International Organization for Migration (IOM)

The UN Migration Agency

2018 ECOSOC Integration Segment, 1-3 May 2018

Innovative communities: leveraging technology and innovation to build sustainable and resilient societies

IOM contribution

> *What is your assessment regarding the **main risks** faced by your membership currently and in the next 10 years, within the context of the work of your Office?*

Large-scale, and protracted displacement situations triggered by conflict, disaster, environmental degradation and the effects of climate change constitute the main risks that IOM's membership faces currently and will likely continue to deal with in the coming 10 years and beyond. National and international actors are confronted with multi-variate factors that propel the forced migration of highly vulnerable populations; complex and diverse patterns of mobility within countries, across borders, circular movements; and the diversity and fluidity of categories of migrants. The growing complexity and unpredictability of those crises is resulting in increasingly protracted displacement situations, with seemingly insufficient political will to resolve many current crises. The combination of increasing population displacement for longer periods with relatively low numbers of displaced populations achieving a durable solution highlights some key global challenges which are likely to continue into the future.

There were 6.9 million new internal displacements [1] resulting from conflict and violence in 2016, resulting in a total number of 40.3 million people living in internal displacement as a result of conflict and violence[2], as well as 22.5 million refugees as of the end of 2016 [3] . These conflicts are increasingly complex and protracted, and are in several countries fueled by an increase in violent extremism and a proliferation of non-state armed groups, resulting in insecurity and, human rights violations, which in turn leads to displacement. In addition, 25.4 million people each year are displaced by disasters associated with natural hazards, which are increasingly caused or magnified by climate change and the compounding effects of fast-paced urbanization, population growth and rising inequalities. Beyond the direct human, material and environmental effects on societies and countries concerned, these disasters frequently result in protracted displacement situations, impacting on access to services and livelihood options, and often leading to increasing levels of vulnerability, food insecurity and conflict over scarce resources, affecting both displaced populations and the communities that host them.

Data shows that the impacts of natural and man-made crises reverse development gains, and hamper progress towards the Sustainable Development Goals (SDGs). Environmental degradation and climate change are expected to increase the frequency and worsen the impacts of sudden- and slow-onset hazards, and contemporary conflict dynamics are expected to continue their protracted nature. Member states, as well as humanitarian, stabilization, peace and development actors, will need to adopt new and innovative approaches, and work collectively, to

---

[1] Global Report on Internal Displacement, May 2016, IDMC

[2] Ibid

[3] Global Trends in Forced Displacement in 2016, UNHCR data

implement more comprehensive and preventative approaches to tackle root causes and drivers of displacement and invest in the long-term to build resilience, sustain peace and achieve the goals of the 2030 Agenda.

> *What are the **highlights** of your Office's current work in terms of leveraging technology and innovation to build more sustainable and resilient societies?*

IOM's Displacement Tracking Matrix (DTM) is a system to track and monitor displacement and population mobility, provide critical information to decision-makers and responders during crises, and contribute to better understandings of population flows. DTM's effectiveness lies in the flexibility and modularity of its data collection tools, which are easily adapted to meet the practical requirements of a given context. DTM has been deployed in a variety of operational contexts, including conflicts, natural disasters, and complex emergencies. In addition to its role in humanitarian response operations, DTM also contributes to inform preparedness activities as well as transition and recovery programming.

DTM provides valuable data and expertise and actively uses technology to support in managing the risks and building the resilience of communities. DTM data can inform not only the immediate response, but also efforts to better prepare for future contingencies.

The following are examples of the ways in which DTM harnesses new technologies and innovations:

Making use of the advancement in mobile technology, DTM is currently developing a mobile application system for displacement data crowdsourcing directly from first responders and the communities. The application will allow rapid identification of new displacement sites and basic needs of the displaced population by first responders, direct reporting of needs by the displaced population themselves, and self-reporting of assistance that have been provided by the community.

