

SENIOR REMOTE SENSING/GIS OFFICER (Global Emergency Unit)

(Reference: 22/HQ/SGIS001)

BACKGROUND ON IMPACT AND REACH

REACH was born in 2010 as a joint initiative of two International NGOs ([IMPACT Initiatives](#) and [ACTED](#)) and the United Nations Operational Satellite Applications Programme ([UNOSAT](#)). REACH's **purpose** is to promote and facilitate the development of information products that enhance the humanitarian community's decision making and planning capacity for emergency, reconstruction and development contexts. REACH facilitates information management for aid actors through three complementary services: (a) need and situation assessments facilitated by REACH teams; (b) situation analysis using satellite imagery; (c) provision of related database and (web)-mapping facilities and expertise.

IMPACT Initiatives is a humanitarian NGO, based in Geneva, Switzerland. The organisation manages several initiatives, including the REACH Initiative. The IMPACT team comprises specialists in data collection, management and analysis and GIS. IMPACT was launched at the initiative of ACTED, an international NGO whose headquarter is based in Paris and is present in thirty countries. The two organizations have a strong complementarity formalized in a global partnership, enabling IMPACT to benefit from ACTED's operational support in its fields of intervention.

We are currently looking for a Senior Remote Sensing/GIS Officer to support our teams at HQ.

Department: REACH
Position: Senior Remote Sensing/GIS Officer [Global Emergency Unit]
Contract duration: Open ended
Location: Geneva (with up to 20% field deployment)
Starting Date: ASAP

BACKGROUND ON GLOBAL EMERGENCY UNIT

The Global Emergency Unit (GEU) seeks to establish systems to track, monitor, and advocate around worst-off humanitarian crises, in order to inform emergency prioritisation at the global and national level. The newly established GEU will lead the strategic development and implementation of REACH emergency programmes, including Humanitarian Situation Monitoring (HSM), responding to sudden onset disasters, monitoring risk of excess mortality, as well as launching new global programmes, such as a global alert system. The unit plays a critical voice within the organisation, and externally among humanitarian stakeholders, to raise the alarm in the case of anticipated or occurring catastrophic outcomes in both protracted and sudden onset emergencies.

POSITION PROFILE

IMPACT is seeking a motivated candidate with a strong technical background, who has previous experience working in Remote Sensing and GIS. More specifically, the candidate should have experience with analysis of satellite imagery with different spatial and spectral resolutions for the purposes of environmental monitoring, particularly the assessment of shocks (flood, drought) and environmental degradation. The candidate should understand concepts of cartographic design and be experienced in presentation of the results of spatial

analysis using static and interactive mapping products. Ideally, the successful candidate will also be familiar with the collection and processing of socio-economic data. Experience in fragile or emergency contexts is a plus. Under the direct supervision of the Global Emergency Manager (GEM), and functional supervision of the GIS and Remote Sensing Unit at HQ, the Senior RS/GIS Officer is responsible for providing technical backstopping for all emergency programmes situated within the Global Emergency Unit. The Senior RS/GIS Officer will be responsible for the application of geographic information systems and remote sensing in the Global Emergency Unit, including relevant aspects of research design, support in designing data collection tools, ensuring (spatial) data quality, geo-spatial analysis, drafting of maps, and production of web maps and information management systems. In addition, as the climate crisis proliferates, the Senior RS/GIS Officer will play a critical role in tracking and analysing the impact of climate change on acute humanitarian emergencies globally. In coordination with the Global Emergency Manager and unit at large, the Senior RS/GIS Officer is required to support assessment planning in line with project and program objectives and with IMPACT's research cycle and other relevant guidelines. The Senior RS/GIS Officer will also deploy to sudden onset disasters, through our partnership with UNDAC, and/or other emergency contexts for up to 20% of their time.

RESPONSIBILITIES

The responsibilities of the Senior RS/GIS Officer include the following:

1) RESEARCH DESIGN / PLANNING:

- In coordination with relevant assessment officer(s), support assessment planning in line with project and programme objectives and with IMPACT's research cycle and other relevant guidelines;
- Contribute to draft assessment ToRs with a specific focus on the analysis plan, and related remote sensing and geospatial analysis, as well as data management plan;
- Produce geo-spatial analysis of assessment areas to be used in developing assessment plans, when required;
- In coordination with relevant colleagues, support construction of quantitative sample, when relevant.

