



GEO-MESSAGING

for the migration crisis

Context:

Since 2021 the migration crisis in Central and South America has intensified. The Darién Jungle is one of the most dangerous migration corridors because of water scarcity, natural hazards, wildlife, theft and abuse.

In 2023 more than 500,000 people from over 50 nationalities crossed the jungle, and 81 % came from South American countries.

The lack of up-to-date, reliable data on these flows makes it difficult to prioritise assistance and leads to the deployment of supplies or staff to places where they are no longer needed.

Traditional collection methods (rapid field assessments, surveys or administrative records) suffer from limited coverage and frequency.

Project objective:

With support from Queen's University and in partnership with Balcony Labs, 3iS is driving the adoption of real-time geo-messaging as a tool to improve the humanitarian response. The technology seeks to enable two-way communication between migrants in transit and humanitarian personnel on the ground.

The main objective is to assess whether the tool and its use generate sufficient interaction between organisations and migrants to achieve better humanitarian outcomes.

How are information products developed?

1. Data collection through geo-messages

Geo-messaging app: At the Medellín Transport Terminal (Colombia) more than 200 migrants will be connected to a mobile application that geo-references their messages. The messages allow people to request help, report needs or receive alerts based on their location.

Self-care and safety messages: The application sends personalised information on self-care, locations of humanitarian assistance and security alerts, reducing exposure to risks.

Integration with organisations: Partner humanitarian organisations access a dashboard to manage cases and follow up on requests.

2. Data processing and analysis

- Following 3iS's information management approach, data collection, analysis and dissemination are optimised to ensure transparency and cooperation among stakeholders.
- Messages are anonymised and geo-referenced to protect identities. Spatial and temporal analyses identify routes, concentrations of people and critical points of need.
- By combining this information with secondary data (service registers, censuses, satellite imagery), indicators are developed on movements, vulnerability profiles and service gaps.
- The multidisciplinary team reviews the information to contextualise it and develop recommendations for the response.

3. Production of information products

Based on the analysis, several decision-oriented products are produced:

- Real-time dashboards: Maps showing movements and assistance requests that can be filtered by date, gender, age or type of request. These platforms help humanitarian teams anticipate needs and allocate resources efficiently.
- Analysis documents: Short reports that delve into emerging trends (e.g., risk zones, profiles of women and girl migrants). They include graphs and maps to support operational recommendations.
- Alerts and bulletins: Brief communications for authorities and partners summarising critical findings and proposing adjustments to the response.
- Open data and guides: To ensure transparency and replicability, anonymised data sets and tutorials on using the tool are shared.

4. Feedback and improvement

The project evaluates user and organisational experiences to enhance the tool. The information collected will serve to validate the usefulness of geo-messaging as a source of high-frequency data and assess its scalability to other migration routes.

Expected results

- Direct, two-way communication between migrants and humanitarian personnel, enabling assistance to be adjusted based on real needs.
- Reduced risks through geo-referenced alerts and self-care messages.
- Quality data for planning: geo-messaging will provide timely information on routes, profiles and service demand, improving resource allocation.
- Proof of concept for scaling the tool to other migration corridors and sectors (protection, health, education).

Team and partners

The project team combines specialists in geographic information technologies, data analysis, communications and protection, with support from academics at Queen's University and experts from Balcony Labs. 3iS coordinates with local organisations and authorities to facilitate access to the terminal and ensure the protection of participants.

