

RESILIENCE EXCHANGE WEBINAR

Technology for Evolving Challenges in Humanitarian Contexts

Landscape Analysis & Lessons from the Field

Global Resilience Partnership · November 2026

ABOUT THE TECH4RESILIENCE CHALLENGE

Identifying and supporting idea-stage solutions

The Technology for Evolving Challenges in Humanitarian Contexts (TECH) 4 Resilience Challenge identifies and converts idea-level AI innovations into scalable, sustainable solutions that strengthen preparedness and response to climate-related emergencies.

TECH 1 launched in 2025, with a 12-month implementation period through Jan-Dec 2026. TECH 2 launched in 2026, winners will be announced at COP and implementing 2027.

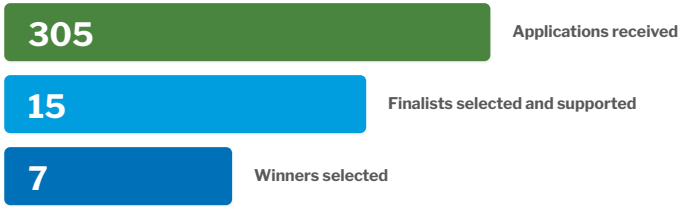
$25,000 – $50,000 grant per grantee

IMPLEMENTATION COUNTRIES

- Nigeria
- Ethiopia
- Nepal
- Mozambique
- South Sudan
- Sudan
- Indonesia

TECH 1 · SELECTION

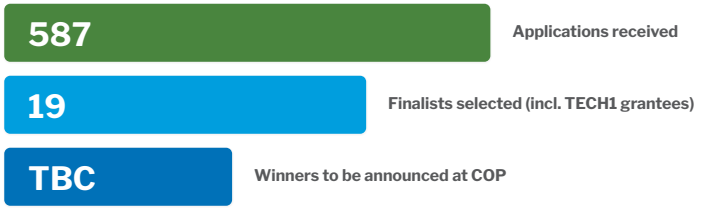
First call, across 72 countries · most from Africa (56%) and Asia (24%)



Seven projects are currently funded to implement in 2026.

TECH 2 · SELECTION

The second call received 587 applications from 82 countries.



Winners have been selected and will be announced at COP to implement in 2027.

Agenda

01	Welcome	10 min
02	Landscape Analysis findings	10 min
03	Danish Refugee Council (DRC)	10 min
04	GOAL Global	10 min
05	Q&A	15 min
06	Closing	5 min

BEFORE WE START

Zoom etiquette

01

Mute yourself

unless you are speaking

02

Questions

use Raise Hand or type in the chat; we will take them during the Q&A

03

Keep it brief

help us stay on schedule by keeping comments and questions short

04

Recording

this webinar will be recorded and shared online

05

Your organisation

add it after your name: Participants > More > Rename

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ADVANCING RESILIENCE IN AN INTERCONNECTED WORLD

Landscape Analysis Findings

Prof Patrick McSharry

Photo credit: Moe Babiker, DARAJA

SCOPE AND METHOD

Three evidence streams

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LITERATURE

5

application areas

Peer-reviewed and grey literature

SURVEY

67

responses

Self-selected, predominantly implementers

PORTFOLIO INSIGHTS

8

solutions in 8 countries

GRP grantees receiving US$20,000–50,000, implementing through 2026

WHY IT MATTERS

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Partial warning coverage and contracting budgets

60%

of countries report having a multi-hazard early warning system in place.

Small island states and least-developed countries are most exposed.

Opportunity	AI can make forecasts more accurate and extend coverage into sparsely monitored areas, at a fraction of the cost of traditional systems.
Pressure	Humanitarian funding cuts are creating additional pressure to find efficiencies.
Constraints	Data gaps, uneven language coverage and weak links between AI developers and disaster-risk or humanitarian specialists might constrain what is possible.

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KEY FINDING

Technical feasibility is demonstrated more clearly than sustained resilience outcomes.

The evidence base is maturing unevenly: strongest for anticipatory cash, weakest for health applications at scale.

