Humanitarian Coordination and Information Management

Malawi Data Summit 2022 Report

June 2nd and 3rd, 2022

Executive Summary

Subtitled *"Harnessing Data and Technology to Improve Humanitarian Response and Community Resilience"*, the Malawi Data Summit 2022 was organized on the 2nd and 3rd of June of 2022. The Summit comes as part of the activities of the Humanitarian Response Information Management (HCIM) project, led by the United Nations Resident Coordinator Office (RCO) in Malawi in partnership with iMMAP and the Department of Disaster Management Affairs (DoDMA) and financed by USAID through the World Food Program (WFP). The Summit was organized as a hybrid event, with participants both in person and online, achieving a significant turnout in both modalities. The participants represented a variety of Government Agencies, UN Agencies, INGOs and Academia, based on both nominations by targeted organizations and direct invitations sent prior to the event. Around 92 participants were present in person in the event venue at BICC in Lilongwe (Malawi) and close to 200 participants attending online through Zoom.

Themes and content of the Summit were first conceptualized earlier in 2022 based on the outcomes of a data mapping exercise executed by iMMAP where gaps in humanitarian and development data were identified and the content of the Summit, therefore, aimed at partially addressing the identified gaps. Diverse topics were hence identified and speakers from Malawi, the region, and globally were approached to present their innovations and creative solutions used to address the data gaps in Malawi and beyond.

The content of the event was delivered by various actors from within and from outside of Malawi. Several speakers from the Private Sector, Government, UN and INGOs presented innovations and new technologies in the field of Data and Information Management in both the Humanitarian and the Development fields. Topics were divided into two themes, one for each day, Day.1 - Humanitarian Data Landscape and Innovations and Day.2 - New Data Approaches for Sustainable Development. The topics of the first day focused mainly on the Innovations in Humanitarian Data and included:

- Big Data and AI for Development and Humanitarian Action.
- Data and Digital Platforms for Disaster Risk Management in Malawi.
- Remote Sensing for Disaster Impact Mapping Using Drones.
- Report Hub – Success Story for Nigeria WASH Sector.
- Review of Data Performance in Malawi (Lessons from Tropical Storm ANA).

Topics for the second day were mainly focused on new innovations in Development data in Malawi and included a Panel Discussion to conclude the event's activities and ensure that appropriate recommendations will result from the two-day discussions. The sessions included:

- Artificial Intelligence and Ethical Boundaries.
- Informing Planning, Policy and Service Delivery for District and National Development Priorities.
- National Baseline Data for Decision-making Support.
- Geospatial M&E (Harnessing Remote Sensing to Evaluate Agricultural Projects Impacts).
- Using Mobile Operators Data for Sustainable Development.
- Open Data Cubes for Urban, Environmental, and Agricultural Applications.
- Panel Discussion: Strengths and Weaknesses of Malawi's Data Ecosystem for Development and Humanitarian Response.

Given the diversity of the Summit audience, this event represented a great opportunity for networking and peer-to-peer knowledge sharing. The event successfully promoted data platforms and data solutions in Malawi of which most of the participants were oblivious to their existence, which helped in enhancing their usage and addressing some of the information sharing gaps in Malawi. Event was also an opportunity to bring the attention of development and humanitarian partners to solutions and technologies that correspond to the data needs in Malawi and can be applied to the local context.

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To help gauge the engagement of the audience, live polling and Q&A sessions during the event and post-event surveys were rolled out to inform on the recommendations of this summit and provide insight on the technologies that data stakeholders in the country deem worthwhile and suitable for investment and further development.

Event Content and Rollout

Day 1 : Humanitarian Data Landscape and Innovations

You Tube Link to the recording of Day 1:
https://www.youtube.com/watch?v=nfmoa6c02z4&list=PLcn74baRdIFxzf-amizVXNFUj5LCDaOQ1

Day 1 - Welcome remarks 1 – Young Hong (United Nations Population Fund Resident Representative)

Link to the recording: https://youtu.be/nfmoa6c02z4

Young Hong, United Nations Population Fund's representative in Malawi, commented on the importance of the data industry, and how it is expected to grow by 274 billion dollars this year. Hong mentioned that today data is everything, especially after the pandemic, which forced us to get involved with more agility in the world of data and at the same time immerse ourselves in the digital age. Therefore, she explained that now it is about seeing how we live with information and how we adapt it to better serve people. Also, Hong emphasized that nowadays it is not only important to create data but also to compete against disinformation, which is partly due to competition, as many sources are capturing data at a rapid pace. For that reason, it is necessary to analyze who, where and when is data presented.

According to Hong, Malawi's situation is multidimensional, which is why it can't be compared with more developed countries, such as Australia. Malawi has resources, human capital, and data analysis, so they can mitigate the level of vulnerability individually and integrate these distinct elements to coordinate responses. In Malawi's case, there are no such resources, which is why we can identify the existence of data gaps. For example, in the African country by 2020, just 50% of children are finishing primary school and 50% of the population is living below the poverty line. For this reason, it is necessary to integrate all the data into a greater system to have easier access and visibility of the data, to identify the existing gaps, and to be prepared when a crisis hits. Furthermore, she mentioned that the ability to read, analyze, understand, and use data is also needed, that is why resources are necessary.

To conclude, Hong left the audience with the question of who is going to sponsor or grant the necessary resources for facing those challenges because, although Malawi makes large investments to generate economic growth and provide opportunities for the youngest, there is more effort needed. For that reason, she expected that the Data Summit contributed to taking action, establishing real commitments, and addressing the existing challenges.

