EMERGENCY TELECOMMUNICATIONS CLUSTER

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TECHNOLOGY SOLUTIONS FOR A CHANGING HUMANITARIAN LANDSCAPE.

ETC Virtual Plenary 2020

Day 1

- Opening Remarks
- Adapting and responding to COVID-19
- Responding together
- Celebrating our collaborations

Day 2

- ETC Capacity Building plans
- ETC Service Catalogue & UAS Coordination Model
- Telecommunications Security Standards (TESS)
- Celebrating Ericsson Response 20th Anniversary

Day 3

- Partner updates and solutions
- Emerging humanitarian trends and the role of technology
- Closure

Opening remarks

The first ever Virtual ETC Plenary Meeting was opened by **Enrica Porcari**, Chief Information Officer, WFP and Chair of the ETC. Opening remarks from **Doug Greene**, Chief Information Officer, UNHCR and **Daniel Couture**, Chief Information Officer, UNICEF followed.

A total of 70 participants from 23 organizations participated in the event over 3 days, with an average of 55 attendees daily.

Through a video entitled "Agility in the face of change", ETC partners weighed in on how COVID-19 is changing their organizations.

The Chair noted the high participation in the virtual meeting was testament not only to the partnership and commitment inherent in the ETC network, but also to its adaptability, in line with this year's theme: "Agility and innovation in the face of change".

The Plenary agenda was adopted.

Adapting and Responding to COVID-19

The group looked at the profound impact of the COVID-19 pandemic on operational and global activities. The Global ETC team, Internews, NetHope and WVI shared their views, challenges and how they overcome those in this exceptional time.

Jalal Shah, Global ETC Coordinator, presented the impact of COVID-19 on ETC operational activities and how ETC is responding under three pillars: ensuring operational continuity, meeting the increased demand for technology and supporting risk communication plans. He also briefly highlighted the impact of the pandemic on Global ETC activities, particularly in the area of training, where most planned sessions had to be postponed or cancelled.

Rami Shakra, NetHope, presented NetHope's response to COVID-19, with a focus on supply chain for the distribution of Personal Protective Equipment (PPE), remote working challenges associated with home-based working (limited bandwidth, lack of equipment, etc.), information management and the need to make sure that relevant information reaches vulnerable communities.

While NetHope normally relies heavily on its partners to respond, the pandemic forced the network to look at where they have solutions (e.g. call centres) already set up and leverage those resources instead. Rami also presented some of NetHope's ongoing projects in Latin America and future projects in Kenya and Rwanda where they are looking at supporting the provision of connectivity, access to information, mobile money and education.

Adapting and Responding to COVID-19

Anthony Kimani, WVI, presented WVI's COVID-19 global emergency response (COVER) and how WVI is working towards limiting the spread of COVID-19 and reducing its impact on the most vulnerable people, especially children, in the 70 countries in which World Vision is responding to the pandemic. To do so, WV will (1) put community engagement at the core of its response, (2) put more focus on addressing the secondary impacts of COVID-19 (especially on livelihoods), (3) scale up digital solutions and (4) deepen partnerships with local partners, especially faith leaders.

On the IT front, WV has formed a COVID-19 Quick Response Task Force to coordinate IT activities and ensure the continuity of business operations. With the successful transition of staff to working from home, the organization has witnessed an increase in the use of collaboration platforms and remote IT support requests, as well as in cyber-attacks. As a result, a Cyber Security Emergency Response Team (CERT) has been formed.

Stellar Murumba, Internews, presented the work Internews is doing on community engagement during the COVID-19 response, particularly when it comes to risk communication and some of the activities undertaken to provide information to the public (radio, shows, etc). She also presented a way in which Internews remains accountable to the communities with which it works through the publication of the "In the Loop bulletin", which publishes the feedback provided by communities and actions taken by humanitarians. She presented on the methods of collecting data and the importance of face-to face communication.

Discussion:

There was a discussion on the challenges related to energy, where people working from home are facing difficulties to perform in locations where power grids are not stable. WVI explained that adopting new energy solutions and reducing the workload of colleagues helped them to overcome energy-related challenges. UNICEF and Save The Children related to the same challenges.

