



**GOVERNMENT OF Khyber Pakhtunkhwa
Urban Policy and Planning Unit (UPU)
and
Environmental Protection Agency**

Terms of Reference (ToRs)

For
**Consultancy Services for
“Study on the State of Environment of District Swat
Review and Updating the Environmental Profile (2016) of
District Swat**

Terms of Reference (ToRs) for Consultant for Consultancy Services for “Study on the State of Environment of District Swat Review and Updating the Environmental Profile (2016) of The District Swat

Background:

The Urban policy Unit of the Planning and Development Department of the Government of Khyber Pakhtunkhwa intends to carry out a study on the state of environment of District Swat to up-date the Environmental Profile (2016) of Khyber Pakhtunkhwa. In order to carry out the study for updation of Environmental Profile of Khyber Pakhtunkhwa of District Swat, the Unit will engage services of a consulting firm having sound qualification and experience in the relevant field.

1. Objective of the Assignment

The study consists of the following three components:

- a. State of Air, Water, Soil (through primary data collection)
- b. Situation of Solid, Hazardous, Hospital Waste (Secondary/Primary data)
- c. Existing Land-Cover with special reference to forest, land degradation/soil erosion (through remote sensing/GIS data).

While the broad objectives of the study are but not-limited to the following:

- Updating of the already published Environmental Profile of Khyber Pakhtunkhwa and comparison of the previous and current state of environment in the province.
- Updating of the previous data (primary & secondary) regarding forest, agriculture, solid waste, ambient air , air pollution, water pollution, soil pollution, noise etc through surveys and analysis.
- Analyzing and consolidation of the primary and secondary data collected from the field and comparing to find out previous and current trends in the status/degree of pollution, highlighting the worst scenarios for general awareness.
- Highlighting of the major causes of environmental issues and its impact on the general public, health, social and economics.
- Identifying sustainable, cost effective, environmental feasible and socially acceptable solutions for the environmental issues of the district.
- Updating, publishing and distribution of the updated revised environmental profile among the stakeholders for taking remedial actions in concerned sector.

2. Scope of Work:

The scope of work is limited to District Swat of Malakand Division and the consultant will carry out the following activities and task assigned under this study;

i) Primary Data Collection:

Primary data collection, sampling, laboratory analysis and comparative assessment of parameters with NEQS Standards for Air quality, Water quality, Soil quality, and Noise level across the Selected Points in all Seven Tehsil Head Quarters of the District Swat, Khyber Pakhtunkhwa. The Primary Data so collected will be analyzed and interpreted to provide an overall Status of Environment Situation of the atmospheric, water resources and land pollution in the District. The analysis shall be done from a certified environmental laboratory in Khyber Pakhtunkhwa or any other government recognized laboratory in this regards as per standard practices. **The GPS coordinates of the sampling points should be collected and plotted on the map of District Swat.**

The consultant firm shall use its own resources for the field sampling, transportation and analysis of samples for primary data acquisition. The resources of the UPU or EPA or its laboratory shall not be utilized for analysis or data collection in any case. The total number of samples at the seven tehsil headquarters of the district for each category is given below:

S#	Types of Samples	No. of Samples	Priority Parameters	Sampling Districts/Points
1	Air quality	30 (8 hours Monitoring)	COx, NOx, SOx, SPM,	To be specified by UPU/EPA
2	Drinking water quality	50	Taste, or dour, color, turbidity pH, NH ₄ , NO ₂ , NO ₃ , Total Alkalinity, Total Hardness, Ca Hardness, magnesium, Chloride, TDS, TOC, Sulphates, fluoride, Iodine, As, Fe, Mn, Na, K , total count, Faecal Coliform.	To be specified by UPU & EPA
3	Surface water quality	30	DO, TDS, TSS, TOC, phosphates, Total pesticides, Total Count, Faecal Coli form, detergents, Cl, NA, K	To be specified by UPU & EPA
4	Soil quality	30 15 Sample each from orchards and non-orchards agriculture land	SAR, Heavy metals, Ca, Mg, Boron, pH, Acidity, NPK, Pesticides.	To be specified by UPU & EPA
5	Noise	30 (8 hours Monitoring)	Noise in dB as per NEQS criteria.	To be specified by UPU & EPA

ii) Secondary Data Collection:

For temporal analysis and to identify trend, the consultant will collect secondary data regarding air, water, land pollution in District Swat of Khyber Pakhtunkhwa from the existing reports, surveys and published literatures as well as collect unpublished reports/data from the relevant stakeholders including Federal, Provincial and District Line Departments, Civil Society Organizations, Research and Academic Institutions across the country. Secondary data from 2010-2020 shall be collected, pertaining to the following areas will be collected by the consultant for development of the state of environment profile.

