GOVERNMENT OF KHYBER PAKHTUNKHWA

PLANNING AND DEVELOPMENT DEPARTMENT

PC-I

SETTLEMENT AND DIGITIZATION OF LAND RECORD IN MERGED DISTRICTS

ADP NO: 218-190668

REVISED ESTIMATED COST: 1,268.1 Million PKR

1	**Name of the Project**	**Settlement and Digitization of Land Record in Merged Districts**
2	**Location**	**Khyber Pakhtunkhwa (Merged Areas)** 1. **Khar (Bajaur)** 2. **Landi Kotal (Khyber)** 3. **Upper Kurram (Kurram)** 4. **Lower Kurram (Kurram)** 5. **Hassan Khel (Peshawar)** 6. **Darra Adam Khel (Kohat)** 7. **Wazir (Bannu)**
3	**Authority Responsible for**	**Planning and Development Department (P&DD)**
(i)	**Sponsoring**	**P&DD**
(ii)	**Execution**	**Land Settlement Unit (LSU), P&DD**
(iii)	**Operation and Maintenance**	**P&DD**
4	**Plan Provision** **a)** i. If the project is included in the medium term/five-year plan, specify actual allocation. ii. If not included in the current plan, how is it now proposed to be accommodated. iii. If the project is proposed to be financed out of block provision, indicate, • **Total Block provision**	**The Project is included in the approved AIP 2019-20 (AIP-201920- G067) with allocation of PKR 500 Million for 2020-21**

	Amount already committed **Amount proposed for the project.** **b)** **If the project is not the plan, what warrants its inclusion in the plan?**	

5. Background:

The Project envisions establishment of a system of accurate, transparent and secure land records linked to geospatial information system for the Merged Areas (MAs) of Khyber Pakhtunkhwa.

Exploring land records management requires understanding the concept of land and significance of records management in the development process of urban/rural areas. The development in these areas requires a coordinated work between committed governments at all levels, honest government officials, open legislative and transparent regulatory system.

Unlike rest of the province, the MAs do not have an official system of land and property rights with the exception of only a few pockets of land in Kurram and North Waziristan that have land records prepared and maintained. The current state of property rights is characterized by two main features: (a) the ownership of land is undocumented; and (ii) most of the rights of usufruct are communal in nature. The latter means that the ownership of most of the land rests with the tribe.

In the absence of formal records and any institutional mechanisms for record keeping, disputes regarding land are resolved through the Jirga, community bodies, whilst the sale and purchase of land also remains cumbersome. Land is not taxed and the government has therefore no database of land titles, occupancy and rights of passage and use. Unlike other areas of Pakistan, the usufruct of the land in MAs remains undocumented.

Government of Khyber Pakhtunkhwa has recently approved a Tribal Decade Strategy (TDS) to address developmental lags of Merged Areas (MAs). It accords high priority to economic development of this region. An important endeavor in this regard is creation of accurate, transparent and secure system of land records providing ease of access of land information to its owners. In addition to this, a system of legal institutions will be required for efficient and affordable dispute resolution. This effort will draw upon the systems, skill sets and manual procedures currently in practice in Khyber Pakhtunkhwa and the rest of Pakistan while also reaching out to benefit from IT based information and innovations in system designs to provide higher level of service delivery to residents and businesses in MAs.

6. Project Objectives and Its Relationship with Sectoral Objectives:

The project has mainly two objectives:

1. Complete settlement operation using GIS based technology
2. Provide computerized transactional services to land owners.

The first objective is to create a series of documents related to land, land owners and its tenants. This step includes survey of the entire area. Boundaries are determined of the basic revenue unit called Mouza, Deh or Revenue Estate. Following are some of the important documents created during this process along with some other auxiliary records.

a. Shajra e Nasab (Pedigree/Family Tree)
b. Khatooni (Records of Tenancy)
c. Field Book (Measurement dimensions)
d. Massavi (Cadastral Map)
e. Record of Rights (Misl e Haqiat)
f. Wajib ul Araz (Document of Customs) of mouza/village.

The second objective is to operationalize Service Delivery Center (SDC) to provide services to the public as soon as records of a mouza are completed. It will reduce the cost of computerization of manual records which is usually done in already settled districts.

Secondary objectives of the project are:

- Initiation of GIS based land settlement operation.
- Survey entire project area using advanced surveying equipment i.e. embedded with Real-time kinematic (RTK) and Global Navigation Satellite System (GNSS) technology

- Data entry of records of rights and all other related data in the existing Land Record Management Information System (LRMIS) software.
- Creation of digital Massavi Maps
- Creation of spatial database to store all GIS related data.
- Integration of MIS and GIS data in the existing LRMIS software.
- Provide scalable database solution to accommodate land transaction data both in spatial and non-spatial formats.

The major Long Term goals of the project:

- To maintain and update the existing digital records and prepare digitized Jamabandis from the computerized records.
- To mitigate land disputes on instant update of land records.
- To prepare scalable digital maps for multi sector and multipurpose uses.
- To determine the type of land, crop etc. from satellite imagery of the digitized Mauzas.
- To increase revenue from Fard and Mutation services
- To reduce litigation by accurately maintaining the digital records of rights.
- To facilitate land owners and farmers for acquisition of bank loans.

Relationship with Sectoral Objectives:

The development of Information Technology Sector in the public sector is integral to government initiatives. Strengthening back-office operations and effective public service delivery is part of the objective to help the government achieve its vision of providing quality services to citizens efficaciously and efficiently. This includes providing hassle-free service to citizens which is an important objective of the government and this project would play a vital role in achievement of such objectives.

The wealth of a nation and its economic development are dependent on the state land and its usage. Digitalizing fresh land record through GIS technologies, will reduce potential disputes and will enable the government to efficiently generate revenue from land transactions. One of the key elements of this project is to improve the revenue record system by creating land records in seven selected sub-divisions of Merged Areas (MAs). There is political commitment in making hassle-free services available to the citizens and, at the same time, diminishing the scope for litigation and land-related disputes.

This project would, therefore, help government for implementing the IT policy and good governance.

The Board of Revenue (BoR), Khyber Pakhtunkhwa, Government has in principle agreed to making use of the modern technology and incorporating international practices for Land Administration. The government intends to strengthen its available resources and provide capacity building support for existing staff and hire experienced staff for the project.

7. Key Performance Indicators:

The Key Performance Indicators (KPIs) for measuring project success are:

- Establishment of Settlement Offices
- Parcel survey of entire area using digital surveying equipment and/or satellite imagery.
- Creation of computerized records of rights and other related documents.
- Preparation of both digital and paper based Massavi Maps.
- Providing computerized land transaction services to public.
- Establishment of Service Delivery Centers (SDCs).

Result Based Matrix

Result Based Matrix of the project is given in below table.

Table 1 : Result Based Matrix

Goal	Indicator	Means of Verification	Assumptions
Mainstreaming merged areas through sustainable socio- economic development	G1: % of respondents reporting increases confidence in government in post merger period. G2: % of respondents reporting improvement in livelihood conditions in the post merger period. G3: % of respondents reporting that government is responsive to their needs. G4: % of respondents reporting satisfaction in the reforms implementation	Community feedback surveys; Baseline Mid Term and End line surveys.	Reforms process is implemented smoothly; communities are providing required information; security situation remains favorable; no restriction on access to MAs; communities are cooperating in the development process
Outcome	**Indicator**	**Means of Verification**	**Assumptions**
Land records digitized to give owners access to land records, secure transactions of land titles and financial institutions	OC1: Hectares of lands mapped in the MAs. OC2: Number of owners provided with legal tenancy rights OC3: Number of ,and owners accessing financial institutions for loans OC4: Number of land owners successfully receiving loans from financial institutions.	Program data; financial institutions records; land records	Reforms process is implemented smoothly; communities are providing required information; security situation remains favorable; no restriction on access to MAs; financial institutions have their operations in the MAs
Output	**Indicator**	**Means of Verification**	**Assumptions**
1. Digitized land settlement records created	1.1 No. of Revenue Estates demarcated. (target and timeline) 1.2 Number of owners who have digitized land records.(target and timeline) 1.3 Number of districts that have digitized land records (target and timeline)	Misle-e-Hiqat documents; data base of land records;	Security situation is favorable for carrying out activities; communities are cooperating;
2. Land Records Complex and SDC established	2.1 Number of land record complexes built and operational 2.2 Number of service delivery centers established	Onsite verification; progress reports; monitoring reports; program data	funds are available for construction work;
3. Land revenue services provided in the MAs	3.1 Number of owners received digitized land numbering (fard mutation; correction gardawari etc.) 3.2 Number of owners benefiting from land revenue services	Project data;	Land owners are registering with Revenue authority; timely provision of land revenue services; cooperation on the part of land owners
4. Digital system put in place for land revenue collection	4.1 Number of Merged Areas districts where revenue is collected through digital system. 4.2 Number of land owners registered in the digital revenue collection system.	Project data;	Land owners are registering with Revenue authority; timely provision of land revenue services; cooperation on the part of land owners; timely creation of digitized system; land owners are registering under the digitized system

Activities	Inputs	Means of Verification	Assumptions
1.1: Establishment of Projectized Offices 1.1a: Establishment of Land Settlement Unit (LSU) 1.1b: Establishment of Settlement Offices 1.1c: Procurements for operationalization of offices	Human Resource Project Core Team Formation Equipment and Furniture		Project is approved
1.2: Creation of digitized Land Settlement Records 1.2a: Awareness raising campaign for Land Settlement. 1.2b: Demarcation of Revenue Estate boundaries (Thak Bast) 1.2c: Preparation of digitized Shajra e Nasaab 1.2d: Preparation of digitized Khatoni 1.2e: Digital measurement of Parcels 1.2f: Generation of Misl e Haqiat 1.2g: Taqseem Parcha Khatoni 1.2h: Tasdeeq Akhir	Human Resource Equipment (GIS and IT) Logistics Support Land Settlement Module Training		1. National control network has been extended to each revenue estate. 2. Security situation is normal. 3. Land settlement module is developed.
2.1: Construction of Buildings 2.1a: Construction of Land Records Complex (LRC) 2.1b: Procurement of Land for Service Delivery Center (SDC) 2.1c: Construction of SDCs	Identification of Land Procurement of Land Approval of Designs		Land is identified and procured by the Government.
3.1: Establishment of Service Delivery Centers (SDCs) 3.1a: Development of Centralized Land Record Management Information System (CLRMIS) 3.1b: Hiring of regular staff 3.1c: Procurement of Paraphernalia 3.1d: Provision of live services in SDC building	Selection of third party for development of CLRMIS Human Resource Equipment and Furniture for SDCs Training		1. Requirements of CLRMIS are clear. 2. Land Records Processing Unit (LRPU) is operationalized.
4.1: Land transactions in SDC			

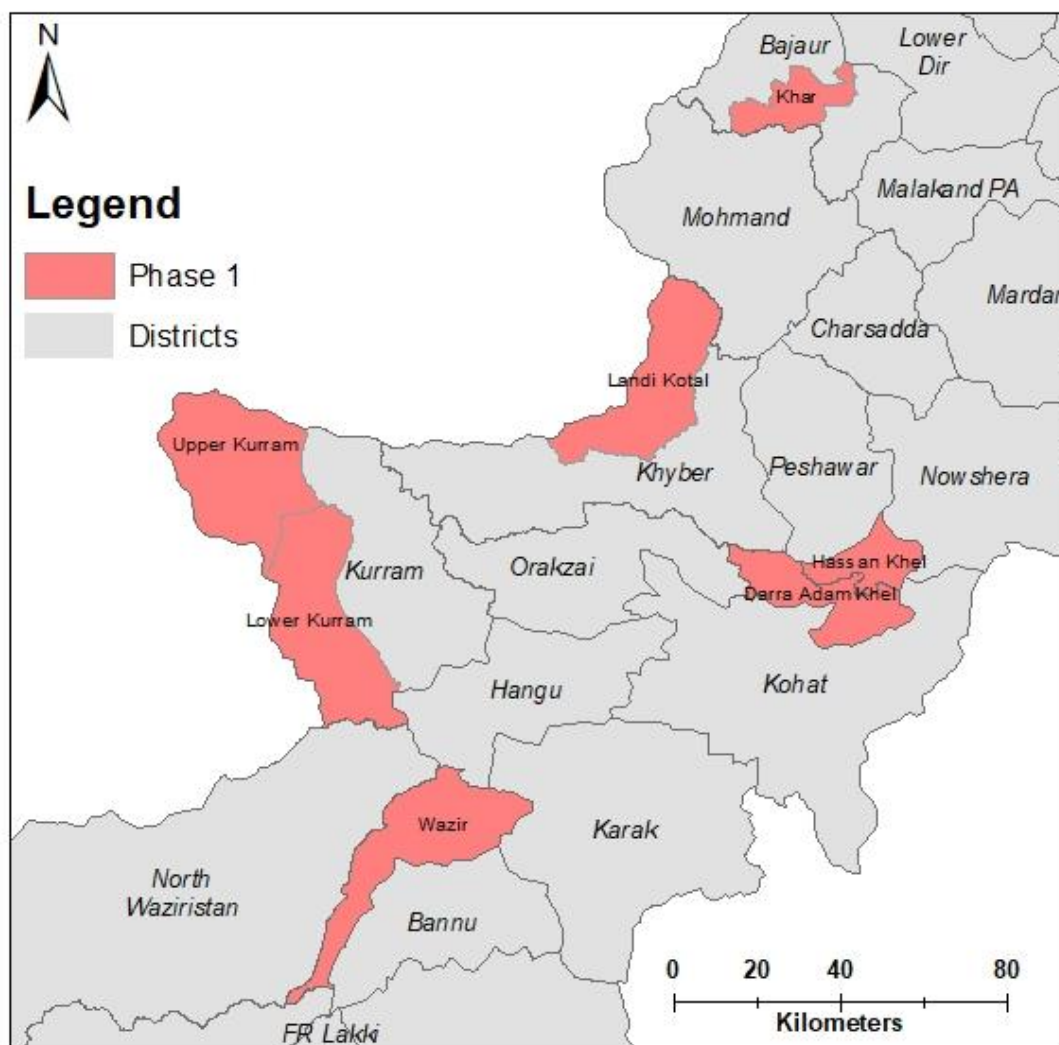## 8. Map of the Project of Merged Areas of Khyber Pakhtunkhwa

Figure 1: Map of sub-divisions of Merged Areas planned for Settlement Operation.

9. Area Statistics:

Table 2 : Area Statistics

S.No.	District Name	Sub-Division	Population (2017)	No. of Households	Area (Sq. Km)
1	Bajaur	Khar Bajaur	247,510	27,044	276
2	Bannu	Wazir	43,114	4,188	824
3	Khyber	Landi Kotal	274,409	29,472	771
4	Kohat	Darra Adam Khel	118,578	14,339	469
5	Kurrum	Lower Kurram	136,719	14,030	949
		Upper Kurram	253,478	25,924	986
6	Peshawar	Hassan Khel	64,691	7,065	260
		Estimated Total	**1,138,499**	**122,062**	**4,535**

9. Description and Justification of the Project:

The most salient output of this project is the creation of new land records and protection of property rights of the citizens as guaranteed in the Constitution of Islamic Republic of Pakistan. This project will also ensure security of records by using a central database as well as safeguard its integrity by preventing fraudulent entries.

