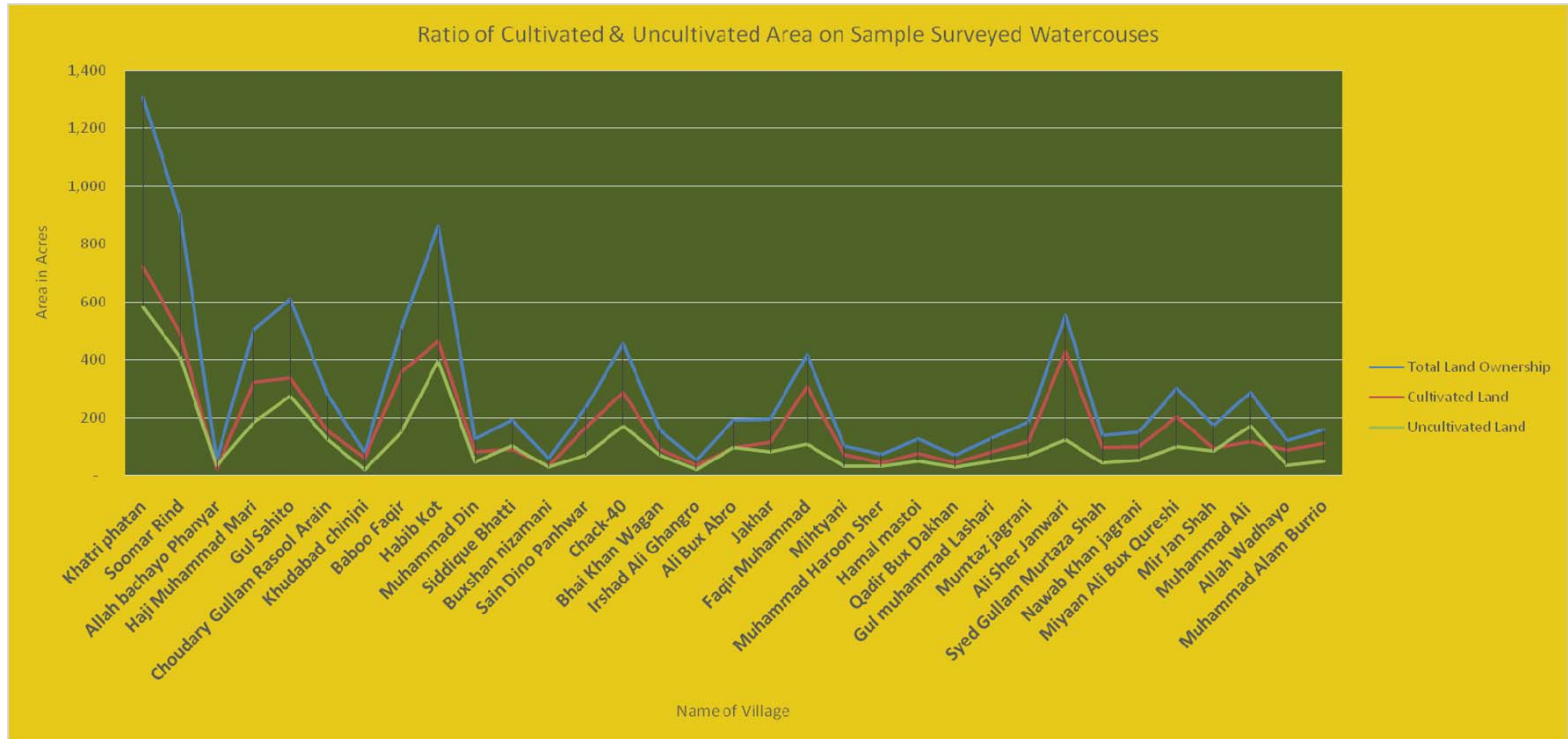
It was found that 5,871 acres land is the cultivated which is 60.3% of overall cultivable land (9,738 acres) and in other side 3,867 acres which is 39.7% is non-cultivated due to water shortage indicated by the farming community during our study sessions. Wastage/ scarcity of irrigation water are common issue in the project areas which could be covered by the improvement of watercourses lining and other project proposed alternate irrigation systems.

Table 4.17: Showing The Land Status In The Project Area.

Land Statistics of village (in acres)								
Sr. No.	Name of Main village	Name of UC	District	Total Land Ownership	Cultivated Land	(%)	Uncultivated Land	(%)
1.	Khatri phatan	Mad	Khairpur	1,306	723	55.4	583	44.6
2.	Soomar Rind	Aamri	Jamshoro	906	495	54.6	411	45.4
3.	Allah bachayo Phanyar	Sui Kandhar	Sanghar	55	21	38.2	34	61.8
4.	Haji Muhammad Mari	Balouchabad	Mirpurkhas	503	321	63.8	182	36.2
5.	Gul Sahito	Bhitshah	Matari	610	337	55.2	273	44.8
6.	Choudary Gullam Rasool Arain	Piyaro Goth	Dadu	276	153	55.4	123	44.6
7.	Khudabad chinjni	Miandad chinjni	Qambar Shehdadkot	78	59	75.6	19	24.4
8.	Baboo Faqir	Ramzan Pur	Jacobabad	508	358	70.5	150	29.5
9.	Habib Kot	Habib Kot	Shikarpur	860	465	54.1	395	45.9
10.	Muhammad Din	Mula Katyar	Tando Mohd Khan	125	80	64.0	45	36.0
11.	Siddique Bhatti	Patayoon	Mirpurkhas	191	90	47.1	101	52.9
12.	Buxshan nizamani	Tando Gullam Hyder	Badin	57	29	50.9	28	49.1
13.	Sain Dino Panhwar	Haji Sawan	Badin	233	163	70.0	70	30.0
14.	Chack-40	Ahmed Raju	Badin	456	285	62.5	171	37.5
15.	Bhai Khan Wagan	Rasheed Wagan	Larkana	156	88	56.4	68	43.6
16.	Irshad Ali Ghangro	Thebo	Larkana	52	32	61.5	20	38.5

