

Disaster Response

GSMA Humanitarian Connectivity Charter: Annual Report 2016

FEBRUARY 2017

The GSMA represents the interests of mobile operators worldwide, uniting nearly 800 operators with almost 300 companies in the broader mobile ecosystem, including handset and device makers, software companies, equipment providers and internet companies, as well as organisations in adjacent industry sectors. The GSMA also produces industry-leading events such as Mobile World Congress, Mobile World Congress Shanghai, Mobile World Congress Americas and the Mobile 360 Series of conferences.

For more information, please visit the GSMA corporate website at www.gsma.com

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Disaster Response

The GSMA Disaster Response programme aims to strengthen access to communications and information for those affected by crisis in order to reduce loss of life and positively contribute to humanitarian response. We work to drive the creation and adoption of coordinated, impactful solutions and practices that leverage the ubiquity of the mobile technology under the umbrella of the Humanitarian Connectivity Charter.

Learn more at www.gsma.com/disasterresponse or contact us at disasterresponse@gsma.com

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UKaid
from the British people

This initiative is currently funded by the UK Department for International Development (DFID), and supported by the GSMA and its members.

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Forewords

GSMA

In 2012, GSMA established the Disaster Response programme at the request of its members. Recognising the critical role played by Mobile Network Operators (MNOs) and mobile technology in supporting preparedness and response to humanitarian crises, the programme aimed to build an understanding of how the mobile industry could most effectively coordinate and improve resilience in times of disaster. It also sought to identify how the industry could best support individuals, communities and humanitarian organisations on the ground following crises.

Since the launch of the programme, the threat and frequency of humanitarian crises have unfortunately only increased. However, the mobile industry has continued to evolve to meet this challenge, by harnessing connectivity, new technology and innovation. MNOs around the world have worked to not only protect their businesses and staff from these events, but to use their networks and scale to protect and prepare the communities where they operate. Our industry has also deepened and established new partnerships in recognition of the challenge that humanitarian emergencies present, and our shared responsibility to assist.

In 2015 we launched the Humanitarian Connectivity Charter (HCC) to enable the industry and our humanitarian partners to formalise their commitments to enhancing their capacity to mitigate, prepare and respond to disasters through mobile technology. From three founding signatories, the Charter community has grown to over 100 Mobile Network Operator members and six endorsing humanitarian partners, with reach across more than 75 countries.

Today we are proud to launch the Humanitarian Connectivity Charter Annual report, highlighting MNO signatory efforts and progress to support disaster preparedness and response activities around the world during 2016. As part of the mobile industry commitment to the Sustainable Development Goals, this inaugural annual report charts the development and roll-out of the HCC as the mobile industry umbrella initiative on this topic, capturing global efforts to address crises ranging from the ongoing refugee crisis in Europe, through to typhoons in the Philippines. This report will act as a baseline against which to measure progress in the coming years.

We understand that transformation will not happen overnight. Signing the Humanitarian Connectivity Charter is the start of a journey, not the end point. But importantly the process has begun, and collectively we will work to build capacity across our industry.

At the GSMA, we believe that when you restore the mobile network, you begin rebuilding the human network. To our existing signatories and partners, thank you. We look forward to engaging with partners both new and old in the year ahead, to continue to strengthen access to communication and information for those affected by crisis, in order to reduce loss of life and positively contribute to humanitarian response.



Kyla Reid

Head of Disaster Response and Digital Identity, GSMA

UK Department for International Development

Natural and man-made disasters destroy lives and it is often the poorest and most vulnerable who suffer the most. Since 2000, 3.5 billion people have been affected by humanitarian emergencies.

The Department for International Development (DFID) is demonstrating the UK's commitment to supporting and protecting those worst affected by conflict and natural disasters. From leading the fight against Ebola in Sierra Leone or reaching people affected by the 2015 earthquakes in Nepal within hours, to providing the opportunity for jobs and education to those caught up in the Syria crisis - support from DFID is saving lives and tackling problems at source.

Across the range of contexts in which DFID works, we have witnessed first-hand the powerful role that mobile technology can play for both emergency response teams and affected people. Mobile phones are not only a lifeline during the response phase for contacting emergency services, calling a loved one, or providing insights into population movements; they are also essential for improving the preparedness of vulnerable populations, for example through early warning alerts via SMS.

The potential for mobile technology to positively impact people's lives in disaster situations has never been greater, with 4.9 billion unique phone subscribers across the world today. What is needed is a concerted effort across public and private sectors to strengthen access to communication and information for those affected by crises. No one sector can do this alone.

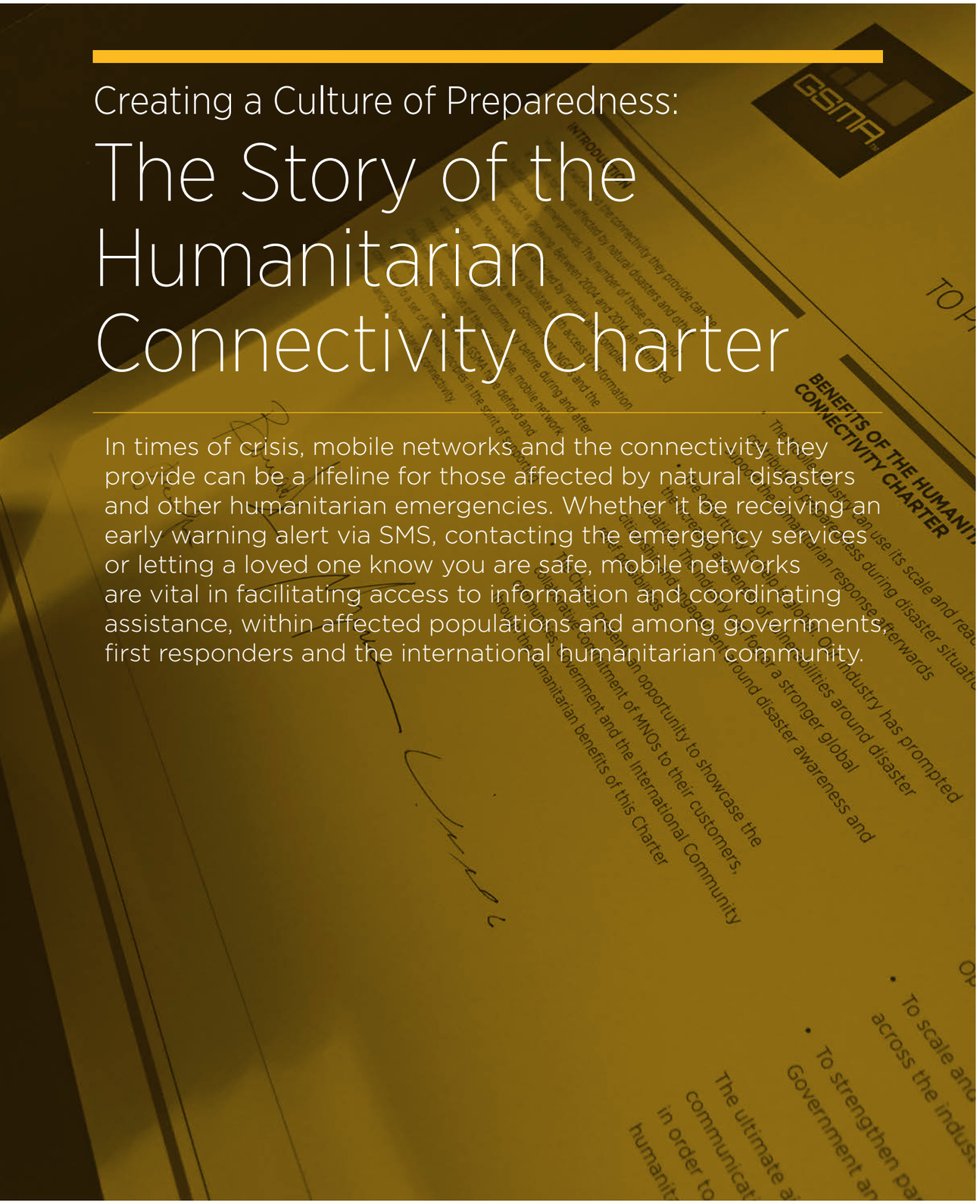
This is why DFID is supporting the GSMA's Disaster Response programme and its Humanitarian Connectivity Charter, as part of our Mobile for Development Strategic Partnership. Under the Charter, mobile network operators, humanitarian agencies and governments are working together to improve preparedness and resilience and to reduce loss of life in disaster situations.

This Annual Report illustrates the real impact that has been achieved by initiatives undertaken by Signatories and Partners of the Humanitarian Connectivity Charter. We applaud their work in rising to the increasingly complex challenges presented by humanitarian disasters and in securing a safer world for all.



James Wharton MP

Parliamentary Under Secretary of State, UK Department for International Development



Creating a Culture of Preparedness:

The Story of the Humanitarian Connectivity Charter

In times of crisis, mobile networks and the connectivity they provide can be a lifeline for those affected by natural disasters and other humanitarian emergencies. Whether it be receiving an early warning alert via SMS, contacting the emergency services or letting a loved one know you are safe, mobile networks are vital in facilitating access to information and coordinating assistance, within affected populations and among governments, first responders and the international humanitarian community.

The impact of disasters and crises around the world today is not diminishing. 3.5 billion people have been affected by humanitarian emergencies since the year 2000. In the USA alone, nearly 143 million people live in areas where there is risk of a potentially damaging earthquake, with 28 million people living in areas classed as 'high risk'. The Philippines, with a population of nearly 100 million people, experiences an average of 20 typhoons a year, as well as the risk of earthquakes. Upwards of 65 million people around the world are currently displaced, a large proportion of whom will remain so for an average of 17 years, with little if any hope of returning home (UNHCR, 2016)[1].

Yet against this challenging backdrop, the potential for mobile technology to positively impact people's lives has never been greater. Access to mobile technology is on the rise, with over 4.9 billion unique subscribers today, a 4.7% increase on last year (GSMAi, 2017)[2]. The scale and ubiquity of mobile networks means that MNOs have a unique and important role to play in connecting people, providing critical access to information and ultimately providing a lifeline in times of disaster and crisis.

For a number of years, there has been a growing awareness and appreciation of the importance of communication during times of disaster and crisis, not only for emergency response agencies, but for affected and responding communities themselves. Research suggests that 90% of lives saved following a disaster are saved by local people (IFRC, 2013)[3]. The ability to communicate and access information is critical to supporting this immediate response. Major disasters, such as the 2010 Haiti earthquake, ushered in a new recognition of the unique role that mobile network operators can play in response activities, spurring a greater interest in leveraging this technology to support communication amongst affected communities and facilitate the rapid dissemination of critical humanitarian information. In 2011, the earthquake and subsequent tsunami in Japan, followed by the Fukushima nuclear power plant meltdown, highlighted again the immense impact that disasters can have, and their destructive impact on mobile networks.