- Land Use temporal for the year 2010, 2015 and 2019/20 tabulated data and maps (Agriculture, barren land, canals, forest, glaciers, habitation, range land, shrub and bushes, water bodies) of the district.
- Topography tabulated data and maps with 10 meters contours level
- Population tabulated data maps (1981, 1998 and 2017)
- Industries all (large, small and medium) including Brick kilns, Poultry Farms etc
- All Educational institutions (Statistics/maps)
- All Health institutions statistics/maps
- Transportation & communication networks
- Irrigation & dams/barrages
- Mines, Minerals, Energy & Power (including oil & gas reserves)
- Forestation/deforestation (temporal analysis)
- Biodiversity tabulated data and maps, including Wildlife Sanctuaries, Protected Areas, National Parks, and Game Reserves. and others
- Archeological sites, Culture and Heritage
- Wet lands and Environmental Sensitive Areas
- Climate /weather, rain fall etc.
- Abnormal Climate Changes
- Solid waste collection and disposal practices in all TMs
- Hazardous and hospital wastes collection, transportation & disposal practices.
- Livelihood and income of peoples
- Other development and statistical data regarding environment.

iii) Acquisition of Satellite Imageries/Data:

For temporal analysis and change detection the consultant will acquire high resolution (0.5 – 1.5 M) satellite imageries of the year 2010, 2015 and 2019 with minimal cloud cover. UPU will reimburse the actual cost of the imageries through provisional sum.

3. Analysis and Presentation of Data:

The primary and secondary data collected so by the consultant will be analyzed in comparison with previous data in systematic manners to provide the overall trends in environmental conditions of the province. All data shall be presented in tabulated forms as well as graphs and maps to show the latest trends.

4. Cultural Formation of the District:

The consultant firm shall collect tehsil wise data of population its distribution, resources availability to the population and the general demographic distribution of the population.

5. Mapping and Reporting:

All primary and secondary data will be presented in tabulated forms and graphical presentation through charts and secondary maps using GIS and other mapping techniques.

6. Stakeholders Consultation:

The consultants will be responsible for stakeholder's consultation in all stages of the preparation/updation of the Environmental Profile of the district starting from data collection, interpretation of data, validation of data and final sharing of draft report with all stakeholders and confirmation/authentication of data presented in the final report. The consultant will also be responsible to present the final draft report and data to all stakeholders in a two seminars/workshop one preliminary and other final to the stakeholders. The team must be available during the contractual period and for at least 2 months afterwards to meet with the concerned government officials to discuss findings and recommendations, if required to share and finalize the report and getting the stakeholders feedback. The feedback from stakeholders shall be incorporated in the final report to be presented by the consultant to the Client (UPU).

7. Designing & Printing of Report:

The consultants/firm shall be responsible for the designing and color printing of final report and providing 100 hard copies of the updated revised Environmental Profile of the District Swat along with an electronic copy to the UPU at the end/completion of the project with all data tables, annexure, appendices and maps (in its original/editable format). The Final report will be prepared by consultant and presented on a specified format to be provided by the client (UPU).

8. Deliverables by Consultants:

The principal output/deliverable at the end of the consultancy will be an updated version of the Environmental Profile/ State of Environment Report of District Swat Khyber Pakhtunkhwa printed in English. One Hundred (100) hard copies and one soft copy with all GIS data in editable format on CD/USB will be provided to the Urban Policy Unit, P and D Department Govt. of Khyber Pakhtunkhwa along with all data, tables, annexure, appendices and maps etc.

9. Confidentiality of Findings:

All interview notes, documents, and information obtained as a result of this study are to be considered the property of the Urban Policy Unit, P and D Department Govt. of Khyber Pakhtunkhwa and should be handed over to UPU in original and the same should not be discussed or shared with others without the express consent of the UPU. Similarly findings and

recommendations of the study should not be discussed with any third party without the expressed, written permission from the Urban Policy Unit, P and D Department Govt. of Khyber Pakhtunkhwa. The UPU shall reserves the copy rights of the Final Environmental Profiles Report and the consultants shall not disclose the information and or use the same for any other purpose without prior approval of Urban Policy Unit, P and D Department Govt. of Khyber Pakhtunkhwa.

10. Reporting:

The consultancy firm will be contracted by the Urban Policy Unit, P and D Department Govt. of Khyber Pakhtunkhwa and will report to Executive Director, UPU through Senior Urban Planner and or Procurement Manager, UPU for guidance and advice if required.