Day 1 - Welcome remarks 2 – Charles Kalemba (Department of Disaster Management Affairs Commissioner)

Link to the recording: https://youtu.be/nfmoa6c02z4

Charles Kalemba is the Commissioner of the Department of Disaster Management Affairs (DoDMA). He commented on data management and the importance of making decisions based on data. For this purpose, he read the article "*Ministries need to be strengthened on information management to support their decision-making processes*" from a local daily newspaper. The article explains that in practice, the data becomes useless if it is not used to improve the decision the leaders make. Thus, Kalemba's

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speech showed the importance of educating those who make decisions to read and analyze data, so that decisions are based on knowledge and can be more objective.

In conclusion, he said that people should give and present the facts as they are. He added that not sticking to what the evidence shows is manipulating information. Mr. Kalemba stated that it is important to make decisions based on evidence, because without it, we would be governed only by opinion, where misinformation exists. For this, he established that it is necessary to have a platform that can integrate all the data and ensure their consistency, to then analyze them and make decisions based on evidence.

Day 1 – Conference 1.1: Big Data and artificial intelligence (AI) for Development and Humanitarian Action – Breakthroughs, Setbacks and Next Steps – Emmanuel Letouzé (President & Co-founder of Data Pop Alliance)

Link to the recording: https://youtu.be/qak-9y3-JR4

Emmanuel Letouzé is the Director and Co-Founder of Data-Pop Alliance. He presented Big Data and AI and how they can help to reach Sustainable Development Goals (SDGs). He commented that AI contributes to development because it is a technology that learns from data, and in that sense, it could contribute to supporting emergency responses and measuring SDGs.

Despite this, Mr. Letouzé considers that we are not using it up to its potential. He explained that Big Data works with four axes: crumbs, capabilities, communities, and culture. Some problems appear when data and AI are not frequently used in practice. For example, related to crumbs, the problem is that we are immersed in an ocean of data, so it is difficult to say which ones are correct. Also, a lot of this information is not publicly accessible and is controlled by private companies.
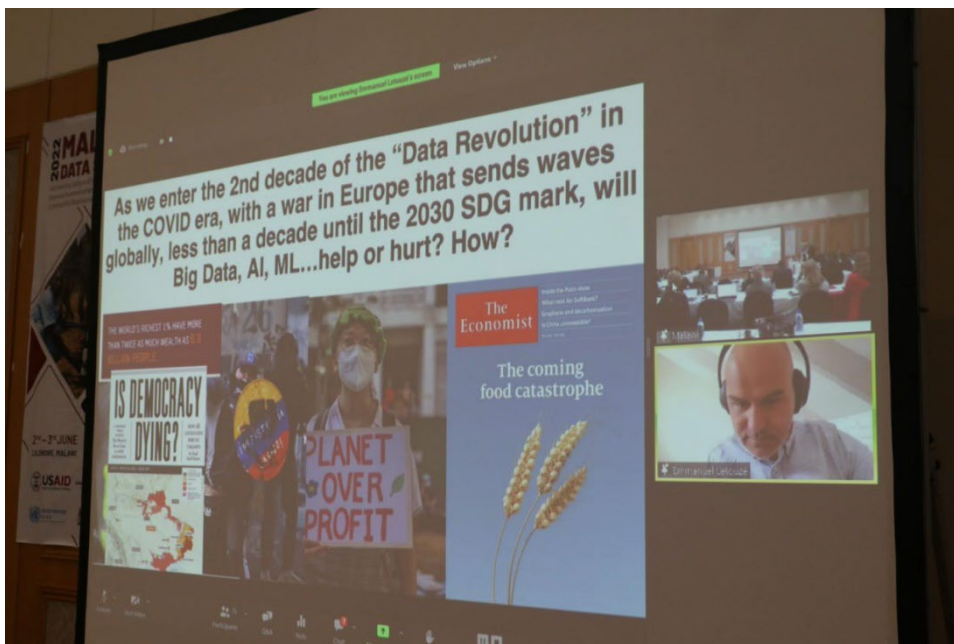
Also, he talked about the bias of some algorithms and how it impacts our analysis and understanding of data, due to cultural impediments that make us analyze and understand the data differently.

Finally, he affirmed that AI and data help human development because they mean progress and innovation. Mr. Letouzé reiterated that AI can learn about the evidence and information that exists, to the point of predicting events. It is for this reason that it can be seen from two perspectives: as an instrument and as an inspiration. An inspiration to learn and improve through feedback(s) and an instrument to yield better feedback.

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Day 1 – Conference 1.2: Data and Digital for Disaster Risk Management in Malawi – Marc Van Den Homberg (Scientific Lead) & Phuoc Phung (GIS and Remote Sensing Analyst) - Netherlands Red Cross

Link to the recording: https://youtu.be/b6mLF2U9vcQ

Marc Van Den Homberg is an applied researcher and consultant who focuses on how humanitarian data and information management can improve preparedness and response to both natural disasters and complex emergencies. Phuoc Phung is a Cadastral Engineer and a Hydro informatician with skills in GIS/ remote sensing, and water-related simulations such as hydrology. Both work on the 510 Data Team of the Netherlands Red Cross. Their presentation highlighted how digital and data access contributes to better and faster crisis response. However, they also stated that it can remain limited due to unequal internet access, data illiteracy, data capacity gaps, and data poverty.

First, they presented the 510 initiative of the Netherlands Red Cross which consists in using satellite imageries and other remote sensing tools for disaster risk management. Van Den Homberg explained the 5 steps (expand risk data bases, create hard-impact database, inventory of forecast and generate impact-based forecasting intervention map) to trigger development, from risk knowledge to preparedness and response capabilities. He explained how they used different datasets and compared data from different sources to be able to produce probability impact maps and forecasts. Likewise, he mentioned that different data layers and the combination of secondary datasets enhanced the understanding of existing vulnerabilities and helped identify the most vulnerable households.

