

**LIST OF ENVIRONMENTAL PROJECTS UNDERTAKEN BY  
MM PAKISTAN (PVT) LTD.**

Project	Client	Description	Fee Million	Value Million	Completion
Extension of RBOD from Sehwan to Sea	Irrigation & Power Department, Sindh	The various components of Project include: <ul style="list-style-type: none"> <li>▪ topographic survey of 273 km</li> <li>▪ geotechnical investigations</li> <li>▪ environmental Impact Assessment and resettlement plan</li> <li>▪ finalization of drain route alignment and Main Drain design</li> <li>▪ design of hydraulic structures en-route the Drain</li> <li>▪ select location of outfall structure and its design</li> <li>▪ design of flood protection works along the drain</li> <li>▪ project management and construction supervision</li> </ul>	Rs. 122	Rs. 14000	2006
Sindh Basic Urban Services Project	Government of Sindh	<ul style="list-style-type: none"> <li>▪ Sectoral review, policy and institutional analysis, lessons learned, urban centre selection, detailed poverty assessment, data collection on infrastructure and municipal services delivery.</li> <li>▪ Project planning and design through consultations with stakeholders to reach consensus.</li> <li>▪ Detailed feasibility studies and project design, including project costs, financial and economic analysis, social and resettlement assessment, environmental assessment, capacity building and institutional strengthening and implementation arrangements.</li> </ul>	USD 0.74  Eq.Rs. 4.44		2006
Fact Finding & Recommendation Study on Water Supply and Sewerage System in Karachi	Japan International Cooperation Agency (JICA)	<p>JICA in respond to Pakistan Government's request to Government of Japan for technical cooperation has decided to undertake Development Study for Karachi Water and Sewerage Master Plan. Towards preparation for a comprehensive study for master planning a preliminary data collection and situation analysis study.</p> <p>Main goal of this Fact Finding Study is to collect and analyse the data and information to improve the present condition of water supply and sewerage service in Karachi. In order to bring those improve the present condition of water and sewerage service in Karachi. In order to bring those improvements, this study analyses existing system including socio-economic, environmental condition and the KWSB's institutional and financial situation. Special attention to water scarcity and sewerage overflows in slump areas (Katchi Abadis) shall be paid on the humanitarian grounds. Key findings of the study will encompass the plan and strategy of further project activities</p>	Rs. 1.5		2005
135 MW Japan Diesel Power Station near Raiwind	National Bank of Pakistan	Detailed inspection of the power station was done as Lender's Independent Engineers. Its report covered:		0.28	2003

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		<ul style="list-style-type: none"> <li>▪ Details of any events of default, potential event of default or Forced Majeure.</li> <li>▪ Details of any material dispute</li> <li>▪ Details of forecasted / projected amount against actual expenditure on operating the plant.</li> <li>▪ Comparison between revenue forecast and actual received by the company along with variance, if any.</li> <li>▪ Details of maintenance and costs, fuel purchases / consumed etc.</li> <li>▪ Net operating output, no. of cold starts, hot starts and other details as required under the agreement.</li> <li>▪ Environmental compliance &amp; defaults, if any.</li> </ul>			
117 MW SEPCOL Diesel Power Station – Lender’s Independent Engineer	National Bank of Pakistan	The Lender of funds, National Bank of Pakistan appointed MM Pakistan in association with Mott MacDonald Ltd of UK, as Independent Engineer to examine and review the operation and maintenance of SEPCOL’s Raiwind Diesel Power Station, every six months. The independent Engineer reviews SEPCOL’s quarterly operating reports, carried out site inspection, holds discussions with the Client and operation staff and submitted a detailed report to National Bank of Pakistan, covering Operation and Maintenance activities, Staffing, Financial Analysis, Health, Safety and Environmental aspects etc.	Rs. 0.46 + £3,000		2003
Health, Safety & Environmental Audit (HSE) for Oil & Gas Assets in Pakistan	Govt. of Pakistan	Privatization Commission of Pakistan wished to sell working interests in nine (9) Oil & Gas concessions, which were in Badin, Upper Indus and Sindh Province. Orient Petroleum Inc. of USA, a prospective buyer, awarded Contract to Mott MacDonald (UK) to carry out HSE Audit of these sites. Mott MacDonald appointed MM Pakistan to undertake this Audit.	0.0015\$		2002
117 MW Diesel Power Plant Monitoring as Lender’s Engineer for SEPCOL	National Development Finance Corporation (NDFC), Karachi	<p>Consultants physically visited the plant and reported on:</p> <ul style="list-style-type: none"> <li>▪ Details of any events of default, potential event of default or Forced Majeure.</li> <li>▪ Details of any material dispute</li> <li>▪ Details of forecasted / projected amount against actual expenditure on operating the plant.</li> <li>▪ Comparison between revenue forecast and actual received by the company along with variance, if any.</li> <li>▪ Details of maintenance and costs, fuel purchases / consumed etc.</li> <li>▪ Net operating output, no. of cold starts, hot starts and other details as required under the agreement.</li> <li>▪ Environmental compliance &amp; defaults, if any.</li> </ul>	Rs. 2.0 + £4500		2001

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		Review of environmental monitoring plan.			
