



MALARIA CONTROL IN HUMANITARIAN EMERGENCIES

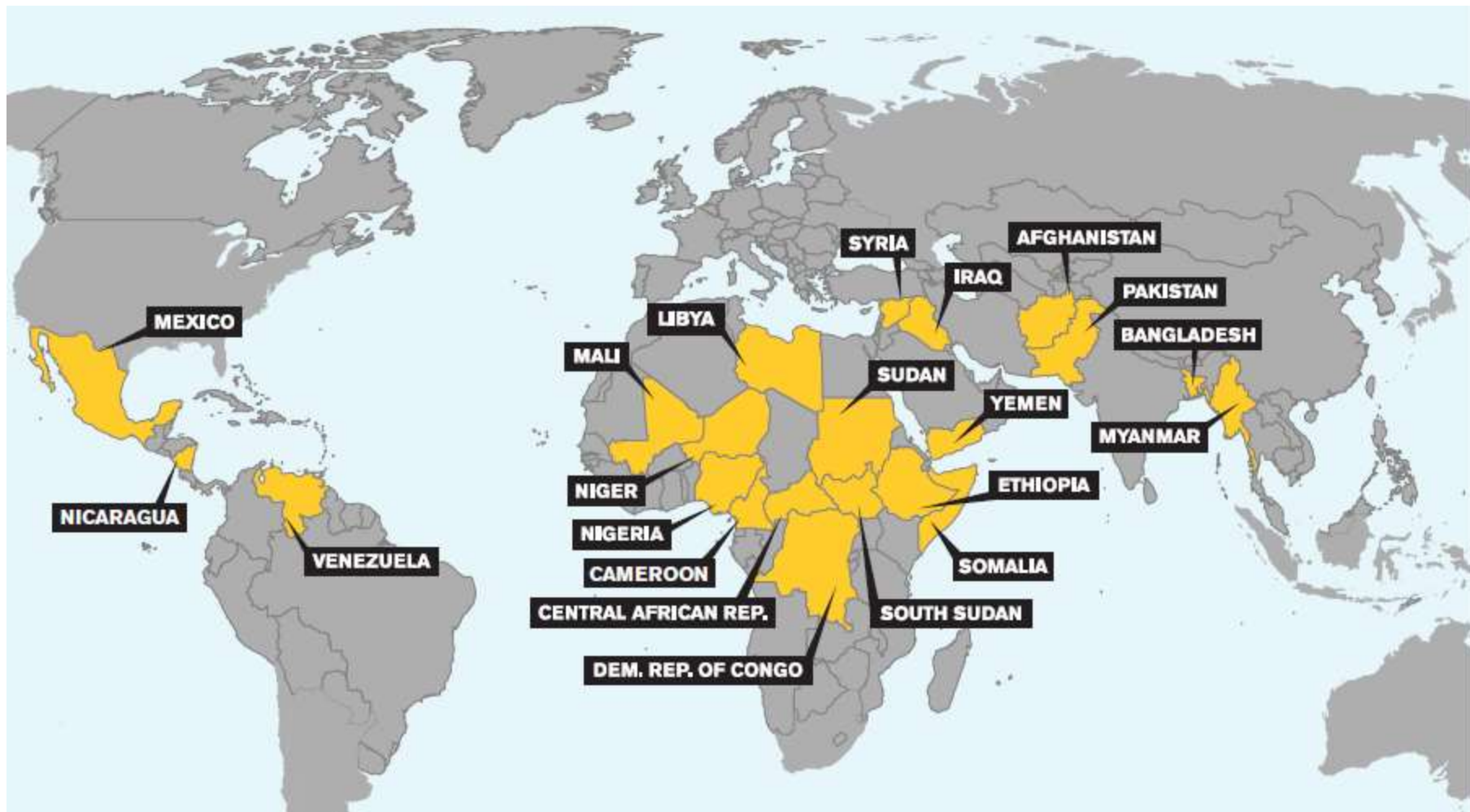


Roll Back Malaria Multi-Sectoral Working Group

06-07 Feb 2020



Countries with ongoing emergencies 2019

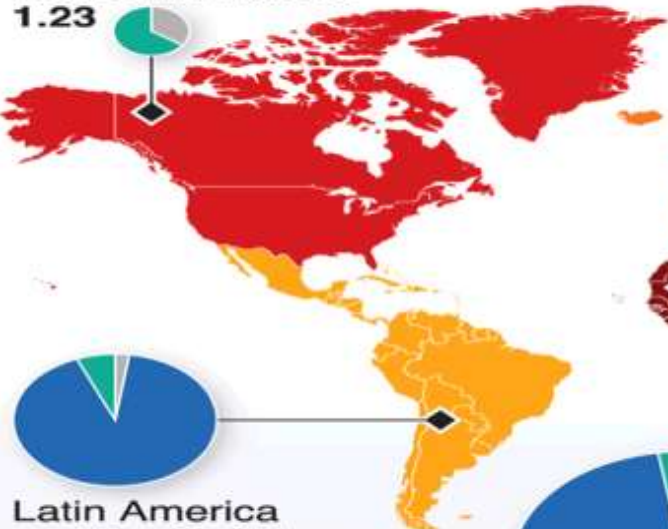


A record 70.8 million people have been displaced worldwide by war, persecution and other violence – an increase of more than two million from last year – according to UNHCR, the UN refugee agency

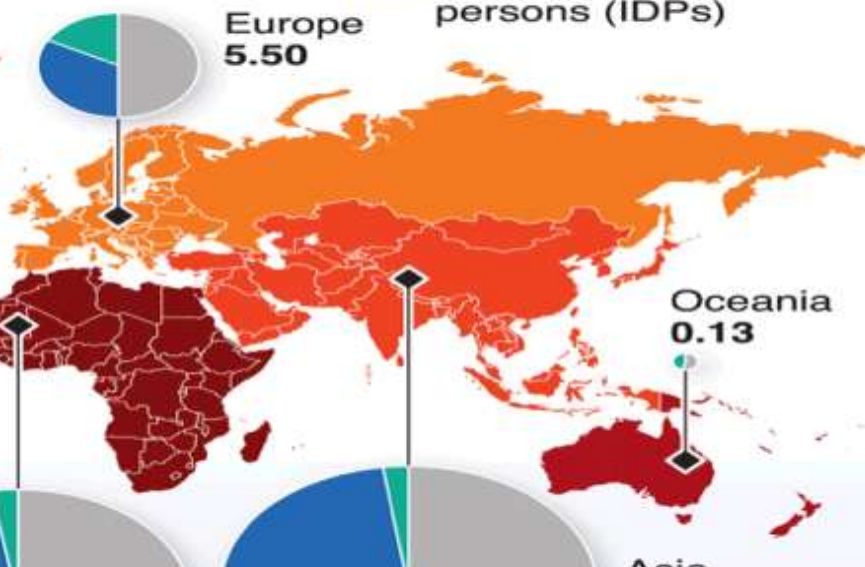
FORCED DISPLACEMENT BY WORLD REGION, 2018 (millions)

■ UNHCR refugees ■ Asylum-seekers ■ Internally displaced persons (IDPs)

Northern America
1.23



Europe
5.50

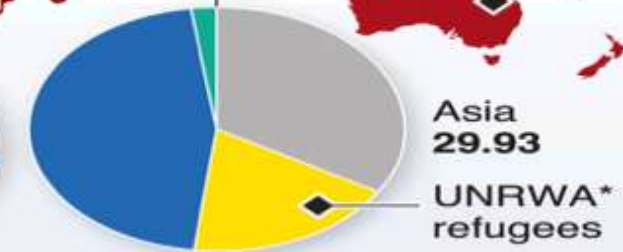
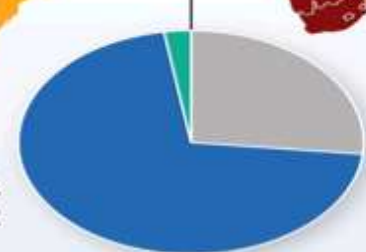


