Ref. Number: 31.21

Consultancy service to develop a delta-wide sand budget for the Vietnamese Mekong Delta Region

Terms of Reference structure

1. Acronyms 2
2. General information 3
3. Background 4
4. Objectives 5
5. Scope of work/major responsibility 5
   - *5.1. The following approaches are recommended amongst others: 5*
   - *5.2. Monitoring sites, parameters, frequency, and duration. 6*
   - *5.3. The proposed activities 6*
     - *5.3.1. Work package 1: river sand monitoring, sampling, and survey 6*
     - *5.3.2. Work package 2: Sand transport modelling and development of sand budget 7*
   - *5.4. Equipment 7*
6. Required education, skills, and experience 7
7. Timeline and deliverables 8
8. Project Schedule 8
9. How to bid 8
   - *9.1. Award criteria 9*
10. Budget and terms of payment 10
11. Cancellation, suspension, protection and addenda clauses 11
12. Ground for exclusion 11
13. Fraud, corruption and conflict of interest declaration 11
14. Ethics 12
15. Declaration of Undertaking 12
16. Technical proposal submission form 13

1. Acronyms

ADCP	Acoustic Doppler current profiler
BMU	German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
DOC	Department of Construction
DONRE	Department of Natural Resources and Environment
GDP	Gross Domestic Product
ICB	International Competitive Bidding
ICT	Indo China Time
LISST	Laser In-Situ Scattering and Transmissometry
IKI	International Climate Initiative
MARD	Ministry of Agriculture and Rural Development
MOC	Ministry of Construction
MONRE	Ministry of Natural Resources and Environment
MRC	Mekong River Commission
Mt	Metric tons
SLR	Se Level Rise
SMP	Sand Mining Project
TOR	Terms of Reference
USD	United States Dollar
VMD	Vietnamese Mekong Delta
WWF	World Wide Fund for Nature

2. General information

Applicable procurement law: WWF Viet Nam procurement regulations.

Contracting agency: No. 6, Lane 18 Nguyen Co Thach Str., Nam Tu Liem Dist., Hanoi, Viet Nam.

Type of contracting agency: Non-profit, non-governmental, charity organisation.

Title: Procurement of Services - Consultancy service to develop a delta-wide sand budget for the Vietnamese Mekong Delta Region

Type of Contract: Services.

Estimated, maximum contract value (including all taxes and charges):
639,000 USD[1].

Award criteria: Price is not the only award criterion and all criteria are stated in the procurement documents.

Duration of the contract:
April 5th 2021 – March 1st 2023.

The contract is subject to renewal: no

Information about funds:
The procurement is related to the project: *"Drifting Sands: Mitigating the impacts of climate change in the Mekong Delta through public and private sector engagement in the sand industry"* and funded by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) - International Climate Initiative (IKI).

Type of procedure: Single stage bidding (Technical and financial offer).

Time limit for sending the proposals: March1st 2021, 17.00 hrs (ICT).

Time limit for sending questions to this tender is: Within February 5th 2021, 17hrs (ICT).

Opening of the tenders: 1 day after the deadline for sending, at WWF Viet Nam.

As ICB, Language shall be: English.

[1] Fund is of 520.000 Euro converted in USD based on the conversion rate date of January 26th 2021 (1 € = 1.229005901 USD$)

TERMS OF REFERENCE

Consultancy service to develop a delta-wide sand budget for the Vietnamese Mekong Delta Region

Project code: 40001882 & 40001883/402575

Supervised by: IKI SMP Project Director
Work location: The Vietnamese Mekong Delta Region and Hanoi where and when needed.
Duration: April 5th 2021 – March 1st 2023

WWF Viet Nam is looking for a Consultant Firm / Consultant Joint Venture (Consortia) to deliver a delta-wide sand budget for the Vietnamese Mekong Delta Region.