17.	Ali Bux Abro	Waris Dino Machi	Larkana	190	95	50.0	95	50.0
18.	Jakhar	Bero Chandio	Larkana	194	113	58.2	81	41.8
19.	Faqir Muhammad	Gerolo	Larkana	416	307	73.8	109	26.2
20.	Mihtyani	Dili Pota	Noshero Feroz	103	73	70.9	30	29.1
21.	Muhammad Haroon Sher	Bharia	Noshero Feroz	73	43	58.9	30	41.1
22.	Hamal mastoi	Bhorti	Noshero Feroz	125	76	60.8	49	39.2
23.	Qadir Bux Dakhan	Kamal Dero	Noshero Feroz	70	43	61.4	27	38.6
24.	Gul muhammad Lashari	Patni	Sukkur	130	80	61.5	50	38.5
25.	Mumtaz jagrani	Kandhra	Sukkur	186	117	62.9	69	37.1
26.	Ali Sher Janwari	Patni	Sukkur	552	430	77.9	122	22.1
27.	Syed Gullam Murtaza Shah	Babarolo	Khairpur/ Sukkur	139	95	68.3	44	31.7
28.	Nawab Khan jagrani	Kandhara	Sukkur	150	98	65.3	52	34.7
29.	Miyaan Ali Bux Qureshi	Hamerlo	Sukkur	300	201	67.0	99	33.0
30.	Mir Jan Shah	Patni	Sukkur	175	91	52.0	84	48.0
31.	Muhammad Ali	Patni	Sukkur	285	116	40.7	169	59.3
32.	Allah Wadhayo	Patni	Sukkur	120	85	70.8	35	29.2
33.	Muhammad Alam Burrio	Patni	Sukkur	158	109	69.0	49	31.0
				9,738	5,871	60.3%	3,867	39.7%

Fig 4.12: Ratio of Cultivated & Uncultivated Area on Sample Surveyed Watercourses



xii. Number of Animal in Village

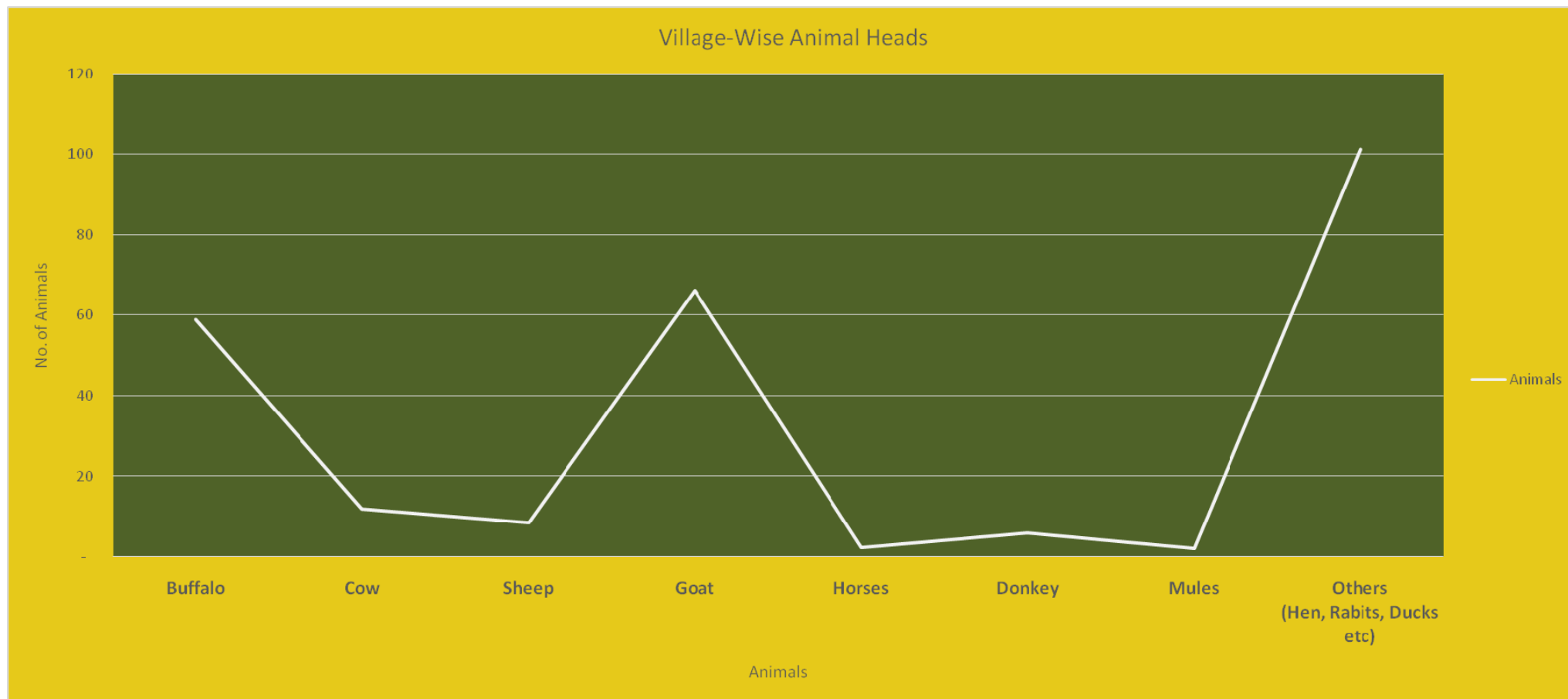
The farming community is also engaged in rearing of livestock, poultry and other domestic animals as a source of their income for supporting their families and managing their home economics.

Table 4.18: Showing The Number Of Anima In Village In The Project Area.

Number of Animal In the village											
Sr. No.	Name of Main village	Name of UC	District	Buffalo	Cow	Sheep	Goat	Horses	Donkey	Mules	Others (Hen, Rabbits, Ducks etc.)
1.	Khatri phatan	Mad	Khairpur	90	40	10	40	2	10	2	100
2.	Soomar Rind	Aamri	Jamshoro	1	5	2	20	2	5	2	50
3.	Allah bachayo Phanyar	Sui Kandhar	Sanghar	12	5	2	20	2	3	2	20
4.	Haji Muhammad Mari	Balouchabad	Mirpurkhas	20	10	5	15	2	10	2	90
5.	Gul Sahito	Bhitshah	Matari	30	20	15	30	2	15	2	80
6.	Choudary Gullam Rasool Arain	Piyaro Goth	Dadu	20	5	2	20	2	3	2	60
7.	Khudabad chinjni	Miandad chinjni	Qambar Shehdadkot	10	10	2	10	2	7	2	45
8.	Baboo Faqir	Ramzan Pur	Jacobabad	12	7	2	17	2	6	2	37
9.	Habib Kot	Habib Kot	Shikarpur	50	12	5	59	2	10	2	45
10.	Muhammad Din	Mula Katyar	Tando Mohd Khan	17	3	3	15	2	5	2	15
11.	Siddique Bhatti	Patayoon	Mirpurkhas	5	3	2	7	2	3	2	12
12.	Buxshan nizamani	Tando Gullam Hyder	Badin	7	2	2	14	2	3	2	9
13.	Sain Dino Panhwar	Haji Sawan	Badin	6	2	2	10	2	4	2	13