Responding together

Alexander Thomas and **Nizar Zeidan**, UNHCR, presented the Mozambique Lessons Learned exercise held in 2019. UNHCR accepted to lead the exercise for the ETC as a neutral organization since it was not directly involved in the ETC Mozambique response. They presented the methodology used, the outcomes of the face-to-face discussion and the resulting recommendations. They also presented the progress made so far on the set of recommendations that aim at improving future ETC responses.

Simon Gray, GVF, briefly presented the outcomes and lessons from the Crisis Connectivity Charter (CCC) meeting in November 2019 and the first 3 activations of the CCC over the past year. He mentioned that operators are working towards adapting to the need to increase the ETC's response capacity by, for example, looking at more portable equipment and the possibility of deploying services for more than 3 months. The group is also looking at putting together a consolidated training package.

Prakash Muniandy, Global ETC, briefly presented ongoing ETC operations and some of their specific challenges and contexts. He then split participants into groups and asked them to identify the key areas that the ETC should either continue to work on, stop working on or further explore to continue improving its responses today, also considering the challenges posed by COVID-19.
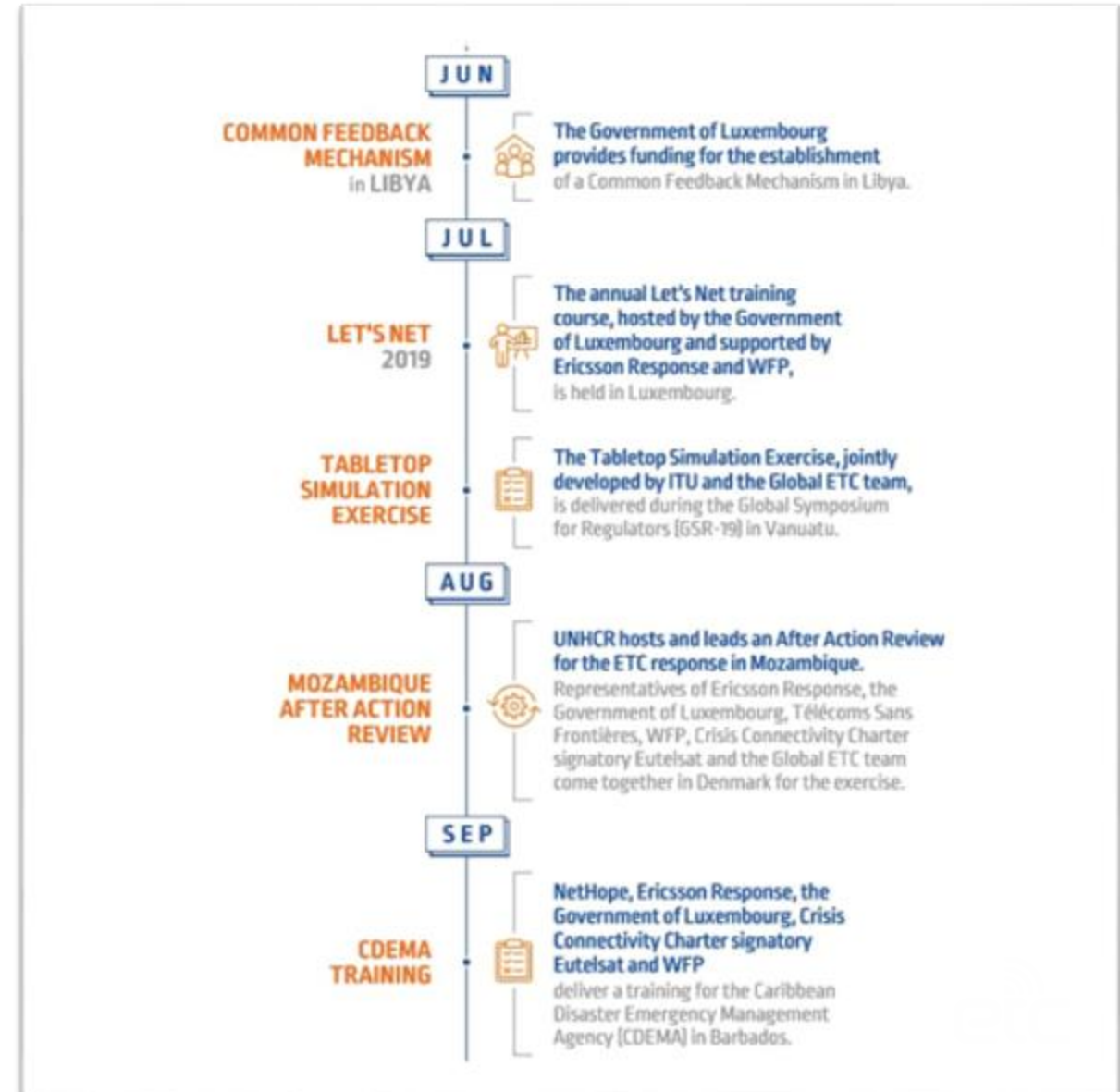
Responding together