3. Background

Covering an area of 40,548 km² in 13 provinces[2], the Vietnamese Mekong Delta is home to some 17.804 million people[3] and accounts for about 18% of national GDP. With an extremely low mean elevation of ~0.8 m above sea level, the delta also is among the region's most vulnerable to climate change-driven sea level rise (SLR)[4]. The construction of hydropower dams and extraction of sediments for a booming construction sector have already reduced sediment transport to the delta by about 77% between 1992 (160 Mt) and 2014 (75 Mt)[5]. Regarding sand mining specifically, excessive extraction concessions (82 licensed companies are officially allowed to extract 28 million tons of river sand per year from the river), illegal sand mining and a lack of awareness have resulted in extraction rates far beyond the replenishment capacity of the Mekong River[6]. Especially along the Mekong's main channels, the Hau and Tien rivers, the consequences have become increasingly apparent, notably a mean incision of the river bed of the Hau and Tien channels by > 2m since 1998, exposing millions of riparians to river bank erosion, salt water intrusion and higher tidal amplitudes[7].

The project: Drifting Sands: Mitigating the impacts of climate change in the Mekong Delta through public and private sector engagement in the sand industry

Between 2019 and 2023, the World Wide Fund for Nature (WWF), with financial support from the German Government, is working with national and provincial

[2] The area as of December 31, 2017 according to Decision No. 3873 / QD-BTNMT dated December 25, 2018 of the Minister of Natural Resources and Environment.
[3] General Statistics Office of Viet Nam, 2018
[4] Minderhoud, P.S.J., Coumou, L., Erkens, G. et al. Mekong delta much lower than previously assumed in sea-level rise impact assessments. Nat Commun 10, 3847 (2019). https://doi.org/10.1038/s41467-019-11602-1

[6] Ass.Prof. Le Manh Hung, Ass.Prof.Dinh Cong San and Dr. Nguyen Duy Khang – Southern Institute of Water Resources Research: "Studying the impact of sand mining activities on changing the river bed of Cuu Long river (Tien and Hau rivers) and proposing solutions for rational exploitation management and planning",State-level independent scientific research projects, 2014 (Code: ĐTĐL.2010T/29).
[7] Tuoi Tre News, 2017. Vietnam forecast to run out of construction sand by 2020. Available at: https://tuoitrenews.vn/news/society/20170803/vietnam-forecast-torun-out-of-construction-sand-by-2020/40865.html

stakeholders (eg. MARD, MONRE, MOC) to mitigate the Mekong delta's vulnerability to SLR through an improved sediment management.
Under the project, the WWF will:

a) Establish a Delta wide sand-and-gravel-budget in consultation with stakeholders to create a uniformly agreed understanding of the scope and impact of unsustainable extraction rates;
b) Promote public awareness of the impact of unsustainable sediment exploitation in the Mekong Delta;
c) Support key actors in the construction sector to access to information on the risks and opportunities of different sourcing methods for sand and gravel.
d) Develop and propose improved policies and practices in relation to sustainable sand and gravel mining;

The project is implemented by WWF Viet Nam and WWF's regional hub for the Greater Mekong region, and in collaboration with WWF Germany.

4. Objectives

This study aims to develop an initial sand budget and to improve the management of sand sources through the Vietnamese Mekong Delta. This sand budget is to serve as a key reference to support the formulation of policies and recommendations, and to serve as the basis for awareness on sand management and development of training materials.

The specific objectives of this study are to:

- Quantify the sand budget of the VMD, including the volume of sand entering the apex of the delta, sand extracted, mobilized and deposited within the delta as well as sand exchange between delta and the sea. This includes measuring both the suspended and bed loads, and estimating the stock of in channel sand, and the volumes being extracted.[8]
- Document seasonal changes in flows and the evolution of morphological dynamics.

5. Scope of work/major responsibility

5.1. The following approaches are recommended amongst others:

- Synchronized measurement across different monitoring stations.
- Synchronized measurement of suspended load and bed load.
- Adapt a proven method to estimate in-channel sand stock (from the exiting data and/or data generated by the suspended load and bed load measurements) and replenishment rates.
- Adapt a proven method to estimate the volumes of sand extracted from the Vietnamese Mekong Delta (VMD) (developed from the existing data and/or data generated by the suspended load and bed load measurements).

