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General information

a. Brief information on the project

Project PN : 19.2311.9-001.00
Output distribution: Output 4: 100%

The Climate-Sensitive Innovations for Land Management (CLM) project supports the Ethiopian Ministry of Agriculture (MoA) with the implementation and ongoing development of nationwide programs for sustainable land management. These programs reach millions of rural households in the marginal highland areas. The CLM project focuses in particular on support for the preparation and dissemination of sectoral policies and guidelines for sustainable land management, technical information, reporting, outreach, and digitization.

b. Context

Ethiopia is facing a major problem of soil erosion, resulting in land degradation and loss of productive land. To combat this, research organizations, universities, and government and non-government organizations are working together on natural resource development activities. Their efforts, which include various soil and water conservation measures, have shown positive results in curbing the degradation process. There are many reports and research outcomes, both in Ethiopia and around the world, that guide these efforts.

One such research output is the Universal Soil Loss Equation, which helps quantify soil loss from a unit of land. Thanks to the work of soil conservationist and research scientist Hans Hurni, this equation has been adapted to Ethiopian conditions.

Hurni established relationships between factors of erosion by water and available information in the country, such as annual rainfall and rainfall erosivity factor “R”, soil color and soil erodibility factor “k”, slope length and factor “L”, slope gradient and factor “S”, cover factors and factor “C”, and management type and factor “P”. With this information, it is possible to think of a gamified approach that can create awareness and show the impact estimate on the annual soil loss amount for any plot of land or field in Ethiopia.

A game app can be developed based on the Universal Soil Loss Equation adapted to Ethiopia. The app can consist of three parts: soil loss factors, a sample 3D watershed, and interventions. Each of the six factors will be covered with activities that illustrates their concept. The 3D watershed will demonstrate all types of watersheds to illustrate the soil, Loss. The interventions will consist of different sample innovations to show the effect of soil loss with parameters. Animations, simulations, and games will also be integrated. The game will use a levelled approach, with each part being locked until the previous level is completed successfully.

The proposed solution/ game app should promote a behavioural change among the DAs and farmers. The game should educate and entertain them about the best techniques to conserve the land. The game should also demonstrate the concept clearly and effectively.

c. GIZ shall hire the contractor for the anticipated contract term, from **September 1st , 2023**, to **February 28th, 2024**.

d. The contractor shall provide the following work/service:

- A game application (especially for Tablets and Smartphones) that includes several levels and scenarios to learn step-by step and in a gameful and motivating way the several specific topics about watersheds and rehabilitation.
- The contracted company should conduct thorough research on the content of each level and present it in a clear and accurate way that need to happen before starting the development of the game (this includes also well-prepared interviews and meetings with experts from the GIZ team) .
- All the resources used in this project should obey international copyrights laws.
- The app should have three main components: soil loss factors, a 3D watershed model, and interventions.