The overall objectives of the proposed project are aimed to revolutionize record keeping and land related transactions under the umbrella of a wholesome land management information system in all Merged Areas of Khyber Pakhtunkhwa. This initiative will reduce land related disputes and litigations through the introduction of an authentic recording and mapping system. Land rights would be ensured in a transparent and timely manner. The project would ensure that to provide streamlined services, better public-sector efficiency and citizen satisfaction.

The project intends to make all transactions related to land as transparent, credible, and efficient. The aim of this project is to create GIS based digital fresh land records in merged areas, which would be maintained by the land revenue technical staff in their respective Service Delivery Centers (SDCs). The main theme is to prepare fresh land records in MAs, which is easily accessible as a single electronic database where,

- Efficient record of rights is maintained
- Efficient mutation process is executed
- People can access their records easily

The following specific objectives would be achieved through this project:

- Creation of computerized land records
- Accurate delineation of digital boundaries at various administrative levels
- Transparency in creation and management of record of rights (ownership title)
- Accurate demarcation of land parcels along with their individual dimensions and land record keeping
- Integration of spatial and non-spatial data
- Resolution of land dispute as well as ensuring individual property rights
- Sharing of information electronically among the authorized stakeholders and provision of prescribed information on website
- Support agriculture credit system and provide investment opportunities to Banking Sector
- Institutional development and capacity building of existing staff.

- Better land use planning and providing the opportunity of access to capital for landowners and cultivators.

Justification of the Project:

The use of GIS in land administration system has considerable potential to support society's evolving humankind/land relationship by providing information for decision makers that will enable them to make decisions favorable to sustainable development in the context of land administration and management. GIS is a valuable tool and powerful decision support system for the Computerization of land records for the following reasons:

- Effective land administration
- Efficient resource allocation for land administration
- Sustainable land development and planning
- Improved physical storage facilities for land related matters
- Automation of indexes to provide quicker document retrieval
- Computerization of title documents to provide quicker access to land information

Majority of Merged Areas lack any settlement process and therefore, have no proper land records. As a consequence, updating of records has suffered and they no longer represent the ground realities relating to ownership and possession. For citizens, land records form the basis for assignment and settlement of land titles that determine ownership claims. These records also provide the administration with all the statistical information required for the purpose of development planning, social reforms, rational use and conservation of resources. These are also important as they form a component of Merged Areas revenue from taxes on agriculture income, the transactions of rents, revenues, rates, cases among each of the land titleholders.

10. Implementation Modalities of the Project:

There are two projects of Land Records Computerization ongoing in Board of Revenue. Another ADP approved scheme (ADP No. 190183) of Land Settlement in Dir Lower, Dir Upper and Tehsil Kalam is also planned to be initiated this year (PC-I already submitted). One more project is planned for ADP 2020-2021 to complete the GIS component of current Computerization of Land Records Project. Moreover, Land Records Management Information System (Turn Key Solution) which was approved ADP scheme (ADP No. 17043) will now be the part of this PC-I.

Keeping in view the importance of these projects and space requirements for staff offices, conference rooms and GIS lab a separate building is proposed to be constructed near the

existing Revenue Academy, Phase-III Chowk Hayatabad, Peshawar. This building will be named as Land Records Complex (LRC).

All the above mentioned projects are technology based and require a proper infrastructure for storage and centralization. Land Records Processing Unit (LRPU) is planned to be established under this PC-I. LRPU will not only facilitate the storage for these projects but will also host the Centralized Land Records Management Information System (CLRMIS) which is the future software application to be used in Service Delivery Centers (SDCs).

10.1 Project Structure

The project will be headed by Project Director who will be a grade 19 Government officer, appointed by Project Selection Committee / Establishment Department and will be reporting to the Secretary Planning and Development Department. Project Director will lead the overall administration of the project including Land Settlement Unit (LSU) and all Settlement Offices. Overall project structure is illustrated below:
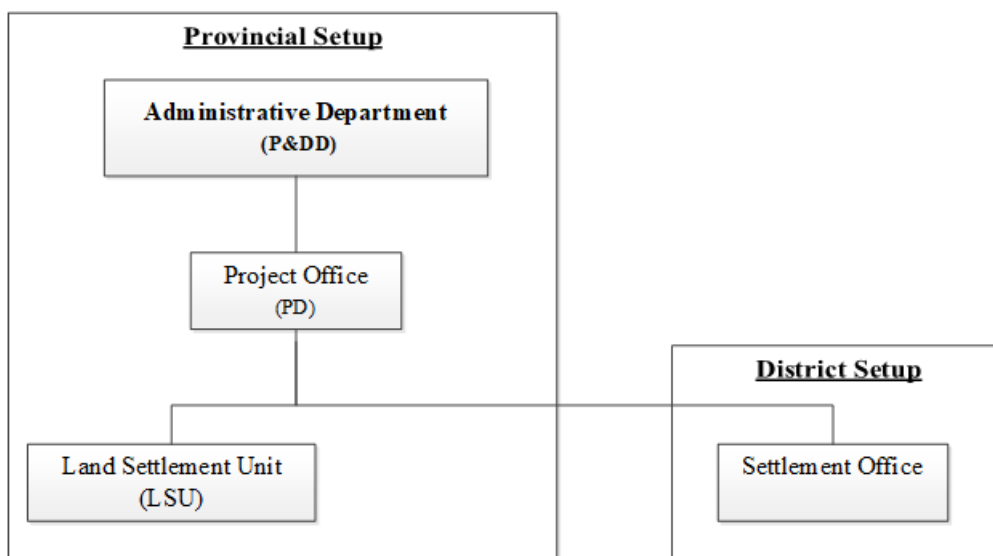
Figure 2: Overall project setup

10.1.1 Land Settlement Unit (LSU):

Land Settlement Unit (LSU) is the main office responsible for overall project management. LSU will not only support project operations but will also supervise all GIS and IT related activities.

Project Director will be supported by three Senior Managers i.e. Senior Manager (Operations), Senior Manager (Technical) and Senior Manager (GIS). These officers will be heading

operations and technical wings of IT and GIS throughout the project life. These posts will be filled either through existing resources/HR of the department or from market.

In order to support the planning, finance and accounts sections of the project, Senior Planning Officer and Account Officer will be posted from Planning and Development Department and Finance Department/Accountant General Office respectively. List of staff of Land Settlement Unit (LSU) is given in the following table.

Table 3: List of Staff of Land Settlement Unit

| S.No.	Designation	BPS	Mode of Engagement	No. of Posts
1	Project Director (PD)	19	Transfer posting/New Hiring	1
2	Senior Manager (Operations)	19	Transfer posting/New Hiring	1
3	Senior Manager (IT)	19	Transfer posting/New Hiring	1
4	Senior Manager (GIS)	19	Transfer posting/New Hiring	1
5	Manager Database	18	Transfer posting/New Hiring	1
6	Manager Networks	18	Transfer posting/New Hiring	1
7	Senior Planning Officer	17/18	Transfer posting/New Hiring	1
8	Account Officer	17	Transfer posting/New Hiring	1
Sub Total (Government Officers)				**8**
9	Assistant Manager (Database)	17	New Hiring	1
10	Assistant Manager (GIS)	17	New Hiring	1
11	GIS Associate	SPP	New Hiring	1
12	Network Support Engineer	SPP	New Hiring	1
13	Accountant	16	New Hiring	1
14	Assistant	16	New Hiring	3
15	Computer Operator	16	New Hiring	2
16	Driver	6	New Hiring	7
17	Naib Qasid	3	New Hiring	4
18	Sweeper	3	New Hiring	2
Sub Total (Contract basis)				**23**
Total Staff of Land Settlement Unit (LSU)				**31**
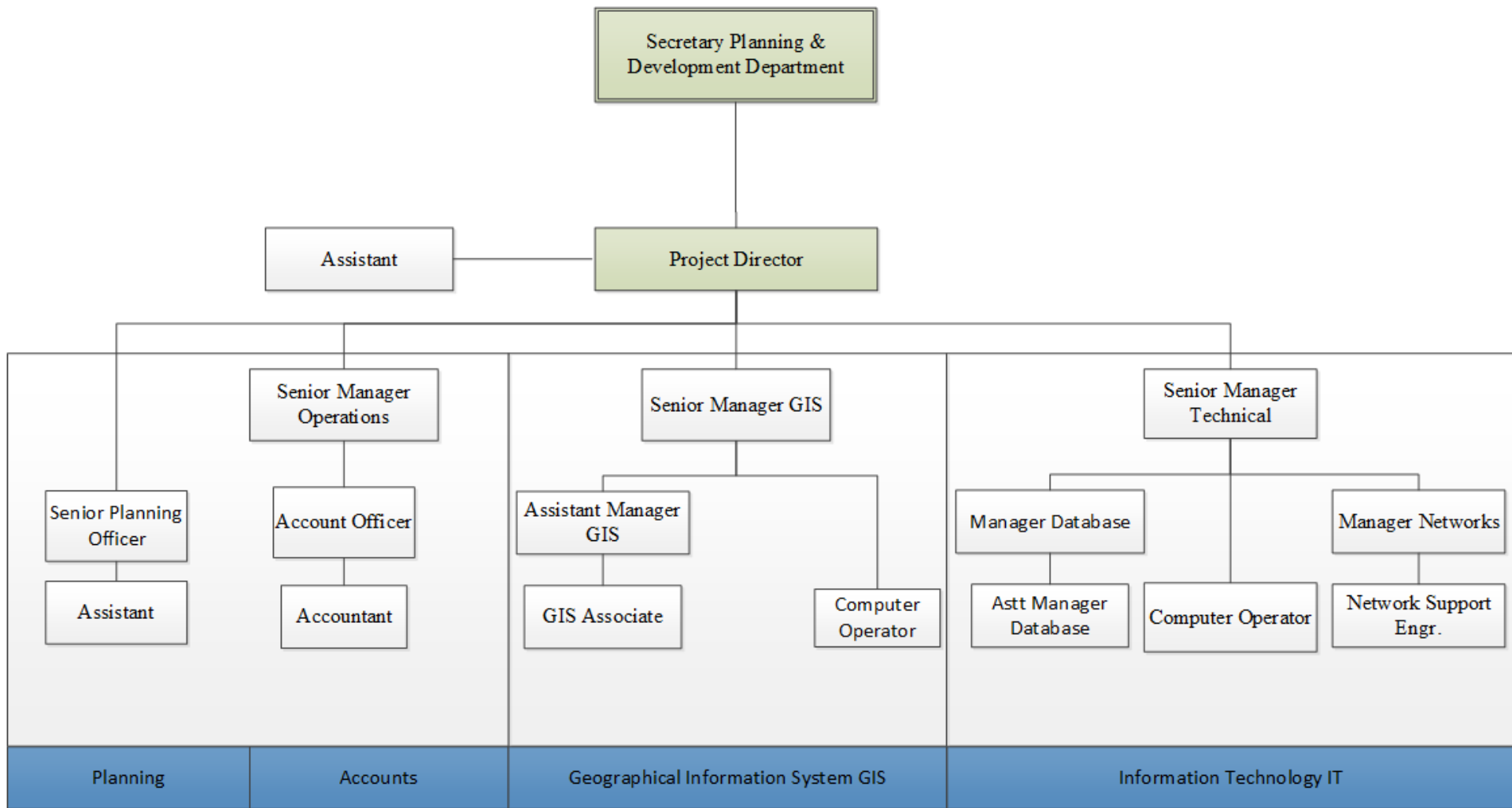
Figure 3: Land Settlement Unit (LSU) Organogram

10.1.2 Settlement Office

Settlement Offices will be established in seven sub-divisions to start settlement operations simultaneously. Settlement Officer (SO) will be in-charge of settlement operations in each district and will be stationed at Headquarters (HQ) Settlement Office. The Additional Deputy Commissioner (ADC-G) of the concerned district will be notified as Settlement Officer by the Revenue and Estate Department. Each Settlement Officer will be assisted by an Assistant Settlement Officer (ASO). In districts like Kurram where settlement is planned in two sub-divisions, there will be one settlement office and one HQ settlement office both led by a single Settlement Officer. All staff of Settlement Office will be hired from market on contract basis except ASO who will be appointed by Project Selection Committee/Establishment Department and will be Grade 17/18 Government Officer. However, if a government officer with relevant experience and skills is not available, then the ASO will be hired from market. List of staff of settlement office along with its aggregate are given as below:

Table 4: List of Staff of Headquarters Settlement Office

S.No.	Designation	BPS	Mode of Engagement	No. of Posts	No. of Units	Total No. of Posts
1	Settlement Officer	17/18	Additional Charge	1	6	6
1	Assistant Settlement Officer	17	Transfer posting/New Hiring	1	6	6
Sub Total (Government Officers)				**2**	**6**	**12**
2	Assistant Manager (GIS)	17	New Hiring	1	7	7
3	Tehsildar (Rtd.)	SPP	New Hiring	1	7	7
4	GIS Associates	SPP	New Hiring	3	7	21
5	Computer Operator	16	New Hiring	3	7	21
6	Accountant/Assistant	16	New Hiring	1	7	7
7	Girdawar	SPP	New Hiring	3	7	21
8	Surveyor	SPP	New Hiring	6	7	42
9	Patwari	SPP	New Hiring	15	7	105
10	Driver	6	New Hiring	1	6	6
11	Survey Helper	3	New Hiring	6	7	42
12	Chowkidar	3	New Hiring	2	7	14
13	Sweeper	3	New Hiring	1	7	7
14	Naib Qasid	3	New Hiring	1	7	7

Sub Total (Contract basis)			307
Total Staff of Headquarters Settlement Office			**319**

Settlement staff will consist of both Revenue and Technical staff. Tehsildar will be responsible to lead and guide Revenue Staff (i.e. Girdawar and Patwari) while Assistant Manager GIS will be responsible for GIS Associates, Computer Operators and Surveyors. AM GIS will also be responsible for database management at the Settlement Office level.