MNOs around the world have been interested in not only how to protect their infrastructure, business and staff from these events, but in how they could use their networks, technology and expertise to protect and prepare the communities in which they operate. Where best practice was identified, sharing and scaling these approaches often remained a challenge. The nature of disasters and complex emergencies continued to highlight that new, stronger forms of partnership were required, and that a community of practice was needed.

1. UNHCR 'Global Trends; Forced Displacement in 2015', Published June, 2016
2. www.gsmaintelligence.com
3. IFRC 'World Disasters Report, 2013', Published October, 2013

Humanitarian Connectivity Charter Principles

In March 2015, following two years of industry consultation, GSMA launched the Humanitarian Connectivity Charter (HCC). The HCC, an umbrella initiative for industry preparedness and response activities, consists of a set of shared principles adopted by our Mobile Network Operator members. These principles are:

1. To enhance coordination within and among Mobile Network Operators before, during and after a disaster
2. To scale and standardise preparedness and response activities across the industry to enable a more predictable response
3. To strengthen partnerships between the Mobile Industry, Government and the Humanitarian Sector

The ultimate aim of the HCC is to strengthen access to communication and information for those affected by crisis, in order to reduce the loss of life and positively contribute to efficient humanitarian response.

Report Overview

The 2016 Annual Report tells the story of the growth of the Humanitarian Connectivity Charter (HCC) from its launch in 2015, to the end of 2016 (Timeline pages 12-14), charting how its footprint has expanded to more than 75 countries, becoming a globally recognised industry-wide initiative.

This report also details signatory and partner achievements in upholding the HCC principles. In 2016, the HCC brought together over 100 experts from the humanitarian sector and mobile industry, with representation from over 24 operators joining face-to-face discussions on industry collaborations. Such activities have encouraged the mobile industry to be more coordinated within markets (Principle 1) where operators generally compete, with signatories across three continents reporting inter-operator coordination discussions focusing on disaster preparedness.

Charter signatories are also demonstrating their efforts in scaling and standardising preparedness and response activities (Principle 2). The efforts of over 90% of signatory operators in establishing stronger business continuity plans has increased resilience, improving operators' ability to provide connectivity to the communities in which they operate.

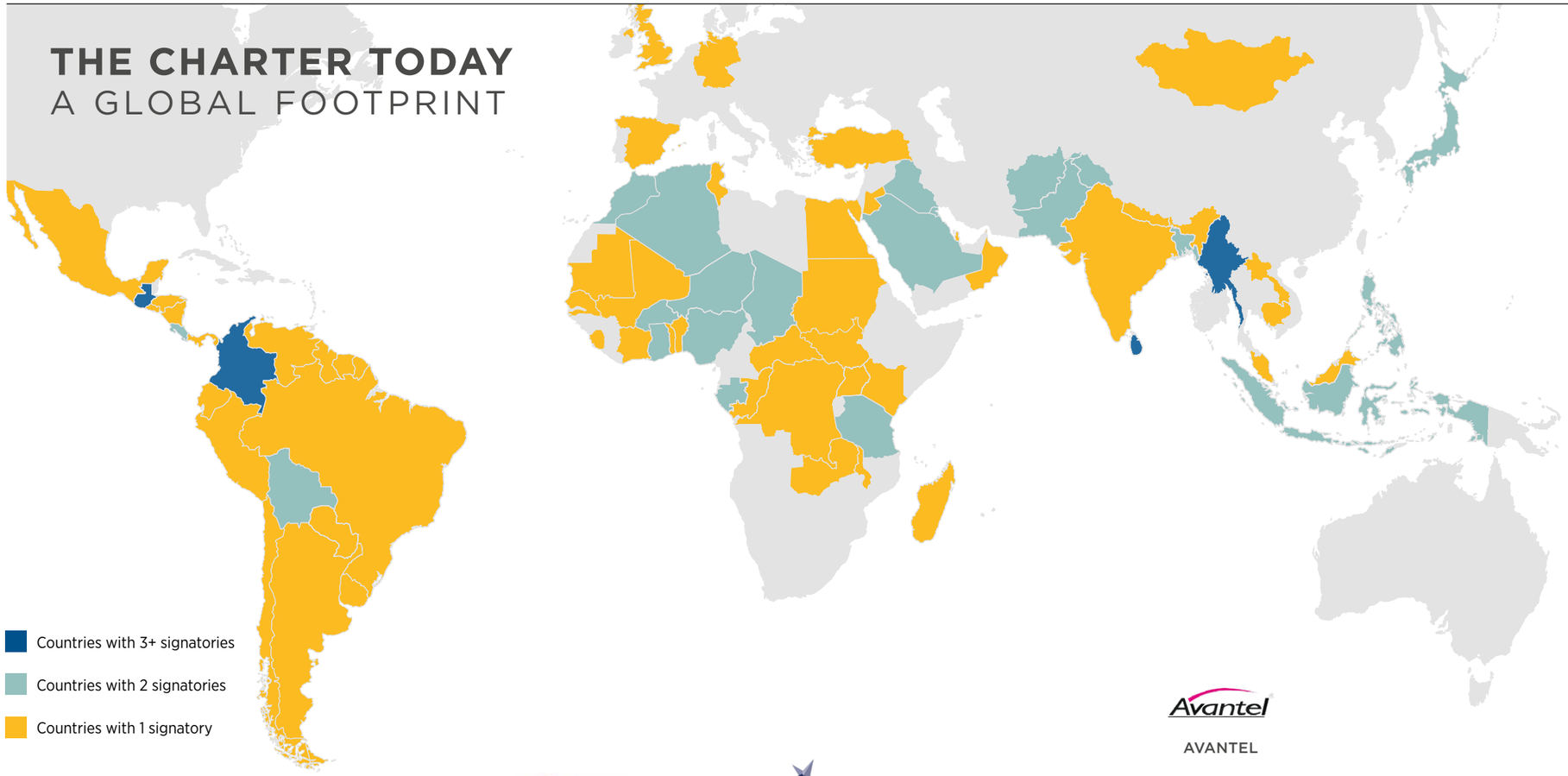
In addition to demonstrating these individual and combined efforts from signatory operators, the report charts the HCC's successes in upholding Principle 3; encouraging collaboration between mobile industry, government and humanitarian stakeholders. Impressive examples of collaborative initiatives across sectors, including the Iraq Internally Displaced Persons Information Centre, are detailed in this report (see pg 25).

Events of 2015 and 2016 led us to focus our attention on three key topics because of their particular relevance to HCC signatories, the wider mobile industry and the humanitarian sector; refugees and connectivity, Mobile Money and humanitarian cash transfers, and innovation. Pages 22 - 26 outline the activities and research undertaken by GSMA in these areas in an attempt to consolidate initiatives and offer best practices for stakeholders for whom these topics are becoming increasingly important. New forms of innovation continue to push the boundaries of what is possible, and some of the most impactful innovations spearheaded by HCC signatories and partners are highlighted.



Dr Nasser (right), former CEO of Ooredoo Group, and Tan Sri Jamaludin Ibrahim (left), President and Group CEO of Axiata Group, sign the HCC in 2015 as founding signatories.

THE CHARTER TODAY
A GLOBAL FOOTPRINT



- Countries with 3+ signatories
- Countries with 2 signatories
- Countries with 1 signatory

108

TOTAL NUMBER OF OPCO SIGNATORIES AT TIME OF PUBLICATION

77

TOTAL NUMBER OF COUNTRIES WITH HCC COVERAGE

AXIATA GROUP

GLOBE

ETISALAT

MILLICOM

AVANTEL

PALTEL

KDDI

ROSHAN

SK TELEKOM

SMART MOBILE

TELEFONICA

AIRTEL GROUP

ZAIN

KOREA TELEKOM

TURKCELL

NTT DOCOMO

OOREDOO

NUEVATEL

CLARO AMERICAS

How do signatories engage?

- Global convenings and industry events: Providing a platform to highlight industry achievements and leadership. Sharing global best practice and developing industry tools and approaches
- Regional focus groups: Targeting specific challenges and risks with a focus on developing potential solutions and partnerships.
- Monthly expert webinar series: Learning from industry experts on the latest technological developments.
- Humanitarian engagement: Enhancing collaboration, building partnership opportunities and increasing cross-sector understanding.
- Policy and advocacy opportunities: Driving capacity building with government and regulators, as well as developing industry positions.
- Focus on innovation and technology: Supporting the industry and disaster response ecosystem in the creation of innovative solutions for enhanced resilience and response.

HUMANITARIAN CONNECTIVITY CHARTER
TIMELINE 2015 - 2017

2016 has seen an impressive number of new signatories join the Humanitarian Connectivity Charter (HCC) group, adding their influence to those who joined in 2015. New relationships have been formed and existing ones developed through a series of regional and global events. Signatories have responded to events in their markets, and a new strategy has been implemented to ensure that impact is being made and measured on a global level. Transformation will not take place overnight. The HCC is not the end point, but rather the start. Momentum continues to grow and the journey has begun.

2014 - 2015

- Consultations with MNOs, the wider mobile industry and the humanitarian sector, lead to the development of the HCC

MARCH 2015

- MWC 2015 launch of HCC with founding signatories; **Axiata**, **Ooredoo**, **Etisalat** and **Smart Communications**. Humanitarian endorsement from **UNOCHA**, **IFRC** and **ETC**

APRIL 2015

- **Globe** signs the HCC
- Focus on Nepal: **GSMA** hosts a capacity building meeting in Nepal, to share strategies on earthquake resilience and effective partnerships. The Nepal earthquake struck days later, with participants highlighting the value in having best practices fresh to mind, and new partnerships having been created or strengthened.

MAY 2015

- **Roshan** signs the HCC
- **Roshan** and **Globe** share experiences of operating in extreme environments at the UN Working Group on Emergency Telecommunication

JULY 2015

- HCC working group hosted by **Dialog Axiata** in Sri Lanka. Demonstration of the DEWN Disaster Emergency Warning Network.

OCTOBER 2015

- **Ericsson** commit to the HCC, bringing a wealth of experience from its Ericsson Response division.

JANUARY 2016

- HCC working group hosted by **Indosat Ooredoo** in Indonesia.

