

TECHNICAL INSTRUCTION SHEET FOR THE CONTRACTING OF AN EXTERNAL CONSULTANCY FOR: THE STUDY OF THE LOCALIZATION AND DESIGN OF A SOLID WASTE LANDFILL SITE IN THE CITY OF STUNG TRENG, CAMBODIA.

Reference	07 - CO1- 032
Name of the Agreement /Project	“Urban Solid Waste Management” in the city of Stung Treng
Type of Contract	Contract for Services
Legislation applicable to the Contract	Spanish
Sub-contracting	No
Delivery date of the financial and technical proposals	15 th September 2010
Resolution date	10 days after the document’s delivery

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1. INFORMATION

a. Capacity to tender

Proposals can be presented by natural persons or legal entities with English proficiency, and among their team they should include persons with perfect knowledge of the Khmer language.

Knowledge of the evaluation of the environmental impact will also be necessary.

Tenderers should have a demonstrable experience in Solid Waste Management.

Consultants that do not meet these basic requirements won't be eligible to tender.

b. Offers Content and presentation

The offer, which must include the technical, methodological and financial proposal of the offered works, should meet with the indicated formal parameters:

- 1 Tender presentation form for the services to be provided
- 2 Tenderer statement
- 3 Index or content
- 4 Technical offer
- 5 Detailed budget
- 6 CVs of the consultant/s that will take part of the work team

The offer that will be prepared by the tenderer, including all the related correspondence and documents, should be written in both English and Khmer.

The Offers will be presented in two separate envelopes:

- A for the Technical Offer
- B for the Financial Offer or Price

c. Technical offer

The Technical Offer shall indicate the products and results that the tenderer is committed to provide and carry out, which cannot exclude any of those indicated in the Terms of Reference.

The Technical Offer shall include a workplan in accordance to the scope and methodology required in the Terms of Reference.

The Technical Offer shall also include all those documents that indicate and prove the tenderer experience.

The Technical Offer of the selected tenderer will constitute an integral part of the endorsed contract.

d. Place and deadline for the presentation of the offers

The tenderers should present a hard copy, along with an electronic copy (in CD) in closed and signed separate envelopes, indicating the data showed in the offer.

The offers will be submitted to the following address:

CRDT
María Eugenia Carrascal
PO box 2539 Phnom Penh 3
Email : camboya@fundacion-ipade.org

e. Type of tender

Public tender, that will be published in IPADE's Website: www.fundacion-ipade.org and remitted to a list of entities, companies and specialized professionals in Cambodia and other countries in the region and will be announced in The Cambodia Daily.

f. The validity period of the offers:

Offers will be valid for a period of six months from the opening date. Offers of a minor validity period than the required one will be automatically denied by the Contacting Authority since they do not respond to the requirements of this dossier.

g. Deontological Clauses

Any attempt from a candidate or a tenderer with the aim to get confidential information, make illicit agreements with its competitors during the examination period, or to get clarifications, evaluation or comparison with other offers will lead to the exclusion of its application or its offer.

In the moment of presenting its application or offer, the candidate or tenderer should declare, on one hand, that there is no potential conflict of interest and, on the other hand, that she/he doesn't have any specific link with any other tenderer or other parties participating in the Project. If this situation should occur during the execution phase of the Project, the contractor should immediately communicate it to the Organization Management.

The contractor shall at all time act with impartiality and in good faith in accordance to the deontological code regulating its profession. Furthermore, he/she shall not make any public declarations about the agreement or the services provided without prior approval of the Organization Management, nor he/she shall commit, by any means, IPADE's Management without the latter's prior written consent.

Throughout the duration of the contract, the adjudicatory entity (and its staff) shall respect the Human Rights and be committed to respect the political, cultural and religious values of the beneficiary countries.

The contractor shall not accept any remuneration in virtue of the contract other than the foreseen one (in the contract). The contractor shall not carry out any other activity nor receive any other gratification that may enter in conflict with the obligations contracted with the Counterpart Entity.

The contractor is subject to the professional secret throughout the duration of the Project and after it ends. All the reports and documents received or elaborated by the Titular in the framework of the contract will be confidential. The use from the

contracting parties of the reports and documents elaborated, received or delivered during the Project's implementation are bind by the conditions established in the Contract.

The contractor should refrain from making any relation that may compromise his/her Independence. In the case the contractor is not anymore independent, the Contracting Entity may terminate the contract, without prior notice, for the caused prejudice and, in which case, the contractor does not have the right to reclaim any kind of indemnity.

