All systems go
Africa

System building in fragile contexts across the WASH, Humanitarian Development, and Peace triple nexus

ETHIOPIA

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All systems go Africa

19-21 October 2022

IRC Supporting water sanitation and hygiene services for life

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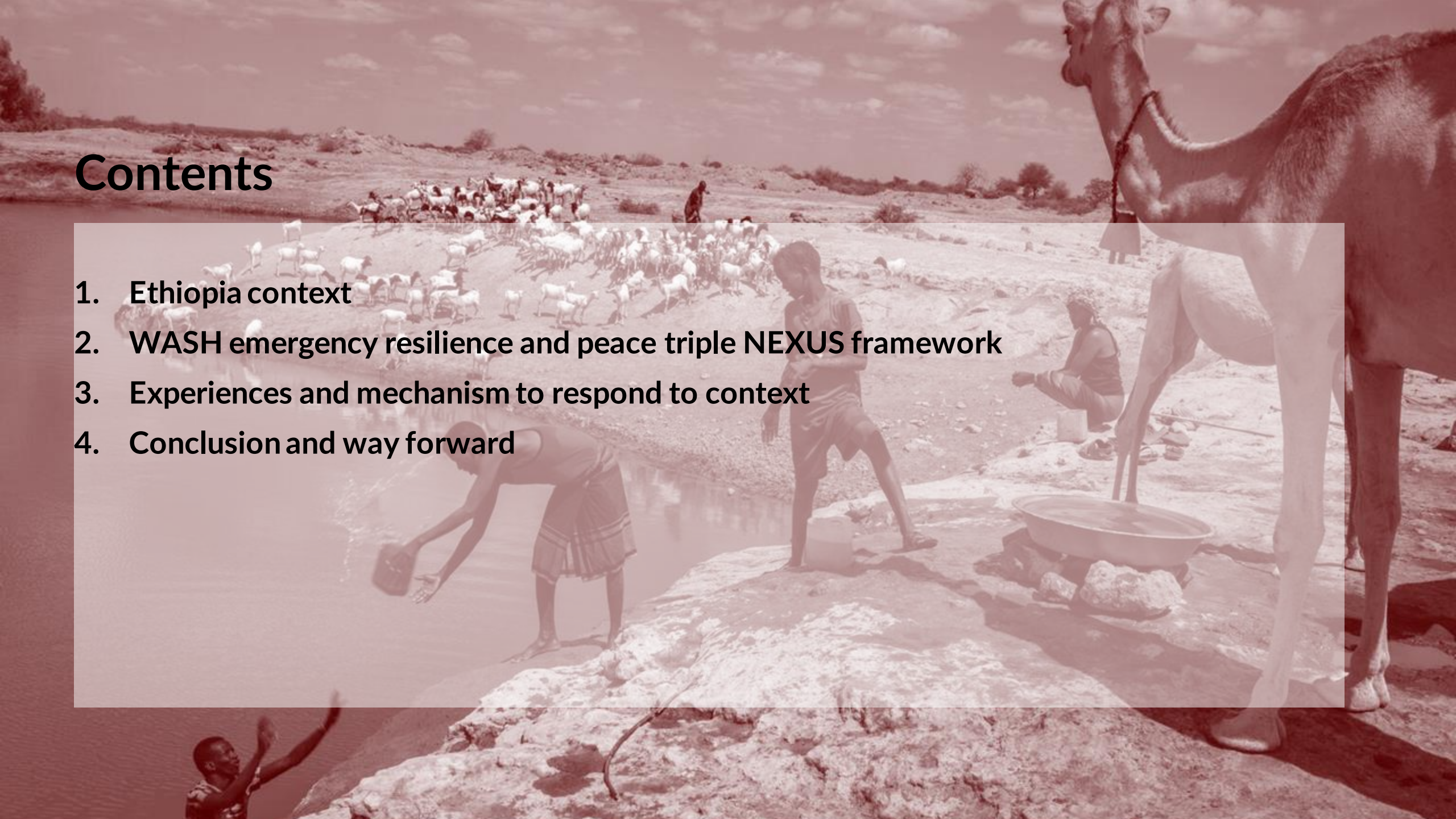


Contents

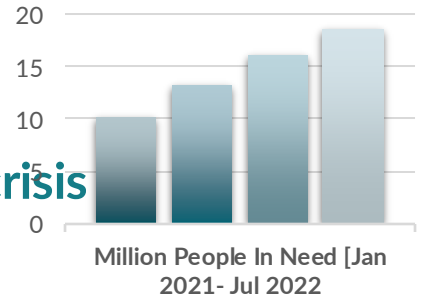
Ethiopia context - Extremely fragile with multiple displacements