To conclude, they stated that the 5 steps are required to create a program that will improve the response to disaster events in Malawi (risk assessment: data framework, hazard-impact databases, forecast inventory, composite index approach, and triggering of Malawi river floods). this type of transition is occurring globally as we have more extreme climates, increased vulnerability, and more disasters. Malawi is working to increase resilience by implementing flood anticipation measures and improving response to extreme events.

Day 1 – Conference 1.3: Remote Sensing for Disaster Impact Mapping using Drones – Tautvydas Juskauskas (Drones and Data Specialist at UNICEF Malawi) & Ronald Kamwendo (IMO at iMMAP Malawi)

Link to the recording: https://www.youtube.com/watch?v=tEiGUjjGJXo&list=PLcn74baRdIFxzf-amizVXNFUj5LCDaOQ1&index=4

Tautvydas Juskauskas is a Drones and Data Specialist at UNICEF Malawi Country Office and Ronald Kamwendo is an Information Management Officer (IMO) based in Malawi. They presented how drones meet challenges in Malawi and how multifunction they are for humanitarian response by offering imagery, connectivity and transport. They also insisted on how drones can provide more detailed imagery of a very local area and how it complements the satellite images that can map large-scale areas.

They showed how drones can map very quickly a relatively big area such as a town. They presented a case study in Malingunde – Kamuzu Dam, showcasing how to quickly map an area that's usually impacted by floods. They also touched on the sustainability question by presenting the African Drone and Data Academy (ADDA) to build skills locally, which includes an incubation hub. Campuses are opened in Ethiopia, Sierra Leone, Niger, and Malawi (the first one created). One of the next steps will be to connect ADDA with Yoma (a platform that matches youth to job opportunities).

Then, they presented the areas for improvement and mentioned that one key step is to improve the Common Operational Datasets - CODs to have accurate data to support rapid assessment and have a base map. One specific question focused on how to ensure data protection, specifically regarding pictures of children, given the context of child trafficking and the right of people to consent

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to be filmed. Related to these aspects, they mentioned that it is important to inform villages and communities in advance on what are the advantages and risks of drones. Advantages like cost-effectivity in collecting data, timeliness and quality of data.

Finally, they stated that to improve disaster response, certain areas need to be improved such as regular updating and availability of vulnerability base maps, rapid assessment of satellite imagery, identification and understanding of different information clusters and data needs, training of relevant personnel, use of digital terrain models, development of alert procedures, development of drone deployment procedures, and establishment of a drone rapid response unit in Malawi.

At the end of their presentation, a drone exhibition was proposed to the participants on site, in order to show how these tools can be technically deployed.

Day 1 – Conference 1.4: Report Hub – Success Story for Nigeria – Gambo Yelmis Makabi (WASH Sector IMO at UNICEF Nigeria) & John Pau Mugo (Wash Sector Co-Coordinator from NRC)

Link to the recording: https://youtu.be/DEsqL2SKKPQ

Gambo Yelmis Makabi is an Information Management Officer at UNICEF, currently supporting the Nigeria WASH Sector as well as the UNICEF Maiduguri Field Office. John Paul Mugo is the Northeast WASH Sector Co-Coordinator with the Norwegian Refugee Council currently based in Maiduguri–Borno State, supporting the coordination of the humanitarian response in WASH across the conflict-affected states. They presented Report Hub, which is an online reporting platform developed by iMMAP that fills the gap in reporting operational data across organizations, by streamlining the information flow between clusters, partners, and the Humanitarian Country Team.

They presented the key features of the platform and how it meets both organization needs, activity information, and monthly reporting. They also presented its challenges and areas for improvement. For example, Report Hub is not yet able to capture all WASH response data, so they propose to modify it to capture all data (one-stop-shop) collected by the WASH sector including and not limited to gaps matrix, cholera response, WASH infrastructure database, etc.

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This will greatly reduce the problem of having multiple methods for collecting data, and significantly improve data quality. Another aspect that could be improved is that baseline location data is no longer regularly updated, due to the lack of staff in Nigeria. This situation can be mitigated by providing an interface for sectors to update location data using DTM and other sources.

Day 1 – Conference 1.5: Review of Data Performance in Malawi (lessons from TS ANA) – Manar Aleryani (Senior IMO and Project Manager at iMMAP in Malawi)

Link to the recording; *https://youtu.be/wMdfFMqe1DI*

Manar Aleryani is the Senior Information Manager Officer and Project Manager for iMMAP in Malawi. He presented the iMMAP project that iMMAP implemented in Malawi in partnership with the RCO and DoDMA and funded by USAID. He specifically focused on the result of the data landscape mapping showing information and the procedural, structural, and capacity data gaps that need to be addressed in Malawi. Regarding procedural gaps, he said that annual or semi-annual multi-sectoral activities need to be predefined to assist the development of data collection tools. Additionally, he mentioned that different sectors require improvement of standardized activities reporting mechanisms. Related to structural gaps, he stated that sectors do not

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own any IM structures and the role is usually covered by program personnel. Regarding capacity gaps, sectors require IM capacity reinforcement and community-level data collection skills and tools are scarce.

Key learned lessons from the data collection processes and procedures in response to TS ANA were presented (from disaster reporting, to needs mapping and response tracking.) The term "impacted households" was said to be a perfect example of a wide usage of an ambiguous term with little to no contextualization, due to the absence of raw data at the most granular level to assess the level of impact. Rapid information sharing was also listed as one of the key challenges hurdling coordinated response in Malawi and was mostly due to the absence of detailed sectoral needs at early stages of disaster reporting. Absence of household-level data collection was also one of the mentioned challenges in disaster reporting and needs mapping.

On response tracking, the absence of pre-defined activities and indicators at sectors level meant that response tracking and evaluation required longer than expected, despite data collection taking place as early as response rollout.