14.	Chack-40	Ahmed Raju	Badin	8	2	3	15	2	3	2	16
15.	Bhai Khan Wagan	Rasheed Wagan	Larkana	900	200	150	1100	10	24	2	365
16.	Irshad Ali Ghangro	Thebo	Larkana	110	6	5	45	2	4	2	152
17.	Ali Bux Abro	Waris Dino Machi	Larkana	95	7	9	65	2	5	2	88
18.	Jakhar	Bero Chandio	Larkana	80	4	2	24	2	6	2	114
19.	Faqir Muhammad	Gerolo	Larkana	20	2	2	34	2	3	2	145
20.	Mihtyani	Dili Pota	Noshero Feroz	10	2	3	16	2	4	2	186
21.	Muhammad Haroon Sher	Bharia	Noshero Feroz	8	2	2	14	2	3	2	65
22.	Hamal mastoi	Bhorti	Noshero Feroz	10	2	2	45	2	3	2	120
23.	Qadir Bux Dakhan	Kamal Dero	Noshero Feroz	11	2	2	23	2	3	2	125
24.	Gul muhammad Lashari	Patni	Sukkur	51	6	7	65	2	6	2	189
25.	Mumtaz jagrani	Kandhra	Sukkur	45	6	2	35	2	4	2	112
26.	Ali Sher Janwari	Patni	Sukkur	30	3	4	55	2	6	2	98
27.	Syed Gullam Murtaza Shah	Babarolo	Khairpur/ Sukkur	35	2	3	65	2	5	2	164
28.	Nawab Khan jagrani	Kandhara	Sukkur	15	2	2	35	2	5	2	110
29.	Miyaan Ali Bux Qureshi	Hamerlo	Sukkur	17	5	6	65	2	6	2	117
30.	Mir Jan Shah	Patni	Sukkur	112	6	5	55	2	7	2	185
31.	Muhammad Ali	Patni	Sukkur	10	2	3	12	2	3	2	65
32.	Allah Wadhayo	Patni	Sukkur	85	6	7	96	2	4	2	210
33.	Muhammad Alam Burrio	Patni	Sukkur	10	3	3	45	2	3	2	140
				1,942	394	276	2,186	74	191	66	3,342

Fig 4.13: Village-Wise Animal Heads



xiii. Project Need Assessment

The data presented in table-4.19 indicate the need assessment for activities of the project components. It was observed that all of the villagers interviewed opted for improvement of watercourses. While 67% opted for High Efficiency Irrigation System (HEIS) and 33% did not desire for the same. For the On- Farm and Inter-farm Drainage System 88% showed the interest while 12% of the beneficiaries shown their reluctance for this activity. It may be added here that most of the beneficiaries who desired for the drains belong to the peddy areas where there exists the problem of water logging. The desire for emergency flood shelter/ community center was shown by 33% of the farmers while 67% were reluctant for this project activity. It was observed that farmers in the most vulnerable areas were in the favour of construction for flood shelters/ community centers while the others had no top priority of this demand due to the reason that the floods in these areas occur very rarely.

Table 4.19: Showing The Project Need Assessment

Project Need Assessment								
Sr. No.	Name of Main village	Name of UC	District	WCs	HEIS	O/I Drains	Flood Shelters	Agri Improv Activities
1.	Khatri phatan	Mad	Khairpur	Yes	No	Yes	No	
2.	Soomar Rind	Aamri	Jamshoro	Yes	Yes	No	No	
3.	Allah bachayo Phanyar	Sui Kandhar	Sanghar	Yes	Yes	Yes	Yes	
4.	Haji Muhammad Mari	Balouchabad	Mirpurkhas	Yes	Yes	No	Yes	
5.	Gul Sahito	Bhitshah	Matiari	Yes	Yes	No	No	
6.	Choudary Gullam Rasool Arain	Piyaro Goth	Dadu	Yes	Yes	Yes	Yes	
7.	Khudabad chinjni	Miandad chinjni	Qambar Shehdadkot	Yes	No	Yes	Yes	
8.	Baboo Faqir	Ramzan Pur	Jacobabad	Yes	No	Yes	Yes	
9.	Habib Kot	Habib Kot	Shikarpur	Yes	No	Yes	Yes	
10.	Muhammad Din	Mula Katyar	Tando Mohd Khan	Yes	Yes	Yes	Yes	
11.	Siddique Bhatti	Patayoon	Mirpurkhas	Yes	Yes	No	Yes	
12.	Buxshan nizamani	Tando Gullam Hyder	Badin	Yes	Yes	Yes	Yes	
13.	Sain DiNo Panhwar	Haji Sawan	Badin	Yes	Yes	Yes	Yes	
14.	Chack-40	Ahmed Raju	Badin	Yes	Yes	Yes	Yes	
15.	Bhai Khan Wagan	Rasheed Wagan	Larkana	Yes	No	Yes	No	
16.	Irshad Ali Ghangro	Thebo	Larkana	Yes	No	Yes	No	
17.	Ali Bux Abro	Waris Dino Machi	Larkana	Yes	No	Yes	No	

18.	Jakhar	Bero Chandio	Larkana	Yes	No	Yes	No	
19.	Faqir Muhammad	Gerelo	Larkana	Yes	No	Yes	No	
20.	Mihtyani	Dili Pota	Noshero Feroz	Yes	Yes	Yes	No	
21.	Muhammad Haroon Sher	Bharia	Noshero Feroz	Yes	Yes	Yes	No	
22.	Hamal mastoi	Bhorti	Noshero Feroz	Yes	Yes	Yes	No	
23.	Qadir Bux Dakhan	Kamal Dero	Noshero Feroz	Yes	Yes	Yes	No	
24.	Gul muhammad Lashari	Patni	Sukkur	Yes	Yes	Yes	No	
25.	Mumtaz jagrani	Kandhra	Sukkur	Yes	No	Yes	No	
26.	Ali Sher Janwari	Patni	Sukkur	Yes	Yes	Yes	No	
27.	Syed Gullam Murtaza Shah	Babarolo	Khairpur/ Sukkur	Yes	No	Yes	No	
28.	Nawab Khan jagrani	Kandhara	Sukkur	Yes	Yes	Yes	No	
29.	Miyaan Ali Bux Qureshi	Hamerlo	Sukkur	Yes	Yes	Yes	No	
30.	Mir Jan Shah	Patni	Sukkur	Yes	Yes	Yes	No	
31.	Muhammad Ali	Patni	Sukkur	Yes	Yes	Yes	No	
32.	Allah Wadhayo	Patni	Sukkur	Yes	Yes	Yes	No	
33.	Muhammad Alam Burrio	Patni	Sukkur	Yes	Yes	Yes	No	

4.15 SOCIAL DEVELOPMENT OUTCOMES AND MONITORING MECHANISM

4.15.1 PROJECT MONITORING & EVALUATION MICHANISM:

The mechanism for the Performance of Project shall be developed and activities be monitored against the targets defined in the Design Monitoring Framework (DMF). The templates for the DMF shall be developed by consultants for recording the data pertaining to the periodic Consolidated Monitoring & Evaluation Reports.