MARCH 2016

- Mobile World Congress 2016 - The HCC's first anniversary. **Zain Group**, **Millicom** and **Telefonica** sign the HCC

MAY 2016

- Focus on the Philippines - **GSMA**, **ETC**, **Ericsson** and MNOs focus on preparation for earthquake risk. Signatories **Smart Communications** and **Globe Telecom** play a leading role
- World Humanitarian Summit; the **GSMA** announces commitment to provide support and insights on the opportunities and challenges associated with the use of mobile money in humanitarian contexts
- **Turkcell** signs the HCC

JUNE 2016

- At MWC Shanghai **KDDI**, **KT Corporation**, **NTT DOCOMO Inc** and **SK Telecom** committ to the HCC

SEPTEMBER 2016

- Asia Pacific regional event hosted by **Ooredoo** in Myanmar
- **Airtel** signs the HCC
- At GSMA Mobile 360 Mexico, **Nuevatel** Bolivia (Viva) signs the HCC
- United Nations General Assembly - Mats Granyrd, Director General of **GSMA**, addresses UN Secretary General and world leaders at the High Level Summit for Refugees and Migrants to emphasise the importance of mobile connectivity for refugees.
- Launch of the GSMA Refugees and Connectivity portal to consolidate industry-wide initiatives targeted at providing mobile connectivity to refugees

OCTOBER 2016

- MENA regional event hosted by **Zain** in Jordan, focuses primarily on responses to ongoing conflict and refugee crises
- **Nokia** becomes a technical partner of the HCC

= NEW SIGNATORY

HUMANITARIAN CONNECTIVITY CHARTER
TIMELINE 2015 - 2017

NOVEMBER 2016

Country focus meeting in Chad. Signatories **Tigo** Chad and **Airtel** Chad, meet to improve capacity to respond to humanitarian issues facing the country.

Jawwal signs HCC

FEBRUARY 2017

MWC 2017: HCC second anniversary and launch of the HCC Annual report

JANUARY 2017

Davos - World Economic Forum, GSMA Director-General Mats Granryd:

> I'm proud of the role that the mobile industry is already taking in addressing humanitarian crises. Mobile technology and connectivity are increasingly at the heart of humanitarian response, providing vital resources and information for displaced populations including mobile-based cash disbursements, digital health services, learning tools in refugee classrooms, and beyond.



Industry leaders and HCC partners discuss progress of the Charter at Mobile World Congress 2016

The Numbers

DISASTER IMPACT NUMBERS

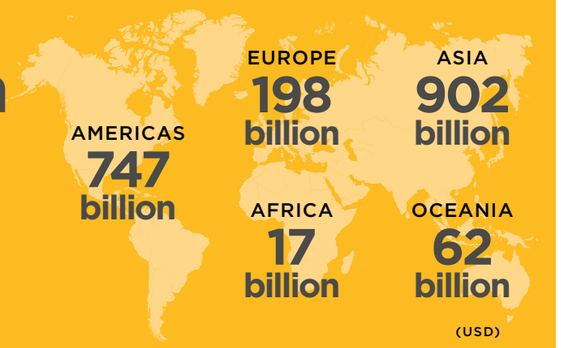
65.3 million
PEOPLE CURRENTLY DISPLACED WORLDWIDE

EFFECTS OF DISASTERS (2000 - 2016)

3.5 billion
PEOPLE AFFECTED BY DISASTERS

1.9 trillion
ECONOMIC LOSSES (USD) DUE TO DISASTERS

BY REGION



REFUGEES

21.3 million
REFUGEES WORLDWIDE
HIGHEST LEVELS OF DISPLACEMENT ON RECORD

GLOBALLY, REFUGEES ARE
50%
LESS LIKELY THAN THE GENERAL POPULATION TO HAVE AN INTERNET-ENABLED PHONE

93%
OF REFUGEES LIVE IN AREAS COVERED BY AT LEAST 2G NETWORKS

71%
OF REFUGEE HOUSEHOLDS HAVE A MOBILE PHONE

CONNECTIVITY IS OFTEN PRIZED OVER ITEMS SUCH AS EDUCATION, CLOTHING AND HEALTH CARE

Sources: GSMA, UNHCR and INFORM Index 2016



DEFINING A DISASTER OR CRISIS

A disaster can be defined as a humanitarian crisis in a country, region or locality where a major adverse event (either natural, man-made or complex) has a negative impact on human life, the environment, society, essential services and infrastructure. These events may require a national or international response, indicating that the impacts of the event are severe enough to go beyond the mandate or capacity of any single entity, organisation or business (in this case the Mobile Network Operator) to manage alone.

Some disasters may be "sudden-onset", such as an earthquake, whilst others are "protracted" and may occur as a result of several intersecting factors, such as displacement caused by conflict and exacerbated by drought. Large scale and complex emergencies may be typically characterised by:

- **Widespread damage to societies and economies;**
- **The need for large-scale, multi-faceted humanitarian assistance;**
- **The hindrance or prevention of humanitarian assistance by natural or man-made constraints;**
- **Widespread injury and loss of life;**
- **Displacements of populations.**

Different types and scales of emergency can result in different levels of impact and require varying degrees of response. All can be mitigated to some degree through the building of resilience and investment in preparedness.

The Charter in Action

Observers of the intersection of technology and humanitarian action will be aware that there are constantly new partnerships, innovations and initiatives being launched by and between MNOs, humanitarian organisations and third parties. The snapshot below is our first effort to capture the impact around key areas of the HCC principles. This data provides an insight into activities undertaken in 2016 by HCC signatories, many of whom are at different stages of preparedness and response. Our intention is to continue to strengthen and develop this monitoring and evaluation process with signatories throughout the year ahead.



PRINCIPLE 1

TO ENHANCE COORDINATION WITHIN AND AMONG MOBILE NETWORK OPERATORS BEFORE, DURING AND AFTER A DISASTER

Operators in **Philippines, Japan, South Korea, Turkey, South Sudan, and India** have reported participating in formal **disaster focused inter-operator coordination discussions** in their markets in 2016. All of these operator collaborations **focused on enhancing disaster preparedness**.

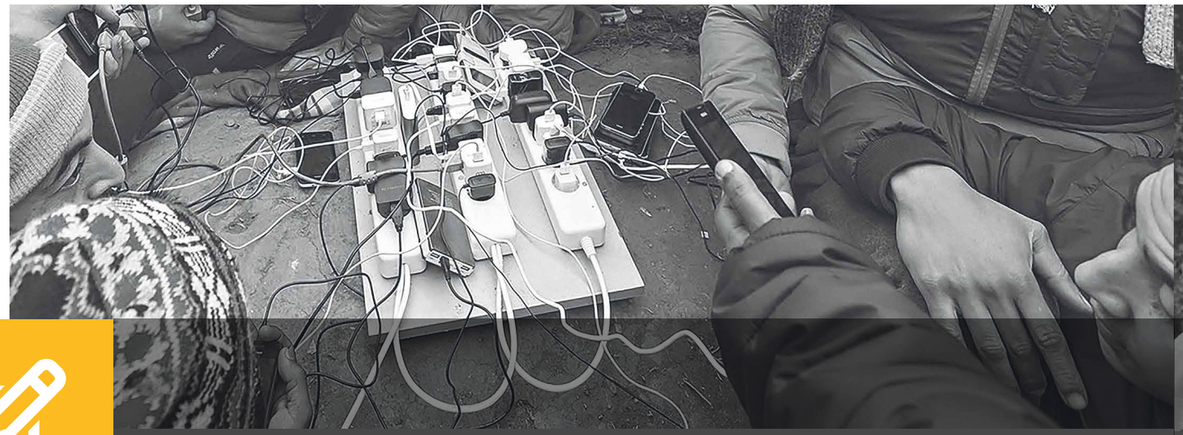
Over **100 experts from the mobile industry and humanitarian sector** participated in face to face GSMA disaster preparedness meetings in 2016, with **representation from 24 MNOs**.

IN ACTION

Operators in Myanmar, Jordan and Chad participated in roundtable discussions in 2016 as part of the HCC, to discuss ways in which they could improve preparedness and response activities within their unique operating environments.

Zain Sudan joined the other operators in South Sudan for quarterly meetings with the National Disaster Authority

In the Philippines, Smart and Globe participated in regional collaborations on emergency communications





PRINCIPLE 2

TO SCALE AND STANDARDISE PREPAREDNESS AND RESPONSE ACTIVITIES ACROSS THE INDUSTRY TO ENABLE A MORE PREDICTABLE RESPONSE

Signatories including Telefonica, Axiata and Airtel Groups along with Smart Communications, Jawwal and Korea Telecom all support a National emergency short-code in some of their markets.

More than **41%** of the Signatory Operators **support** a **National Early Warning System in some capacity**.

91% of signatory have a Business Continuity Plan **(BCM plan)**, and **65%** of these Operators have reported **benchmarking** this plan against a global standard or **reviewed their BCM** against **GSMA's BCM guidelines**.

55% of Signatory Operators report having a platform to enable customers to donate funds via SMS and 5 operators **launched SMS donation programmes in 2016**.

IN ACTION

Following severe flooding in 2016 Etisalat Sri Lanka opened a toll-free number for those affected, and provided free credit to over **400,000** people who made use of the service.

Globe Telekom in the Philippines restored 53% of their network within 24 hours after Typhoon Nina, mainly as a result of its strong preparation and business continuity planning processes.

In 2016 alone, Turkcell estimated it had reached over 60 million people in 31 different incidents including disasters and crises, domestic and abroad, by providing free communication and support packages.

Smart Communications estimated that at least **1 million disaster alerts** were sent to people living in **disaster affected areas**.

In Palestine, Jawwal reports that 3 million customers have been provided free access to their National Emergency short-code, enabling them to reach the Palestine Civil Defence (PCD) centre in case of an emergency.

Zain Iraq and Zain Sudan have reported supporting 11.5 million and 10 million customers respectively through their disaster focused initiatives in 2016.

PRINCIPLE 3

TO STRENGTHEN PARTNERSHIPS BETWEEN THE MOBILE INDUSTRY, GOVERNMENT AND THE HUMANITARIAN SECTOR

77% of responding Operators reported collaborations with **Government** and disaster response agencies during 2016.

40% of the responding Operators report having ongoing **partnerships with the Humanitarian organisation**s, the majority of which focused on preparedness.