Organogram of settlement office is shown in below figure.
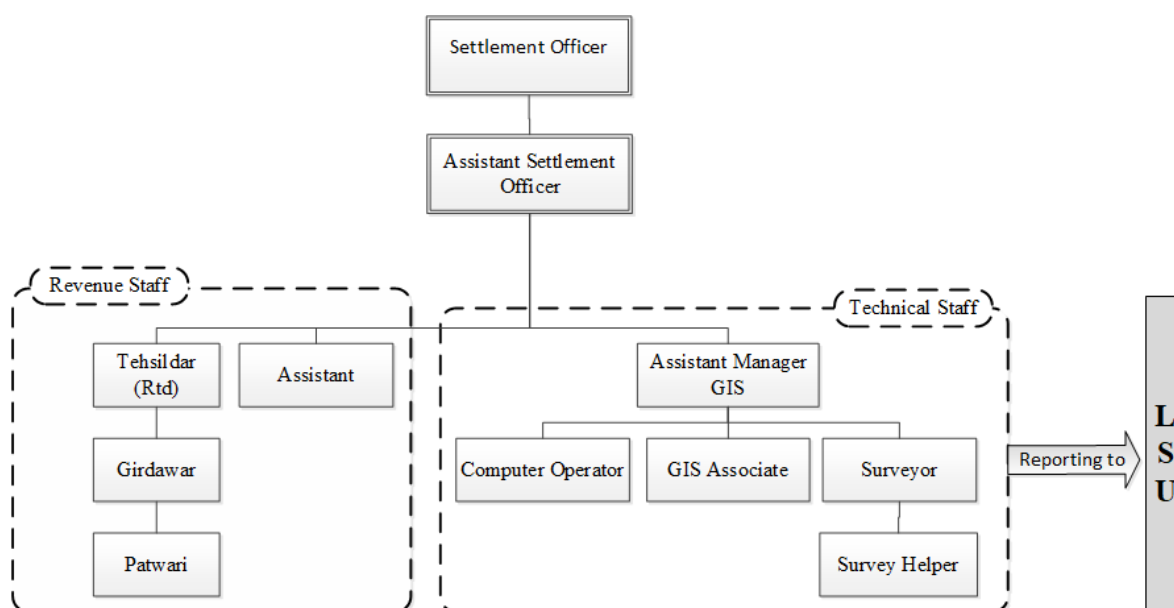
Figure 4: Organogram of HQ Settlement Office

10.1.3. Service Delivery Center (SDC)

Service Delivery Center (SDC) is the facilitation center to provide services related to land record transactions. These SDCs will be established on the analogy of Computerization of Land Records Project, Khyber Pakhtunkhwa. In order to operationalize SDCs, permanent staff will be hired through proper channel. List of SDC staff are given below:

Table 5: List of Staff of Service Delivery Center

S.No.	Designation	BPS	Mode of Engagement	No. of Posts	No. of Units	Total No. of Posts
1	Deputy Director Database	18	New Hiring	1	3	3
2	Assistant Director GIS	17	New Hiring	1	3	3
3	Assistant	16	New Hiring	1	7	7

4	Service Delivery Official	16	New Hiring	10	7	70
5	GIS Associates	16	New Hiring	1	7	7
6	Driver	6	New Hiring	2	7	10
7	Naib Qasid	3	New Hiring	4	7	28
8	Chowkidar	3	New Hiring	2	7	14
9	Sweeper	3	New Hiring	1	7	7
Total Staff of SDC				**23**		**149**

It is pertinent to note that Deputy Director Database (DD Database) will be hired for Headquarters SDC meaning there will be only one DD Database for a district and will be looking after multiple SDCs. In seven sub-divisions of this project, three sub-divisions i.e. Hassan Khel, Darra Adam Khel and Wazir (erstwhile FR) will be looked after by DD Database of Peshawar, Kohat and Bannu respectively.

Procurement of land and construction of SDCs are also included in this project. From the experience of Computerization of Land Records Project, Khyber Pakhtunkhwa, it has been noted that construction work takes more time than expected. That's why during the project's life, provision of rented building for SDCs have been allocated.

Service Delivery Centers will be able to provide services to the public as soon as settlement operation is completed in a mouza.

10.1.4. Project Review Board (PRB)

Overall supervision and keeping the project on track will be ensured by Project Review Board (PRB). Project Review Board will consist of the following members:

Table 6 : Project review Board Structure

S.No.	Designation	Status
1	Additional Chief Secretary	Chairman
2	Project Director	Member/Secretary
3	Representative of Board of Revenue	Member
4	Representative of Finance Department	Member
5	Representative of ST&IT Department	Member

Frequency of Meeting: The Project Review Board (PRB) meeting will be organized at least once in a quarter to review the progress as per the project goals.

Justification for PRB: The Project of land settlement in Merged Areas (MAs), will require consistent guidance and supervision as for the first-time land settlement will be conducted through GIS Technology. PRB will act as major forum to give directions after carefully monitoring the progress of the project and help to solve the administrative and legal matters during project implementation.**Terms of Reference (TORs) of PRB**

- Review and coordinate over-all progress and provide strategic direction to project implementation.
- Performance overview and consistency with the project goals.
- Support and solve the project objectives with the administrative and line departments for legal matters.
- Guidance for the KPIs progress and support any higher support to the project;
- Any other action / decision for smooth implementation of the project and achieving the objectives.

10.2. Project Execution

Land settlement operation is an extensive exercise of engaging people, surveying entire area, recording records of rights and preparing other records related to land and its access. Settlement operation will be initiated in all sub-divisions simultaneously. The overall timeline of the project is three (03) years.

To efficiently utilize staff of settlement operation, they have been organized in three (03) teams/per sub-division. These teams are illustrated in the figure below.
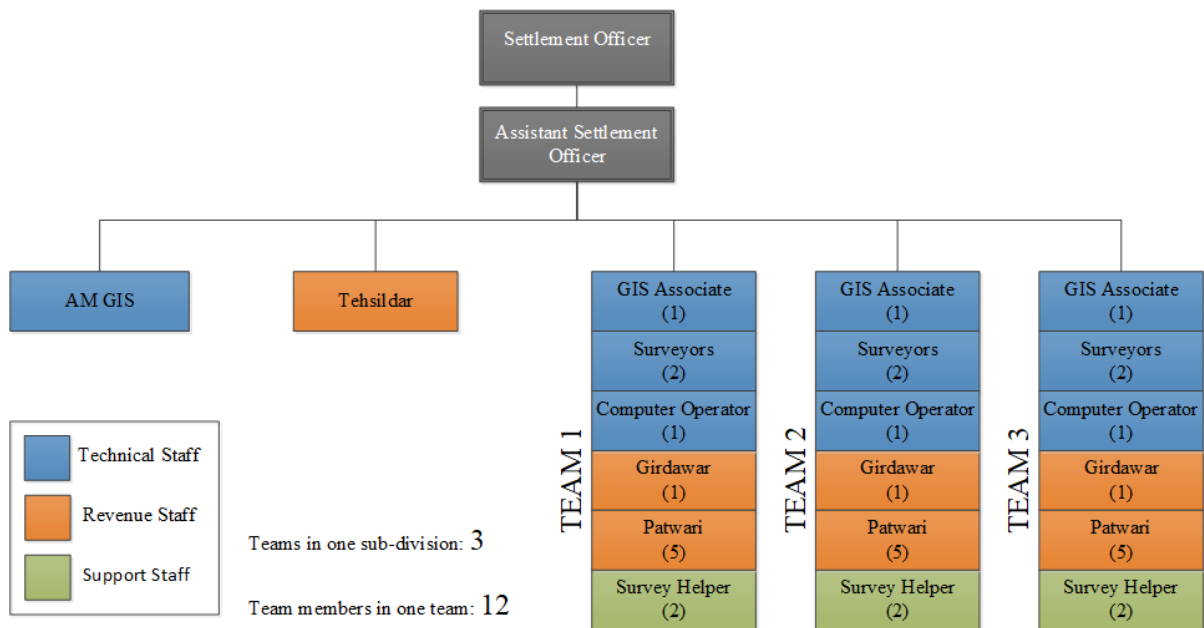
Figure 5: Team structure of Settlement Office

Each team will be comprised of both Revenue and Technical staff. Team composition is shown in below table.

Table 7 : Team Composition

S.No.	Designation	No.
1	GIS Associate	1
2	Surveyors	2
3	Computer Operator	1
4	Girdawar	1
5	Patwari	5
6	Survey Helper	2
No. of Staff in a team		**12**

Each team will be working in five mouzas simultaneously i.e. at a single time settlement operation will be ongoing in 15 mouzas in a sub-division. After completing five mouzas by a single team, another group of five mouzas will be assigned to them by the Assistant Settlement Officer.

There will be five Patwaris working in a team. They will be preparing Shajra e Nasb, writing Khatooni, verifying field measurements, verifying field book, preparation of Misl e Haqiat and verification of all other revenue documents. He will be supervised and guided by Girdawar. Patwari will be working closely with Computer Operator to ensure data has been entered and with GIS staff to make sure measurements of parcels are correct.

As soon as the Patwari starts writing Shajra e Nasb and Khatooni, Surveyors with the help of GIS Associate will start Khasra Measurement. GIS Associate will be extending GIS support to the team and will be primarily responsible to demarcate mouza boundaries, manage and verify survey data, finalize Massavis and perform ground truthing where required.

Surveyors will be supporting GIS Associate and Patwari in field data collection and field verification. He will also be responsible to handle and use GNSS/RTK equipment. Computer Operator will perform the scanning and data entry of Shajra e Nasb and Khatooni received from Patwari on daily basis. Computer Operator will be a trained personnel to use Land Settlement Module and support the Revenue staff and Assistant Settlement Officer in performing verification of the data entered. Surveyors will be assisted by Survey Helpers in handling survey equipment and do the duty of attendants where Base (DGPS) is fixed.

Field work will be conducted by Patwari and Surveyors where GIS Associate and Computer Operator will do the desk work. In case of any verification needed, both the staff members will move with the field team. In order to facilitate the field staff i.e. Patwari, Surveyors and Survey Helpers, each team will be provided with a vehicle.

Once the record is finalized by Patwari, it will be verified by Girdawar, Tehsildar, Assistant Settlement Officer and finally by the Settlement Officer. After signing off the records, data will be available for live services.

10.3 Implementation Methodology

Settlement operation will be carried out in two different modalities i.e.

   a. Fresh Settlement
   b. Re-settlement

Both the processes are explained in detail as below.

10.3.1 Fresh Settlement

Most of the areas of Merged Areas (MAs) are lacking proper record of rights that's why Fresh Settlement process will be adopted. The use of GIS and IT has been illustrated in the figure below. Land Records Management Information System (LRMIS) which is already in use in Service Delivery Centers (SDCs) of District Peshawar, Mardan and Abbotabad. Land Settlement Module will be developed and integrated with current LRMIS software. Initial data

entry of Shajra e Nasab and Khatooni will be stored in Settlement Module which after verification (Parthal) from concerned revenue staff will be updated to LRMIS database.

Khasra measurement and Field Book preparation will be done using GIS technology as illustrated in Figure 5. All the Khasra measurement will be done by using Very High Resolution Satellite Stereo Imagery and using advanced surveying equipment i.e. DGPS + GNSS. This data will be stored in a Geo-database and then after verification from concerned revenue staff will be integrated with LRMIS database. After completing all the required processes of Settlement Operation, the data will be ready for live services.

The detail process is discussed below and is shown in Figure 6.
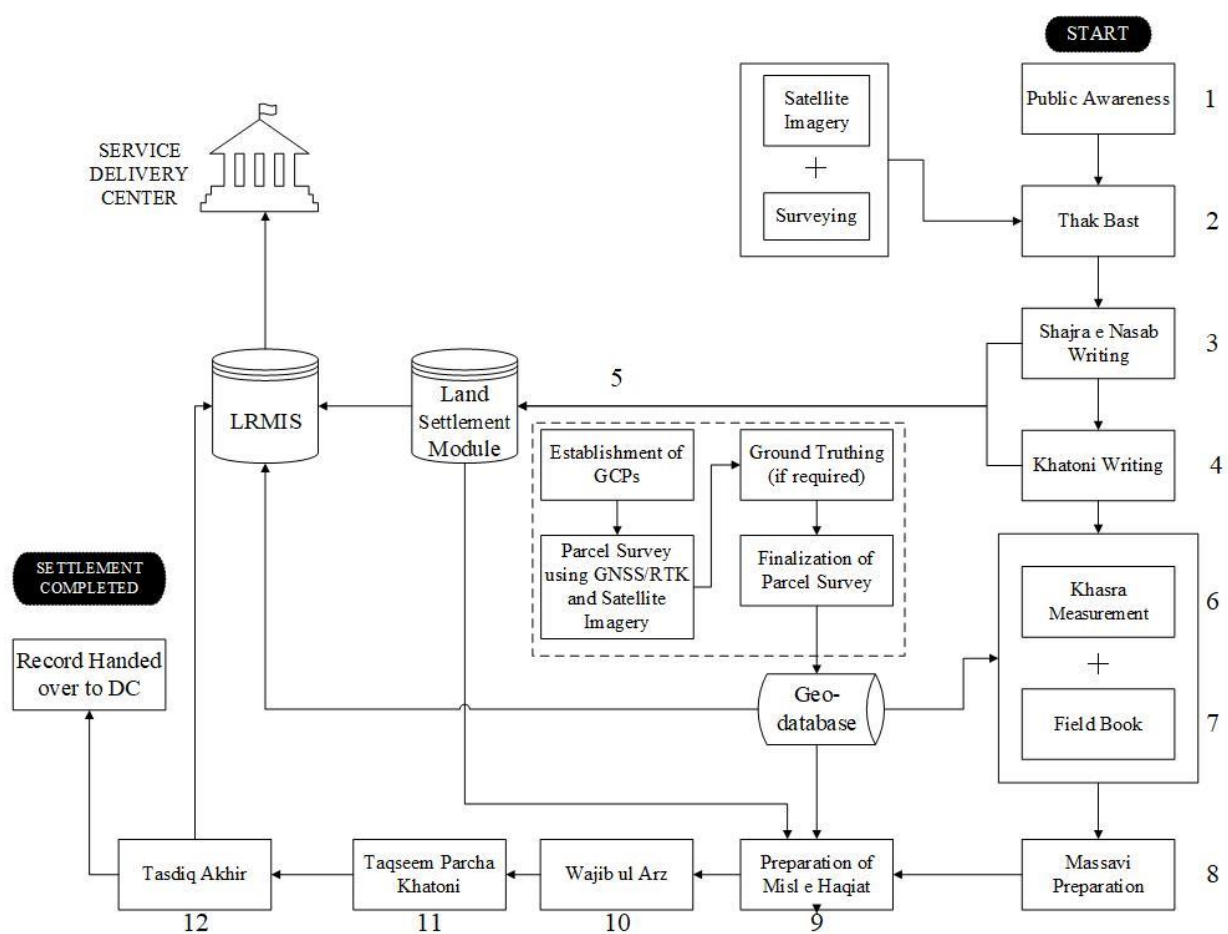

Figure 6: Settlement Methodology

1. *Public Awareness*

The department will initiate and coordinate mass awareness campaigns before the settlement process begins in each area separately. A range of tools and techniques will be developed to foster participation through elders and mass awareness campaigns. It will include posters and

leaflets, mass media campaigns (radio, television), mobile display/announcements, public meetings, using social media campaigns, and school/college class awareness with the help of local administration. Keeping in view the importance of the project, the awareness campaign will be focused to develop a clear perception, understanding, and familiarity of how the target masses will get benefits out of the settlement operation. Assistant Settlement Officer will be looking after and coordinating this activity.

Objectives of Public awareness campaign are:

- Establishing the fact that settlement operation and land record management information system will offer services that will advantage land owners.
- Familiarizing the audiences with the use, and ease of the system.
- Educating the target audience on how to use the offered Services.
- Minimizing resistance among the target audience against the change of operation.
- To ensure that awareness campaign is reached to the maximum audience.

Public support and understanding are essential to educate potential landowners and other stakeholders. The campaign would involve information about benefits and obligations of registering title transactions, title alterations and the risks associated with unregistered interests.

Reach: The mass awareness campaign will be launched through village-based meetings, print and electronic media and also by arranging sessions in school and colleges.

