**Terms of Reference for Consultancy assignment: Development of tools to track recent trans-border travelers through the GSM network**

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| **Application Deadline:** | 20 October -2020 (Midnight, EST New York, USA) |
| **Country**  | Uganda |
| **Additional Category:** | Crisis response; climate and disaster resilience |
| **Type of Contract:** | Individual Contract  |
| **Post Level:** | International consultant  |
| **Languages Required:** | English  |
| **Starting Date:**  | 30/October/2020 |
| **Duration of Initial Contract:** | 60 days (within two months) |
| **Duty Station**  | Home-based with field travel |
| **Expected Duration of Assignment:** | 20 working days |

1. **Background**

On 31st December 2019, the World Health Organization was notified of a cluster of cases displaying symptoms of a “pneumonia of unknown cause” linked to the Huanan Seafood Wholesale Market, Hubei province, Wuhan.

The outbreak was declared a Public Health Emergency of International Concern by the World Health Organization on 30 January 2020

On 7th January 2020, Chinese authorities confirmed that they had identified the new virus. Since January statistics from WHO as of August 9th, 2020, over almost 20 million cases had been reported in 188 countries worldwide, including over 700 thousand deaths caused by COVID -19. Out of 18 million of confirmed cases, about 11 million have already recovered from the virus.

Since the declaration of the outbreak in China in December 2019, the Government of Uganda has established early and proactive measures that enabled early detection. On 18 March 2020, the President of Uganda declared COVID-19 a national emergency and put in place several measures. In response to this situation, the government enacted control measures to limit the spread of the virus including: banning all public gatherings, closure of school and shopping malls, suspended public and private transport, prohibited open-air markets in rural areas, prohibited marketing of non-food items in urban markets, and prohibited entry into the country for all people, including Ugandan citizens and refugees, a continuous campaign to raise public awareness through all media channels and strengthening of health facilities in different hospitals among other measures+.

On 21st March 2020, Uganda reported the 1st confirmed COVID-19 case imported from Dubai. Despite government efforts to curb the spread of the virus across the country. As of August 9th, 2020, 1,254 COVID-19 cases and 6 deaths have been reported across more than fifty districts. Out of the people infected, so far 1113 have already recovered.

Currently, the country is in phase 3 of COVID-19 and the community cases are increasing mainly in the hot spots composed by urban areas but also communities along border entry points.

Considering the current situation of pandemic’s aggravation in many countries and in the African continent, despite this, considering socio-economic impact of lockdowns many countries are planning to reopen borders and strengthen security measures in the health sector. In order to allow a safe reopening and to enable a resilient recovery, it is important that the country implements the efficient technological solutions for contact tracing and incoming travelers’ movement monitoring through an integrated digital tool able to track transborder travelers, arriving by land or air, as a way to prevent the spread of the virus while enabling re-opening of the economy.

In this sense, the United Nations Development Program (UNDP) has mobilized financial resources to support the Government of Uganda through the project “Enhancing **National Resilience to Multi-hazard Induced Disaster Risks**”

The project has the following four key objectives to deliver.

1. Enhanced Multi-sectoral Coordination Capacity of National Emergency Coordination and Operations Centre (NECOC) and Local Governments (District Emergency Coordination and Operations Centres) for integrated multi-hazard Response,

2. Strengthened Disaster Risk Assessment Capacity

3. Enhanced Disaster Risk Communication

4. Improved Border Surveillance and Tracking

1. **Objective**

The purpose of this consultancy will be based on last of the aforementioned project objectives which aims to provide the tools to track recent travelers through Mobile networks.

1. **Duties and Responsibilities**
	1. **Duties**

3.1. D***evelop an advanced system that allows District and National Emergency Coordination and Operation Centers, Border Surveillance Committees, Health authorities and partners to***:

1. Integrate with other public health surveillance and care systems and services, including call centers or any others supportive services available.
2. Develop the integrated web-interface and Mobile app tools to track in real rime the recent travelers, including professional transborder drivers.
3. Enable recent inbound travelers to report their health condition, validated testing status, relevant demographic data, data facilitating the connection with supportive services, and the best means of communication.
4. Enable travelers to self-report contacts which can allow to seamlessly import proximity data from travelers and potential exposed persons in close contact with them, while respecting relevant national data personal protection regulations and ensuring human rights’ upholding.
5. Provide cross-platform functionality (Android, and iOS, with reasonable backwards compatibility for older Android and iOS versions).
6. Support offline data entry and caching across platforms.
7. Enable data analytics and real-time mapping functionalities for public officials use and anonymized data visualization tools for public.
	* 1. ***Provide training sessions and manuals to responsible organizations and all relevant stakeholders to enable them to take over the administration, use, and maintenance of the platform****.*

The consultant must maintain the reliability of all data and information that will be accessed during the consultation.

**3.2 Responsibilities**

1. Identify concrete information needs by different institutions and partners involved in the project.
2. Understand and develop management and users’ profiles and levels of access to the system according to the role of the different stakeholders within the system.
3. Use programmatic means to ensure secure data transfer from existing institutional databases and between information systems within and between jurisdictions.
4. Develop required safeguards for privacy, data protection and non-discrimination.
5. Capacitate government counterpart’ designated administrator to perform any customizations required after initial design (e.g. adding new data fields, connecting with other existing data sources, implementing data validation rules, etc.).
6. The entire system must be developed based on most appropriate and cost-efficient open source technology which do not require administrator to incur additional costs for the payment of software licenses, upgrades, or others.
7. Develop web and app user manuals for administrator and other users.