SIAPEP- I Projectoutcome indicators:

The Project outcomes shall be gauged against baseline survey findings regarding:

- A. Water Efficiency
- B. Water Equity
- C. Crop Yields

SIAPEP- I Project Output Indicators

The Project Intermediate output indicators shall be measured against current progress of the relevant activities as:

- A. Community Irrigation Improvement
- B. Promotion of HEIS

- C. Rehabilitation of existing On-Farm & Inter-Farm Drains
- D. improvement of Agriculture Practices
- E. Reduce Risks of Flooding for the Poor etc.
- F. Development of Formats for Monthly Progress Reports

The progress of the project activities shall be reported in the Descriptive Monthly Progress Report (MPR). The formats for the report shall be developed by the consultants.

Development of Formats for Monthly Progress Reports

The progress of the project activities shall be reported in the Descriptive Monthly Progress Report (MPR). The formats for the report shall be developed by the consultants.

Development of Formats for Quarterly and Annual Progress Reports

The longer timeline progress of the project activities shall be reported in the Descriptive Quarterly Progress Report (QPR). The formats for the report shall be developed by the consultants.

It is intended that the Monitoring Model developed for Flood Emergency Reconstruction Project (FERP) by the M/s G3 Engineering Consultants & the Donor (ADB) adopted by the Project Monitoring Unit (PMU) shall be replicated with the necessary modifications, if required.

Source of Data

The Key Sources of Data shall be the field teams of OFWM and concerned staff of the consultants. The data shall be recorded and reported as per above Standard mentioned DMF.

Reporting of Works

The data captured through DMF from field team and consultant staff members shall be used for the following periodic reports:

- a) Consolidated Monthly Monitoring & Evaluation Report (CMMER);
- b) Monthly Progress Report (MPR-Descriptive);
- c) Quarterly Progress Report (QPR).
- d) Annual Progress Report (APR).

The cohesive consultations with stakeholder i.e. client, farmers, local NGOs, CBOs, Lines departments shall remain continued during project period through meetings, seminars, trainings and various other events in and out door gatherings on different platforms in the betterment of project.

The efforts were taken during the studies to conduct such events i.e. community absed consultative meetings, awareness gatherings with the previously formed

Water Course Associations and local forming communities within the jurisdiction of project area in collaboration with OFWM and Agriculture Extension department who provided their representatives on district level and assistance to coordinate the meetings/ group discussions.

4.16

DETAIL OF STAKEHOLDER CONSULTATION

The detail introduction for this feasibility study, its background, past, present and future were briefly shared with the participants in detail by Sociologist and Deputy Director Agriculture Engineering and Water Management Department;

- The consultant's team chalked out the field visit program of various targeted sites within the fifteen districts of three area water boards;
- Under this program about 41 consultative meeting were conducted, which covered 93.1 percent of the targeted sample size;
- Through this activity project team documented the genuine concerns of the WCA member and local community people regarding the advantages of this project;
- Community people showed their full interest and acute need for the execution of this project in the betterment of their livelihood and basic economic development through development the agriculture of Sindh province by increasing the Agro-Industrial Production;
- It could be concluded that the project shall run in the smoothly with the coordinatin of forming communities which are very keenly interested in the project activities.
- The different stockholders WCAs participates members and other local community people and about 709 participants attended the session form 41 Water Course Associations.
- People participated the event with full interest and shown their consent in the favour of project implementation.

Further detail of the consultative meetings has also been attached as follows

Table 4.20: Community Consultative Meetings Conducted In Different District Of Sindh Province.

Sr. No.	Basic Information/ Village Profile (nearest village to the Watercourse)				Consultative Meeting			Checklist Status
	Watercourse No.	Union Council	District & No. of WCs	Name of Chairman WCA	Date	Venue of Activity		
1.	RD 25000	Dali Pota	Noshero Feroz	Ghulam Asghar	30-01-13	Mithiyani	25	Clear
2.	22 AR Sanghi	Bhirai	Noshero Feroz	Sajjad Hussain	30-01-13	M. Haroon Shar	25	Clear
3.	RD 18980	Bhurtie	Noshero Feroz	Ahmed Nawaz Bhurt	29-01-13	Hamal Mastoyi	20	Clear
4.	8 AL Jatoyi	Kamal Dhero	Noshero Feroz	Mehrab Qureshi	29-01-13	Qadir Bux Dakhan	25	Clear
5.	3 AL Ren Distry	Bhora	Sh. Banazirabad	Shahnawaz Zohair	24-02-13	Talpur Village	23	Clear
6.	12 AR Ren Distry	10 Bhra	Sh. Banazirabad	Ghulam Shareef Zardai	22-01-12	Ghandia	23	Clear
7.	10 AR Ren Distry	Mehrabpur	Sh. Banazirabad	Ghulam Sarver Zada	23-01-12	Ghandia	23	Clear
8.	14 AR Ren Distry	Mehrabpur	Sh. Banazirabad	Allah Dino	24-01-12	Faith Khan Chandio	23	Clear
9.	6 L Defance Minor	Khalifa	Badin	Malik Abdul Allahi	17-20-13	Punjab Chak	20	Clear
10.	39 AL Jam Wah	Rahoki	Badin	Ghulam Mustafa	16-02-13	Geo Kholi	11	Clear
11.	2 BR Soomroki	Falkara	Badin	Ghulam Ishak	15-02-13	Qazi Ghot	20	Clear
12.	4 AR Soomorki	Tando Saein Dad	Badin	Abid Raza	14-02-13	Haji Khaliq Dino Sahito	17	Clear
13.	11-jhole	Ahmed raju	Badin	Afzal waraich	21-02-13	chak 40	25	Clear
14.	16-AI Ex shahwah	tando ghulam hyder	Badin	Mamtaz Ali	21-02-13	bakshan nizamani	20	Clear
15.	9-L Matli distry	haji sawan	Badin	Sain dino panhwar	20-02-13	haji shawan	15	Clear