Oceania
0.13

Latin America and the Caribbean
8.79



Africa
25.22

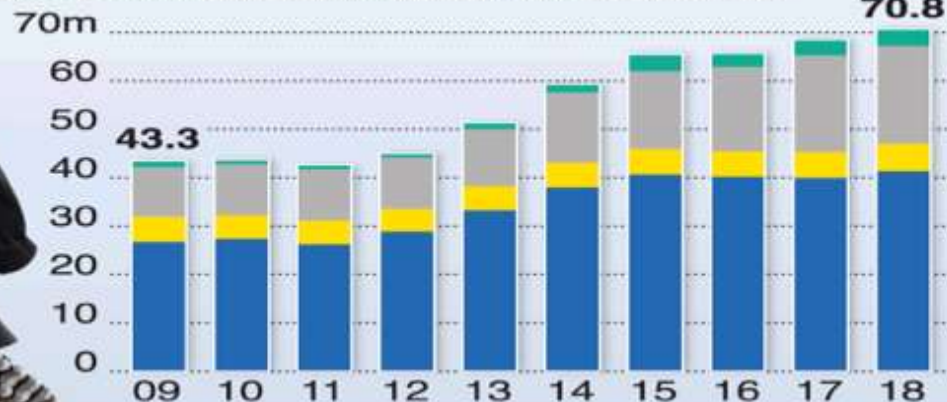


Asia
29.93

UNRWA* refugees

*United Nations Relief and Works Agency for Palestine Refugees in the Near East

GLOBAL FORCED DISPLACEMENT, 2009-18



Disease Risk in COEs (esp among Refugees)

- Forcibly displaced populations are often at greater risk of disease due to
 - High levels of mobility
 - Poor living conditions which increase exposure to disease or disease vectors
 - Decreased access to health services often caused by ongoing conflict, collapse of health system, ethnic, cultural, linguistic or other barriers
 - Weakened immunity because of multiple infections and malnutrition esp during 1st phase of displacement
 - Poor water container water management & Flood / surface water = increased insect numbers and disease transmission
 - Open defecation sites & poorly maintained latrines increase flies numbers and disease transmission
 - Movement from low to high transmission zones. Majority of refugees live in areas in which malaria is endemic or occurs in seasonal epidemics
 - Women of reproductive age and children constitute a majority of refugee populations

Top 5 Killers listed for Humanitarian Emergencies:



But

Diarrhoea
Malaria
Malnutrition
Measles
Pneumonia

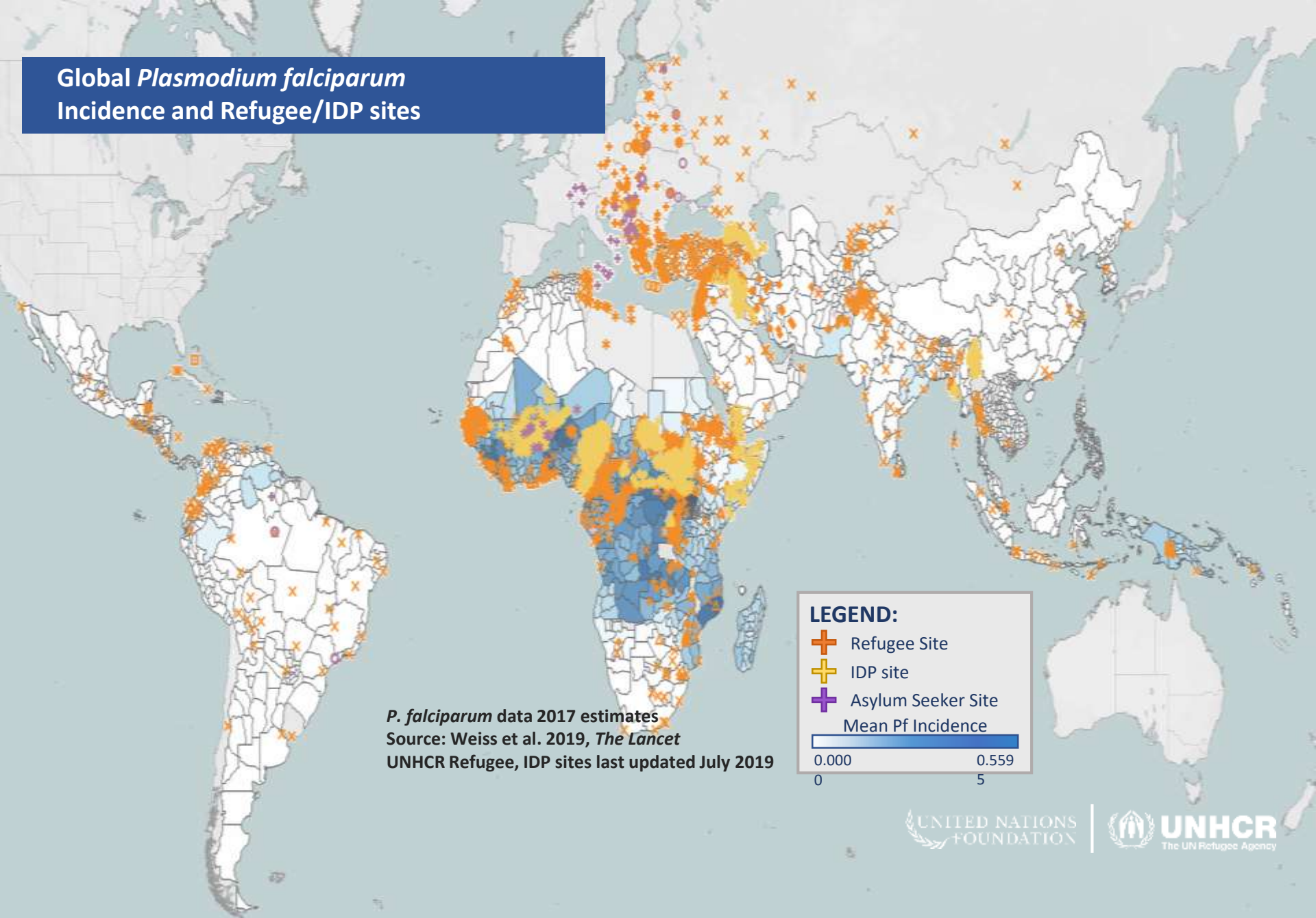


In other emergency settings other VBDs predominate, and may or may not come with malaria:

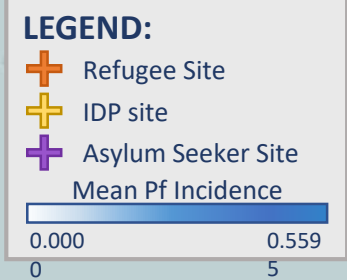
- Leishmaniasis / Syria,
- Dengue fever / Haiti / Somalia/ tsunami/ SEA cyclones..... (followed by other aedes borne viral diseases) in many natural crises and conflict settings
- Plague, even Ebola....starts as a VBD
- Typhus fever / African camp settings
- RVF /Somalia/Kenya drought and floods
- And amongst refugees in Europe?