Decisions regarding the adjudications cannot be appealed.

h. Causes of Exclusion

May not participate in the tenders nor be adjudicatory of a contract those natural persons or legal entities that:

- Are in a bankrupt or a settlement situation, suffer payments suspension, are in a meeting of creditors, cease of activities or any other similar situation resulting from such a procedure existing in the national legislations or regulations;
- Are subject to a procedure of declaration of bankruptcy, settlement, payments suspension, meeting of creditors or any other similar procedure existing in the national legislations or regulations.
- Have been condemned to a firm sentence (without appealing possibility) for an offense that compromises her/his professional conduct.
- Have committed a gross professional misconduct observed by any mean and that can be justified by the Joint Committee.
- Have not complied with their payment obligations of the Social Security contributions as per the established legal arrangements of the beneficiary country;
- Have not complied with their obligations related to the payment of taxes in virtue of the established legal arrangements of the beneficiary country;
- Have been guilty of false declarations after she/he has given the information required by the Joint Committee for his/her participation in a tender or a contract;
- Have been declared in a gross implementing misconduct for the non compliance with her/his contractual obligations in the framework of another contract financed by the AECID or the Contracting Entity.
- Are found, in the framework of the tender or the contract, in one of the exclusion situations mentioned in the deontological clauses.

Candidates must present a sworn statement stipulating that they are not in any of the before-enumerated situations.

2. DOCUMENTATION

Terms of Reference for the contracting of technical assistance services for THE STUDY OF THE LOCALIZATION AND DESIGN OF A SOLID WASTE LANDFILL SITE IN THE CITY OF STUNG TRENG, CAMBODIA

1 Justification

The IPADE Foundation, under Agreement nº 07-CO1-032 signed with the Spanish Agency of International Cooperation for Development (AECID) is financing the Project “Urban Solid Waste Management” in the city of Stung Treng. In order to implement this project, a partnership was established with the CSARO organization and the Government of Stung Treng.

One of the activities proposed is the implementation of a technical assistance for the assessment of a waste landfill site, being that the actual site where waste is deposited does not meet the adequate requirements for its use as such. The existing one is a “landfill” lacking of technical infrastructure for the treatment of waste or its derivate products (gases or leachates) and it is located in an inadequate place since it's near the city and a water flow and do not dispose from any fencing that protects the zone.

To deal with these above-mentioned problems, the Government of the city of Stung Treng decided to construct a new landfill. The said landfill is situated 13 Km away from the city and has a surface of 50 hectares. Nevertheless, never an appropriate localization study was carried out before for its dimensioning, management system, localization or construction.

The conditioning works were initiated but had never been finished and till this day, this “landfill” has never been used. Besides this site, the Government has two other possible sites for the municipal landfill.

2 Object of the tender

In the context of the solid waste management Project, the Government of the city of Stung Treng, along with the Department of Environment and the IPADE Foundation, has concluded that the IPADE Foundation will contract a technical assistance to carry out:

- The study of the three zones proposed by the Government as possible sites of the municipal landfill, including the evaluation of the three alternatives so that the Government can choose the most adequate one.
- The design, the technical specifications, the operation and maintenance manuals, analysis of the financial sustainability and the budget for the construction of the landfill, taking into account the technical solutions in order to minimize the negative impacts.

3 Actions and outputs to deliver

For the achievement of the afore-mentioned objectives, it is necessary to obtain the data related to the type, quantity, generation rate and characteristics of the waste to be deposited in the landfill of the city of Stung Treng.

Taking into account these objectives, the Works to be carried out by the consultancy firm

are detailed here-after.

1- STUDY OF THE QUANTITY AND QUALITY OF THE WASTE

The consultancy firm shall first evaluate the quantity and quality of the waste generated by the city of Stung Treng, which constitute a step prior to the selection and design of the landfill.

1.1 Quantity of the waste:

The following parameters are to be determined:

- a) Generation of domestic waste rate per habitant:

It will be carried out in accordance to the recommendations of the Technical Regulations of Waste Treatment dictated by both the Government of Cambodia and the World Health Organization (WHO). Results shall be expressed in: Kg/hab.-day.

- b) Generation of waste in other sources of the system

The total daily waste quantity generated in markets, businesses, plants and health sub-centers, tourist installations and others will be determined. Also, the average daily quantity of waste generated by the whole system, both in weight and in volume, is to be defined.