Engineering Design Vetting and Construction Supervision for Improvement of Karakoram Highway (Mansehra - Chilas 316 Km)	Govt. of Pakistan	Design vetting, construction supervision, feasibility study of 316 Km, Traverse and topo survey soil and material, traffic and axle study pavement evaluation landslide and slope stability machinery and equipment report, hydrological study report, feasibility study, specification design report, preliminary design report of drawings, cost estimate, final design, tender documents, environment study.	Rs. 25.36		2001
Soil Gas Survey at Retail Outlets Project	Shell Pakistan Limited	Survey of Soil-Gas for 55 Retail Outlets of Shell Pakistan scattered throughout Pakistan was conducted to identify areas of oil pollution in soil due to leaks. Drager Soil Gas detection equipment was used to conduct the survey.	Rs. 2.1	Rs. 500	2000
Initial Environmental Examination of the White Oil Pipeline of PARCO	PARCO	Baseline study and IEE were conducted for the new white oil pipeline to be laid from Port Qasim, Karachi to Mehmood Kot's Mid Country Oil Refinery. The pipeline is 813 Km long may pass through sensitive areas.	Rs. 1.6		2000
Soil and Groundwater Assessment of Depots/Installations/ Airfields	Shell Pakistan Limited	Soil and Groundwater Assessment of Environmental damage due to oil pollution were made and remedial measures were suggested for Depots / installations / airfields of Shell Pakistan, scattered throughout the country.	Rs.3.9		2000
Fordwah Eastern Sadiqia Canal Lining Component	World Bank / Govt. of Punjab	Uncontrolled seepage from the irrigation system has resulted in waterlogging in the Canal Command area. The project comprises the development of canal lining systems to reduce seepage.	Rs. 23.8	Rs. 500	2000
Design vetting & supervision of Disposal Wells at Kadanwari Gas Field - Rehabilitation of Disposal Wells.	LASMO	Design and Construction supervision of 2# additional waste water Disposal wells, including hydro geological investigation	Rs. 0.275		1999
Hydro-geological Survey for Additional ground-water development at Engro Plan - Daharki, Sindh	Engro chemicals	The project included <ul style="list-style-type: none"> <li>▪ Survey to develop a site map</li> <li>▪ Design VES Program &amp; supervise execution</li> <li>▪ Design &amp; supervise test boreholes</li> <li>▪ Design new boreholes</li> </ul>	Rs. 0.85		1999
Lahore Ring Road re-alignment Project.	DAEWOO	Feasibility study, traffic survey and selection of new proposed route for Lahore ring road for private sector participation.	Rs. 8.0		1999
Construction Supervision of All Whether Internal Road for protecting the Qadirpur Gas Field	OGDC	Provided construction supervision with measurement of quantities, certification of contractor's claims, quality assurance and co-ordination with the client.	Rs. 0.7	Rs. 17.5	1999
Flood Fighting works for protecting the Qadirpur Gas Field for the year	OGDC	Monitoring of Indus river flows with respect to the bund and readiness for any emergency works during the flood	Rs. 0.6	Rs. 15.0	1999

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1999		season.			