16.	2-L Arther Branch	Garello	Larkana	Mohammad Siddique	11/03/13	Garello	10	Clear
17.	11-L Ghar Branch	Behro Chandio	Larkana	Zameer Hussain	12/03/13	Behro Chandio	10	Clear
18.	1-AL Daro Minnor	Rasheed Wagan	Larkana	Inam-ullah Wagan	11/03/13	Bhai Khan Wagan	10	Clear
19.	5-R Ex Feader 1	Thebo	Larkana	Irshad Ali Ghangro	11/03/13	Irshad Ali Ghangro	10	Clear
20.	6- L Waris Dino	Waris Dino Machi	Larkana	Ali Bux Abro	12/03/13	Ali Bux Abro	10	Clear
21.	1-R Kalori	Patni	Sukkur	Muhammad Alam Burio	06/03/13	Muhammad Alam Burio	10	Clear
22.	9-L Patani	Patni	Sukkur	Allah Wadihyo	08/03/13	Allah Wadihyo	15	Clear
23.	26-L Patani	Hamrelo	Sukkur	Mian Ali Bux Quershi	08/03/13	Mian Ali Bux Quershi	17	Clear
24.	11-AR Kandri	Patni	Sukkur	Gul Muhammad Lashari	08/03/13	Gul Muhammad Lashari	10	Clear
25.	6-L Patni	Patni	Sukkur	Muhammad Ali	08/03/13	Muhammad Ali	10	Clear
26.	17-AL Kalori	Kandara	Sukkur	Gulsher Khan Jagirani	08/03/13	Nawab Khan Jagirani	10	Clear
27.	9-L Kalori	Patni	Sukkur	Mir Jan shah	07/03/13	Mir Jan Shah	10	Clear
28.	1-R Patni	Baabarlo	Sukkur	Syed Ghulam Murtaza Shah	14/03/13	Viallage Jawari	19	Clear
29.	7-R Patni	Patni	Sukkur	Ali Sher Jawri	07/03/13	Viallage Jawari	14	Clear
30.	17-BL Kalori	Kandra	Sukkur	Mamtaz Jagirani	09/03/13	Viallage Jawari	12	Clear
31.	127/1-R Doso Dhahrio Disty	Baloch Abad	Mirpurkhas	Ghulam Qadir	26/03/13	Haji Mahwal mari	10	Clear
32.	69/2-L Mari Minor	Patayoon	Mirpurkhas	Siddique Bhatti	26/03/13	Siddique Bhatti	18	Clear
33.	6-L Lucki shah sadar	Amri	Jamshoro	Ali Sher rind	27/03/13	Soomar rind	20	Clear
34.	DO-835/1	Sui Kandar	Sanghar	Danish Hussain	28/03/13	Allah Bachayo Panhyar	19	Clear
35.	New Pipe Lakisar Minor	Bhit Shah	Matyari	Ali Nawaz	28/03/13	Gul Sahito	25	Clear

36.	1-R Ex Wasing	Mula Qatiar	Tando M. Khan	Mohammad aslam	29/03/13	Mohammad Din Alwani	25	Clear
37.	14-T Daraza Minor	Mad	Khairpur	Bahadur Larik	01/04/13	Khatri Pathano	25	Clear
38.	3-L Chingni Minor	Miandad Chingni	Kamber-Shahdadkot	Hafiz Qurban	02/04/13	Khudaabad Chingni	15	Clear
39.	8-R Jaro Wah	Habibkot	Shikarpur	Haji Abdul Ghaffar Mahar	03/04/13	Habibkot	15	Clear
40.	59-CR Ex Begari Canal	Ramzanpur	Jacobabad	Haji Ahmed Din	3/4/2013	Babo Faqir	20	Clear
41.	4-DL Rahuja Minor	Pyaro Goth	Dadu	Hashmat Ali	4/4/2013	Ghulam Rasool Arain	25	Clear

4.17

SNAPSHOTS ARE TAKEN DURING CONSULTATIVE MEETINGS
CONDUCTED BY CONSULTANTS WITH WCA MEMBERS & OTHER LOCAL
COMMUNITY PEOPLE



Figure 4.14: Detailed briefing by Resettlement Specialist (Consultant) during Consultative meeting at Village Jarar Lund, District Shaheed Benazirabad (Sakrand) on January 22, 2013.



Figure 4.15: Consultative meeting/ group discussion with at Village Jarar Lund, District Shaheed Benazirabad (Sakrand) on January 22, 2013.



Figure 4.16: Briefing by Deputy Director (OFWM Deptt) during consultative meeting.



Figure 4.17: Sharing/ Participation of WCA member in consultative meeting.



Figure 4.18: Consultative meeting/ group discussion with WCA Members at Village Mithiani, Distt Noshero Feroz on January 31, 2013.



Figure 4.19: Consultative meeting/ group discussion with WCA 22 AR/ local people, Sangi Minor at Village Muhammad Haroon Shar, Distt Noshero Feroz on January 30, 2013.



Figure 4.20: Community Meeting/ Consultative Meeting with WCA 6L, Lakhi Shah Sadar, Distt Jamshoro on March 27, 2013.



Figure 4.21: Community Meeting/ Group Discussion at WCA new Pipe, Lakisar Minor, Distt Matiari on march 28, 2013.



Fig: 4.22: Community consultative Meeting/ Group Discussion on WC# 8AL Jatoi, village Qadir Bux Dakhan, Distt Nosheroferoz on January 01, 2013.



Figure 4.23: Community Consultative Meeting/ Group Discussion on WC# 1R- Ex Wasing, Distt Tando Muhammad Khan on March 29, 2013.



Figure 4.24: Community Consultative Meeting/ Group Discussion on WC# SM 835/1, District Matiari held on March 28, 2013.



Figure 4.25: Community Consultative Meeting/ Group Discussion on WC# SM 835/1, District Matiari held on March 28, 2013.

4.18

**SNAPSHOTS OF CONSTRUCTING ONE ROOM SHELTERS FOR FLOOD
AFFECTED COMMUNITIES**



Figure 4.26: Almost completed shelter (before fixing the roof) for the flood affected communities designed for each family who lost their houses 100% by the flood.



Figure 4.27: Caption: Almost completed shelter for the flood affected communities designed for each family who lost their houses 100% by the flood.



Figure 4.28: Plastic made model-I for one room shelter for flood affected families.



Figure 4.29: Plastic made model-II for one room shelter for flood affected families.



Figure 4.30 : Plastic made model-III for one room shelter for floodaffected



Figure 4.31: Flood shelter during construction.



Figure 4.32: Flood shelter during construction.



Figure 4.33: Flood shelter during construction.