Group discussion:

- The groups mentioned the need to put greater emphasis on localization, looking at leveraging the resources and expertise that exist in country, and to continue building local capacity.

- It was also mentioned that the ETC should remain flexible and innovative in the ways it supports field operations remotely. This could include e-learning opportunities and the activation of connectivity services to be compatible with local solutions following the successful example of the Cyclone Harold response in Vanuatu and Fiji in April 2020.

- Participants welcomed the initiative of having a neutral organization leading an ETC operational lessons learned exercise and encouraged the Cluster to do so again in the future where possible.

Celebrating our collaborations

Emma Gilson, Global ETC, presented a timeline of the key milestones reached with partners between April 2019 and May 2020. She then presented some of the efforts made to fill the gaps in some of the areas of work previously identified. The areas of work presenting the largest gaps include Energy (to power ETC telecommunications equipment and set up charging stations for affected populations), Services for Communities and Unmanned Aircraft Systems (UAS).

The Chair thanked all for the great support and collaboration leading to more robust and quality of ETC services in humanitarian operations. **The timeline can be found here**.

JUN

COMMON FEEDBACK MECHANISM in LIBYA — The Government of Luxembourg provides funding for the establishment of a Common Feedback Mechanism in Libya.

JUL

LET'S NET 2019 — The annual Let's Net training course, hosted by the Government of Luxembourg and supported by Ericsson Response and WFP, is held in Luxembourg.

TABLETOP SIMULATION EXERCISE — The Tabletop Simulation Exercise, jointly developed by ITU and the Global ETC team, is delivered during the Global Symposium for Regulators (GSR-19) in Vanuatu.

AUG

MOZAMBIQUE AFTER ACTION REVIEW — UNHCR hosts and leads an After Action Review for the ETC response in Mozambique. Representatives of Ericsson Response, the Government of Luxembourg, Télécoms Sans Frontières, WFP, Crisis Connectivity Charter signatory Eutelsat and the Global ETC team come together in Denmark for the exercise.

SEP

CDEMA TRAINING — NetHope, Ericsson Response, the Government of Luxembourg, Crisis Connectivity Charter signatory Eutelsat and WFP deliver a training for the Caribbean Disaster Emergency Management Agency (CDEMA) in Barbados.

ETC Capacity Building plans

The Global ETC team shared their vision and the way they are adapting to the evolving situation with respect to COVID-19, which has impacted the physical delivery of trainings.

The Global ETC team has been building and testing online learning systems, as well as designing and upgrading training packages using a "blended learning approach" for all training packages. A virtual classroom training is planned to be delivered later in the year to make up for some of the postponements caused by the pandemic.

In the past year, the team has also been looking at strengthening the measurement of Global ETC training activities by introducing evaluation tools such as self-assessment forms and pre-post tests. The evaluation framework will help to better link the ETC's work in the capacity building sphere with the overall goals and objectives of the Cluster and quantify impact.

As an outcome of the Plenary Meeting, the Global ETC team invites ETC partners to further discuss the capacity building strategy and explore different ways of delivering trainings and collaborating in this area.

ETC Capacity Building plans

Discussion:

- Partners were called upon to explore new capacity building avenues – including competency mapping and gap analysis and innovative ways to deliver training.