2) REMOTE SENSING RESEARCH IMPLEMENTATION

- Work with global GIS and remote sensing unit to implement, develop, modify/adapt new RS tools and approaches to specific contexts;
- Ensure proper documentation of methodologies and tool development;
- Share best practices in accessible format to the IMPACT remote sensing community of practice;
- Represent the Global Emergency Unit when it comes to planning and procurement of UNOSAT services and satellite imagery.
- Some common tasks are likely to include: creation/aggregation of climatic indicators, trend analyses of spectral/multi-spectral indices, Machine-Learning based classification for land/water monitoring, and change detection analyses

3) GIS RESEARCH IMPLEMENTATION

- Evaluate opportunities for additional geospatial analysis within existing research cycles;
- Perform spatial/geostatistical analysis to understand if there are patterns beyond conventional levels of aggregation / strata, below administrative levels or with new strata entirely (i.e livelihood zones, environmental features, etc.)
- Responsible for analysis which contributes to products related to hazard/environmental monitoring (flood, drought, wind, landslide, etc), as well as how these interrelate with other analytical layers in emergency contexts

- Some additional common tasks: automation (via python or R) to integrate analysis processes into cartographic outputs, spatial network analysis, hotspot analyses.
- 4) DATA MANAGEMENT, CLEANING AND ANALYSIS
- Write functions for custom GIS data cleaning/checking;
 - Conduct spatial analysis on collected data as per ToRs;
 - Ensure that data and its spatial analysis are validated by IMPACT HQ before product drafting stage.
 - Recommend and develop data management frameworks that improve preservation, security, automation, and scalability of data processes (i.e PostgreSQL, cloud-based)
- 5) DRAFTING OF PRODUCTS
- Maintain regular communication with IMPACT Research Department in HQ on progress and deadlines for GIS products;
 - Ensure the drafting of timely and accurate GIS products, which comply with IMPACT's guidelines.
- 6) EXTERNAL ENGAGEMENT
- Link with relevant partners to consult and involve them in the GIS components of a research cycle;
 - Represent IMPACT in relevant meetings/working groups and support the presentation of research findings through GIS inputs to relevant third parties in order to enhance their use and impact;
 - Follow up on issues identified by partners or during meetings/working groups;
 - Promote an active use of datasets, GIS products, and research findings by partners and the broader humanitarian community for their decision making.
- 7) CAPACITY BUILDING
- In coordination with the Research Manager, support the development and implementation of capacity training plans for GIS and other team members, particularly on remote sensing capacities;
 - Be available to provide regular support and technical backstopping.
- 8) ACCOUNTABILITY TO COMMUNITIES AND BENEFICIARIES

The Senior RS/GIS Officer is responsible for ensuring that all interactions with affected communities are conducted in a respectful and consultative manner. Due attention must be paid to ensuring that communities are adequately consulted and informed about IMPACT programme objectives, activities, beneficiary selection criteria, and methodologies. This is the responsibility of every IMPACT staff member.

9) CONFIDENTIALITY AND DATA PROTECTION

The Senior RS/GIS Officer will maintain the strictest confidentiality on all data collected and related processes. He/she will actively take measures to prevent the unauthorized sharing of any information and data belonging to IMPACT and its partners, or collected during his/her assignment with IMPACT.

REQUIREMENTS

- ❖ **Academic:** Excellent academic qualifications, preferably including a Master degree related to GIS, Remote Sensing, Data Science, Geography or Hydrology/Environmental-related disciplines;
- ❖ **Theoretical knowledge:** Sound foundational knowledge of remote sensing, including theory, principles, practice and application. Expands and maintains knowledge in the field through literature;
- ❖ **Research skills:** Advanced experience with remote sensing analysis, and excellent spatial analysis skills; advanced knowledge of climate, drought, and the water cycle is an asset.
- ❖ **Software skills:** Advanced knowledge of Google Earth Engine; advanced knowledge of GIS software (ArcPro, ArcGIS Online, QGIS); advanced knowledge of Microsoft Office including Excel; knowledge of R, STATA, Python or equivalent statistical software an advantage; knowledge of Adobe Suite, particularly InDesign and Illustrator an asset;
- ❖ **Knowledge of remote sensing tools:** Demonstrated experience using GEE, demonstrated experience with R or python for remote sensing and or geospatial analysis;
- ❖ **Years of work experience:** At least 3 years of relevant working experience;
- ❖ **Familiarity with aid system:** Experience in a complex humanitarian emergency is not required, but is an asset;
- ❖ **Communication/reporting skills:** Excellent communication and drafting skills for effective reporting;
- ❖ **Multi-tasking skills:** Ability to multitask with tight deadlines, on numerous research cycles;
- ❖ **Level of independence:** Proven ability to work independently;
- ❖ **Cross-cultural work environment:** Ability to operate in a cross-cultural environment requiring flexibility;
- ❖ **Experience in geographical region:** Past experience in the region is desirable;
- ❖ **Language skills:** Fluency in English required, competency in another language an asset, particularly French or Spanish;
- ❖ **Security environment:** Ability to operate in a complex and challenging security environment.