Enhancing Disaster Response through Social Media Listening: An Innovative Tool for National Societies

In the context of disaster response, staying connected with affected communities is not merely a logistical challenge but a moral imperative. Ensuring that those impacted by crises can make their voice heard and access the assistance they need is at the heart of the work of the Red Cross Red Crescent Movement. To fulfill this objective, last year, led by the IFRC, the Ukrainian Red Cross and neighbouring National Societies together with 510, the data and digital initiative of the Netherlands Red Cross, embarked on the implementation of Social Media Listening in response to the conflict in Ukraine. Social media listening involves actively monitoring and analysing messages shared on instant messaging platforms (in this case Telegram) to gain real-time insights into the circumstances, needs, and sentiments of people affected by a disaster or crisis. This approach aims to enhance the effectiveness and responsiveness of humanitarian support.

"Social media listening is the bridge between digital conversations and real-world impact. It's the key that unlocks the doors to empathy, information and swift response, reminding us that, even in the virtual space, we can make a tangible difference in the lives of those facing adversity."

Diana Medina, IFRC Regional Community Engagement and Accountability Coordinator for Europe and Central Asia

Social Media Listening

With Social Media Listening, it is possible to scan posts and messages on social media and instant messaging applications. The posts and messages are collected, translated, and classified by subject, to provide a qualitative and quantitative summary of the most discussed topics by people affected. These insights provide an unbiased understanding of their needs, fears, feedback, sentiments, and experience. It supports the Community Engagement and Accountability (CEA) focal points in identifying information needs, and it can inform programmatic improvements.

In June 2022, 510 started providing the SML service with more than 20 Telegram groups in Ukraine and neighboring countries (Poland, Slovakia, Romania – Moldova and Bulgaria were added in February 2023 and Hungary in august 2023). Every two weeks, a data model developed by 510 Data Scientists collects, translates and classifies thousands of messages posted in these Telegram groups. A large sample of these messages is then read by 510 CEA officers, who cluster them into actionable information including Frequently Asked Questions, needs, and more general insights.

With this way of working, thousands of messages are presented in a 1-page cross-regional report and a 2-page country report which facilitates the regional and national CEA teams to advice on improvements of activities, programs, and information campaigns that support people affected.
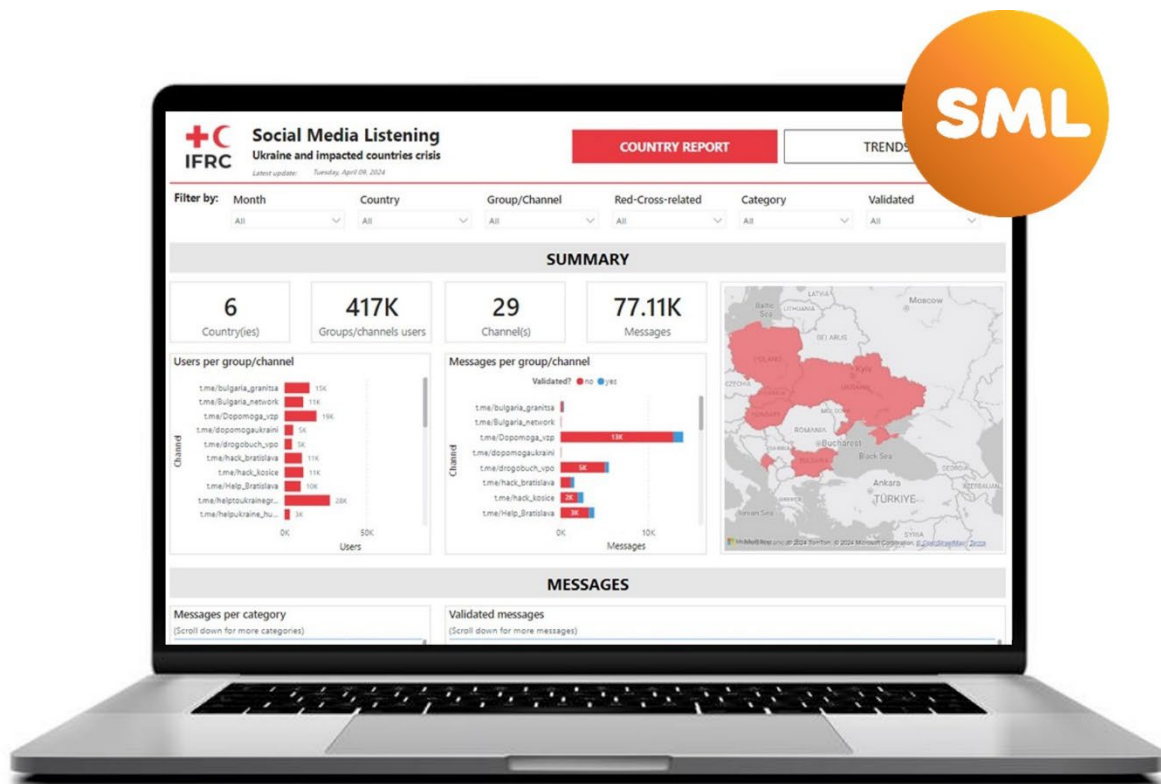
Social Media Listening tool – [Read more here](#)