- All agreed that the blended learning approach, using a combination of classroom-based and e-learning, is the best option to offer ETC trainings. It offers flexibility, cost-effectiveness and inclusiveness, as it reaches more people. Blended learning can also support faster onboarding for students, as well as offer ways to support continued learning with refresher courses.

- Cross-partner collaboration was welcome to avoid duplication of efforts but also to support some of the more challenging aspects of e-learning, such as for technical trainings for instance. GVF has online VSAT trainings simulating VSAT installation that are already in place and in use by multiple partners.

- UNICEF mentioned that, in terms of evaluation, self-assessments are not enough. The need to incorporate feedback from line managers and peers and understand whether acquired skills and knowledge are being applied is also important.

- In-class training was recognized as essential for teaching certain technical skills and remains a great networking opportunity, an important aspect when participants get deployed together in the field.

- Save the Children also suggested to look at conducting training in different languages to reach more people and build capacity around the globe.

- The following partners expressed interest in engaging with the ETC Capacity Building team: the Government of Luxembourg, Ericsson Response, ICRC, ITU, MSB, NetHope, Save The Children, UNICEF, UNHCR and WVI. CDAC Network is willing to engage on the development of the Services for Communities training package. All will be contacted after the Plenary to continue the discussion and explore concrete collaborative activities.

ETC Service Catalogue & UAS Coordination Model

The Global ETC team briefly presented two documents – the updated "ETC Service Catalogue" and the "ETC UAS Coordination Model" – that were circulated for feedback and of which the final versions were shared with participants before the meeting. The documents aim at reflecting the services the ETC is providing in the field, including the latest services endorsed since 2015 as part of the ETC2020 Strategy. While the ETC Service Catalogue reflects the changes and updates to the list of services the ETC can provide in the field, the ETC UAS Coordination Model provides more details on how to deliver UAS services if an emergency strikes tomorrow.

Discussion:

- It was confirmed that the ETC UAS Coordination Model document is a live document and would evolve as the service matures.

- Participants raised concerns around managing data sharing and protection using drones, as well as safety. The Global ETC team confirmed that it works closely with the ETC lead agency, WFP, which has been putting a lot of efforts into UAS-related safety and security by working closely with WFP Aviation Safety units and other organizations on the matter of data protection.

Decision:

The ETC Service Catalogue and UAS Coordination Model were adopted by ETC partners.

Telecommunications Security Standards

Peter Casier, TESS, presented the findings and accomplishments of the project over the past year and the direction it is now taking. He also presented its complex governance system, highlighted the presence of the ETC in all TESS working groups, and went over the work done in the following three areas.

Stream 1: Field support

- Country assessments as well as technical support missions to provide recommendations to the Security Management Teams (SMT)

Stream 2: Standardizing technologies

- Standardization of VHF (Very High Frequency) radio networks, VTS (Vehicle Tracking System) and MSS (Mobile Satellite Service)

Stream 3: Standardization of long-term technologies

- Exploring new technologies (LTE, Large Area Wireless Data)

