

**GOVERNMENT OF SINDH
AGRICULTURE DEPARTMENT**



**PC-I
OF THE
PROJECT**

**STRENGTHENING OF
DIRECTORATE OF CROP REPORTING
SERVICE SINDH**

**DIRECTORATE
CROP REPORTING SERVICE SINDH
HYDERABAD**

Revised 2005

**GOVERNMENT OF SINDH
PLANNING COMMISSION**

PC-1 FORM

(Production Sector)

- 1. Name of the project** **Strengthening of Directorate of Crop Reporting Service Sindh**
- 2. Location**
* Provide name of district and province
* Attach map of the area
Clearly indicating the project location
- Head quarter of the project will be at Hyderabad which will cover the entire Sindh province. However for RS/GIS technology the headquarter of the project will be at Hyderabad covering the districts Badin, Mirpurkhas, Khairpur & Larakana. However further more RS/GIS system would be carried out through SUPARCO / NRSP.
Map attach at page No:48
- 3. Authorities responsible for:**
- i) Sponsoring** Secretary,
Agriculture Department,
Government of Sindh, Karachi
- ii) Execution** Director,
Crop Reporting Service Center,
Sindh Hyderabad.
- iii) Operation & Maintenance** Director,
Crop Reporting Service Center,
Sindh Hyderabad.
- iv) Concerned Federal Ministry** Ministry of Food, Agriculture and Livestock,
Government of Pakistan, Islamabad.
- 4. Plan provision**
- If the project is included in the medium term / five year plan, specify actual allocation. Project is included in the provincial ADP 2008-09 with an allocation of Rs.50.000 millions
-If not included in the current plan, what warrants its inclusion and how is it now proposed to be accommodated. Not applicable.
- If the project is proposed to be financed out of block provision, indicate: Not applicable.

Total Block provision	Amount already committed	Amount proposed for this project	Balance available
	50.00 Million	1184.008 Million	

(b) Provision in the current year:

Project is included in the provincial ADP 2008-09 with an allocation of Rs.50.000 million.

5. Project objectives with its relation with sector objectives.

The objectives of the sector / sub sector as indicated in the medium term / five year plan be reproduced.

The reliable statistics is necessary for the planners who making planning for the requirement and availability position specially for food crops, foreign exchange earning and export. In this regard during the ECC meeting held on 18.06.2002 it was decided that to review the existing estimation system and the provincial governments in Sindh, NWFP & Balochistan must take positive steps to create independent statistical organization with complete autonomy and without the influence of Agriculture Extension Services. Hence in the follow-up of the decision the provincial government allocated funds in its ADP from 2003-04 to 2007-08 and resultantly a separate Directorate of Crop Reporting Service Center has been established with its existing manpower and some vehicles, equipments and furniture was met with that project "Establishment of Crop Reporting Service Center Sindh however with the creation of new districts and new sample designs, the Directorate needs strengthening.

Indicate objectives of the project

The main objectives of the project to collect and prepare the reliable and in-time area and production estimates of all variety wise agricultural crops viz Wheat, Cotton, Rice, Sugarcane, Maize, Chilies, Mung, Mash, Sesame, Soybean, Kharif Fruits, Gram, Oilseeds, Tobacco, Lentil, Potato, Onion, Barley, Rabi Fruits etc. and made available within due time for the planners for making agricultural policies.

and a linkage between proposed project and the sectoral objectives.

This project has very close linkage with objectives of sector because the Statistics was already being collected and estimates were prepared by the Statistical Organization working under the control of Director General, Agriculture Extension Sindh. However, from 2003-04 a separate Directorate of Crop Reporting Service Center has been established under the control of Secretary Agriculture as per follow-up of the decision of ECC meeting

held on 18.06.2002 with the objectives to collect more reliable statistics. Now with the creation of new districts in the province and by draw of new samples design the number of dehs has been increased with increased number of crops hence the existing Directorate needs strengthening hence this project is being proposed to achieve the goal by Crop Reporting Service Center own staff without the influence of any other agency.

In case of revised project, indicate objectives of the project if different from original.

Not applicable

6. Description and Justification of Project.

Describe the project, indicate existing facilities in the area and justify the establishment of the project.

Despite of so many structural changes in the economy of the country, agriculture still is the main contributor towards the economy. In agriculture sector availability of Crop statistics and other authenticated related information is indispensable to all concerned in planning and promoting the agriculture development and improving the distribution of food and other products. Reliable statistical data is utmost important in planning by all the private / public sector organizations for increasing quality crop production for consumption within the country and increasing quality exports for gaining proper markets in the world market and reducing imports. For this purpose, the development of National System data collection is of vital importance.

At present the area and production of three crops, i.e. Wheat, Cotton & Rice is estimated on the basis of objective survey by random sampling. In one of other crops, the source for the area is revenue department and the production is prepared on the basis of eye estimation. Revenue Department is mostly reporting under estimated data of different crops for as many reasons. The production estimated for other crops leaving wheat, rice & cotton on the basis of eye estimation, which is not the scientific approach.

Sample survey is the real scientific statistical and applicable method to collect and pass on

the information timely. Agriculture Statistics especially crop estimates are subject to criticism from many corners. At present, the Agriculture Statistics are collected as a by-product of Revenue operations. Acreage being used for planning policy of the data is utmost important. The Government is very much interested to know an anticipated size of a crop for taking suitable measures to meet expected shortage or surpluses.

The Economic Coordination Committee during its meeting held on 11.04.2002 decided that the Sindh, Balochistan and NWF Provinces may establish an independent Statistical Cell on the pattern of Punjab Province; copy of the proposal submitted by Statistics Division, Federal Bureau of Statistics and decision of ECC are attached as **Annexure A**. Besides during the meeting held on 18.06.2002 under the Chairmanship of Secretary, Statistics Division to review the existing estimation system as follow up **ECC**, decided that "the provincial governments in Sindh, N.W.F.P & Balochistan may take immediate steps to place the crop estimation staff directly under the existing statistical cells working under D.G's (Agriculture Extension)". The copy of minutes of the meeting is attached as **Annexure - B**

In Punjab province, the Statistical Organization is headed by the Director Crop Reporting Service at Provincial level who is working direct under the Supervision of Secretary Agriculture. At field level setup of the province has been divided in 2 regions where as Statistician is supervising the work. The Assistant Director Statistics are at district level and Statistical Officer at Taluka level, where as the Crop Reporter are working at selected village.