Global *Plasmodium falciparum* Incidence and Refugee/IDP sites



P. falciparum data 2017 estimates
Source: Weiss et al. 2019, *The Lancet*
UNHCR Refugee, IDP sites last updated July 2019



Disease transmission escalates dramatically in conditions created by Conflict and Natural Disasters

- Flooding
- Cyclones
- Drought
- Earthquakes
- Volcanoes



N Kenya/Somalia



Cyclone Nargis



Indonesia—tsunami

Challenges

- **Access to the population**
 - **Local capacity**
 - **Supply systems**
 - **Global stocks**
 - Availability of stocks
 - **Financing (\$)**
 - **Strength of the health system**
 - Resilience and response planning
 - Reallocation of staff & resources according to need
 - **Availability & transmission of data**
- 
- A photograph showing a woman in an orange and black striped top holding a young child in a tent. The tent has a patterned fabric with red and yellow floral designs. The woman is looking towards the camera with a serious expression.
- **Social norms/cultural practices**
 - **Fears/Rumours**
 - **Socio-political context**

Humanitarian Situation in Refugee Settings

Scenarios

People are on the move and scattered

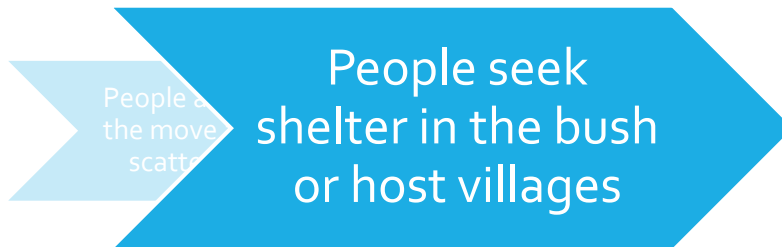


Distribution not feasible
Focus on access to rapid
diagnostics and treatment

Distribution
LLIN likely not
Must include
Ensure access

Humanitarian Situation in Refugee Settings

Scenarios



Distribution not feasible
Focus on access to rapid
diagnostics and treatment

- **Distribution difficult,**
- **LLIN likely not being used**
- **Must include host population**
- **Ensure access to RDT/ACT**



- Use of IT plastic sheeting
- Campaigns

Humanitarian Situation in Refugee Settings

Scenarios



People arrive at a transit centre

People are settled in a camp or settlement

- **Distribute LLIN**
- **Hanging**
- **Use of plastic sheeting**
- **Distribute as NFI/CRI**
- **Shelter kit**
- **Campaigns**

Humanitarian Situation in Refugee Settings

Scenarios



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People are settled
in a camp or
settlement

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- Distribute LLIN
- Shelter kit
- Campaigns