- c) Determination of the average daily quantity of waste recollected in the streets sweeping process.
- d) Determination of the average daily quantity of waste generated by the whole system in weight and volume.
- e) Determination of the average loose and compacted quantity of solid waste by user type, which is the average waste density.

Taking into consideration the demographic growth, these results will be projected to the next 20 years.

1.2 Quality of the waste

An analysis of the sub-products contained in the different types of solid waste generated by the whole system will be carried out, in accordance to the indicated in the Technical Regulations of Waste Treatment dictated by both the Government of Cambodia and the World Health Organization (WHO). Results shall be expressed in percentage.

The following physical and chemical analysis shall be carried out: humidity, volatile solids, pH and biodegradable organic matter.

In the case that considerable quantities of dangerous waste have been observed, the necessary bacteriological analysis will be carried out to determine the degree of dangerousness of these waste.

The consultancy firm in its technical and financial offer shall detail the number of samples to be analyzed in order to achieve the required objectives.

Furthermore, the study should indicate the possibility, or not, to recycle the solid waste by analyzing environmental variables that are affected during the recycling process and make a research on the potential trade market. The consultancy firm shall also analyze environmental variables that will have an influence on this action.

2.- STUDY OF THE OPTIMUM PLACE FOR THE FINAL WASTE DISPOSAL

2.1 Basic engineering study

The consultancy firm shall recompile and analyze the existing technical information so that it doesn't unnecessarily repeat the basic engineering studies already done.

Topographic information:

City topographic maps will be used, or any other existing topographic information for this purpose, to determine the characteristics, location and accessibility of the sites proposed for the final disposal, in order to compare them and select the best site.

The consultancy firm should research before the presentation of its technical and financial offer on whether the Municipality has the topographic maps or not otherwise, it should tender the works to be implemented in order to achieve the objectives.

Tacheometry of the selected site should be carried out in order to make possible the final designs of the landfill and treatment areas.

Geotechnical Information

In order to determine subsoil features in each of the proposed sites for final disposal, and select the best one, the most appropriate geophysical method shall be carried out as well as the necessary tests drillings or borings that will allow to determine at each site, the type of soil, the depth and direction of the water table and the soil permeability.

A report on soil mechanics should be included, describing the researches that have been carried-out as well as the test results, conclusions and recommendations.

The consultancy firm, in its technical and economic offer, should detail the amount and type of works to be carried out in order to achieve the objectives required.

Hydrological and meteorological information

With regards to the influence area of the proposed sites for final disposal, the following information shall be gathered:

Hydrology.- if any bodies of water are present near the final disposal sites proposed, the following parameters shall be determined:

- Any usage these waters receive that could be affected by the discharges of percolating liquids or waste water after treatment.
- Estimation of the average and minimum flows of low water of these receiving bodies.

Meteorology.- information concerning climate records shall be gathered, such as rainfall, temperature, winds, an ombrothermic diagram and runoffs.

The consultancy firm, in its technical and economic offer, should detail the amount and type of works to be carried out in order to achieve the objectives required.

2.2 Study of the environmental impact (SEI)

2.2.1 Description of the Environment

Area of influence:

Describe and represent cartographically at an appropriate scale, the area to be affected directly and indirectly by the landfill in all the proposed alternatives including:

Describing and assessing quantitatively at least the following environmental factors:

Physical environment: soil, atmosphere, surface and groundwater hydrology

Living Environment: vegetation and ecosystems

Perceptual Environment: landscape

Socio-economic environment: population, economic activities, land use.

2.2.2 Legislative and regulatory considerations

Current rules and regulations applicable to the project and that determine the environmental quality should be described, including executive decrees, regulations promulgated by ministries and any municipal ordinances.

2.2.3 Identify and assess the magnitude and importance of environmental impacts

The significant environmental impacts that can be foreseen in the implementation and operation of the landfill shall be analyzed, identifying unavoidable or irreversible impacts and their importance.

Among the possible and most important environmental impacts generated by the project, the following can be found:

Construction phase:

Impacts on vegetation

Impacts on ground and surface waters

Nuisances for the population (noise, dust)

Expropriations:

Social acceptability of the project

Implementation phase:

Impacts on the health conditions of the population: housing near the landfill site; possible invasions and presence of scavengers, if any.

