

IRRIGATION

Irrigation sector under province's medium term development framework covers the programs and projects relating to the irrigation, drainage, groundwater, flood management & mitigation, development of small dams and environment, sub sectors.

IMPORTANCE OF IRRIGATION SECTOR IN PUNJAB

Irrigated agriculture is the major determinant of economic growth potential of the province as it accounts for 26 percent of the GDP and caters for over 40 percent of the province's work force. Over 90 percent of agricultural output in Punjab comes from farmlands irrigated by one of the largest contiguous irrigation systems in the world. The colossal irrigation conveyance network is serving 21 million acres (8.4 million hectare) cultivable command area with cropping intensities generally exceeding 120 percent. The vast irrigation system in the province, however, faces major irrigation and drainage challenges with serious economic, environmental and social implications. Hydraulic infrastructure has deteriorated and large deficits in (O&M) maintenance have led to sub-optimal service delivery levels characterized by low water conveyance efficiencies and inequitable water deliveries. Replacement cost for Punjab Irrigation infrastructure including barrages and conveyance network is estimated as Rs. 1600 billion whereas estimated cost for rehabilitation and deferred maintenance need is Rs. 170 billion. Consequently, development in the sector needs to enshrine rehabilitation, improvement and modernization of infrastructure coupled with holistic reforms aiming at integrity and sustainability of the system through improved management and service delivery levels.

APPROACHING LEVEL OF WATER SCARCITY

Pakistan and especially Punjab is approaching water stress and there is persistent level of inefficient use of existing water, both within the irrigation system and at the farm level. Losses in our irrigation system are extremely high, and most of the available water is lost in water channels and in farms. Pakistan may become a water scarce country in the near future, which makes it critical to invest in much better utilization of our precious water resources.

VISION

Long term vision for Punjab Irrigation Sector is to provide adequate, equitable and reliable irrigation supplies to the cultivable lands of Punjab aiming at enhanced agricultural productivity with focus on broad based institutional reforms.

SECTOR OVERVIEW

Irrigated agriculture is the major determinant of economic growth potential of the province as it accounts for 26 percent of the GDP and caters for over 40 percent of the province's work force. Over 90 percent of agricultural output in Punjab comes from farmlands irrigated by one of the largest contiguous irrigation systems in the world. The colossal irrigation conveyance network is serving 21 million acres (8.4 million hectare) cultivable command area with cropping intensities generally exceeding 120 percent. The vast irrigation system in the province, however, faces major irrigation and drainage challenges with serious economic, environmental and social implications. Hydraulic infrastructure has deteriorated and large deficits in (O&M) maintenance have led to sub-optimal service delivery levels characterized by low water conveyance efficiencies and inequitable water deliveries. Replacement cost for Punjab Irrigation infrastructure including barrages and conveyance network is estimated as Rs. 1600 billion whereas estimated cost for rehabilitation and deferred maintenance need is Rs. 170 billion. Consequently, development in the sector needs to enshrine rehabilitation, improvement and modernization of infrastructure coupled with holistic reforms aiming at integrity and sustainability of the system through improved management and service delivery levels.

ISSUES AND OPTIONS

Key issues of Punjab's irrigation sector are:-

- Growing water shortages, which are further worsened in periods of drought.
- The irrigation and drainage infrastructure has deteriorated overtime due to a combination of age, chronic under-funding of maintenance and repair (M&R), and lack of appropriate asset management planning.
- Gaps in meeting financial sustainability of the system owing to low recovery of abiana, inefficient operational regimes, and low M&R funding.
- Non-transparent water entitlements and distribution.

- Lack of participatory approach in operations, maintenance and management of irrigation services leading to inefficiencies, inequities and lack of ownership by users.
- Imprudent and inefficient utilization and management of groundwater.

KEY STRATEGIES FOR IRRIGATION SECTOR MTDF (2014-18)

Key strategies underpinning the sector's development outlay under province's MTDF (2014-15 to 2017-18) are to:-

- Implement structural measures for optimal utilization of surface water resources.
- Plan effective utilization of public investments for modernization of irrigation infrastructure
- Develop and practice holistic approaches to optimize surface and groundwater use efficiencies with the aim to maximize agricultural productivity of irrigated lands.
- Mitigate environmental degradation and groundwater mining
- Extend broad-based institutional reforms already initiated in the province to achieve improved service delivery targets.
- Extend and improve drainage, flood protection, hill torrent management and command area development interventions in reverine and rain-fed (barani) areas.