On the pattern of Punjab, under the project "Establishment of Crop Reporting Service Center Sindh, a separate Directorate was established. Now the Crop Reporting Service Center Sindh is being headed by Director who is working under the supervision of Secretary Agriculture, Government of Sindh. In this regard, the province has been divided in two regions i.e. Lower Sindh and Upper Sindh

regions with headquarters at Hyderabad and Sukkur respectively. The each region is being headed by Statistician BPS-18. The Hyderabad (lower Sindh) region is comprised on the districts Hyderabad, Matiari, Tando Allahyar, Tando Muhammad Khan, Badin, Thatta, Karachi, Dadu, Mirpurkhas, Umerkot, Tharparkar and Sanghar whereas the Sukkur (Upper Sindh) region is comprised on districts Sukkur, Ghotki, Khairpur, Naushehroferoze, Nawabshah, Larkana, Qamber Shahdadkot, Shikarpur, Jacobabad & Kashmore. The Assistant Director is the In-charge of the district. In this regard the most of the posts of Assistant Director have been arranged from the existing posts of Assistant Statistical Officers & Junior Statisticians (BPS-17 Supervisory) by changing the nomenclature of the posts and some posts are being proposed from this project. It is proposed that Statistical Officer look after the charge of one to two talukas keeping in view of the crop intensity in these talukas. Those talukas having less intensity of crops will be combined and one statistical Officer will be assigned to look after the charge of that talukas however keeping in view of the shortage of field staff including Statistical Officers and Crop Reporters some posts are being demanded through this project.

For the Directorate of Crop Reporting Service, the most staff has been arranged from the existing strength however some essential Administrative, Technical and Ministerial staff and essential amenities will be required, which has been demanded through this project; the detail of existing staff and new proposed staff is attached as Annexure-C

Since the data is only collected for Major Crops i.e. wheat, cotton, rice, and sugarcane However, as per decision of Federal Bureau of Statistics meeting held on 18.06.2002 Provincial Governments will take immediate steps for providing village / deh wise data of area sown of 19 crops (11 crops of Kharif season and 8 crops of Rabi season; List of crops attached as Annexure-D) the work has been initiated to collect the data for 11 crops in Kharif season and 8 crop of Rabi season however with the increase of number of crops and increase the sample size

from 283 dehs to 600 the work load will be increased which requires the facilities of staff, mobility, equipments, furniture and operational funds. The detail of item wise requirement with Justification is attached from page No. 38 to 41.

Besides, it is proposed to implement the RS/GIS data collection system for collection of data for area, production and yield estimation through this technology hence it is proposed that initially the activities may be implement in four districts i.e. Badin, Mirpurkhas, Khariapur and Larkana. The detail of expenditure requirement with justification is attached at page No. 42 and 43.

Provide technical parameters i.e. input and out put of the project in quantitative terms. Also discuss the technology aspect of the project.

At present objective survey of random sampling techniques on four major crops i.e. Cotton, Wheat, Rice & Sugarcane are in practice in Sindh. The present size of wheat crop is 285 sample dehs, cotton 125 sample dehs, Rice 140 sample dehs and sugarcane 75 sample dehs.

The sample size is 10.42% of the total dehs in Sindh. However, with the help of this frame the area and production of Wheat, Cotton and Rice will be estimated (due to the changes in cropping pattern and installation of more Sugar Mills in the province, the sample of 75 dehs of Sugarcane crop became insufficient).

The area is estimated by using raising factor and yield is worked out through crop cutting experiments by random selecting and demarcating 6 sub-plots of 15 x 20 in 3 fields of every selected deh.

The district wise area estimates for other crops are collected from Revenue Authorities and the statistical wing is assessing the production estimates.

The first estimates depict the sowing picture of the particular crop, which is prepared and issued just after the sowing. The 2nd estimates is prepared and issued when the crop is nearing to maturity. It can be said as final in area and preliminary in case of production. The final estimate is prepared and issued when the crop is harvested. It is final in case of area as well as production.

Under this project, data of 11 crops in Kharif season and 8 crops in Rabi season will be collected.

The area will be estimated by each deh wise and the yield worked-out through as per crop cutting experiments as described above. The Crop Reporter will collect reports at selected Dehs that reports will be compiled at Taluka and district level and would be computerized. On this pattern, every District will collect and compile data and provide to the regional office. Every regional office will forward the data to the provincial Headquarter. Director Crop Reporting Service Center will get the data approved from concerned forums and provide the approved data to concerned organizations to publish Statistics Book for Planners & Policy makers.

Provide details of civil works, equipment, machinery and other physical facilities required for the project.

Transport

Detail attached at page No. 25

Machinery & Equipments

Detail attached at page No. 25

Furniture

Detail attached at page No. 26

Staff

Detail attached at page No. 22

Consultancy Requirement

Since the RS/GIS technology is new one hence consultant in various fields will be required for two years. The Detail of ToR of the consultants are attached page No.44 to 46

Indicate governance issues of the sector relevant to the project and strategy to resolve them.

Not applicable

In addition to above the following sector specific information be provided.

i) Provide history of extension work in and around project area and justify the extension work.

Already discussed in above paras.

ii) Provide transport, equipment and field machinery etc available with

The list attached at page No. 30 & 31

the department.

7. Capital cost estimates.

Local : Rs. 184.008 Millions
FEC. : --
Total : Rs. 184.008 Millions

Indicate date of estimation of project cost estimates.

July 2008.

Basis of determining the capital cost be provided. It includes market survey, schedule rates, estimation on the basis of previous work done etc.

Prevailing markets rates estimation on the basis of previous work done.

YEAR WISE PHYSICAL ACTIVITIES

Year 2008-09, 2009-10, 2010-11

Activity	Season	1 st year	2 nd year	3 rd year
Samples dehs will be established in both Rabi & Kharif Seasons by overlapping 673 dehs	Kharif	600	600	600
	Rabi	600	600	600

The Statistical data will be collected on the more crops as indicated in each year.	Kharif	10	10	10
	Rabi	8	8	8

Kharif Crops	Rabi Crops
Rice	Wheat
Sugarcane	Gram
Maize	Oil Seeds (R&M Seed, Canola & Sunflower.
Cotton	Tobacco
Chilies	Masur
Mung	Potatoes
Mash	Onion
Sesamum	Barley
Soybean	
Potatoes	

Note:

- i) In addition to above crops, provinces, are also recommended to provide separate area and production figures of important fruits such as apples, mangoes and citrus fruits depending upon the importance of fruits produced in a particular province.
- ii) For all remaining crops area sown figures be provided separately for Rabi and Kharif Season.

YEAR WISE / COMPONENT WISE FINANCIAL PHASING

Year Wise Expenditure Requirement for Strengthening of Crop Reporting Service Sindh

Items	Year wise Expenditure Requirement											
	1 st Year			2 nd Year			3 rd Year			Total		
	FEC	Local	Total	FEC	Local	Total	FEC	Local	Total	FEC	Local	Total
a) Physical Assets												
Transport	-	3.000	3.000	-	-	-	-	-	-	-	3.000	3.000
Machinery & Equipment	-	2.835	2.835	-	-	-	-	-	-	-	2.835	2.835
Furniture & Fixture	-	17.171	17.171	-	-	-	-	-	-	-	17.171	17.171
Sub Total (a)	-	23.006	23.006	-	-	-	-	-	-	-	23.006	23.006
b)Operational Cost												
Pay	-	11.778	11.778	-	23.556	23.556	-	23.556	23.556	-	58.890	58.890
Recurring Expenditure	-	14.481	14.481	-	28.054	28.054	-	28.054	28.054	-	70.590	70.590
Training of staff	-	0.240	0.240	-	0.200	0.200	-	--	--	-	0.440	0.440
Sub Total (b)	-	26.499	26.499	-	51.810	5.810	-	51.610	51.610	-	129.920	129.920
c) Expenditure Requirement for SRS/GIS	-	-	-	-	20.366	20.366	-	8.926	8.926	-	29.262	29.262
Total (a + b+c)	-	49.505	49.505	-	72.146	72.146	-	60.536	60.536	-	182.188	182.188
3 rd party monitoring cost	-	0.495	0.495	-	0.721	0.721	-	0.605	0.605	-	1.820	1.820
G. Total	-	50.000	50.000	-	72. 867	72.867	-	61.141	61.141	-	184.008	184.008

Incase of revise projects, provide

- Project approved history along with PSDP allocations, release and expenditure --
- Item wise, year wise actual expenditure and physical progress --
- Justification for revision of PC-I and variation in scope of project if applicable. --
- Item wise comparison of revised cost with the approved cost and give reasons for variation. --
- Exchange rate used to work out FEC in the original and revised PC-I's. --

8. Annual operating and Maintenance cost

after Completion of the project.