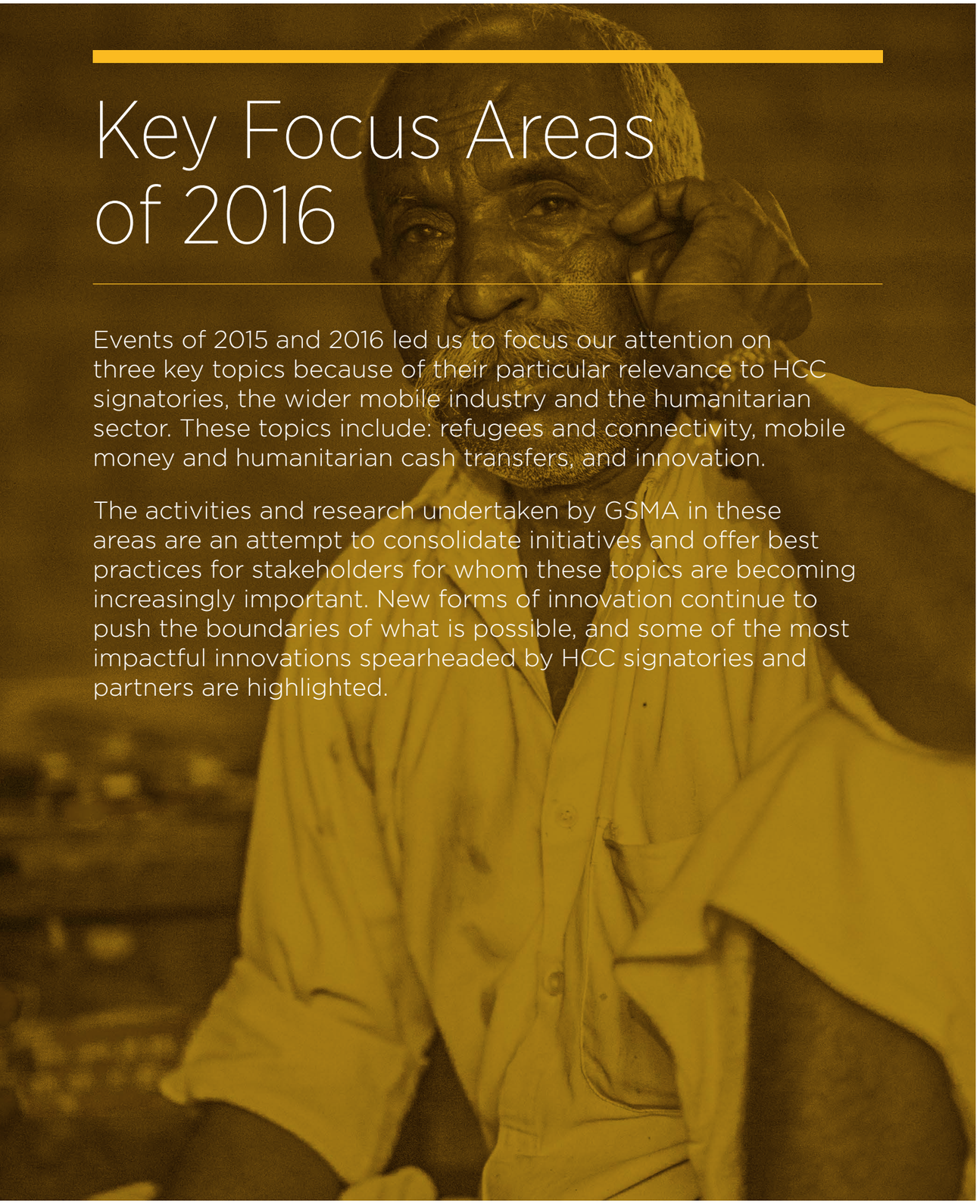
IN ACTION

Smart Communications disaster app 'Batingaw', used by the national disaster management agency in the Philippines, was replicated in the Horn of Africa through the efforts of UNDP-Africa and the embassy of the Philippines in Kenya.

Airtel Kenya Partnership with Kenya Red Cross has supported the creation of a public emergency information system.

Korea Telekom provides LTE based information and a LTE drone base station to support United Nations activities.

Footnote: This information is extracted from the 'HCC Signatory Communication on Progress' submission, of which all signatory MNOs are given the opportunity to contribute to. GSMA is dependent on the accurate and timely reporting of data by its members, and figures provided by individual MNOs may be calculated differently across the signatory group. The percentages provided in this snapshot relate to the current number of responding operators. Larger signatory Groups who have common policies and practices across their groups may have completed the Communication on Progress as one unit, as opposed to individual operating companies.



Key Focus Areas of 2016

Events of 2015 and 2016 led us to focus our attention on three key topics because of their particular relevance to HCC signatories, the wider mobile industry and the humanitarian sector. These topics include: refugees and connectivity, mobile money and humanitarian cash transfers, and innovation.

The activities and research undertaken by GSMA in these areas are an attempt to consolidate initiatives and offer best practices for stakeholders for whom these topics are becoming increasingly important. New forms of innovation continue to push the boundaries of what is possible, and some of the most impactful innovations spearheaded by HCC signatories and partners are highlighted.

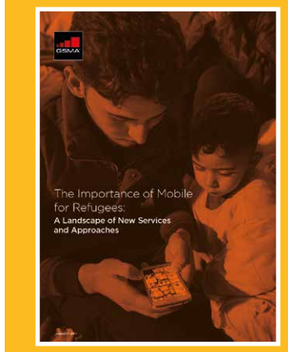
Displacement and connectivity

During 2016 the global refugee crisis continued to grow, with current figures suggesting that more than 65 million people are forcibly displaced worldwide, 21.3 million of whom have refugee status.[4] Alongside the growth in numbers of displaced people, there has been an increasing recognition of the critical role of communication and information to these populations, and of the potential to provide essential support and services through mobile technology. UNHCR released a research report highlighting the importance placed upon connectivity by refugee and displaced populations (UNHCR, 2016).

From information on transit routes and translation apps to 'Welcome to the country' information portals and legal services, the mobile industry has worked, often in partnership with other organisations, to deliver accessible, relevant and much needed support. There is no doubt that this will remain a challenge through 2017 and beyond, but signatories of the Humanitarian Connectivity Charter continue to take practical steps to use industry knowledge and skill, coupled with the ubiquitous nature of mobile networks to support those in need of assistance.

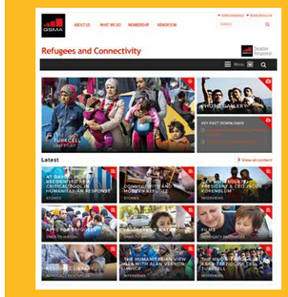
During the United Nations General Assembly (UNGA) in September 2016 at the High Level Summit for Refugees and Migrants, GSMA Director General, Mats Granryd addressed UN Secretary General Ban Ki Moon and world leaders to emphasise the importance of mobile connectivity for refugees, highlighting the work of signatories and partners to address these challenges.

Refugees & Connectivity report and portal



The Importance Of Mobile For Refugees: A Landscape Of New Services And Approaches

GSMA undertook a landscaping exercise to provide a snapshot of the current interest and activities of the mobile industry and aid agencies in catering to the connectivity needs of refugees. The resulting report outlines ongoing activities, pilots, projects, and initiatives across different regions, divided into five key themes: connectivity, digital tools and platforms, family reunification, education, and livelihoods and mobile money.



Refugees and Connectivity: Web Portal

The Refugees and Connectivity portal is a website dedicated to shining a light on where and how mobile technology is making a difference in the lives of refugees. The portal features case studies, fact sheets, interviews and other resources to inform, educate and encourage the replication of services and programmes that are having an impact, and which reflect the breadth of ways that GSMA members and partners are reaching refugees with new solutions.

4. UNHCR 'Global Trends; Forced Displacement in 2015', Published June, 2016

Mobile money and humanitarian cash transfers

There is a growing consensus across the humanitarian and donor sectors that cash assistance is more beneficial for vulnerable people than traditional forms of aid (e.g. the provision of food and blankets), with research demonstrating wide-ranging socio-economic benefits.[5] At the same time, there is a continuing trend in which the delivery of aid is becoming more digitised, with much focus placed on the potential of leveraging mobile financial services to facilitate digital humanitarian cash transfers to beneficiaries.

Humanitarian agencies and MNOs are beginning to partner in disaster-prone countries to deliver cash assistance via mobile money, delivering the potential to provide transparent and more effective impact than traditional aid provision - with improving security and saving money among the many benefits. Although the opportunities are significant, deploying sustainable mobile money solutions which can deliver the full benefits of financial inclusion for beneficiaries is not straightforward, not least because the needs of disaster affected and displaced populations are usually entirely unique depending on the context in which they find themselves. Furthermore, the infrastructure which a sustainable mobile money deployment demands varies across and within markets, requiring a robust and highly liquid agent network and sufficient mobile network coverage - elements which can often be difficult to create or maintain in humanitarian settings.

Continued efforts are required to ensure that humanitarian organisations and mobile network operators working on this topic understand the challenges and barriers, in addition to the associated opportunities and benefits. As part of its commitment to work on this topic under the HCC at the World Humanitarian Summit in 2016, GSMA supported the development of the WEF 'Principles on Public-Private Cooperation in Humanitarian Payments' released at Davos.

Landscape report: mobile money, humanitarian cash transfers and displaced populations

GSMA has undertaken research to further current understanding of the impacts, benefits and challenges of mobile money for displaced populations, focusing primarily on examples from Haiti, Pakistan and Rwanda. The research identifies key considerations for humanitarian organisations and the mobile industry on the implementation of cash transfer programmes via mobile money.

Innovation

It is essential for MNOs to continue to innovate in order to improve their capacity to deal with crises, to not only protect their businesses but also to ensure their customers and surrounding communities are served sufficiently and supported where possible.

Despite the mobile industry making strides in developing innovative services and solutions to improve resilience, it is clear that no single sector can tackle such challenges alone. The Humanitarian Connectivity Charter provides an ideal community in which to share and discuss examples of innovative solutions for use in emergency contexts.

Examples of MNO-led innovation can be found globally. From 'super base stations' to innovative connectivity provision for displaced populations, new services have supported communities and increased network resilience around the world.

The GSMA Disaster Response programme continues to witness the impact that innovative mobile-led solutions can have on human lives in times in crisis. In 2017 the programme will be exploring how it can play a role in catalysing and scaling the development of mobile-enabled models that contribute to the ability of the industry to prepare and respond to disasters.

Innovation snapshot for 2016

Early Warning Flood Alerts in Nepal

Ncell customers living in high-risk areas of floods and landslides in Nepal are now receiving early warning alerts that can help them to safety and prevent loss of property in times of disaster, thanks to an innovative partnership between Ncell and the Department of Hydrology and Meteorology (DHM), implemented in July 2016.

When water levels cross the danger level or when severe weather conditions are forecast, DHM provides SMS content to Ncell which immediately sends early warning SMSs from short-code number 1155 to customers, based on the situation in real-time. If water levels cross the danger point, people can move to government-designated safe locations with their belongings. SMS alerts are sent to inform customers when water levels return to normal.

The implementation of the early warning system is part of Ncell's corporate social responsibility programme and is increasing the preparedness of Nepali communities living in risk-prone areas.

'Hello Hope' Mobile App for Integration of Syrian Refugees

Turkcell has mobilised the power of communication, launching the 'Hello Hope' mobile app for the benefit of 1.2 million Syrian refugee customers in Turkey. The app, which supports the integration and adaptation of Syrian refugees to life in Turkey, was launched in September 2016 and is free of charge and accessible to all - regardless of their GSM operator.

