

Section II: Schedule of Requirements

RFP/2023/47496- Central Africa and Iraq Dashboard Updates, Follow-on, and Maintenance

1. Background

The regions of Central Africa and Iraq have highly varied climates and populations exposed to climatic-related water insecurity. These crises pose complex humanitarian, socioeconomic, security, and political challenges. Additionally, large displaced or continually migrating populations in these regions have intensified regional water insecurity, exacerbating social tensions and the potential for conflict.

The UNDPPA Innovation Cell has developed, in concert with its academic and commercial partners, an environmental monitoring platform, or “dashboard” to calculate and display climatic trends within the regions of Central Africa and Iraq. This dashboard consists of a repository of data collected by environmental satellite over the course of the last two decades, that is organized by region and timeframe.

This data is processed and displayed on a national- or regional-scale map, that allows a user to select sub-regions of interest within the displayed map to display calculated periodic environmental details within that chosen sub-region (details derived from environmental satellites pertaining to indicators of water scarcity such as rainfall, soil moisture, ground water, and changes in surface water extent). Data pertaining to incidents of conflict can be geographically “overlaid” to the existing environmental map to allow a better assessment of the relationship between environmental changes and the potential for conflict. A dashboard has been built for the nation of Iraq and another has been built for the 11 countries comprising Central Africa.

These dashboard projects are part of an overall effort aimed at strengthening the UN analysis of climate change-related challenges to regional peace and security and informing decision-making processes, to detect potential crises within these regions.

2. Project Continuation

The UNDPPA seeks to continue building, improving, and maintaining these dashboard platforms for Iraq and for Central Africa by updating the core code repository to improve the overall functionality of the Iraq and Central Africa dashboards, automate the process for downloading and interpolating the environmental satellite datasets, add a new type of environmental data that better calculates rainfall changes over time, add a new dataset that better represents population change than the dashboards’ existing population datasets, and add a translation functionality into the Central Africa dashboard. Additionally, the UNDPPA seeks to reprocess the historical environmental satellite dataset repository for

Iraq to allow for streamlined processing and function, and assist with the development of algorithms that assist in “modeling” and predictive analysis.

The result of this effort will be an updated, more impactful, more intuitive environmental platform that provides our partners within and beyond the UN Assistance Mission in Iraq and UN Office of Central Africa a tool to aid decision-making and for matters of water security and conflict risk mitigation.

3. Requirements

The UNDPPA has been developing the environmental monitoring dashboard platforms for Iraq since 2019 and its platform for Central Africa since 2021, and seeks partnership with a geospatial engineering company with and end-to-end geospatial solutions engineering expertise with experience in the discipline of environment and conflict risk mitigation. The effort also requires extensive expertise in User Experience (UX) design to intuitively display and elicit interaction with the complex environmental dataset - comprising millions of individual datapoints – in such a way that policymakers and stakeholders can access impactful environmental information intuitively and simply. Additionally, conflict and agricultural modeling expertise is required for better calculation of correlations between environmental insecurity and rate of conflict incidences. Finally, the UNDPPA seeks to work with a partner with prior experience with the UNDPPA Innovation Cell’s geospatial portfolio and dashboard products.

The project will be conducted in two Parts:

a) Part I: Maintenance of the Iraq and Central Africa Dashboards

- i) The Iraq and Central Africa dashboards will be updated with the latest version of proprietary coding.
- ii) Reprocessing of all historical Iraq data, which will streamline the User Experience by applying “lessons learned” about functionality in the subsequent dashboard products back to the original dashboard for Iraq.

b) Part II: Adding additional datasets, and conflict modeling consultancy Indicators and Modeling Advisory

- i) New datasets will be added to the Iraq and Central Africa environmental dashboards to better understand water availability, and a population’s effect on water use. These datasets include:

- 1) CHIRPS Rainfall Data

- 2) ORNL LandScan Population Data

- ii) Automated language translation; including the translation of the UNOCA Dashboard into French.
- iii) Agricultural modeling expertise to advance the Innovation Cell’s modeling efforts.

4. Deliverables:

a. Part I:

- i. Delivery of the updated platform, with text available in English, to be evidenced by a live demonstration and a PDF report containing screenshots of the updated Central Africa and Iraq dashboards, for customer signature.
- ii. An Excel spreadsheet containing the reprocessed historical Iraq data and demonstration.

b. Part II:

- i. PDF report containing screenshots of the Central Africa and Iraq dashboards with the new indicators as well as in the French language, for customer signature.

5. Schedule of Payments

Payments will be made against each milestone deliverable outlined in the work plan to be elaborated at the beginning of the contract and only paid upon the UNOPS acceptance of the work performed.

The terms of payment are net 30 days after the receipt of the invoice and acceptance of work. Payments will be made at the intervals mentioned below:

Payment #	Description	Estimated date	% of the payment
1	Delivery of the updated platform, with text available in English	31 August 2023	25%
2	An Excel spreadsheet containing the reprocessed historical Iraq data and demonstration.	31 August 2023	25%
3	PDF report containing screenshots of the Central Africa and Iraq dashboards with the new indicators as well as in the French language.	31 December 2022	50%
Total			100%

6. Qualifications and Experience:

- The UNDPPA Innovation Cell seeks a partnership with a geospatial company with a minimum (2) two years history of developing, designing, testing, implementing, and supporting scalable systems to monitor regional and national environments through the use of environmental satellite data and innovative-yet-tradecraft-proven methodologies to derive insight from the satellite data.
- This company should have experience working with UN and other national and international partners on geo-enabled environmental monitoring solutions.

- The company must have qualified geospatial systems engineers, geospatial analysts, a robust User Experience (UX) design team to design and test the dashboard platform, additional software engineers and IT staff to launch and support the dashboard platform, and an internal and external network of environmental analysts with algorithmic modeling experience.

7. Minimum Required Team

- The UNDPPA Innovation Cell would require the partner company to executive-level oversight (managerial oversight from the President-, CEO-, CTO-, or CIO-level).
- Additionally, the company must provide oversight of a Project Manager, at least one Geospatial Systems Engineer, at least one to five geospatial analysts (full-time or in reserve), between one and five environmental scientists (active or in reserve), a User Experience team including that includes UX managerial oversight as well as designers, and an IT staff to assist with the launch of the platform.

8. Project Language:

- The language for this project is English.
- All relevant employees of the partner company must be fluent in written and spoken English.
- All deliverables must be produced in English, unless otherwise indicated (for instance in the case of translating pre-existing products, such as dashboards, into other languages such as French)

9. Timing

This contract should be completed by 31 December 2023

10. Other Considerations

Representatives of the successful bidder will be required to attend various in-person meetings in New York.