(Item wise annual operating cost based on proposed capacity utilization for five years).

Items	Year wise Expenditure Requirement				
	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
Pay & Allow: (CRSS)	20.723	21.759	22.847	23.989	25.188
Recurring Expenditure	37.816	39.497	41.257	43.201	45.131
Recurring Exp: for RS/GIS	6.411	6.732	7.069	7.422	7.793
Training of staff	0	0.500	0.500	0.750	0.750
Total	64.95	68.488	71.673	75.362	78.862

Note: The detail attached at page No.47

9. Demand and supply analysis (For Industrial and Agricultural Production projects)

- Description of products / services. Not applicable
- Demand/Supply alongwith unit price for the last five years. Not applicable
- Imports/Exports for the last five years alongwith unit price (if applicable). Not applicable
- Projected demand / supply for 10 years. Not applicable
- Proposed year-wise production and unit price of the product. Not applicable

- Existing & proposed arrangements for marketing. Not applicable

10. Financial Plan and mode of financing.

a) Equity:

Indicate the amount of equity to be financed from each source

- * Sponsors own resources --
- * Federal Government --
- * Provincial Government All the cost of the project will be born by the provincial government through its ADP.
- * DFI's / Banks --
- * General Public --
- * Foreign Equity (Indicate partner agency). --
- * NGOs / Beneficiaries. --
- * Others --
- b) Debit (Indicate the local and foreign debit, interest rate, grace period and repayment period for each loan separately. The loan repayment schedule be also annexed.) --
- c) Grants along with source --
- d) Weighted cost of capital --

11. Project benefits and analysis

- i. Financial** --
- ii. Economic** This project is survey type project hence its benefit will be used for further agricultural policy making in the interest of country, economy of the country and country's peoples.
- iii. Social benefits with indicators** Not applicable
- iv. Employment generation** The detail of employment through this project is attached at Annexure-C.
- v. Environmental impact** This project has no any adverse effect on the environment.
- vi. Impact of delays on project cost and viability.**

12. Implementation Schedule.

- Indicate starting and completion date of the project.

Starting date : July 2008

Completion date : June 2011

Item wise / Year wise implementation schedule of Strengthening of Crop Reporting Service in line chart co-related with the phasing of physical activities.

Item of work (Quarters)	1 st year			2 nd year			3 rd year		
	Q1	Q2	Q3	Q1	Q2	Q3	Q1	Q2	Q3
Preparation of PC-I	■								
Tender advertisement			■	■					
Purchase of Equipments / furniture			■	■					
Appointment of staff			■	■					
Collection of data			■	■	■	■	■	■	■

Item wise / Year wise implementation schedule of SRS/GIS in line chart co-related with the phasing of physical activities.

Item of work (Quarters)	1 st year				2 nd year				3 rd year			
Preparation of PC-I	■											
Tender advertisement					■	■						
Purchase of Equipments / furniture					■	■						
Appointment of Consultancy					■	■						
Collection of data					■	■	■	■	■	■	■	■

13. Management structure and man power requirements including specialized skills during construction and operation phases.


At provincial level the project will be implemented by the Director Crop Reporting Service Center Sindh who will be assisted by two Statistician Hyderabad & Sukkur region. Hyderabad region (Covering the old civil divisions Hyderabad & Mirpurkhas) and Sukkur Region (covering the old civil divisions Sukkur & Larkana). At district level the Assistant Director Crop Reporting Service will be the head of districts and will be responsible for all the activities to be performed in their districts. The Statistical Officer will be responsible of the activities to be performed in their jurisdiction and will supervise two to three talukas of their jurisdiction and will report to Assistant Director of the District.

14. Additional projects / decisions required to maximize socio-economic benefits from the proposed project.

All Agriculture Projects/ policy decisions are based on the statistical data provided by this Directorate, hence this project play the role of back bone of Agriculture policies and specially on the successful of the pilot project component the same activities will be replicated in other districts for which the next phase is proposed.

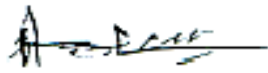
15. Certified that the project proposal has been prepared on the basis of instructions provided by the Planning Commission for the preparation of PC-I for Infrastructure sector projects.

Prepared by:



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Approved by :


(Sabirigo Khan Jatoi)
Secretary
Agriculture Department
Government of Sindh
Ph# 021-9211462

SUMMARY OF PROOJECT COST

S.No.	Item	1st Year	2nd Year	3rd Year	Total
A	Expenditure of Strengthening of CRS	49.505	46.582	50.731	146.818
B	Expenditure Requirement of SRS/GIS	-	34.502	12.683	47.185
	Total (A+B)	49.505	81.084	63.414	194.003
	3rd Party Monitoring Cost	0.495	0.811	0.634	1.940
	Grand Total	50.000	81.895	64.048	195.943

SUMMARY OF THE PROJECT COST

S.No.	Item	1st Year	2nd Year	3rd Year	Total
A	Physical Assets				
1	Transport	3.000	-	-	3.000
2	Machinery & Equipments	2.835	-	-	2.835
3	Furniture & Fixture	17.171	-	-	17.171
	Subtotal (A)	23.006	0.000	0.000	23.006
B	Operatioanl Cost				
1	Pay	6.305	12.611	12.611	31.527
2	Recurring Expenditure	19.390	32.274	36.275	87.939
3	Training of Staff	1.127	0.173	-	1.300
	Subtotal (B)	26.822	45.058	48.886	120.766
C	Expenditure Requirement of SRS/GIS	0.000	20.336	8.926	29.262
	Total (A+B+C)	49.828	65.394	57.812	173.034