Printing: Special awareness poster will be printed for describing land settlement process step by step and will be shared with local community and stakeholders etc.

Frequency: The message reaching the audiences should be received more than once. This ensures attendance and improves recall.

2. *Thak Bast*

Thak Bast is the first practical step of settlement operation. It is the process of drawing a sketch of revenue estate or in other words we can say it is the process of determining boundary line of that revenue estate. It is precisely determined with the help of community elders and land owners.

Role of Technology: This process will be supported by GIS by printing high resolution satellite imagery on paper. These maps will be presented and discussed in the community to determine boundary line of that revenue estate. If the boundary line is a

natural feature like river, stream or hill/mountain or it's a manmade feature like road, canal etc. then physical survey may not be needed. But if the boundary line is within parcels and is not clear in satellite imagery then physical survey using advanced surveying equipment will be carried out.

In this process a number of staff will be involved. GIS Associate will be responsible to print satellite imagery on paper maps of that area on suitable scale. Tehsildar/Patwari will be responsible to determine the boundary line with the help of community and land owners while Surveyors will be responsible to survey that area if required. At the end GIS Associate will produce the final boundary of that revenue estate.

3. Chatta Shajra Nasb writing

Shajra Nasb writing (Pedigree/Family Tree) is the process of noting down list of all owners along with their ancestors. Owner list is written in the form of a tree through which relation between owners can be determined. It also provides the list of different tribes and clans residing in that area.

Writing Shajra Nasb is an ongoing process and it is usually not completed in a single sitting. It is completed towards record finalization stage. Shajra Nasb will be written by Patwari on prescribed form and that form will be handed over to Computer Operator.

Role of Technology: Computer Operator will scan the hand written Shajra e Nasb and will do data entry in settlement module of existing LRMIS software. Scanned record and data entry will be compared for verification purposes.

4. Khatooni Writing

Khatooni is the primary document to record information of cultivator of a piece of land. This information is collected for each and every parcel in a given revenue estate.

Role of Technology: Patwari will be responsible to write Khatooni in the field and then deliver it to respective Computer Operator. Computer Operator will scan it and will enter the data in exiting LRMIS software. At the completion of Khatooni writing, both the hand written and printed out records will be compared for verification and in case of any inconsistency, will be corrected at the field level.

5. Chanda Bandi/Establishment of Ground Control Points (GCPs)

In manual settlement process Chanda bandi is the process of setting base for measurement. In this process, points of equal distance are lay down in all over revenue estate. These points can

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be referred to as reference points. Khasra measurement is taken place using reference from these points and are used as a source of triangulation.

Role of Technology: In GIS based settlement Chanda Bandi will be replaced by using Ground Control Points (GCPs). GCPs are termed as permanent locations on ground which do not change over time. These points are very important for referencing location of land features. GCPs are usually established and managed by the National Surveying Agency i.e. Survey of Pakistan (SOP). SOP has already established network of GCPs/Benchmarks in all over Pakistan and they might be engaged to further increase the density of these points by traversing it, so that it may cover all the areas.

In revenue system "Seh Hada" which acts as GCP and are marked at the common/junction point of three Mouzas. A small rock is placed or cemented block is constructed at that point and its location is also marked on Massavi Map with a Red Dot. Seh Hada will also be referenced with GCPs of Survey of Pakistan.

6. *Khasra Measurement*

Khasra measurement is the most time taking process of manual settlement operation. In this process dimensions of each and every Khasra is measured.

Role of Technology: Khasra measurement will be done using GIS technology. A hybrid approach of both satellite imagery and surveying equipment will be used. Very High Resolution (VHR) satellite imagery will be used to digitize the entire area. As the settlement operation is going to take place mostly in hilly areas, it will be difficult to conduct survey in rough terrain, deep valleys and inaccessible areas. Such areas will be digitized and measured using VHR satellite imagery. Areas which are congested, will be surveyed using advanced surveying equipment.

In this process GIS Associates and Surveyors will play the vital role under the guidance of Assistant Manager GIS of each district. GIS Associates will be digitizing the areas while Surveyors will be doing ground survey where required.

7. *Field Book preparation*

Field Book is also one of the most important record regarding Khasra measurement. This record is prepared while measurement is ongoing. Each of the Khasra is given a unique ID and lengths of each dimension is noted down in it. Area of each Khasra is also determined in Field Book. Khatooni No. of each Khasra is also recorded.

Role of Technology: Using GIS based technology, Field Book preparation will be much easier. Measurement of each dimension of a Khasra will be determined from VHR satellite imagery or advanced survey equipment (as discussed in the previous step). Area of each Khasra will also be determined automatically. Only Khatooni No. will be recorded from the field by Patwari which will provide the basis for cross verification of the data. Field Book and Khatooni will be verified by relevant revenue staff after its completion.

8. *Massavi preparation*

Plotting of Massavi using manual methods requires very high degree of skills. In manual system, it is plotted using Plane Table technique which is obsolete now in this era of technology.

Role of Technology: All the Khasra measurements of a given revenue estate will be organized in the form of Massavi. This Massavi will have the same scale which is used for manual one i.e. 1inch = 40 Karam or 220 feet. It will also have the 4x4 grid each of 200x200 Karam. This grid will initially be extended from settled districts to avoid any inconsistency on the borders of its neighboring districts.
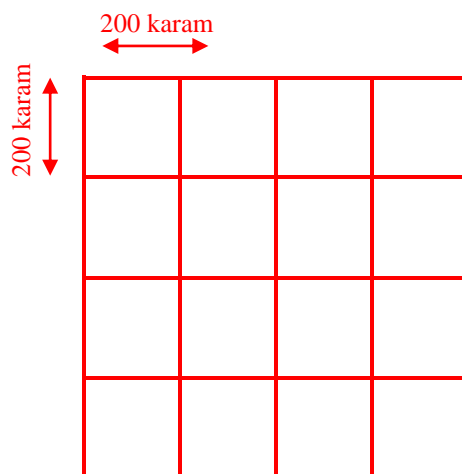
GIS Associates will be responsible to create these Massavis. Massavis will be verified on ground by concerned revenue officials before it is finalized.

9. *Writing of Misl e Haqiat*

Misl e Haqiat is the primary document and final deliverable for records of rights. It is the combination of multiple documents which is written at the end of settlement operation.

Role of Technology: As Misl e Haqiat is written from multiple documents like Shajra e Nasab, Khatooni and Field Book, it will be generated automatically from the land settlement module of existing LRMIS software. After it is generated, it will be handed over to revenue staff for verification.

Computer Operator will be responsible to generate it from the system.

10. Wajib ul Araz

Wajib ul Araz is the document of common lands, its customs, accessibility for different tribes/clans and distribution of resources. This document is written by Patwari of the concern revenue estate.

Role of Technology: Once Patwari is finished writing it, it will be handed over to Computer Operator to scan and incorporate it with Misl e Haqiat in to the system.

11. Taqseem Parcha Khatooni

Taqseem Parcha Khatooni is the process of distributing owner's land information to respective owners to find out if there is any discrepancy in the data.

Role of Technology: Parcha Khatooni of each owner will be generated from the system by Computer Operator on its prescribed format and will be distributed by concerned Patwari. In case of any issues reported by the owner will be corrected accordingly.

12. Tasdeeq Akhir

Tasdeeq Akhir is the final process of verification done by the Settlement Officer. All the required documents will be generated from the system which will be verified by respective SO. In case of any discrepancy found in data will be corrected accordingly.

After the completion of Tasdeeq Akhir, data will be handed over to District Administration and will be ready to get live on Service Delivery Center (SDC).

10.3.2 Re-settlement

There are a few pockets in Merged Areas (MAs) where settlement has previously been done like Kurram and North Waziristan. In these areas Re-settlement operation will be carried out which has a few different steps from Fresh Settlement process which are explained below. Figure 6 shows the methodology of Re-settlement process.
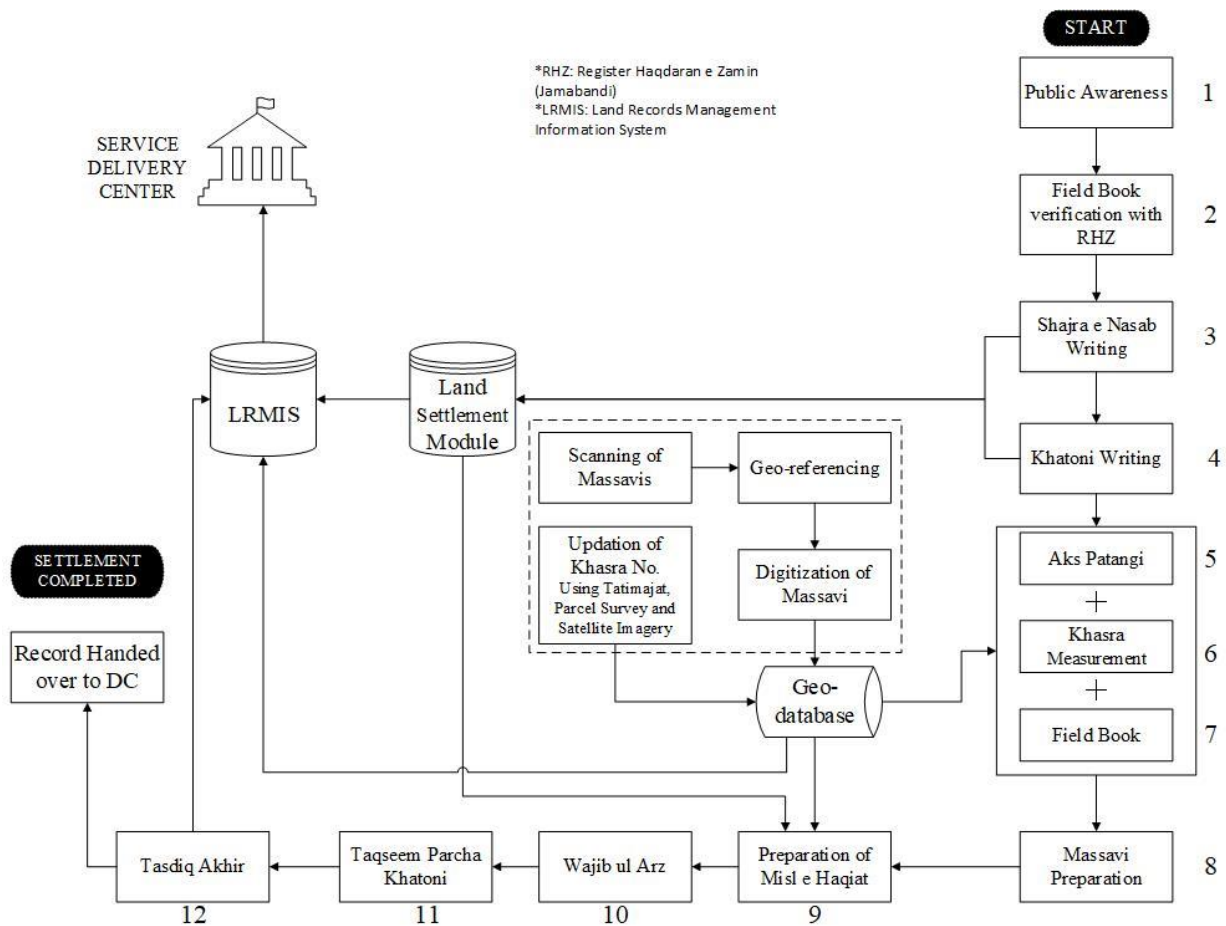
Figure 7: Re-settlement Methodology

1. Public Awareness

It has been explained under "Public Awareness" of section **10.3.1.**

2. Field Book verification with Jamabandi (Field Book ba Jamabandi)

This process involves cross verification of *Field Book* with latest *Jamabandi*. This activity is done by revenue official and it is a desk review.

3. Chatta Shajra Nasb writing

Details of "Chatta Shajra Nasb writing" are given in section 10.3.1. In Re-settlement the previous Shajra Nasab is updated.

4. Khatooni Writing

In Re-settlement process, Khatooni writing has the same process as of Fresh settlement only the previous Khatooni Number is added in the record. Khatooni writing is explained in section 10.3.1.

5. Aks Patangi

Aks Patangi is the process of photocopying original Massavi manually. This process is carried out by placing tracing paper on Massavi and draw each and every Khasra on it. Aks Patangi is then plotted on new sheet and then is updated in the field by Patwari.

> **Role of Technology:** This step will be skipped in GIS based land settlement as Massavis will be digitized from old ones. Once the digital copy is prepared, it can be printed as many times as required.

6. Khasra Measurement

Once the previous Massavi of a mouza is digitized, it will be printed out and the relevant Patwari will start updating it. Surveyor will conduct field surveys where required and the changes will be recorded accordingly including Khasra divisions, new features addition like roads, schools, health facilities and change in type of land.

> **Role of Technology:** In digital mode, the previous Massavis will be scanned, geo-referenced, digitized and then will be updated according to the ground situation. This updation will be done using satellite imagery and mostly by ground survey. Updated Massavis will be prepared by GIS Associates and will be shared with concern Revenue officials for verification.

7. Field Book preparation

Field Book will also be prepared in parallel with Khasra measurement. Details of Field Book preparation is already discussed in section 10.3.1.

8. Massavi preparation

Massavi preparation is also discussed in section 10.3.1.

9. Writing of Misl e Haqiat

Preparation of Misl e Haqiat is discussed in section 10.3.1

10. Wajib ul Araz

Writing of Wajib ul Araz is discussed in section 10.3.1.

11. Taqseem Parcha Khatooni

Taqseem Parcha Khatooni is discussed in section 10.3.1.

12. Tasdeeq Akhir

Tasdeeq Akhir is discussed in section 10.3.1.

After the completion of Tasdeeq Akhir, data will be handed over to District Administration and will be ready to get live on Service Delivery Center (SDC).

10.4 Data Management

Data management is the compilation and storage of both spatial and non-spatial. All the data collected from field during survey will be compiled at the Settlement Office, which will also be transported to Land Records Processing Unit (LRPU) through secure Virtual Private Network for safe storage as shown in below figure. The data collected from the field may consist of semi digitized data i.e. data in digital form collected through GPS/GNSS devices and manual/textual records. The semi digitized data will be cleaned and post processed after correction of necessary errors and removal of unwanted attributes. This data will be locally stored at each Settlement Office in a work station, which will be accessed by the survey teams and digitizers on a local area network (LAN) for local processing. The Settlement Office will provide all the data processing facilities along with necessary hardware for printing, scanning and sending the final data to LRPU. All the data transmission between the Settlement Offices and LRPU will be protected by firewall at LRPU and a Remote Ethernet Device (RED) connected to DSL to provide secure VPN over internet. The data from all the offices will be accumulated in LRPU and the backup copies of the same will also be created on a backup server. Figure 7 shows the data management and data flow between Settlement Offices and LRPU.
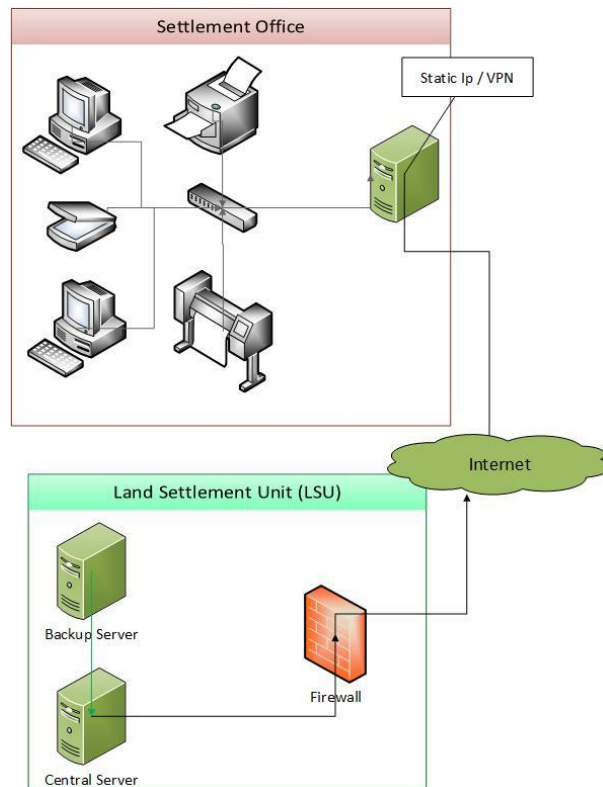
Figure 8: Data Management and Data Flow Diagram.