This app is the first of its kind from the telecom industry supporting refugees, and provides Turkish language learning, instant speech translation between Turkish and Arabic, information on essential services in Turkey and more. In addition, 'Hello Hope' also provides information on disaster situations including earthquakes, fires, and floods, giving advice on what to do in emergencies. In the first two months the app reached an impressive 150,000 active users; Turkish language cards were viewed 90 million times and speech translation was used 1.7 million times.

Turkcell's app is demonstrating the real impact that a well-designed, innovative app, which meets the distinct needs of the user, can have for refugees.

5. 'Cash, vouchers or in-kind? Guidance on evaluating how transfers are made in emergency programming' HPG Commissioned report, 2015

Iraq Internally Displaced Persons Information Centre (Iraq IIC)

Launched in July 2015, the Iraq ICC was born out of the increasing recognition of information as a vital form of aid. The centralised toll-free humanitarian helpline provides a crucial link between Iraq's displaced communities and information on humanitarian services available; whilst gathering information on the services and support still needed. Any mobile phone user in Iraq can access the hotline for free by dialling 80069999 via any of Iraq's three telecommunication companies: Korek, Asiacell, and Zain.

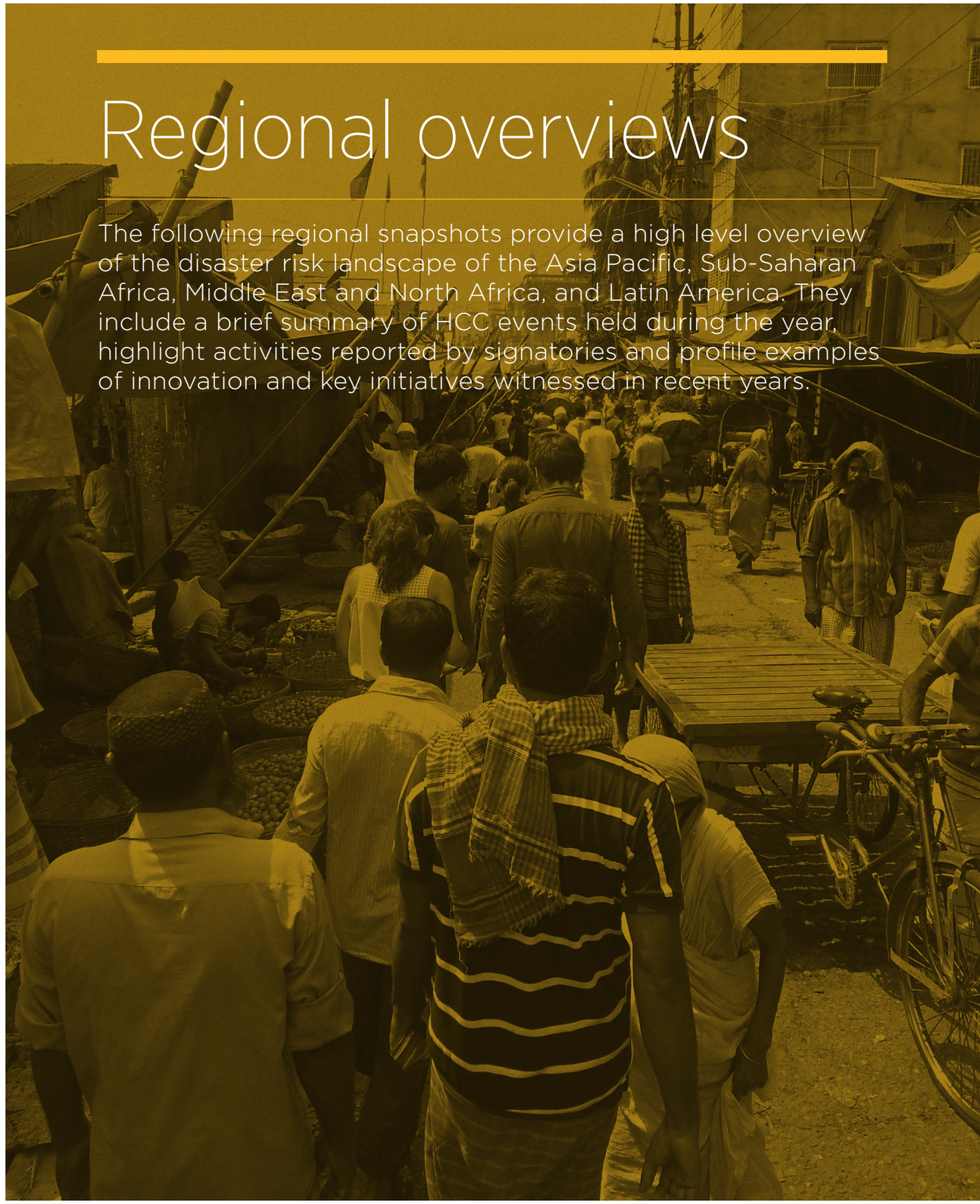
By December 2016, this UN inter-agency initiative (implemented by United Nations Office for Project Services [UNOPS]) had processed a total of over 54,000 calls, giving people essential information about food, child protection, healthcare and more. It is the first initiative to flag serious protection issues, enabling interventions that have prevented human rights abuses, and providing a life-line to people in desperate situations.

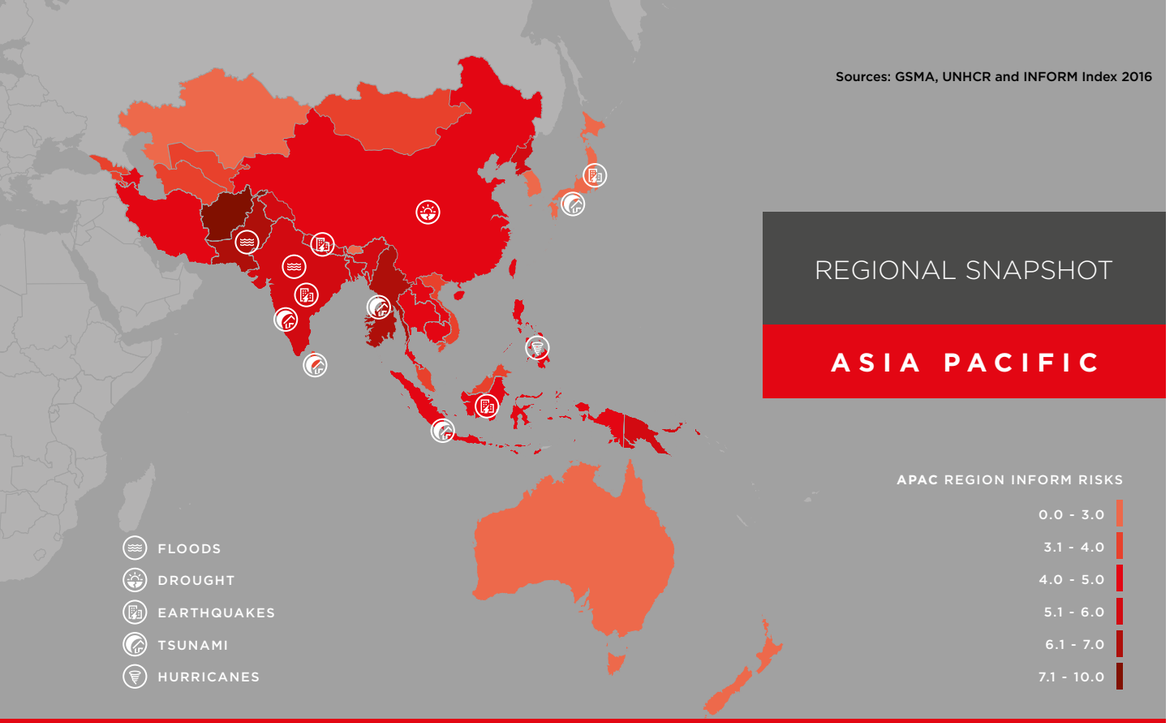
The Nokia Saving Lives Project

Nokia Saving Lives is an innovation and non-profit project, demonstrating that technological progress can save lives when different technologies fully leverage their combined potential, and when key stakeholders work together to resolve structural limitations. The project highlights the potential of LTE-based ultra-compact communications equipment combined with LTE-connected drones and applications - like real-time high-definition video and infrared camera feed for increased situational awareness. This combination enables rescue teams to effectively coordinate and prioritise their work in natural disaster zones, even when commercial communication networks are down. Nokia is looking to cooperate further on this project with local operators, the emergency aid community and vendors.

Regional overviews

The following regional snapshots provide a high level overview of the disaster risk landscape of the Asia Pacific, Sub-Saharan Africa, Middle East and North Africa, and Latin America. They include a brief summary of HCC events held during the year, highlight activities reported by signatories and profile examples of innovation and key initiatives witnessed in recent years.





Asia Pacific (APAC)

The Asia Pacific (APAC) is the world's most frequently disaster-stricken region. The vast diversity in geography, development and population density across the region makes disaster preparedness a challenge. Managing the effects of climate change and disaster risk is critical to reducing poverty and building shared prosperity in the region. Signatories of the HCC in the region have demonstrated the central role mobile technology can play in stepping up to these challenges.

APAC Working Group meeting

The APAC regional working group meeting took place in Yangon, Myanmar in September 2016. Signatories from across the region including Ooredoo, Ncell, Smart, Globe, KDDI, NTT, SK Telecom, KT, MPT, Axiata joined the meeting, as well as Telenor. Partners UNOCHA, Ericsson, ETC and the IFRC (represented by Myanmar National Red Cross Society) joined the meeting.

Key Highlights:

- MNOs and humanitarian partners identified key challenges around basic literacy in the region. Organisations need to consider how they make services and solutions accessible. Many APAC countries have multiple local languages and a challenge exists in including these languages in ICT solutions on disaster response.
- Evolution in technology and a supportive regulatory environment has enabled operators in Japan and South Korea to run initiatives which are very advanced compared to other parts of the region.
- Industry collaboration and sharing of experiences and best practices were highlighted as a key component for success in the region.
- A need exists for creating awareness within regulatory bodies in different APAC countries as to the role of MNOs in disaster preparedness and response. The GSMA Industry Position on Emergency Regulation[6] can be used by MNOs as a guide for discussions with Regulators.

6. http://www.gsma.com/mobilefordevelopment/programme/disaster-response/industry-position-emergency-telecoms-regulation

Signatory progress



Japan

Following the 2016 Kumamoto earthquakes, NTT DOCOMO provided free Wi-Fi service, constructed an emergency IP network and deployed 'base-stations-on-wheels' to restore network coverage.