**RECURRING EXPENDITURE OF THE SCHEME "STRENGTHING OF
CROP
REPORTING SERVICE SINDH"**

S.No.	Item	1st Year	2nd Year	3rd Year	Total
1	Repair of vehicles	0.600	0.600	1.000	2.200
2	Repair of Mach. & Equipments	0.150	0.150	0.150	0.450
3	TA/DA	4.177	8.000	10.000	22.177
4	POL	2.000	4.000	5.000	11.000
5	Postage & Stamp	0.060	0.060	0.060	0.180
6	Telephone	0.300	0.400	0.400	1.100
7	Office Stationery	0.300	0.300	0.400	1.000
8	Printing Charges	0.100	0.100	0.100	0.300
9	Newspapers & Books	0.010	0.010	0.010	0.030
10	Hot & Cold	0.010	0.010	0.010	0.030
11	Rent of Office Buildings	7.350	12.600	12.600	32.550
12	Rent, Rate & Taxes	0.200	0.024	0.025	0.249
13	Contigent paid labour (DPL)	0.250	0.400	0.400	1.050
14	Electricity Charges	1.530	3.060	3.060	7.650
15	Gas Charges	0.015	0.030	0.030	0.075
16	Water Charges	0.015	0.030	0.030	0.075
17	Other Miscellaneous	2.000	2.500	3.000	7.500
	Total	19.067	32.274	36.275	87.616

**YEAR WISE EXPENDITURE REQUIREMENT FOR PURCHASE TRANSPORT AND
MACHINERY EQUIPMENT OF THE SCHEME "STRENGTHENING OF
DIRECTORATE OF CROP REPORTING SERVICE SINDH"**

S.No.	Item	Qty.	1st Year	2nd Year	3rd Year	Total
A	Transport					
1	Pickups	2	3.000	-	-	3.000
	Total		3.000	0.000	0.000	3.000
B	Machinery & Equipments					
1	Computer with printer	12	0.900	-	-	0.900
2	Colur laserjet printer	1	0.050	-	-	0.050
3	Multimedia Projector	1	0.125	-	-	0.125
4	Photostat Machines	2	0.300	-	-	0.300
5	Fax Machines	8	0.120	-	-	0.120
6	Survey Kits	128	0.640	-	-	0.640
7	Electric Generator	1	0.500	-	-	0.500
8	Safe	1	0.050	-	-	0.050
9	UPS	1	0.020	-	-	0.020
10	Airconditioner	2	0.130	-	-	0.130
	Total		2.835	0.000	0.000	2.835

**YEAR WISE EXPENDITURE REQUIREMENT FOR PURCHASE FURNITURE OF
THE SCHEME "STRENGTHENING OF DIRECTORATE OF CROP REPORTING
SERVICE SINDH"**

S.No.	Item	Qty.	Unit rate	1st Year	2nd Year	3rd Year	Total
1	Revolving Chairs	32	7500	0.240	-	-	0.240
2	Office Chairs	1124	1500	1.686	-	-	1.686
3	Office Tables Quality-1	32	16000	0.512	-	-	0.512
4	Office Tables Quality-2	69	14000	0.966	-	-	0.966
5	Office table Standard	569	11000	6.259	-	-	6.259
6	Side Rack	32	5000	0.160	-	-	0.160
7	Almirah	696	8500	5.916	-	-	5.916
8	File Cabinet	109	8500	0.927	-	-	0.927
9	Stool	103	800	0.082	-	-	0.082
10	Benches	33	3000	0.099	-	-	0.099
11	Computer Chairs	27	3500	0.095	-	-	0.095
12	Computer Trolleys	27	8500	0.230	-	-	0.230
	Total			17.171	0.000	0.000	17.171

SUMMARY OF THE PROJECT

S.No.	Item	1st Year	2nd Year	3rd Year	Total
A	Physical Assets				
1	Transport	3.000	-	-	3.000
2	Machinery & Equipments	2.835	-	-	2.835
3	Furniture & Fixture	17.171	-	-	17.171
	Subtotal (A)	23.006	0.000	0.000	23.006
B	Operatioanl Cost				
1	Pay	11.778	23.556	23.556	58.890
2	Recurring Expenditure	14. 481	28.054	28.054	70.590
3	Training of Staff	0.240	0.200	--	0.440
	Subtotal (B)	26.499	51.810	51.610	129.920
C	Expenditure Requirement of SRS/GIS	0.000	20.336	8.926	29.262
	Total (A+B+C)	49.505	72.146	60.536	182.188
	3rd Party Monitoring Cost	0.495	0.721	0.605	1.820
	Grand Total	50.000	72.867	61.141	184.008

**YEAR WISE EXPENDITURE REQUIREMENT FOR PURCHASE TRANSPORT AND
MACHENCARY EQUIPMENT OF THE SCHEME "STRENGTHENING OF
DIRECTORATE OF CROP REPORTING SERVICE SINDH"**

S.No.	Item	Qty.	1st Year	2nd Year	3rd Year	Total
A	Transport					
1	Pickups	2	3.000	-	-	3.000
	Total		3.000	0.000	0.000	3.000
B	Machinery & Equipments					
1	Computer with printer	12	0.900	-	-	0.900
2	Colur laserjet printer	1	0.050	-	-	0.050
3	Multimedia Projector	1	0.125	-	-	0.125
4	Photostat Machines	2	0.300	-	-	0.300
5	Fax Machines	8	0.120	-	-	0.120
6	Survey Kits	128	0.640	-	-	0.640
7	Electric Generator	1	0.500	-	-	0.500
8	Safe	1	0.050	-	-	0.050
9	UPS	1	0.020	-	-	0.020
10	Air conditioner	2	0.130	-	-	0.130
	Total		2.835	0.000	0.000	2.835
	Total (A+B)		<u>5.835</u>	--	--	<u>5.835</u>

**YEAR WISE EXPENDITURE REQUIREMENT FOR PURCHASE FURNITURE OF
THE SCHEME "STRENGTHENING OF DIRECTORATE OF CROP REPORTING
SERVICE SINDH"**

S.No.	Item	Qty.	Unit rate	1st Year	2nd Year	3rd Year	Total
1	Revolving Chairs	32	7500	0.240	-	-	0.240
2	Office Chairs	1124	1500	1.686	-	-	1.686
3	Office Tables Quality-1	32	16000	0.512	-	-	0.512
4	Office Tables Quality-2	69	14000	0.966	-	-	0.966
5	Office table Standard	569	11000	6.259	-	-	6.259
6	Side Rack	32	5000	0.160	-	-	0.160
7	Almirah	696	8500	5.916	-	-	5.916
8	File Cabinet	109	8500	0.927	-	-	0.927
9	Stool	103	800	0.082	-	-	0.082
10	Benches	33	3000	0.099	-	-	0.099
11	Computer Chairs	27	3500	0.095	-	-	0.095
12	Computer Trolleys	27	8500	0.230	-	-	0.230
	Total			17.171	0.000	0.000	17.171

**YEAR WISE EXPENDITURE REQUIREMENT FOR PAY FOR THE SCHEME
"STRENGTHENING OF DIRECTORATE OF CROP REPORTING SERVICE SINDH"**