Humanitarian Situation in Refugee Settings

Scenarios



People are settled in a camp or settlement

Distribution

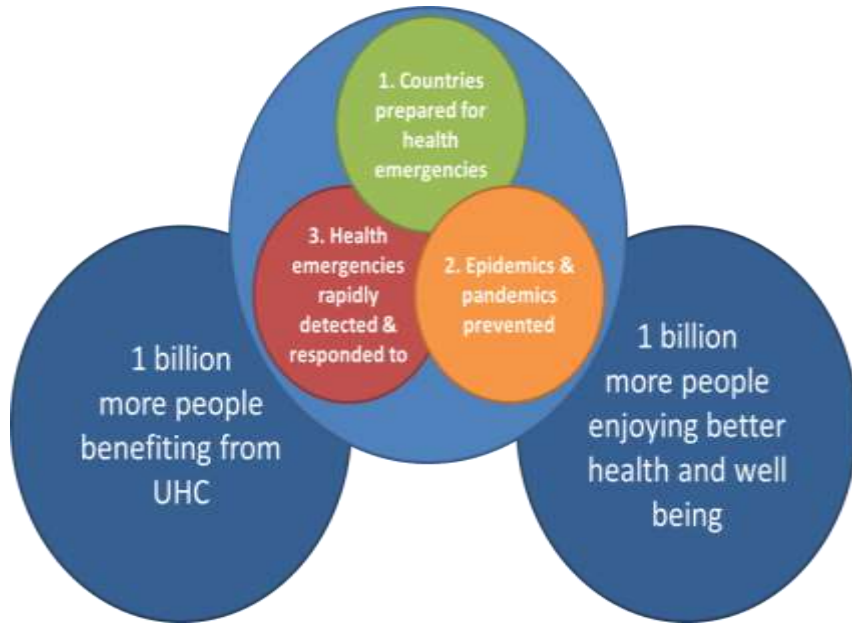


Contribute as CRI
changing
use of IT plastic
setting

- **Distribute LLIN**
- **Shelter kit**
- **Campaigns**



1 billion better protected from health emergencies



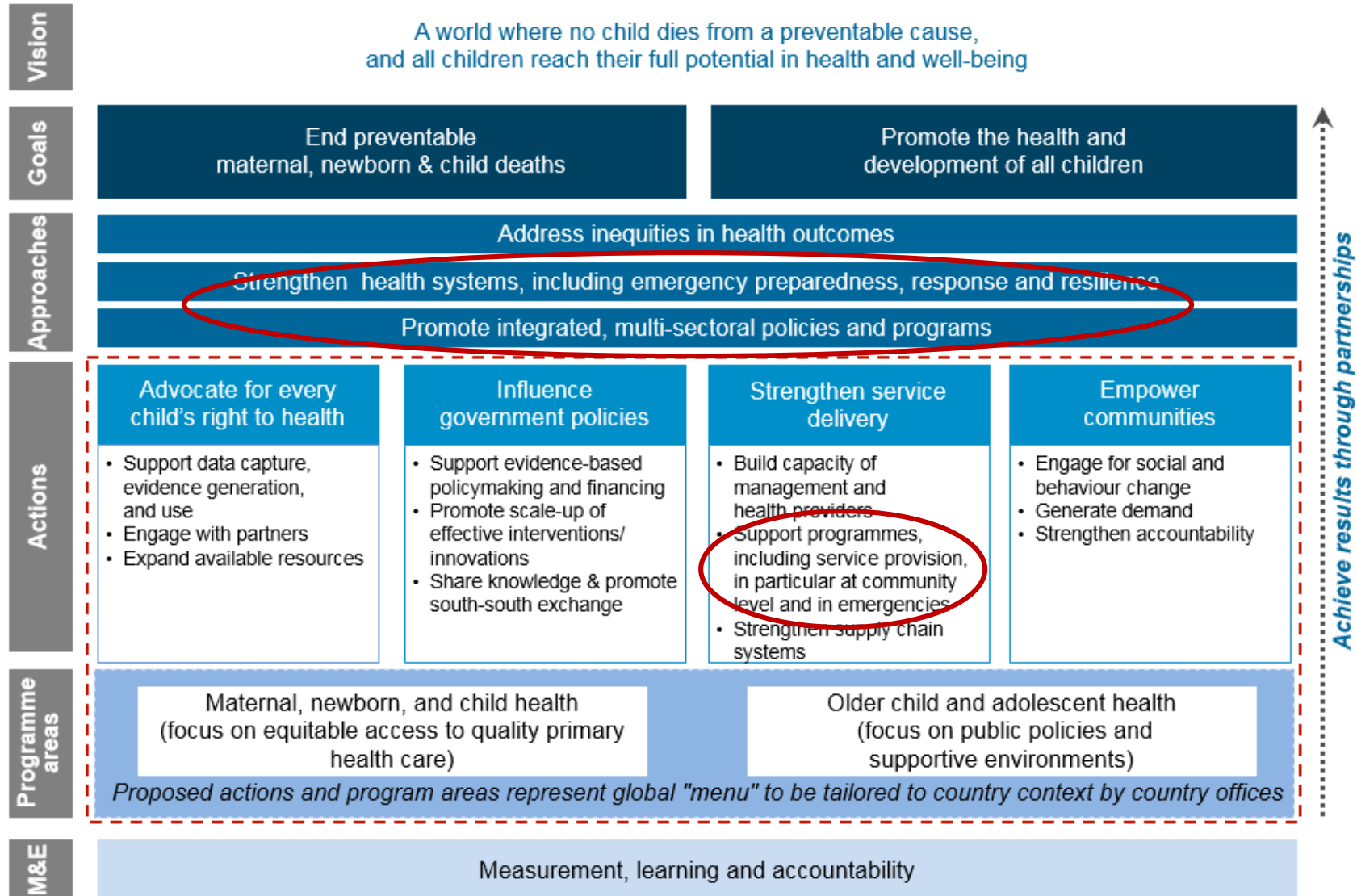
WHO Graded Health Emergencies 2019

Currently responding to 40 graded events/emergencies
12 new this year



UNICEF Health Strategy for 2016–2030

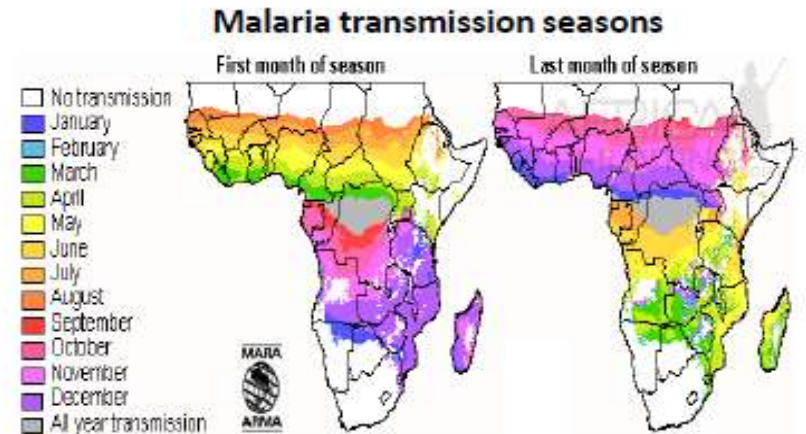
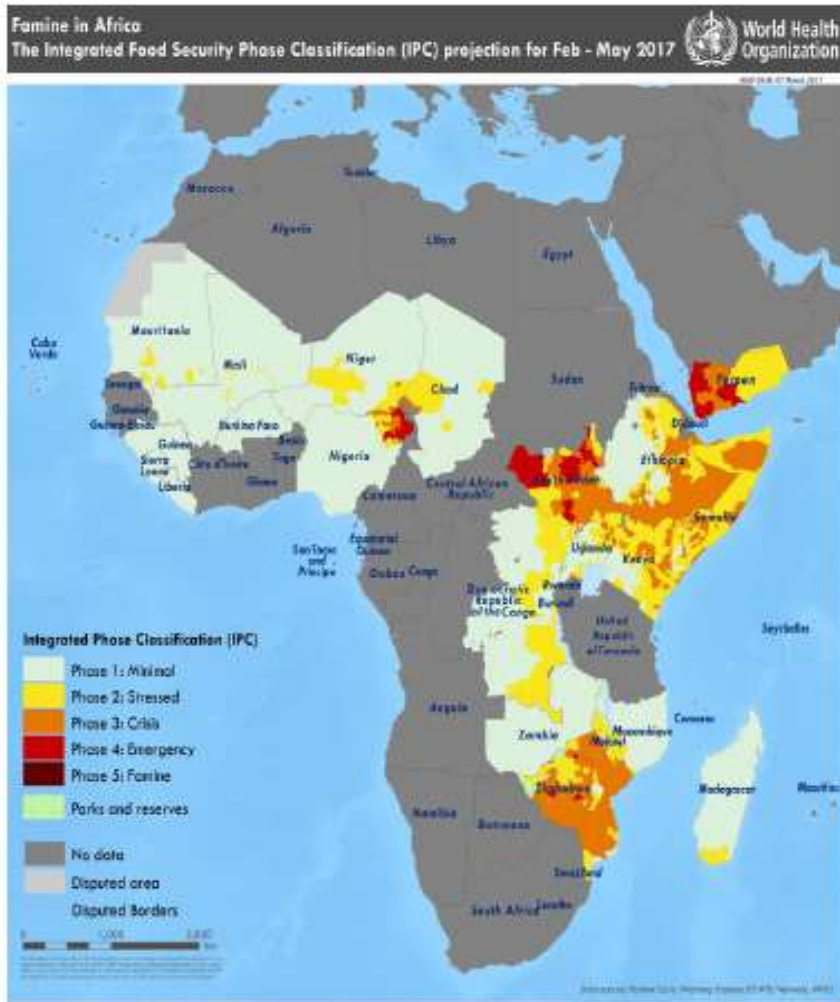
Guided by the Convention on the Rights of the Child (CRC) and Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), and in line with the Sustainable Development Goals (SDGs) and Every Woman, Every Child (EWEC)



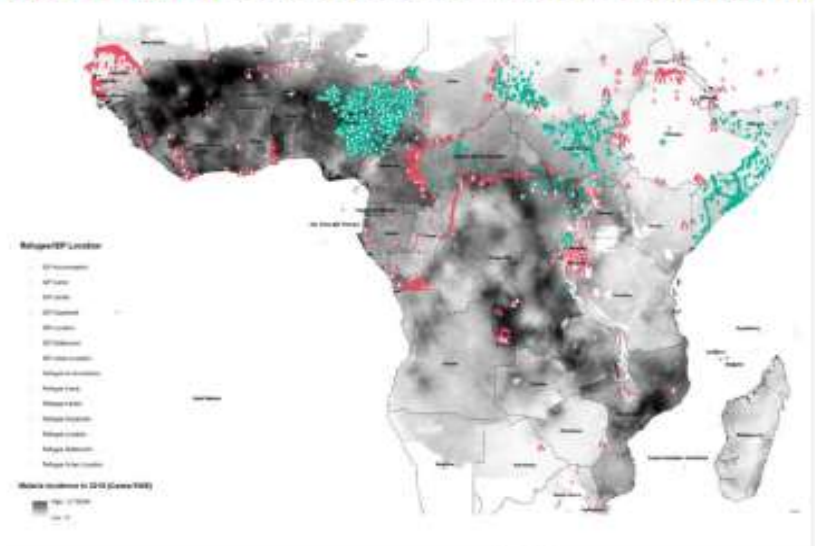
WFP's and UNHCR's view of emergencies



- Intensified collaboration between health, nutrition and logistic clusters



IDP and Refugee locations in areas of malaria transmission





- **Example: Acute malnutrition**

Bulletin of the World Health Organization, 2000, 78 (10)

Malnutrition as an underlying cause of childhood deaths associated with infectious diseases in developing countries

Amy L. Rice,¹ Lisa Sacco,² Adnan Hyder,³ & Robert E. Black⁴

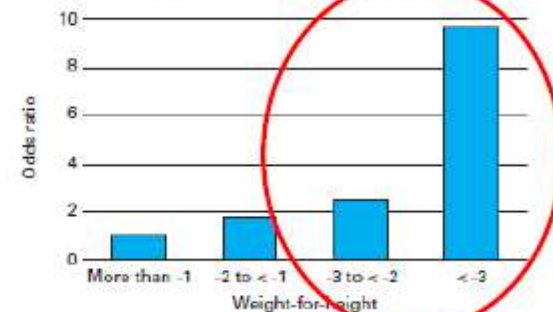
Malaria

Comparatively few studies assessed nutritional status and death from malaria. The data from hospital-based studies conducted in Africa suggest that anthropometric status at admission is associated with subsequent death from malaria (25, 44–48). The largest study involved a cohort of over 8000 cases of malaria and over 700 deaths in the Gambia. *Compared with children who had weight for age Z-scores > -2, case fatality rates were twofold higher among children with scores of < -3 to > -4 and threefold higher among those with scores < -4* (25). Likewise, data from the Republic of Chad (48), Madagascar (46, 47), Nigeria (45), and Senegal (44) indicate that malnourished children admitted to hospital for severe malaria fared less well than adequately nourished cases. No community-based studies were identified.

Screening for SAM during MDA highly recommended as SAM requires therapeutic feeding and Parenteral antimalarial therapy

FIGURE 1

Odds ratio for mortality by weight-for-height.
Adapted from reference 9



Note: reference category: children with a weight-for-height > -1 SD.