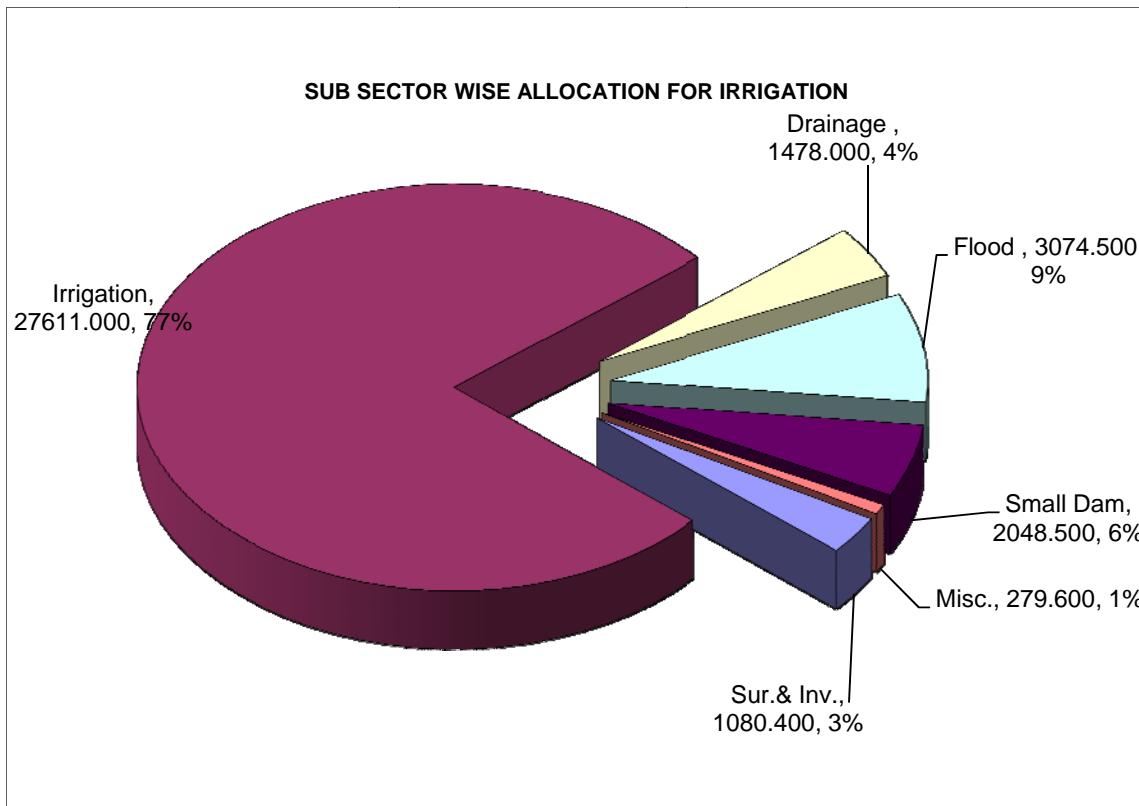
TREND OF ALLOCATIONS

Rs. in Million

Sr. No.	Year	Allocation
1	2010-11	11,005
2	2011-12	10,850
3	2012-13	11,250
4	2013-14	22,401
5	2014-15	35,572

SALIENT FEATURES OF SECTOR'S MTDF (2014-18)

Irrigation sector's total outlay for the year 2014-15 is planned as Rs.35.572 billion. These allocations show 59% increase from ADP 2013-14 and constitute about 12% of the core ADP (2014-15) budget under the MTDF 2014-18. Project outlays for the sector in years 2015-16, 2016-17 and 2017-18 are Rs.50 billion, 67 billion and Rs.91 billion respectively. Out of the total 106 schemes included in MTDF 2014-15, 54 schemes comprising 29 on-going and 25 new schemes have been targeted for completion during 2014-15 by allocating 83% of outlay to the on-going and 17 % to new schemes.



Government of the Punjab being cognizant to safety of major hydraulic structures for sustained supply of canal water to crops and mitigation of flood hazards has planned efficient remodelling of its irrigation network besides envisioning a phased rehabilitation and modernization of barrages. As first of the programmatic series, rehabilitation of Taunsa Barrage was completed in December 2009. Present ADP (i.e., 2014-15) includes rehabilitation of Jinnah Barrage, Khanki, Balloki, Slemanki, Trimmu and Punjad Head works with estimated costs of Rs.12.7 billion, Rs. 23.4 billion, Rs. 2.4 billion, Rs. 3.0 billion, Rs. 12.1 billion and Rs.6.0 billion respectively. Substantial allocations have been provided in current fiscal year to Complete Jinnah Barrage, construction of main barrage Khanki and Balloki Head

works, launch execution of Sulemanki Barrage and preparatory work on Trimmu and Punjab Head works. Major targets for other key initiatives in the sector are given below:-

MTDF TARGETS FOR FINANCIAL YEAR 2014-15

Sectoral Initiatives	Targets (FY 2014-15)
Assured and sustainable irrigation supplies	10 million acre
Selective lining of irrigation channels	400 km
Lower Bari Doab Canal Improvement Project	(a): Balloki Headworks (b): Main canal and distribution network
Punjab Irrigated Agriculture Improvement Program (PIAIP)	Feasibility studies and Detail design of: Link canal and irrigated agriculture of Cholistan
Rehabilitation of LCC System (Part-B)	Mian Ali, Lower Gugera, Burala and Rakh Branch canal commands
Establishing FOs in Faisalabad (LCC), Bahawalnagar (Sadiqia & Fordwah) and DG Khan (DGK) canal commands	192 No
Construction of Small Dams: <ul style="list-style-type: none"> • Shahbazpur, Taja Bara, Sadrial, Haji Shah and Sowrra Dams in district Attock • Arrarar Mughlan and Tamman Dams in District Chakwal • Chahan and Mohata Dams in District Rawalpindi • Pindori and Sihal Khinger Dams in District Jhelum 	11,920 acres command area 7,600 acres command area 17,000 acres command area 3,500 acrse command area
Construction of Cherah Dam (Rawalpindi – Islamabad)	Land acquisition completed, construction of main dam to commence
Rehabilitation & Modernization of Jinnah Barrage	i) Construction of coffer dam ii) Works on main and subsidiary

	Weir to commence.
New Khanki Barrage Construction Project	Construction of coffer dam ii) Works on main and subsidiary Weir to commence.
Punjab Irrigation System Improvement Project.	Lining and remodelling of distributaries and minors in Sadiqia, DG Khan and Jhang Branch canal commands
Remodelling of SMB Link Canal and Enhancing Capacity of Mailsi Syphon	Detailed designing , launching of preparatory activities and remodelling of structures
Management of Hill Torrents in CRBC area stage III, Vidore. Sori Lund and Kaha in DG Khan Irrigation Zone	i. Embankment construction ii. Flood dispersion and distribution structures
Pakpattan Canal and Sulemanki Barrage Improvement Project.	i) Deployment of consultants & counterpart staff ii) Construction of coffer dam
Rehabilitation and up-gradation of Trimmu Barrage, Punjab Head works	i) Deployment of consultants & counterpart staff