EVIDENCE BY APPLICATION AREA

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What the evidence supports & what it does not yet

	Technical performance →	Operational use →	Resilience outcome
Hyperlocal early warning	**Demonstrated** gains in accuracy and coverage	**Emerging** needs owners, channels and pre-agreed actions	**Limited** little evidence yet that AI warnings reduce losses
Anticipatory cash and action	**Emerging** AI entering forecasts and triggers	**Established** triggers, finance and delivery in use	**Strongest** gains for anticipatory action, not necessarily attributed to AI though
Health resilience	**Prototype** retrospective accuracy on curated data	**Limited** workflow and regulatory barriers	**Weakest** little evidence on safety or health at scale
Index and parametric insurance	**Improving** AI reduces, but cannot remove, basis risk	**Established** but often dependent on subsidy	**Contested** Wide variation in effects
Displacement forecasting	**Useful skill** 10–18% error; weaker in surges	**Emerging** live triggers in South Sudan and Somalia	**Early signals** pilots depict gains, but attribution remains weak

SURVEY: WHAT SOLUTIONS RUN ON

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Proprietary models and connectivity challenges

69%

use a proprietary frontier model as a service: GPT (41), Gemini (20), Claude (18). 15% train their own.

52%

work offline or sync periodically. But 21% are untested without connectivity and 19% are cloud-dependent.

51%

keep a human in the loop before any action. 6% alert automatically, with no human review.

Inputs are government and administrative records (73%), community-reported data (66%) and satellite observation (55%). Around two in five respondents describe a data governance practice in operation today.

Risks and asymmetries

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01 **Data gaps and representational bias**

02 **Exclusion of low-connectivity and low-documentation populations**

03 **Explainability, accountability, and where decision rights sit**

04 **Over-reliance on prediction where institutions cannot act**

05 **Resource intensity and environmental footprint**

The scale of the funding gap

US$582bn

global corporate AI investment in 2025, a record high

US$163m

venture investment in climate risk analytics in 2025, one of the most AI-intensive resilience segments

~US$33m

in flagship commitments to AI for resilience in humanitarian settings, spread across several years

FROM THE SURVEY

AI has enormous potential to strengthen humanitarian preparedness, but its impact will depend on whether it reaches the communities that are currently excluded by language, literacy, connectivity, and accessibility barriers. The greatest innovation is not only building smarter AI, but making it more inclusive.

Maysoon Badi · Chief Executive, Sudan Urban Development Think Tank

CONCLUSIONS

Key questions we are taking forward

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1

Finance architecture

How might we create the incentives and coordination mechanisms for grantmakers, intermediaries and capital providers to address the backend challenges of graduation and scaling?

2

Graduation pathways

How might we work with funders, investors and institutional adopters to formalise graduation pathways for idea-stage solutions, with agreed referral criteria?

3

Evidence and learning

What does “good enough” evidence look like, if the aim is to unlock the next stage in a solution’s journey towards graduation?

With deliberate investment, shared standards, and coordinated action, AI could strengthen the resilience of those most exposed.

Anticipatory Action for Conflict-Induced Displacement

Anna Lena Huhn - Global Lead on Anticipatory Action, annalena.huhn@drc.ngo
Alexander Kjaerum - Senior Analyst and Global Advisor, alexander.kjaerum@drc.ngo



From Foresight to AHEAD

2017

Foresight

- Support to overall, annual strategic planning
- Predicting number of displaced persons (IDPs, refugees and asylum seekers) *from* a given *country 1-3 years into future*

MINISTRY OF FOREIGN AFFAIRS OF DENMARK
Danida

IBM

2020

WACAFI

- Support to operational planning
- Predicting number of displaced persons (IDPs, refugees and asylum seekers) in a given admin 1 and admin 2 district 3-4 months into future in Sahel

MINISTRY OF FOREIGN AFFAIRS OF DENMARK
Danida

2024

AHEAD

- Support to anticipatory action for displacement
- Predicting number of displaced persons (IDPs, refugees and asylum seekers) *in* a given *admin 1 and admin 2 district 3-4 months into future across 19 countries*

