

# REMOTE SENSING/GIS OFFICER

(Reference: 22/YEM/GISO01)

## 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 on its fields of intervention.

**We are currently looking for a Remote Sensing/GIS Officer to support our REACH Yemen team in Amman, Jordan, with potential travel to Yemen.**

**Department:** REACH  
**Position:** Remote Sensing/GIS Officer  
**Contract duration:** 6 months  
**Location:** Amman, Jordan, with potential travel to Yemen  
**Starting Date:** ASAP

## COUNTRY PROFILE

The humanitarian situation in Yemen is one of the most severe in the world, with 14.3 million people – or 40% of the population – in acute need of humanitarian assistance. The direct effects of the conflict continue to have severe effects on the population. Other aspects of the conflict – especially blockades, the deterioration of basic service infrastructure, and the depreciation of the Yemeni riyal – also have enormous impact on Yemenis. Approximately 9.9 million people in Yemen are facing severe acute food insecurity and since 2016, Yemen has witnessed up to 1.3 million suspected cases of cholera, with outbreaks exacerbated by crumbling WASH infrastructure.

The loss of livelihoods, when combined with the depreciation and general volatility of the Yemeni currency, has made the purchase of basic everyday necessities difficult for most Yemenis. IM REACH has supported the humanitarian response to the Yemen crisis since October 2016, working extensively with the CCCM Cluster, the WASH Cluster, the Cash and Markets Working Group (CMWG), and the Information Management and Assessment Working Group (IMAWG).

The REACH team – based remotely in Amman, with potential travel to Yemen – provides systemic assessment and IM support to the response through indicator review, tool design, coordination of data collection exercises, data analysis, output production, and IM platform design. Given the challenging context in Yemen, REACH is constantly working to find new and innovative ways to effectively inform the humanitarian response.

## POSITION PROFILE

IMPACT is seeking a candidate with a strong technical background, who has previous experience of working in the sphere of Remote Sensing (RS) and GIS/Cartography. More specifically, the candidate should have experience of working on at least one of the following: analysis of satellite imagery with different spatial and spectral resolution for the purposes of climate, agricultural and water resource monitoring; and/or collection and processing of socio-economic data. 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.

## FUNCTIONS

Under the line management of the Senior GIS Officer, the RS/GIS Officer is responsible for the application of geographic information systems in Yemen, including relevant aspects of research design, support in designing data collection tools, ensuring (spatial) data quality, geo-spatial analysis, drafting of maps, and (as relevant) production of web maps and information management systems. The RS/GIS Officer will provide technical inputs in all stages of the research cycle. Throughout each research cycle, the RS/GIS Officer, in (as relevant) close liaison with the assessment teams, engages with partners to promote their participation and maximize their impact. He/she also ensures an efficient and transparent use of resources required for project implementation. Amongst various responsibilities, the RS/GIS Officer will be responsible for running two-dimensional (2D) unsteady flow hydraulic models using HEC RAS software to support the flood mapping activity in the mission by producing flood hazard, depth and extent datasets at the catchment level to identify areas prone to flood risk, especially areas exposed to flash flooding. The RS/GIS Officer will also be responsible for developing and implementing a continuous capacity building program for national and international team members, and (when relevant) for providing trainings to partners.

In his/her mission, the RS/GIS Officer will be hosted by IMPACT's global partner ACTED and will fall under the direct responsibility and management of ACTED's Country Director and his/her delegates for all Administrative, Security, and relevant Logistics and Finance issues. S/he will therefore fully abide to ACTED's Security, Administration, and relevant HR, Logistics and Finance rules and regulations.

## RESPONSIBILITIES

The RS/GIS Officer responsibilities include the following:

### RESEARCH PLANNING:

- In coordination with relevant assessment officer(s), support assessment planning in line with project and program objectives and with IMPACT's research cycle and other relevant guidelines;
- Map and analyse secondary data in coordination with the assessment officer(s);
- Contribute to draft assessment ToRs with a specific focus on the analysis plan, and related mapping, as well as data management plan;
- Support the development of qualitative and quantitative data collection tools, ensuring GIS/RS requirements of research cycle/assessment are met;
- Develop geo-spatial analysis of assessment areas to be used in developing daily assessment plans, field movement plans and accompanying operational maps for field teams;

### REMOTE SENSING RESEARCH IMPLEMENTATION

- Plan and develop satellite-based modelling techniques (e.g. natural hazard susceptibility) which highlight hazards and risks for the country. Understand, maintain and improve models already present and running, in order to use them upon request;
- Suggest and conduct satellite-based analyses, such as rapid flood hazard assessments, change detections, natural disaster mapping, and time series. Such activities will be based on a variety of different sensors including multispectral optical sensors, SAR sensors and very high resolution optical sensors;
- Run, design and produce two-dimensional (2D) unsteady flow hydraulic models using HEC RAS software to identify areas prone to flood hazard, especially areas exposed to flash flooding.
- Understand, maintain and improve models already present and running, in order to use them upon request;
- Evaluate opportunities for additional remote sensing analysis within existing research cycles;
- Ensure proper documentation of methodologies and tool development.
- Liaise with IMPACT HQ on the procurement of UNOSAT services and satellite imagery.