Japan Meteorological Agency provided earthquake early warnings 19 times. Over 1 million customers (estimated) received these messages.



Philippines

In compliance with a law mandating MNOs to issue free alerts, Smart Communications invested in a Cell Broadcast platform for early warning. This runs on 2G, 3G and 4G.

ICT Bayanihan or Regional Communication Summits intended to develop regional emergency telecoms teams were held throughout the year.



India

Airtel Group organised SMS based initiative to support the affected population.



Nepal

Ncell Axiata of Nepal collaborated with the Department of Hydrology and Meteorology (DHM) to send an early warning or SMS alert to people residing in places where the risk of flood and landslide is high.



Maldives

In 2016, Ooredoo supported the community in the local island of Thinadhoo, who faced a power outage for four days. This included providing a generator for the local hospital, creating a mobile phone charging platform at the company site on the island to keep them connected. Logistical support was provided to the Maldives Red Crescent in providing necessities (food, water, mosquito repellent, flash lights etc.) to Thinadhoo.

Innovation in the region

Given the frequency and intensity of disasters in Asia Pacific, mobile operators have launched services to both prepare for and respond to disasters.

- **Japan:** With regulatory approval, base stations have been placed on ships to provide connectivity if networks on land are compromised. Additionally, infrastructure has been built with enhanced technology, exceeding the recommended standards, to ensure network equipment is as resilient as possible – for example, by reinforcing antennas and building extra-strong foundations for base stations.

- **Japan:** KDDI and NTT provide fast network restoration as well as free charging and calling facilities to subscribers. A collaborative approach ensures that the two operators cover all affected areas without duplication of effort. NTT also provides customer support through a Disaster Message Board.

- **Sri Lanka:** Dialog Axiata, in partnership with the Disaster Management Centre, and other partners, launched the Disaster and Emergency Warning Network (DEWN) in January 2009. The system is still used today, with new iterations implemented to increase functionality. Alert messages can be received on mobile phones and DEWN alarm devices. This was the first such early-warning system for disasters in South Asia.

- **South Korea:** Drones have been used to assess the impact of disasters by providing aerial views of roadways and damaged buildings, and providing other relevant real-time information. Drones have also been used to provide mini base transceiver stations in affected locations.

- **Pakistan:** Etisalat partnered with the National Database & Registration Authority Government of Punjab in 2015 to support a simple yet innovative way of verifying a person's identity using GSM network and systems connectivity. Biometric verification and cash disbursement supported over 55,000 flood affected people.



Middle East and North Africa (MENA)

The Middle East and North Africa (MENA) region has suffered considerable political upheaval over the last decade. Ongoing disputes in countries such as Iraq, Yemen and Syria have led to mass migration as civilians flee conflict zones. Of the ten countries with the highest number of displaced citizens in 2015, four were in the MENA region. Natural disasters pose less of a hazard in MENA than in regions such as Asia Pacific, yet where natural disasters do occur, such as cyclones or droughts, they compound the effects of ongoing crises. Many operators in the region focus their activities on alleviating some of the challenges faced by displaced and conflict-impacted people.

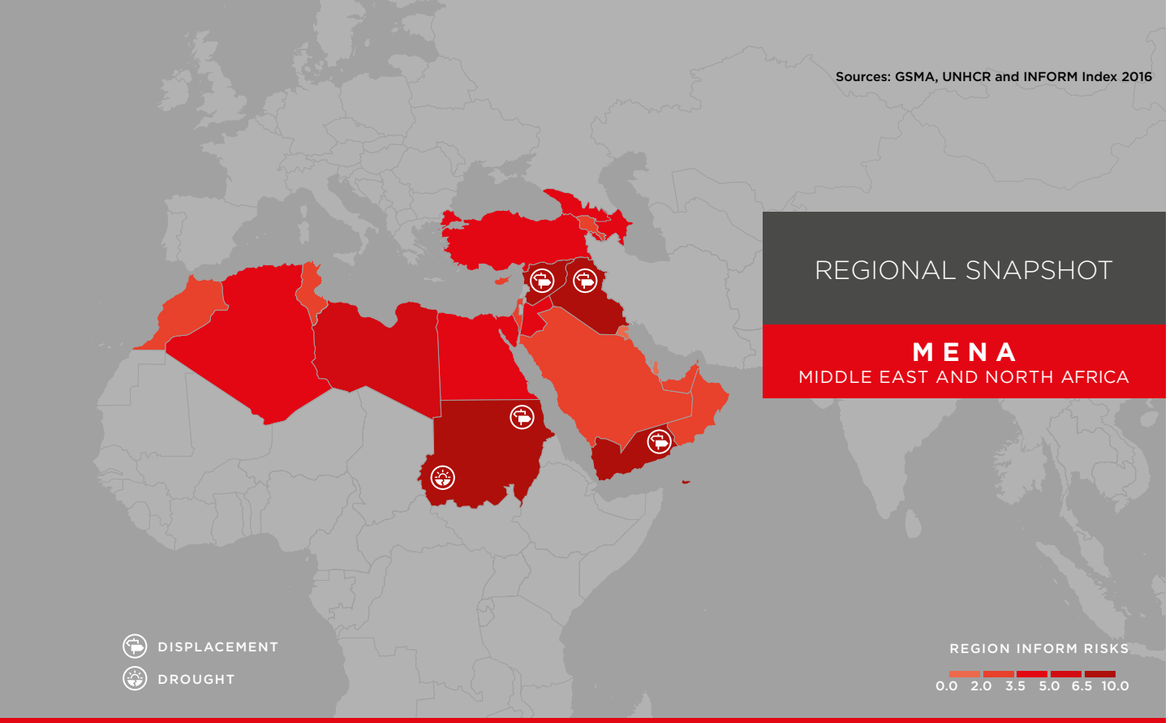
In 2015, the region accounted for more than 30 per cent of global displacement, including 2.7 million refugees, 13.9 million internally displaced people (IDPs) and an estimated 374,200 stateless individuals.

MENA Working Group

Participating organisations of the MENA working group meeting included Zain Group, Zain Jordan, Ooredoo Kuwait, Umniah Jordan, Orange Jordan, Jawwal, Turkcell, Ericsson, UNOCHA, WFP, ETC, UNHCR, Unicef, DFID and the Ministry of Information and Communication Technologies of Jordan.

Key highlights:

- There are unique and complex challenges in the region, created by continuing conflict situations and the ongoing threat of terrorism - require further collation of best practice and guidelines to support industry efforts.
- Mobile is recognised as a transformational tool which can support solutions for a number of challenges in the region, both in crisis response and related concerns such as education, health and utilities.
- The scale of the refugee crisis in the region has resulted in an impressive number and range of creative services and innovations from the MNO and humanitarian community – many could be more impactful with a higher level of collaboration between stakeholders.
- The 'mentality' of planning for risk needs to be shifted to address revenue based tensions regarding investment in resilience. Business Continuity Management (BCM) needs to be more than simply revenue protection.
- Efforts will continue to review and share examples of experienced and mature market achievements in the region in order to create and contribute to industry best practice reports/guidelines for operators who are starting to strengthen their disaster preparedness and response efforts.



Signatory progress



Turkey

In 2016 alone, Turkcell estimated it had reached over 60 million people in 31 different incidents including disasters and crises, domestic and international, by providing free communication and support packages.



Palestine

In Palestine, Jawwal reports that 3 million people have been supported through use of their emergency information short-code.



Sudan

Zain Sudan has reported supporting 10 million customers through their disaster focused initiatives.



South Sudan

Zain Sudan joined the other operators in South Sudan for quarterly meetings with the National Disaster Authority.



Iraq

Asiacell (Ooredoo Group) worked with Ericsson to implement 'Connect to Learn' programmes in refugee camps in Iraq. Zain Iraq has reported supporting 11.5 million customers through their disaster focused initiatives.



Pan-Arab Region

In June 2016, Zain partnered with MIT EF Pan Arab to launch the 'Innovate for Refugees' Initiative – a competition intended to promote innovative entrepreneurial businesses, providing tech-driven solutions that cater to the needs of refugees.

Innovation in the region

Mobile operators have launched services across the region that enable them and their customers to improve their preparedness and response to disasters.

- **Turkey:** Turkcell has implemented a series of policies aimed at supporting its subscribers affected by earthquakes. Programmes such as 'Reach Me' and the 'Earthquake Information Service' disseminate information in case of disaster and help subscribers contact and locate their loved ones.

- **Turkey:** Turkcell has launched an app called Merhaba Umut ('Hello Hope') to help facilitate the integration of Syrian refugees living in Turkey. The app has a Turkish language learning component, as well as instant audio translation between Turkish and Arabic.

- **Jordan:** Zain Group has instigated a programme to provide free Wi-Fi to refugees across Jordan. The programme is run in partnership with the United Nations High Commissioner for Refugees (UNHCR) and Facebook. By placing Wi-Fi hotspots in refugee centres, the programme helps expand the influence, value and utility of services offered at these locations.

- **Iraq:** In Iraq Zain Iraq, AsiaCell (Ooredoo) and Korek have collaborated to support the launch of a national hotline for internally displaced Iraqi citizens. Staffed by the UN, the call centre helps identify and respond to the most urgent needs of the displaced, whilst providing a single contact point for the many disparate humanitarian relief programmes working across the country.



Cross-border programmes

- The REFUNITE platform is designed to help refugees trace their loved ones. It is the largest mobile based reunification platform of its kind with more than 600,000 profiles in its database and is active across the MENA region (as well as in Sub Saharan-Africa and the Asia Pacific region). The database, accessible to subscribers of operators that have joined the partnership, allows displaced individuals to securely and privately identify potential matches with missing family and friends also signed up to the programme. It is supported by Ericsson and has partnerships with the United Nations and a number of operators.

- Mobile operators across the region have launched tariffs aimed specifically at refugees. Examples include the Al Tawasol tariff launched by Touch in Lebanon in response to the influx of Syrian refugees. The pre-paid tariff includes SMS and call time to Syria, in addition to local allowances.