Survey data collected by surveyor will be handed over to GIS Associate and will be saved in a proper folder structure which is shown as below. This survey data will be post processed to remove errors and will be plotted on respective Massavi. Processed data will be updated in respective spatial database.

PROJECT WORK PLAN

Project work plan is as below.

ID	Task Mode	Task Name	Timeline
1		**Project Core Team Formation**	
2		Posting Transfer of Project Director	
3		Posting Transfer of Technical Staff	
4		Posting Transfer of Settlement Officers	
5		Orientation of newly posted staff on project activities.	
6		Project PC-I Review and common understanding of project objectives	
7		**Establishment of Project Offices**	
8		Establishment of Project Office (PO)	
9		Procurement of paraphernalia for PO	
10		**Establishment of Settlement Offices**	
11		Procurement of paraphernalia for Settlement Offices	
12		Construction of Service Delivery Centers (SDCs)	
13		Procurement / Acquisition of Land for SDCs	
14		Construction of building for SDCs	
15		Procurement of Furniture and Fixture.	
16		Mass Awareness Campaigns	
17		Preparation of Mass Awareness contents (Text, Audio, Videos etc.)	
18		Mass Awareness Activities	
19		Meetings with local community	
20		Procurement of Satellite Imagery	
21		Coordination with third party for permanent Ground Control Points.	
22		Establishment of ground control points for all Tehsils.	
23		Team Formation for Land Settlement Operation	
24		Training / Orientation of the field staff	
25		Development of field visits Plans	
26		Approval of field visits and Schedule by Settlement Officer	
27		**Execution of Field Operations of Land Record Settlement**	
28		Thak Bast	
29		Demarcation of Revenue Estate Boundaries	
30		Preparation of Shajra Nasab	

Legend:
Task		Project Summary	Manual Task	Start-only	Deadline
Split		Inactive Task	Duration-only	Finish-only	Progress
Milestone		Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress
Summary		Inactive Summary	Manual Summary	External Milestone	

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ID	Task Mode	Task Name	Gantt Chart
31		Writing of Shajra e Nasab	
32		Khatoni Writing	
33		Writing of Khatoni	
34		Khasra Measurement with the help of GNSS Survey Equipment	
35		Khasra Measurement of individual Khasra boundary	
36		Generation of field book	
37		Preparation of Field Book	
38		Preparation of Massavies	
39		Preparation of Massavi	
40		Preparation of Misl e Haqiat	
41		Preparation of Misl e Haqiat	
42		Preparation of Wajib ul Arz	
43		Monthly Status Review Meeting	
44		Taqseem Parcha Khatoni	
45		Taqseem Parcha Khatoni	
46		Tasdeeq Akhir	
47		Certificate of Completion	
48		Go Live	
49		Monitoring and Control	
50		Project Review Meeting (PRB) Meeting	
61		Monthly Status Review Meetings	
62		Bi-Weekly Review Meetings.	
63		Weekly updation of Progress on the M&C Dashboard for the KPI.	
64		Closeout	
65		Mauzas wise Completion Certificate by Settlement officer	
66		Handing over / taking over of all land settlement record by Settlement officer and District Administration.	
67		Live Services of Completed Services in Service Delivery Center.	
68		Update / Maintenance of the digital record.	
69		Formal Closure of project	
70		Release of project resources.	

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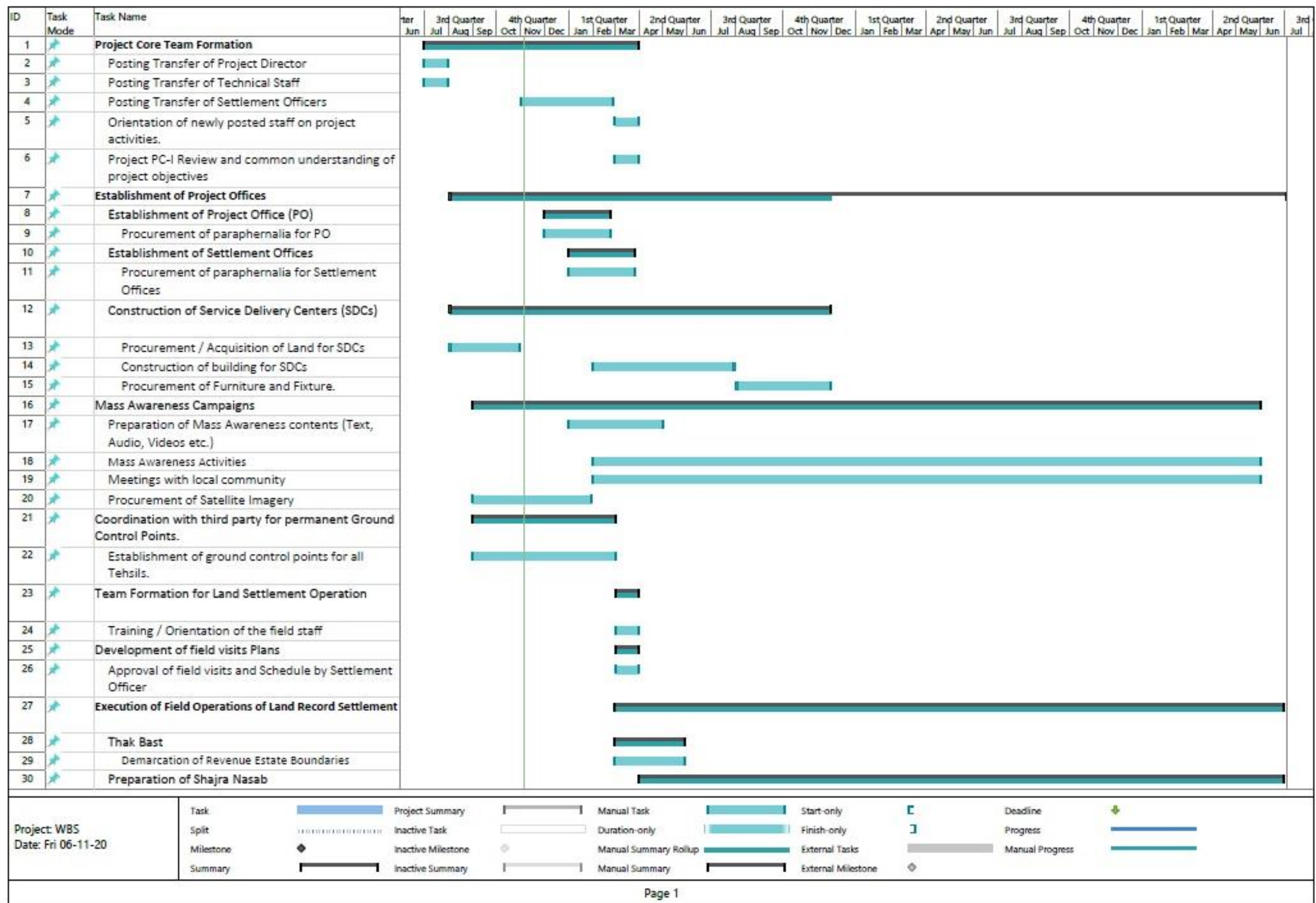| Task | | Project Summary | | Manual Task | | Start-only | | Deadline |
Split		Inactive Task		Duration-only		Finish-only		Progress
Milestone		Inactive Milestone		Manual Summary Rollup		External Tasks		Manual Progress
Summary		Inactive Summary		Manual Summary		External Milestone		

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Figure 9: Project Work plan

❖ In case of availability of additional resources, better level of accessibility of the local population and preparedness at the project and departmental level, the project can be initiated in other sub-divisions of the Merged Areas during this project life.

14. Project Benefit and Analysis:

Secure land tenancy and property rights are fundamental to shelter and livelihoods and serve as solid foundation for the realization of human rights and poverty reduction. It enables people in rural and urban areas to invest in improved livelihoods. Secure land rights are particularly important in helping reverse gender discrimination, social exclusion of vulnerable groups and wider social and economic inequalities linked to inequitable and insecure access to land. They also help to promote good environmental management, improve revenue collection, improve food security, and assist directly in the realization of human rights, including the elimination of discrimination against women, the vulnerable, indigenous groups and minorities. It is vital for good governance at all levels as it promotes transparency and accountability in its service delivery in unequivocal terms.

The project is to improve the land records service delivery of the Merged Areas of Khyber Pakhtunkhwa, contributing to long-lasting tenure security and more efficient functioning of land markets, and to establish a basis for comprehensive integration of information associated with rights in land. Parcel information is comprised of the documents, maps, attribute and attribute information that represent rights and interests in land. It includes ownership, legal description, location, and nature and extent of a particular piece of land. Parcel information plays an important role in the economic development of individuals and communities. Parcel information provides a public record of who owns what, where and how much.

Merged Areas needs secure, accessible and authoritative land information to build a successful cadastral system. The benefits of land information systems (cadastral and geographic information systems) are many and varied. In analyzing the benefits, it is best to look at urban and rural areas separately, both of which have economic, social and environmental benefits.

Economic Benefits:

▪ To reduce time and cost of transaction
▪ To utilize digital land records data mining for planning and taxation.

- System will support government, private, commercial and civil departments in land revenue, land titles, land holdings, land mortgage and land leasing.

Social Benefits:

- Public access to records through Service Deliver Centre (SDC's) and eventually, the internet via web for basic information.
- Increased access to land records at lower transaction cost for the beneficiary, through a client-responsive service.
- Increased level of tenancy security of land-right holders.
- Definite and secure transactions at mutation.
- Central maintenance of electronic land records and instantly update and backup in secure terminal.
- E-Pass Book and Computerize Fard, Jamabandi and Massavi.
- Efficient and easy searching facilities.
- Land transfer within in a one window operation.
- Get "FARD" instantly without any delays.

Environmental:

- Provide basis for integrated spatial decision support systems. (SDSS)
- Geospatial data created during the project will help in Environmental Impact Assessments (EIA)
- Will help in identification and demarcation of forests, mines and other features.

The overall benefits of modern technology in Land Administration is to design a land system, which will facilitate the land administration process such as:

Land Valuation

- Determining values, objectives and the legal framework in relation to management of land as a legal, economic, and physical object.
- Basis for building sound land administration infrastructures.

Cadastral Systems

- Identification of land parcels and securing land rights.
- Facilitate land registration, land valuation, and land-use control.
- Underpin Sound Land Administration

Land Administration Systems

- Administration of land tenure, land value, land-use, and land development.
- Facilitate efficient land markets and effective land-use management.
- Underpin Sound Land Management

Land Management

- Management of processes by which land resources are put into good effect.
- Facilitates economic, social, environmental sustainability.
- Underpins and implements sound Land Policies

Mode of Payment

All payments would be made through assignment account for quick and efficient disposal of disbursements. Assignment account is proposed by keeping in view the following points:

1. Project duration is three (03) years and it would require quick disbursements.
2. There are seven sub-divisions, and all the operations would be managed from one Project Office.
3. There are no procurements involved in this project as all the procurement will be done by USAID and Government would be supporting salaries and operational cost only.

Justification for Land Settlement Special Allowance

Manual procedure of Land Settlement Operations and land records creation is a very complex and time consuming activity, which is going on in District Chitral for the last two decades incurring more than 703 million cost. Utilizing the lessons learnt from settlement operations, Board of Revenue, Khyber Pakhtunkhwa for the first time in history of Pakistan is proposing to execute digital land settlement with latest surveying equipment having GNSS/RTK technology. The overall project methodology has been designed in such a way to maximum utilization of latest technology and Satellite Imagery thus reducing completion time by approximately six folds. The department has completed a dry run of the proposed methodology in a sample Mouza in District Malakand as a pilot with outstanding results having accuracy up to centimeters in Khasra measurement.

The Project needs multi-dimensional Professionals having sound understanding of the latest technology and settlement methodology to execute the project activities in hard and far-flung areas of Merged Areas having volatile law and order situations. In order to attract good human resource and keep them motivated "Land Settlement Special Allowance" is proposed in addition to the project salary on the analogy of Independent Monitoring Unit (IMU) and Performance Monitoring and Reform Unit (PMRU). The overall financial implications of the proposed allowance for seven Settlement Offices and Land Settlement Unit for complete project life (3-Years) is **58.32 million**. Justification for each post is given as below.

S#	Role / Designation	Justification
1	Project Director	The GIS based settlement is out of the box and innovative solution never done in Pakistan before. The project is specialized, unique and significant for Government, donor partner as well as general public to create GIS based settlement records including accurate measurement using GNSS / RTK technology and Satellite Imagery. UNDP proposed salary @ 600,000 per month whereas, this project proposes **'Land Settlement Special Allowance'** @ 160,000 per month in addition to his own salary to attract qualified, professional and experienced officer as per Project Policy.