Finally, he also presented the products iMMAP created through the project which included access maps, 5Ws dashboards, gaps analyses, and flash updates.

Day 1 - Closing remarks – Rachel Sibande (Senior Director, Country Outreach (Africa) UN Foundation)

Link to the recording: https://youtu.be/NH8udlOOSzo
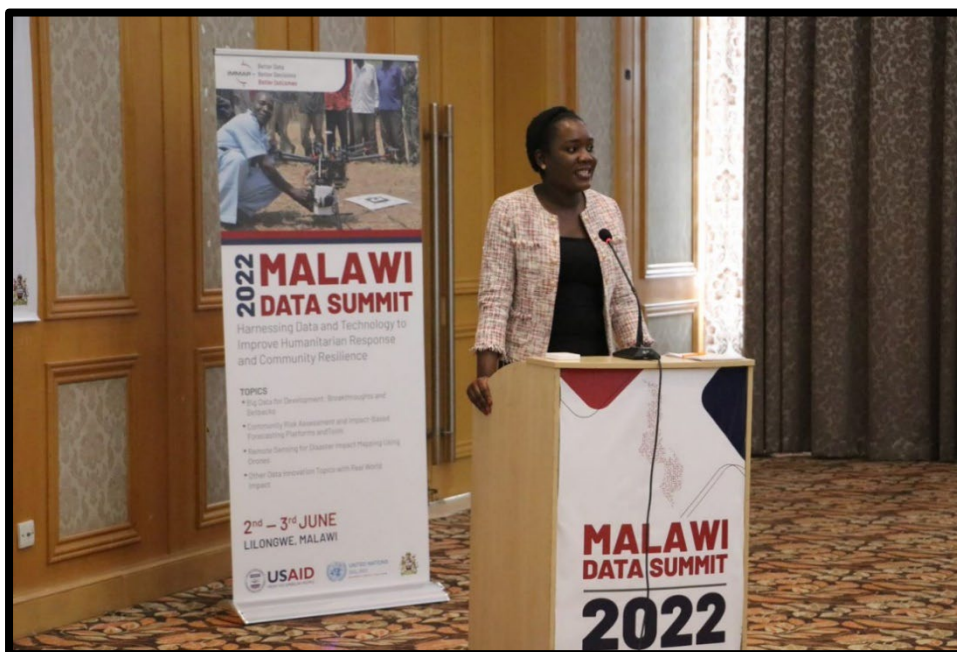
Rachel Sibande is the Senior Director of Country Outreach in Africa for the United Nations Foundation. She did a synthesis of the presentations of the day. She emphasized the Do No Harm concept while collecting data for public good. She also said that information sharing is key, and there is a high potential for data on the decision-making process. She thanked the iMMAP team for the organization of the Summit and looked forward to the next day.

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Day 2 : New Data Approaches for Sustainable Development

You Tube Link to the recording of Day 2:
https://www.youtube.com/playlist?list=PLcn74baRdIFxRd8kjWq7K_tRI6Z6VXJbo

Day 2 – Conference 2.1: AI and ethical boundaries – Nuria Oliver (Scientific Director & Co-Founder of ELLIS Alicante Foundation)

Link to the recording: https://youtu.be/WO_hGAcD874

Nuria Oliver is a computer scientist and is the Scientific Director & Co-Founder of ELLIS Alicante Foundation. At the conference, she first explains the importance of AI and the fact that we need it in different areas. For her, we are in the fourth industrial revolution which includes the use of AI, Big Data, and clouds.

She explained the different levels of AI: narrow/weak AI, general or strong AI, and super AI. Afterwards, she described the different approaches to this kind of technology and how its use has become a political discussion related to ethics, to the extent that the European Union created a framework to regulate AI in Europe. Likewise, she commented on the five key dimensions of AI that need to be looked at, which are: technology; legal and regulatory frameworks; ethics; people, society, education, and economy; and productivity labor market. She then discussed the question of how we can guarantee that AI works for social good and presented her foundation that supports the use of AI for social good.

Finally, she commented on the ethical limitations of AI for social good the foundation is working on, which are: computational violations and privacy; algorithm discrimination and bias as humans create them with all our human limitations and bias; algorithm lack of transparency; subliminal manipulation of behavior; lack of veracity (deep fakes); excessive carbon footprint; lack of diversity (ethnic, gender, etc.) which leads to Asymmetry; and the risk of hacking of algorithm.

Day 2 – Conference 2.2: Informing planning, policy and service delivery for district and national development priorities – Mercy Chirambo (Program Analyst – UNDP Malawi)

Link to the recording: https://youtu.be/j2l98484ksg

Mercy Chirambo, Program Analyst for UNDP Malawi, discussed the components of the data management system to inform planning, policy, and service delivery for district and national development priorities. She mentioned that the goals of having data are to identify communities suffering the most, map communities in need, develop action plans linked to District Development Plan and Village Action Plan - DDP/VA, agree and fund action plans (platforms), and inform evidence-based planning and service delivery.

She said that the system comprises dashboards, sector portals, hotspots, and digitized VAPs. She presented the Council website and dashboard (council data management system), described its features, and said that the system can accept data from all levels – primary, secondary and outcome levels – and can provide analysis at the GVH, TA, district, national levels. The data management platform was created to be flexible, in order to expand to incorporate new indicators and be able to aggregate from many data sources. Council websites for Nsanje and Phalombe were developed as landing pages for the dashboard. Afterwards, she commented on the challenges that the dashboard still faces, which are related to timeliness, accessibility, reliability, relevance, and completeness.

In the end, Ms. Chirambo talked about the need for data standards in district councils, which means enhancing or promoting data sharing by actors, harmonizing geographic identifiers for data matching, and strengthening routine sector data collection.