[8] Monitoring of sand lost to the floodplain is not included in the proposed monitoring strategy

5.2. Monitoring sites, parameters, frequency, and duration.

- Location: Tien (Mekong) and Hau (Bassac) rivers (and channels) from upstream of VMD to their mouths.
- Number of monitoring sites: We expect the optimal number of stations to be no lower than 8 and up to 17 along both the Tien and Hau river channels.The 5 existing station at Tan Chau, Chau Doc, Vam Nao, Can Tho and My Thuan are critically important thus compulsory. The remaining range will be at suggestion of the consultancy group.
- Monitoring parameters: Water level[9], discharge[10], bathymetry, bed-load, suspended load at a series of optimal depths, and grain-size distribution.
- Monitoring frequency: The monitoring parameters are suggested to be less frequent in the dry season and more frequent in the wet season.
- Monitoring duration: It is suggested to run an intensive monitoring campaign from April through December 2021 including a first analysis, and validate the findings with a more light-touch monitoring campaign in 2022 (focusing on the wet season). Should 2021 be a very dry year, this approach may need adjustments in agreement between the contracting authority and the consultants.

5.3. The proposed activities

The activities can be grouped into two work packages as suggested below:

5.3.1. Work package 1: river sand monitoring, sampling, and survey

- Collect secondary data (eg. technical reports, research papers, thematic maps, high resolution satellite images, DEM) from the Mekong River Commission (MRC) secretariat data portal, provincial people's committees departments (mainly from DoNREs, DoCs), ministries and associate institutes (eg. MoNRE, MoC), development partners such as World Bank, GIZ, universities, and other relevant organizations and internal available datasets from the IKI sand mining project to support the selection of monitoring sites (beyond the 5 pre-identified stations) and the development of the delta-wide sand budget.
- Determine the number and locations of the monitoring sites/stations (in addition to the 5 pre-identified ones) and the method/protocol/risk identification framework/mitigation plan.
- Identify and engage with key stakeholders (eg. national and provincial authorities) to present and validate (eg. in a workshop) the number and locations of the monitoring sites/stations and the method/protocol/risk identification framework & mitigation plan and collect/discuss/integrate their feedback.
- Organize and conduct field trips to test the method and provide capacity building (includes development of training content, training materials and training

[9] the water level should be recorded at the beginning and end of each monitoring excursion
[10] A minimum of 4 discharge measurements should be completed at the site of monitoring station by ADCP

execution) to the engaged local experts and project staff. The trainings will be organized by WWF project staff.[11]

- Conduct the monitoring measurements and analysis of the samples according to the agreed method and protocol, and regularly report to project team & government partners on progress
- Estimate the volumes of sand extracted, based on remote sensing or the collection of secondary data.
- Provide laboratory analysis of sampled sand (e.g. concentration /volume, grain size analysis).
- Create and populate a database (that will be hosted by the project management team) with all the data collected from the survey and generated in the laboratory.

5.3.2. Work package 2: Sand transport modelling and development of sand budget

- Model sand fluxes in the delta, using a valid modelling software (license to be provided by the consultants).
- Coach/train local experts as well as WWF project staff on the use of the sand modelling software.
- Format data, set boundary conditions and run the model.
- Interpret the modelling results.
- Present in a 1st progress workshop the initial modelling results, collect/discuss critical feedback from provincial, national, and regional partners and integrate them.
- Present in a validation workshop the sand budget and gather feedback from key stakeholders.
- Integrated the feedback and deliver the final Sand Budget.

5.4. Equipment

Any equipment, software and/or analysis needed for the task (eg. ADCP, LISST, bed samplers, boats, IT equipment, modelling software, grain size and sand laboratory analysis)will have to be provided, or rented or procured by the consultants. Equipment, laboratory analysis- and software-related costs need to be factored into the funds made available for this contract.

6. Required education, skills, and experience

Education and working experience

The consultancy team should have:

- Experts with advanced degree (PhD preferred) on sediment transport, sediment sciences, hydrology, geomorphology, or similar field of education.
- Experts/staff with bachelor degree or higher on hydraulic, hydrometeorology, geomorphology, or similar field of education.