2	Sr. Manager Operations	The project needs a seasoned officer in the capacity of Sr. Manager Operations having unique multidimensional and multi-sectorial experience to manage the operations of GIS based land settlement project encompassing Planning, Audit & Accounts and Mass Awareness. The said post with specialized knowledge of land settlement and project operations management have high market demand. This project proposes **'Land Settlement Special Allowance'** @ 140,000 per month in addition to his own salary to attract qualified, professional and experienced officer as per Project Policy.
3	Sr. Manager Technical	Designing, developing and installation of centralized Land Records Management Information System (CLRMIS) and ICT Infrastructure for Land Record Processing Unit, needs the services of a senior technical veteran having expertise in similar nature work. The job nature of Sr. Manager Technical is extremely technical, specialized, unique and having very high market value. UNDP proposed salary @ 550,000 per month for similar nature post whereas, this project proposes **'Land Settlement Special Allowance'** @ 140,000 per month in addition to his own salary to attract qualified, professional and experienced officer as per Project Policy.
4	Sr. Manager GIS	GIS is the major operational component of the project which needs a GIS specialist having practical expertise in the use of satellite imagery, GNSS / RTK technology based survey for creation of digitized Massavis (cadastral maps). The expertise in this specialized field are very rare and have very high market value in Pakistan as well as abroad. UNDP

		proposed salary @ 550,000 per month whereas, this project proposes **'Land Settlement Special Allowance'** @ 140,000 per month in addition to his own salary to attract qualified, professional and experienced officer as per Project Policy.
5	Manager Networks	The deployment of state of the art IT infrastructure in Land Records Processing Unit (LRPU) needs a dynamic, passionate and market oriented IT Infrastructure specialist. The market value of IT Professional with such expertise is approximately 250K to 300K. This project proposes **'Settlement Special Allowance'** @ 100,000 per month in addition to his own salary to attract qualified, professional and experienced officer as per Project Policy.
6	Manager Database	The designing, deployment and maintenance of Centralized Land Records Management Information System is a very complex and specialized task, which needs expertise in database as well as Revenue domain. A manager database without expertise in Revenue domain cannot comprehend the complexities involved in the old and manual records of Patwari. Such specialty is very rare and have high demand in market. The market value of IT Professional with such expertise is approximately 250K to 300K. This project proposes **'Land Settlement Special Allowance'** @ 100,000 per month in addition to his own salary to attract qualified, professional and experienced officer as per Project Policy.
7	Senior Planning Officer	Detailed and comprehensive planning is the guarantee for successful project completion. Planning and executing Land records settlement project in merged areas is a very challenging job and needs a dynamic

		and market oriented professional having proficiency in planning, scheduling, budgeting, execution, monitoring and risk management. Such multi-dimensional officers need good compensation to keep them motivated. This project proposes **'Land Settlement Special Allowance'** @ 100,000 per month in addition to his own salary to attract qualified experienced officer as per Project Policy.
8	Account Officer	Sound communication/correspondence between Finance Department, Accountant General office and Project offices is the guarantee for smooth operations of the project. A competent and dynamic AO is required to pursue the project cases at finance for timely releases and AG office for timely expenditure. This will ensure timely expenditure and progress in the project. Therefore, this project proposes **'Land Settlement Special Allowance'** @ 70,000 per month in addition to his own salary to attract qualified and experienced officer as per Project Policy.
9	Assistant Settlement Officer.	Assistant Settlement officer (ASO) is the in charge of settlement operations in each district, who has to mobilize Tehsildars, Girdawars, Patwaris, Surveyors, AM GIS and AM Database for field activities. He also has to monitor and supervise the field staff progress. A revenue knowing officer, who have sound understanding of settlement operations and project management can ensure timely completion of the project. The ASO has a specialized nature job in the hard and remote areas of MAs and therefore this project proposes **'Land Settlement Special Allowance'** @ 100,000 per month in addition to his own salary to attract qualified, professional and experienced officer as per Project Policy.

15. **Certified that the project proposal has been prepared on the basis of instructions provided by the Planning Commission for the preparation of PC-I for Social Sector projects.**

Prepared by:

_____

Aftab Ahmad
Deputy Director (GIS)
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_____

Junaid
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_____

Wasif Rehman
Project Director

Recommended by:

_____

Amir Sultan Tareen
Secretary
Planning & Development Department
Government of Khyber Pakhtunkhwa

ANNEXURES

		SUMMARY OF OVERALL BUDGET			
S.No.	Office	Heads	Cost (millions PKR)	Office Units	Total Cost
1	Land Settlement Unit (LSU)	Salary - Human Resource	109.89	1	109.89
		Operational Cost	288.702	1	288.70
		Purchase of Motor bike	0.1	1	0.10
		Satellite Imagery	100	1	100.00
		Survey of sensitive areas	30	1	30.00
	Sub-Total		**528.69**		**528.69**
2	Headquarters Settlement Office (HQ SO)	Salary - Human Resource	654.158	1	654.16
		Operational Cost	0	1	-
	Sub-Total		**654.158**		**654.16**
3	Service Delivery Center (SDC)	Salary - Human Resource	-	1	-
		Operational Cost	50.25	1	50.25
		Land Cost	35	1	35.00
	Sub-Total		**85.25**		**85.25**
	Grand Total		**1,268.10**		**1,268.10**

	COST ESTIMATATION OF LAND SETTLEMENT UNIT (LSU)								

A - Human Resource of LSU

S.No.	Designation	BPS	Approved PC-I			Expenditure	Revised PC-I		
			No. of Posts	Salary Package	Total Salary		No. of Posts	Salary Package	Total Salary
Project Staff to be transferred on deputation basis									
1	Project Director	19	1	175,000	6,620,000	-	1	175,000	6,621,000
2	Senior Manager (Operations)	19	1	175,000	6,620,000	-	1	175,000	6,621,000
3	Senior Manager (Technical)	19	1	175,000	6,620,000	-	1	175,000	6,621,000
4	Senior Manager (GIS)	19	1	175,000	6,620,000	-	1	175,000	6,621,000
5	Manager Database	18	1	125,000	4,729,000	-	1	125,000	4,729,000
6	Manager Networks	18	1	125,000	4,729,000	-	1	125,000	4,729,000
7	Senior Planning Officer	17/18	1	125,000	4,729,000	-	1	125,000	4,729,000
8	Account Officer	17	1	90,000	3,405,000	-	1	90,000	3,405,000
	Sub-Total		**8**		**44,072,000**		**8**		**44,076,000**
Project Staff to be hired on initial recruitment									
9	Assistant Manager (Database)	17	1	90,000	3,405,000	-	1	90,000	3,405,000
10	Assistant Manager (GIS)	17	1	90,000	3,405,000	-	1	90,000	3,405,000
11	GIS Associate	SPP	1	90,000	3,405,000	-	1	90,000	3,405,000
12	Network Support Engineer	SPP	1	90,000	3,405,000	-	1	90,000	3,405,000
13	Accountant	16	1	60,000	2,268,000	-	1	60,000	2,270,000
14	Assistant	16	1	60,000	2,268,000	-	3	60,000	6,810,000
15	Computer Operator	16	2	60,000	4,536,000	-	2	60,000	4,540,000
16	Driver	6	4	20,000	3,024,000	-	7	20,000	5,297,000
17	Naib Qasid/Office Boy	3	4	16,000	2,419,000	-	4	16,000	2,422,000
18	Sweeper	3	2	16,000	1,210,000	-	2	16,000	1,211,000
	Sub-Total		**18**		**29,345,000**	**-**	**23**		**36,170,000**
	Total (A)		**26**		**73,417,000**	**-**	**31**		**80,246,000**

B - Internship Program

			Approved PC-I			Expenditure	Revised PC-I		
1	Internees	Fixed Pay	10	25,000	9,000,000	-	10	25,000	9,000,000
	Total (B)		**10**		**9,000,000**	**-**	**10**		**9,000,000**

C - Land Settlement Special Allowance

			Approved PC-I				Revised PC-I		
S.No.	Description	Special Allowance	No. of Posts	Total of Special Allowance	Total of All Years	Expenditure	No. of Posts	Total of Special Allowance	Total of All Years
1	Land Settlement Special Allowance (PD)	88,815	1	88,815	3,198,000	-	1	88,815	3,198,000
2	Land Settlement Special Allowance (SMs)	88,815	3	266,445	9,593,000	-	3	88,815	9,593,000
3	Land Settlement Special Allowance (Manager DB, Manager N/W, SPO)	57,525	3	172,575	6,213,000	-	3	57,525	6,213,000
4	Land Settlement Special Allowance (AO)	45,555	1	45,555	1,640,000	-	1	45,555	1,640,000
	Total (C)		**8**		**20,644,000**	**-**	**8**		**20,644,000**
	Total HR Cost (A+B+C)				**103,061,000**	**-**			**109,890,000**

S.No.	Item Name	Approved PC-I			Expenditure	Revised PC-I		
	Operational Cost	No. of Units	Unit Rate	Total Cost		No. of Units	Unit Rate	Total Cost
1	Utility Bills, postage and courier (for 8 offices)	1	50,350	2,000,000	-	1	600,000	23,832,000
2	Office Rent (for 8 offices)		400,000	-	-	1	1,100,000	43,692,000
3	Internet Service (for 8 offices)	1	100,700	4,000,000	-	1	210,000	8,342,000
4	Stationery, Plotter Roller A0, A2 size - A4-A3 (for 8 offices)	1	20,000	794,000	-	1	160,000	6,356,000
5	Printers/Plotter Toners, etc. (for 8 offices)	1	20,000	794,000	-	1	195,000	7,746,000
6	Printing and Publication (for 8 offices)	1	10,000	397,000	-	1	45,000	1,788,000
7	Newspaper & Periodicals and Books (for 8 offices)	1	7,000	278,000	-	1	28,000	1,113,000
8	Repair and Maintenance Transport (for 8 offices)	1	32,730	1,300,000	-	1	320,000	12,711,000
9	Generator, Machinery and equipment repair (for 8 offices)	1	12,600	500,000	-	1	160,000	6,356,000
10	Furniture and fixture repair (for 8 offices)	1	7,000	278,000	-	1	25,000	993,000
11	Registration of all vehicles (for 8 offices)	1	1,000,000	1,000,000	-	1	1,000,000	1,000,000
12	POL Charges	12	37,765	18,000,000	-	46	44,879	82,000,000
13	POL Charges Generator						80,000	-
14	Rented Vehicles					21	70,000	58,389,000
15	Travelling allowance (for 8 offices)	1	88,120	3,500,000	-	1	629,400	25,000,000
16	Services of security company for two guards (for LSU only)	2	30,000	2,383,000	-	2	30,000	2,384,000
17	Advertisement				-	1	1,000,000	1,000,000
18	Office Renovation/Maintenance				-	1	1,000,000	1,000,000
19	Miscellaneous (for 8 offices)	1	20,150	800,000	310,000	1	125,860	5,000,000
	Total Operational Cost			36,024,000	310,000			288,702,000

Logistic Support								
		Approved PC-I			**Expenditure**	**Revised PC-I**		
S.No.	Description	No. of Units	Unit Rate	Total Cost		No. of Units	Unit Rate	Total Cost
1	Motor bike 70 cc for rider	1	100,000	100,000	-	1	100,000	100,000
	Total Cost of Logistic Support	**1**		**100,000**	**-**	**1**		**100,000**

Sub Total of Government Supported Component	**139,185,000**	**310,000**			**398,692,000**

139.19	*398.69*
130.00	*130.00*
269.19	*528.69*
(in millions)	*(in millions)*

	Cost Estimation for Settlement Office							
Human Resource (Settlement Office)								
S.No.	Designation	BPS	No. of Posts	Salary Package	Year 1 Total	Year 2 Total	Year 3 Total	Total of All Years
Project Staff to be transferred on deputation basis								
1	Settlement Officer	18	6	-	-	-	-	-
2	Assistant Settlement Officer	18	6	125,000	9,000,000	9,450,000	9,922,500	28,373,000
	Sub-Total		**12**		**9,000,000**	**9,450,000**	**9,923,000**	**28,373,000**
Project Staff to be hired on initial recruitment								
3	Assistant Manager (GIS)	17	7	90,000	7,560,000	7,938,000	8,334,900	23,833,000
4	Tehsildar (Rtd.)	SPP	7	90,000	7,560,000	7,938,000	8,334,900	23,833,000
5	GIS Associate	SPP	21	90,000	22,680,000	23,814,000	25,004,700	71,499,000
6	Computer Operator	16	21	60,000	15,120,000	15,876,000	16,632,000	47,628,000
7	Accountant/Assistant	16	7	60,000	5,040,000	5,292,000	5,544,000	15,876,000
8	Girdawar	SPP	21	60,000	15,120,000	15,876,000	16,632,000	47,628,000
9	Surveyor	SPP	42	60,000	30,240,000	31,752,000	33,264,000	95,256,000
10	Patwari	SPP	105	60,000	75,600,000	79,380,000	83,160,000	238,140,000
11	Driver	6	6	20,000	1,440,000	1,512,000	1,584,000	4,536,000
12	Survey Helper	3	42	16,000	8,064,000	8,467,200	8,870,400	25,402,000
13	Chowkidar	3	14	16,000	2,688,000	2,856,000	3,024,000	8,568,000
14	Sweeper	3	7	16,000	1,344,000	1,428,000	1,512,000	4,284,000
15	Naib Qasid	3	7	16,000	1,344,000	1,428,000	1,512,000	4,284,000
	Sub-Total		**307**		**193,800,000**	**203,557,000**	**213,409,000**	**610,767,000**
	Total (A)		**319**		**202,800,000**	**213,007,000**	**223,332,000**	**639,140,000**

S.No.	Description	Special Allowance	No. of Posts	Total of Special Allowance	Year 1 Total	Year 2 Total	Year 3 Total	Total of 4 Years
B - Land Settlement Special Allowance								
1	Additional Charge Allowance (20% of basic pay - maximum 12,000)	12,000	6	72,000	864,000	864,000	864,000	2,592,000
2	Land Settlement Special Allowance (ASO)	57,525	6	345,150	4,141,800	4,141,800	4,141,800	12,426,000
Sub Total (B)			**6**		**4,141,800**	**4,141,800**	**4,141,800**	**15,018,000**
Total HR Cost (A+B)					**206,941,800**	**217,148,800**	**227,473,800**	**654,158,000**
Total of Government Supported Component					**206,941,800**	**217,148,800**	**227,473,800**	**654,158,000**

Government Component	*654.16*
	(in millions PKR)

Cost Estimation for Service Delivery Center (SDC)

Human Resource

S.No.	Designation of Officers	BPS	No. of Posts	Year 2 Total	Year 3 Total	Total of all Years
1	Deputy Director Database	18	3			-
2	Assistant Director GIS	17	3			-
3	Assistant	16	7			-
4	Service Delivery Official	16	70			-
5	GIS Associates	16	7			-
6	Driver	6	10			-
7	Naib Qasid	3	28			-
8	Chowkidar	3	14			-
9	Sweeper	3	7			-
	Total		**149**			-

Note: This staff will be hired on regular basis.

Operational Cost

S.No.	Item Name	No. of Units	Unit Rate	Year 2 Total	Year 3 Total	Total of all Years
1	Rent of Office building	7	100,000	8,400,000	9,240,000	17,640,000
2	Utility Bills	7	30,000	2,520,000	2,772,000	5,292,000
3	Internet Service	7	15,870	1,333,080	1,466,388	2,799,000
4	Stationery, Plotter Rollers, Toners	7	15,870	1,333,080	1,466,388	2,799,000
5	Printing and Publication	7	7,950	667,800	734,580	1,402,000
6	Newspaper & Periodicals and Books	7	3,000	252,000	277,200	529,000
7	Repair and Maintenance transport / Generator	17	2,640	538,560	592,416	1,131,000
8	Furniture and fixture repair	7	3,950	331,800	364,980	697,000
9	Vehicle Registration both vehicles	7	200,000	1,400,000		1,400,000
10	POL Charges Vehicle and Generator	10	56,220	6,746,400	7,421,040	14,167,000
11	Repair of Equipment	7	3,950	331,800	364,980	697,000

12	Postage/Courier charges	7	3,950	331,800	364,980	697,000
13	Others	7	5,670	476,280	523,908	1,000,000
Total Operational Cost				**24,662,600**	**25,588,860**	**50,250,000**

Total of Government Supported Component			**24,662,600**	**25,588,860**	**50,250,000**

Government Component	*50.25*
SDC Land Cost	*35.00*
	85.25
	(in millions PKR)

The following positions will be created on regular basis for Service Delivery Centers.