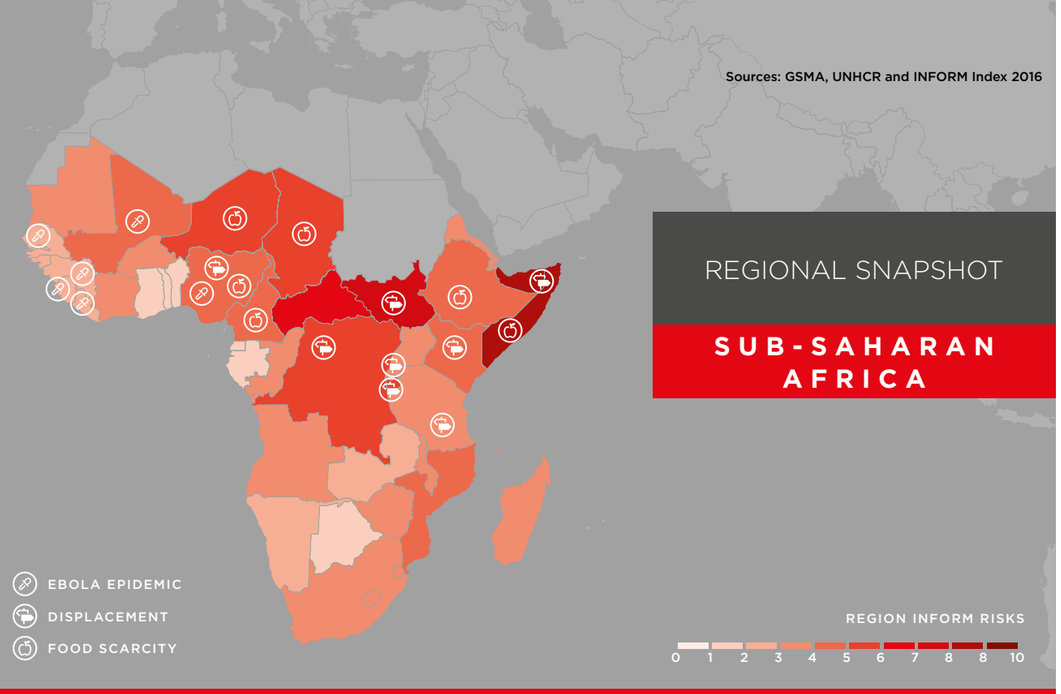
Sub-Saharan Africa (SSA)

Sub-Saharan Africa (SSA) is affected by a number of natural disasters each year and recurring health epidemics. The West Africa Ebola epidemic in 2014 resulted in almost 30,000 cases and more than 11,300 deaths (WHO, 2016), with Liberia, Sierra Leone and Guinea the worst-affected countries. Droughts accounted for 80% of the total number of people affected by natural disasters in Sub-Saharan Africa between 2000 and 2016, while floods accounted for almost half of the total damage.

Country focus meeting in Chad

In November 2016, a country focus meeting was convened in Chad, between Charter signatories Tigo Chad and Airtel Chad, as well as humanitarian partners and government agencies. The focus session was a first step in initiating a multi-stakeholder disaster preparedness plan for the country, where it was unanimously agreed that a platform, whereby the mobile operators could present their challenges and engage in discussion with the government and other stakeholders, would be established.





Innovation in the region

Mobile operators have launched services across the region that enable them and their customers to improve their preparedness and response to disasters.



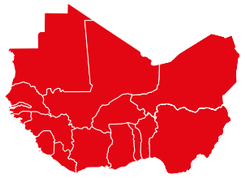
Kenya

In 2015, Bharti Airtel partnered with Kenya Red Cross Society to launch a public emergency information service in Kenya, offering disaster management information on disease outbreaks and other man-made and natural disasters such as floods, fires and terrorist attacks.



Chad

Tigo Cash has worked with the humanitarian organisation Acción Contre le Faim to disburse emergency funds to drought-stricken communities in the Kanem region.



West Africa

During the Ebola crisis in 2014 and 2015 many MNOs in West Africa, including now signatories Airtel and Etisalat, along with the African Union, established short-codes to allow subscribers to access information for free. Mobile money services were utilised to pay healthcare professionals, and MNOs implemented a number of initiatives including transport support and on-site health check-ups, to ensure that staff and their families remained healthy and able to work, to ensure that the networks continued to function.

REFUNITE

Many MNOs in the region have partnered with the REFUNITE project to contribute to reconnecting separated families across borders and conflict zones by leveraging their networks scale and access to millions of subscribers. REFUNITE, the world's largest mobile based global family tracing platform, is harnessing the unique potential of mobile in facilitating family reconnection by partnering with MNOs in 18 countries.





POPULATION

2015 **638m**

2020 **670m**

RURAL **38%**

POPULATION COVERAGE

3G 4G

2015 89% 53%

2020 93% 82%

SMARTPHONE ADOPTION

2015 **42%**

2020 **70%**

2015 - 2020 **10.6%** CAGR

CONNECTIONS - EXCLUDING M2M

2015 **683m** **107%** PENETRATION RATE

2020 **670m** **118%**

2G 3G 4G

2015 45% 47% 8%

2020 21% 41% 38%

10 20 30 40 50 60 70 80 90 100

Operators continue to invest in 4G network build-outs, and subscribers migrate to higher speed networks

UNIQUE SUBSCRIBERS

2015 **442m** **69%** PENETRATION RATE

2020 **521m** **78%**

2015 - 2020 **3.3%** CAGR

Around 80 million new subscribers by 2020

MOBILE INTERNET SUBSCRIBERS * 3G OR 4G

2015 - MOBILE BROADBAND* **50%**

307m **48%** PENETRATION RATE

2020 **430m** **64%**

2020 - MOBILE BROADBAND **69%**

2015 - 2020 **7.0%** CAGR

Majority of internet subscribers are on high-speed internet (3G or 4G)

Latin America (LATAM)

Sitting in an area of significant seismological activity means that earthquakes are a common occurrence in Latin America, as well as the risk of tsunamis in coastal areas. The warm tropical waters of the Caribbean Sea generate powerful cyclones that often develop into hurricanes. In October 2016 category 5 Hurricane Mathew hit Haiti, killing 480. As with many disasters in the region, the lack of infrastructure in Haiti exacerbated the impact of the storm with many people still homeless following the devastating 2010 earthquake. The mountainous topography of much of the region makes it vulnerable to landslides and flash floods, particularly during periods of intense rainfall. These characteristics create a number of challenges for MNOs in the region.

We Care Campaign

A number of HCC signatories are also members of the GSMA 'We Care' campaign. This is an initiative of leading mobile operators in Latin America to ensure all subscribers can enjoy the life-changing benefits of mobile technology in a safe and secure environment.

To achieve this, operators have decided to join forces and take on a series of commitments in every country in the region where mobile phones and networks can provide solutions to social problems. The HCC principles are included in the We Care campaign.



Representatives from Claro, Movistar, Tigo and the GSMA sign the HCC in Guatemala through the We Care campaign.

Innovation in the region

Mobile operators have launched services across the region that enable them and their customers to improve their preparedness and response to disasters.



Chile

Following several major earthquakes in the country, Telefónica Chile has continued to develop and improve its business continuity contingency plan, which includes periodic simulations and drills. In an emergency, local, mobile and long-distance national calls can be enabled through the 188 short-code free of charge, and free call booths can be established for those without a phone to make free calls. Billing of customer accounts can be postponed and in some cases suspended for services such as SMS, paging and calls, depending on the context and duration of the emergency.



Colombia

MNOs deployed their resources to help publicise a National Evacuation Drill, and the Search and Rescue Drill organised by Colombia's National Unit for Risk and Disaster Management (UNGRD), in 2016. Through these efforts 9 million people were informed, through a series of broadcasts across the country. By engaging in such drills, MNOs play their part in increasing the preparedness and resilience of the wider population. Colombia is a market in which all MNOs are committed to the HCC through the GSMA WeCare Initiative.



Paraguay

In Paraguay, Tigo Money has an agreement with the World Food Programme (WFP) to disburse emergency funds. It also works with the government to distribute financial support through the Tekoporã - a social programme that was set up to reduce poverty and promote upward mobility.



Guatemala

Tigo Guatemala and Oxfam formed a partnership that simplified and enabled the distribution of humanitarian cash transfers to families affected by child malnutrition and drought. Families were issued with a SIM card and personal pin number, which they then used in order to receive authorisation codes sent by Oxfam via SMS. With these codes, families could collect their emergency funds from the nearest Tigo point of sale. Guatemala is a market in which all MNOs are committed to the HCC through the GSMA WeCare Initiative.



Ecuador

Following a 7.8 magnitude earthquake which struck Ecuador on 16 April 2016, the MNOs operating in the country responded quickly. Movistar Ecuador mobilised 190 technicians and sent out 40 vehicles equipped with satellite phones, enabling more than 82,000 people to call relatives and friends. Claro Ecuador provided the government and rescue organisations with 100 radio communication sets. CNT delivered more than 3,800 telecommunications resources to aid organisations and provided connectivity, communication and entertainment at 20 official shelters. The three companies gave free voice minutes and texting to their customers in Manabí and Esmeraldas, as well as discounts and flexible payment terms.



Mexico

Mexico's mobile operators, AT&T, Telcel and Telefónica Movistar, recently announced a commitment to the We Care Initiative, supporting HCC principles to:

- Collaborate with the competent authorities to take preventive actions to mitigate the impact of natural disasters for mobile phone users, and reinforce coordination during the stages of prevention, response and recovery in affected areas to save lives, reduce risks and provide an effective response to the population.
- Standardise messages from operators during emergencies to position the hashtag #NosImportaMéxico as a reference to provide guidelines for the population.



Our Strategic Partners

One of the key principles of the Humanitarian Connectivity Charter is to strengthen partnerships between the mobile industry and the humanitarian sector. Successful partnerships and effective coordination is challenging, particularly in times of crisis. During disaster situations, all too often the frustrating reality is that key players are in place but do not talk to each other, and when they do, sometimes find it difficult to 'speak the same language'. Aid agencies have significant resources, expertise and knowledge, but often lack national outreach channels. MNOs, on the other hand, have unparalleled reach through their networks – but often lack a deep understanding of crisis response.

The Humanitarian Connectivity Charter brings together the mobile industry with the humanitarian sector to ensure better alignment of their respective incentives and objectives. The aim is to effectively map expertise and core competencies of different stakeholders against required needs for enhanced preparedness and response efforts, whist reducing duplication. To achieve this - through increased dialogue and the strengthening of partnerships - the Charter has been endorsed by members of the international humanitarian community, including United Nations Office for the Coordination of Humanitarian Affairs (UN OCHA), Emergency Telecommunications Cluster (ETC), International Federation of Red Cross and Red Crescent Societies (IFRC), International Committee of the Red Cross (ICRC) and technology providers including Ericsson and Nokia. These partners commit to working with MNO signatories and the wider industry to collaboratively achieve and support the Charter aims and principles.

United Nations Office for the Coordination of Humanitarian Affairs (OCHA)

The United Nations Office for the Coordination of Humanitarian Affairs (OCHA) is part of the United Nations Secretariat responsible for bringing together humanitarian actors to ensure a coherent response to emergencies. Since 2015, OCHA has worked closely with GSMA in implementing the Humanitarian Connectivity Charter to convene humanitarian partners and mobile network operators, to ensure a common, predictable operational framework, so that we respond to people's needs more quickly and efficiently in the wake of a disaster. In 2016, OCHA and GSMA collaborated to expand the footprint of the Charter and leverage GSMA expertise in mobile money and disaster preparedness and response to help address the opportunities and challenges of mobile money disbursements in disaster-prone countries. OCHA was pleased to participate in regional workshops in Myanmar and Jordan to further the work of the Charter, including on mobile payments, with operators in both Asia Pacific and the Middle East.