For Severe Acute Malnutrition (SAM)
SD < -3 = BMI < 18.5 = MUAC < 11.5cm



Northern Nigeria: Delivering in Partnerships

Geographical Presence (41/44 LGAs)

Maiduguri and Jere Partners:

- ACF
- ICRC
- IRC
- MSF-F
- PUI
- UNFPA
- WHO

ACF; ALIMA; ICRC;
MSF-F; WHO

WHO

ICRC; WHO

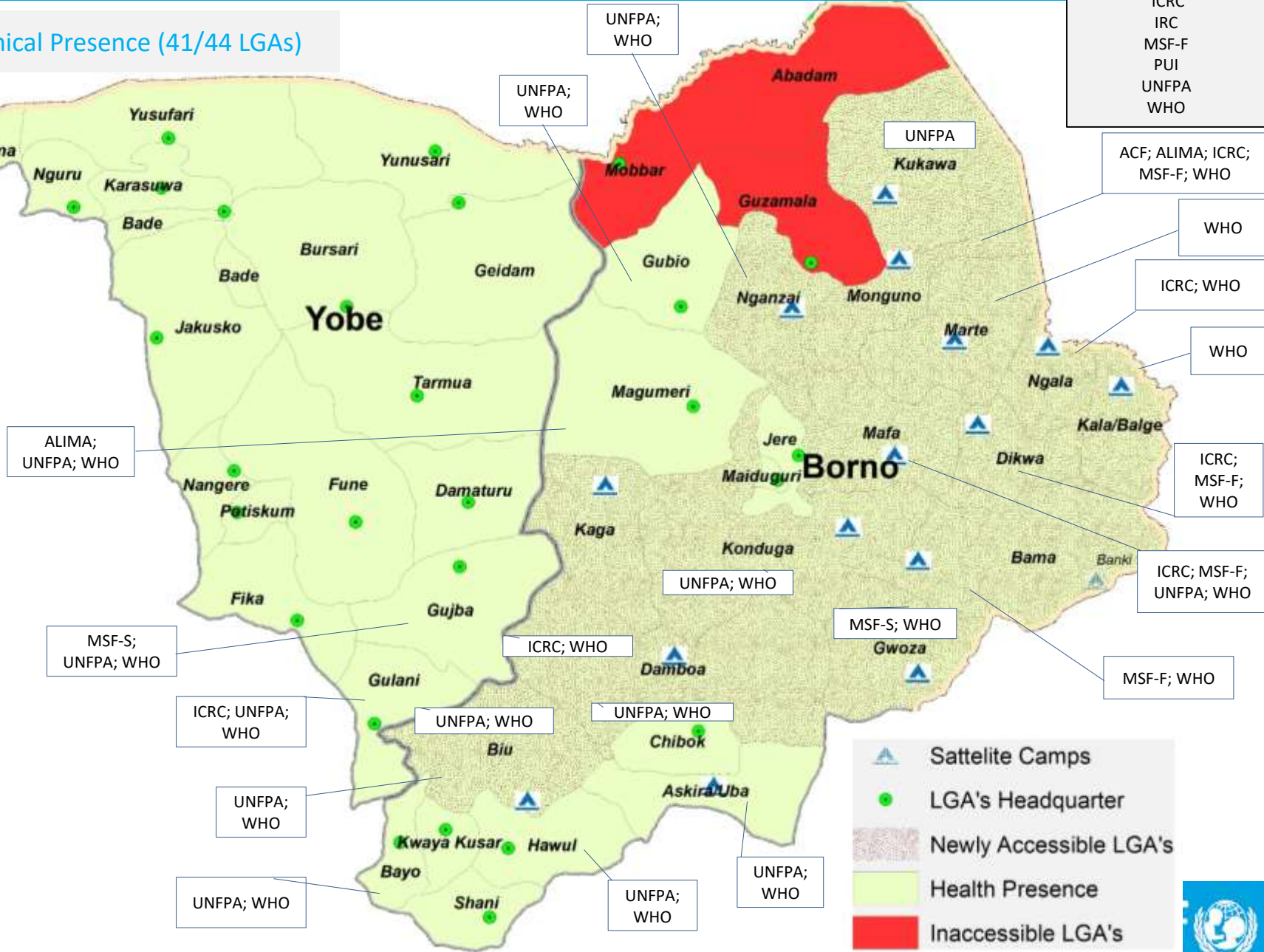
WHO

ICRC;
MSF-F;
WHO

ICRC; MSF-F;
UNFPA; WHO

MSF-F; WHO

-  Satellite Camps
-  LGA's Headquarter
-  Newly Accessible LGA's
-  Health Presence
-  Inaccessible LGA's



Multi-sectoral Work

- Collaboration with **Protection/Registration** unit. Protection needs, Community work, Population projection/planning figures
- In order to help retention and use of LLITNs, it is important to address refugee's basic needs e.g. **food and non-food items, cash based intervention** etc.
- Country public health team work with **field teams and health partners** on planning and implementation of LLIN mass distribution, targeted distribution and post distribution monitoring.
- Close collaboration with **WASH and environment** sectors eg Outbreak management, vector control, environmental measures.
- **Site selection and shelter** arrangement for the refugees need special attention considering environmental factors e.g. swampy areas and shelter design to allow for effective LLIN hanging. Sleeping on mats or beds (former being difficult to ensure nets are held secure)



New Malaria SOPs in Ebola outbreaks?



- New best practices need to be documented and published



Recent example:
First integrated MDA and LLIN distribution in
Ebola epicentre Beni, NK, DRC
27/11 to 1/12/2018

Global Malaria Programme

PRISE DE MÉDICAMENTS POUR SE PROTÉGER CONTRE LA MALARIA

ASAQ Artesunate+Amodiaquine

COMMENT PRENDRE CE MÉDICAMENT ?

TRANCHE D'ÂGE

EMBALLAGE

JOUR 1 JOUR 2 JOUR 3

2 à 11 MOIS

1 à 5 ANS

6 à 12 ANS

ALU Artemonate et Lasebactrim

COMMENT PRENDRE CE MÉDICAMENT ?

TRANCHE D'ÂGE

QUAND ?

JOUR 1 JOUR 2 JOUR 3

MATIN

SOIR

14 ANS ET PLUS

World Health Organization UNICEF UNAMA The Global Fund



Example: Potential of intensified collaboration with WFP

Complex Emergency	IPC Levels	Population affected	Population reached by WFP 2018
Nigeria (Borno)	3-5	3'600'000	1'300'000
Niger (Diffa)	2-4	691'400	180'000
Chad*	2-4	129'200	155'000
Cameroun	2-4	678'000	237'000
South Sudan	3-5	5.100'000	4'100'000
Somalia	3-5	2'900'000	597'700
Ethiopia**	2-4	5.600'000	5'350'000
Kenya	3-5	1'200'000	650'000
Uganda	3-5	3.900'000	1'177'500
Yemen	3-5	7'100'000	3'200'000
TOTAL		30'698'600	16'947'200

* Boku Haram affected only

** Estimate of population in need of food assistance – Government of Ethiopia

Leveraging multi-sectoral/programme contact points: Example Going to scale in Borno through polio transition



Coverage achieved with age-targeted malaria MDA in Borno State, 2017

	Distribution period		Target	Age groups		Overall
	Start	End		3-11mths	12-59 mths	
Cycle 1			Reached	150,309	738,596	888,905
	08/07/2017	12/07/2017	Targeted	160,868	988,079	1,148,898
			%	93%	75%	77%
Cycle 2			Reached	191,795	1,015,914	1,207,709
	23/08/2017	27/08/2017	Targeted	168,683	1,029,759	1,198,393
			%	114%	99%	101%
Cycle 3			Reached	202,271	1,052,688	1,254,959
	14/10/2017	18/10/2017	Targeted	168,683	1,029,759	1,198,393
			%	120%	102%	105%
Cycle 4			Reached	198,788	1,015,914	1,023,980
	16/11/2017	20/11/2017	Targeted	168,683	1,029,759	1,198,393
			%	118%	99%	102%
Overall			Reached	743,163	3,831,178	4,574,341
	08/07/2017	20/11/2017	Targeted	666,917	4,077,356	4,744,273
			%	111%	94%	96%

Improved Cluster Coordination:

Nduta Refugee Camp, Tanzania. (MSF)