S.No.	Designation	BPS	No. of posts	Fixed Pay	1st Year	2nd Year	3rd Year	Total
1	Deputy Director (HQ)	18	1	17000	0.102	0.204	0.204	0.510
2	Assistant Director Statistics	17 (S)	4	15000	0.360	0.720	0.720	1.800
3	Statistical Officers	17	10	15000	0.900	1.800	1.800	4.500
4	Accounts Officer	17	1	15000	0.090	0.180	0.180	0.450
5	Computer Programmer	17	1	15000	0.090	0.180	0.180	0.450
6	Administrative Officer	16	1	12000	0.072	0.144	0.144	0.360
7	Office Superintendent	16	1	12000	0.072	0.144	0.144	0.360
8	Office Assistant	14	3	9000	0.162	0.324	0.324	0.810
9	Computer Operator	12	26	8000	1.248	2.496	2.496	6.240
10	Crop Reporters	11	128	8000	6.144	12.288	12.288	30.720
11	Senior Clerks	9	23	7000	0.966	1.932	1.932	4.830
12	Drivers	5	22	7000	0.924	1.848	1.848	4.620
13	Naib Qasids	2	16	6000	0.576	1.152	1.152	2.880
14	Chowkidar	2	2	6000	0.072	0.144	0.144	0.360
	Total		<u>239</u>		<u>11.778</u>	<u>23.556</u>	<u>23.556</u>	<u>58.890</u>

**RECURRING EXPENDITURE OF THE SCHEME "STRENGTHENING OF CROP
REPORTING SERVICE SINDH"**

S.No.	Item	1st Year	2nd Year	3rd Year	Total
1	Repair of vehicles	0.600	0.600	0.600	1.800
2	Repair of Mach. & Equipments	0.150	0.150	0.150	0.450
3	TA/DA	4.000	8.000	8.000	20.00
4	POL	1.240	4.000	4.000	9.240
5	Postage & Stamp	0.060	0.060	0.060	0.180
6	Telephone	0.300	0.400	0.400	1.100
7	Office Stationery	0.300	0.300	0.300	0.900
8	Printing Charges	0.100	0.100	0.100	0.300
9	Newspapers & Books	0.010	0.010	0.010	0.030
10	Hot & Cold	0.010	0.010	0.010	0.030
11	Rent of Office Buildings	4.440	8.880	8.880	22.200
12	Rent, Rate & Taxes	0.200	0.024	0.025	0.249
13	Contingent paid labour (DPL)	0.250	0.400	0.400	1.050
14	Electricity Charges	1.530	3.060	3.060	7.650
15	Gas Charges	0.015	0.030	0.030	0.075
16	Water Charges	0.015	0.030	0.030	0.075
17	Other Miscellaneous	1.261	2.000	2.000	5.261
	Total	<u>14.481</u>	<u>28.054</u>	<u>28.055</u>	<u>70.590</u>

**YEAR WISE EXPENDITURE REQUIREMENT FOR RENT OF OFFICE BUILDINGS UNDER THE
SCHEME "STRENGTHENING OF DIRECTORATE OF CROP REPORTING SERVICE SINDH"**

S.No.	Item	Nos.	Unit rate	1st Year	2nd Year	3rd Year	Total
1	Director + Statistician Hyderabad	1	50000	0.300	0.600	0.600	1.500
2	Statistician + AD Sukkur	1	15000	0.090	0.180	0.180	0.450
3	Asstt. Director (Statistics)	22 Districts	10000	1.320	2.640	2.640	6.600
4	Statistical Officer	65 Talukas	7000	2.730	5.460	5.460	13.650
	Total			<u>4.4400</u>	<u>8.880</u>	<u>8.880</u>	<u>22.200</u>

STATEMENT SHOWING THE DETAIL OF EXISTING FACILITIES OF TRANSPORT

S. No.	Item	Existing		New Required	Total	Status
		Provided by Sindh Govt.	Provided by Federal Government			
1	Single Cabin Pickup Double Cabin	-	20	2	22	For Asst. Directors
2	Pickup	-	1	0	1	For Director CRS
3	Potohar Jeeps	4	-	-	4	For Statisticians
4	Baleno Cars	2	-	-	2	
	Total	6	21	2	29	
5	Motorcycles	-	200	-	200	For Crop Reporters

STATEMENT SHOWING THE DETAIL OF EXISTING FACILITIES OF EQUIPMENTS

S. No.	Item	Existing		New Required	Total
		Provided by Sindh Govt.	Provided by Federal Government		
1	Computer with printers	22	25	12	59
2	Fax Machine	1	24	8	33
3	Photocopier	2	1	2	5
4	Colour laser jet Printer	-	-	1	1
5	Survey Kits	-	-	128	128
6	Electric Generator	-	-	1	1
7	Safe	-	-	1	1
8	UPS	-	-	1	1
9	Multimedia Projector	-	-	1	1
10	Air Conditioner	-	-	2	2
	Total	25	50	157	232

STATEMENT SHOWING THE DETAIL OF POST WISE FURNITURE REQUIREMENT FOR THE SCHEME "STRENGTHENING OF CROP REPORTING SERVICE SINDH

S.No.	Designation	BPS	Total	R/chairs	Chairs	Table L Q.1	Table L Q.2	Tables Standard	Side racks	Almirah	File Cabinet	Stool	Benches	C/chairs	C/ trolley
1	Director	19	1	-	-	-	-	-	-	-	-	-	-	-	-
2	Statistician	18	2	2	12	2	-	-	2	2	2	2	-	-	-
3	Deputy Director (HQ)	18	1	1	6	1	-	-	1	1	1	1	-	-	-
4	Assistant Director Statistics	17 (S)	29	29	174	29	-	-	29	29	29	29	-	-	-
5	Statistical Officers	17	67	-	335	-	67	-	-	67	67	67	-	-	-
6	Accounts Officer	17	1	-	5	-	1	-	-	1	1	1	-	-	-
7	Computer Programmer	17	1	-	5	-	1	-	-	1	1	1	-	1	1
8	Administrative Officer	16	1	-	5	-	-	1	-	1	1	1	-	-	-
9	Office Superintendent	16	1	-	5	-	-	1	-	1	1	1	-	-	-
10	Stenographer	15	1	-	1	-	-	1	-	1	-	-	-	-	-
11	Stenotypist	12	2	-	2	-	-	2	-	2	-	-	-	-	-
12	Computer Operator	12	26	-	-	-	-	-	-	26	-	-	-	26	26
13	Office Assistant	11	6	-	16	-	-	6	-	6	6	-	-	-	-
14	Crop Reporters	11	500	-	500	-	-	500	-	500	-	-	-	-	-
15	Comp: clerk / clerk cum typist	7	35	-	35	-	-	35	-	35	-	-	-	-	-
16	Senior Clerks	9	23	-	23	-	-	23	-	23	-	-	-	-	-
17	Drivers	5	27	-	-	-	-	-	-	-	-	-	-	-	-
18	Naib Qasids	2	33	-	-	-	-	-	-	-	-	-	33	-	-
19	Chowkidar	2	2	-	-	-	-	-	-	-	-	-	-	-	-
	Total		759	32	1124	32	69	569	32	696	109	103	33	27	27