Resident Supervision of Flood Protection Works in D.G. Khan Zone	Irrigation & Power Department, Govt. of Punjab	Supervision of maintenance works on irrigation structures in D. G. Khan Zone.	Rs. 1.2	Rs. 60.0	1999
Top Supervision of Flood Restoration Works in Bahawalpur Irrigation Zone	Irrigation & Power Department, Govt. of Punjab	Design vetting and construction supervision of irrigation structures in Bahawalpur Zone.	Rs. 0.5	Rs. 20.0	1999
Punjab Middle Schooling Project	ODA	Teacher training, head teacher training, testing and assessment, supplementary readers, social development, benefit monitoring and evaluation, material development.	£ 3.5		1999
Neelum Valley Hydro Project, Jagran	HEB/AJK	Review and approve design criteria, design report, supervise geotechnical investigation, specification report, layout and construction drawings, assembly drawings, as built drawings, progress reports. Project Management. Construction Supervision. Supervise erection installation, testing and commissioning E&M plant. Certification of invoices monthly progress and quality, attending meetings.	Rs. 19.8	Rs. 4000	1999
Pakistan Teachers Training Project	ADB	Review present structure, suggest management capability, conduct feasibility study on alternate curricula, assist in formulating work plans, schedule define subject criteria for pilot GCET, help prepare manuals, undertake field visits etc., management development, distance education and material development education technology development, research, education economics, non-formal education.	Rs. 44.6		1999
Sindh Rural Water Supply and Sanitation Project	World Bank	Provision of technical assistance to strengthen PHED, Sindh through training and the development of a participatory approach to the implementation of rural water supplies.	Rs. 68.0	Rs. 3400	1999
Malir Bulk Water Supply	Govt. of Sindh	Collection of data and information study existing sources. Preparation of feasible independent bulk water supply system for MDA area after investigation various alternate sources e.g. Indus, Hub, Groundwater, Dumlottee Wells and desalination. Environment Impact of suggested alternate, PC-I, Financing Plan.	Rs. 0.875	Rs. 700	1999
Integration of Aquaculture within Irrigation Systems	DFID	A 2-day workshop was conducted as a part of new DFID research project aimed at discussing problem and potential of integrated aquaculture from the various stakeholders' perspectives.	Rs. 0.700		1999
Teachers Training Project - Overseas Fellowship Programme	IDP Education, Australia / ADB	To maintain constant liaison with the participants, IDP and Ministry of Education, obtain nominations from MoE, arrange for processing of visas and	Rs. 1.5		1999

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Project	Client	Description	Fee Million	Value Million	Completion
		health certificates of 100 trainees to be sent for training outside Pakistan under this project, organise international travel and conduct pre-departure briefings for the trainees.			
Feasibility of Providing Conduction Main From Shah Allah Ditta Reservoir to Different Sectors of Islamabad	CDA, Govt. of Pakistan	Study of Feasibility and detailed design and geotechnical investigation regarding design of 25 Km long Conduction Main from Shah Allah Ditta Reservoir which gets its share of treated water from Khanpur Dam under the Metropolitan Water Supply Project via Sangiani, to the priority sectors of Islamabad.	Rs. 4.0	Rs. 640	1999
Waste Minimization and Cost Effective Treatment - Seminar	British Council - WWF	A 2-day training course conducted on waste minimization and cost effectiveness treatment in Lahore.	Rs. 0.186		1998
Supervisory Services for Development / maintenance works in D.G. Khan Zone of Irrigation & Power Department	Irrigation & Power Department, Govt. of Punjab	The scope of services included review of work proposals, designs and verification of cost estimates, checking of the physical layout of proposed works and top supervision of works to certify, quantify and quality of works executed.	Rs. 2.5		1998
Feasibility Study for Airstrip for LASMO Oil Fields, Bhit, East Kirthar	LASMO	The study included general suitability of site for proposed airport operation, goetech investigations, geometric and pavement, design of Airstrip, design of flood protection measures and drainage design.	Rs. 0.08		1998
Environmental Baseline Studies, Kirthar Range, Dadu, Sindh	LASMO	Environmental baseline study of proposed oil and gas exploration and production concession area. Involved surveys of land, water, soil and agricultural resources. Feasibility study.	Rs. 0.3		1998
Socio-Economic Study for Korangi Sewerage and Wastewater Management Project	KW&SB, Govt. of Sindh	The field study was conducted to formulate alternative livelihood package for agricultural workers who might be affected by the project. Also, Social survey of Korangi and Landhi townships were conducted to assess the willingness to pay for improved sanitation facilities	Rs. 8.15		1998
Study for the Integrated Development of North East Swat	Govt. of NWFP	Study to develop a master plan for rural development including roads, irrigation, water supply, agriculture and social facilities.	Rs. 1.20	Rs. 700	1998
Impact Evaluation of Second Scarp Transition Project (SSTP), Punjab	World Bank/ Govt. of Punjab	Impact evaluation of the SSTP involving long term monitoring of groundwater levels and salinity and evaluation to determine the effect of tubewell privatisation.	Rs. 10.8		1998
Construction Supervision of Chanda Fateh Khan Dam	Govt. of NWFP	Site investigation, Construction supervision of embankment, spillway, irrigation conduit, intake as outlet structures, head regulator, irrigation network. Review construction drawings and prepare cost estimate within 2 months. Inspection and testing measurement of work quantities, certification of payment, close control on progress and monthly reporting.	Rs. 2.15		1998
Lower Indus R.B. Irrigation and Drainage	Govt. of Sindh	Construction supervision. MMP provided one ARE on RBOD extension	Rs. 2.84		1998

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Project (RBOD)		for 24 man-months one Senior Engineer on MRV Drain for 30 man-months and one Senior Engineer on Rato Dero for 27 man-months.			