MTDF 2014-17
IRRIGATION
DEVELOPMENT PROGRAMME 2014-15

Sub-Sector	Capital	Revenue	Total	F. Aid	Total	(Million Rs.)
Ongoing						
Survey, Investigation & Research.	246.300	25.000	271.300	0.000	271.300	
Irrigation.	1,795.000	0.000	1,795.000	0.000	1,795.000	
Drainage & Recalamation	493.000	0.000	493.000	0.000	493.000	
Flood Works.	1,285.500	0.000	1,285.500	0.000	1,285.500	
Small Dams	1,213.500	0.000	1,213.500	0.000	1,213.500	
Buildings	124.600	0.000	124.600	0.000	124.600	
Foreign Aided Project.	2,500.000	87.100	2,587.100	21,722.000	24,309.100	
Total	7,657.900	112.100	7,770.000	21,722.000	29,492.000	
New Schemes						
Survey, Investigation & Research.	500.000	0.000	500.000	0.000	500.000	
Irrigation.	1,706.000	0.000	1,706.000	0.000	1,706.000	
Drainage & Recalamation	985.000	0.000	985.000	0.000	985.000	
Flood Works.	1,789.000	0.000	1,789.000	0.000	1,789.000	
Small Dams	835.000	0.000	835.000	0.000	835.000	
Buildings	80.000	0.000	80.000	0.000	80.000	
Misc. Works	75.000	0.000	75.000	0.000	75.000	
Foreign Aided Project.	10.000	0.000	10.000	100.000	110.000	
Total	5,980.000	0.000	5,980.000	100.000	6,080.000	
Total (ongoing+new)	13,637.900	112.100	13,750.000	21,822.000	35,572.000	

DEVELOPMENT PROGRAMME 2015-16

Ongoing Schemes						
Survey, Investigation & Research.	93.000	0.000	93.000	0.000	93.000	
Irrigation.	4,000.000	0.000	4,000.000	0.000	4,000.000	
Drainage & Recalamation	2,800.000	0.000	2,800.000	0.000	2,800.000	
Flood Works.	3,635.000	0.000	3,635.000	0.000	3,635.000	
Small Dams	4,397.000	0.000	4,397.000	0.000	4,397.000	
Misc. Works	75.000	0.000	75.000	0.000	75.000	
Foreign Aided Project.	3,500.000	0.000	3,500.000	23,500.000	27,000.000	
Total	18,500.000	0.000	18,500.000	23,500.000	42,000.000	
New Schemes						
Survey, Investigation & Research.	500.000	0.000	500.000	0.000	500.000	
Irrigation.	1,700.000	0.000	1,700.000	0.000	1,700.000	
Drainage & Recalamation	600.000	0.000	600.000	0.000	600.000	
Flood Works.	500.000	0.000	500.000	0.000	500.000	
Small Dams	835.000	0.000	835.000	0.000	835.000	
Buildings	80.000	0.000	80.000	0.000	80.000	
Misc. Works	75.000	0.000	75.000	0.000	75.000	
Foreign Aided Project.	410.000	0.000	410.000	3,300.000	3,710.000	
Total	4,700.000	0.000	4,700.000	3,300.000	8,000.000	
Total (ongoing+new)	23,200.000	0.000	23,200.000	26,800.000	50,000.000	

DEVELOPMENT PROGRAMME 2016-17

Ongoing Schemes						
Survey, Investigation & Research.	100.000	0.000	100.000	0.000	100.000	
Irrigation.	10,000.000	0.000	10,000.000	0.000	10,000.000	
Drainage & Recalamation	4,000.000	0.000	4,000.000	0.000	4,000.000	
Flood Works.	3,000.000	0.000	3,000.000	0.000	3,000.000	
Small Dams	7,000.000	0.000	7,000.000	0.000	7,000.000	
Buildings	100.000	0.000	100.000	0.000	100.000	
Misc. Works	100.000	0.000	100.000	0.000	100.000	
Foreign Aided Project.	3,500.000	0.000	3,500.000	27,200.000	30,700.000	
Total	27,800.000	0.000	27,800.000	27,200.000	55,000.000	
New Schemes						
Survey, Investigation & Research.	200.000	0.000	200.000	0.000	200.000	
Irrigation.	3,500.000	0.000	3,500.000	0.000	3,500.000	
Drainage & Recalamation	600.000	0.000	600.000	0.000	600.000	
Flood Works.	500.000	0.000	500.000	0.000	500.000	
Small Dams	1,500.000	0.000	1,500.000	0.000	1,500.000	
Buildings	100.000	0.000	100.000	0.000	100.000	
Misc. Works	100.000	0.000	100.000	0.000	100.000	
Foreign Aided Project.	600.000	0.000	600.000	4,900.000	5,500.000	
Total	7,100.000	0.000	7,100.000	4,900.000	12,000.000	
Total (ongoing+new)	34,900.000	0.000	34,900.000	32,100.000	67,000.000	
IRRIGATION MTDF 2014-17: GRAND TOTAL						152,572.000

IRRIGATION: SUMMARY

(Million Rs.)

Type / Sub Sector	No. of Schemes	Provision for 2014-15				Projection for 2015-16	Projection for 2016-17
		Capital	Revenue	Foreign Aid	G. Total (Cap+Rev)		
<u>ON-GOING SCHEMES</u>							
SURVEY INVESTIGATION & RESEARCH	3	246.300	25.000	0.000	271.300	0.000	0.000
IRRIGATION	13	1,795.000	0.000	0.000	1,795.000	1,639.100	1,200.000
DRAINAGE	4	493.000	0.000	0.000	493.000	449.500	0.000
SMALL DAMS	8	1,213.500	0.000	0.000	1,213.500	1,728.620	890.410
BUILDINGS	2	124.600	0.000	0.000	124.600	0.000	0.000
FOREIGN AIDED PROJECTS	9	2,500.000	87.100	21,722.000	24,309.100	23,165.000	2,229.179
FLOOD WORKS	9	1,285.500	0.000	0.000	1,285.500	0.000	0.000
Total: ON-GOING SCHEMES	48	7,657.900	112.100	21,722.000	29,492.000	26,982.220	4,319.589
<u>NEW SCHEMES</u>							
SURVEY INVESTIGATION & RESEARCH	12	500.000	0.000	0.000	500.000	93.000	0.000
IRRIGATION	16	1,706.000	0.000	0.000	1,706.000	2,438.970	150.000
DRAINAGE	7	985.000	0.000	0.000	985.000	2,450.000	1,165.000
SMALL DAMS	6	835.000	0.000	0.000	835.000	2,381.000	1,134.000
BUILDINGS	1	80.000	0.000	0.000	80.000	0.000	0.000
FOREIGN AIDED PROJECTS	1	10.000	0.000	100.000	110.000	4,000.000	5,000.000
FLOOD WORKS	14	1,789.000	0.000	0.000	1,789.000	3,738.000	1,765.000
MISC	1	75.000	0.000	0.000	75.000	75.000	0.000
Total: NEW SCHEMES	58	5,980.000	0.000	100.000	6,080.000	15,175.970	9,214.000
Grand Total	106	13,637.900	112.100	21,822.000	35,572.000	42,158.190	13,533.589

IRRIGATION

(Million Rs.)