**Annexure IV: Checklist for collection of data from the Project
Affected Person (s) under Resettlement Issues.**

Checklist to identify the groundbased status of resettlements in project Area				
Probable Involuntary Resettlement Effects	Yes	No	Not Known	Remarks
Involuntary Acquisition of Land				
1. Will there be land acquisition?				
2. Is the site for land acquisition known?				
3. Is the ownership status and current usage of land to be acquired known?				
4. Will easement be utilized within an existing Right of Way (ROW)?				
5. Will there be loss of shelter and residential land due to land acquisition?				
6. Will there be loss of agricultural and other productive assets due to land acquisition?				
7. Will there be losses of crops, trees, and fixed assets due to land acquisition?				
8. Will there be loss of businesses or enterprises due to land acquisition?				
9. Will there be loss of income sources and means of livelihoods due to land acquisition?				
Involuntary restrictions on land use or on access to legally designated parks and protected areas				
10. Will people lose access to natural resources, communal facilities and services?				
11. If land use is changed, will it have an adverse impact on social and economic activities?				
12. Will access to land and resources owned communally or by the state be restricted?				
Information on Displaced Persons:				
<p>Any estimate of the likely number of persons that will be displaced by the Project? [✓] No [] Yes</p> <p>If yes, approximately how many? _____ N.A. _____</p>				

Are any of them poor, female-heads of households, or vulnerable to poverty risks?	<input checked="" type="checkbox"/>] No	<input type="checkbox"/>] Yes
Are any displaced persons from indigenous or ethnic minority groups?	<input checked="" type="checkbox"/>] No	<input type="checkbox"/>] Yes

Note: The project team may attach additional information on the project, as necessary.

Annexure V: Proposed Individual Grievance Registration Form (IGRF).

G3 Engineering Consultants (Pvt.) Limited, Pakistan Individual Grievance Registration Form (IGRF)	
Name of Complainant:	Complaint Registration No.
Name/ No. of WC/ WCA:	Date of Registration:
CNIC No. of Complainant:	
Phone No. of complainant:	
Address of Complainant:	
Detail of complaint:	
Respondant Official (name):	
Proposed Action Required:	
Date for Response/ Redressal:	
<div style="border-top: 1px solid black; width: 150px; margin: 0 auto;"></div> Signature of Respondant Official	<div style="border-top: 1px solid black; width: 150px; margin: 0 auto;"></div> Signature of Applicant/ Complainant
For Official Use Only:	
Solution of grievance:	
<div style="border-top: 1px solid black; width: 150px; margin: 0 auto;"></div> Signature of Concerner Official/ Officer	

Annexure VI: Proposed Layout of Complaint Register (Format).

Complaint Register (CR)											
1	2	3	4	5	6	7	8	9	10	11	12
Complaint Registration No.	Date of Registration:	Name of Complainant:	Name/ No. of WC/ WCA:	CNIC No. of Complainant:	Phone No. of complainant:	Address of Complainant:	Detail of complaint:	Date of Response/ Redressal	Respondant Official (name):	Signature of complainant	Signature of Respondant Official

Annexure VII: Socio Economic & Environmental Assessment Questionnaire.

SINDH ON-FARM WATER AND AGRICULTURE PRODUCTIVITY ENHANCEMENT PROJECT
SOCIO- ECONOMIC AND ENVIRONMENTAL ASSESSMENT
Questionnaire

Village Profile Survey

(Note: To be collected in a joint gathering of villagers at some central place)

Serial No. _____

The following Social and Environmental Questionnaire has been designed specifically for use by the G3 Engineering Consultant Staff to help them obtain a factual record of WCA communities and their current Social and Agro-Environmental situation.

The objective is not only to determine the social and environmental needs for the communities which receive irrigation water from the Watercourses, but also to assist the WCA in their annual business planning activities.

Observations/ Instructions for Facilitator (s)

- a "Village" means Mauza as defined in census reports. This Questionnaire would be filled in during "Scoping Session"(SS).
- b All information would be filled in concerning to the settlement and not for the whole village.
- c Separate "Scoping Sessions" would be conducted at each settlement / chak to cover each affected village.
- d Settlement/ chak mean forming the part of village irrespective of size and structure.
- e The checklist provided separately will be used for one/ each settlement / chak
- f When starting the scoping session
- g Introduce the Project details to the
- h Take attendance of all the participants on the attached attendance sheet.

SINDH ON FARM WATER & AGRICULTURE PRODUCTIVITY ENHANCEMENT PROGRAM - (PHASE - I)

1 IDENTIFICATION:

1.1	Names of Union Council:	
1.2	Name of Main Village:	
1.3	Total Number of Settlements/ HHs in the Village:	
1.4	Name of Settlement / Chak of Scoping Session:	
1.5	Persons Attending the Scoping	Total Males Females
1.6	Water Course Association (WCA)	

2 ETHNICITY AND POPULATION

	Name of the Main Caste	Name of the Clan	Name of HEAD or Prominent Member of Caste / Clan	Total Household of Respective Caste	Population		
					Male	Female	Total
n.1							
n.2							
n.3							
n.4							
n.5							
n.6							
n.7							
n.8							
N.x							

3 LANGUAGES SPOKEN IN THE VILLAGE:

3.1	Urdu	3.3	Others	
3.2	Sindhi	3.4		

4 NUMBER OF HOUSES IN THE VILLAGE:

4.1	Kacha	4.3	Semi-Pacca	
4.2	Pacca	4.4	Hut	

5 AVAILABLE UTILITIES (No. of houses having facility)

	Available in the Village (Y=1/N=2)	No. of Dwellings	Available in Nearby Village / Locality (Y=1/N=2)	Distance from the Village (km) (Y=1/N=2)
5.1				
5.2				
5.3				
5.4				
5.5				
5.6				
5.7				
5.8				
5.9				
5.10				
5.11				
5.12				
5.13				
5.14				
5.15				
5.16				

SINDH ON FARM WATER & AGRICULTURE PRODUCTIVITY ENHANCEMENT PROGRAM - (PHASE - I)

6 EDUCATION FACILITIES AVAILABLE IN THE SETTLEMENT / VILLAGE

Description	No. in Village		No. Enrolment		No. of Teachers	
	Boys	Girls	Boys	Girls	Male	Female
6.1 Primary School.						
6.2 Middle School						
6.3 High School						
6.4 Inter College						
6.5 Degree College						
6.6 Madrasa						
6.7 Vocational						

7 NUMBER OF EDUCATED PERSONS IN THE SETTLEMENT / VILLAGE (Detail):

Level	Male (No.)	Female (No.)	Total (M+F)
7.1 None			
7.2 Primary Level			
7.3 Middle			
7.4 Metric			
7.5 Intermediate			
7.6 Graduation			
7.7 Post Graduation			
7.8 Others			

8 HEATH FACILITIES (Within Chak / Village)

Facility Within Village	Exists (Y=1)	Whether	Medical Staff	Nearby
8.1 Hospital				
8.2 Basic Health Unit				
8.3 Mother Child Care Centre				
8.4 Child Immunization Centre				