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Day 2 – Conference 2.3: Data for decision-making Support – Richard Phiri (Principal Statistician) & Lusungu Chinesa (Statistician and data manager) at the National Statistics Office for Malawi (NSO)

Link to the recording: *https://youtu.be/mCZUt2WcD1U*

Richard Phiri and Lusungu Chinesa, both part of the National Statistics Office of Malawi (NSO) team, presented an overview of the NSO activities and initiatives. About NSO, they stated that it is the main government department responsible for the collection and dissemination of official statistics. They also presented the Malawi Data Dissemination Platform developed by the Office and its functionalities. https://www.malawicensus.mw.

Then, they presented the Data for Development (D4D) initiative, set up in 2021 and is led by the NSO, which has as its main goal to strengthen multisectoral collaboration to leverage the use of data for development. They expect that this action contributes to the construction of a national data pipeline and strengthens the NSO's role as the custodian of national data.

In the end, they commented on the potential future state of the NSO and introduced how

Mobile Network Operator (MNO) data could contribute to managing health, disaster response, population estimation, economy, and public services targeting in the country. They explained this potential use by showing how this technology could have contributed to managing Cyclone Ana's response, in terms of estimating the affected population and understanding the displacement movements and financial affection.
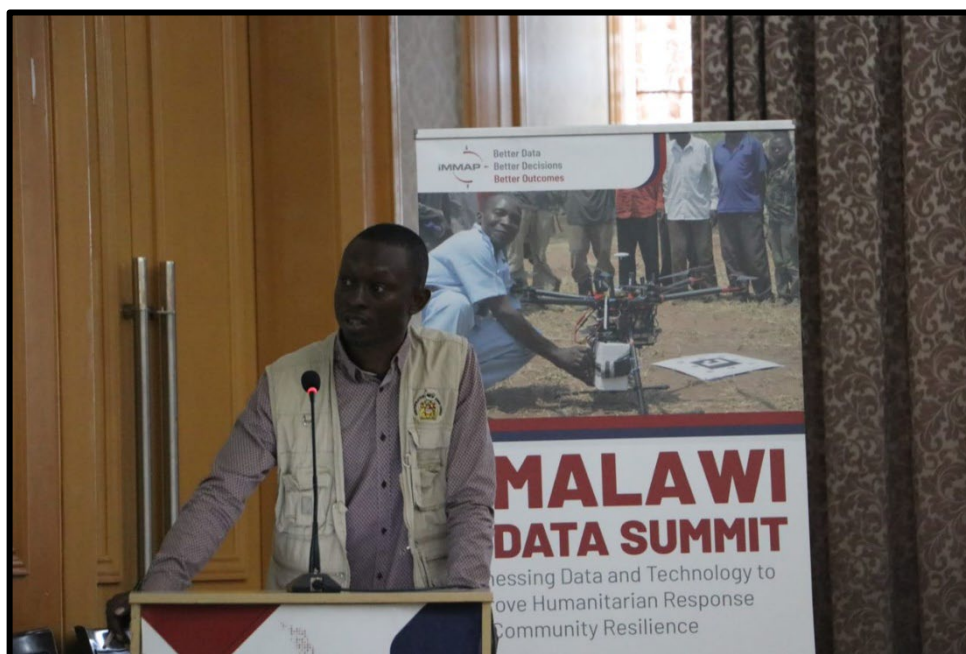
Day 2 – Conference 2.4: Geospatial M&E (Harnessing Remote Sensing to Evaluate Project Impacts in Strengthening Community Resilience) – Margaret Mugo (Geo-information and Knowledge Manager at FAO Malawi)

Link to the recording: *https://youtu.be/Co1H7EDarvY*

Margaret Mugo is a geo-information, digitalization, and knowledge management expert for the Food and Agriculture Organization (FAO) of Malawi. She started by rewarding all initiatives that had been presented during the event and advocating for more data sharing among the actors. Then, she presented the geospatial M&E and IM system of the FAO, their components, and their way of use.

She explained that the system allows the assessment of the impact of FAO projects with great advantages such as being cost-effective and timeliness. Despite this, Ms. Mugo commented that there is still work to do related to collecting sufficient baseline data, that allows even more precise analysis. Afterwards, she explained the four system components, which are capacity building

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in the use of digital tools and systems; digitalized geo-data collection, validation, and statistical analysis; routine data quality control; and audits, and remote monitoring system accountability tool.

Finally, she presented the structure of the platform and the way it works, as well as examples of impact assessment using remote sensing and satellite imageries and how it helped identify the impact of a 2016 action in 2019.

Day 2 – Conference 2.5: Using Mobile Operator Data for Sustainable – Xavier Vollenweider (Director of Mobile Data partnerships at Flowminder)

Link to the recording: https://youtu.be/p3Pp1KUkTC4

Xavier Vollenweider, Director of Mobile Data Partnerships at Flowminder, talked about FLOWMINDER.ORG, to show the audience how to use mobile operator data for sustainable development.