- Each of the six factors of the Universal Soil Loss Equation should be explained and illustrated clearly in a separate section of the app.
- The 3D watershed model should show several types of watersheds to give a comprehensive understanding of the concept.
- The interventions component should present various examples of innovations that demonstrate the effect of soil loss with different parameters.
- The app should use animations, simulations, and games to make the learning experience engaging and effective for all users.
- A level-based approach should be adopted where users have to complete each section successfully before moving on to the next one.
- A user-friendly and interactive design should be used to make the app enjoyable and accessible to all farmers and DA's.
- User feedback should be collected and incorporated throughout the development process to ensure that the app meets user needs and expectations.
- Quality assurance measures should be applied to ensure that all aspects of the app meet high standards of quality and functionality.
- Organizational issues and changes such as project management, communication, and collaboration among team members should be addressed and communicated on regularly bases.
- Critical success factors such as clear goals, effective planning, resource allocation, and risk management should be considered throughout the development process and must be organized before the starting the development process, to create a common understanding and direction of the project and product.
- Game thinking / Gamification methods and techniques (badges?) should be integrated to increase user engagement by providing fresh perspectives on familiar concepts.
- Technical considerations such as platform compatibility, performance optimization, backup options and security should also be addressed during development.
- The contracted company should submit all files, codes, resources, and provision of a comprehensive report after completion of the project, which includes all essential steps, results of the project, and gives an outlook.
- A successful game app requires not only a good development process, but also a strong marketing plan and a reliable support system therefore the contracted company should have a detailed plan showing how they can implement this.
- The contracted company should also ensure that the game app is regularly updated and fixed to provide a smooth and satisfying user experience at list for 2 years.
- The contracted company should also pay attention to the design aspects of the game app, such as graphics, sound effects, music, etc., and make sure they are appropriate and appealing for the game theme and content.
- The app should be tailored to the specific context and demographic of Ethiopia.
    - Both parties should organize regular update meetings at list ones per week.
- The game app should work offline but it should also have the option to update important futures. (If a ranking will be integrated the learning data has to be reported back to the system)
- A Detailed documentation including all the also the code must be provided that is editable at the handover state so that the MoA team will be able to modify the app and adjust it afterwards.

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Tender requirements

1. Qualifications of proposed staff

1.1. Expert 1: Team Leader / Project Manager

1.1.1. General qualifications

Education: University qualification in Project Management and/or Urban and Regional Planning (URP) and/or relevant, closely related subjects.

Professional experience: 4 years' experience in Game development, project management, Software development / video & animation sector.

1.1.2. Experience in the region/knowledge of the country

Basic knowledge and good understanding in NRM topics and an experience on 3D modelling Technologies

1.1.3. Other skills

Good knowledge and understanding in Game development, project management, Software development / video & animation sector.

1.2. Expert 2: Game Designer / Didactic Expert

1.2.1. General qualifications

Education: Bachelor and/or M.Sc. in Electrical engineering, computer engineering and/or programming and certified Animator.

Professional experience: 3 years or more years in practical experience in game development and a practical knowledge as a CG artist working on 3d animation, graphics design, motion graphics and visual effects.

1.2.2. Experience in the region/knowledge of the country

Basic knowledge and good understanding in NRM topics and an experience on 3D modelling Technologies

1.2.3. Other skills

Good knowledge and understanding in Game development, project management, Software development / video & animation sector.

1.3. Expert 3: Short term expert pool with minimum 3 and maximum 6 Experts

1.3.1. Qualifications of the expert pool

***Note**:*
While not to be assessed as part of the technical offer, the following list of qualifications may be used by the tenderer as an orientation to profile short-term experts. It is only shared as background information to pre-assess STEs' viability. However, short term missions and thus STE needs will only be defined along the project development)

- Education/training **(2.6.1)**: Postgraduate university degree in the foreseen field of assignment or minimum 2 years of directly related work experience.
- Language (**2.6.2)**: All experts with knowledge of C1 language proficiency English according to the Common European Framework of Reference for Languages
- Professional experience **(2.6.3) (2.6.4):** Proof of experience that demonstrates the expert's involvement in previous game development projects.
- Other **(2.6.7**): Soft skills of the Team; In addition to their specialist qualifications, the following qualifications are required of team members:
    - Team skills
    - Initiative, Proactiveness
    - Communication skills
    - Sociocultural competence
    - Efficient, partner- and client-focused working methods
    - Interdisciplinary thinking

The bidder must provide a clear overview of all proposed short-term experts and their individual qualifications (CV, references and justifications to be submitted).

1.3.2. General qualifications

- The list of experts will need to have a graphic designer, creative director, programmer, advisor, and data analyst.
- No CVs have to be submitted by the tenderers as part of their technical proposals. However, the TORs of the experts and the CVs of the candidates need to be approved by GIZ prior to the respective assignments during the implementation period.
- The bidder is required to calculate fees related to short term experts.