Table 8: List of positions to be created on permanent basis in SDC.

S.No.	Designation of Officers	BPS	No. of Posts
1	Deputy Director Database	18	3
2	Assistant Director GIS	17	3
3	Assistant	16	7
4	Service Delivery Official	16	70
5	GIS Associates	16	7
6	Driver	6	10
7	Naib Qasid	3	28
8	Chowkidar	3	14
9	Sweeper	3	5
Total			**149**

USAID has confirmed to provide assistance of 15 million USD (app. 2,325 million PKR) for this project. This assistance will be provided in kind and the department has decided to spend it on the procurement of Centralized Land Records Management Information System (CLRMIS), procurement of all GIS and IT equipment, construction of required buildings and capacity building of the staff. Summary of these components are given as below:

Table 9: Summary of Components supported by USAID

Item Name	Description
Hardware	Hardware includes GIS and IT equipment for LSU, 7 Settlement Offices and 7 Service Delivery Centers
Licensed Software	It includes required software for GIS and IT.
Furniture, Fixture, Renovation	It includes renovation and procurement of furniture for LSU and all of the office.
Logistics	Procurement of all required vehicles and backup generators.
Establishment of Land Records Processing Unit (LRPU)	Procurement of required hardware and software to establish LRPU.
Construction of Land Records Complex (LRC)	LRC will provide permanent office space for the staff and establishment of LRPU.
Procurement of Centralized Land Records Information Management System (CLRMIS)	CLRMIS is the new proposed system for land transaction in SDCs.
Media & Mass Awareness	Local population will require awareness campaigns for Land Settlement operation.
SDC Construction	SDC buildings will also be constructed from USAID funding.
Individual Technical Consultants	In case of consultants requirement e.g. Legal firms, communication specialist etc.
Trainings/Workshops/Seminars/Certification	All the trainings and capacity building programs

The above mentioned components will be governed and managed by USAID or its implementing partner. All the procurements and construction will be done by USAID with close coordination of the department. Detail list of these items are mentioned in below table.

Details of components supported by USAID						
Components	**LSU**	**HQ SO**	**SO**	**HQ SDC**	**SDC**	**Total No.**
Construction						
Construction of Building					3	4	7
Construction of Land Records Complex	1					1
Sub Total	**1**	**-**	**-**	**3**	**4**	**8**
Furniture & Fixture						
Purchase of Furniture and fixture	1	6	1	3	4	15
Renovation of GIS Lab	1					1
Renovation of Multipurpose Training Hall	1					1
Sub Total	**3**	**6**	**1**	**3**	**4**	**17**
IT/GIS Equipment						
A0 size Plotter	2	6	1	3	4	16
A0/A1 size Scanner	2					2
A3 Printer	4	6	1	3	4	18
Advanced Aerial Surveying platform	1					1
Biometric Scanner/Thumb scanner				30	40	70
Desktop	95	60	9	36	48	248
Dual side ID Card printer	1					1
External HD	8	30	5	15	20	78
GIS - Base Device (DGPS + GNSS)	7	18	3	3	4	35
GIS - Data Collector Large Screen	14	36	6	3	4	63
GIS - External Radio	7	18	3	3	4	35
GIS - Rover Device	14	36	6	3	4	63
Laptop	16	12	2	6	4	40
LaserJet light duty printer	10	12	2	12	16	52
Legal size paper scanner	1	6	1	6	8	22
MFP Photocopier	3	6	1	3	4	17
Tablet Device (Android & iOS)	2					2
Workstation Computer		6	1			7
Sub Total	**187**	**252**	**41**	**126**	**164**	**770**

Licensed Software						
3D Mapping Software	1					1
Antivirus/security software		6	1	3	4	14
ERDAS Imagine	1					1
ESRI GIS Server Enterprise Solution	1					1
Microsoft 365 license	1					1
Other software's	1					1
Software for survey data post processing	1	6	1	3	4	15
Sub Total	**6**	**12**	**2**	**6**	**8**	**34**
Office Equipment						
Air Conditioner	24	36	6	21	28	115
Backup Generator	1	6	1	3	4	15
DSLR Camera	1	6	1	3	4	15
Electric Blower	2					2
Fax machine		6	1	3	4	14
Multimedia system and projector	2					2
Que Management System with Display LED panels				3		3
Que Management System with Display LED pannels					4	4
Security CCTV System		6	1	3	4	14
Telephone Mini Exchange	1			3	4	8
Telephone Sets	15			18	24	57
TV Screen	8	12	2	6	8	36
UPS/Solar Backup system	1	6	1	3	4	15
Vacuum Cleaner Heavy Duty	2					2
Sub Total	**57**	**78**	**13**	**66**	**88**	**302**

JOB DESCRIPTIONS

Project Director (PD) Job Description:

- The Project Director is responsible for overall management of the project including liaison with the donor, coordinating and leading partners, supervising members of the project team, and overseeing project implementation, financial and administrative oversight, reporting, monitoring and evaluation of the project.

- Responsible to support and facilitate hiring of Project Staff and their capacity building.

- Responsible of implementation of project plans with coordination of Senior Managers (LSU) and Assistant Settlement Officers.

- Responsible to communicate team status, task accomplishment, and ensure right direction of field survey process in coordination with Assistant Settlement Officer.

- Oversees development of a monitoring and evaluation plan for the successive phases of the project to capture project performance and results.

- Responsible to prepare plan and methodology before the implementation of the media mass awareness campaign in the merged areas of KP.

- Coordination with the Departments in provision of Fresh Settlements and Land Revenue Record where available for Scanning, Data Entry and Updation

- Assist and feedback the project key teams for deliverables of Services during land project.

- Coordination with BOR officials for the existing Land Computerization Software officially placed in LSU of merged areas.

- To act as Chairman for the Scrutiny of Purchase Committees for procurement of the hardware/software and equipment's, etc. for the Land Project.

- Ensures the project produces the specified results in the annual work plan(s) to the required standard of quality and within the timeline and budget parameters.

- Oversees budget pipeline development and budget monitoring.

- Responsible to solve day to day issues, grievances with Govt. departments or District Administration or line agencies or public for smoothly running project.

- To assist Account Officer and verify the bills/vouchers submitted of any cost deliverables.

- To act as drawing and disbursing officer (DDO) of the Project funds.

- Responsible of monthly, quarterly and yearly progress reports to Govt. Officials and Donors.

- Responsible of project presentation to Project Review Board, SMBR/DLR and Donors about Land Settlement progress and updates, etc.

Senior Manager Operation Job Description

- Leading supervision role for Planning, Audit, Accounts, Finance and Procurement staff.

- Provide high level advice to the Project Director on strategic planning and risk management, procurement planning and continuous quality improvement.

- Undertake the development, implementation, monitoring and quarter progress reports of the Operations Plan to meet the strategic goals and interests of the Project.

- Overseeing all accounts, ledgers, and reporting systems ensuring compliance with AG and Finance.

- Prepare and administer annual audit plan.

- Guide and direct project team members to ensure compliance with set standards, procedures, and guidelines

- Ensure availability of financial, material and human resources required to successfully complete a project.

- Responsible to assist in hiring the project staff at Land Settlement Unit, Settlement Offices and Service Delivery Center's for land project.

- Assist Project Director during procurement team for the preparation of final list of land survey equipment's and hardware/software for project initiative.

- Evaluate the progress of a project to detect limitations or faults in order to seek solutions to a more efficient process.

- Manage all governance arrangements of the Project Review Board.

- Perform any task assigned by the competent authority.

Senior Manager Technical Job Description

- Leading supervision role for the technical team of software development and IT infrastructure staff including LSU, Settlement Offices and SDCs.

- Responsible for Land settlement project implementation tasks with the coordination of Project Director and Assistant Settlement Officer in the light of land prospective.

- Provide technical support to LSU staff for the designing and development of the centralize database for land settlements.

- Assist PD and project team for the development of standard operating procedures (SOPs) for IT related work flows.

- Responsible to assist in hiring the technical staff at LSU, DMU and SDC's for land project.

- Assist Project Director during procurement team for the preparation of final list of land survey equipment and hardware/software for project initiative.

- Supervision of designing and development of the Web Interactive Dashboard for day to day field survey progress.

- Supervision and monitoring of where available existing land records data conversion from manual to digital system.

- Close coordination with Manager Database for the integrated of the MIS and GIS system spatial module.

- Perform any task assigned by the competent authority.

Senior Manager GIS Job Description

- Leading role for all GIS related activities including survey of Revenue Estates and Parcel boundaries.

- Responsible to manage technical teams of GIS and Survey.

- Provide technical support regarding GNSS survey equipment.

- Supervise field survey planning, data management and ensure quality assurance.

- Develop and maintain centralized web-based interactive dashboard for progress monitoring of the project.

- Provide technical role in translating GIS processes to revenue officials and vice versa.

- Develop and implement standard operating procedures (SOP) for GIS survey, GIS products produced, data management and data flow.

- Work closely with application developer / third party in developing GIS Module for Centralized Land Record Management Information System (CLRMIS).

- Provide technical input and facilitate in procurement of Satellite Imagery.

- Provide support on the use of Satellite Imagery.

- Supervise and strengthen the GIS skills of the field technical and survey teams.

- Perform any task assigned by the competent authority.

Manager Database Job Description

- Responsible of all Database related tasks like design, management and backup.
- Work under the supervision of Senior Manager Technical and close coordination with Application Developer.
- Responsible for managing and maintaining a Land records of data, data collection through field surveys of land owners, Analyzing the Data and Data storage.
- Responsible of Land Records Database and recovery backup plan of data
- Coordination with application developer to ensure the Land software customization for Land project
- Responsible of creating user manuals for LRMIS
- Conduct training sessions to users on LRMIS
- Perform any task assigned by the competent authority.

Manager Networks Job Description

- Responsible to manage Land Record Processing Unit and support in its design and implementation.
- Plan, design and help the networking team in establishing a network knowing the requirements of the organization/Project.
- Design specifications for establishing security in the networks and protecting vulnerable database.
- Plan the budget for network, recommend proper software and hardware such as routers, hubs, hard disks, wires, etc., for networking understanding the type and use of the network.
- Troubleshoot any kind of hardware and software problems at the end users site and make sure that there is no problem in accessing any resource for the users.
- Update the systems regularly with antivirus, firewall and spyware and protect any kind of viruses and breakdowns in the network.
- Maintain remote monitoring systems and keep a track of the use of resources provide to the employees and the end users
- Developing a backup/disaster recovery plan for a network emergency.
- Training network staff to provide support to end users.
- Perform any task assigned by the competent authority.

Senior Planning Officer (SPO) Job Description

- Responsible to manage planning section of the project.
- Design project monitoring templates for recording progress of the project.
- Coordination with Planning & Development Department and Finance Department.
- Regular monitoring of the project activities including construction of SDCs and procurement of equipment.
- Organize training and capacity building events including workshops, trainings, seminars etc.
- Work closely with Accounts officer to effectively manage budget.
- Perform any task assigned by the competent authority.

Account officer Job Description:

- Responsible to Maintaining all the accounts and account books of the project in accordance with Govt. rules and procedures.
- Coordination and communicate with Project Director (PD) in accounting and financial matters of the Land project.
- To assist Project Director (PD) and verify the bills/vouchers submitted of any cost deliverables.
- Preparing the accounting reports and submission thereof to all the concerned quarters on time.
- Preparing the payrolls, bank invoices, in the holding tax returns and other statements on time
- Reconciliation of payments and expenditure with Bank, Treasury Office, AG Office and Donor Agencies
- Preparation of vouchers relating to payments and keeping them in orderly manner
- Responsible of Land Project all administrative activities, logistic, procurement and salary etc.
- Preparing daily, monthly, quarterly and annual accounts and reports on time.
- Perform any task assigned by the competent authority.

Assistant Manager GIS (LSU) Job Description

- Assist Senior Manager GIS in managing GIS related activities of all settlement operations.

- Provide assistance in developing Standard Operating Procedures (SOPs) for GIS related activities, data and GIS products.

- Ensure data completion along with maintenance of metadata at the LSU level.

- Ensure GIS data management and data quality of all collected data from the field.

- Provide assistance in managing Satellite Imagery.

- Provide assistance in developing and implementing field plans.

- Responsible to maintain central Geodatabase of the project.

- Ensure data verification by overlaying on Satellite Imagery.

- Responsible of the Geospatial data security and backup plan.

- Perform any task assigned by the Senior Manager GIS.

Assistant Manager Database Job Description

- Assist Manager Database in managing database related tasks.

- Work under the supervision of Manager Database and close coordination with Computer Operators.

- Assist in arranging training for Computer Operators

- Support Settlement Offices in capacity building and troubleshooting.

- Responsible for managing and maintaining a Land records of data, data collection through field surveys of land owners, Analyzing the Data and Data storage.

- Responsible of Land Records Database and recovery backup plan of data

- Coordination with application developer to ensure the Land software customization for Land project

- Responsible of creating user manuals for LRMIS

- Conduct training sessions to users on LRMIS

- Perform any task assigned by the competent authority.

Network Support Engineer Job Description

- Assists with establishing networking environment by installing, configuring, testing and documenting the equipment/network systems according to the design and specifications.

- Assists with day-to-day networking tasks to ensure network reliability, availability and serviceability within minimal interruption.

- Provides technical support, responds to work orders and tickets from the users, analyzes and solves reported network problems.

- Assists with configuring firewall security settings to access permissions groups for individuals and sets up provisions for incoming data.

- Assists with network technology upgrade or expansion projects, including installation of hardware, software and integration testing, as well as coordinating these activities without disturbing function of other systems.

- Assists with producing documentation for installation, network topology, and troubleshooting of communications hardware or software.

- Perform any task assigned by the competent authority.

GIS Associate (LSU) Job Description

- GIS Associate will assist Assistant Manager GIS in performing his duties.

- Scanning and Geo referencing of existing Massavis (if required).

- Digitization of various ground features from Satellite Imagery or Massavis.

- Performing spatial analysis on available data and extracting useful information.

- Develop different types of maps as required by the project staff and senior management.

- Maintain quality assurance and follow SOPs as defined.

- Identifies and corrects digitized errors using topologies.

- Perform any task assigned by the Senior Manager GIS.

Assistant Settlement Officer Job Description:

- Responsible for supervision of Settlement Office and coordination with Land Settlement Unit (LSU) and Project Director/Settlement Officer.

- Responsible for public engagement for creating awareness of settlement operation among the local population of respective districts.

- Responsible for dispute resolutions of any grievances in land related matter.

- To ensure and authenticate preparation of land records as per settlement manual.

- Preparation of settlement document and reports of respective district.

- To provide guidance to other revenue officials during settlement process related to fresh settlements.

- Responsible and coordination with district and tehsil administrative staff for field survey processing.

- Responsible to ensure security of staff by coordinating closely with District Administration.
- Help resolve community issues with the District Administration during land settlement process.
- Supervise field plans and ensure activities are on track.
- Monitoring of the field surveys as per requirement of the Land Settlement Unit.
- Perform any task assigned by the competent authority.