IDP: 2.8M | PIN: 18.7

Requirement $133M

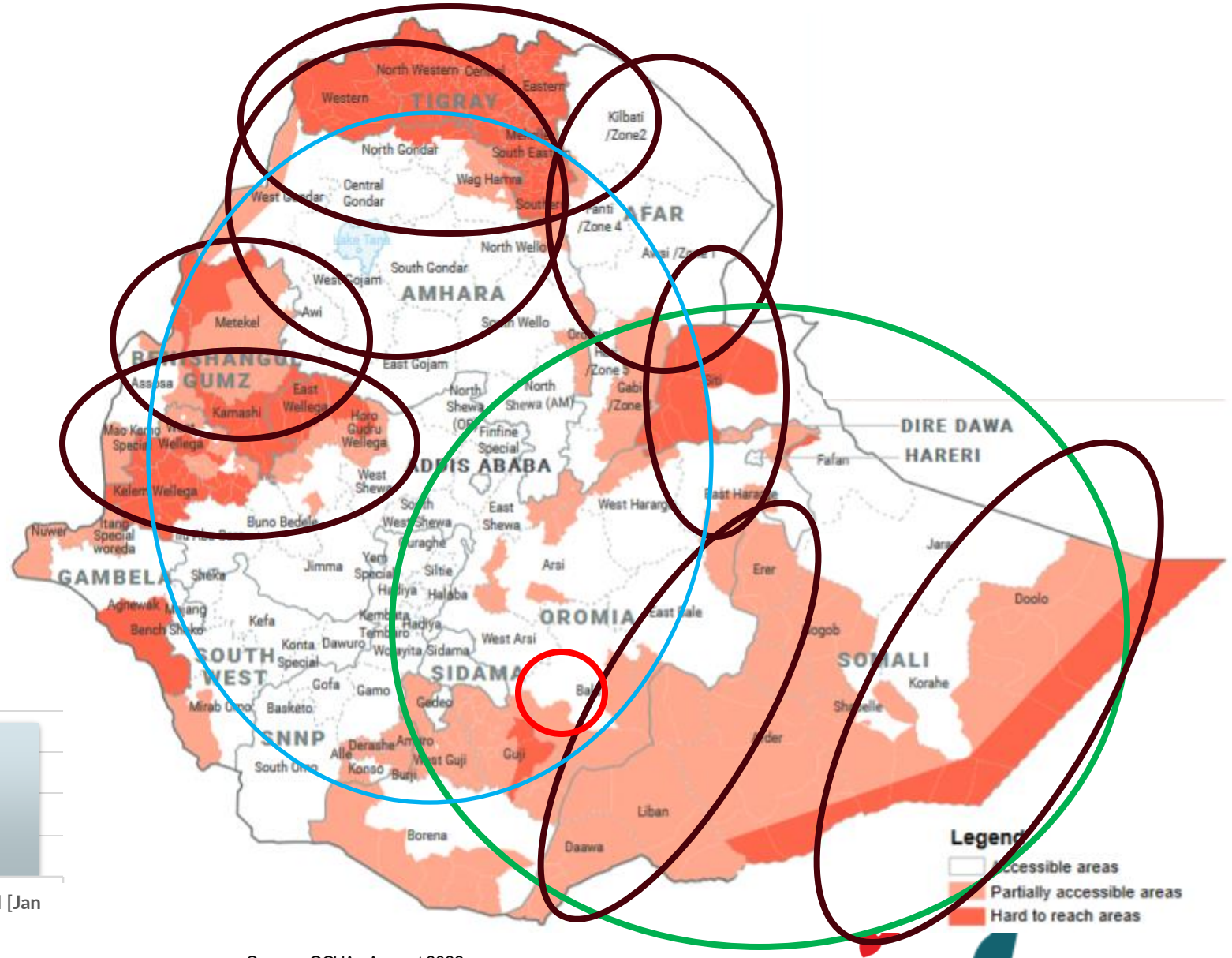
Shocks and stressors

- Security related
- Climate induced (drought/floods)
- Health related (cholera)



Characteristics

- Protracted/recurring crisis
- Worsening scale (now 5th response globally)