1.3.3. Experience in the region/knowledge of the country

Basic knowledge and good understanding in NRM topics and an experience on 3D modelling Technologies

1.3.4. Other skills

Good knowledge and understanding in Game development, project management, Software development / video & animation sector.

2. *Appropriateness of proposed concept*

In the bid, the bidder is required to show how the objectives defined can be achieved as per the conditions described in detail at (General information - D) , if applicable under consideration of further specific method-related requirements (technical-methodological concept). In addition, the bidder must describe the project management system for service provision.

For a complete bidding dossier, the following documents have to be submitted by the bidder: The contractor's objective is to create a game app that teaches and illustrates the Universal Soil Loss Equation (USLE) for Ethiopia. The USLE is a scientific formula that calculates soil erosion by water on slopes.

The game app* bidding document *should explain

- The USLE factors, such as rainfall, soil, slope, vegetation, and practices (2.1)
- How the USLE factors affect soil erosion in a 3D Ethiopian watershed (2.2)
- Suggest land management strategies to prevent or minimize soil loss (2.3)
- How the game app can interactive and informative with quizzes, feedback and rewards, and compatible with common handheld devices. (2.4)
- The Game development bidding document should have a detailed design, programming, art, sound, testing and marketing plan. The bidding document should define gameplay, mechanics, aesthetics, and story. Evidence of three successful games created by the contractor is also required. (2.5)

⇨ *Number of pages for the technical proposal: 5 max. (DIN A4).*

3. *Specification of inputs*

Sustainability aspects for travel
GIZ would like to reduce greenhouse gas emissions (CO_2 emissions) caused by travel. When preparing your tender, please incorporate options for reducing emissions, such as selecting the lowest-emission booking class (economy) and using means of transport, airlines and flight routes with a higher CO_2 efficiency. For short distances, travel by train (second class) or e-mobility should be the preferred option.
If they cannot be avoided, CO_2 emissions caused by air travel should be offset. GIZ specifies a budget for this, through which the carbon offsets can be settled against evidence.
The market for carbon credits is made up of a large number of providers, each with different claims as to their climate impact. The Development and Climate Alliance has published a list of standards. GIZ recommends using the standards specified there.

Fee days	Number of experts	Number of days per expert	Comments
• Preparation/debriefing	4	13	
• Implementation	8	57	
Travel expenses	**Number of experts**	**Number of days/nights per experts**	**Comments**
• Per-diem allowance in country of assignment	10	10	
• Overnight allowance in country of assignment		8	
• Travel costs (train, private vehicle)	-	-	
Flights	**Number of experts**	**Number of flights per experts**	**Comments**
• International flights	-	-	
• Domestic flights	2	2	
• CO_2 compensation for air travel *Guidance for GIZ service providers on avoiding, reducing and offsetting GHG emissions (giz.de)*	-	-	A budget is earmarked for settling carbon offsets against evidence.
Other costs	**Number of experts**	**Amount per experts**	**Comments**

Calculate your financial bid exactly *in line with the quantitative requirements of the specification of inputs above. There is no contractual right to use up the full days/travel or workshops or budgets. The number of days/travel/workshops and the budgets will be contractually agreed as* ***maximum amounts****. The regulations on pricing are contained in the price schedule.*

4. Fixed lump sum price – contract for work

Since the contract to be concluded is a contract for work, the specification of inputs serves as guidance only. We request that you provide us with a fixed lump sum price for your services that includes an itemised breakdown of all the relevant costs (fees, travel costs, etc.). We require this information for our internal calculations. The assessment of the financial bid is based on the lump sum price tendered, which must be realistic for the services to be rendered.

5. Requirements on the format of the tender

The CV submitted for each expert can have a maximum of four pages. The **concept** (if required) should not exceed five pages. If one of the maximum page lengths is exceeded, the content appearing after the cut-off point will not be included in the assessment. External content (e.g. links to websites) will also not be considered.