9 IS THERE ANY PRIVATE MEDICAL PRACTITIONER IN THE VILLAGE?

9.1 Homeopathic (No.)	9.2	Hakeem (No.)	
9.3 M.B.B.S (No.)	9.4	Paramedical	

10 DOES ANY CHILD BIRTH ATTENDANT AVAILABLE IN THE VILLAGE?

10.1 Doctor	10.2	Other	
10.3 Nurse			

11 OCCURRENCE OF DISEASES DURING LAST FIVE YEARS

11.1 Malaria	11.2 Typhoid	11.3 Cholera	
11.3 HIV	11.4 Measles	11.5 Polio	
11.6 T.B.	11.7 diarrhoea	11.8 Hepatitis	
11.9 Others Specify			

**SINDH ON FARM WATER & AGRICULTURE PRODUCTIVITY ENHANCEMENT
PROGRAM - (PHASE - I)**

12 CONFLICT RESOLUTION MECHANISM

12.1 Who mediates and give resolution rule in your village?					
12.1a	Head of the Caste	12.1b	Nazim /	12.1c	Religious
12.1d	Heads of Families	12.1e	Government	12.1f	Others
12.2 How the matters related to property, dispute about the control and consumption of the natural resources of the area are and matters of					
12.2a	Punchyat	12.2b	Head of the	12.2c	Nazim of
12.2d	Head of Families	12.2e	Government	12.2f	Others

13 ACCESSIBILITY OF THE VILLAGE THROUGH:

13.1	Distance of Village from Metal/Pukka		
13.2	Metalled Road	13.4	Pukka Road
13.3	Kacha Road	13.5	Other

14 TRAVEL AVAILABLE IN VILLAGE (detail):

	Type	No.
14.1	Public Transport	14.1a
14.2	Private Transport	14.2a
	Truck	
	Bus	
	Van	
	Car	
	Tractor	
	Donkey cart	
	Bicycle	
	Motorbike	
	Other (specify)	

15 WATER SUPPLY SYSTEMS (Detail):

	Y=1/N=2	No. people supplied		Y=1/N=2	No. people supplied
15.1	Self Carried	15.5	Donkey		
15.2	Pumped	15.6	Tapped		
15.3	Tanker	15.7	Hand Pump		
15.4	Water Carrying System	15.8	Other/Well		

16 Wastewater Disposal System (Detail):

	Y=1/N=2	No. people supplied		Y=1/N=2	No. people supplied
16.1	Sewerage System,	16.5	Open		
16.2	Washroom facilities	16.6	Soakage		
16.3	Indoor Latrine	16.7	Pits		
16.4	Outdoor enclosed Latrine	16.8	Communal		
			Other		

17 OCCUPATIONAL STATISTICS (No of Households with Main and Secondary Source of Income)

	Main	Secondary
17.1	Agriculturist	
17.2	Shopkeepers	
17.3	Transporters	
17.4	Traders	
17.5	Livestock Farmers	
17.6	Employment (Public)	
17.7	Employment (Private)	
17.8	Daily wage Earners /Labourer	
17.9	Poultry Farmers	
17.10	Away for Village / Moved to a City	
17.11	Remittance from outside Pakistan	

SINDH ON FARM WATER & AGRICULTURE PRODUCTIVITY ENHANCEMENT PROGRAM - (PHASE - I)

19 IRRIGATION WATER SOURCE AND AREA IRRIGATED (main and Secondary)

	Main	Secondary	Area
19.1 Canal (Irrigation Water) Only			
19.2 Tube well Only			
19.3 Canal+ Tube well			
19.4 Barani			
19.5 Do the farmers sell water to other farmers? If yes to who/why?			

18 LAND STATISTICS OF VILLAGE (land parcels / Area)

	Total / Area	Irrigated (Y=1/N=2)
18.1 Cultivated Land		
18.2 Fallow Land		
18.3 Wood/Forest Land		
18.4 Cultivable Waste Land (Banjar)		
18.5 Ghair Mumkin		
18.6 Total Land		
18.7 Total cultivated land within the buffer zor		
18.8 Total Wood/Forest land within the buffer zone		

20 CROPS

	Area	Irrigated (Y=1/N=2)	Income	Land owner(s)
20.1 wheat				
20.2 Rice				
20.3 Cotton				
20.4 Sugarcane				
20.5 Other				

21 NUMBER OF ANIMAL IN THE VILLAGE

Animal type	Masculine		Feminine		Total
	Young Stock (<3Y)	Adult	Young Stock (<3Y)	Adult	
21.1 Buffalo					
21.2 Cow					
21.3 Sheep					
21.4 Goat					
21.5 Horses					
21.6 Donkeys					
21.7 Mules					
21.8 Others					