GS No	Scheme Information Approval Date / Location / scheme ID	Est. Cost	Accum. Exp June,14	Provision for 2014-15			MTDF Projections		Throw fwd Beyond June, 2017
				Cap	Rev	G. Total (Cap+Rev)	2015-16	2016-17	
1	2	3	4	5	6	7	8	9	10

ON-GOING SCHEMES

SURVEY INVESTIGATION & RESEARCH

1664	Feasibility Study of Dadocha Dam 08.10.2013 Rawalpindi , Kalar syda, Kahota 19-1302000-003	48.260	5.000	43.300	0.000	43.300	0.000	0.000	0.000
1665	Hiring of Consultancy Services for Monitoring of Projects under Provincial Development Program 26-11-2012 Lahore 19-1218000-001	633.675	431.364	203.000	0.000	203.000	0.000	0.000	0.000
1666	Establishment of Strategic Planning/Reform Unit in Irrigation and Power Department (Initiatives under Development Policy Loan-Strategic Planning Cell, Ground Water Management Environment Improvement, Institutional Reforms and Communication Strategization, 31.01.2014 Lahore 19-1418000-002	117.281	92.622	0.000	25.000	25.000	0.000	0.000	0.000
Sub-Total: SURVEY INVESTIGATION & RESEARCH		799.216	528.986	246.300	25.000	271.300	0.000	0.000	0.000

IRRIGATION

1667	Rehabilitation of Jhang Branch Upper 8.8.2009 Jhang 19-0910000-004	889.929	544.000	250.000	0.000	250.000	96.000	0.000	0.000
1668	Protecting Banks of Rasul Qadirabad Link Canal From RD 129+000 to RD 145+256(tail) Approved Mandi Bahauddin 19-1415000-005	86.574	59.998	26.600	0.000	26.600	0.000	0.000	0.000
1669	Rehabilitation of BRBD Link Canal RD 178+000 to 260+000 8.8.2009 Sheikhupura , Ferozwala 19-0921198-006	418.000	286.108	52.000	0.000	52.000	80.000	0.000	0.000
Sub-Total: IRRIGATION									
1670	Rehabilitation of Muridke Distributary System. Approved Sheikhupura , Muridke 19-1421199-007	324.832	214.518	110.400	0.000	110.400	0.000	0.000	0.000
1671	Rehabilitation of Shahdara Distributary System. 23.04.2013 Sheikhupura , Ferozwala 19-1321198-008	404.512	215.453	150.000	0.000	150.000	39.100	0.000	0.000
1672	Remodeling of SMB Link RD. 0-374983 Tail and Bahawal Canal Lower from RD. 152-239580 23.08.06 Vehari , Mailsi 19-0623207-009	374.000	373.000	1.000	0.000	1.000	0.000	0.000	0.000

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1	2	3	4	5	6	7	8	9	10
1673	Remodeling of SMB Link Canal and Enhancing Capacity of Mailsi Syphon 29.08.2012 Vehari , Mailsi 19-1223207-016	2,571.088	20.000	500.000	0.000	500.000	1,000.000	1,050.000	0.000
1674	Construction of Gujrat Disty and Salman Minor to Mitigate Tail Shortage in Basira Sub Division Approved Muzaffargarh , Kot Addu 19-1432308-015	158.711	145.479	12.000	0.000	12.000	0.000	0.000	0.000
1675	Rehabilitation of 6-L/Ahmedpur (AP)Branch 8.8.2009 Bahawalpur , Ahmedpur 19-0933243-010	246.365	148.211	99.000	0.000	99.000	0.000	0.000	0.000
1676	Remodeling of Behari Disty RD 0-54860 with System. 08.11.08 Rahim Yar Khan , Khanpur 19-0835251-012	492.550	143.805	100.000	0.000	100.000	150.000	150.000	0.000
1677	Rehabilitation of Bhong Disty System 8.8.2009 Rahim Yar Khan , Sadiqabad 19-0935253-013	273.355	248.340	30.000	0.000	30.000	0.000	0.000	0.000
1678	Selective Lining of Irrigation Channels in Punjab Phase-II 8.8.2009 Punjab 19-0999000-014	990.000	626.031	364.000	0.000	364.000	0.000	0.000	0.000
1679	Rehabilitation of Noshera Distributary System. Approved Gujranwala, Noshera 19-1488000-011	608.943	235.000	100.000	0.000	100.000	274.000	0.000	0.000
Sub-Total: IRRIGATION		7,838.859	3,259.943	1,795.000	0.000	1,795.000	1,639.100	1,200.000	0.000
DRAINAGE									
1680	Enhancing Capacity of Charar Drain to Catter for Rain Water of Ring Road(Revised). 29.08.2012 Lahore 19-1218187-017	491.809	183.712	100.000	0.000	100.000	209.000	0.000	0.000
1681	Construction of Suknai Drain RD 610+000 to RD 1250+000. 12.02.09 Sahiwal 19-0924000-018	994.410	798.990	150.000	0.000	150.000	45.500	0.000	0.000
1682	Providing Drainage System within Command Area of 3-R Abbassia Canal. 28.11.08 Rahim Yar Khan , Liaqatpur, Khanpur 19-0835000-019	737.384	342.616	200.000	0.000	200.000	195.000	0.000	0.000
1683	Rehabilitation of Drainage System in Sargodha Irrigation Zone 03-02-12 Sargodha, Gujrat, Jhelum, Mandi Bahauddin, Khushab, Mianwali 19-1288000-020	257.538	214.358	43.000	0.000	43.000	0.000	0.000	0.000
Sub-Total: DRAINAGE		2,481.141	1,539.676	493.000	0.000	493.000	449.500	0.000	0.000