- In addition, the team is also providing guidelines and procedures, online webinars, and analysis on Mobile Network Operators (MNO)/Electricity services. TESS also supported the handover of WFP Location Services to UNDSS to complement the eTA application and enhance its effectiveness in the field.
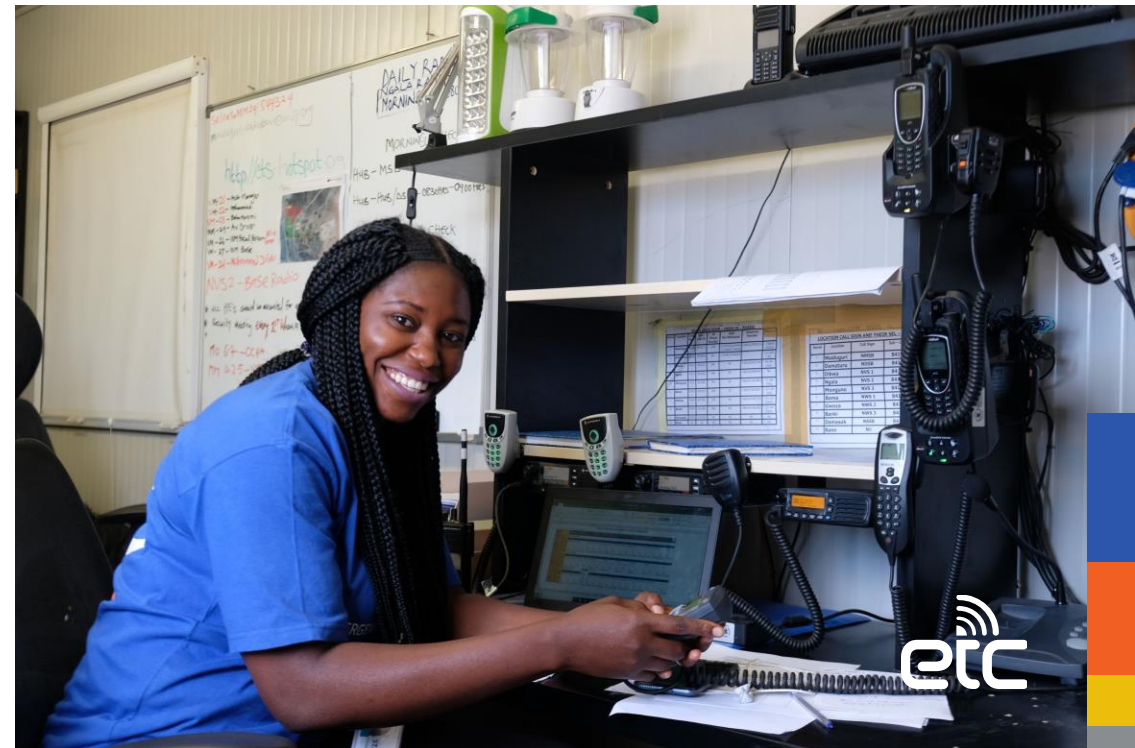
Telecommunications Security Standards

The project is entering its last month before beginning to transition to a sustainable solution, {TESS +}. {TESS +} is TESS as an institutionalized support service, endorsed by the IASMN and the ETC in January 2020. The team is looking at securing funding in order to set up the {TESS +} structure. The initial activities would include:

Stream 1: Increased field support (advice on budgets, configurations, etc.)

Stream 2: Implement VHF optimization, operationalize VTS, Mobile Satellite Solution (MSS) architecture/tests, as well as centralized Security Operation Centres (SOC). The first test of a centralized SOC was conducted in Burkina Faso, where 5 repeater sites were successfully managed from Ouagadougou.

Stream 3: Prototyping and testing new solutions (guidance on phase out as well as standards for activation)

The TESS online community holds regular online sessions and welcomes everyone to join – tess@wfp.org.

Discussion:

- MSB asked about High Frequency (HF) radio usage in the future. Peter explained that in most operations today, the use of HF for security communications exists on paper but not in practice. The infrastructure in most places is no longer useable or there are no procedures in place (no call sign or channel lists), and the knowledge is no longer there. HF radio is planned to be replaced by mobile phones (or satellite phones where mobile phones are not an option) based on the operational context. While the use of mobile devices has not yet been formalized across the UN system, this is the most practical approach, given that in 90% of operations mobile phones are already the most used device. There is a plan being developed to phase out HF over 5 years. A document will be shared with the ETC for endorsement soon.

- The Government of Luxembourg pointed out that technology for remote SOCs has existed for years and asked why it has never been implemented until now. Peter answered that while the technology has been around for years, it was never implemented because there was never an organization mandated to do so.

Celebrating Ericsson Response
20 years anniversary

Heather Johnson, Ericsson, joined the event to celebrate the 20th anniversary of Ericsson Response, one of the first partners to join the Cluster in the mid-2000s.

Partners' updates and solutions

Omar Namaoui, Global ETC, guided participants on a tour of innovative technology solutions.

The ETC Voice and Data Connectivity Solution:

Lars Rüdiger, Ericsson Response, presented improvements made on the WIDER (Wireless LAN in Disaster and Emergency Response) solution in terms of equipment, cybersecurity and user traffic management and the possibility of linking different solutions for higher capacity.