After introducing the organization, he explained what it is and the use of the mobile operator data for mobility. Mr. Vollenweider described how call detail records can provide near real-time estimates of population movements and changes in population density. He presented four key mobility indicators, namely the number of residents, moves, active subscribers and travelers/trips.
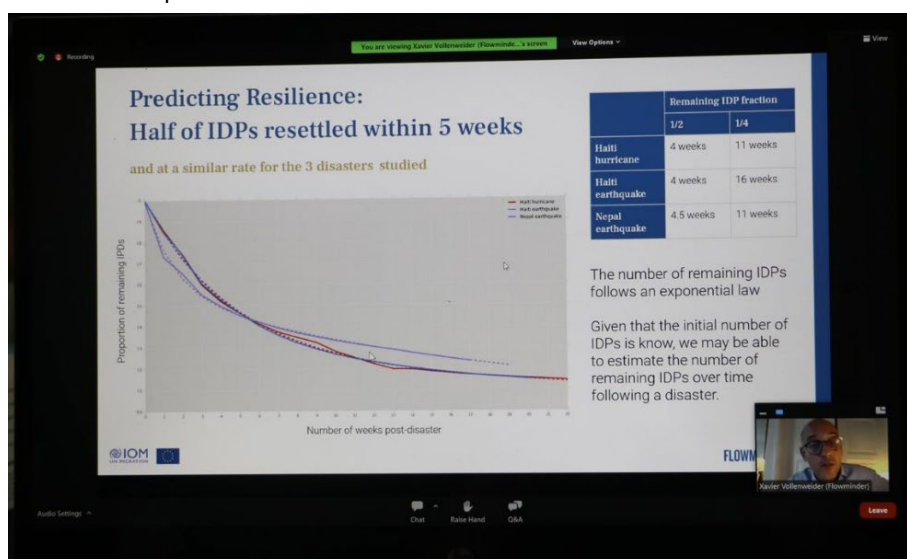
Afterwards, he explained how the company is going to ensure privacy and quality, by moving the code to the data and not the data to the code, complying with national regulations and EU GDPR, and using transparency and peer review, among other elements. Then, he talked about the five requirements needed to use mobile operators, that are: tailored, trust, capacity to leverage the data, application, and time.

Later, he explained the tailored partnership model and commented on some of the projects that the organization has done, or that are currently in progress. Finally, he showed how the model could work by using a specific case.

Day 2 – Conference 2.6: Open Data Cubes for Urban, Environmental and Agriculture Applications – Victor Mackenhauer Olsen (Remote Sensing / GIS Developer at iMMAP)

Link to the recording: https://youtu.be/D-vy0Vluir0

Victor Mackenhauer Olsen is a remote sensing/GIS developer at iMMAP. He talked about remote sensing in Open Data Cubes for urban, environmental, and agricultural applications.

Victor highlighted the fact that many satellite signals exist and that our planet is surrounded by them, and, in turn, these satellites allow us to visualize the world from multiple perspectives. He also presented some challenges that sensing has such as growing

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data volume and velocity, diversity and variety of sensors, lack of computing resources to efficiently prepare and utilize the data, cost, and effort to store and process the data, and scarcity of scientific knowledge to extract meaning from the data.

Then, he talked about the data cube which is a multi-dimensional array organizing data in a way that simplifies data storage, access, and analysis compared to file-based storage and access. Also, he mentioned that applying data cube technology to Earth Observation (EO) datasets attempt to address some of the challenges and opportunities rooted in these big data characteristics. In that sense, he explained the iMMAP Data Cubes and their operation, and how they can help to facilitate the management, access, and use of analysis-ready data (ARD), to harness big EO data at a minimum cost and effort, to store data in a query-optimized way, among other factors.

After, he described a list of potential aspects where they could be applied (Environmental, agricultural and urban) and gave examples of how the technology works. Finally, he talked about the future expectations of this technology in terms of accessibility, richness of data, and user-friendliness and its areas of improvement.

Day 2 – Panel Discussion: Strengths and Weaknesses of Malawi's Data Ecosystem for Development and Humanitarian Response – Victor Ohuruogo (Senior Africa Regional Manager at GPSDD), Lizzie Chikoti (Acting Commissioner of Statistics at NSO Malawi), Dalitso Kafumbata (University of Malawi), Maganizo Monawe (Program Leader at Cooper/ Smith) and Andrés Clavijo (Economist and Data Strategist at iMMAP)

Link to the recording: *https://youtu.be/0wi3COeDpsc*

The panel discussed the strengths and weaknesses of the data ecosystem in Malawi: governance, trust, the difficulty to build relationships with the academic sector, and generating trust in the available data. The panelists established that the current main challenge is the quality of data to make better decisions for achieving better outcomes. Also, they discussed that an important obstacle is that most of the data is still not open. In that order of ideas, they requested to work on the accessibility of data, by creating a trustable data platform.

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Another important question that arises was that it is not clear which is the official data system for Malawi. In that sense, the panelist emphasized the need to clarify this topic, to facilitate research. Also, they mentioned that there is still a need to increase the investment in local infrastructure such as servers, power, and connectivity, among other factors. They stated that if one of the goals is moving huge datasets around the country, there is a need to invest in infrastructure for doing so.

The panelists also mentioned that there are clear challenges related to coordination and information sharing in the country, and for producing high-frequency data. In most cases, for producing this kind of data, researchers must rely on surveys and censuses from 10 or 5 years ago that are no longer usable or certain. As well, they mentioned that the country faces a gap in environmental data and climate change information, slowing the pace at which the country can respond to disasters. For that reason, it is important to use new technologies, such as drones, for data collection and response.

Day 2 - Closing remarks – Sarah Simon (Africa Desk Coordinator at iMMAP), Margaret Mugo (Geo-information and Knowledge Manager at FAO Malawi)

Link to the recording: https://youtu.be/wuLjFTcsUsg

Sarah extended thanks to the attendees and all those who showed up at the Summit. Then, she introduced iMMAP, who they are as an institution, and what has been its achievements in Malawi. She made a synthesis of the presentations of the day. She delved into the data needs of Malawi and the opportunities that are given to the country with this Summit. She also praised the fact that they received a lot of information about data gaps and thanked the speakers for enriching the topic of data gaps in Malawi. Likewise, expressed her gratitude for the initiatives and collaborations.

 Then and as closure, Margaret recapitulated all the presentations that were made on the two days of the summit.