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SMALL DAMS

1684	Constructon of Cherah Dam Rawalpindi 26-03-09 Rawalpindi 19-0902000-021	1,600.000	179.710	192.500	0.000	192.500	600.000	627.790	0.000
1685	Construction of Chahan Dam Project 17.05.2013 Rawalpindi 19-1302000-022	1,567.430	504.810	250.000	0.000	250.000	262.620	162.620	0.000
1686	Construction of Small Dams in Disst: Attock (Haji Shah Dam) 31.03.2012 Attock , Hazro 19-1201109-023	358.243	309.793	49.000	0.000	49.000	0.000	0.000	0.000
1687	Construction of Small Dams in District Attock Phase-II (Shahbazpur, Tajabara and Sadrial Dam). 22.10.2011 Attock 19-1101000-024	668.580	445.614	100.000	0.000	100.000	123.000	0.000	0.000
1688	Constructon of Sowrra Dam Project in District Attock 03.02.2012 Attock , Pindi Gheb 19-1201107-025	537.740	265.240	172.000	0.000	172.000	100.000	0.000	0.000
1689	Constructin of Arrar Mughlan Dam in District Chakwal 14.06.2013 Chakwal 19-1304000-026	829.375	385.000	150.000	0.000	150.000	295.000	0.000	0.000
1690	Construction of Pindori Dam 09.05.2013 Jhelum , Dina 19-1303127-027	655.020	107.833	100.000	0.000	100.000	348.000	100.000	0.000
1691	Rehabilitation and Improvement of Existing Dams and Irrigation Channels in Small Dams Organization 08-08-09 Rawalpindi, Jhelum, Chakwal, Attock 19-0988000-028	423.747	223.399	200.000	0.000	200.000	0.000	0.000	0.000
Sub-Total: SMALL DAMS		6,640.135	2,421.399	1,213.500	0.000	1,213.500	1,728.620	890.410	0.000

BUILDINGS

1692	Construction Residential Colony for the Officers / Officials of Flood Bund Division Narowal 11.4.2014 Narowal 19-1417183-029	134.813	90.221	44.600	0.000	44.600	0.000	0.000	0.000
1693	Construction of alternate buildings in D.G.Khan Division D.G.Khan 03.11.2012 Dera Ghazi Khan 19-1229000-030	180.168	100.368	80.000	0.000	80.000	0.000	0.000	0.000
Sub-Total: BUILDINGS		314.981	190.589	124.600	0.000	124.600	0.000	0.000	0.000

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FOREIGN AIDED PROJECTS

1694	Punjab Barrages Improvement Phase-II Project (PBIP-II) -Jinnah Barrage 9-12 2010 Mianwali 19-1008000-031	12,678.000	8,847.530	4,175.000	0.000	4,175.000	0.000	0.000	0.000
1695	New Khanki Barrage Construction Project 03.09.2009 Gujranwala , Wazirabad 19-0912166-032	23,442.000	5,708.368	6,725.000	0.000	6,725.000	10,050.000	0.000	0.000
1696	Pakpatan canal and sulemanki Barrage Improvement Project (PCSBIP) 28.08.2013 Pakpattan 19-1325000-038	7,829.187	850.000	1,750.000	0.000	1,750.000	3,000.000	2,229.179	0.000
1697	Optimization Canal and Ground Water Management to Assist Water User Association in Maximizing Crop Production and Managing Salinisation with Australian Assistance 11.07.12 Punjab 19-1299000-033	84.120	60.574	0.000	4.000	4.000	0.000	0.000	0.000
1698	Project Preparation of Punjab Irrigated Agriculture Improvement Programme (PIAIP) PC-II. 03.12.13 Punjab 19-1399000-034	977.000	644.959	0.000	303.000	303.000	0.000	0.000	0.000
1699	Rehabilitation of LCC System Part-B. 25.11.2013 Faisalabad, Sheikhupura, Hafizabad, Toba Tek Singh 19-1388000-035	12,452.892	9,204.997	2,100.000	0.000	2,100.000	1,150.000	0.000	0.000
1700	Lower Bari Doab Canal Improvement Project (PC-I). 07.03.07 Okara, Kasur, Sahiwal, Khanewal 19-0788000-036	29,832.490	13,967.550	5,600.000	60.000	5,660.000	8,965.000	0.000	0.000
1701	Punjab Irrigation System Improvement Project. 21.10.2013 Dera Ghazi Khan, Rajanpur, Bahawalpur, Bahawalnagar, Faisalabad, Hafizabad, Chiniot, Faisalabad, Toba Tek Singh, Jhang 19-1388000-037	11,534.000	8,413.918	3,570.000	20.000	3,590.000	0.000	0.000	0.000
1702	Feasibility Study of Jalalpur canal (PPTA) 08.01.2014 Jehlum, Khushab , Pind Dadan Khan 19-1488126-039	88.000	0.500	0.000	2.100	2.100	0.000	0.000	0.000
Sub-Total: FOREIGN AIDED PROJECTS		98,917.689	47,698.396	23,920.000	389.100	24,309.100	23,165.000	2,229.179	0.000

FLOOD WORKS

1703	Rehabilitation of Naugran Flood Bund 06.02.2012 Jhelum 19-1203000-040	171.483	66.841	105.000	0.000	105.000	0.000	0.000	0.000
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IRRIGATION

(Million Rs.)

