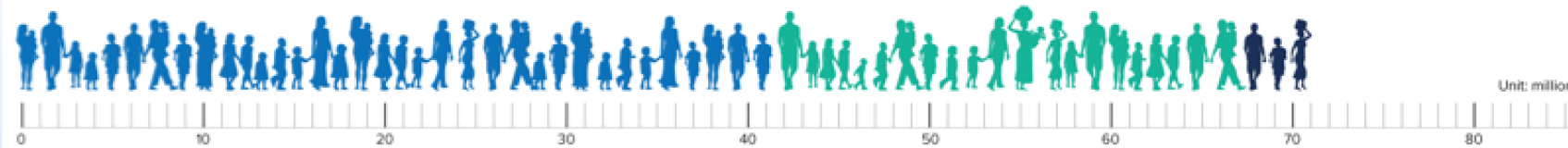


The Role of Satellite Communications in Our Work

**Saving Lives - Protecting Rights - Building a Better Future
for refugees, forcibly displaced communities, stateless people**

Jovica Todorovic, ICT Officer, UNHCR Egypt Office

70.8 million forcibly displaced people worldwide



Internally Displaced People
41.3 million

Refugees
25.9 million

20.4 million under UNHCR's mandate
5.5 million Palestinian refugees under UNRWA's mandate

Asylum-seekers
3.5 million

Where the world's displaced people are being hosted



About 80 per cent of refugees live in countries neighbouring their countries of origin

57% of UNHCR refugees came from three countries

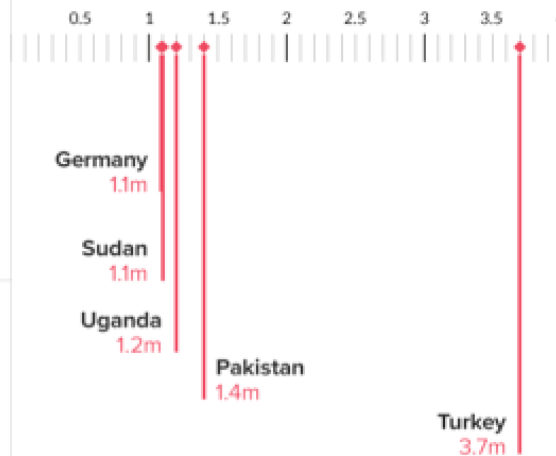


341,800
new asylum seekers

The greatest number of new asylum applications in 2018 was from Venezuelans



Top refugee-hosting countries



UNHCR has data on

3.9 million stateless people
but there are thought to be millions more



92,400
refugees resettled

37,000 people

a day forced to flee their homes because of conflict and persecution

16,803 personnel

UNHCR employs 16,803 people worldwide
(as of 31 May 2019)

134 countries

We work in 134 countries (as of 31 May 2019)

We are funded almost entirely by voluntary contributions, with 86 per cent from governments and the European Union and 10 per cent from private donors

UNHCR at a glance

SEPTEMBER 2019

EMERGENCIES GLOBAL OVERVIEW

For more information about the Refugee Emergency Telecommunications Sector (RETS), contact: Global.RETS@unhcr.org