11. Timing of Work:

The full and final report is expected to be presented not later than 06 months following the signing of the contract. A final draft report should be presented at least two months before completion of the project, so it can be reviewed by the UPU and Environmental Protection Agency, Govt. of Khyber Pakhtunkhwa and other relevant stakeholders and comments shall be provided to the firm for incorporation in the final report. The firm will meet with UPU's officials on a regular basis and present a progress report and discuss findings and work program on monthly basis.

12. Qualification and Experience of Consulting Firm:

The interested consultancy firm must possess the following qualification and experience:

- The firm must be a registered as consulting firm/corporate entity having national tax number and paid all applicable Government taxes (proof required).
- The firms has not been declared and or recommended for declaring black-listed by any Government entity.
- The firm must have sufficient paid human resources and expertise to carry out the assignment. The offered professional team should have the at least following Members with 10 years or more relevant experience, whose Detailed signed CVs must be provided to conduct the proposed study:
 1. Team leader should have master or above degree in Environmental Sciences with 10 years or more relevant experience and should have competency to compile the data, and interpret in scientific way as well have capability to motivate his team.
 2. Deputy Team leader should have master or above degree in environmental engineering with 10 years or more relevant experience and should have competency to cost effective, socially acceptable and environmentally feasible solutions for the issues identified during the course of the study.
 3. One Water Quality expert, having master degree in environmental engineering, chemistry or microbiology at least 10 years relevant experience in water sampling, analysis, interpretation and reporting

4. One air and noise quality monitoring expert with a master degree in chemistry or environment or environmental engineering having experience in collection of air pollution data collection and use of air data tools equipments.
 5. One forestry sector expert having master degree in Forestry or related field
 6. One social sector expert having master degree in Anthropology, Sociology and or Social Work with 10 years of relevant experience for supporting field data collection, stakeholder/community consultation and other similar tasks.
 7. One Aquaculture expert having master degree in Aquaculture/Agriculture/Botany or related degree with 10 years of relevant expertise.
 8. GIS analyst having master degree in remote sensing, GIS and or computer science with Diploma in GIS, should have 5 years experience in spatial data analysis, interpretation and mapping.
 9. For successful completion of the assignment the firms should have sufficient numbers of field and support staff.
- The firm must have at least ten years of relevant experience on environmental issues particularly in the acquisition of primary and secondary data, development of environmental reports, policies and documents similar in nature.
 - The firm having demonstrated experience of work on national / international projects of similar nature will be preferred.
 - Demonstrated knowledge of relevant environment, climate, development, natural resources, land management and project management aspects are required.
 - In-depth knowledge of and experience with the government agencies and departments and acquaintance of their allied rules and procedures
 - Knowledge of the private sector and NGOs will be desirable as it may relate to the probable sub-contracting of study.
 - The Team must have ability to collect and analyze land cover, air, water, noise, soil, and particulate matters data and should be able to clearly communicate and have the ability to write professional consulting report in English language.
 - The team should have ability to work with, hold meetings, and obtain information from government offices/officials, NGOs, private sector organizations, and other stakeholders.

12. Payment:

a. Mode of Payment

Payments will be disperse in five installments as per details given below:

- i. First installment @ 10% of the contract value on approval of inception report
- ii. Second installment @ 30% of the contract value will be released after the collection of Primary data (Air quality, Water (Underground and surface) quality, Soil and Noise pollution Data)
- iii. Third installment @ 20% of the contract value will be released after the approval of GIS based maps and analysis

- iv. Fifth installment @ 20% will be released at the submission draft report (revised environmental profile of District Swat)
- v. Final payment @ 20% to the consultant shall be made only when the consulting services have been completed satisfactorily by submission of the required report by the firm and duly certified by the competent authority/technical committee of the UPU/EPA.

b. Terms of Payment

Selected Firm will be entitled to payment by UPU against bill duly supported by the following documents:-

- a. Bill in Original.
- b. Receipt/Report of Deliverables.
- c. Certificate to the effect that the billed amount has not been claimed or received earlier.
- d. Inspection Certificate issued by the Committee.
- e. Delivery Challan.
- f. Payment will be made through crossed Cheque in favor of selected firm/company after deduction of applicable Taxes as per Government rules & regulations.
- g. In case the firm/company is exempt for deduction at source a certificate shall be provided.

12.1. Delivery Period:

- The successful firm/company will be liable to execute and complete the task/assignment within six months of award of contract.
- An Expert Committee/inspection committee comprising of relevant Government Departments will be constituted to ensure that the quality of the work has been done as per International Standards / Requirements and addressing all the sectors included in this RFP

Draft Contents on the State of Environment Report

I. EXECUTIVE SUMMARY

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III. Current status, trend and key environmental issues.

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