Source: OCHA, August 2022

Ethiopia context - Extremely fragile with multiple displacements

IDP: 2.8M | PIN: 18.7

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Refugees: 875,000

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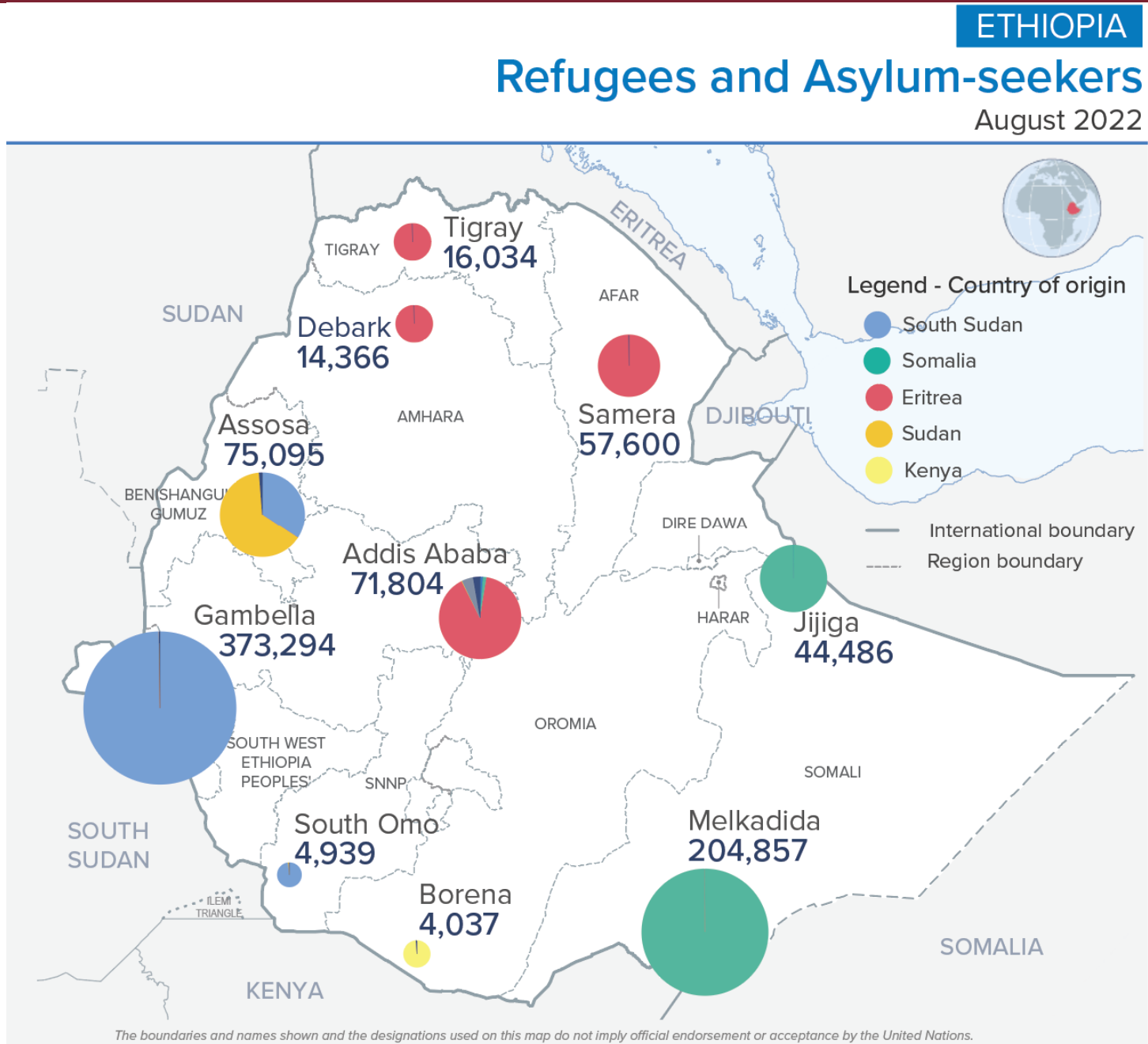

WASH emergency resilience and peace triple NEXUS framework

THE TRIPLE NEXUS IN WASH
HUMANITARIAN DEVELOPMENT PEACE

Outcome

WASH Resilience and Peace

Collective Sub Outcomes

Prevention

Early Warning, Early Action

Preparedness

Recovery

Peace building

Outputs

Activities

The "How" or approaches

The "What"