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Audience Engagement and Feedback

During the event, live polling sessions were organized to gauge the engagement of the audience and obtain feedback on the discussed topics. A post-event survey was also sent out to complement the panel discussions and the live polls. Questions related to the existing capacity, data and institutional gaps were addressed to the audience and confirmed the results of the mapping exercises performed by iMMAP earlier in October 2021.

Data and Information Gaps and Needs

During the first day of the Summit, the participants, through live polling, reaffirmed that, in Malawi, basic baseline data and Common Operational Datasets (CODs) were indeed lacking in quality, availability and update. The second day of the event was, therefore, a great opportunity to showcase the progress made by Malawi NSO to render these datasets more accessible and to improve their quality.
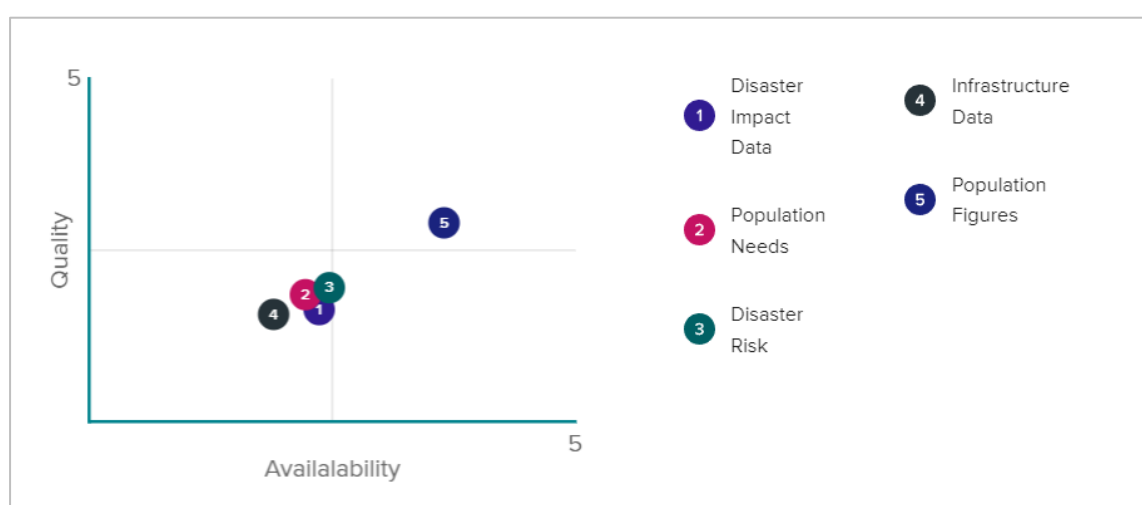

Figure 1. Feedback on Quality of CODs & FODs in Malawi

Audience also stated that, amongst the data types presented, Disaster Impact, Disaster Early Warning, and Thematic Infrastructure data were the top 3 needed and relevant data for the design of their programs and interventions.
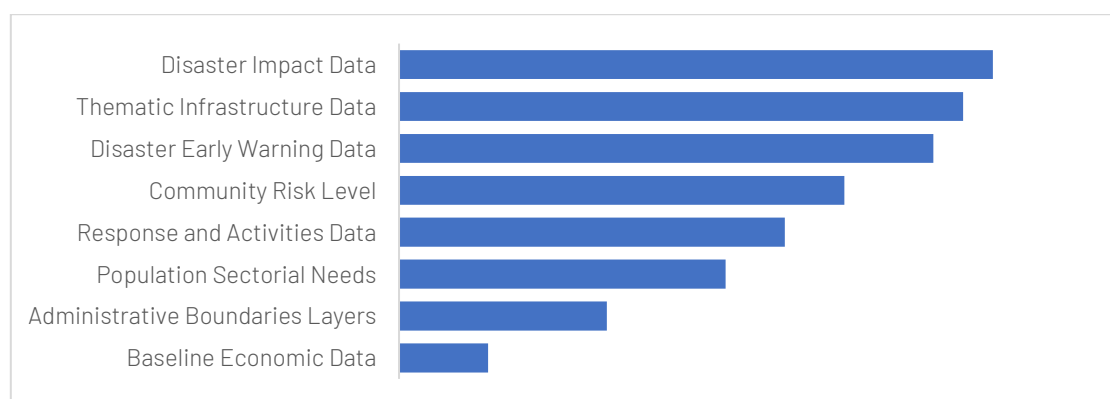

Figure 2. Most Needed and Operationally Relevant Data Types

Community Risk and Response Activities data came 4th and 5th in terms of need and relevance, despite more than 40% of the participants stating that their organizations are not in possession of activities tracking solutions. Around 80% of the audience also stated that they were not aware of 510's community risk platform prior to being presented during the summit and found it to be helpful.

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Feedback on Content and Organization

The results of the live-polling and surveys, demonstrated that, for the theme of the first day (Humanitarian Data Landscape), the participants were most interested in seeing more advancement in the utilization of Drones as a sustainable solution to remote-sensing, especially for disaster response. Activities Tracking and the success story represented by UNICEF Nigeria for WASH was also close second in terms of relevance to the audience's needs and activities.
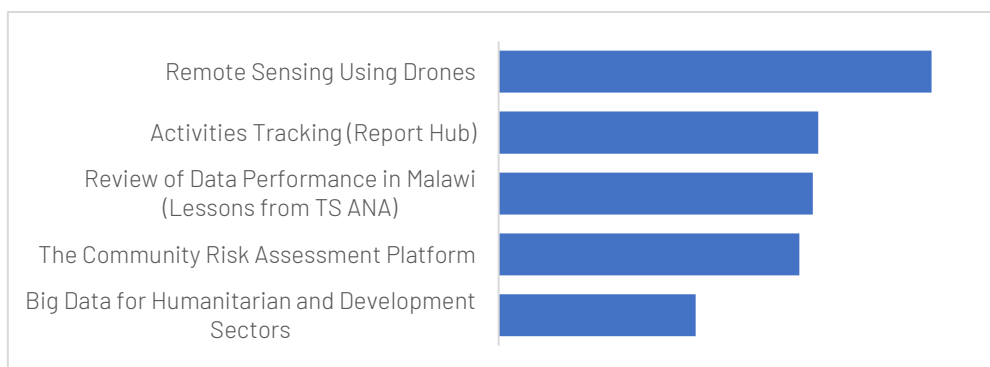