Health Cluster: *epi and entomological monitoring: LSM*

Shelter Cluster: *brick pits and drainage*

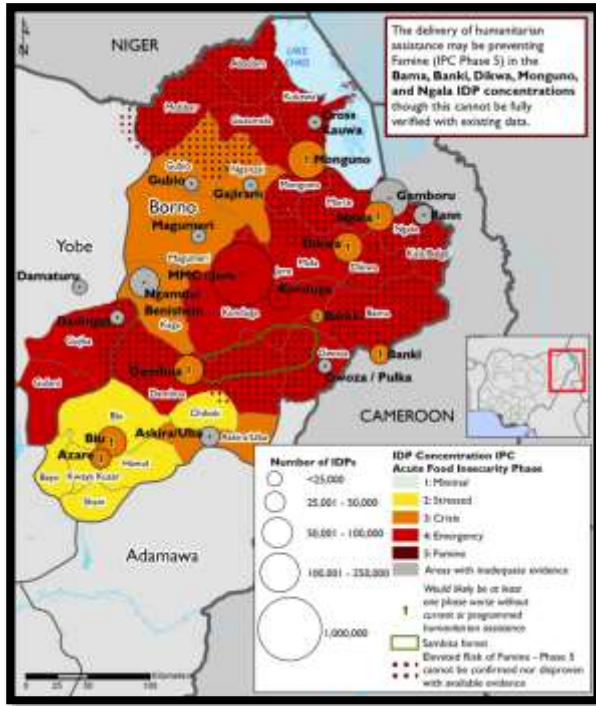
WASH Cluster: *water tap stands*

Integrate across disease delivery systems

Borno State Nigeria. Malaria, cholera, measles, famine (WHO)



ITN logistics,
Seasonal Malaria Chemoprophylaxis
and
Polio vaccination



<http://www.who.int/malaria/news/2017/smc-campaign-nigeria/en/>

Need to Shift to Integrated Vector Control

Integrating appropriate vector control tools design to best fit the operating and living context is likely to increase efficacy of VBD control in most settings.



Solutions for Humanitarian Crises Shelter Contexts has the potential to generate solutions and markets for Outdoor Transmission



Photo MSF/Cambodia

Outdoor transmission Mekong



Photo MENTOR

Chad



PHOTO UNHCR

Humanitarian Emergency

Vector Control in Humanitarian Emergencies

Roll Back Malaria Vector Control Working Group

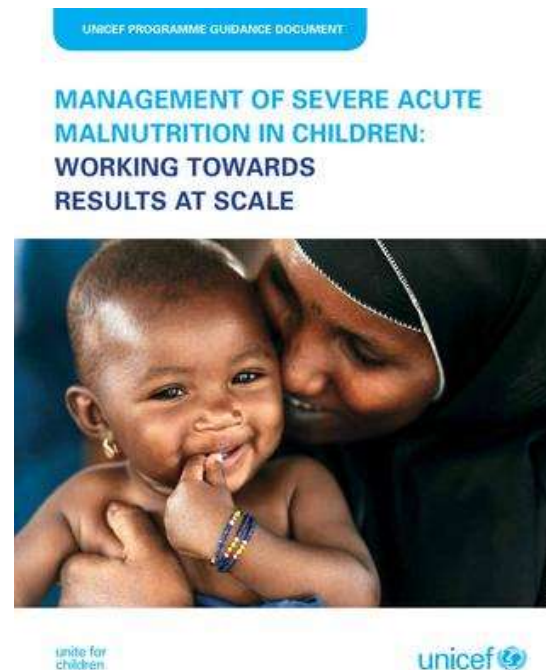
Objectives:

- Provide a **platform for information exchange**, from the emergency viewpoint, including on **existing vector control tools and processes** to empower implementing agencies to do their work better.
- **Advocate to improve operational collaboration among clusters** in humanitarian or refugee emergencies, agencies, and relevant national programs and both emergency and development donors.
- Integrate across diseases and delivery strategies to improve efficiencies and effectiveness of program delivery.
- **Facilitate bringing new tools to the field**, including through contribution to the evidence-base through Standard Operating Procedures, **collaboration with industry and academia** and IRB-approved Operational Research.

Many good reasons why a new field manual needed



- Previous WHO Technical Guidance needs updating and synthesis



Aim of the revised guide

- ▶ A concise guide to effective malaria control responses in humanitarian emergencies
 - ▶ Particular focus on the initial acute phase when reliance on international humanitarian assistance is greatest.
- ▶ Provides WHO and UNICEF recommendations and practical advice on designing and implementing interventions to reduce malaria morbidity and mortality during anthropogenic (e.g. conflict) and natural (e.g. flood, earthquake) disasters.
- ▶ Revisions to reflect changes in best practices, improvements in technologies, availability of tools, and changes in WHO and UNICEF recommendations.
- ▶ Each chapter includes the latest available WHO and UNICEF recommendations and guidance and operational examples of how to implement them in humanitarian settings.

Target Users

- ▶ Humanitarian field coordinators & programme managers.
- ▶ Those tasked with assessment, planning, costing, implementing, monitoring, or evaluating malaria control interventions in a humanitarian emergency.
- ▶ Those who may have limited experience of malaria prevention and control.
- ▶ *Possible useful reference for students and senior decision-makers (e.g. in donor agencies).*

Development of this update was initiated by WHO (GMP, WHE) & UNICEF

- ▶ Initial draft developed in early 2019
- ▶ Independent revisions were consolidated during a working group meeting in Sharm El Sheikh (14-16 March 2019).
- ▶ Second (much smaller) working group meeting in Geneva (3-7 June 2019).
- ▶ New version should be available in Q1 2020 for final review and inputs

What's new

- ▶ All sections updated and revised
- ▶ Addition of two new chapters

Current structure of the manual (1/2)

- ▶ *Executive Summary*
- ▶ *Chapter 1* introduces **humanitarian emergencies** and the malaria burden.
- ▶ *Chapter 2* introduces **malaria essentials**
- ▶ *Chapter 3* summarises **assessment and situation analysis** approaches in humanitarian emergencies that include malaria.
- ▶ *Chapter 4* describes **case management interventions:** uncomplicated and severe malaria, monitoring and evaluation.
- ▶ *Chapter 5* describes **vector control interventions**, including WHO recommendations, operationalisation, monitoring and evaluation.

Current structure of the manual (2/2)

- ▶ Chapter 6 describes **chemoprevention interventions**, WHO recommendations, operationalisation, monitoring & evaluation.
- ▶ Chapter 7 describes **surveillance, epidemic detection and response interventions**, including WHO recommendations, operationalisation, monitoring & evaluation.
- ▶ Chapter 8 describes **partnering with communities** to ensure respectful health communications and **capacity-building** approaches.
- ▶ Chapter 9 describes **key competencies** needed by malaria control staff in humanitarian emergencies, including curriculum development and examples of training materials and job aids.
- ▶ Chapter 10 discusses **operational research** needs for evidence generation, including potential interventions for which insufficient evidence currently exists for a WHO recommendation.
- ▶ Annexes & Further reading

Additional Resources





- **WHO;** *"Guidelines for the treatment of malaria, Third edition pages 31-40"* http://apps.who.int/iris/bitstream/10665/162441/1/9789241549127_eng.pdf; WHO 2016
- **WHO** *Community-based reduction of malaria transmission. Consultation Report* ; WHO 2012 <http://who.int/malaria/publications/atoz/9789241502719/en/>
- **WHO** recommendations for achieving universal coverage with long-lasting insecticidal nets in malaria control http://www.who.int/malaria/publications/atoz/who_recommendation_coverage_llin/en/
- **WHO** *Indoor residual spraying: An operational manual for IRS for malaria transmission, control and elimination. Second edition*; WHO 2015; <http://who.int/malaria/publications/atoz/9789241508940/en/>
- **WHO;** *Disease surveillance for malaria control: operational manual* WHO 2012 <http://who.int/malaria/publications/atoz/9789241503341/en/>
- **WHO** *Malaria control in humanitarian emergencies – An inter-agency field handbook. Second edition*
- WHO 2013; <http://who.int/malaria/publications/atoz/9789241548656/en/>
- **WHO** *"Recommendations on the role of mass drug administration, mass screening and treatment, and focal screening and treatment for malaria"* <http://www.who.int/malaria/publications/atoz/role-of-mda-for-malaria/en/>
- **WHO** *"Seasonal malaria chemoprevention with sulfadoxine-pyrimethamine plus amodiaquine in children: A field guide"* <http://www.who.int/malaria/publications/atoz/9789241504737/en/>

UNICEF in Complex Operating Environments

- UNICEF strives to save lives and protect rights as defined in the **Core Commitments for Children (CCCs) in Humanitarian Action**.
- UNICEF focuses its efforts on systematically reducing vulnerability to disasters and conflicts for effective prevention of and **response to humanitarian crises to ensure rapid recovery and building community resilience to shocks that affect children**.