Emissions of particles and gases in the atmosphere

Impacts on the water quality and its use

Impacts on soils

Risk of accidents

2.2.4 Identify mitigation measures

The alternative measures shall be described in their preliminary or pre-design phase in order to mitigate, prevent or reduce significant negative impacts which have been identified to acceptable levels in accordance with current regulations. The parties affected by those impacts that cannot be mitigated should be equally taken into account. Technical specifications and estimated costs of the measures designed shall be indicated as well as the persons responsible for their implementation, the duration, their estimated effectiveness and the degree of difficulty for their implementation.

For example, measures to:

Prevent and reduce pollution in ground water and atmosphere

Impermeabilise the bottom of the landfill

Collection of leachates

Treatment of leachates and contaminated water

Collection and usage / gas combustion

Collection and disposal of rain water

Separate collection for hospital waste

Landfill closure

Visual isolation for the active areas of the landfill site (verges, tree screening, etc.).

Control of entry to prevent the disposal of hazardous wastes; and;

Rehabilitation (e.g. revegetation) of the area after the closure

After completing the basic engineering and environmental impact studies, the best option for the location of the site will be proposed and the landfill design phase will begin.

3- DESIGN AND ESTIMATED BUDGET – LANDFILL CONSTRUCTION

3.1 Landfill design

The final design for the handling and disposal of solid waste shall analyze the most appropriate technology and shall include at least the following aspects:

Landfill infrastructure:

- Design of the bottom of the landfill
- Cuts and improvement of soil support
- Impermeabilization of the bottom of the landfill
- Design of terraces
- Design of protective trenches or ditches to divert rain water runoffs.
- Design of the drainage system for percolating fluids.
- Design of the system for the pre-treatment of leachate fluid and its disposal.
- Design of the drainage system of gases generated in the landfill (location, dimensions and material).

The landfill itself:

Sizing landfill cells

Calculation of the necessary amounts of material to cover landfill cells

Areas for unloading and maneuvering of trucks and machinery

No landfill is to be built for 20 years of useful life, instead terraces that can provide support for the continuation of the landfill must be built over time.

The consultancy firm must locate banking loans for the cover material or define the final disposal technique.

Treatment of percolating liquids:

The treatment of percolating liquids aims to reduce organic matter and pathogens to values recommended by the technical standards of the design, for which the consultant must submit the following designs:

Feedback from landfill leachates

If there are any remnants of leachate liquids, the design of the system for leachate treatment, which should contain the following:

An equalization tank in order to achieve a uniform flow and;

The treatment itself can be of various types or a combination of anaerobic biological processes.

Auxiliary constructions

Fences and enclosures

Arborization

Gateways to the disposal site

Design of access roads

Any other works required

3.2 Work volumes and project budget

The general work budget must contain detailed information about all parties involved in the project by investment categories.

Volumes or quantities of each material shall be quantified in the appropriate units, to the value of each item. This is previously obtained from the respective analysis of unit prices and the total value of the concept in question.

In order to prepare the work budget, the consultant shall conduct an investigation of the costs of materials, transportation, rental equipment and other inputs required to carry out the work at the locality of neighboring populations.

The work budget should be developed by investment category, with proper justification for the use of local and imported components.

The budget shall contain the following information:

Cost for the construction of civil works

- Final work volumes
- Analysis of unit prices and updates for all budget items
- Polynomial formulas and crew types - if required by the legislation.
- Summary and cost of used materials and equipment
- The budget must be broken down in stages of construction.

Indirect costs

- Break down of engineering and administration costs, general expenses and contingencies.

3.3 Technical specifications of construction materials

These must be submitted with the tender documents and should contain specifications of materials, equipment and tools with reference to the regulations that the responsible Cambodian entity has formulated and to the generally accepted international standards (ISO, STM, DIN).

THE CONSULTING FIRM OUTPUTS

The documentation to be submitted to the IPADE Foundation in English and Khmer is as follows:

Executive memorandum summarizing all components of the study.

Set of technical documents, containing all the calculations and reports of all project components.

Landfill design

A set of computer CDs with its own index, containing all technical information processed within the project (calculations, technical reports, budgets).

All sheets must have the appropriate identification card that shall contain the following information:

Borrower Entity: Municipality of Stung Treng

Agency financing the project: AECID

Type of study and project name:

Sheet contents:

Numerical and graphic scales:

Date of creation:

Name, signature and license number of the professionals responsible for the design:

Code and number of sheets:

3.1. Site visits.

3.2. Documents.

3.3. Return of results to IPADE in Cambodia. To return results to the entire organization, two meetings shall at least be held in Stung Treng, in which the project progress will be discussed.