11 Online training course could be accepted if international experts are not able to travel to Vietnam due to Covid pandemic

- Proven practical experience in operating ADCP, LISST, or US D-96 or similar type of equipment as well as remote sensing software and techniques.
- Proven experience on sediment/sand transport and river and coast geomorphology modelling.
- Experience in multi-stakeholder consultation.
- Experience in provincial partners from VMD regions, Ministry of Natural resources and Environment, Ministry of Construction, Ministry of Investment and Planning and MRC is an asset.
- Experience in development of sand/sediment budget is an asset.
- English proficiency is a must and Vietnamese is desired.

7. Timeline and deliverables

The following is a proposed timeline for the milestones/key deliverables under this contract. The schedule will be subject to agreement with the contracting authority and the successful bidder.

Timeline	Deliverables
April 5, 2021	Kick-off
April 19, 2021	Inception report
December 2021	First progress report
March 2022	1st progress workshop on 1st draft of sand budget development
December 2022	Second progress report
February 2023	2nd progress (validation) workshop on sand budget development
March 2023	Final Sand budget, training material, and dataset

8. Project Schedule

The project deliverables shall be concluded between April 5th 2021 and March 1st 2023.

9. How to bid

The call is open to an international or national consortia or a mixed team including international and national experts/organization. The bidder shall submit the bidding dossier in single stage:

a) The signed technical proposal submission form (section14).
b) A brief description of why the service provider considers the team/organization as the most suitable for the assignment. Description needs to include the Capacity profile (CVs) of all experts to be involved in the contract as well as references of including the relevant projects/works/studies that have been carried out by the consultant team / organization.
c) In the case of a Consultancy firm, organization or institute a profile of the entity/ies and their goal, mission and mandate shall also be shared along with the Certificate of the State Register of Legal Entities.
d) Bidders are free to associate themselves (mixed national/international consortia is desired) with other firms or experts to ensure that all required know-how and experience are available to them. In this case, a signed MoU of cooperation

between all of the involved vendors with the indication and agreement of the lead applicant is required.

e) A technical proposal with the (i) stakeholder's consultation plan, (ii) detailed methodology with clear deliverables and how the assignment will be completed, (iii) the justification and risks/mitigation plan. International consultants are also to indicate the plan on how they will ensure effective participation in light of Covid19 travel restrictions.
f) A financial proposal (expressed in USD) that indicates the all charges and taxes inclusive fixed total contract price, supported by a breakdown of costs per key activity package.
g) A tender bank guarantee (also called a tender bond or bid bond) is requested from the tender participants. In the case of Consortia, the tender guarantee from the lead applicant shall suffice.
h) The declaration of undertaking (section 13) signed (by all vendors in the case of consortia).

A soft copy in PDF of the application should be sent to procurement@wwf.org.vn. Application e-mail must have the subject heading indicating **IKI SMP SAND BUDGET**. **Deadline for applications is March 1st, 2021 - 17.00 hrs ICT.**

Questions for clarifications can be submitted until February 5th - 17.00 hrs ICT.

Only selected candidate(s) will be contacted about the outcome of their tender.

The Bids submitted after the deadline prescribed will not be considered.

9.1. Award criteria

The contract will be awarded based on the most economically advantageous tender, according to the **'best price-quality ratio'** award method. The quality of the tender will be evaluated based on the following criteria. The maximum total quality score is 100 points. Tenders that receive less than 70% of the maximum possible mark for the whole quality evaluation or less than 60% for one of the quality criteria will be eliminated and their final score will not be calculated. Tenders that do not reach the minimum quality levels will be rejected and will not be ranked.

To assist in the examination, evaluation, and comparison of the bids, and qualification of the Bidders, the Contracting authority may, at its discretion, ask any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder that is not in response to a request by the Contracting authority shall not be considered. The Contracting Authority's request for clarification and the response shall be in writing. No change in the prices or substance of the Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Contracting authority in the evaluation of the bids.

