TERMS OF REFERENCE

DEVISING SOLUTION FOR SOLID WASTE MANAGEMENT OF LEATHER SECTOR IN SIALKOT TANNERY ZONE

1. Background:

WWF Pakistan implementing the EU funded project namely "International Labour & Environmental Standards (ILES) Application in Pakistan's SMEs" aims at enhancing capacities of the textile and leather sector SMEs to adopt (SEMPs) Smart Environmental Management Practices to reduce overall energy and water footprint of textile and leather manufacturing, in addition to addressing other relevant environmental issues such as air and noise pollution, and solid waste management.

Whereas, In an effort to control the environmental hazards caused by the tanning industry in Sialkot and to improve the climate change adaptation capability, United Nations Industrial Development Organization (UNIDO) is implementing a Global Environment Facility (GEF) funded project, titled "Mainstreaming Climate Change Adaptation through Water Resource Management in Leather Industrial Zone Development". The initiative had been started to shift scattered tanneries to a centralized location and provide various facilities like common effluent treatment plant, solid waste disposal site, and common effluent collection system and flood management.

Moreover, the project Sialkot Tannery Zone (STZ) is in establishment phase with the aim is to develop focused industrial growth in Sialkot by developing international standard tannery zone in the region. The project is being executed in Public Private Partnership. For representation of the private sector, a non-profit company by the name of Sialkot Tannery Association (Guarantee) Limited (STAGL) was incorporated.

STAGL, UNIDO & WWF Pakistan have collaborated to support Sialkot Tannery Zone for "Devising Solution for Solid Waste Management of Leather Sector in Sialkot Tannery Zone" on following objective and scope

2. Objectives

The present terms of reference aim at practical to establish solution for solid waste management of leather sector in Sialkot Tannery Zone. The project stakeholders under their respective project scopes intends to hire the services of reputed and experienced Consultancy Firms for conducting techno-economic study to suggest economically feasible and environmentally safe option of solid waste management, segregations of useful by-products of leather industry and possible solution for leather processing solid waste including sludge from the CETP. The consultant/expert shall also be responsible for preparation of detailed plan, the equipment required and cost estimates, tender documents for procurement of various tools, equipment and technologies etc., for the proposed Solution for Solid Waste Management System.

3. Scope of Consultancy

- Review of relevant project studies / primary data for understanding of project and to adopt best methodology for this assignment. This will include the review of Climate and Social Assessment Study, Environment Impact Assessment Study, Conceptual Report of Common Effluent Treatment Plant and Chrome Recovery Plant, Construction By-Laws of Tanneries at STZ, Typical Tannery Design Guidelines, Green Tannery Designs Guidelines, etc.
- Review & impart, existing norms & standards (national & international) applicable for STZ project, including Punjab's EPD standards, UNIDO's Framework for Sustainable Leather Manufacture 2nd edition, LWG, EU BREF, etc,.
- 3) Survey of industries for assessment of solid waste to determine the types and quantities of waste generated in leather sector (maximum 20 tanneries).
- 4) Identification & recommendation on segregation of useful by-products of leather industrial waste, for further use including like leather board, fat extraction, waste to fertilizer, waste to energy, bio gas, landfill etc. The Waste utilization either as material should be preferred, energy generation should be as second option. The consultant should provide possible information on products which includes comparison, investment and market information (whether there is a market for such products). In case of the recommendations for waste to energy, the consultant must consider the gross & net calorific values of input collective waste.

- 5) Comparatively discuss the financial, technical, and environmental, pros and cons of all available technologies of solid waste treatment & safe disposal that may be utilized for the project keeping in view the ground realities / site conditions. Proposed solution or technologies should be proven (not experimental) and should have references (at least three units already in use).
- 6) Detailed Designing & Engineering Estimate of proposed solution for example Scientific Landfill/Waste to Energy etc, keeping in view the occupancy rate of zone, such as, initially for the first 5 years of STZ. This will include the identification of suitable land within or outside STZ and soil investigation.
- Detailed technical & financial proposal for waste collection, intermediate Storage, transfer & safe disposal of solid waste based on time-frame of occupancy of zone (ideally in four phases) and includes;
 - a. Recommendation for Human Resource requirement.
 - b. Identification and Recommendation for Equipment requirements i.e bins, containers, collection & transfer vehicles, etc, including placement plan.
 - c. Proposed Operational & Monitoring plan which also includes digital weighing mechanism (individual or collective based) and allied facilities required.
- 8) Preparation of Tender Documents on EPC basis, for the proposed solid waste management solution based on PPRA & PEC guidelines.

4. Duration:

The duration of study and final report submission is 90 days from signing of contract.

- 10 days for Inception report.
- 30 Days for 1st draft Report on available management solutions, solid waste assessment report, techno-economic study.
- 10 days for 2nd draft report including engineering estimates and tender documents of proposal engineering solution according to PPRA rules.
- 5 days for submission of final report.

5. Deliverables:

1) Inception Report indicating detailed methodology and work plan (at the time of Kick-

off/Preliminary Meeting) of award of the contract.

- Integrated Solid Waste Management Study Report including the solid waste test report & analysis. (Two Hard Copies and One Soft Copy in for of CD/DVD).
- 3) Tender Documents & Engineering Estimates of selected technology. (Two Hard Copies and One Soft Copy in for of CD/DVD)
- 4) Arranging two consultative sessions with Project stakeholders to present the findings of techno-economic study and to select the appropriate treatment technology.
- 5) Arranging one workshop at project site to present the major findings of study to all project stakeholders.

6. Qualification/Requirements:

- The consultant should have a one MSc/MS/M.phill in environmental sciences/ engineering having professional experience of 15 years or more and one MS/BE in Chemical Engineer /Civil Engineer, having professional experience of 10 years or more in field of environment / solid waste / renewable energy.
- The consultant should have a minimum of 10 years, in designing, feasibility studies developing policies, plans, engineering estimates related to solid waste management & treatment.
- 3) The consultant should have affiliation with international agencies/councils.

7. Guideline for submission of proposal/expression of interest:

Interested consultants should submit the following documentation to Muzzammil Ahmed (<u>mahmed@wwf.org.pk</u>) and Maham Zahara (<u>mzahara@wwf.org.pk</u>)

- Brief introduction of consultant (attach detailed CV with references)
- Understanding of the context
- Methodology
- Design Portfolio
- Work plan

• The consultant will submit the cost of assignment in lump sum including all applicable taxes of the Government of Pakistan.

8. Selection Criteria:

Applicant's proposal shall be evaluated based on Quality and Cost Based Selection (QCBS) method. Under QCBS both technical and financial proposals shall be evaluated as per following criteria against a maximum score of 100 points.

- a. Technical Proposal 70%
- b. Financial Proposal 30%

The following criteria shall be used as a basis for evaluation of technical proposals:

- Qualifications (maximum 30 points)
- Experience relevant to the assignment (maximum 30 points)
- Adequacy of the proposed methodology and work plan (maximum 20 points)
- Skills & Competencies for the assignment (maximum 10 points)
- Prior experience with WWF-Pakistan (maximum 10 points)

Note: Late/ incomplete submissions will not be accepted. Only three (03) top ranked firms will be included in the comparative process.