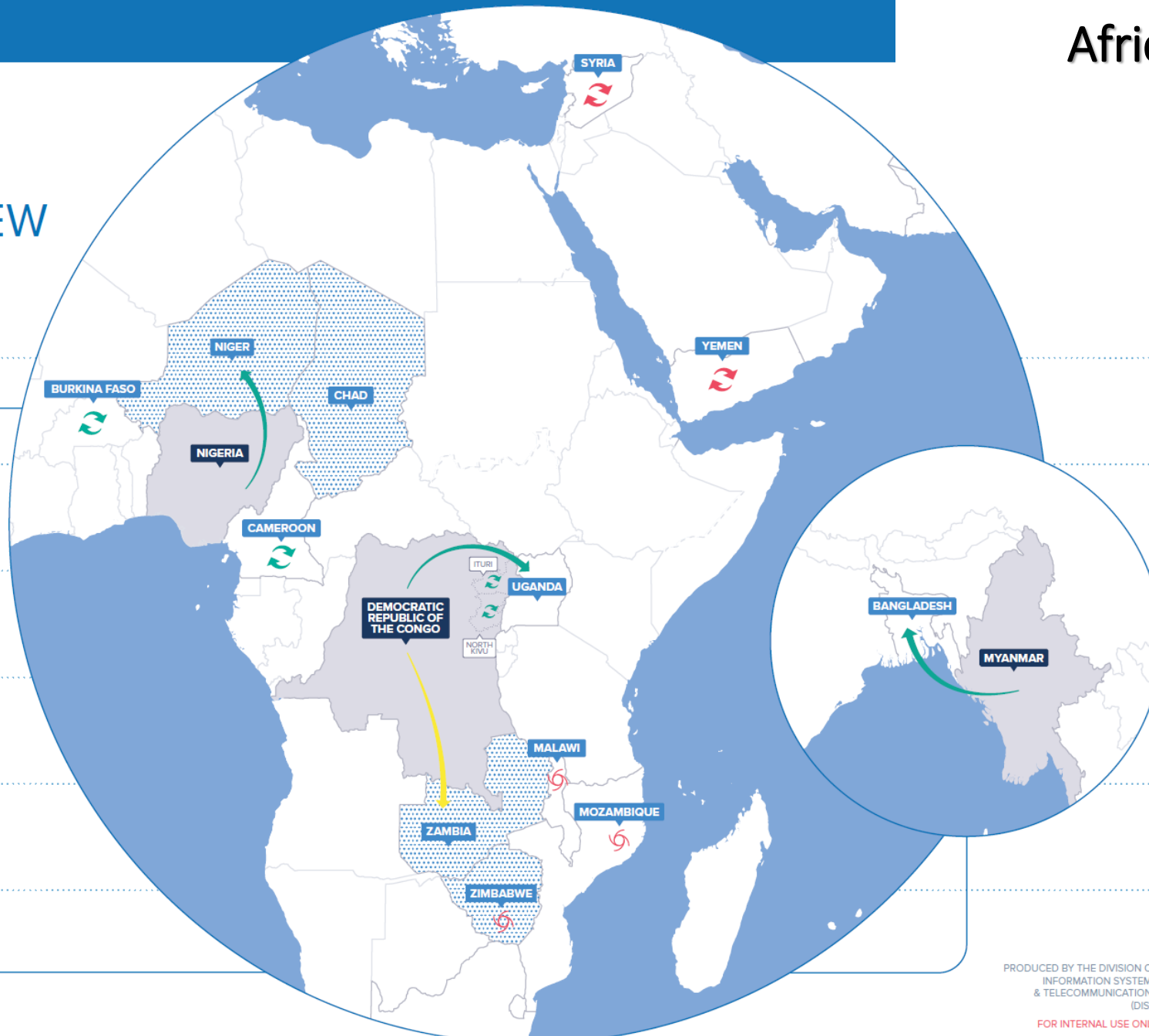
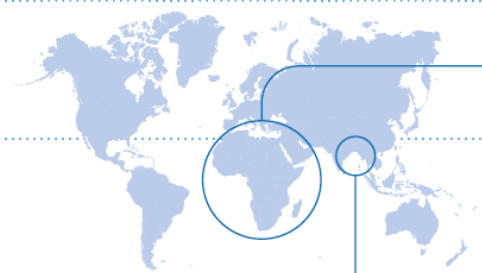
- ◆ 'Situations' in different countries drive migration across continents
- ◆ Masses of people displaced
- ◆ UNHCR responds

LEGEND	
EMERGENCY LEVEL	L3 L2 L1
SITUATION	
SYSTEM-WIDE EMERGENCIES	SYRIA, YEMEN, MOZAMBIQUE
POPULATION MOVEMENT	
INTERNAL DISPLACEMENT	
RETS ACTIVE	
CYCLONE	

SEPTEMBER 2019

EMERGENCIES GLOBAL OVERVIEW

For more information about the Refugee Emergency
Telecommunications Sector (RETS), contact:
Global.RETS@unhcr.org



- ◆ Combinations of natural disasters and 'situations' trigger UNHCR efforts
- ◆ Addressing both internal displacement issues as well as international migration

LEGEND

EMERGENCY LEVEL	L3 L2 L1
SITUATION	
SYSTEM-WIDE EMERGENCIES	SYRIA, YEMEN, MOZAMBIQUE
POPULATION MOVEMENT	
INTERNAL DISPLACEMENT	
RETS ACTIVE	
CYCLONE	