Quality Criteria	Points
Overall approach This criterion assesses the quality of the approach set out in the tender, specifically with regard to order clarification, work planning, the content-related preparation of the consultations	40 point – minimum threshold 60% (24 p)

and written deliverables, and communication with the contractor and external stakeholders. The Overall approach looks also at the consortia mix where a national and international mix is considered as an asset.	
Relevant work experience This criterion assesses the work experience of the tenderer relevant to criteria 2-5 listed above, as evidenced through a list of project references, reference publications and materials to be submitted in conjunction with the tender.	40 points - minimum threshold 60% (24 p)
Quality assurance This criterion assesses the quality assurance measures applied to the service foreseen in this tender specification concerning the quality of the stakeholder process and the deliverables, such as language quality checks or application of facilitation standards. This criteria also evaluates on the equipment, software and other technical materials proposed for the task.	20 points – minimum threshold 60% (12)
Total number of points	100 points

10. Budget and terms of payment

Total available budget for the task is of: **639,000 USD**[12] including taxes, import duties, and other possible charges as well as equipment rental or purchase and service costs. (*Organization fees for Inception workshop (01), Capacity building event (01 event), progress and launching workshop on sand budget development (02) are excluded from this budget. WWF Vietnam will organize these events*).

Timeline	Deliverables	Payment (% of contract value)
April 19, 2021	Inception report delivered	15%
December 2021	First progress report delivered and approved from WWF Vietnam	15%
March 2022	1st progress workshop on sand budget development organized	10%
December 2022	Second progress report delivered and approved from WWF Vietnam	10%
February 2023	2nd workshop on sand budget validation	20%
March 2023	Sand budget launched, Final report, training material, dataset delivered	30%

Cost-norm: WWF Viet Nam cost-norm will be applied.

[12] Fund is of 520.000 Euro converted in USD based on the conversion rate date of January 26th 2021 (1 € = 1.229005901 USD$)

11. Cancellation, suspension, protection and addenda clauses

WWF Viet Nam reserves the right to cancel or delay the tender process at any stage and at its own discretion.

At any time prior to the deadline for submission of Bids, the Employer may amend the Bidding Document by issuing addenda.

12. Ground for exclusion

Applicants/Bidders (including all members of a Consortia) shall not be awarded the contract if, on the date of submission of their Application/Offer or on the intended date of Award of Contract, they:

1. Are bankrupt, being wound up or ceasing their activities, are having their activities administered by courts, have entered into receivership, or are in any analogous situation.

2. Have been: convicted by a final judgement or a final administrative decision or subject to financial sanctions by the United Nations, the European Union and/or Germany or Viet Nam for involvement in a criminal organisation, money laundering, terrorist-related offences, child labour or trafficking in human beings; this criterion of exclusion is also applicable to legal Persons, whose majority of shares are held or factually controlled by natural or legal Persons which themselves are subject to such convictions or sanctions.

3. Convicted by a final court decision or a final administrative decision by a court, the European Union or national authorities in Viet Nam or in Germany for Sanctionable Practice during any Tender Process.

4. Have been subject, within the last five years to a Contract termination fully settled against them for significant or persistent failure to comply with their contractual obligations during Contract performance.

5. Have not fulfilled applicable fiscal obligations regarding payments of taxes either the country where they are constituted.

6. Are subject to an exclusion decision of the World Bank or any other multilateral development bank and are listed in the respective table with debarred and cross-debarred firms and individuals available on the World Bank’s website or any other multilateral development bank.

7. Have given a misrepresentation in supplying the information requested as condition to participation in this tender process.

13. Fraud, corruption and conflict of interest declaration

Candidates have read entirely the WWF Policy on conflicts of interests. He understands responsibilities to comply, and fully commit to it. He acknowledges he has no conflicts, as described in the WWF's Policy on Conflicts of Interest in attachment to these ToRs.

An attempt by a Bidder to influence the evaluation committee in the process of examination, clarification, evaluation, and comparison of the bids, to obtain information

on how the procedure is progressing or to influence on its decision concerning the award of the Contract will be result in immediate rejection of the bid.

14. Ethics

Candidates must respect the professional rules of conduct without any reproach in the conduct of its mandate. Furthermore, the vendor will ensure not to tarnish the image of the WWF execution of its mandate. WWF gives the right to terminate the agreement in proven cases of misconduct that can harm the WWF.