Operations & Coordination

Programming & Financing

WASH Triple Nexus Ways of working

Existing WASH approaches/tools

WASH Sector Building Blocks

WASH NETZWERK

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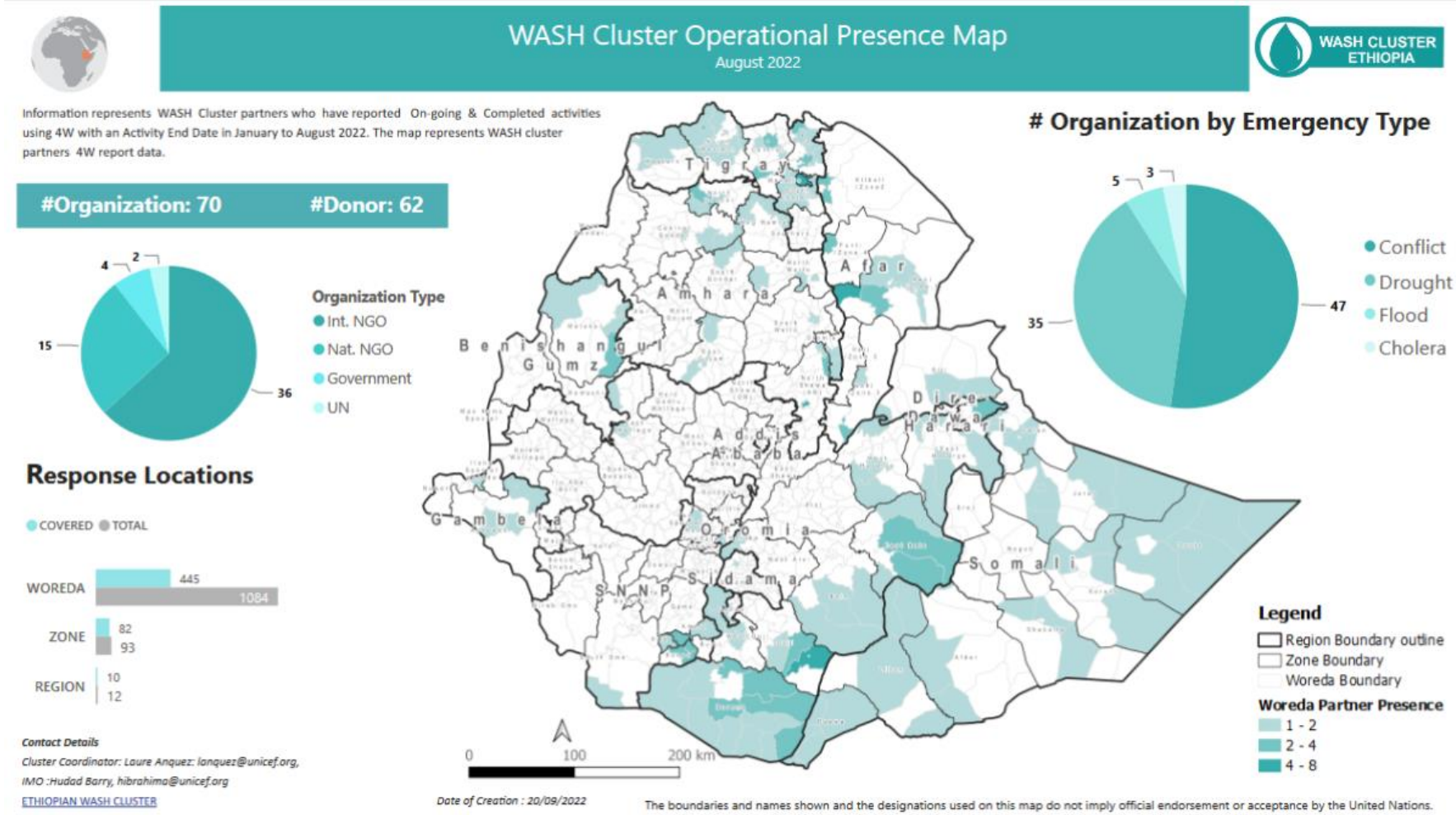
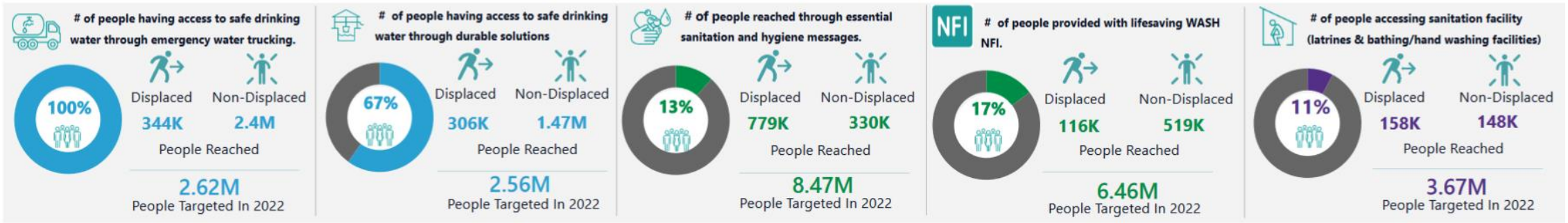
Emergency response through WASH cluster

70 partners across the country

8 regional coordination hubs close to response

Collaboration with **government** counterparts





Ethiopia Rapid Response Mechanisms (RRM)

Principles:

- Early warning system
- Prepositioning of supplies/partners with dedicated funds
- Standardised approach/assessment/reporting:

  alert > rapid assessment > intervention [first line, then second line] > monitoring
- Timebound first-line response
- Coordination with WASH cluster

Financial & operational pipeline facility

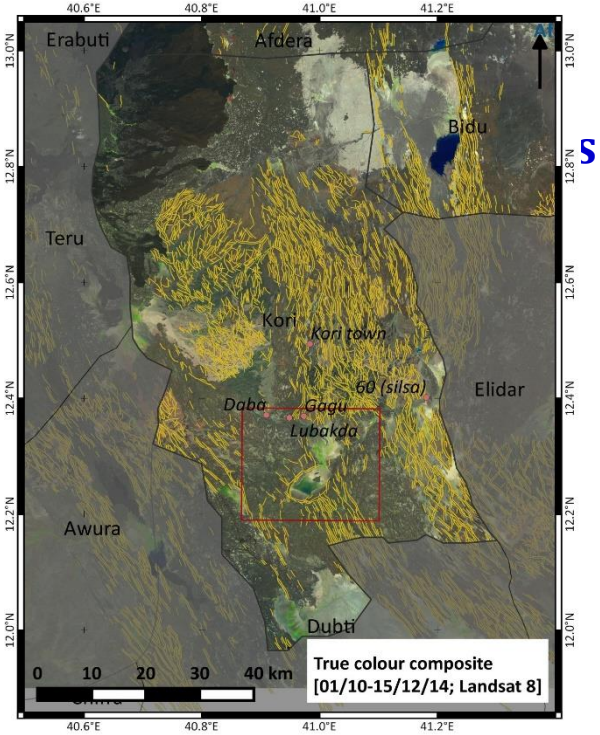
Ethiopia has several RRMs (UNICEF/BHA, ECHO/IRC, OCHA/SWAN)

