

## **TERMS OF REFERENCE FOR EWACC - IWMP GIS EXPERT**

### **A. Project Title:**

Economy-wide integration of climate change adaptation and disaster risk management to reduce climate vulnerability of communities in Samoa

### **B. Project Description or Context and Background:**

The project "Economy-wide Adaptation to Climate Change (EWACC)" implemented by the Government of Samoa in collaboration with UNDP became operational in November 2014 with the objective to address expected impacts of climate change in losses of lives, livelihoods, and assets of vulnerable communities in Samoa. .

The US\$12.3 million project, funded by the Least Developed Countries Fund (LDCF), will contribute to overcoming barriers to climate change adaptation by strengthening institutional capacity within the government; enhancing inter-ministerial coordination of climate change adaptation; promoting the inclusion of climate change concerns into development strategies across all sectors; climate-proofing of communities' physical assets; introducing more climate-resilient livelihoods options; and sharing lessons learned and best practice on climate change adaptation across the Pacific region. The Implementing Entity is the Ministry of Natural Resources and the Environment. Responsible parties include the Ministry of Finance, Ministry of Women, Communities and Social Development, the Land Transport Authority and the UNDP.

MNRE will invest the bulk of the LDCF resources in Component 2, aimed to enhance the resilience of communities as first responders of climate change-induced hazards. This component focuses on flood-protection infrastructure interventions, ecosystem-based adaptation approaches, resilient livelihoods support and revision and implementation of Disaster Risk Management plans for targeted villages. It also involves the development of an Integrated Watershed Management Plan (IWMP) that will address up- and down-stream causes and effects of climate vulnerability within all five watersheds in the Greater Apia area. The IWMP will thus outline climate risks posed to the communities living in the Faleata West, Faleata East and Vaimauga West Districts. It will follow the "Ridge-to-Reef" principle following an integrated approach to building climate resilience and supporting community livelihoods through the inclusion of aspects such as water, land and coastal management within an overarching framework.

UNDP is recruiting a **GIS Expert** to work as part of a team of specialists that will be developing the IWMP for the Greater Apia Area and be responsible for assisting the team with data collection and analysis

related to the IWMP.

He/she will ensure that all objectives regarding GIS/MIS tools and services are provided on schedule. Map production, satellite image analysis, remote sensing, data basis, NRM and agriculture/irrigation studies and technical support are to be provided throughout the project.

- **Scope of Work:**

The duties of the **GIS Expert** will include, but are not limited to:

- Conduct research to locate and obtain existing databases, thematic layers and grid data for relevant areas of Samoa possibly using the sources from Meteorology, PUMA and Forestry divisions including but not limited to existing spatial data including maps of land cover, forest types, soil types, elevation, slope and rainfall, critical forest areas, climate series, terrain information etc);
- Source, prepare, and structure GIS data in accordance with the requirements and guidelines defined by other experts in the project (e.g., hydrologist, geotechnical engineer, environmental engineer, etc);
- Describe all layer fields in the geodatabase, and characterize metadata for each layer.
- Digitize/create new thematic layers, using scanned maps, satellite images and GIS data, in accordance with the structure and coding system defined by GIS unit of MNRE;
- Conduct a GIS training on geospatial analysis and thematic maps, using MapInfo and IDRISI GIS;
- Produce maps and graphs in accordance with the design and criteria defined by the Team Leader or other members in the team;
- Perform spatial analysis for producing the geographic statistics required by the various Team Leaders including but not limited to the following aspects:
  - Use spatial data to assess land cover, forest change and developments occurring in forested areas throughout the project site, with a special focus on land use and forest types, including mapping of forest restoration sites;
  - Calculate the area of annual change in forest area and develop map of annual human induced change on forests within the targeted area;
- Operate and maintain GIS system hardware, software, plotter, digitizer, color printer, and video camera;
- Ensure a daily backup of all data managed by IWMP;
- Perform all other GIS-related activities useful for IWMP;
- Propose methodologies/initiatives to improve GIS and IDRISI Tiga capabilities of the Water Resources Division, MNRE. This will include how to input, update and maintain GIS database (catalog, inventory, metadata creation, backup, linkages to other databases);
- In line with guidelines for the preparation of a UNDP-GEF/LDCF compliant project document, the GIS specialist will work collaboratively within IWMP's GIS unit in Samoa to provide GIS services to all key technical team members;
- Any other responsibilities assigned to him/her by Team Leader and the Project Director.

#### **A. Expected Outcomes and Deliverables:**

##### **Specific deliverables are:**

- Inception report detailing proposed approaches and specific workplan on achieving specific deliverables for the full period (within 5 working days after start of contract);
- Fortnightly progress report of work programme and update to be provided to the Project Manager and ACEO MNRE –WRD (can be email or similar format to relay progress of works to current reporting periods);
- High quality advice on GIS data files, and mapping requirements (thematic maps, spatial and temporal analysis) available and utilised by the team of experts;
- Updated GIS database (layers, base maps, thematic maps, satellite images) available for watershed management and hydrological mapping;
- All critical areas mapped and defined for rehabilitation efforts within the IWMP;
- Report on capacity building training undertaken on GIS and IDRISI Taiga GIS including MapInfo/IDRISI User Manual, in place;
- Comprehensive Strategy for the development and use of GIS for watershed and water resources monitoring in place;
- High quality technical advice on sub-projects;
- Technical inputs to the "Ridge-to-Reef" Integrated Watershed Management Plan for Greater Apia;
- Report on all other tasks as highlighted in the scope of works.