Technical Assistance for Quality Assurance	World Bank/ Govt. of Indonesia	Secondment of Highway Engineer to MM Jakarta for assignment for D.G. Highway (Bina Marga) Technical Assistance services to Quality Assurance Unit.	US\$ 0.053		1998
Advisory Consultancy Services for River Training Works 1998	Govt. of Punjab	To provide advisory services and attend meetings on river training and protection schemes by Mr. Abdul Shakoor.	Rs. 0.6		1998
Preparation of Lahore Solid Waste Management Plan through PSP	Lease Pak (Pvt) Ltd., Lahore	MCL intended to enter into a performance contract with a Private Sector firm for the Lahore Solid Waste Management, including waste collection, street sweeping, drains cleaning, composting and landfilling as well as incineration for a period of 5 years. A comprehensive proposal was prepared for solid waste management of Lahore city including collection and recycling and disposal. Prepared plan for Lahore city for a zonal collection of solid waste management system on daily basis.	Rs. 0.3 + £ 0.012		1998
Pearl Continental, Lahore (Extension)	Tourism Promotion Services (Pakistan) Ltd.	Design review and construction supervision of all building works and related services.	Rs. 14.0	Rs. 773	1997
Project Management Convention Centre	Govt. of Pakistan	Review the design of Convention centre and certify its adequacy and technical soundness in respect of Structures, HVAC and MEP services. Monitor and carry out complete supervision of construction work. Certification of structural stability and soundness and International Standard. Review and monitor project construction schedules/bar-charts/graphs of all activities and their inter-relationship to ensure timely completion of project. Interpretation of provisions of agreement to meet above requirements. Maintain daily log of progress, meetings and conferences. Certification of contractors invoices.	Rs. 10.75		1997
ICI - PTA Plant Water Supply Main - Port Qasim	ICI	Construction Supervision of a 51 Km Water Supply Pipeline at Port Qasim.	Rs. 5.2	Rs. 300	1997
D.G. Khan Rural Area Development Project	ADB	Rural Area Development: Social aspects; Irrigation Engineering; Watershed Management; Livestock; Rural Roads; Environmental Aspects.	US\$ 0.037		1997
Pakistan Motorway - Bridge Remedial Works	Daewoo	Investigation of foundation and damage to a bridge on Motorway near Chakwal being built by M/s Daewoo.	Rs. 0.336		1997
Parco Mid Country Oil Refinery EIA Project	Stork Engineers and Contractors B.V.	Factual report on applicable law and policies, factual report on available data on environment quality and development within range of 15 Km. Attend to	£ 0.02		1997

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		comments by Client, write comprehensive EIA, chapter and survey provide guidance to client's team during its visit to Pakistan, advise SE&C on specific questions.			