Strengths: fast; agile; can quickly fill gaps in emergency response

Opportunities: allows also for system rehabilitation

Challenges: in protracted situation -> limited provision for sustainable exit or post construction support; small rehabilitation only; needs larger than RRM capacity

Early action/preparedness – Groundwater Suitability Mapping



Innovation and Climate Resilience

Strategic partnership between UNICEF, Ministry of Water and Joint Research Center (EU) – 2018-2020

Increasing deep well success rates from 40-50% to >90% in the Lowlands

More than 100 woredas mapped through UNICEF/EU and UKAid, currently expanding with UNICEF and WB funding

https://gw4e.acaciadata.com/

INPUT DATA

RS-derived data
- SRTM
- TARCAT, CHIRPS
- MODIS
- Landsat 8

Other data
- Geological maps
- Ground information

DATA PROCESSING & ANALYSIS

THEMATIC MAPS

Type 1
- Slope
- Lineaments
- Recharge*

Type 2
- TWI
- NDVI
- Flow accumulation
- Drainage network
- True/false colour composites

Type 1
- Permeability

Type 2
- Water points

CLASSIFICATION & WEIGHTING OF TYPE 1 LAYERS

WEIGHTED FACTOR LAYERS

OVERLAY ANALYSIS

GROUNDWATER PROBABILITY MAP

VALIDATION WITH TYPE 2 LAYERS & GROUND INFORMATION

SELECTED SITES FOR DETAILED STUDY

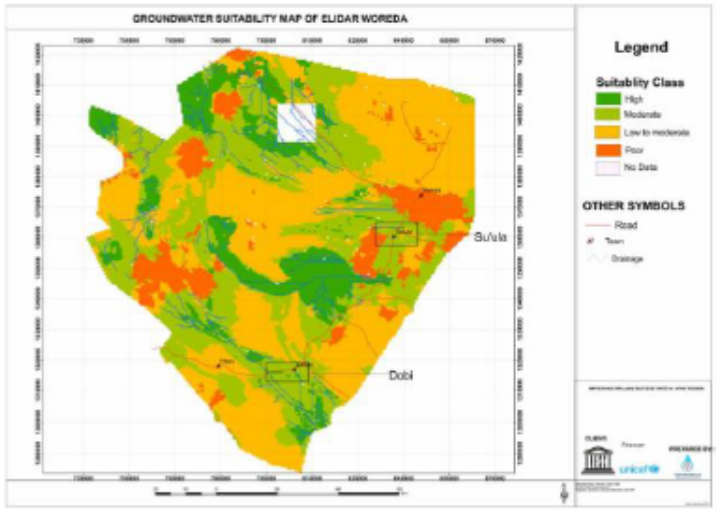
Data acquisition, processing & RS analysis

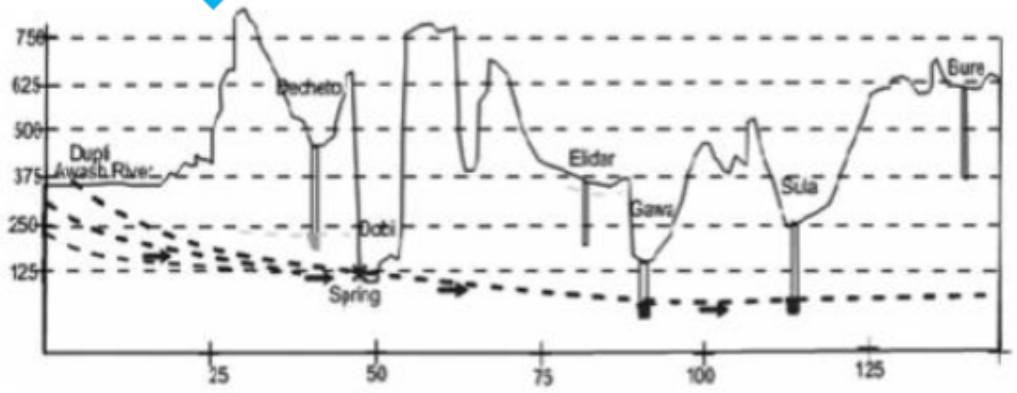
Overlay analysis

Early action/preparedness – Groundwater Suitability Mapping

Groundwater Suitability Map

Layer	Parameter	Factor weight	Class and class weight 1	2	3	4
1	Geomorphology	0.5	Flat low lying grabens 50	Gentle to flat horst 30	Gentle to steep horst 15	Steep and mountainous 5
2	Drainage/drainage density	0.25	High 70	Moderate 30		
3	Hydrogeology/permeability	0.23	High 60	Low to moderate 35	Aquiclude 5	
4	Structure/structural density	0.22	Major (regional) 55	Moderate 25	Local 15	Poor 5
	Total	1	58.4	30.05	8.95	2.6
	Classification		High	Moderate	Low to moderate	Low