One of DTM's core activities is registration. DTM registers individuals or households to establish the information required to identify beneficiaries for the provision of humanitarian assistance. DTM is currently expanding its Biometric Registration system as well as continue building its interoperability with other relevant systems, especially with WFP-SCOPE system. Biometric registration increases data accuracy and reduce duplication to contribute to a better targeted and more effective humanitarian response.

In 2017, IOM carried out disaster risk reduction activities in 17 countries worldwide, for example Haiti, Afghanistan, Myanmar, The Philippines, The Federated States of Micronesia and Papua New Guinea. Within these 17 countries, IOM implemented a total of 32 projects in Disaster Risk Reduction. One such project involved communities in the Republic of the Marshall Islands, who engaged in participatory hazard vulnerability capacity mapping exercises. By utilizing community-based disaster risk management, these communities were able to formulate community investment strategies, targeting for example the development and design of early warning systems, disaster risk awareness raising and education. IOM's effort helped to implement capacity-development and resilience-building activities at the national, provincial and community levels. In support of the Rohingya refugee crisis response in Bangladesh, IOM also deployed Disaster Risk Reduction surge support to establish programming to mitigate disaster and climate risk and build resilience in the context of the ongoing crisis.

In 2017, IOM also launched a Strategic Work Plan on Disaster Risk Reduction and Resilience (2017-2020), which sets out a framework of support to Member States implementing the Sendai Framework for Disaster Risk Reduction. The work plan promotes a unified, all-of-organization approach to DRR, while enabling consistency in IOM strategic communications and resource mobilization efforts. It serves as a key resource for project development, monitoring, evaluation and partnership development at country, regional and global levels. In particular, the work plan capitalizes on IOM's operational delivery capacity and ability to connect directly with migrants and other vulnerable populations to understand their particular needs, risks and capacities while at the same time aligning with national frameworks and priorities.

Working in partnership with the Norwegian Refugee Council (NRC), the Platform on Disaster Displacement, UNHCR, UNISDR, and the Internal Displacement Monitoring Center (IDMC), IOM has contributed to the development of a Words into Action Guide for implementing the Sendai Framework on 'Disaster Displacement: How to Reduce Risk, Address Impacts and Strengthen Resilience'. The purpose of the Guide is to offer practical guidance to help government authorities integrate human mobility considerations into regional, national, sub-national and local disaster risk reduction strategies in accordance with target E of the Sendai Framework.

Through joint efforts with partners, including the Platform on Disaster Displacement (PDD), displacement was integrated in the Global Platform Outcome Documents - the Cancun High-Level Communiqué and the Chair's Summary - presented at the High-Level Political Forum in New York 2017, ensuring commitments and follow-up to the issue.

*Please share strategies, plans, policies or initiatives in which your Office has been involved where different stakeholders – such as government, civil society organizations, private sector and academia – have engaged in **coordinated actions** to enhance resilience at the local, national or international levels. What approaches have proven effective in this respect? (Please limit your response to 350 words or less)*

Reflecting IOM's commitment to working through multi-stakeholder approaches in support of DRR and resilience, IOM participated in the Global Platform for Disaster Risk Reduction on 22-26 May in Cancun, Mexico. IOM was represented by senior delegation led by the IOM's Director of Operations and Emergencies (DOE). Apart from delivering its official statement at the GP, IOM contributed to various session deliberations of relevance to the Organization's mobility mandate. IOM's participation in the Platform was supported by a coordinated global communications effort stressing the links between mobility, risk and resilience and highlighting best practices from the field.

Further consolidating IOM's role as a key operational actor in DRR, the Organization has become an observer member to the Capacity for Disaster Reduction Initiative (CADRI), which is a global partnership composed of 15 UN and non-UN organizations that works towards strengthening countries' capacities to prevent, manage and recover from the impact of disasters. Also in 2017, at the 108th Council Session, IOM welcomed the UN Office for Disaster Risk Reduction (UNISDR) as an observer organization to IOM, with a view to strengthening ongoing collaboration between the two organizations and to provide more effective and coordinated support to countries in the implementation of the Sendai Framework.