Satellite Connectivity: Use Cases

e-Learning / Training



Connectivity for Partners



Emergency Response



Business as Usual



Registration

Camp Management



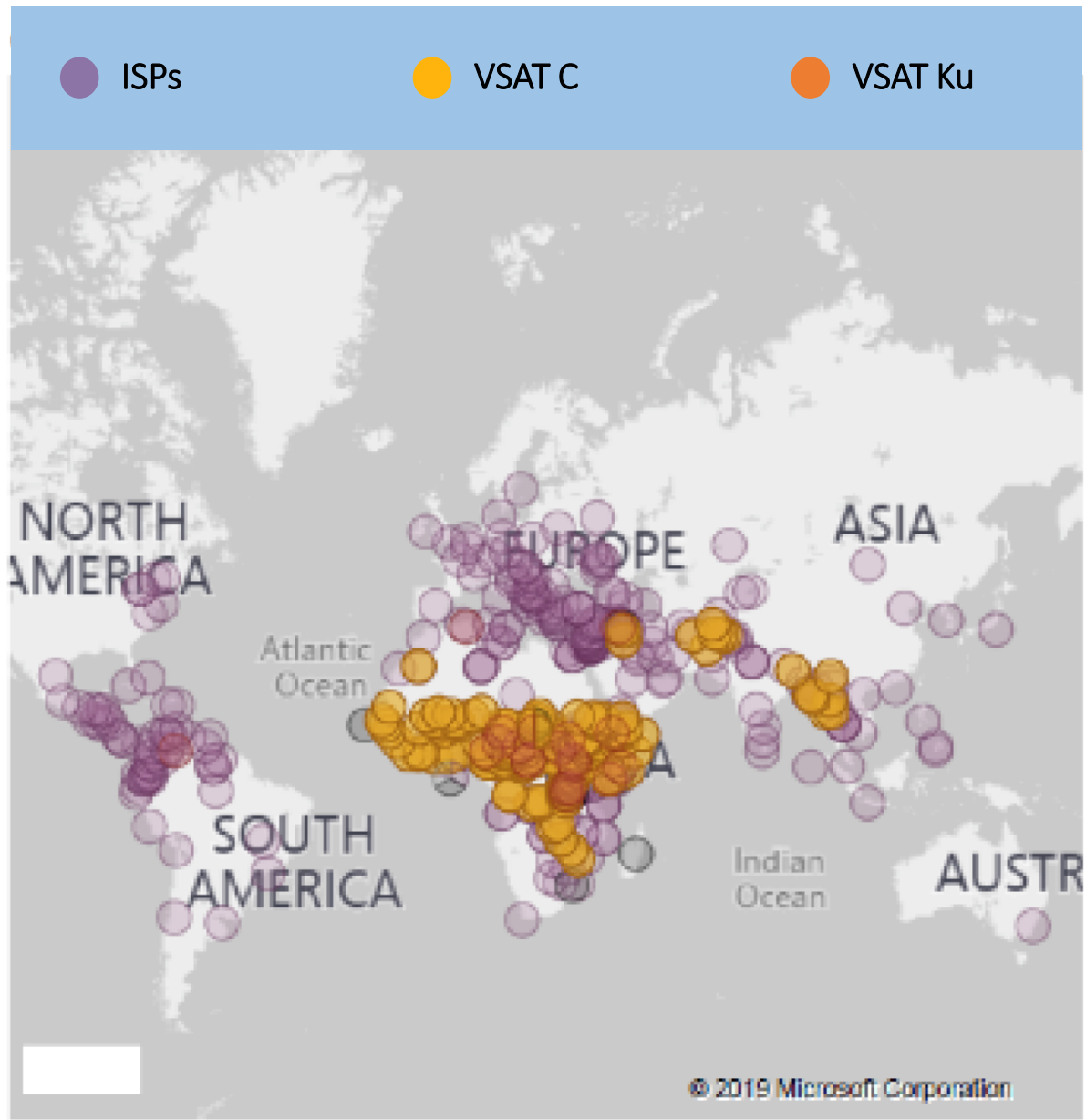
Aid Distribution



Biometrics



UNHCR's Satellite Connectivity Map



USERS		
147 Sites	5,705 HCR Users	1,445 Non-HCR Users
SERVICE USERS		
7,150 VSAT/C Users	571 VSAT/Ku Users	4,647 ISP Users
TOTAL BANDWIDTH (kbps)		
227,777 VSAT/C BW	17,742 VSAT/Ku BW	1,201,125 ISP BW

- ◆ Satellite required on all continents
- ◆ C & Ku Band for primary connectivity
- ◆ FSS *and* MSS (L-Band)
- ◆ Backhaul for ISPs due to lack of terrestrial coverage

Projects enabled by Satellite Connectivity: **Cash Assistance**

Cash Facts
UNHCR 2016/2018



Grand Bargain
baseline USD 325 M

\$1.8 B (2018: \$ 568 M)