ECF - Post Flood Rehabilitation and Protection Project	European Community	Production of 20 Tax Report Assist PMU of Development projects in Asia which receive assistance from European Commission, aimed at strengthening local ownership of these projects and fostering a democratic transparent and accountable environment.	Rs. 0.765		1997
Linkage of Teacher Training with the Retention Rate of Students of Primary Level	ADB	Development of Instruments, field personnel training, try out, improvement and revision, survey, draft report, final report.	Rs. 0.974		1997
Community Health Sciences and Juma (Research) Buildings and Sports Centre Projects of Aga Khan University Centre	Agha Khan Hospital and Medical College Foundation	Preparation of BOQs and Cost Estimates of the sports centre during the conception, schematic design, design development and construction documentation stages.	Rs. 2.10		1997
Supervisory Services for Flood Restoration / Protection Works in Irrigation and Power Department	Govt. of Punjab	7 Nos. Flood Projects in D.G. Khan and Multan Zones of Irrigation and Power Department. Also included Top Supervision	Rs. 0.737		1997
A Study of Relationship of Mathematics Curriculum Among Various Levels	ADB/Govt. of Sindh	To study the relationship of maths curriculum among various levels. Instruments will be developed, pre-testing be done, field surveys be conducted data collected, analysed and report prepared.	Rs. 0.699		1997
Advisory Consultancy Serves for River Training Works 1997	Govt. of Punjab	To provide advisory services and attend meetings on river protection schemes by Mr. Abdul Shakoor.	Rs. 0.6		1997
Pakistan Motorway Project - Bridge BD12C5 and BD12C6	Daewoo	Design of rehabilitation works on bridge in salt range and construction supervision of remodelling works.	Rs. 0.213		1997
Pakistan LNG Terminal Feasibility Study	LASMO	Feasibility study involving the searching out and quantifying and the extent of data available to determine the most appropriate and economic means of obtaining information necessary to determine the physical viability of selected sites (three) for a new LNG terminal.	£ 0.006		1997
Low Head Hydropower Potential Project	Govt. of NWFP	Hydrological/Geological Studies, Feasibility Study, PC-I, Detailed Design - BOQ, Economics Financial Analysis, Environment Impact Assessment, Tender Documents, Construction Drawings, Design Report and Calculation.	Rs. 1.2		1997
Project Monitoring Master Plan of TTP	Govt. of Pakistan	To upgrade policy making and its implementation, improvement of instructional material and libraries, training master trainers and to provide in-service Teachers' Training. Also, staff development of 4500 service staff of	Rs. 1.09		1997

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Lahore Urban Drainage Construction Supervision Consultancy	WASA, Govt. of Punjab	Construction management, supervision quality control, certification of work. Monthly reporting on overall progress, contractors resources, details of material at site and status of payment.	£ 0.27 Rs. 3.3	Rs. 400	1997
Study and Preparation of Master Plan for Flood Protection works for Qadirpur Gas Field on River Indus	OGDC	Consultancy services for comprehensive planning studies for the protection of Gas Field from the flood of River Indus.	Rs. 1.35		1996
Detailed Engineering design for Flood Protection works on River Indus for Qadirpur Gas Field	OGDC	Consultancy services to carry out detailed design for the above project.	Rs. 4.5		1996
Planning and Design of Nagwah Creek Diversion of River Indus	OGDC	Preparing proposal for diversion possibilities of the Creek passing through critical areas.	Rs. 0.5		1996
Conducting Model Studies for Flood Protection works for Qadirpur Gas Field	OGDC	Arranging & Conducting Model studies to recommend flood protection package at the Hydraulic lab. Hyderabad.	Rs. 1.5		1996
Construction Supervision of Flood protection works for Qadirpur	OGDC	Resident Supervision of construction works.	Rs. 6.0		1996
Pakistan LNG Terminal Feasibility Study Phase I: Site Selection	LASMO	Study to determine the preferred location, conceptual layout & estimated cost of a marine terminal for the import of liquefied natural gas into Pakistan using 125,000 m <sup>3</sup> vessels. The study included the inspection of a number of potential sites & collection of local data.	Rs. 0.28		1996
Panel of Experts Nara Canal	World Bank	Advisory Services on canal regime and erosion.	Rs. 0.546		1996
Strengthening of Environmental Management for Water Resources Projects (WAPDA)	ADB/WAPDA	Institutional strengthening of the WAPDA environmental cell. Environmental and GIS training and the development approaches to environmental assessment.	Rs. 25.0		1996
Marghzar Irrigation Scheme	Govt. of NWFP	Hydrology study of Jamal Khawar and Marghzar Khawar. Detailed contour survey of command area. Selection of canal alignment. Topo survey 100 strip. Cross drainage works. Chakbandi statement. Detailed design and drawings. PC-I. Monthly reporting including geotechnical studies.	Rs. 0.5		1996
Project Implementation Plan for Northern Education Project	Govt. of AJK	Preparation of Project Implementation Plan for Northern Education Project.	Rs. 0.4		1996
Design of Key Hole Access Road Bridge and Location	UTP	Preparation of design & specification for the Doti Road to North Bank Tidal Link and South Bank to Key Hole # 1. Geotechnical investigation and Conceptual Design of a Bridge Over Tidal Link.	US\$ 0.062		1996
Water Loss Reduction	World Bank	Preparation of CAP TAL works programme for distribution system improvement. River institutional	£ 0.8	Rs. 6000	1996

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		strengthening plan.			