Emergency Telecommunications Cluster (ETC), led by the United Nations World Food Programme (WFP)

In humanitarian emergencies, communications means information, connection, life. As a founding supporter of the GSMA Humanitarian Connectivity Charter, the Emergency Telecommunications Cluster (ETC) has been encouraged by the growing number of signatories in 2016. More signatories means increased recognition of the critical role of communications in humanitarian work, and more operators which are ready, willing and able to support life-saving operations.

GSMA Humanitarian Connectivity Charter workshops and simulations in 2016 have built a global network of operators, fostered understanding and action towards a shared vision, and strengthened technical and human capacity. These vital preparedness activities - before emergency strikes - allows faster collaboration and mobilisation for disaster response, saving time and lives.

Our mandate is to provide shared communications services in emergencies and on behalf of the humanitarian community, we have been able to directly leverage connections established through the charter to support operations in Nepal, Haiti and Iraq.

We look forward to continuing to build, strengthen and operationalise the charter in the coming years. Communications is the link to survival.

International Federation of Red Cross and Red Crescent Societies (IFRC)

The International Federation of Red Cross and Red Crescent Societies (IFRC) was one of the first humanitarian organizations to sign the Humanitarian Connectivity Charter. Mobile phones and connectivity are changing the way National Red Cross and Red Crescent Societies around the world prepare for, respond to and recover from humanitarian disasters and crisis.

From our work with migrant communities in Greece, Brazilian communities affected by the Zika epidemic through to our support to local responders in Nepal after the 2015 earthquake; mobile phones, SMS, messaging apps and social media are being extensively used by the Red Cross Red Crescent to increase the capacity for local volunteers, affected communities and ordinary citizens to access, produce, share and disseminate useful and actionable information.

The IFRC and GSMA are leveraging the power of public–private partnerships in places like Myanmar, Honduras and Colombia, where local governments, mobile operators and the Red Cross are combining the power and proximity of local front line workers and volunteers, with the reach of technology solutions to strengthen our ability to connect, communicate with and listen to communities in need.

International Committee of the Red Cross (ICRC)

Increasingly, affected people in conflict situations want to be connected. This opens up tremendous opportunities for them to better help themselves and for us, humanitarian and mobile network operators, to help them more effectively.

In Rwanda for example, a partnership between the ICRC, the Rwanda Red Cross and MTN Rwanda, a local telecommunications company, is enabling Burundian refugees to get in touch with their loved ones by using their own mobile phones. Since the beginning of the Burundian refugee influx in April 2015, thousands of phones were charged in our 'Mobile Solar Kiosks', while we have offered more than 60,000 free phone calls and distributed hundreds of local SIM cards with airtime.

As supporters of the HCC, the ICRC looks forward to further collaboration with mobile network operators around the world to meet the information and communication needs of affected people. We are also eager to engage in a strategic conversation with GSMA and members of the HCC on global standards for collecting, sharing and storing data in times of crisis, to ensure we do not do any digital harm to people at their most vulnerable, especially in terms of data protection and privacy.

Ericsson

Ericsson has been involved with the Humanitarian Connectivity Charter since it was launched in 2015. For many years Ericsson has understood the value of having the mobile industry play a key role in emergency response, as operators often run vital communications infrastructure in disasters.

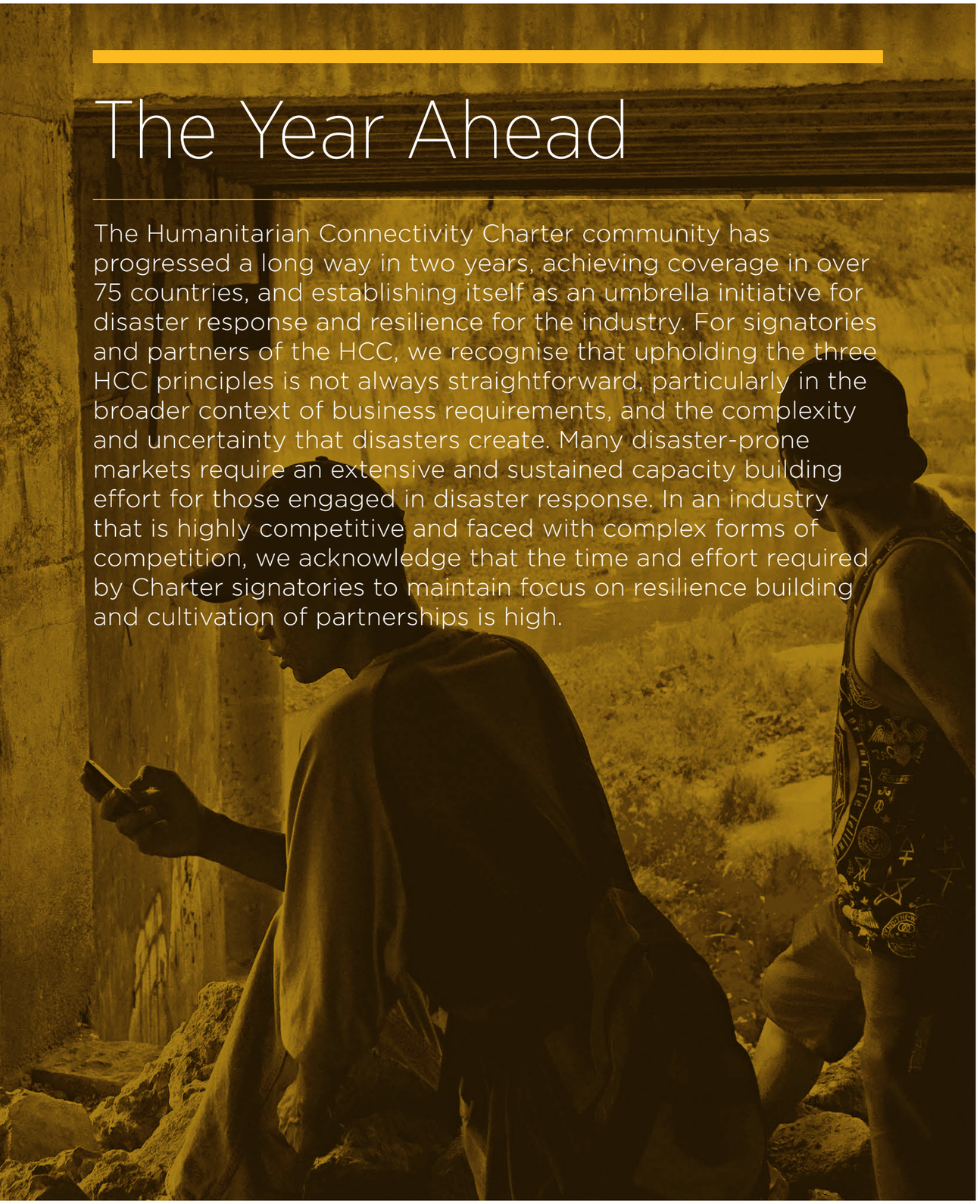
Over the past year Ericsson has been involved in regional GSMA meetings in Myanmar and Jordan to support the promotion of the Charter, and advocate for a better understanding of the role that mobile operators can play in humanitarian response. As a member of the Emergency Telecommunications Cluster (ETC), Ericsson Response has seen first-hand the benefit of having mobile operators understand the objectives of humanitarian response and how humanitarians can in turn support the rapid restoration of communications services. In 2016, Ericsson Response and the ETC provided communication capabilities in Haiti, Iraq, and South Sudan with the support of local operators in many locations.

Nokia

As Nokia Saving lives, we invent, design, and deploy connecting technologies that make a real difference to people's lives: we focus on the human possibilities of technology. When we develop solutions that reinvent how to connect the world, we always focus on the human possibilities of these digital technologies.

We believe the GSMA's Humanitarian Connectivity Charter is a mobile industry initiative that complements our approach and we are happy to support the Charter activities and look forward to working with local operators, the emergency aid community and vendors bringing solutions - such as our LTE-based ultra-compact communications equipment combined with LTE-connected drones and applications like real-time high-definition video and infrared camera feed, into action in most disaster prone areas of the world.

We innovate not for technology's sake – but to solve connectivity problems to make people's lives better. Solving global connectivity and digital life challenges is how we want to exercise our social responsibility.



The Year Ahead

The Humanitarian Connectivity Charter community has progressed a long way in two years, achieving coverage in over 75 countries, and establishing itself as an umbrella initiative for disaster response and resilience for the industry. For signatories and partners of the HCC, we recognise that upholding the three HCC principles is not always straightforward, particularly in the broader context of business requirements, and the complexity and uncertainty that disasters create. Many disaster-prone markets require an extensive and sustained capacity building effort for those engaged in disaster response. In an industry that is highly competitive and faced with complex forms of competition, we acknowledge that the time and effort required by Charter signatories to maintain focus on resilience building and cultivation of partnerships is high.

In 2017, we will continue to increase our commitment to identifying new ways of building preparedness. We will seek to stimulate innovation, continue to bridge understanding and build capacity around the usage and potential of mobile technology - including transformational services such as mobile money, cell broadcasting and the Internet of Things, whilst working closely with relevant associations and regulatory bodies.

We look forward to continuing our work with existing signatories, and welcome wider engagement from the mobile industry and our partners in the humanitarian sector in the coming year. Together we will continue to drive the creation and adoption of coordinated, impactful solutions and practices that leverage the ubiquity of mobile technology under the umbrella of the Humanitarian Connectivity Charter.

In the year ahead, the GSMA Disaster Response programme will continue to support signatory MNOs and HCC partners through:

REGIONAL KNOWLEDGE SHARING SESSIONS:

- Discussing challenges and disaster response priorities
- Sharing of key HCC learnings and insights
- Exploring engagement and partnership opportunities, building networks

IN-DEPTH COUNTRY FOCUS SESSIONS:

- Supporting the implementation of preparedness and resilience initiatives
- Problem solving key challenges with industry best practice
- Developing new solutions

THEMATIC/TECHNICAL MEETINGS:

- Providing an on-site learning opportunity for signatories
- Providing exposure to operator specific efforts in more advanced/mature markets
- Supporting the mobile industry and Disaster Response ecosystem towards innovative solutions for barriers in resilience

GLOBAL ADVOCACY:

- Spotlighting progress and impact of HCC signatories
- Developing of industry standards and regulatory positions
- Announcing new solutions and major developments



For further information please visit the GSMA website at www.gsma.com

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