#### **B. Institutional Arrangement:**

The hired consultant will directly be under the close supervision of the EWACC Project Manager, ACEO Water Resources Division in MNRE. Reports and documentations will be shared with the Project manager in a timely manner, with copy to the responsible Programme Officer in UNDP MCO. He/She will work closely with the Team Leader and other specialists that will be developing the IWMP.

#### **C. Duration of the Work:**

The total number of days of the consultancy is expected to be 60 working days. The consultant will be working in close collaboration with the EWACC Project Manager and ACEO Water Resources Division in MNRE as well as with the UNDP multi-country office in Samoa.

#### **D. Duty Station:**

The consultant will be based at the Water Resources Division Office, MNRE.

#### **E. Competencies:**

**Corporate Competencies:**

- Demonstrates commitment to the Gov. of Samoa mission, vision and values.
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability

**Functional Competencies:**

Knowledge Management and Learning

- Shares knowledge and experience
- Actively works towards continuing personal learning, acts on learning plan and applies newly acquired skills

Development and Operational Effectiveness

- Ability to perform a variety of specialized tasks related to administrative supports, including project data management support, reporting, and logistics for project implementation.
- Ability to provide input to business processes re-engineering, implementation of new system, including new IT based systems

Leadership and Self-Management

- Focuses on result for the client and responds positively to feedback
- Consistently approaches work with energy and a positive, constructive attitude
- Remains calm, in control and good humoured even under pressure
- Demonstrates openness to change and ability to manage complexities
- Good inter-personal and teamwork skills, networking aptitude, ability to work in multicultural environment

**F. Qualifications of the Successful Contractor:**

- He/she should have at least Bachelor Degree in Geography (GIS), computers or related field;
- Four years or more of experience in a similar position;
- Proficiency in MapInfo GIS, ArcGIS packages, and other MS office applications;
- Working experience within the Pacific region in general and Samoa in particular is a requirement;
- Experience with UNDP-GEF projects in the Pacific is a requirement, in Samoa a strong asset;
- Previous experience with MNRE and knowledge of the watersheds in the greater Apia area is a strong asset;
- Experience in working as part of a multidisciplinary team of experts and consultants;
- Excellent communication, analysis and writing skills;
- Fluency in English (oral and written) is a requirement;
- Good interpersonal skills (the consultants will contact various actors and stakeholders of the project).

**Evaluation criteria: 70% Technical, 30% financial combined weight**

Technical Evaluation Criteria (based in the information provided in the CV and the: Relevant documents must be submitted as evidence to support possession of below required criteria.

- He/she should have at least Bachelor Degree in Geography (GIS), computers or related field; (20%)
- Four years or more of experience in a similar position; (20%)
- Proficiency in MapInfo GIS, ArcGIS packages, Microsoft Word, Outlook and PowerPoint in Excel, and other MS office applications; (10%)
- Working experience within the Pacific region in general and Samoa in particular is a requirement; (10%)
- Experience with UNDP-GEF projects in the Pacific is a requirement, in Samoa a strong asset; (10%)
- Previous experience with MNRE and knowledge of the watersheds in the greater Apia area is a strong asset; (10%)
- Experience in working as part of a multidisciplinary team of experts and consultants; (5%)
- Excellent communication, analysis and writing skills; (5%)
- Fluency in English (oral and written) is a requirement; (5%)
- Good interpersonal skills (the consultants will contact various actors and stakeholders of the project). (5%)

**G. Scope of Bid Price & Schedule of Payments:**

DELIVERABLES	DUE DATE & WEIGHTING (%)	AMOUNT IN USD TO BE PAID AFTER CERTIFICATION BY UNDP OF SATISFACTORY PERFORMANCE OF DELIVERABLES
Upon submission of Report on Capacity Building Trainings undertaken on GIS and IDRISI Taiga GIS, together with User Manual and Tools.	20 working days after the start of contract (35%)	\$xxx
Upon submission of Comprehensive Strategy for the development and use of GIS for watershed and water resources management; and Upon submission/ stocktaking of "GIS database, tools and products" outlined in "Scope of works" and "Specific Deliverables".	40 working days from start of contract (35%)	\$xxx
Upon submission and approval of Technical Report on other expected consultancy products outlined in "Scope of works".	60 working days from the start of contract (30%)	\$xxx
<b>TOTAL (60 working days)</b>		<b>\$xxx</b>

**H. Recommended Presentation of Proposal:**

- A. Given below is the recommended format for submitting your proposal. The following headings with the required details are important. Please use the template available ( Letter of Offer to complete financial proposal)

CVs with a proposed methodology addressing the elements mentioned under deliverables must be submitted by **14<sup>th</sup> August 2015**, electronically via [jobs.undp.org](http://jobs.undp.org). Incomplete applications will not be considered and only candidates for whom there is further interest will be contacted. Proposals must include:

- **CV** or P11 form addressing the evaluation criteria and why you consider yourself the most suitable for this assignment. The selected candidate must submit a signed P11 prior to contract award.
- **3 professional references most recent**
- **A brief methodology** on how you will approach and conduct the work,
- **Financial Proposal** specifying the daily rate and whether DSA is included.
- **Letter of interest and availability specifying the available date to start and other details**

Queries about the consultancy can be directed to the UNDP Procurement Unit  
[procurement.ws@undp.org](mailto:procurement.ws@undp.org)