In 2016, UNICEF and partners responded to **344 humanitarian situations of varying scale in 108 countries** with **576 surge deployments** – the largest number of situations and countries recorded since tracking began more than a decade ago.

Key actions:

- early identification of priorities & strategies to **build resilience** on emergency to development spectrum
- **rapid deployment** of qualified staff and clear accountabilities for the response.
- In collaboration with MoHs, UNICEF country offices, NGO & academic partners, UNICEF's Child Health Unit is **documenting lessons learned & providing evidence on best practices** on the role and impact of community health workers and other community actors in complex & insecure environments.

Supply actions in emergencies

- **Focus on preparedness:** ensuring appropriate and sufficient health supplies are in place.
- **Capacity Development:** E.g expertise on markets, products, inventory, monitoring, convening partners
- **Strengthening together:** supply chain strengthening efforts are part of the UNICEF-wide Health Emergency Preparedness Initiative (HEPI) launched in 2015.
- **Reduce stock-outs** by keeping emergency commodities stockpiled at all times or through LTAs with suppliers
- **Improve delivery/timelines** through improved reporting, quantification, forecasting, etc
- **Reaching the last mile**

Emergency Context

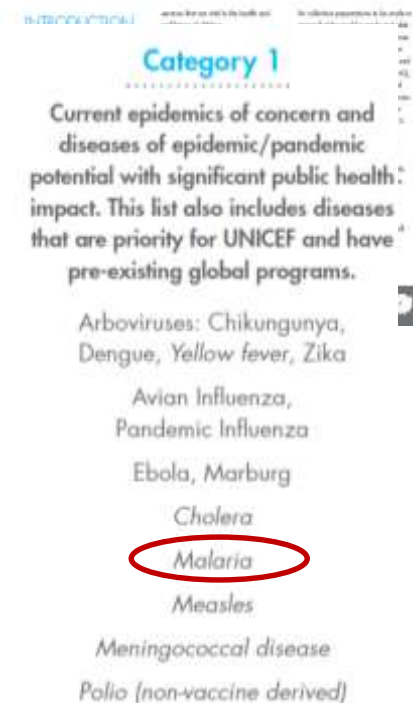
In 2016, UNICEF emergency funds' procurement reached \$379.1 million.

South Sudan, Nigeria, Somalia, Yemen, Mali, Burundi, Niger, Guinea (8 countries)

UNICEF total spend on in-country logistics for 2015-16 was **62.3 million USD**

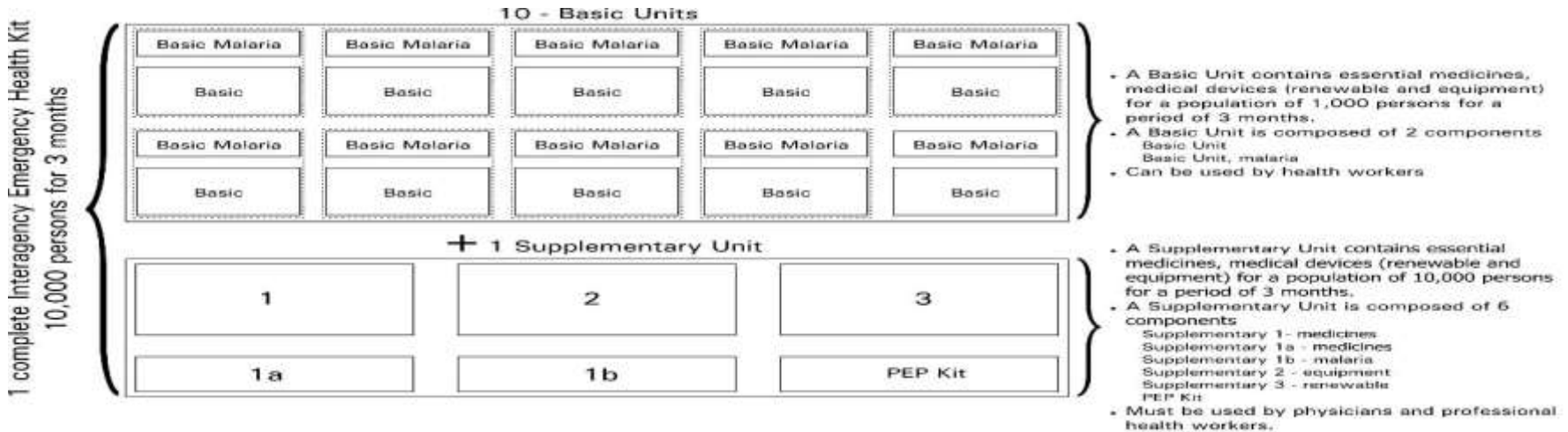
Health Emergency Preparedness Initiative (HEPI)

- New **IASC Level 3 (L3) Activation Procedures** for Infectious Disease Events - requiring all sectors/clusters to be ready (**beyond health**)
- UNICEF has developed a ‘package of support’, which consists of guidance, resources and tools necessary for a well-coordinated and rapid sector specific response in the event of an outbreak.
- This also includes disease-specific supply requirements with pre-positioned stock and a roster of staff for response teams.