Gilles Hoffmann, Government of Luxembourg, presented emergency.lu's capacity and future plans beyond 2020. The team provides in-kind operational response capacity to disaster situations and humanitarian crises through deployment of staff and equipment for ICT services, software services and capacity building, using the established stand-by partnership with WFP.

The team is interested to further support the ETC Service Catalogue in particular in terms of Internet hotspots, phone booths and multi-channel broadcasting for affected populations in emergencies.

Gilles also expressed interest in further discussing the future of the ETC voice and data solution originally developed with Ericsson Response, the Government of Luxembourg and WFP.

Partners' updates and solutions

The Disaster Connectivity Maps (DCM):

Salma Farouque, WFP, and **Paul Hamilton**, ITU, presented the DCM project, currently driven by ITU and supported by ETC Preparedness Working Group members and the Global ETC team. It is a visual tool to provide accurate connectivity information pre- and post-disaster to support decision-making. The product can display heat map (showing "hotter" when there is stronger connectivity performance), dynamic and real-time contours that show connectivity between datapoints. It also includes already existing GIS datasets.

The team is collecting datasets for countries identified and is currently piloting it in 3 countries, Fiji being one of them. However, there is a challenge with the availability and variability of the data, with occasionally too much data available.

The team is looking at automating DCM as much as possible to ensure that the information presented is up-to-date.

Discussion:

- The Government of Luxembourg asked if, following the partnership with Facebook, Facebook data is displayed on the maps. Salma answered that APIs are not offered by Facebook yet, and there are legal constraints with data sharing that need to be resolved before Facebook data can be integrated into the DCM prototype.

- The U.S. Department of State asked about the DCM rollout from prototype to production and whether disaster-prone countries would be prioritized. Salma proposed to discuss this in more detail in a dedicated DCM Webinar to be held after the ETC Plenary Meeting.

Partners' updates and solutions

Renewable energy:
Mark Hawkins, Save the Children, presented activities to deliver off-grid power solutions in operations. He reminded the group of the risks and challenges surrounding power in terms of poor safety, quality, or the lack of skills to handle power solutions in the field. There is also some leadership apathy when it comes to power-related issues (no accountability or delegation of responsibility).

To overcome some of these challenges, Save The Children and NetHope are looking at solutions with partners to use renewable energy, consume less, use better quality products and ensure skills are improved to support them.
Training programmes on electrical/technical/programme management skills for practitioners on the ground are to be explored and implemented. Mark also mentioned that a webinar will be held to discuss solutions.

John Isaksson, MSB, presented MSB's investment in a Sustainable Power Project. The team is looking at solar panels and solutions using industry standards, as well as practical solutions for emergency response. For example, capacitor batteries were found to be the best and most efficient option, helping to avoiding the logistical issues experienced with lithium batteries (classified as potentially dangerous materials). The team is looking at providing such support to other organizations in the field and encouraged partners to engage with their electrician, Linus Johannsson, for more questions and interest.

Discussion:
- Save the Children confirmed the "Off-grid power guide" will be completed and shared in August 2020.

- MSB asked whether we could revive discussions around the "power working group" to further discuss clean energy solutions for the ETC. The Global ETC team will evaluate the need to create a forum to further discuss power-related solutions, noting that these would only support ETC services and solutions in the field (i.e. powering ETC telecoms equipment and providing charging stations to affected populations) as the ETC does not have a mandate to take this activity beyond.

Emerging humanitarian trends and the role of technology

Gianluca Bruni, WFP, facilitated the strategic discussion about the future of the ETC as the Cluster is about to embark on the development of a new strategy for the next few years. He opened the session by describing the evolution of the humanitarian landscape since the creation of the Cluster, from mainly sudden-onset natural disasters to protracted crises and conflict, and today a pandemic on top of the existing crises. Gianluca then gave the floor to 6 guest speakers, who were invited to share their organizations' perspective on specific humanitarian and technology trends:

Massoumeh Farman Farmaian, UNHCR, mentioned that the number of displaced people worldwide is expected to increase to over 80 million by the end of 2020. This is not a temporary situation and, with COVID-19, the world is facing a crisis within a crisis. Humanitarians need to take the opportunity to be innovative, look forward and come up with solutions.