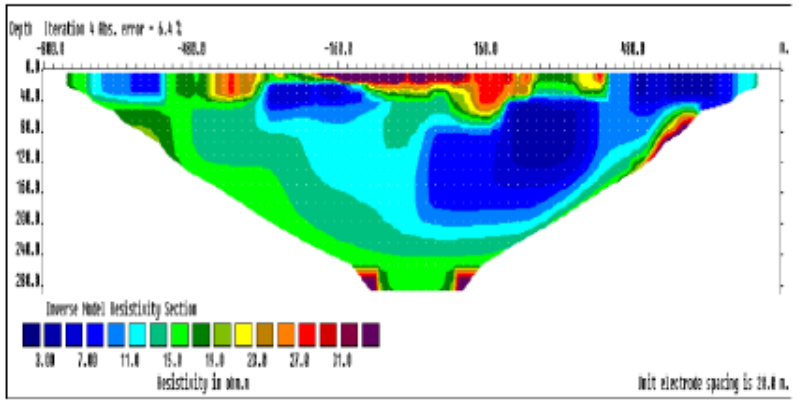
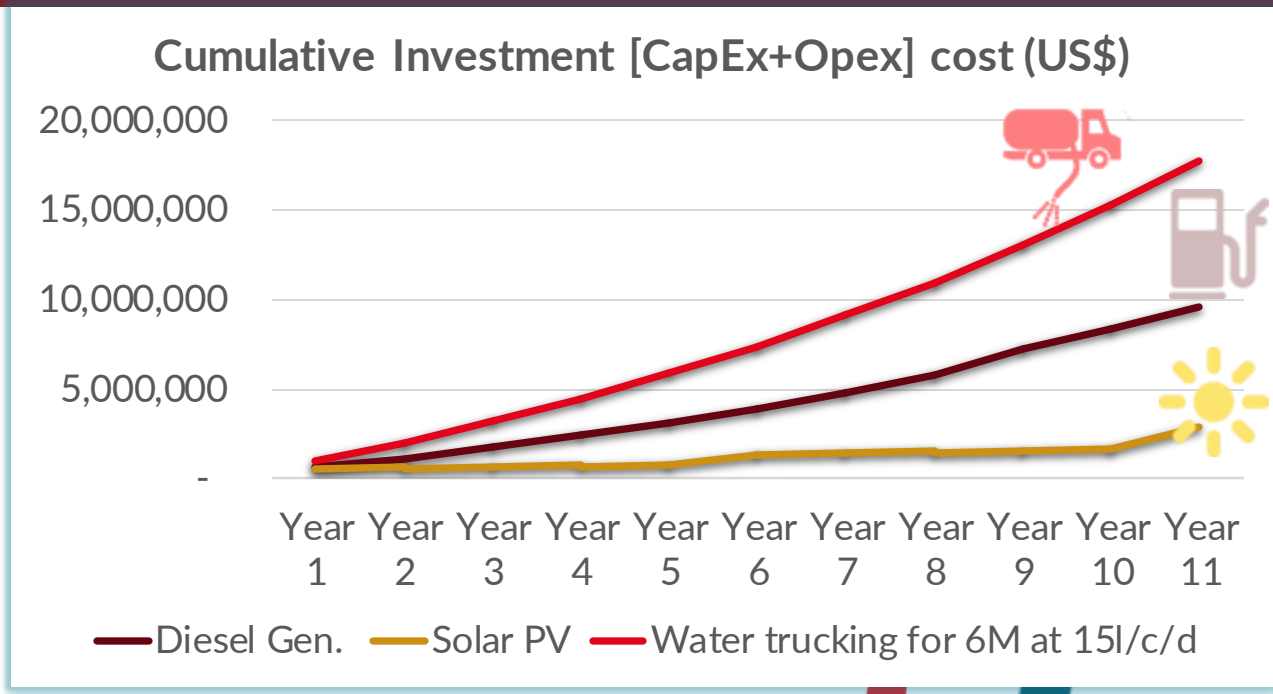


Figure 5. 5. 2D Resistivity Imaging section, Musley.