Assistant Manager GIS (Settlement Office) Job Description

- Lead GIS and survey activities in respective settlement operation.
- Ensure compliance on Standard Operating Procedures (SOPs) developed for GIS related activities, data and GIS products.
- Ensure data completion along with maintenance of metadata at the settlement office level.
- Ensure GIS data management and data quality of all collected data from the field.
- Ensure field data accuracy by overlaying it on Satellite Imagery.
- Provide assistance in developing and implementing field plans.
- Responsible to maintain Geodatabase of the settlement office.
- Validate and verify Massavis prepared by GIS Associates.
- Manage survey data collected by Surveyors properly.
- Responsible of the Geospatial data security and backup plan.
- Perform any task assigned by the Senior Manager GIS (LSU).

GIS Associate (Settlement Office) Job Description

- GIS Associate will assist Assistant Manager GIS in performing his duties.
- Support revenue staff in determining Revenue Estate boundaries (Thak Bast).
- Scanning and Geo referencing of existing Massavis (if required).
- Responsible for printing maps of different scales.
- Digitization of various ground features from Satellite Imagery or Massavis.
- Performing spatial analysis on available data and extracting useful information.
- Coordinate closely with survey teams in collecting survey data and post processing it.
- Primarily responsible for preparation of Massavis at the Settlement Office.
- Verify Field Book entries with that of Massavis and survey data

- Develop different types of maps as required by the revenue staff and senior management.

- Maintain quality assurance and follow SOPs as defined.

- Identifies and corrects digitized errors using topologies.

- Perform any task assigned by the Assistant Manager GIS (Settlement Office).

Computer Operator Jobs Description

- Perform the processing of the data entry and computer related task.

- Maintain and operate the computer system.

- Set control on computer and peripherals devices and ensures the secrecy of the records/data.

- Perform maintenance task such as checking for viruses, upgrading software and other basic maintenance.

- Watch closely for error lights/signals and solve malfunctions.

- Inform supervisor about equipment malfunction.

- Perform any task assigned by the competent authority

Tehsildar Job Description

- Responsible for public engagement of local for creation of preliminary documents required for new settlement.

- Responsible of coordination with awareness campaign team in respective District.

- Responsible for dispute resolutions of any grievances in land related matter.

- To ensure and authenticate preparation of land records as per settlement manual.

- Preparation of settlement document and reports of respective district.

- Responsible for preparation of list of land owners during settlement process.

- Responsible of demarcation of settlement "Seh Hada" (boundary bench mark) assigned during field survey for GCP collection.

- Responsible and coordination with tehsil administrative staff for field survey processing.

- During new settlement in Phase-I the District Management Unit will be responsible to ensure that SDC survey teams follow the agreed SOPs of the project.

- Responsible to arrange meeting with community and public awareness complain for the new settlement and land records preparation.

- Perform any task assigned by the competent authority.

Girdawar Job Description

- Responsible for supervision of revenue Patwari.

- Responsible for public engagement of local for creation of preliminary documents required for new settlement.

- Responsible of coordination with awareness campaign team in respective Settlement Office.

- Responsible for dispute resolutions of any grievances in land related matter.

- Responsible to ensure and authenticate measurement / dimensions of dispute land parcels and Land records detail prepared by survey team.

- Preparation of settlement document and reports of respective Settlement Office.

- To provide guidance to other revenue officials during settlement process related to fresh settlements.

- Responsible of verification of settlement "Seh Hada" (boundary bench mark) assigned during field survey for GCP collection.

- Responsible and coordination with tehsil administrative staff for field survey processing.

- Assist to survey field team in DGPS data gathering with compliance of the concern authority.

- Perform any task assigned by the competent authority.

Surveyor Jobs Description

- Surveyors will work directly under Assistant Manager GIS of their respective settlement office and the technical guidance of Assistant Manager Survey.

- Undertaking DGPS land surveys using latest GNSS survey equipment and post processing survey data software.

- Demarcation of Revenue Estate boundaries with the help of revenue staff and GIS technical team.

- Perform field surveys to establish Ground Control Points (GCPs) and Seh Hadas.

- Parcel level survey of each parcel using GNSS survey equipment.

- Perform any task assigned by the competent authority.

Patwari Job Description

- Responsible for preparing land record documents.
- Assist senior revenue officials in public engagement of local for creation of preliminary documents required for new settlement.
- Assist to awareness campaign team in respective Settlement Office.
- Assist Tehsildar in dispute resolutions of any grievances in land related matter.
- Responsible to ensure and authenticate measurement and dimensions of land parcels prepared by survey team.
- Responsible to write/verify, Shajra e Nasab, Khatooni and Misl e Haqiat.
- Assist team for the preparation of settlement "Seh Hada" (boundary bench mark) assigned during field survey and GCP collection.
- Perform any task assigned by the competent authority.

Assistant Job Description

- Type letters, notifications and other official correspondence.
- Ensure that matter requiring the concerned officer's attention are brought to his notice promptly and in the correct format.
- Answers telephone and task messages.
- Accurately record all incoming papers and correspondence.
- Keep accurate records of the where about of the files and other official documents.
- Perform any task assigned by the competent authority

Accountant Job Description

- Assist Account Officer in accounts matter
- Type letters, notifications and other official correspondence regarding accounts matters.
- Process bills and keep record of project inventory
- Reconciliation of payments and expenditure with Bank, Treasury Office, AG Office and Donor Agencies
- Preparation of vouchers relating to payments and keeping them in orderly manner
- Keep accurate records of the where about of account files
- Perform any task assigned by the competent authority

Survey Helper Job Description

- Assist Surveyor in conducting field survey

- Perform duty as an attendant with survey base stations.

- Take care of survey equipment

- Perform duties in Settlement Office when required.

- Perform any task assigned by the competent authority

S.No.	Position Title	Qualification, Experience, Competencies & Personal Attributes	Mode of Appointment	Salary Benefits
1	Project Director (PD)	Masters' degree in Public / Business Administration, Public Policy, Political Science, Economics, Computer Science or relevant discipline from HEC recognized Institution. 10 years of multi-disciplinary experience preferably 05 years in revenue and project management 10 years of experience in Land revenue 15-20 years of experience in public sector management, public finance, planning and implementation of development projects in related fields Respectively.	Government Officer BS-19 **OR** (In case Govt. Officer with the prescribe qualification is not available) Rtd. Govt. Official (BS-19 or above) **OR** By initial recruitment (in case Govt. Officer of relevant experience is not available)	Own Salary plus Land Settlement Special Allowance **OR** (In case of hiring from market) Project Salary.
2	Senior Manager Operations	At least 2nd class Master degree in Computer Science, Management Science, Social Science having 12 years' experience in Project Management, Procurements, Finance and Audit. Sound understanding of Land Records Computerization / Settlement Operations will be preferred. Language(s): Fluency in English, Urdu and Pashto are required Age limit: Maximum 50 years.	By transfer of Govt. officer in BPS-18/19 having relevant qualification and experience. **OR** By initial recruitment (in case Govt. Officer of relevant experience is not available)	Own Salary plus Land Settlement Special Allowance **OR** (In case of hiring from market) Project Salary

3	Senior Manager Technical	At least 2nd class Master degree in Computer Science / Information Technology. Having 12 years' experience in Software Analysis, Design, Development, Implementation and Management. Sound understanding of Land Records Computerization / Settlement Operations will be preferred. Language(s): Fluency in English, Urdu and Pashto are required Age limit: Maximum 50 years.	By transfer of Govt. officer in BPS-18/19 having relevant qualification and experience. **OR** By initial recruitment (in case Govt. Officer of relevant experience is not available)	Own Salary plus Land Settlement Special Allowance **OR** (In case of hiring from market) Project Salary
4	Senior Manager GIS	At least 2nd class Master degree in GIS. Overall 12 years of experience in GIS, DBMS, GNSS survey, and spatial databases. Sound understanding of Land Records Computerization / Settlement Operations will be preferred. **OR** At least 2nd class Bachelor's degree in Computer Science /Geology/ Geography / Environment with one year GIS Diploma. Overall 15 years' experience in GIS related field Language(s): Fluency in English, Urdu and Pashto are required.	By transfer of Govt. officer in BPS-18/19 having relevant qualification and experience. **OR** By initial recruitment (in case Govt. Officer of relevant experience is not available)	Own Salary plus Land Settlement Special Allowance **OR** (In case of hiring from market) Project Salary

		Age limit: Maximum 50 years.		
5	Manager Database (LSU)	At least 2nd class Master degree in Computer Science/BS in Computer Science (Four years Degree) or its equivalent from recognize University with 7 years' experience in data base management system Language(s): Fluency in English, Urdu, Pashto Age limit: Maximum 40 years.	By transfer of Govt. officer in BPS-18 having relevant qualification and experience. **OR** By initial recruitment (in case Govt. Officer of relevant experience is not available)	Own Salary plus Land Settlement Special Allowance **OR** (In case of hiring from market) Project Salary
6	Manager Networks	At least 2nd class Master Degree in Computer Science/BS in Computer Science (Four years Degree) or its equivalent from recognize University with 7 years' experience in Networking. Language(s): Fluency in English, Urdu, Pashto Age limit: Maximum 40 years.	By transfer of Govt. officer in BPS-18 having relevant qualification and experience. **OR** By initial recruitment (in case Govt. Officer of relevant experience is not available)	Own Salary plus Land Settlement Special Allowance **OR** (In case of hiring from market) Project Salary
7	Senior Planning Officer	At least 2nd class MBA/MA other relevant degrees from a recognized institute with at least 07 years' relevant experience.	By transfer of Govt. officer from P&D Department in BPS-18 having relevant qualification and experience. **OR** By initial recruitment (in case Govt. Officer of relevant experience is not available)	Land Settlement Special Allowance **OR** (In case of hiring from market) Project Salary
8	Account Officer	At least 2nd class degree in MBA / B.Com / BBA / other relevant degrees from a recognized institute with at least	By transfer of Govt. officer from Finance / Treasury / AG Department	Land Settlement Special Allowance **OR** (In case of hiring from market)

		05 years' experience in account matters & proficient in office and accounting Software.	in BPS-17 having relevant qualification and experience. **OR** By initial recruitment (in case Govt. Officer of relevant experience is not available)	Project Salary
9	Assistant Settlement Officer	(In case of Government Officer) Bachelors' degree in relevant field with 5 years' experience in land records / revenue. **OR** (In case of hiring from market) Bachelors' degree in Public / Business Administration, Public Policy, Law, Political Science, Economics, Computer Science or relevant discipline from HEC recognized Institution. 7 years of experience in land records / revenue / land settlement and project management.	By transfer of Govt. Officer in BPS-17 having relevant qualification and experience **OR** By initial recruitment (in case Govt. Officer of relevant experience is not available)	Land Settlement Special Allowance **OR** (In case of hiring from market) Project Salary
10	Network Support Engineer	At least 2nd class Master Degree in Computer Science/BS in Computer Science (Four years Degree) or its equivalent from recognize University with 05 years' experience in Networking. Language(s): Fluency in English, Urdu, Pashto Age limit: Maximum 35 years.	By initial recruitment	Project salary

11	Assistant Manager Database	At least 2nd class Master degree in Computer Science / IT or BS in Computer Science / IT (Four years Degree) or its equivalent from recognize University with 5 years' experience in data base management system Language(s): Fluency in English, Urdu, Pashto Age limit: Maximum 40 years.	By initial recruitment	Project salary
12	Assistant Manager GIS	At least 2nd class Bachelor's degree in GIS or related field. Minimum 03 years of experience in GIS. Sound understanding of Land Records Computerization / Settlement Operations will be preferred. **OR** At least 2nd class Bachelor's degree in Computer Science /Geology/ Geography / Environment with one year GIS Diploma. Minimum 03 years' experience in GIS related field Language(s): Fluency in English, Urdu and Pashto are required. Age limit: Maximum 40 years.	By initial recruitment	Project salary
13	GIS Associate	At least 2nd class Bachelor's degree in GIS or related field from HEC recognized University with one year experience in LIS (Land Information	By initial recruitment	Project salary

		System) or three years' experience in other GIS related field. **OR** At least 2nd class Bachelor's degree in Computer Science / Geology / Geography with one year GIS diploma from recognized institute with one year experience in LIS or three years' experience in other GIS related field. Sound understanding of Land Information System / Land Administration will be preferred. Age limit: Maximum 35 years.		
14	Tehsildar	Retired Government Revenue Official preferably Tehsildar having relevant experience in Land Settlement **OR** (In case retired Tehsildar is not available in market) Transfer of in service Tehsildar having relevant experience in Land Settlement.	By initial recruitment **OR** (In case not available in market) By transfer of in service Tehsildar	Project salary (in case of hiring from market) **OR** Own salary plus 50,000 allowance.
15	Girdawar	Retired Government Revenue Official preferably Girdawar having relevant experience in Land Settlement **OR** (In case retired Girdawar is not available in market)	By initial recruitment	Project salary (in case of hiring from market) **OR** Own salary plus 30,000 allowance.

		Transfer of in service Girdawar having relevant experience in Land Settlement.		
16	Patwari	Retired Patwari having relevant experience in Land Settlement **OR** F.A/F.Sc qualification and Patwar course having 3 years' experience in Land Settlement/revenue.	By initial recruitment	Project salary
17	Accountant	At least 2nd class Bachelor's degree in Finance / Accounts / Business Administration / ACCA (Inter) / CA (Inter) or related field from HEC recognized University with three years' experience in Accounts Management. Age limit: Maximum 40 years.	By initial recruitment	Project salary
18	Assistant	At least 2nd class Bachelor's degree from HEC recognized University with minimum three years' relevant experience. Age limit: Maximum 40 years.	By initial recruitment	Project salary
19	Computer Operator	At least 2nd class Master degree in Computer Science/BS in Computer Science (Four years Degree) or its equivalent from recognize University with minimum 3 years' relevant experience. **OR**	By initial recruitment	Project salary

		At least 2nd class Bachelor's degree with one year diploma in IT from recognized institute having 3 years of relevant experience. Language(s): Fluency in English, Urdu, Pashto Age limit: Maximum 40 years.		
20	Surveyor	At least 2nd class DAE Civil Diploma from recognized institute with minimum two years' experience in survey. **OR** At least 2nd class Bachelors' degree in Geography/URP/Civil Engineering or any related field with minimum two years' experience of land surveying. Sound understanding of GPS/GNSS technology. Preference will be given to candidates who are registered with Survey of Pakistan. Age limit: Maximum 35 years	By initial recruitment	Project Salary
21	Internees	Graduates of HEC recognized universities.	By initial recruitment	Stipend
22	Driver	Literate. Having a valid driving license and shall qualify the driving test conducted by the dept. Age limit: Maximum 40 years.	By initial recruitment	Project salary
23	Survey Helper	Literate.	By initial recruitment	Project salary

		Preference will be given to candidates having survey experience. Age limit: Maximum 40 years		
24	Naib Qasid/Office Boy	Literate. Age limit: Maximum 40 years.	By initial recruitment	Project salary
25	Chowkidar	Literate. Age limit: Maximum 40 years.	By initial recruitment	Project salary
26	Sweeper	Literate. Age limit: Maximum 40 years.	By initial recruitment	Project salary