### RS/GIS RESEARCH IMPLEMENTATION

- Ensure that collected data is properly geo-referenced, enabling the production of maps and related products;
- Perform spatial/geostatistical analysis to understand patterns that are beyond conventional levels of aggregations such as administrative levels, i.e., patterns that are within livelihood zones, environmental features, etc.;
- Contribute to products related to hazard/environmental monitoring (e.g., flood, drought) and analyse how these interrelate with other analytical layers;
  - Automation of workflows to integrate analysis processes into cartographic outputs, spatial analyses, etc.

## DATA MANAGEMENT, CLEANING AND ANALYSIS

- Ensure that all collected data is stored in line with IMPACT's Data Management Guidelines, and with the ToRs (data management plan Annex);
- Ensure that data is revised and cleaned, and that all revisions are recorded;
- 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;
- Ensure that data and its analysis do not contain personal or other sensitive information and are validated by IMPACT HQ before sharing to external parties;
- Ensure the quality and accuracy of technical information provided as well as the confidentiality and protection of collected information.
- Development and maintenance of country-level databases for the consolidation of all assessment-related and GIS/RS data in country.

## DRAFTING OF PRODUCTS

- Ensure accurate linkages between spatial databases and assessment data;
- Ensure that the GIS/RS products meet the requirements of IMPACT and concerned partners;
- Maintain regular communication with IMPACT HQ on progress and deadlines for GIS/RS products;
- Ensure the drafting of timely and accurate GIS/RS products, which comply with IMPACT's guidelines
- Ensure that all GIS/RS products are validated by IMPACT HQ before external release;
- When relevant, in close coordination with IMPACT HQ, support the regular maintenance and update of web GIS/RS products;
- In coordination with the CR, liaise with IMPACT HQ on the procurement of UNOSAT services and satellite imagery.

## EXTERNAL ENGAGEMENT

- In support of the assessment team, link with relevant partners to consult and involve them in the GIS/RS components of a research cycle;
- After validation by the line manager, represent IMPACT in relevant meetings/ working groups;
- Follow up on issues identified by partners or during meetings / working groups;
- Promote an active use of datasets, GIS/RS products and research findings by partners and the broader humanitarian community for their decision making;
- After validation by line manager, support the presentation of research findings through GIS/RS inputs to relevant third parties in order to enhance their use and impact;
- Ensure that all partner engagement and all external relations are clearly documented and communicated with the line manager and relevant colleagues;
- More generally, contribute to the creation of a positive image and overall credibility of the organization, notably through the application of IMPACT's mandate, ethics, values and stand-point with regard to other actors.

## KNOWLEDGE SHARING AND LEARNING PROCESSES

- Anticipates knowledge gaps prior the execution of the Research Cycle
- Provides content and contributes to lessons learned exercises

## PROJECT CYCLE MANAGEMENT

- For relevant projects, ensure compliance to project cycle management requirements and guidelines at all phases;
- Before project start, participate and help organise a kick off meeting and the availability of key project management documentations to plan the efficient use of assets and human resources;
- In close coordination with line management, finance and grants colleagues, monitor and regularly update the use of GIS-related assets, financial and human resources, in full compliance with IMPACT's guidelines;
- Ensure that GIS/RS-related project deliverables and requirements are tracked, met and complied to;
- Ensure that any issue in relation to project implementation is reported to the line manager, finance and grants colleagues, and HQ;
- Other tasks as requested by supervisors.

## CAPACITY BUILDING

The GIS/RS Officer is responsible, in coordination with his/her line manager, for the development and implementation of capacity training plans for GIS and other team members. He/ she is responsible for setting clear and personalised development goals, and designing training and mentorship plans to assist team members in professional development.

## INTERNAL COORDINATION

- Actively participate in regular team meetings;
- Ensure regular coordination and exchange with relevant colleagues;
- Engage in the development and implementation of IMPACT's strategy in Yemen.

## DATA CONFIDENTIALITY AND PROTECTION

The GIS/RS Officer will maintain the strictest confidentiality on all data collected and related processes, ensuring full compliance with IMPACT's data protection policy and SOPs. 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

### GIS OFFICER

- ❖ **Academic:** Excellent academic qualifications, preferably including a Master degree related to GIS, Remote Sensing, Data Science, Geography or related discipline;
- ❖ **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, spatial analysis, and geo-spatial information management. Advanced knowledge of climate, agriculture, flood hazard mapping and hydrology is an asset;
- ❖ **Software skills:** Advanced knowledge of Google Earth Engine; advanced knowledge of GIS software (ArcPro, ArcGIS Online, QGIS); knowledge of remote sensing software (e.g., ESA SNAP, ERDAS IMAGINE); advanced knowledge of Microsoft Office including Excel; good knowledge of HEC RAS, good knowledge of Python and/or JavaScript; knowledge of R, STATA, or equivalent statistical software an advantage; knowledge of Adobe Suite, particularly InDesign and Illustrator an asset;
- ❖ **Years of work experience:** At least 1 years of relevant working experience. Experience in humanitarian settings highly desirable;
- ❖ **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 Arabic an asset;
- ❖ **Security environment:** Ability to operate in a complex and challenging security environment

### CONDITIONS

- ❖ Salary defined by the IMPACT salary grid; educational level, expertise, hardship, security, and performance are considered for pay bonus
- ❖ Additional monthly living allowance provided in country by IMPACT's partner ACTED
- ❖ Food and lodging provided at the organisation's guesthouse/or housing allowance (depending on contract length and country of assignment)
- ❖ Transportation costs covered, including additional return ticket + luggage allowance
- ❖ Provision of medical, life, and repatriation insurance + retirement package