Climate Resilience – Shift to durable systems

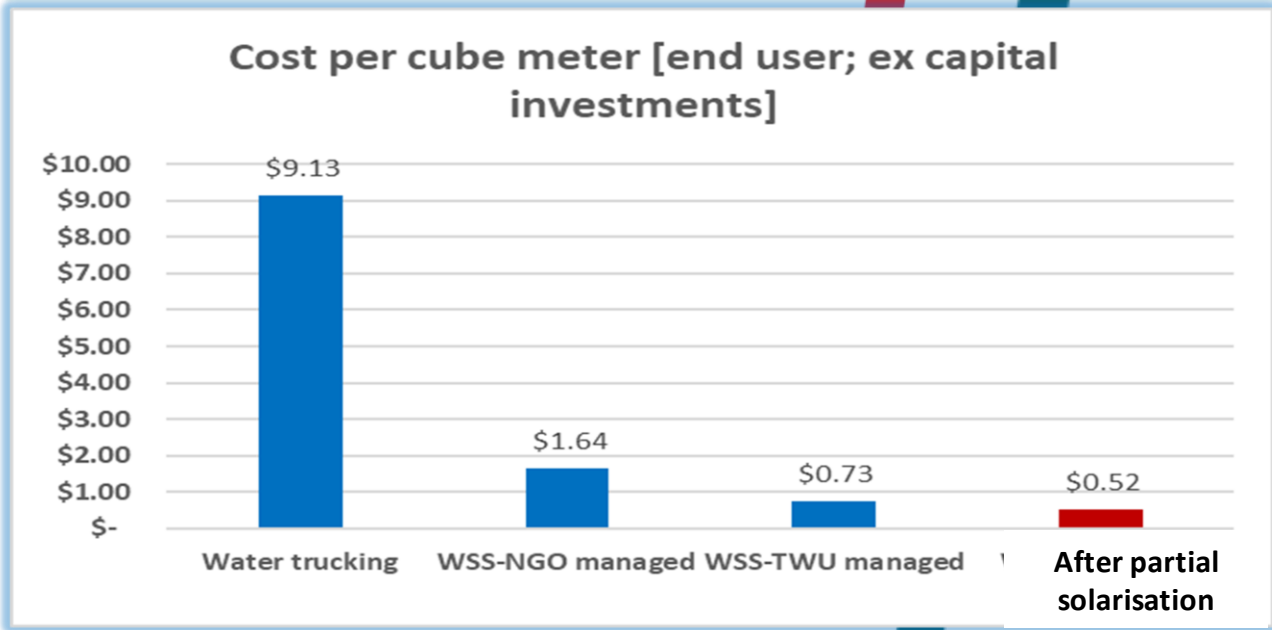
Business case for 10 yr life cycle of scheme in drought prone area; serving 20,000 people (Sept 2020):

- Water trucking operations (15l/c/d for 6 months/yr)
- Nearly 3 X cost of diesel-powered water systems (50l/c/day for 12 months/yr)
- Nearly 10 X cost of solar- powered systems (50l/c/day for 12 months/yr)



Cost analysis for durable system system in Refugee host systems: Shift from water trucking to Town Water Utility Managed water service delivery hosting 220,000 refugees and host community of 30,000 people – cost per m3

- Utility cost with cost recovery model = sustain operation
  and maintenance
- Note: analysis prior to recent fuel cost increases

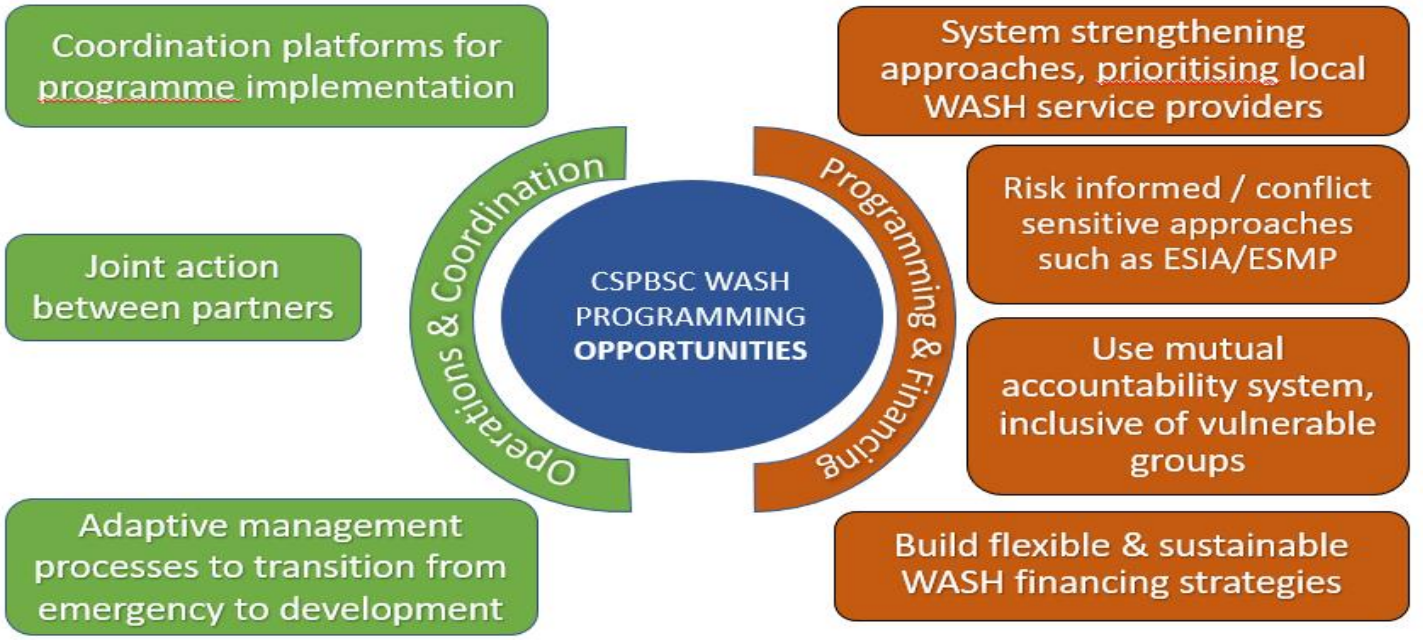


WASH for Peace – Conflict Sensitive Programming in fragile contexts

Integrating conflict sensitive and peacebuilding approaches &
Leveraging programmatic entry points in conducive sectors - WASH

https://www.unicef.org/ethiopia/documents/conflict-sensitivity-peace-building-and-social-cohesion-guideline-wash-programming