Karin Kallander, UNICEF, presented UNICEF's health response to COVID-19: fighting misinformation and rumors in the midst of the current infodemic; providing support to countries for direct response (PPE, hand-washing facilities, etc.), including by leveraging existing digital platforms (e.g. linking health registries to mobile platforms); and monitoring the impact of COVID on routine health services.

Cristina Majorano Sarapo, Global Food Security Cluster, explained that the main drivers of food insecurity remain conflict, extreme weather conditions and economic crisis. In 2020, the crisis situation has been worse than last year and at risk of deterioration due to the COVID-19 pandemic and the desert locusts in the Horn of Africa. The use of technology can be very useful in facing some of the challenges, such as timely data collection, with the "eLocust" application being a good example of this.

Meghann Rhynard-Geil, Internews, highlighted the importance of being able to reach the people we serve, identify their needs and understand their rights in terms of personal information. Humanitarians also need to understand the informational landscape (how do people access information?). Programmes should be built using human-centered design and be contextually appropriate, applicable, relevant and actionable.

Anthony Kimani, WVI, focused on emerging digital trends in the humanitarian space, from Disaster Risk Reduction and Early Warning Systems that leverage Artificial Intelligence and Machine Learning, to Digital ID, digital wallets, Food ATM, and 3D printing. The pitfalls to avoid in the humanitarian digital space include the rush to innovate, which often results in duplication, and putting too heavy a focus on technology, instead of taking a human-centered approach. There is also a need to bridge the digital divide and do no digital harm, prioritizing people's safety and privacy.

Emerging humanitarian trends and the role of technology

Simon Gray, GVF, explained the key role that private sector companies can play in supporting the humanitarian sector and how this has already proven so, particularly around the use of technology. He mentioned that one of the main challenges that persists between the private and humanitarian sectors is the ability to speak the same language. There is a need to continue building these partnerships and bridge that gap to better understand both sectors, simplify the interaction and create more opportunities.

The group then split up into groups to brainstorm on how the ETC should evolve in assigned focus areas, what the impact or outcome should be and what partnerships would be needed.

The results of the group discussions were reported as follows:

Connectivity:

- Focus should be on last-mile connectivity distribution. Some of the challenges related to regulations, permissions and licensing should be looked at with the support of partners on the ground and the ITU.

- Engaging with the private sector with "one voice" from the humanitarian community would allow for better negotiations. Approaching the private sector with clear needs would also allow the private sector to better tailor solutions.

Digital:

ETC should engage on three levels:

- Early Warning Systems with the aim of avoiding duplication of efforts, as there are several organizations focusing on the same area;

- Provide guidelines and support to engage with MNOs on the ground. A suggestion was to include this component as part of the ETC Coordination Course.

- Focus on use of AI and 'Digital ethics and principles.

The foundation of any activity on digital:

- Digital literacy: both for communities and the staff in humanitarian organizations (who need to be able to think digitally)

- Access to digital ID for the people we support

- Accountability to affected populations (ensure flexibility and adaptability to different contexts)

Emerging humanitarian trends and the role of technology

Technology for affected populations:

- Digital risk: the ETC shall consider working on educating affected populations on digital risks.

- For any service for affected populations, there is a need for an early focus on sustainability, building preparedness and resilience and working with local actors who will be on the ground for longer-term and could take over digital solutions.

- There is also a need to bridge the digital/gender divide locally as there is uneven access to technology for men and women. The group asked about the ETC's role and how an emergency could be an opportunity to help affected communities cross the digital divide and ensure people are 'better off' after the emergency than when it started.

- Partnerships is key to succeeding, particularly in areas such as mapping (building on initiatives like DCM). The ETC should look at technology partners with different skill sets, as well as local universities and academia.

Support to the safety and security of humanitarian staff:

- Continue to work with TESS and follow TESS recommendations (e.g. bring your own device, using the right hardware, licensing, VHF Analog as last resort or gap filler until we find a way to use our own devices).

- Continue to work closely with the business and other clusters to be able to meet the demand of users and ensure alignment and buy-in from senior management.

Support to health crises:

- As humanitarian technology groups approach 'people' with their services, they should focus on building relationships and trust, just like our colleagues in programme delivery do already.