GS No	Scheme Information Approval Date / Location / scheme ID	Est. Cost	Accum. Exp June,14	Provision for 2014-15			MTDF Projections		Throw fwd Beyond June, 2017
				Cap	Rev	G. Total (Cap+Rev)	2015-16	2016-17	
1	2	3	4	5	6	7	8	9	10
1704	Channelization of Aik Nullah and Improving Drainage System in Distt Sialkot 30.09.2010 Sialkot 19-1016000-041	555.234	337.302	218.000	0.000	218.000	0.000	0.000	0.000
1705	Management of Hill Torrents in CRBC Area (Stage-III) D.G. Khan 16-08-2012 Dera Ghazi Khan , Taunsa Sharif 19-1229225-042	2,225.736	2,157.859	68.000	0.000	68.000	0.000	0.000	0.000
1706	Construction of Tibbi Qaisrani Drain RD:0+000 – 36+600 in District D.G.hKan Approved Dera Ghazi Khan , Tuansa 19-1429225-045	101.334	21.000	80.000	0.000	80.000	0.000	0.000	0.000
1707	Protecting Villages from Seet Pur to Sarki from Erosive Action of River Chenab Adjoining Chandar Bhan Flood Bund with Khanwah Flood Bund at Confluence Point of River Indus and Chenab Approved Muzaffargarh , Alipur 19-1432235-046	197.250	104.000	93.000	0.000	93.000	0.000	0.000	0.000
1708	Correcting River Flow by Digging Cunnette on Left Side of Chenab River Opposite RD 55+000 to RD 65+000 Chandar Bhan Flood Bund Approved Muzaffargarh , Alipur 19-1432235-047	169.238	50.000	119.000	0.000	119.000	0.000	0.000	0.000
1709	Management of Hill Torrents in DG Khan Irrigation Zone Sori Lund, Vidore, Mithawan, Kaha and Chachar(Kaha Hill Torrents) 08-08-09 Dera Ghazi Khan, Rajapur , Jampur 19-0988229-043	716.577	581.480	135.000	0.000	135.000	0.000	0.000	0.000
1710	Management of Hill Torrents in DG Khan Irrigation Zone Sori Lund, Vidore, Mithawan, Kaha and Chachar(Vidore Hill Torrents) Approved Dera Ghazi Khan, Rajapur , Jampur 19-1488229-044	962.969	515.331	447.500	0.000	447.500	0.000	0.000	0.000
1711	Desilting and Strengthening Banks of Drains, Construction of Flood Bund Along Drains and Closing / Strengthening Breaches Along Nullahs Distts Narowal, Gujranwala & Sheikhupura Approved Narowal, Sialkot, Sheikhupura , Daska, Muridke, Ferozwala 19-1488000-048	198.074	177.794	20.000	0.000	20.000	0.000	0.000	0.000
Sub-Total: FLOOD WORKS		5,297.895	4,011.607	1,285.500	0.000	1,285.500	0.000	0.000	0.000
Total: ON-GOING SCHEMES		122,289.916	59,650.596	29,077.900	414.100	29,492.000	26,982.220	4,319.589	0.000

IRRIGATION

(Million Rs.)

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1	2	3	4	5	6	7	8	9	10

NEW SCHEMES

SURVEY INVESTIGATION & RESEARCH

1712	Feasibility Study of Thatta Dam Un-Approved Rawalpindi 19-1402000-100	15.000	0.000	15.000	0.000	15.000	0.000	0.000	0.000
1713	Feasibility Study for Raising of Rawal Dam Un-Approved Rawalpindi 19-1402000-055	50.000	0.000	50.000	0.000	50.000	0.000	0.000	0.000
1714	Feasibility study of Jand Dam at Resh Nullah Un-Approved Attock , Jand 19-1401108-049	20.000	0.000	20.000	0.000	20.000	0.000	0.000	0.000
1715	Feasibility study of Qutib Bandi Dam Un-Approved Attock , Hazro 19-1401109-099	20.000	0.000	20.000	0.000	20.000	0.000	0.000	0.000
1716	Feasibility study on Hill Torrents & flood mitigation in Minanwali District. Un-Approved Mianwali 19-1408000-057	50.000	0.000	50.000	0.000	50.000	0.000	0.000	0.000
1717	Feasibility study to mitigate tail shortage of Upper Depalpur Command area Un-Approved Sheikhupura , Ferozwala 19-1421198-058	75.000	0.000	75.000	0.000	75.000	0.000	0.000	0.000
1718	Feasibility Study for rehabilitation of DG . Khan Canal Un-Approved Dera Ghazi Khan , Jampur 19-1429229-050	30.000	0.000	30.000	0.000	30.000	0.000	0.000	0.000
1719	Study for Groundwater Management for Developing integrated water use policy & Regulartory frame work Un-Approved Punjab 19-1499000-053	50.000	0.000	50.000	0.000	50.000	0.000	0.000	0.000
1720	Feasibility Study for rehabilitation Haveli Main Line Un-Approved Jhang, Khanewal, Toba Tek Singh , Shorkot 19-1488158-051	30.000	0.000	30.000	0.000	30.000	0.000	0.000	0.000
1721	Strenthening of Fields Research Station at Babakwal and Research Laboratories of Irrigation Research Institute, Lahore introducing Numerical Modeling of Hydraulic Structures Un-Approved Lahore, Sheikhupura , Ferozwala 19-1488198-052	100.000	0.000	57.000	0.000	57.000	43.000	0.000	0.000
1722	Feasibility Study of a Pilot Project for Inland Water Way Transport (IWT) in Punjab for the Pilot Reach Between Daudkhel to Attock Approved Mianwali, Attock 19-1488000-054	53.000	0.000	53.000	0.000	53.000	0.000	0.000	0.000

IRRIGATION

(Million Rs.)

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				Cap	Rev	G. Total (Cap+Rev)	2015-16	2016-17	
1	2	3	4	5	6	7	8	9	10
1723	Feasibility Study for Remodeling of Upper Jhelum Canal Un-Approved Jhelum, Khushab 19-1488000-056	100.000	0.000	50.000	0.000	50.000	50.000	0.000	0.000
	Sub-Total: SURVEY INVESTIGATION & RESEARCH	593.000	0.000	500.000	0.000	500.000	93.000	0.000	0.000
IRRIGATION									
1724	Rehabilitation of fall structure at RD 81+274 QB Link canal Un-Approved Hafizabad 19-1413000-061	500.000	0.000	100.000	0.000	100.000	250.000	150.000	0.000
1725	Remouddelling of 3 No. Aqueducts along B.S.Link Canal Un-Approved Kasur , Pattoki 19-1419191-063	200.000	0.000	100.000	0.000	100.000	100.000	0.000	0.000
1726	Construction of Bridges at RD 5+456 and 51+500 Pandoki Out Fall Drain Un-Approved Kasur 19-1419189-069	30.000	0.000	30.000	0.000	30.000	0.000	0.000	0.000
1727	Rehabilitation and Upgradting of LBDC main canal from RD 159-166 of LBDC Canal Un-Approved Okara , Renala Khurd 19-1420196-065	200.000	0.000	200.000	0.000	200.000	0.000	0.000	0.000
1728	Rehabilitation and Upgrading of LBDC main canal from RD 195+601 to RD 227+454 of LBDC Un-Approved okara 19-1420000-068	180.000	0.000	180.000	0.000	180.000	0.000	0.000	0.000
1729	Concrete lining of Chopper Hatta Distributory from RD.0 till RD.049 (Tail), District Khanewal Un-Approved Khanewal 19-1428000-106	73.970	0.000	40.000	0.000	40.000	33.970	0.000	0.000
1730	Construction of over D.G Khan Canal along with appoaches in K.M. No.2 of D.G Khan City to Vidore Road Un-Approved Dera Ghazi Khan , D.G Khan 19-1429224-059	40.000	0.000	25.000	0.000	25.000	15.000	0.000	0.000
1731	Rehabilitation of Bahishty Disty with System Un-Approved Dera Ghazi Khan 19-1429000-064	300.000	0.000	150.000	0.000	150.000	150.000	0.000	0.000
1732	Rehabilitation of Alipur Branch RD 0+000 to RD117+000 (tail) Un-Approved Muzaffargarh , Jatoi, Alipur 19-1432000-060	200.000	0.000	50.000	0.000	50.000	150.000	0.000	0.000