Figure 3. Feedback on Event Topics Relevance and Interest (Day 1)

For the second day of the summit, agriculture was a strong theme amongst the event audience. Remote sensing to track projects impacts and to inform planning are the most engaging and relevant topics according to the polls. NSO's platform also caught the attention of the participants, especially since most audience demonstrated the lack of availability of key baseline information and CODs in the polls of the previous day.
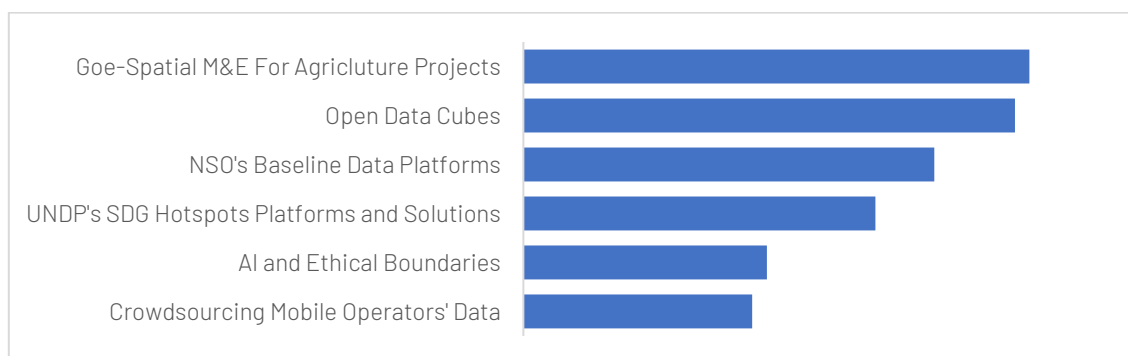

Figure 4. Feedback on Event Topics Relevance and Interest (Day 2)

Open-ended questions and Q&A sessions during the event also showed that, while some participants were interested in AI, Crowdsourcing Mobile Data, and Big Data, some found these topics to be too technical. The organization of the event was highly praised and **100%** of those surveyed stated that they are looking forward to an iteration of this event in the coming year(s).

Key Recommendations

Based on the feedback of the participants, the live polls and surveys, the final panel discussion, and the Q&A sessions, the following recommendations were obtained:

- **Improvement of Baseline Data and CODs:** Despite the presentation of Malawi NSO, population figures and needs, structures data, population needs, community vulnerability data remain hugely unaddressed and of high interest to most

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participants. While the solutions and the platforms presented demonstrate an improvement of accessibility, and availability of these datasets, their quality and granularity remain challenged and needed.

- **Remote-sensing for Humanitarian and Development Needs:** Given the limited capacity (human and technological) to collect raw data from the ground, remote-sensing is a valid solution that will require further investment. Open-source satellite imagery complemented by Drones Imagery are reasonable solutions to these data gaps, based on audience engagement and interest. Disaster response, urban and agricultural sectors are the most in need of further investment in remote-sensing solutions.

- **Enhanced Information Sharing:** While data for certain sectors are abundant, information sharing is limited. This is mostly as a result of the absence of sharing mechanisms between the different data stakeholders (Academia, NGOs, INGOs, UN Agencies and Government Institutions). The development of mechanisms, tools and, above all, sharing platforms is key to guarantee that all data gaps are addressed, and that users have access to data when needed. Recognizing the role of Malawi NSO in centralizing and sharing all data in the country is key in sustaining and ensuring the usability of all collected data in the country. For data to be officially adapted and utilized by the different humanitarian and development actors in the country, NSO will need to be the official source of baseline, economic and common operational data.

- **Activities Tracking:** Coordination in both the Humanitarian and the Development domains requires the proper tracking of activities of all humanitarian and development actors. Tools, processes, and capacities are needed to enhance activities tracking in Malawi. Report Hub can be a good solution for this activity tracking objective.

- **Capacity Building:** Platforms, tools and modern technologies in Malawi should always be implemented with CB of users in mind. Innovative technologies and platforms require individuals who know how to use them to guarantee their impact.

- **Leadership:** Government leadership is key in sustaining a favorable data landscape. Recognizing the role of key governmental institutions (e.g., NSO) and their leadership in managing nation-level data is essential.

- **Sustainability:** The capital expenditure costs involved in automation and platforms creation should always be considered in programs budgeting and designs. In the long run, quality of data resulting from automation and platforms supersedes the associated costs of maintaining these technologies and platforms.

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Annexes

Annex 1 – List of organizations represented on-site

Catholic Relief Services	Malawi Red Cross
Concern Worldwide	**National Statistics Office of Malawi (NSO)**
Cooper/Smith	OXFAM
Department of Disaster Management Affairs (DoDMA)	Plan International
Embassy of Japan	Save the Children
European Union	UNCDF Malawi
FAO Malawi	UNDP Malawi
FCDO	UNFPA Malawi
GIZ	UNHCR Malawi
Malawi Ministry of Agriculture	UNICEF Malawi
Malawi Ministry of Disaster	University of Malawi
Malawi Ministry of Education	UNRCO Malawi
Malawi Ministry of Health	USAID
Malawi Ministry of Homeland security	WFP Malawi
Malawi Ministry of Lands	WHO Malawi

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