- Strengthen local partnerships and work with local communities – local capacity and local knowledge is much broader than at the global level.

- Use/streamline existing solutions but also investigate new tools.

Emerging humanitarian trends and the role of technology

The "new normal":

- The world today is characterized by greater instability, including in regions considered stable until now. There are new categories of emergencies and emergencies tend to last longer and overlap.

- Consider COVID-19 as an 'opportunity for change', leading to solutions being fast-tracked (i.e. contactless delivery) and a strong push for greater localization. We shall focus on models for decentralized response and build on the experience already acquired.

- Future solutions and approaches should build on a combined focus on people, processes and technology.

- Keep an open mindset to address new problems in a different way and with new solutions. It is important to use appropriate solutions that are relevant for the context in question. Not all solutions need to be high-tech.

Gianluca wrapped up by thanking all for the discussions and mentioned that all inputs will be used as a starting point for the development of the ETC strategy beyond 2020.
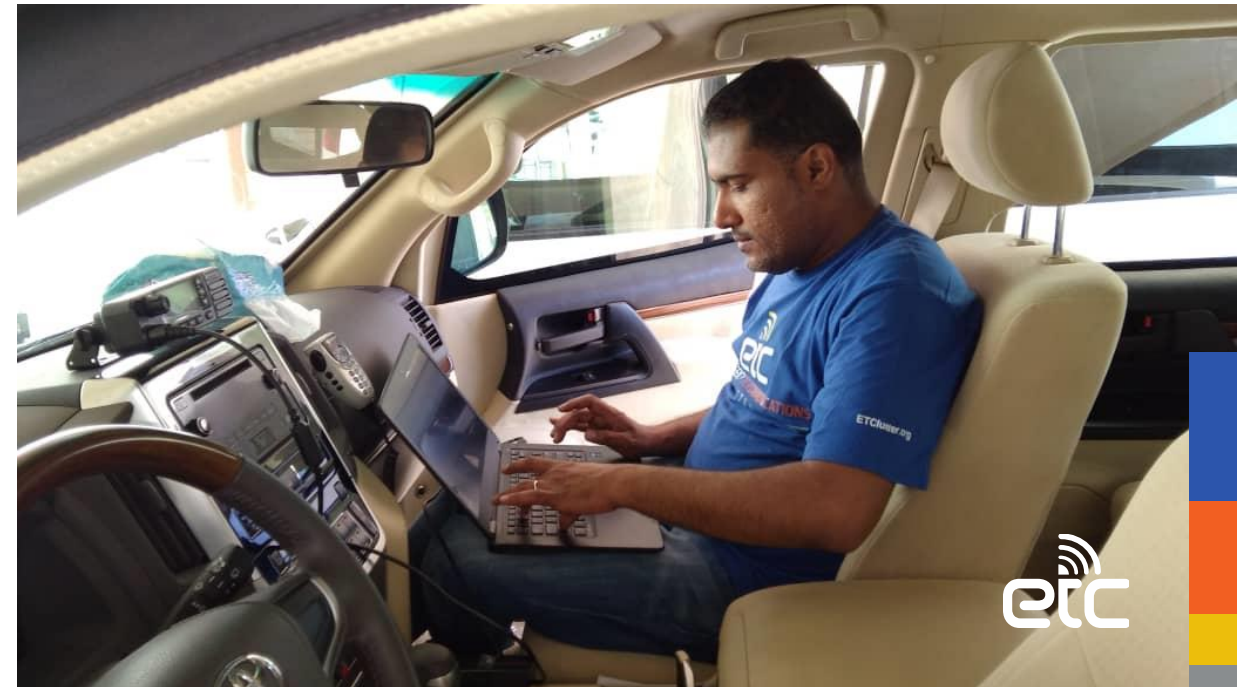
Closure

The Chair of the ETC, **Enrica Porcari**, provided an overview of the topics discussed over the past three days and concluded the first Virtual ETC Plenary Meeting by thanking all participants for joining the event and contributing actively to the presentations and discussions. She confirmed that the dates of the next ETC Plenary meeting will be announced in due course and looks forward to having it hosted by UNHCR in Copenhagen next year.