IRRIGATION

(Million Rs.)

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				Cap	Rev	G. Total (Cap+Rev)	2015-16	2016-17	
1	2	3	4	5	6	7	8	9	10
1733	Concrete Lining of Maggi Magassom Link RD.0-58500 Un-Approved Muzaffargarh , Kot Addu 19-1432308-062	350.000	0.000	150.000	0.000	150.000	200.000	0.000	0.000
1734	Restoration of Inlet RD 14+700 of T.P. Link Canal Un-Approved Muzaffargarh , Kot Addu 19-1432308-070	36.000	0.000	36.000	0.000	36.000	0.000	0.000	0.000
1735	Rehabilitation of Jatoi Branch RD 0+000 – 140+000 (Tail) Un-Approved Muzaffargarh 19-1432000-071	85.000	0.000	85.000	0.000	85.000	0.000	0.000	0.000
1736	Rehabilitation of Ahmadpur Branch System Un-Approved Bahawalpur , Ahmadpur Sharqia, Liaqat pur 19-1433000-067	500.000	0.000	110.000	0.000	110.000	390.000	0.000	0.000
1737	Rehabilitation of Ahmadpur Lamma disty System Un-Approved Rahim Yar Khan , Sadiqabad 19-1435253-066	300.000	0.000	100.000	0.000	100.000	200.000	0.000	0.000
1738	Selective Lining of Irrigation Channels in Punjab Phase-III Un-Approved Punjab 19-1499000-072	1,000.000	0.000	250.000	0.000	250.000	750.000	0.000	0.000
1739	Rehabilitation/Lining of Sharqpur Disty & System Un-Approved Sheikhupura, Nankana Sahib 19-1488000-101	300.000	0.000	100.000	0.000	100.000	200.000	0.000	0.000
Sub-Total: IRRIGATION		4,294.970	0.000	1,706.000	0.000	1,706.000	2,438.970	150.000	0.000

DRAINAGE

1740	Brick Lining Sem Nullah Jhang City Un-Approved Jhang 19-1410156-073	700.000	0.000	100.000	0.000	100.000	300.000	300.000	0.000
1741	Stone Pitching of Bhau Drain RD 33+000 - 43+000 Un-Approved Gujrat , Kharian 19-1414173-103	50.000	0.000	50.000	0.000	50.000	0.000	0.000	0.000
1742	Construction of Side Drain (6Km) Along M.R.Link from RD 296+000 to 314+000 having Capacity of 3000 Cusecs Approval Narowal 19-1417000-102	296.000	0.000	146.000	0.000	146.000	150.000	0.000	0.000
1743	Construction of Kawan Mallian Drain RD: 0+000 to 15+000 06.02.2013 Kasur , Pattoki 19-1319191-074	39.000	0.000	39.000	0.000	39.000	0.000	0.000	0.000

IRRIGATION

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				Cap	Rev	G. Total (Cap+Rev)	2015-16	2016-17	
1	2	3	4	5	6	7	8	9	10
1744	Remodeling and Extension of Tayyab Drain District & Tehsil Rajanpur Un-Approved Rajanpur 19-1430227-098	915.000	0.000	250.000	0.000	250.000	500.000	165.000	0.000
1745	Rehabilitation of Drainage System in District Bahawalnagar Un-Approved Bahawalnagar , Chishtian, Haroonabad 19-1434000-075	600.000	0.000	100.000	0.000	100.000	500.000	0.000	0.000
1746	Mitigation of Waterlogging along Trimmu-Sidhnai Link Canal Un-Approved Toba Tek Singh, Khanewal 19-1488000-076	2,000.000	0.000	300.000	0.000	300.000	1,000.000	700.000	0.000
Sub-Total: DRAINAGE		4,600.000	0.000	985.000	0.000	985.000	2,450.000	1,165.000	0.000
SMALL DAMS									
1747	Raising of Shahpur Dam Un-Approved Rawalpindi , Fathejang 19-1402106-080	250.000	0.000	150.000	0.000	150.000	100.000	0.000	0.000
1748	Construction of Mohata Dam Un-Approved Rawalpindi , Kahuta 19-1402116-081	700.000	0.000	116.000	0.000	116.000	400.000	184.000	0.000
1749	Rehabilitation and Raising of Qibla Bandi Dam Un-Approved Attock , Hazro 19-1401109-105	100.000	0.000	100.000	0.000	100.000	0.000	0.000	0.000
1750	Construction of Tamman Dam Un-Approved Chakwal , Talagang 19-1404129-079	700.000	0.000	100.000	0.000	100.000	400.000	200.000	0.000
1751	Construction of Sihal Khinger Dam Un-Approved Jhelum , Sohawa 19-1403125-078	600.000	0.000	119.000	0.000	119.000	481.000	0.000	0.000
1752	Potohar Climate Smart Irrigated Agriculture Programme Un-Approved Chakwal, Jhelum, Rawalpindi, Attock , Chakwal, Jhelum. Rawalpindi, Attock, Jand, Fatehjang, Talagang, Sohawa,Gujar Khan, pindigheb 19-1488000-077	2,000.000	0.000	250.000	0.000	250.000	1,000.000	750.000	0.000
Sub-Total: SMALL DAMS		4,350.000	0.000	835.000	0.000	835.000	2,381.000	1,134.000	0.000
BUILDINGS									
1753	Re-construction of Irrigation Offices building complex at D.G. Khan damaged due to H.T. flood 2012 Un-Approved Dera Ghazi Khan 19-1429000-082	80.000	0.000	80.000	0.000	80.000	0.000	0.000	0.000
Sub-Total: BUILDINGS		80.000	0.000	80.000	0.000	80.000	0.000	0.000	0.000

