

## Terms of Reference

<b>Job title</b>	GIS Web Developer
<b>Functional Area</b>	n/a
<b>CST level / STP grade</b>	CST L1
<b>Name of proposed consultant</b>	
<b>Name of Hiring Manager</b>	Olivia Hantz
<b>CO/Division-Unit</b>	OSEP
<b>Duty Station</b>	Rome HQ
<b>Period of assignment</b>	ASAP for 6 months

### Background (including description of reporting lines)

OSEP GIS, in collaboration with other relevant units in WFP, are developing a Spatial Risk Calendar (SPARC) to support emergency preparedness and programme planning. To support emergency preparedness and early warning SPARC will combine data layers covering hazard exposure and population vulnerability to determine baseline probabilistic levels of humanitarian impact associated with particular hazard types, on a monthly basis, at a sub-national level, around the globe. To support programme design it will identify subnational areas with varying degrees of exposure to natural shocks, and population vulnerability, on a monthly/seasonal level.

The GIS Web Developer will report to the GIS Analysis section leader who is reporting to the Chief of the Emergency Preparedness Branch.

### Description of tasks

1. Development of server side code to incorporate the GIS-based outputs of the SPARC GIS Risk Analyst in the SPARC platform
2. Finalize the data export/download function including map export generation
3. Build report generation function to present users outputs
4. Integrate seasonal information on cultivation and harvest periods
5. Integrate real-time forecast data and set-up workflows to provide analysis of forecast data
6. Upload complete metadata & methodology manuals
7. Explore conflict data sources to be included in SPARC
8. Resolve existing bugs and run beta-testing to identify additional ones
9. Ensure technical components and processes related to the project are properly documented following internal standards
10. Respond to user and management feedback on all points above, and making adaptations as needed
11. Any other task relevant to the SPARC project as requested by supervisors

### Deliverables

1. Finalised SPARC interface including
  - a. Visualization of final data layers, seasonal and forecast information (~1 month);
  - b. Map and report generation (~1 month);
  - c. Tools for analysis of forecast data (~2 months);
  - d. User documentation;
  - e. Conflict analysis according to advised methodology (~1 month).
2. Technical documentation of SPARC web platform according to standard conventions (~1 month)
3. Interface cleared for internal WFP (or external) release



**Required qualifications and experience**

1. Ability to communicate clearly and concisely both orally and in writing;
2. Extensive coding skills with Python, XML, HTML, CSS3;
3. Extensive knowledge of Javascript libraries such as Angular, React, OpenLayers, GeoEXT, Leaflet;
4. Deep experience working with Web software tools, publishing applications based on Linux and PostgreSQL/PostGIS databases and version control repositories, such as GitHub and Bitbucket;
5. Strong knowledge of Python frameworks and libraries (especially Django);
6. Strong experience with Server/Tools such as GeoServer, GeoWebCache, OGC Services, ArcGIS Server, Apache, Tomcat, Nginx;
7. Courtesy, tact and ability to work with people of different national and cultural backgrounds;
8. Fluency in English;

<b>Signature Consultant</b>	<b>Signature Hiring Manager</b>