Advisory Consulting Services of River Training Work-2	Govt.of Punjab	Advisory Services of Abdul Shakoor on: i) Hydraulic model studies at Nandipur; ii) Planning, design and layout of training works; iii) Construction supervision of training works; iv) Assist in model study reporting and v) Attend meetings and visit sites.	Rs. 0.2		1996
Maintenance of Irrigation Management System in Pakistan	IIMI	Collection of information through interviews from the personnel's & inside irrigation department at various levels (Sub-Engineer,SDO,XEN,SE,CE) as per questionnaire provided by the employer.	Rs. 0.07		1996
Current Status of Directorate of Primary Education NWFP	ODA/British Council	Study of current status of Primary Education in NWFP and preparation of report for British Council	Rs. 0.231		1996
Detailed Design of Ring Road and Network Planning for Guided Development	Govt. of Punjab	Network planning, selection of Ring Road and major arterial, geotechnical investigation, detailed design of Ring Road, Acq. plan for major arterial road future land use.	Rs. 2.9		1996
NW Canal Remodelling Project	ADB/Govt. of Sindh	Study to assess the feasibility of works to control. waterlogging and salinity in the Canal Command area and to fully utilise available land and water resources within the area.	Rs. 8.5	Rs. 8070	1995
Serena Lodge Hotels, Islamabad	Tourism Promotion Services (Pakistan) Ltd.	Supervision of geotechnical investigation and review of structural design of the hotel main building and affiliated services.	Rs. 4.955		1995
Comprehensive Flood Management Study, AJK	CDO, AJK	Comprehensive flood management plan. Services included hydrological and hydraulic modelling, flood damage assessment, flood risk identification and the development of feasibility studies and detailed designs for identified sites.	Rs. 4.25	Rs. 700	1995
Small Dams Project: On Farm Water Management Studies in Command Areas	ADB/Govt. of Punjab	Institutional strengthening to develop on farm water management for small dams presently under construction or completed in the Potohar area.	Rs. 0.40		1995
Consultancy Services for Small Dams Umbrella Project	ADB/Govt. of Punjab	Institutional strengthening in the preparation of feasibility studies, design, investigation, PC-I and tender documents and evaluation.	Rs. 3.5	Rs. 780	1995
Design and Construction Supervision of Underpasses	Govt. of Punjab,	Topographic survey, soil investigation, design, cost estimates for RGH and Committee Chowks.	Rs. 0.79		1995
Lahore Ring Road Feasibility Study and Detailed Design	World Bank/ LDA	Assessment of present situation on the Project and Presentation of Progress and future action, preparation and design of a project document summarizing key features of the project, review of existing studies and preparation of a brief project digest from them.	£ 0.45 Rs. 8.6		1995
Feasibility Study for	Govt. of Punjab	Investigations and feasibility studies for	Rs. 5.57	Rs. 3150 /	1994

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Cholistan Irrigation Project (Phase-1)		providing irrigation facilities in smaller Cholistan covering about 0.57 million acres on the east of Bahawal Canal		Rs. 1888	
Feasibility Study for the Construction of Trichan to Ata Irrigation Scheme at Malko, District Chitral	Govt. of NWFP	Feasibility study for 10 000 acre hill irrigation project. Services included hydrological assessment of glacial water resources, agro-economic studies and the preparation of engineering designs. The study also incorporated an initial environmental assessment.	Rs. 1.76	Rs. 99.79	1994
Leak Detection Study	KDA	Evaluated the potential to reduce leakage by developing and active leakage control policy. The main feature was pilot test area on which the economic benefits of different methods of control were assessed. Training was a major component of the project covering all aspects required to develop, establish and maintain a leakage control policy.	£ 0.075	Rs. 110	1994
Advisory Consultancy Services for the Flood Protection Sector Projects in the Drainage and Flood Zone of Irrigation and Power Department, Punjab	Govt. of Punjab	Advisory services covering: hydraulic model studies; design of river training works; and construction supervision of river training works.	Rs. 0.9		1994