22

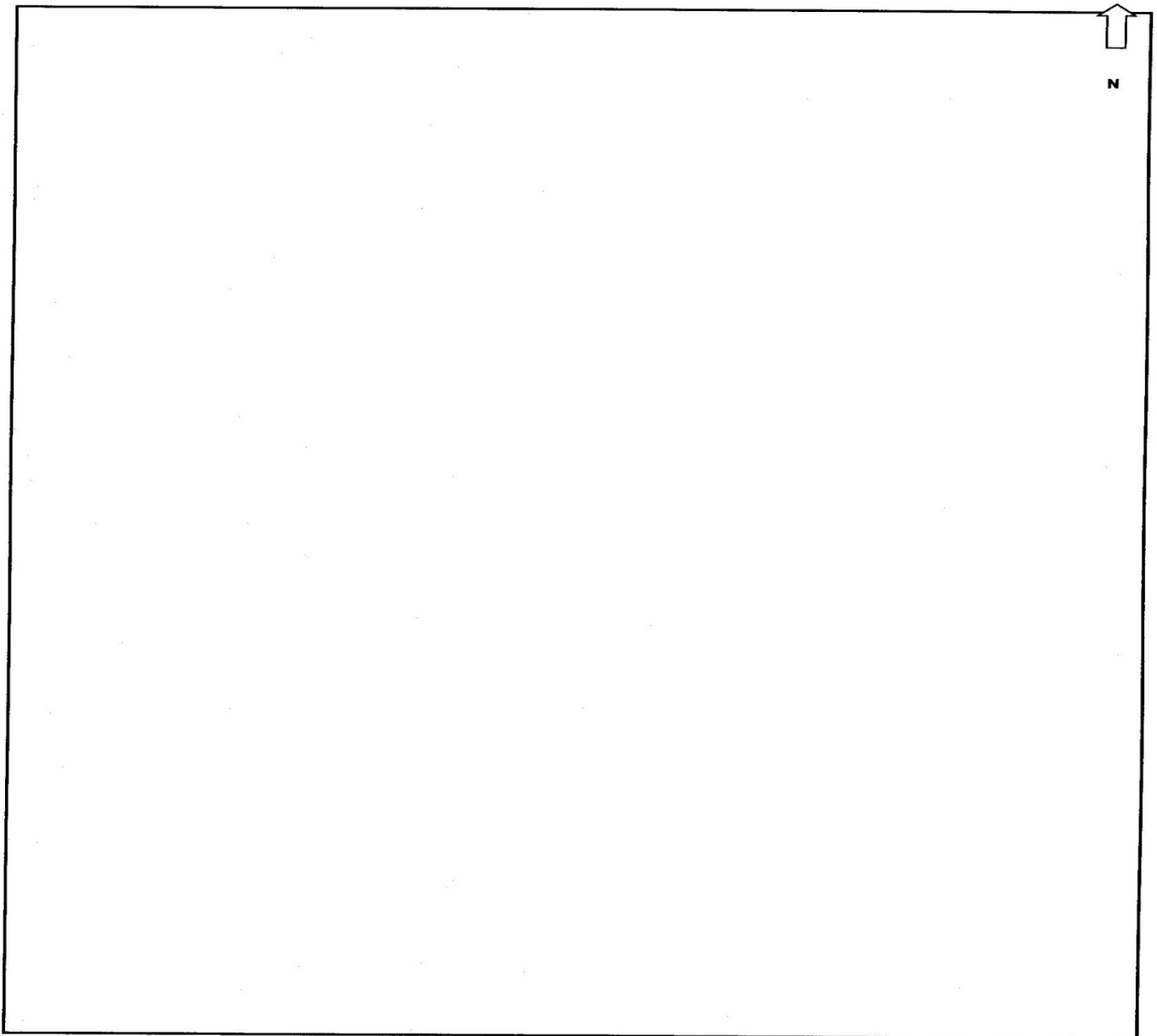
PHOTOGRAPHIC RECORD

Description of Photograph / Location / Orientation / Map reference

n.1
n.2
n.3
n.4
n.5
n.6
n.7
n.8
N.x

23

VILLAGE / SITE SKETCH (HAND MADE MAP)



G3 Engineering Consultants (Pvt.) Limited, Pakistan																	
ASSESSMENT FORM FOR ELEVATED PLATFORM (DURING FLOOD)																	
Date of assessment: ____/____/____ (dd/mm/yyyy)																	
ASSESSING AGENCY DATA																	
1 Agency / Organization Name _____		3 Title _____															
2 Inspector Name _____		5 Title _____															
4 Supervisor Name _____		7 Email Address _____															
6 Phone _____		8 Other contact _____															
II. GEOGRAPHY/CAT / RICH AREA (VILLAGE)																	
9 Name/ Title of respondent person or community: _____		10 Village: _____															
11 UC _____	12 Deh _____	13 Taluka _____	14 District _____														
III. FAMILY DETAIL (Respondant)																	
15 Name _____		16 Caste _____	17 Age _____														
18 Sex <input type="checkbox"/> Male <input type="checkbox"/> Female	19 CNIC No. _____		20														
21 Status <input type="checkbox"/> Married <input type="checkbox"/> Single <input type="checkbox"/> Widow <input type="checkbox"/> Family Members <input type="checkbox"/> Relationship, Other _____																	
22 Religion _____		23 Contact No. _____															
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center;">Family size</th> <th rowspan="2">Total:</th> </tr> <tr> <th>Men</th> <th>Women</th> <th>Boys</th> <th>Girls</th> </tr> </thead> <tbody> <tr> <td style="height: 20px;"></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Family size				Total:	Men	Women	Boys	Girls					
Family size				Total:													
Men	Women	Boys	Girls														
IV. HOUSING CONDITION BEFORE FLOOD																	
24 Plot Size ² _____, Landowner - Y/N <input type="checkbox"/>		25 (Sketch of plot - draw back side of page)															
26 Building Registered - Y/N <input type="checkbox"/> - If Yes, Reg No: _____		27 No. of owners (hearship) _____															
28 House Type <input type="checkbox"/> Kacha <input type="checkbox"/> Pakka <input type="checkbox"/> Semi Pakka <input type="checkbox"/> No of Rooms _____, Veranda Y/N <input type="checkbox"/>																	
Kitchen Yes <input type="checkbox"/> / No <input type="checkbox"/> If Yes, is it: Kacha <input type="checkbox"/> Pakka <input type="checkbox"/>																	
Latrine Yes <input type="checkbox"/> / No <input type="checkbox"/> If Yes, what type: Flush <input type="checkbox"/> Pit <input type="checkbox"/> / Other _____																	
V. UNION/TOWN/WIL WISE LOSSES ON DISTRICT LEVEL (Losses occurred during flood during 2010-2011)																	
29 Total UCs in District _____		30 UCs Affected _____															
31 Completely Damaged _____		32 Partially Damaged: _____															
33 Agriculture Loses (%) _____		34 Livestock Loses (%) _____															
		35 H/Hs Affected _____															
		36 Not damaged _____															
		37 Farming Loses (%) _____															
VI. CURRENT LIVING CONDITIONS																	
38 Where are you currently living? (Choose ONE that best applies)																	
Fully repaired or newly constructed shelter		Partially finished shelter															
Emergency shelter		With relatives or neighbours															
		Finished shelter with parts of original home attached															
		Other (explain): _____															
39 If original home is not fully repaired then please explain why? (Choose ONE that best applies)																	
Too damaged to repair		Materials provided not enough to make full repairs															
Home repaired but not boundary wall		Boundary wall repaired and not enough supplies left over for fully repairing home															
other (Explain): _____		Fully repaired or newly constructed shelter															
		Not enough money for materials															
40 Source of income: Farmer <input type="checkbox"/> Land Owner <input type="checkbox"/> GOVT. Service <input type="checkbox"/> Private Service <input type="checkbox"/> Others: _____																	
41 Did the flood affect your monthly income: Yes <input type="checkbox"/> / No <input type="checkbox"/> If yes, than how? _____																	
42 What is your current monthly income: _____																	
43 Do they fall into the vulnerability Criteria - Y/N <input type="checkbox"/> 44 Reason _____																	
45 Reason for acceptance OR rejection _____																	
VII. IDENTIFICATION OF LAND (identified by community)																	
46 Government/ Private Land _____		47 Alongwith Canal/ Drain _____															
48 Land Area (in acres) _____		49 Distance from village/s (in KMs) _____															
		50 Dune Land (sandy area) _____															
		51 Donated by owner (if private) _____															
VIII. COMMENTS																	
52 _____																	