Entry points and opportunities



Climate Resilience-Energy Effectiveness

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WASH for Peace - some examples & experiences from Itang

Risk situation: In Jan 2020, low water production in system delivering water to 220,000 refugees and 30,000 hosts

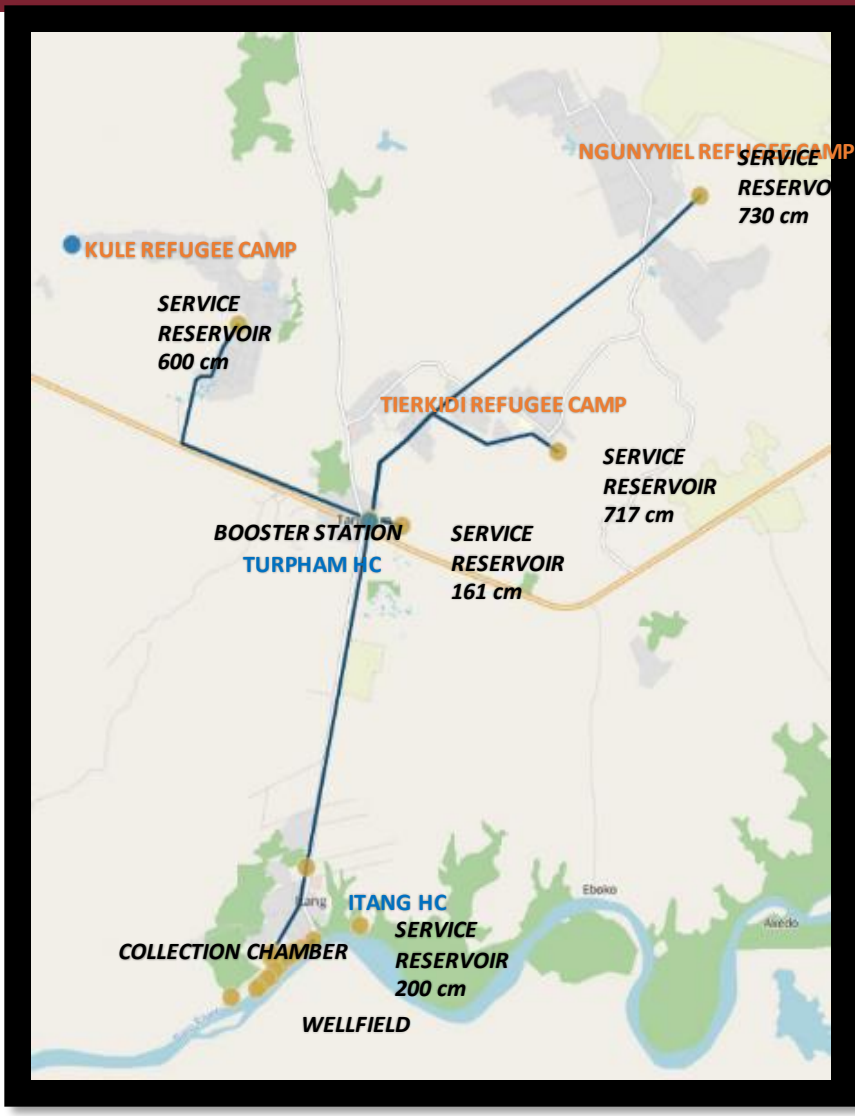
Due to:

1) Collapse of several wells and powerhouses
2) Limited access to spare parts and
3) Ethnic diversity between hosts and refugees

>> **Conflict and vandalism of WSS by host community**

How did we resolve the situation: use entry points

- Intensify coordination
- Multi-stakeholder Contingency plan / Business continuity plan with (i) clear responsibility allocation; (ii) budgeted *short term*, *medium- and long-term interventions*; (iii) fast tracking upgrade of EM equipment
- Water Utility strengthening with strong O&M and Business plan for full cost recovery



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Conclusion and way forward

Need to cover **whole spectrum from prevention to peace building**

Financial and operational mechanisms to respond specifically to emergency response remain critical

Resilient systems can support fragile situations, but require more time and resources; this is even more challenging in a fragile context

Need to bridge and develop mechanisms / funding facilities that bridge nexus between emergency and development

THANK YOU

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19 - 21 October 2022 | Accra, Ghana

Find out more
www.ircwash.org/all-systems-go-africa

IRC Supporting water sanitation and hygiene services for life

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