Small Dams Extension Project: Water Resources Availability Assessment in Potwar Area of Punjab	ADB / Govt. of Punjab	Assessment of the availability of additional surface water for agriculture and water supply and evaluation of the feasibility of its development. Studies included satellite image interpretation, catchment hydrological modelling and preliminary design of dams.	Rs. 3.00		1994
Geological Studies for Dams	Govt. of Oman	Two hydrogeologist have been deputed on this project through Mott MacDonald International Ltd. A senior Dam Engineer has been deputed on the Rusayl Dam Project for the construction / supervision of works.	Rs. 0.40		1994
Feasibility Study for Restoration and Improvement of Marala Ravi Link System	Govt. of Punjab/ADB	Feasibility study for restoration of the conveyance capacity of Marala Ravi Link System. Studies included physical hydraulic modelling of Marala Barrage to develop methods of sediment exclusion.	Rs. 37.5	Rs. 5000	1994
Urban Infrastructure Assessment Study, NWFP	ADB	Assessment of urban infrastructure needs and preparation of feasibility studies for selected secondary studies in NWFP and preparation of recommendations for a provincial urban investment programme.	Rs. 1.80	Rs. 280	1993
Feasibility Study and Detailed Engineering Design of Lahore Ring Road	LDA-TEPA/ World Bank	Feasibility study and detailed design of Lahore Ring Road to deflect external and cross city traffic away from the central areas of the city.	Rs. 24.5	Rs. 1800	1993
Sindh Riverine Area Study	World Bank/ WAPDA/Govt. of Sindh	Preparation of a Development Plan for Sindh Riverine Area. covering environmental, social and other issues. Recommendations included institutional arrangements for implementation with emphasis on Private Sector and Farmer involvement.	Rs. 30.0	Rs. 2428	1993

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Study of Minimum Flow Required Downstream of Kotri Barrage, Sindh	Govt. of Sindh	Studies for determination of minimum flows required downstream of Kotri Barrage to conserve and improve the existing environmental conditions.	Rs. 11.0		1993
Kadanwari Field Development Studies, Sukkur, Sindh	LASMO	Geotechnical investigation for a new gas gathering, processing, treatment facilities at Kadanwari in the Sindh Province. Investigations included comprehensive geotechnical surveys.	Rs. 12.0		1993
Feasibility Study for Balambat Kharif Irrigation Scheme in Dir District	Govt. of NWFP	Feasibility study to evaluate the technical and economic feasibility of 10 000 acre hill irrigation project. Studies included hydrological assessment, agro-economic studies, environmental evaluation and the preparation of engineering designs.	Rs. 1.70	Rs. 178.0	1993
Feasibility Study for the Construction of Irrigation Scheme Dhotar to Mulkan District Abbottabad	Govt. of NWFP	Feasibility study to evaluate the technical and economic feasibility of 10 000 acre hill irrigation project. Studies included hydrological assessment, agro-economic studies, environmental evaluation and the preparation of engineering designs.	Rs. 0.67	Rs. 38.0	1993
Survey and Mapping of Daral Khawar - Bahrain Hydro Power Project, NWFP	SHYDO/GTZ	Topographic survey in difficult terrain using datalogging equipment and utilising computer aided mapping techniques.	Rs. 0.5		1993
Islamabad - Peshawar Motorway Project	NHA	Advisory services on hydraulic aspects of the design of the motorway.	Rs. 0.5		1993
Environmental Study for Lahore Ring Road, Punjab	World Bank/ LDA	Assessment of the environmental impact of the proposed Lahore Ring Road to deflect external and cross city traffic away from the areas of the city.	£ 0.062 Rs. 1.26		1993
Advisory Consultancy Services for the Training of River Chenab from Marala to Alexandra Bridge	Govt. of Punjab	Advised on river training works being undertaken to arrest erosion on the right bank of the river to save the villages.	Rs. 0.45	Rs. 330	1992
Pakistan Sectoral Environment Assessment (National Drainage Programme)	World Bank	Nationwide examination of environmental issues (water quality, health, wildlife) related to existing land drainage practice; identification of developments in drainage and corresponding measures to avoid adverse environmental impact. Study and training.	£ 0.142 Rs. 8.6		1992