3.4. Return of results to local partners. To return results to local partners it would be advisable to hold at least two informative meetings with each of the partners.

4. Period of consultancy

Consultancy will run until November 31st, 2010

5. Methodology

The consultant will carry out the study with a clear methodology and taking into account the beneficiary country population. All results will be obtained from the field work, which would have been conducted through an environmental-oriented technique, examining the cost-benefit of the institutions involved.

6. Assistance / Consultancy Profile

- Expertise studies in Civil engineering, Biology and / or agronomy, economist, sociologist
- Experience of more than five years in similar studies
- Extensive knowledge of environmental impact studies
- Extensive knowledge of the regional context, which is the object of the technical assistance.

7. Price and Payment method

The cost of the Consultancy or Technical Assistance should be in Euros all taxes included.

Spanish legislation applies with regards to international contracts.

Whether it is a natural person or a legal entity, a withholding tax of 24% will be applied.

The contractor shall issue a single invoice for the total amount that shall be sent before the first payment to the IPADE Foundation at the following address:

Fundación IPADE
Calle Altamirano nº 50, 1ª planta
28008 Madrid (Spain)

The invoice must contain the following details:

- Invoice number
- Sender identification details (name, surname, corporate name)
- IPADE's identification details (Spanish tax registration number - NIF - and address)
- Description of the service to be provided
- Unit Price and Total amount
- Title of the agreement
- IPADE's Spanish Tax Code (CIF - G78613767)
- The seal of the issuer (printed above the issuer's signature)
- The amount in Euros
- Date and place of issue
- Date, place and means of payment:

The total amount includes the consulting fees, traveling, accommodation and board expenses incurred by the technical assistance as well as the insurance required to carry out the works, communication costs, stationery, management and administration costs, all relevant taxes and any other costs generated by the technical assistance.

Contracting shall be done taking into account Spanish legislation; therefore any insurmountable contractual dispute shall be settled before the Spanish courts.

Payment of services shall be made by bank transfer to the account designated by the contractor according to the following payment plan: 40% upon signing the contract and 30% after submitting the studies on waste quality and on the optimum site for final waste disposal and the remaining 30% upon completion and approval of all works by IPADE. According to the Spanish law the invoices should include 24% of income taxes.

In accordance with the provisions of Article 43.1.f. of the LGT, the contractor must supply to IPADE before each payment, a specific certificate stating he / she is in compliance with his / her tax obligations up to date.

8. Awarding the contract

The contract will be awarded to the most advantageous offer taking into account not only the economic content, but also any criteria in relation to the technical solvency of the business or the professional individual and its relevant experience in conducting similar studies.

b. Tender Presentation Form for the services provided

Title of the contract: as the one indicated on the tender notice or on the invitation to tender.

The signed original form and copies of this form and all the documents referred to therein must also be submitted.

1 PRESENTED by

Name of the tenderer	
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* In case of a consortium, please indicate the agreed name.

2 CONTACT PERSON (for this offer)

Name and Surname(s)	
Address	
Telephone	
Fax	
Email	

c. Sworn Statement

I hereby declare, in my capacity as a tenderer or authorized signatory of the tenderer (including all partners, in the case of a consortium), that I / we have examined and accepted without reserve or restriction all the contents of the tender dossier. I / we offer to provide the services requested in the Tender Dossier on the basis of the following documents, which constitute my / our technical offer, and my / our financial offer, which I / we submit in a separate sealed envelope:

(Please mention the relevant documents)

- 1
- 2
- 3

Title of the contract for the technical assistance to be provided: as specified in the tender notice or invitation to tender

Name and Surname(s)	
Signature	
Date	

Dear Sir / Madam,

In response to the tender notice or invitation to tender for the contract mentioned above, we hereby declare that:

I / we confirm that I / we did not breach any of the participation grounds of exclusion listed in your tender terms and conditions.

I / we agree to abide by the deontological clauses contained therein and in particular and declare that we have no potential conflicts of interest nor any relation with other candidates or parties involved in the tendering process at the time of submission of this offer.

I / we will immediately notify IPADE's Management of any changes that might occur in any of the mentioned circumstances at any stage of the tendering process or during the implementation period of the contract;

I / we fully acknowledge and accept that the deliberate inclusion of inaccurate or incomplete information in this tender offer may result in being excluded of this contract which is financed by resources granted by the AECID.

Sincerely,

Signature	
Name and Surname(s)	

Signature of the tenderer or authorized representative of the tenderer
Name of the tenderer or authorized representative of the tenderer