cash assistance
reaching people



More than

16 Million

people receiving
cash assistance



+100 countries

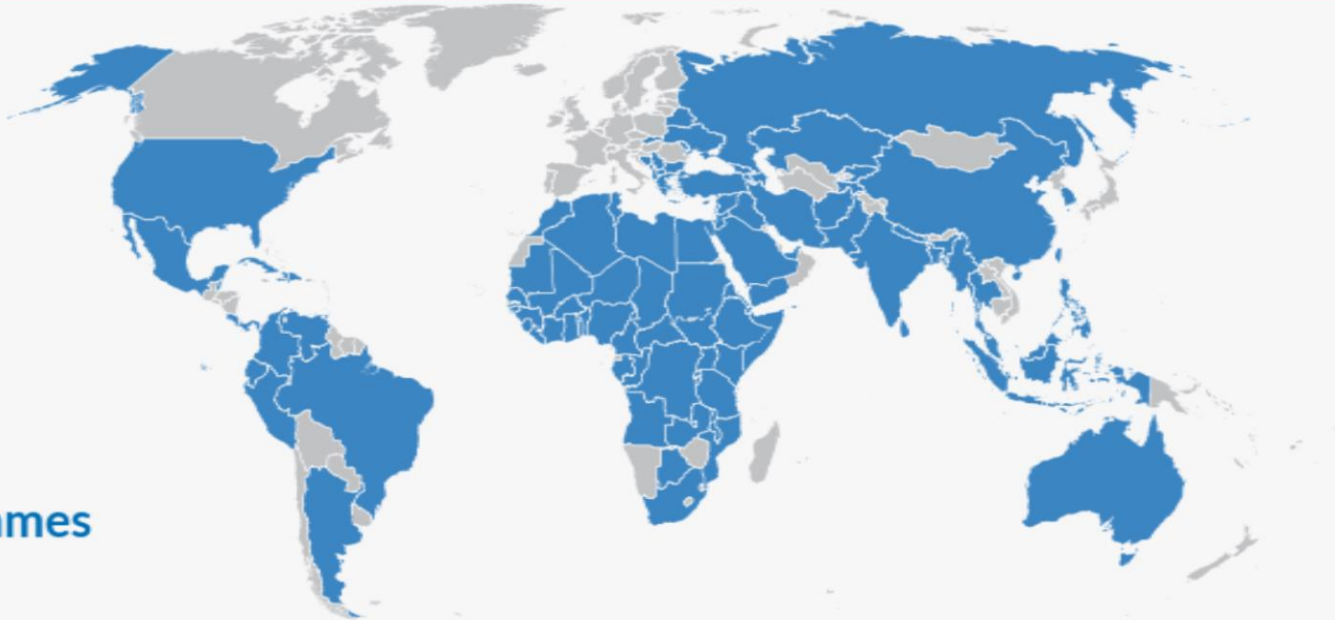
with UNHCR cash
programmes



For each \$

UNHCR delivered up to 93 cents
to people (source: joint PwC/UNHCR study)

UNHCR
Cash
Programmes



Cash creates important new opportunities for meeting **humanitarian needs** in ways that restore and enhance individual **choice** and increase **opportunities** for **refugee inclusion**.

10 LARGEST CASH OPERATIONS

① Lebanon ② Jordan ③ Greece ④ Yemen ⑤ Iraq ⑥ Turkey ⑦ Egypt ⑧ Syrian Arab Republic ⑨ Somalia ⑩ Afghanistan

Projects enabled by Satellite Connectivity: Vehicle Tracking Systems (VTS)

2019 VTS adoption figures

Bureau	NO	YES	Grand Total	%
AFRICA	1089	4060	5149	79%
AMERICAS	41	110	151	73%
ASIA PACIFIC	252	324	576	56%
EUROPE	26	148	174	85%
MENA	241	692	933	74%
Grand Total	1649	5334	6983	76%



Satellite navigation & communication

VTS required for:

- ◆ Security Monitoring: safe arrival of UN personnel & aid 'on the move'
- ◆ Fleet Management: managing the lifecycle of UN vehicles

UN bodies relying on Satcoms: **UNHCR is not alone**

UN Food and Agriculture Organisation – **FAO**

UN Children's Fund – **UNICEF**

UN Office for Coordination of Humanitarian Affairs – **UNOCHA**

UN Relief and Works Agency – **UNRWA**

World Food Program – **WFP**

World Health Organisation – **WHO**

UN Population Fund – **UNFPA**

UN Development Program – **UNDP**

International Office for Migration – **IOM**

UN Department of Field Support – **UN DFS**

UN Program on HIV/AIDS – **UNAIDS**



Numerous UN agencies rely on satellite networks to coordinate activities & work, send reports, voice communications, & provide WiFi for staff welfare

WRC 2019 - **Why do we care?**

Concerned about potential risks to core satellite services that UNHCR/other UN bodies/NGOs rely on for emergency response & day-to-day business

- ◆ We use several communications technologies across our operations BUT there is no obvious replacement for SATCOMS due to location & coverage as well as resilience in areas affected by man or nature made disasters
- ◆ UNHCR continues to use today nearly 300Mbps of space segment - primarily C-band & Ku-band. We use L-Band for MSS and Ka-band is used for emergency networks in Syria and Yemen
- ◆ In spite of our great expectations for this technology, 5G is not a connectivity means that we will be able to rely on in short- or long-term, as it is unlikely to cover many areas
- ◆ We look forward to using next generation systems as well including NGSO (LEO) constellations which we believe will compare well to terrestrial networks

Any disruption to legacy bands would seriously affect our ability to deliver services to populations of concern