IRRIGATION

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1	2	3	4	5	6	7	8	9	10

FOREIGN AIDED PROJECTS

1754	Rehabilitation and upgradation of Trimmu Barrage, Punjab Head Works Un-Approved Jhang 19-1410156-083	18,185.000	0.000	110.000	0.000	110.000	4,000.000	5,000.000	9,075.000
Sub-Total: FOREIGN AIDED PROJECTS		18,185.000	0.000	110.000	0.000	110.000	4,000.000	5,000.000	9,075.000

FLOOD WORKS

1755	Protection of Abadies and Infrastructure from Devastation of Chachali Nullah Tehsil Isa Khel District Mianwali Un-Approved Mianwali , Isa Khel 19-1408147-085	177.000	0.000	20.000	0.000	20.000	157.000	0.000	0.000
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1756	Channelization of Nullah Broach Tehsil Isa Khel District Mianwali Un-Approved Mianwali , Isa Khel 19-1408147-086	153.000	0.000	20.000	0.000	20.000	151.000	0.000	0.000
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1757	Cuts on the Bank of Sindh River at abadies of Mouza Ahmed Ala,Mouza Utra Khurd,Mouza Utra Kalan and Mouza Zareef wala, Union Council Dher Umaid, Ali shah Tahseel and District Mian Wali Un-Approved Mianwali 19-1408000-104	100.000	0.000	100.000	0.000	100.000	0.000	0.000	0.000
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1758	Protection of Bhakhar Flood Bund from erosive action in between RD 0+000 to 76+000 to save the Abadies, Agricultural land & other infrastructure of Bhakhar City Un-Approved Bhakkar 19-1406000-092	800.000	0.000	150.000	0.000	150.000	450.000	200.000	0.000
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1759	Desilting and Side Protection of Nikki Deg Shoot Off-taking from Deg Nullah at Qila Ahmadabad, Tehsil and District Narowal Approved Narowal 19-1417183-094	33.000	0.000	33.000	0.000	33.000	0.000	0.000	0.000
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1760	Construction of Flood protection works to protect BRBD Link Canal from RD 285+300 to 300+000/L against erosion of the River Ravi Un-Approved Lahore 19-1418000-093	300.000	0.000	300.000	0.000	300.000	0.000	0.000	0.000
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1761	Resoration Mole Head Spur at Mailsi Syphon Cum Barrage Approved Vehari , Mailsi 19-1423207-095	111.000	0.000	111.000	0.000	111.000	0.000	0.000	0.000
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1762	Management of Hill Torrents in DG Khan Irrigation Zone Sori Lund, Vidore, Mithawan, Kaha and Chachar(Sori Lund Hill Torrents) Un-Approved Dera Ghazi Khan 19-1429224-088	1,000.000	0.000	150.000	0.000	150.000	400.000	450.000	0.000

IRRIGATION

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1	2	3	4	5	6	7	8	9	10
1763	Construction of Solid Stone Studs and Flood Bund for the Protection Village Naseer and Other Adjoining Abadies in Tehsil Taunsa Sharif District D.G.Khan Approved Dera Ghazi Khan , Tuansa 19-1429225-089	39.301	0.000	39.000	0.000	39.000	0.000	0.000	0.000
1764	Construction of Nutkani Flood Carrying Channel RD 0+000 - 21+000 in District Dera Ghazi Khan Un-Approved Dera Ghazi Khan , Tuansa Sharif 19-1429225-091	615.000	0.000	100.000	0.000	100.000	350.000	165.000	0.000
1765	Flood Protection Bund from Bati Mashori Mithan Kot to Rakh Bagh Wala & Remaining Portion of Flood Bund Fateh Pur Disty in District Rajanpur Un-Approved Rajanpur 19-1430227-084	200.000	0.000	20.000	0.000	20.000	180.000	0.000	0.000
1766	Management of Hill Torrent / Flood Protection of Rajanpur District Un-Approved Rajanpur 19-1430227-087	3,300.000	0.000	350.000	0.000	350.000	800.000	950.000	1,200.000
1767	Raising and Strengthening of Sanwan Flood Bund RD 0-42+000 and Embankment Along T.P. Link Canal RD 6+700 to 18+500 Approved Muzaffargarh , Kot Adu 19-1432308-096	146.000	0.000	146.000	0.000	146.000	0.000	0.000	0.000
1768	Construction of flood embankments and protection works along left and right bank of river Indus for bridge near Miranpur Linkage N-5 at Arbi Tibba with Rahimyar Khan Iqbalabad Un-Approved Rahim Yar Khan, Rajanpur 19-1488000-090	1,500.000	0.000	250.000	0.000	250.000	1,250.000	0.000	0.000
Sub-Total: FLOOD WORKS		8,474.301	0.000	1,789.000	0.000	1,789.000	3,738.000	1,765.000	1,200.000
MISC									
1769	Security arrangements for key points (Barrages, Dams and all the important sites) Un-Approved Punjab 19-1499000-097	150.000	0.000	75.000	0.000	75.000	75.000	0.000	0.000
Sub-Total: MISC		150.000	0.000	75.000	0.000	75.000	75.000	0.000	0.000
Total: NEW SCHEMES		40,727.271	0.000	6,080.000	0.000	6,080.000	15,175.970	9,214.000	10,275.000
Grand Total		163,017.187	59,650.596	35,157.900	414.100	35,572.000	42,158.190	13,533.589	10,275.000