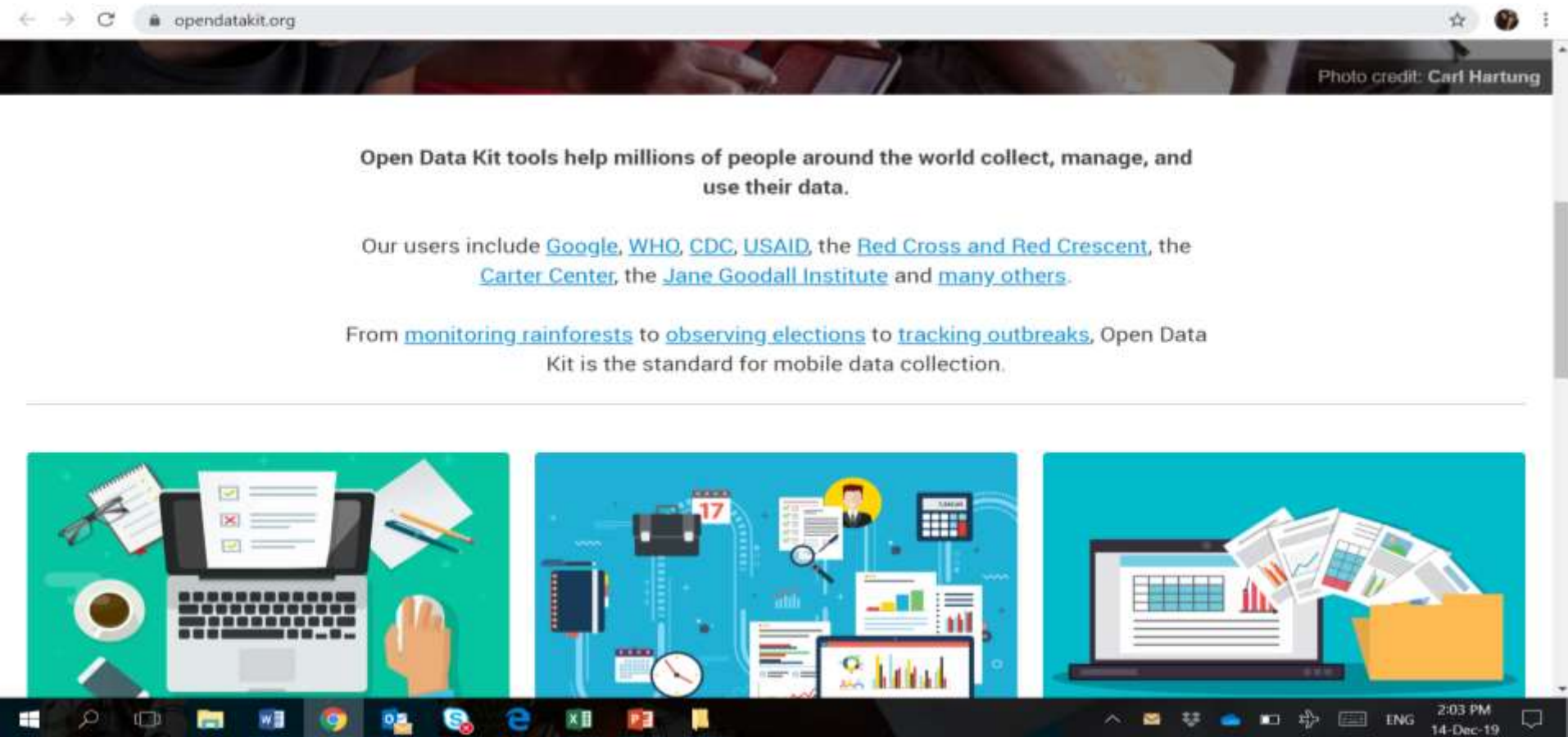
Malaria Emergency Kit

- **The Inter-Agency Emergency Health Kit (IEHK2011)** is an integral part of UNICEF's immediate response to most emergencies and contains enough supplies **to protect a population of 1,000 persons for 3 months**.
- The basic unit contains antimalarial medicines (for uncomplicated) & rapid diagnostic test kits and is meant for use by healthcare workers with limited training. Injectable medicines can be ordered in a supplemental kit



Open Data Kit

- <https://opendatakit.org/>



The screenshot shows the Open Data Kit website homepage. At the top, there is a navigation bar with the URL "opendatakit.org" and a photo credit "Photo credit: Carl Hartung". The main content area features three paragraphs of text:

Open Data Kit tools help millions of people around the world collect, manage, and use their data.

Our users include [Google](#), [WHO](#), [CDC](#), [USAID](#), the [Red Cross and Red Crescent](#), the [Carter Center](#), the [Jane Goodall Institute](#) and [many others](#).

From [monitoring rainforests](#) to [observing elections](#) to [tracking outbreaks](#), Open Data Kit is the standard for mobile data collection.

Below the text are three colorful illustrations: the first shows a laptop with a checklist, a coffee cup, and a mouse; the second shows a person's profile, a calendar, a magnifying glass, and various data charts; the third shows a laptop displaying a data table next to a folder containing several documents.

The bottom of the screenshot shows a Windows taskbar with various application icons and a system tray displaying the time "2:03 PM" and date "14-Dec-19".

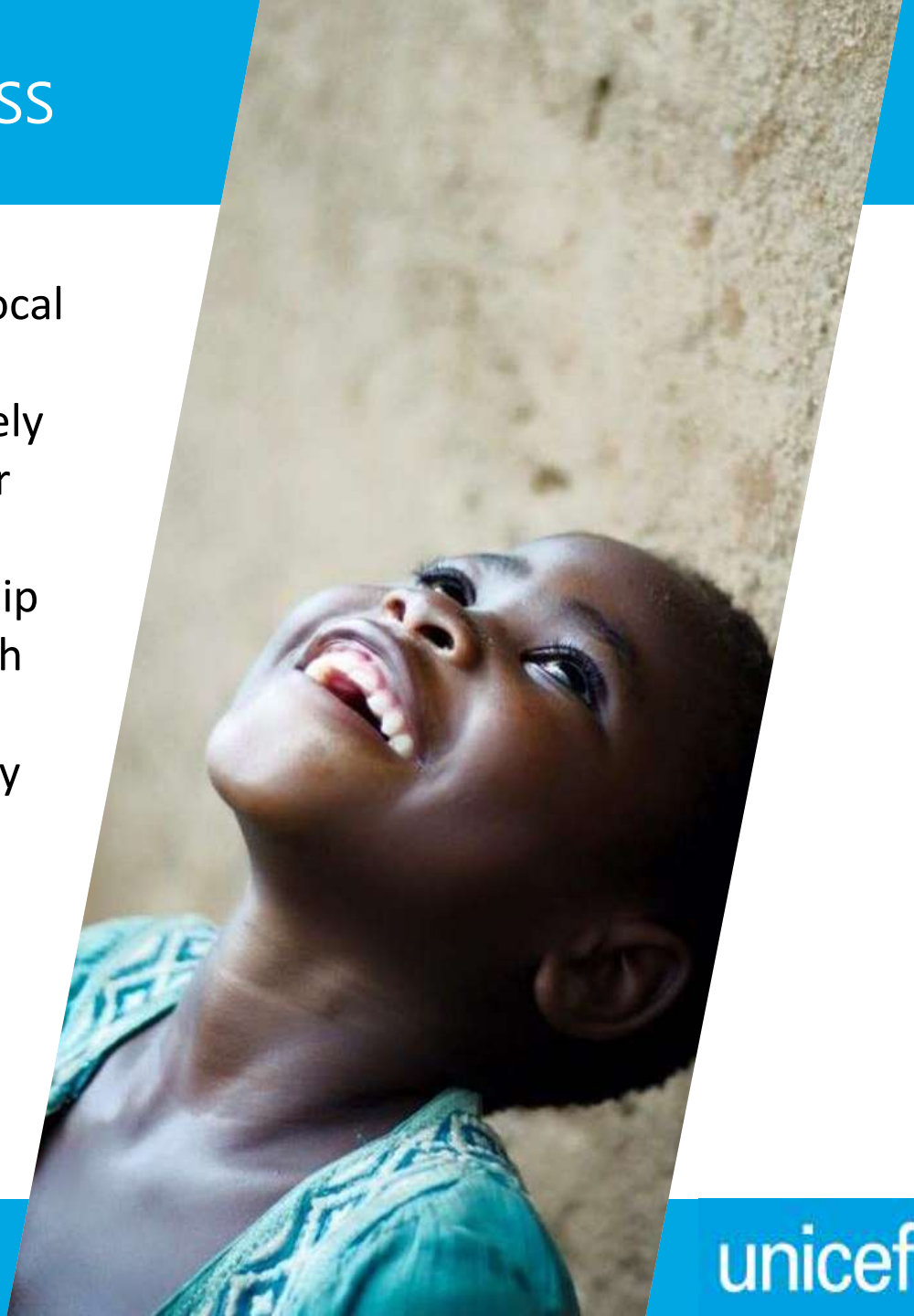
Sphere Standards

<https://handbook.spherestandards.org/en/sphere/#ch006>

The screenshot displays the Sphere Handbook website interface. At the top, the browser address bar shows the URL <https://handbook.spherestandards.org/en/sphere/#ch006>. The page header includes "Sphere Handbook", "Select Handbook", "English", a search bar, and a "Newsletter" link. The main content area features a large green banner with the text "5. Water Supply, Sanitation and Hygiene Promotion". Below this banner is a diagram illustrating the foundational elements of WASH. A central vertical line connects a "Humanitarian Charter" icon at the top to a "Water Supply, Sanitation, and Hygiene Promotion (WASH)" icon at the bottom. Two horizontal lines branch from the central vertical line, connecting to "Protection Principles" on the left and "Core Humanitarian Standard" on the right. A vertical sidebar on the left side of the page contains several circular icons representing different thematic areas.

FACTORS FOR SUCCESS

- Rapid response esp engaging local actors and community health workers and leaders immediately
- Unique & concentrated partner effort
- Continuous dedicated leadership
- Cross-level technical teams with country representation
- Specific support for tracking key areas & activities
- Emergency preparedness plans
- Balance between emergency response and continuation of services



unicef 
for every child

**Thank You
Merci
Obrigado
Asante Sana**

**Comments/Questions
Please contact
Valentina Buj
vbuj@unicef.org**

**Allen Maina –
mainaa@unhcr.org**

Global Malaria Programme



**World Health
Organization**



UNHCR
The UN Refugee Agency