15. Declaration of Undertaking

Date:

LCB No.:

We underscore the importance of a free, fair and competitive procurement process that precludes abusive practices. In this respect we have neither offered nor granted directly or indirectly any inadmissible advantages to any public servant or other person nor accepted such advantages in connection with our bid, nor will we offer or grant or accept any such incentives or conditions in the present procurement process or, in the event that we are awarded the contract, in the subsequent execution of the contract. We also declare that no conflict of interest exists in the meaning of the kind described in the corresponding Guidelines.

If we are a state-owned entity (or a state-owned entity is in partnership with the Consortia), and compete in a Tender Process, we certify that we have legal and financial autonomy and that we operate under the appropriate Viet Nam laws and regulations.

We also underscore the importance of adhering to environmental and social standards in the implementation of the project.

We undertake to comply with applicable labour laws and the Core Labour Standards of the International Labour Organization (ILO) as well as national and applicable international standards of environmental protection and health and safety standards.

We will inform our staff about their respective obligations and about their obligation to fulfil this declaration of undertaking and to obey the laws of the country of Viet Nam.

We also declare that our company/all members of the consortium has/have not been included in the list of sanctions of the United Nations, nor of the EU, nor of the German Government, nor of the Government of Viet Nam nor in any other list of sanctions and affirm that our company/all members of the consortium will immediately inform the client if this situation should occur at a later stage.

We acknowledge that, in the event that our company (or a member of the consortium) is added to a list of sanctions that is legally binding on the client, the client is entitled to exclude our company/the consortium from the procurement procedure and, if the contract is awarded to our company/the consortium, to terminate the contract immediately if the statements made in the Declaration of Undertaking were objectively false or the reason for exclusion occurs after the Declaration of Undertaking has been issued.

Authorized and binding signature: _____

Name and function of the signatory:_____

Name of the Bidder: _____

Address: _____

Date of signing: _____/____/____

16. Technical proposal submission form

[Location, Date]

To: [Name and address of Employer]

Dear Sirs:

We, the undersigned, offer to provide the consulting services for [Insert title of assignment] in accordance with your Request for Proposals dated [Insert Date] and our Proposal.

We are hereby submitting our Proposal, which includes this Technical Proposal and a Financial Proposal in single stage. [If the Consultant is a joint venture/consortia, insert the following: "We are submitting our Proposal in a joint venture/consortia between: [Insert a list with full name and the legal address of each member, and indicate the lead member].

We have attached a copy [insert: "of our Memorandum of Unuderstanding to form a joint venture/consortia" or, if a Consortia is already formed, "the relevant information of the existing Consortia agreement"] signed by every participating member, which details the likely legal structure of, the leadership, and the confirmation of joint and severable liability of the members of the said joint venture/consortia." or If the Consultant's Proposal includes Sub-consultants, insert the following: "We are submitting our Proposal with the following firms as Sub-consultants: [Insert a list with full name and address of each Sub-consultant."]

We hereby declare that:

a) All the information and statements made in this Proposal are true and we accept that any misinterpretation or misrepresentation contained in this Proposal may lead to our disqualification by the Contracting authority.
b) Our Proposal shall be valid and remain binding upon us for the period of 6 months.
c) We have no conflict of interest in accordance with the guidelines for procurement.

d) We undertake to negotiate a Contract on the basis of the proposed Key Experts. We accept that the substitution of Key Experts without written approval from the Employer may lead to the termination of Contract negotiations.
e) Our Proposal is binding upon us and subject to any modifications resulting from the Contract negotiations.

We undertake, if our Proposal is accepted and the Contract is signed, to initiate the Services related to the assignment subject to TOR requirements.

We understand that the Contracting authority is not bound to accept any Proposal that the Employer receives.

We remain,

Yours sincerely,

Authorized Signature [In full and initials]:
Name and Title of Signatory:
Name of Consultant (company's name or JV's name):
In the capacity of:
Address:
Contact information (phone and e-mail):

[For a joint venture, either all members shall sign or only the lead member, in which case the power of attorney to sign on behalf of all members shall be attached.]