Artificial Intelligence

The classification of messages is performed via advanced Artificial Intelligence (AI) models, specifically [sentence transformers](#), which convert each message into a high-dimensional numerical representation, i.e. perform *embedding*, and then classify it based

on semantic similarity with the given class labels. The models are continuously improved by the scrupulous work of 510 CEA officers, who manually classify a subset of the messages every two weeks, so that the model can learn from it. This constitute a *human-in-the-loop* workflow, in which human and artificial intelligence empower each other, step by step. Without the examples and the corrections of the CEA officers, the model wouldn't be able to adapt to the volatile discourse on social media. The model training framework is based on [SetFit](), while the CEA officers use [Argilla]() to classify messages. The code of SML is publicly available [on github]().

Unveiling Key Insights

With SML, we are able to extract pivotal insights from the sea of social media conversations which might otherwise go unnoticed. Sifting through the digital chatter helps uncover a treasure trove of information – from identifying rapidly evolving needs during a disaster to detecting shifts in sentiment towards relief efforts and recognizing emerging challenges faced by affected communities. Together, these insights form a holistic picture of real-time data which enables decision-makers at National Societies and the IFRC to adjust their strategies promptly, ensuring that interventions are timely and tailored to the evolving dynamics on the ground.

> *"I use the SML report in my daily work to adjust and improve the communication of our Cash and Voucher Assistance (CVA) programs. Having thousands of messages summarized in actionable points, it's incredible."*
>
> *Güneş Alpan, IFRC CEA for CVA Delegate*

Collaboration with IFRC and National Societies

At the heart of SML's prowess lies a spirit of collaboration that bridges the gap between technology and humanitarian efforts, channelling insights to benefit the operations of both the IFRC and National Societies alike. The newly garnered findings provide a shared pool of knowledge, enhancing the collective understanding of crises and disaster-affected communities. National Societies can harness the tool's potential through a close partnership with 510 and IFRC, integrating it seamlessly into their disaster response strategies and bolstering their ability to serve communities in need.

Diana Medina (IFRC Regional CEA Coordinator) using the Social Media Listening Tool

Enhancing Data-Driven Strategies

By harnessing SML, National Societies are further empowered to make programmatic improvements and create and execute information campaigns of great precision. The tool acts as a guiding light, illuminating the path to understanding local needs and responding to them by delving into the insights unearthed from digital conversations. Through data-driven information the sentiments expressed on these platforms can be deciphered. To achieve a holistic understanding, Social Media Listening insights are juxtaposed with other feedback data from diverse channels, such as the helpline, or face to face feedback collection. This comprehensive approach allows for the identification of both similarities and differences in the data, guiding National Societies to respond effectively and establish more profound connections with communities.

Data & Digital Responsibility

Data and digital technology can help us serve those in need better, faster and in a more cost-effective manner. When used irresponsibly or incorrectly, data and digital technology

can also cause harm. [510's data & digital responsibility policy](#) addresses the responsible processing of data with respect to ethical standards and in principles in the humanitarian context. It bears in mind potential consequences and taking measures to avoid putting individuals or communities at risk. In this program the national society shared the relevant Telegram groups with 510. Once access is granted, 510 sent a short introduction message (identifying as the Red Cross and a short statement about the purpose of being in the chat) and from there the collection process starts. Additionally, any personal identifiable information which people might inadvertently share on those groups is removed before storing the messages.

Continuous Improvement and Evolution of the Tool

The Social Media Listening's journey is one of perpetual refinement, with its evolution driven by user feedback and the ever-changing landscape of technology. 510's commitment to innovation is evident in its continuous adaptation of the tool to align with the needs of those it supports. As emerging communication platforms arise, 510 is dedicated to integrating them into the tool's functionality.

Conclusion

In the realm of disaster response, the Social Media Listening tool is an invaluable asset for the work of National Societies. Its ability to synthesize real-time data, extract insights, and shape informed strategies redefines the approach to humanitarian efforts. With a pulse on evolving needs and sentiments of disaster-affected communities, the tool forms a bridge connecting those in need and those providing aid. By harnessing the tool's capabilities in collaboration with 510, National Societies can usher in a new era of effective and empathetic humanitarian endeavours, united in purpose and driven by data.