IOM has also been supporting the work of the state-led Platform on Displacement (PDD) in implementing the recommendations made in the Protection Agenda of the Nansen Initiative, the Platform's predecessor. IOM has been engaging in this partnership since 2012, together with UNHCR, looking at solutions for those displaced across borders in the context of disasters and climate change, and has been working to implement the PDD's 2016-2019 Strategic Framework and Workplan.

Please share the most relevant examples and recommendations related to your Office's work in building more sustainable and resilient societies using technology and innovation, as well as emerging issues in this area likely to affect the achievement of the SDGs.

IOM's MigApp leverages current technology and the widespread use of mobile telecommunications to bring a secure, objective and user-friendly downloadable app which serves as a one-stop-shop platform where migrants can access current, reliable and practical migration-related information and services relevant to their own migration needs.

- MigApp delivers **alerts on conflict or natural disasters** in real time. People on the move can use the Global Incidents feature in the MigApp to monitor travel routes and to adjust their passageways in the event that original routes have become impassable.

- MigApp helps migrants stay safe by sending mobile alerts based on needs and geographic location.

- MigApp offers a list of over 2,500 **counter-trafficking hotlines** that span 200 countries.
  Individuals who find themselves in a human trafficking situation could access any of the hotlines in the country they are in for assistance.

- MigApp allows its users to store important travel and identification documents into an online safe space.

- **Dr Translate** allows migrants to describe in their language what ails them and translates this into the language of the doctor they are seeing and the two of them can communicate in this manner.

- MigApp enables its users to share information about their current location with selected friends and families.

- When migrants are in their country of destination, they often send money back home to help their families.

For IOM, MigApp **offers insights into migration trends and patterns**, helping to inform IOM's programming, enabling it to be more proactive in formulating responses to migration-related concerns.

The first release of the MigApp delivered the above-mentioned information and services. Succeeding releases of the app will continue to grow the catalogue of information and IOM services that will be available from the MigApp.

Furthermore, IOM's Displacement Tracking Matrix (DTM, described above) uses the Unmanned Aerial Vehicle (UAV) technologies to improve some of its data products. DTM uses UAV mainly for IDP site modeling and 3D modeling of displacement areas. It provides regular image updates to monitor the growth of the camp and develop a timeline of the camp's evolution. It supports the IDP site planning including aspects on shelter, water supply and infrastructure. The data is also processed to enhance hazard prevention and risk reduction through the identification of flood-prone zones and inaccessible areas. Current deployment includes Cox's Bazar district in Bangladesh where the DTM is conducting regular flights of UAV on the 10 km^2 refugee hosting areas which hold over 500,000 inhabitants living in over 40,000 shelters, providing essential data to site planning and site management as well as all other humanitarian sectors assisting the Rohingya refugees in Bangladesh.

DTM has been exploring the use of predictive modeling and analytics to bring more values out of the data it collects and present better insights to some of the issues around displacement and population mobility. For example, DTM is currently developing theoretical models through its use of the Random Walk Model to predict patterns of displacement in conflict settings. Random walk is a mathematical modelling technique used in many scientific fields to model seemingly random behavior. Displacement in conflict scenarios, in contrast to displacement induced by rapid-onset natural disaster event, appears to be "random" in that it does not follow a consistent or clearly predictable pattern. IOM piloted use of the random walk technique to conceptualize and model the geographic distribution of future displacement in Nigeria, using displacement data collected through DTM since 2014.

DTM also recognizes the utmost importance of data protection, data security, and the ethics of data collection and use including in the way it is planned, collected, analyzed, and used in relation to the type of data it collects. In regard to this, DTM has been placing its efforts in strengthening these aspects internally as well as building related partnerships with various entities. Key partnership such as with Harvard Humanitarian Initiatives (HHI) highlights the effort to ensure the application of relevant and important ethical considerations and best practices for the DTM operations in collecting, analyzing, and presenting its data and information.