ADMINISTRATIVE UNITS IN SINDH

S. No.	DISTRICT	TALUKA	No. OF CIRCLE	No. OF TAPA	No. OF DEH
1.	Karachi	18 Towns	--	--	74
2.	Hyderabad	04	06	24	81
3.	Matiari	03	04	27	112
4.	Tando Allahyar	03	04	30	87
5.	Tando Muhammad Khan	03	06	36	162
6.	Thatta	09	13	75	657
7.	Badin	05	13	103	496
8.	Mirpurkhas	06	19	95	469
9.	Umerkot	04	12	72	235
10.	Mithi	04	18	45	166
11.	Khairpur	08	16	99	407
12.	Nawabshah	04	08	115	239
13.	Naushahro Feroze	05	15	83	128
14.	Jamshoro	04	08	46	121
15.	Shahdadkot	07	20	70	282
16.	Sanghar	06	16	108	361
17.	Kashmore	03	08	44	145
18.	Dadu	04	17	111	350
19.	Ghotki	05	14	73	287
20.	Jacobabad	03	10	53	214
21.	Shikarpur	04	13	65	246
22.	Larkana	04	13	51	182
23.	Sukkur	05	09	45	270
	TOTAL	104+18=121	262	1470	6110

SUMMARY FOR EXPENDITURE REQUIREMENT FOR SRS / GIS

S.No.	Item	1st Year	2nd Year	3rd Year	Total
A	Physical Assets				
2	Machinery & Equipments	-	2.430	-	2.430
4	Furniture & Fixture	-	-	-	0.000
	Subtotal (A)	0.000	2.430	0.000	2.430
B	Operational Cost				
2	Recurring Expenditure	-	13.006	4.426	17.432
4	Consultancy Charges	-	4.900	4.500	9.400
	Subtotal (B)	0.000	17.906	8.926	26.832
	Total (A+B)	<u>0.000</u>	<u>20.336</u>	<u>8.926</u>	<u>29.262</u>

EXPENDITURE REQUIREMENT FOR SRS / GIS FOR FOUR DISTRICTS

S.No	Item	1st Year	2nd Year	3rd Year	Total
A	Physical Assets				
i)	Machinery & Equipment				
1	Computer with Printer & Accessories (6Nos.)	-	0.450	-	0.450
2	Laptop (2Nos.)	-	0.250	-	0.250
3	UPS (6Nos.)	-	0.120	-	0.120
4	GPS (3Nos.)	-	0.150	-	0.150
5	Inverters (2Nos.)	-	0.030	-	0.030
6	Colour Printer (1No.)	-	0.120	-	0.120
7	Colour Plotter (1No.)	-	1.300	-	1.300
8	Scanner (1No.)	-	0.010	-	0.010
	Subtotal	0.000	2.430	0.000	2.430
B	Operational Cost				
1	Soft ware (Arc Map with image analyst)	-	5.540	-	5.540
2	10 Days Training on RS / GIS for 16 Officials	-	0.480	-	0.480
3	10 Days hands on training at home station for 20 officials)	-	1.000	-	1.000
4	TA/DA for staff to be sent for training	-	1.560	-	1.560
5	Imaginary requirements	-	4.000	4.000	8.000
6	Metiological Data Charges	-	0.100	0.100	0.200
7	Stationery Requirement	-	0.326	0.326	0.652
	Subtotal (B)	0.000	13.006	4.426	17.432
C	Consultancy Service				
1	Chief Technical Advisor@Rs. 0.200 per month	-	2.400	2.400	4.800
2	Development of Area frame 4 mn-months @ Rs.0.1000 month	-	0.400	-	0.400
3	Ground Turthing Surveys	-	0.300	0.300	0.600
	Remote Scientist image processing 9 man months each	-	0.900	0.900	1.800
4	year	-			
5	Crop Yield Modeling Expert 9 man-months/year	-	0.900	0.900	1.800
	Total (C)	0.000	4.900	4.500	9.400
					29.26
	Total (A+B+C)	0.000	20.336	8.926	2

**DETAIL OF EXPENDITURE REQUIREMENT FOR AGRICULTURAL
SURVEY THE SRS/GIS OF FOUR DISTRICTS**

Equipment Requirements

Equipment	Nos.	Unit (In Million Rs.)	Total cost (In Million Rs.)
Computer with Printer & Accessories	06	0.075	0.450
Laptop	02	0.125	0.250
UPS	06	0.020	0.120
GPS	03	0.050	0.150
Invertors	02	0.015	0.030
Colour Printer	01	0.120	0.120
Colour Plotter	01	1.300	1.300
Scanner	01	0.010	0.010

Software Requirements

Software	No. of licenses		
Arc Map with image Analyst	01	5.540	5.540

Training Requirements

10 days training on RS/GIS for 16 Officials (4 from each district at vendor station)	16 Officials	0.030	0.480
TA/DA for 16 Officials	16 Officials	0.060	0.960
10 Days hands on training at home station (8 days in field and 2 days in lab)	20 Officials	0.050	1.000
TA/DA for 20 Officials	20 Officials	0.030	0.600

Imagery Requirements

One set of 5 meter resolution colour imaginary for each crop seasons.	10 imagery per year	0.400 per 60 km x 60 km SPOT 5 Scene Total for 10 imaginary Rs.4.000 Mill: / year	8.000 for two years
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Stationery Requirements

Large Size paper roll for plotter	16 Roll (4 for each district per year)	Rs. 0.020 M per roll Total for one year Rs.0.320 M	Rs. 0.640 Mill: for two years
Paper size A4 Packets	20 per year	Rs. 0.0003 per packet Total for one year Rs.0.006 per year	Rs. 0.012 Mill: for two years

Consultancy Services

Chief Technical Advisor	1 per year	Rs. 0.200 per month Total for one year Rs.2.400 per year	Rs. 4.800 Mill: for two years
Development of Area Frame Work	4 man- month	Rs. 0.100 per month Total for one year Rs. 0.400 per year	Rs. 0.400 Mill: for two years
Ground Turthing Surveys	-	Rs. 0.300 per year	Rs. 0.600 Mill: for two years.
Remote Scientist Image processing	9 man-month per year	Rs. 0.100 per month Total for one year Rs. 0.900 per year	Rs. 1.800 Millions for two years
Crop Yield Modeling Expert	9 man-month per year	Rs. 0.100 per month Total for Rs. 0.900 Million per year	Rs. 1.800 Millions for two years.

**ITEM WISE JUSTIFICATION OF THE REQUIREMENTS FOR
STRENGTHENING OF CROP REPORTING SERVICE IN SINDH**

(In Million Rs.)

S.No.	Item	Amount	Justification
1.	Pickups (2Nos.)	3.000	Twenty vehicles for 20 districts have been provided by Federal Government however for the remaining two districts, two vehicles for district Umerkot, and Nawabshah are being proposed from this project.
2.	Computers (12 Nos.)	0.900	During the violence on 27 th December 2007, six offices were burnt by the terrorist in which six computers were also burnt hence six computers for these offices and 4 computers for statistician offices (2 for each) and two for HQ are proposed from this project.
3.	Colour laser jet Printer (1No.)	0.050	For the colour prints for presentation and publishing work one colour laser jet printer is being proposed from this project.
4.	Multimedia Projector (1No.)	0.125	For the presentations at various places / meetings, one multimedia projector is being proposed from this project.
5.	Photostat Machines (2Nos.)	0.300	For the Photostat work at statistician offices, two Photostat machines are being proposed for statistician offices.
6.	Fax Machines (8Nos.)	0.120	During the violence on 27 th December 2007, six offices were burnt by the terrorist in which six Fax Machines were also burnt hence six fax machines for these offices and 2 fax machines for statistician offices (1 for each) are proposed from this project.
7.	Survey Kits (128 Nos.)	0.640	Due to increase Nos. of dehs and crops 128 posts of crop reporters have been demanded through this project for which 128 survey kits are being demanded.
8.	Electric Generator (1No.)	0.500	Due to load shading and other reasons always the Directorate is facing the crises of electricity hence one new electric generator is being proposed in this project so that the computer work may not be hampered.

9.	Safe (1No.)	0.050	To save the cash in office, a safe is proposed from this project. Prior this, such facility is not available with the Directorate.
10.	UPS (1No.)	0.020	To avoid from the shock hazards to computers from electricity one UPS is proposed in this project.
11.	Air Conditioner (2Nos.)	0.130	Two Air Conditioners are required for Computer Room and director Office hence the requirement is proposed from this project.
12.	Pay of Staff	58.890	With the increase in Nos. of dehs and crops some new more staff is need to collect the reliable data for which 239 new posts are proposed in this project hence an amount of Rs. 58.890Million is proposed for three years from this project to meet the requirement of pay.
13.	Repair of Vehicles	1.800	For the repair of existing vehicles being used for collection of data and supervision work of crop reporters an amount of Rs. 1.800 Million is proposed for three years in this project to meet the requirement
14.	Repair of equipments	0.450	For the repair of existing and new equipment an amount of Rs.0.450 Million is proposed for three years in this project to meet the requirement
15.	TA / DA	20.00	For the collection of data the field staff has to travel in far flung areas and they needs TA / DA for which an amount of Rs. 20.00 Million is proposed for three years to meet the requirement.
16.	POL	9.240	For the collection of data and supervision work the vehicles of field staff as well as Statistician and Directorate vehicles have to travel in far flung areas and they needs POL for which an amount of Rs. 9.240 Million is proposed for three years to meet the requirement.
17.	Postage & Stamp	0.180	To meet the requirement of expenditure on postage and courier for Directorate, Statistician offices, District Offices and field offices, an amount of Rs. 0.180 Million has been proposed for three years for the purpose.

18.	Telephone	1.100	To meet the requirement of expenditure on telephone and fax for Directorate, Statistician offices, District Offices and field offices, an amount of Rs. 1.100 Million has been proposed for three years for the purpose.
19.	Office Stationery	1.000	To meet the requirement of expenditure on stationery for Directorate, Statistician offices, District Offices and field offices, an amount of Rs. 1.00 Million has been proposed for three years for the purpose.
20.	Printing Charges	0.300	To print the survey proforma, Girdwari register and survey manual and partial books, an amount of Rs. 0.300 million is proposed for three years to meet the requirement.
21.	Newspapers	0.030	To purchase the newspapers and books, an amount of Rs. 0.030 Million is proposed for three years to meet the requirement.
22.	Hot & Cold	0.030	To meet the requirement of cold & hot weather charges an amount of Rs. 0.030 million is proposed to meet the requirement.
23.	Rent of Office Building	22.200	Presently no any own office accommodation with the crop reporting service hence an amount of Rs. 22.200 million is proposed for three years to meet the rent charges at the rate of Rs. 50000 per month for Directorate at Hyderabad Rs. 15000 per month for Statistician at Sukkur Rs. 10000 for Assistant Directors at 22 Districts H/Q and Rs. 7000 per month for 65 Field Offices at Taluka field Offices.
24.	Daily Contingent paid labour (DPL)	1.050	To asses the yield, crop cutting is being needed for selected plots for which labour is required hence an amount of Rs. 1.050 million is proposed to meet the requirement.
25.	Electricity Charges	0.720	To meet the electricity charges requirement an amount of Rs. 0.720 million has been proposed from this project.

26.	Gas charges	0.075	To meet the gas charges requirement an amount of Rs. 0.075 million has been proposed from this project.
27.	Water Charges	0.075	To meet the water charges requirement an amount of Rs. 0.075 million has been proposed from this project.
28.	Other Miscellaneous	5.261	To meet the unforeseen expenditure to be occurred in the Directorate, Statistician office, district office and field offices, an amount of Rs.5.261 million is proposed to meet the requirement.
29.	Training of Staff	0.440	has been proposed for Staff Training

ITEM WISE JUSTIFICATION OF THE REQUIREMENTS FOR SRS/GIS

(In Million Rs.)

S.No.	Item	Amount	Justification
1.	Computer P-IV with Printer And Accessories (6Nos.)	0.450	To establish the RS/GIS laboratories at four districts and Head quarter six computers (4 for district and 2 for HQ) are essentially required which has been proposed through this project.
2.	Laptop (2Nos.)	0.250	To collect data in the field, two teams to be constituted for survey work, hence to each team one laptop will be required. Therefore two laptops have been proposed from this project.
3.	UPS (6Nos.)	0.120	To establish the RS/GIS laboratories at four districts and Head quarter six UPS (4 for district and 2 for HQ) are essentially required for smooth working without break due to breakdown of electricity which has been proposed through this project.
4.	GPS (3Nos.)	0.150	To collect data in the field, two teams to be constituted for survey work, hence to each team, one GPS (with one extra) will be required. Therefore three GPS have been proposed from this project.
5.	Inverters (2Nos.)	0.060	To collect data in the field, two teams to be constituted for survey work, hence to each team, one inverter will be required. Therefore eight inverters have been proposed from this project.
6.	Colour laser jet Printer (1No.)	0.120	To establish the RS/GIS laboratory at Head quarter one colour printer is essentially required which has been proposed through this project.
7.	Colour Plotter (1No.)	1.300	To establish the RS/GIS laboratory at Head quarter one colour plotter is essentially required which has been proposed through this project.
8.	Scanner (1No.)	0.010	To establish the RS/GIS laboratory at Head quarter one scanner is essentially required which has been proposed through this project.
9.	Software (Arc Map with image analysis.	5.540	To establish the RS/GIS laboratories at four districts a software with license are essentially required which has been proposed through this project.
10.	10 days training on RS/GIS for 16 Officials	0.480	Since the GIS is new one technology to be implemented in the province for crop data collection hence it is necessary that in each district four trained man power may be available to implement the activity hence

			the training of 16 officials is proposed.
11.	10 days hands on training at home station for twenty officials	1.000	Since the GIS is new one technology to be implemented in the province for crop data collection hence it is necessary that in each district five trained man power may be available to implement the activity hence the training of 20 officials is proposed.
12.	TA / DA	1.560	Since the training will be conducted at Islamabad and Hyderabad hence for the trainee staff, the TA/DA is essentially required for which an amount of Rs. 1.560 Million has been proposed to meet the requirement.
13.	Imagery requirement	8.000	Since the for the survey images from satellite will be required hence to meet the expenditure requirement for the purpose an amount of Rs. 8.000 million is proposed to meet the requirement.
14.	Metrological data charges	0.200	For the yield estimation, the metrological data is very essential hence an amount of Rs. 0.200 million for two years has been proposed to meet the data charges from metrological department.
15.	Stationery requirement.	0.652	To implement the activity of RS/GIS the stationery will be required for which an amount of Rs. 0.652 Millions are proposed to meet the requirement.
16.	Consultancy charges.	9.400	Since the RS/GIS technology is new one hence the consultants will be required in various fields for two years hence an amount of Rs. 9.400 Million is proposed to meet the requirement. The detail of consultancy requirement is shown at page No. 35 and its ToR is attached at page No.44 to 46

TERMS AND CONDITIONS FOR THE EXPERTS TO BE HIRED BY THE PROJECT

1. Chief Technical Advisor/ Consultant Agronomy (1) (24 man months)

Qualification:

- Should have a Ph. D Degree in agronomy from a university of international repute.

Experience:

- Should have 20 years experience planning and management of cropping systems on country wide basis;
- Of this, must have, at least 3 years field experience in monitoring of crops through satellite technology in a reputable organization
- Should have strong /demonstrated capacity for manuscript writing, developing projects, coordination with provincial/ federal government and making presentations to Planning Commission/Federal /Provincial Governments;

Terms of Reference (TORs):

- Will be overall responsible for program development, execution and coordination of all the activities of the project/professionals to be hired from private sector.
- Will be responsible for planning and coordination of field /lab programs: image acquisition scheduling, field surveys, monitoring of girdawari, development of field manuals, running of field schools, training programs, developing crop cut techniques and their monitoring, manuscript development, making presentations, other assignments.
- Coordinate with SUPARCO, the national SPACE Agency of Pakistan for field ,lab , image classification and yield modeling work.
- Supervise and coordinate the activities of the consultants hired by the project
- **Duty Station:** Hyderabad; will move to other outstations within the province/ country as may be required under the program.

2. CROP YIELD /PRODUCTION MODELING EXPERT (18 man months)

Qualifications:

M. Sc in Agronomy or Soil Science or Entomology or Plant Breeding with at least 2 years experience in satellite based yield –production regression modelling / forecasting / estimation in Pakistan preferably in the national space agency.

Terms of Reference (TORs):

- a) Should develop a data base for the yield regression parameters as agro-met. data, sunshine duration, agricultural statistics, yield, vegetation index , fertilizers and irrigation water. Particular attention will be given to the integration of data from different administrative levels to ensure their compatibility.
- b) Calibrate a central and decentralised system of crop yield estimation in the country, in consultation with all partners at the provincial / sub provincial levels.
- c) Should have a command in use of soft wares as ARC GIS for analysis of the satellite imagery and in Agro-met Shell (for data entry, archiving and analysis of agro-meteorological data to be used for yield forecasting).
- d) Process and analyze the historical datasets and integration with other agro-meteorological data and information (i.e. phenological, rainfall analysis, crop stages and condition, soil moisture, and satellite images) in order to run the yield forecasting model for each agro-ecological zone in Pakistan.
- e) Should be able to forecast yield and production of major crops and for the purpose should have practical experience of this discipline.

Duty Station: Hyderabad: will be required to move within provinces and other duty stations in the country as may be required.

3. AREA FRAME AND SAMPLE DESIGNING EXPERT :

(4 man months)

Qualification:

Should have M.Sc degree in Agronomy or Agro-meteorology or Statistics from a university of international repute .

Experience:

- Should have at least one year experience in Area Frame /sample designing in Pakistan.

Terms of Reference (TORs):

- Will be responsible to develop Area frames/ sample designs based on remote sensing/GIS for developing crop yield /production forecast and estimation models for wheat, cotton, rice, sugarcane and maize crops.

Duty Station: Hyderabad; will move to other outstations within the province/ country as may be required under the program.

4. Remote Science Expert:

Qualification

Should have an M.Sc degree in the discipline of remote sciences from a university of repute;

Experience:

Must have three years experience in the discipline of image acquisition, interpretation, ground truthing , development of spectral signatures from training samples , image classification and crop area estimations.

Terms of Reference (TORs):

Will be responsible to plan, develop area / crop acquisition schedules , print imagery and able to use GPS equipment for on line tracking /ground truthing, have expertise in use of ARC GIS and similar other softwares and should be responsible to classify images and extract information on area ` sown under various crops.

Duration: 18 man months

Duty Station: Hyderabad; will move to other outstations within the province/ country as may be required under the program.

**RECURRING EXPENDITURE AFTER COMPLETION OF THE PROJECT
"STRENGTHENING OF CROP REPORTING SERVICE SINDH"**

#	Item	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total
A	Pay & allownaces (CRSS)	20.723	21.759	22.847	23.989	25.188	114.506
	Sub-total	20.723	21.759	22.847	23.989	25.188	114.506
B	Recurring Expenditure						
1	Repair of vehicles	1.050	1.103	1.158	1.216	1.276	5.802
2	Repair of Mach. & Equipments	0.158	0.165	0.174	0.182	0.191	0.870
3	TA/DA	10.500	11.025	11.576	12.155	12.763	58.019
4	POL	5.250	5.513	5.788	6.078	6.381	29.010
5	Postage & Stamp	0.063	0.066	0.069	0.073	0.077	0.348
6	Telephone	0.420	0.441	0.463	0.486	0.511	2.321
7	Office Stationery	0.420	0.441	0.463	0.486	0.511	2.321
8	Printing Charges	0.105	0.110	0.116	0.122	0.128	0.580
9	Newspapers & Books	0.011	0.011	0.012	0.012	0.013	0.058
10	Hot & Cold	0.011	0.011	0.012	0.012	0.013	0.058
11	Rent of Office Buildings	12.978	13.627	14.308	15.024	15.775	71.712
12	Rent, Rate & Taxes	0.026	0.028	0.029	0.030	0.032	0.145
13	Contigent paid labour (DPL)	0.420	0.441	0.463	0.486	0.511	2.321
14	Electricity Charges	3.160	3.170	3.180	3.190	3.200	15.900
15	Gas Charges	0.032	0.033	0.034	0.035	0.036	0.170
16	Water Charges	0.013	0.013	0.013	0.014	0.015	0.068
17	Other Miscellaneous	3.200	3.300	3.400	3.600	3.700	17.200
	Sub-total	37.816	39.497	41.257	43.201	45.131	206.902
C	Recurring Exp: for RS/GIS						
1	Imaginary requirements	4.200	4.410	4.631	4.862	5.105	23.208
2	RS/GIS Expert Requirement	1.764	1.852	1.945	2.042	2.144	9.747
3	Metiological Data Charges	0.105	0.110	0.116	0.122	0.128	0.580
4	Stationery Requirement	0.342	0.360	0.378	0.396	0.416	1.892
	Sub-total	6.411	6.732	7.069	7.422	7.793	35.427
D	Training of Staff	0.000	0.500	0.500	0.750	0.750	2.500
	Total	64.950	68.488	71.673	75.361	78.862	359.335