The partners will provide the necessary contacts and the consultant will be responsible for organizing his/her agenda.

1. **Expected Outputs and Deliverables**
2. Inception Note: work-plan, methodological approach, calendar (timelines) for this consultancy service are developed (deliverable 1).
3. Users’ requirement assessment conducted; profiles development and draft of tracing tools prepared including the web system integrated with apps and database (deliverable 2).
4. Tracking tool Beta version, including the web system integrated with apps and database; testing to identify bugs and/or bottlenecks, feedback analysis and revision, final modifications, validation, and tracking tool final version (deliverable 3).
5. Training material including administrator manual, user how-to do guides, FAQ and video tutorial for different user and training delivered to administrator and key partners (deliverable 4)
6. **Institutional Arrangement**

The consultant will work with the UNDP Climate and Disaster Resilience Team and OPM/NECOC National Emergency Coordination Operations Center staff assigned to this specific activity, Uganda Communication Commission, the National Identification Registration (NIRA). The consultant ultimately reports to the UNDP Uganda Resident Representative through the Team Leader, Environment, Climate and Disaster Resilience who in collaboration with OPM will approve all deliverables pertaining to the assignment. Travel within the country of assignment, if required will be arranged and facilitated by UNDP.

1. **Competencies**
	1. **Corporate Competencies**
* Demonstrates integrity by modeling the UN's values and ethical standards;
* Promotes the vision, mission, and strategic goals of UNDP
* Displays cultural, gender, religion, race, nationality, and age sensitivity and adaptability;
* Treats all people fairly without favoritism.
	1. **Functional and technical competencies**
* Ability to work in a diverse and multi-cultural environment;
* Self-motivated and ability to work under pressure and to meet strict and competing deadlines;
* Displays analytical judgment and demonstrated ability to handle confidential and politically sensitive issues in a responsible and mature manner;
* Demonstrates openness to change and ability to manage complexities;
* Computer literate.
1. **Educational Qualifications and Experience**

Offers will be evaluated based on the combined scoring method:

* Technical qualifications = 70%
* Financial Proposal = 30%

For the evaluation of the Technical Proposal, the selection of the successful consultant must be based on the following qualifications (with the appropriate obtainable points):

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| **Qualification** | **Points Obtainable (100pts)** |
| **Education**Minimum level: University Studies/Degree; Bachelors’ Degree on Information Technology and/or actual work experience on programming and software and applications development particularly on contact tracing, monitoring and data analysis and visualization tools or other relevant.Minimum 5 points for Bachelors degree, additional points for additional degree, maximum of 10 points. if not met: 0 | 10 |
| **Experience**Must have at least five (5) years’ experience in systems development and data applications related to contact tracking, location monitoring and similar actionsMinimum 5 years = 20; additional points for additional years of experience, max of 30 points | 30 |
| At least 2 years previous work experience on GPS/GSM trackers/ mobile location data-based tools and data integration and analysis web-based tools Minimum 2 years = 5 points; additional points for additional years of experience, maximum of 10 points | 10  |
| Minimum 5 years’ experience in mobile and web-based application and interface development the following scope detailed below.* Ensure the following features are made available:
1. Operates in Android, iOS devices as well in desktop computers
2. Import base maps (i.e. google maps, etc)
3. Sync capability with the mobile/desktop app/data server
4. Improved Survey logic system to show optimized survey questions used based on the respective needs of the end users; appropriately designed question type and styles (e.g. drop down, grids, single response, multiple response, time, date, open ended, free-text and semantic scales); question routing or skip logic (show/hide questions depending on the previous answers); in-survey calculations and auto-save capability at key stages of the survey/interview; linkable survey items on household, building, critical facilities, and natural resources sectors (including agriculture)
5. Data analytics
6. Report, statistics, and automatic notifications
7. Mapping functionalities

Minimum 5 years with specific experience as detailed = 30 points | 30 |
| Technical Writing Skills and Data Analysis by providing at least 2 sample works on similar projects1 sample = 0; 2 above = 20 points | 20 |

1. **Proposal Price and Schedule of Payments**

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| Payment | Deliverable | Review and approval |
| 20% | **On submission of an acceptable Deliverable 1:** Inception Note: work-plan, methodological approach, calendar (timelines) for this consultancy service are developed. | UNDP/OPM |
| 50 % | **On Submission of an acceptable Deliverable 2:** (i) users’ requirement assessment conducted; profiles development and draft of tracking tools prepared including the web system integrated with apps and database.  | UNDP/OPM |
| (ii) Tracking tool Beta version, including the web system integrated with apps and database; testing to identify bugs and/or bottlenecks, feedback analysis and revision, final modifications, validation, and tracing tool final version | UNDP/OPM |
| 30%  | **On submission of an acceptable Deliverable 3**: Training material including administrator manual, user how-to do guides, FAQ and video tutorial for different user and training delivered to administrator and key partners.  | UNDP/OPM |

The contract will be based on professional fees presented on a daily rate basis. Consultant must send a financial proposal based on a Lump Sum Amount inclusive of all cost components required to perform the deliverables identified in the TOR, including professional fee, travel costs to duty station, living allowance, medical and travel insurance, and communication. The contract price will be fixed output-based price regardless of extension of the herein specified duration. Payments will be done upon completion and certification/approval of the deliverables/outputs and as per below percentages.

The payment will be made in three milestones upon the completion of the following: