

- 2- Water condition (volume and quality)
To collect the water samples from the pre-selected points (Leachate, Point-1 to Point-7) and analyzed for pre-determined parameters.
- 3- Hydro-geological characteristics
To collect the data on geomorphic surface and borehole logs on several tube wells in Peshawar
- 4- Current-water use
To investigate the water demand from the usage, distribution system of city water and well points.
- 5- Solid Waste Management
 - To investigate the volume and quality of solid waste through the process of collection, transportation and disposal
 - Topographic survey of dumping site to find out the dumped volume over the years.
 - Recycle route and value.

3-4 Terms of Study

Pak-EPA to complete the investigation, compile a report and submit it to OECC.

3-5 Others

Any dispute related to the implementation of this survey will be settled amicably between OECC and Pak-EPA.

4- IMPLEMENTED SCHEDULE.

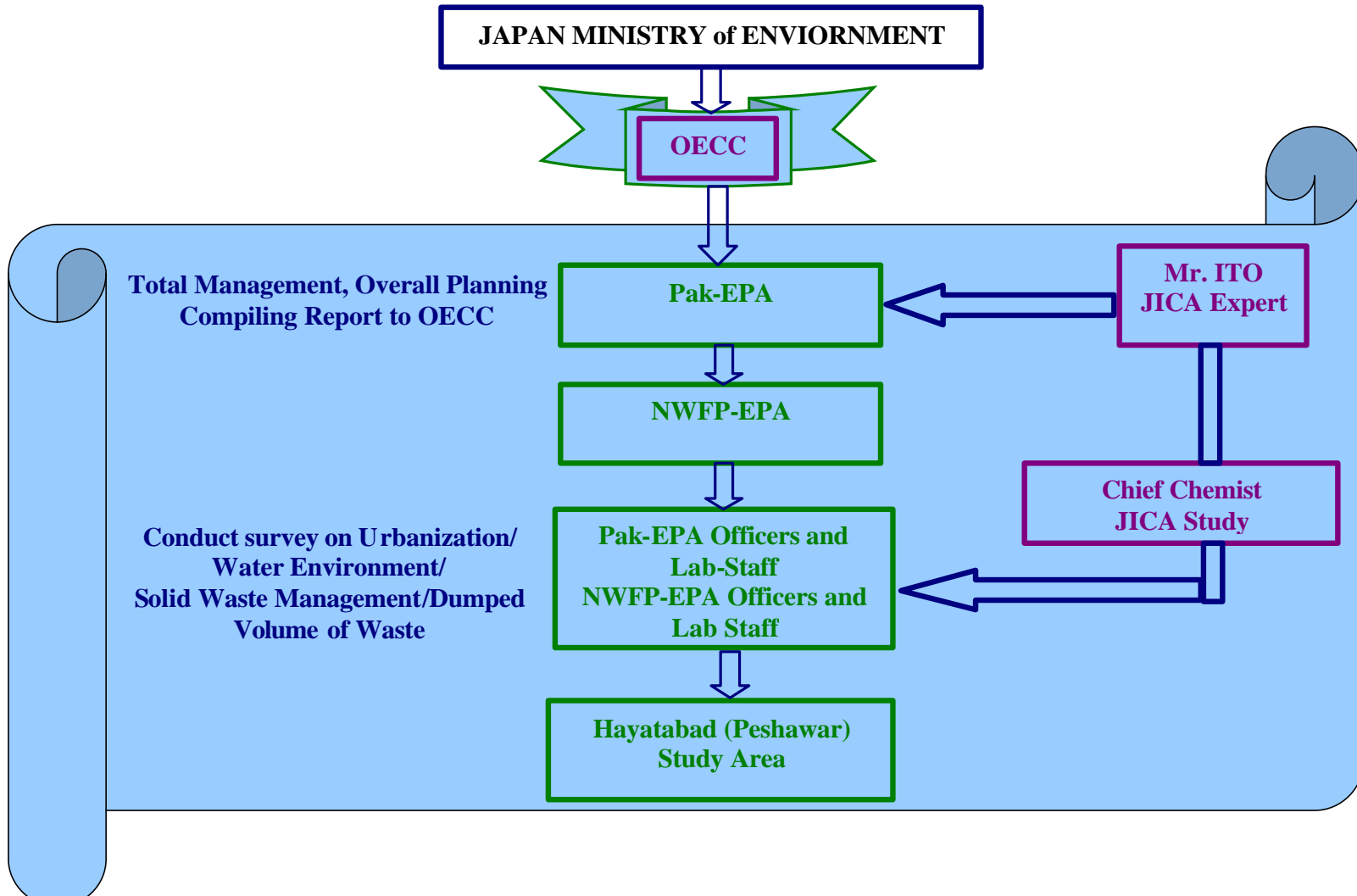
Table-3 shows the time schedule on this investigation. Actual implementation plan was little delayed due to pressing engagements of Pak-EPA Officers in Islamabad due to SARC Summit and visit of foreign delegation at Pak-EPA.

OECC study team visited Pakistan from October 5th, 2003 to October 8th, 2003 to conduct the preliminary study on urban environment especially the case study area, Peshawar and had meetings with different government departments to know the actual environmental problems in Pakistan.

Pak-EPA Officers comprising Mr. Zia-Ul-Islam, Director, EIA/Monitoring and Mr. Ahsan Rafi Kiani, Deputy Director along with Dr. Zulfiqar H. Lodhi, Chief Chemist/JICA study conducted the pre-investigation visit to Peshawar w.e.f December 8th, 2003. They visited the study area and chalked out the actual study implementation program. During their stay in Peshawar, they have detailed meetings with the then Director General, NWFP-EPA about their role in this study and cooperation in data collection and survey on Solid waste management. Pre-investigation team also held meetings with the Chairman, Department of Environmental Sciences, University of Peshawar and Officials of City Development and Municipal Department (CD & MD) about their cooperation and participation in this study.

FIGURE-1

ORGANIZATION CHART OF IMPLEMENTED INVESTIGATION



*Urban Environmental Problems in Pakistan
(A Case Study for Urban Environment in Hayatabad, Peshawar)*

TABLE-3

IMPLEMENTED SCHEDULE

S. No.	Items of activity	Year 2003			Year 2004		
		Oct.	Nov.	Dec.	Jan.	Feb.	March
1.	Visit of OECC study team to Pakistan to conduct preliminary study on urban environment	↔					
2	Signing of memorandum of agreement for this study	●					
3	Pre-investigation visit to Peshawar by Pak-EPA Officers and Chief Chemist/JICA to chalk out the survey implementation program and conduct meetings with concerned agencies/departments			↔			
4	Collection of data from different agencies/departments regarding urbanization, water cycle, hydrogeological characteristics etc.		↔				
5	Sampling and spot testing of water samples from the pre-selected sampling points (point 1 to point 7) and Leachate sample				↔		
6	Laboratory analysis of water samples for different parameters				↔		
7	Solid waste survey to investigate the volume and quality				↔		
8	Topographic survey of dumping site			↔			
9	Compilation of draft report				↔		
10	Final report printing and submission to OECC						↔

NWFP-EPA started their part of assignment from mid November, 2003 to early January 2004 for collection of data on Urbanization, water cycle and solid characteristics.

Pak-EPA study team comprising Mr. Zia-Ul-Islam, Director, EIA/Monitoring, Mr Ahsan Rafi Kiani, Deputy Director and three staff members from the Pak-EPA laboratory along with Dr. Zulfiqar H. Lodhi, Chief Chemist/JICA study launched the actual implementation study on water sampling and analysis and also extended cooperation to NWFP-EPA on their part of study on solid waste management. Spot testing was performed for certain parameters, those tend to change significantly with passage of time.

Portable equipment was used for in situ testing. For laboratory analysis, samples were preserved by the addition of certain chemicals to stabilize the parameters of concern.

Topographic survey was conducted by the surveyor from CD & MD under the supervision of Director General, NWFP-EPA.

Draft report submitted to OECC by the end of February, 2004, while the final report after the approval of OECC submitted.

5- ACTUAL ACTIVITY ON HAYATABAD

5-1 General Information of Hyatabad

Housing is a basic need and thousand families are struggling to have a roof over their heads. Rapid population growth, scarcity of government resources, urbanization and the developing imbalances between urban and rural areas has compounded the housing problem.

Due to imbalance supply and demand of housing, the housing backlog is increasing rapidly. The yearly addition to housing stock hardly caters to the 40 % of the population increase. The worsening supply & demand position manifests itself in overcrowding, deteriorating housing stock formation, katchi abadies, slums and encroachments.

To meet the challenge “Shelter for each”, the Peshawar Development Authority played its role and developed Hayatabad Satellite Township. The initial planning of the township was completed and developmental work was completed in 7 phases. The latest phase Ie phase VII was announced in 1992 and housing construction has very recently started in this last phase.

5-2 Data Collection

Data generated in this study was collected from different departments. The list of those departments who extended help during this study is given below in Table-4.