Ministry of Foreign Affairs of the Netherlands

Humanitarian Aid and Civil Protection

novo nordisk foundation
Benefitting people and society

IKEA Foundation

Andrew Carnegie FOUNDATION

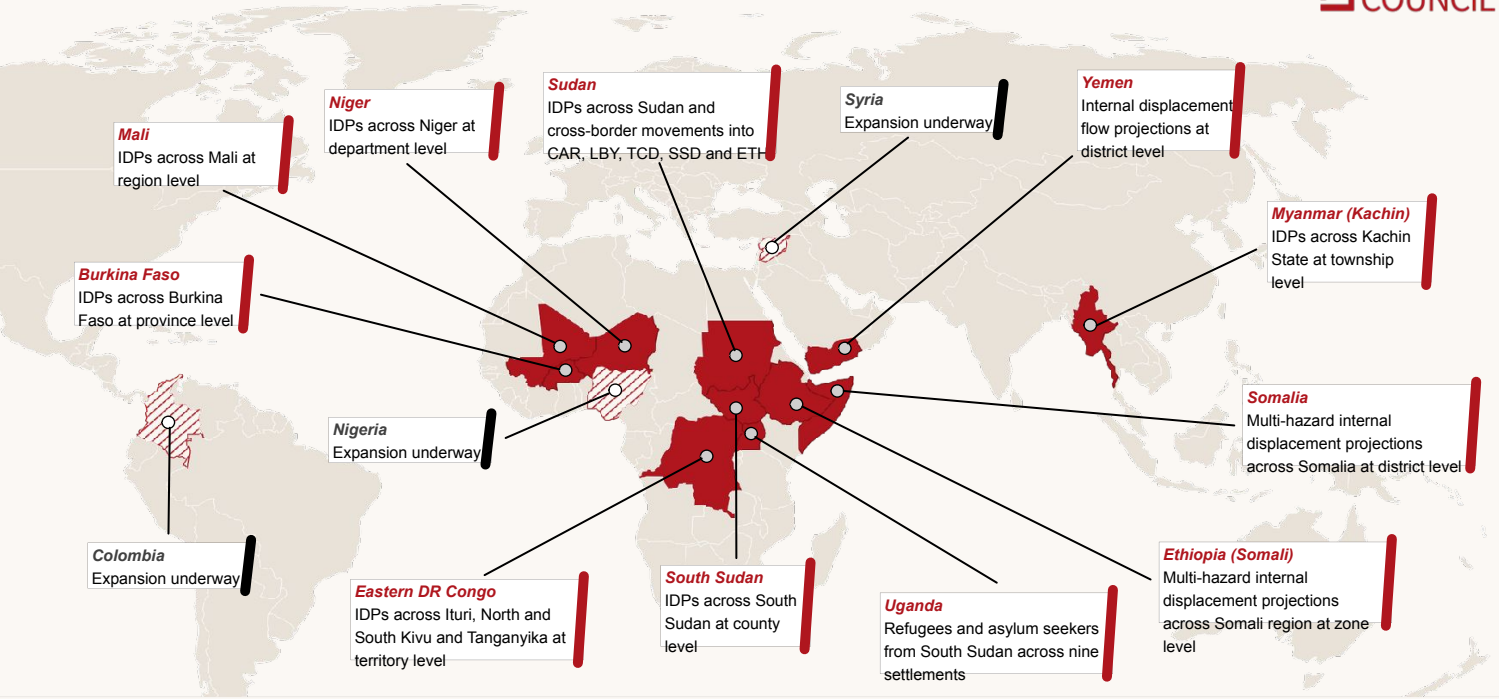
Vitol Foundation

Advancements in predictive capacities

The AHEAD Model

RICA · MENA · ASIA · LAC

DANISH REFUGEE COUNCIL 70 YEARS



Rolling monthly, sub-national displacement forecasts with 3-4 month lead time



Paired with ground intelligence:
Community Peace Monitoring

DANISH REFUGEE COUNCIL 70 YEARS

Stage 01 · Identify

Surface the signals communities already read.

MOVEMENT RESTRICTIONS

Stage 02 · Select

Choose 3–5 indicators that can be acted on.

Stage 03 · Monitor

Collect on a rhythm, with safeguards.

Stage 04 · Calibrate

Refine the trigger as the data comes in.

CALIBRATION IN PRACTICE

Illustrative · % of key informants reporting movement restrictions

Setting the community-level trigger: catching real surges, avoiding false alarms.





Anticipatory action across the displacement continuum

ORIGIN

Myanmar, Uganda, Burkina Faso, Ethiopia, Somalia

WHAT WE AIM TO ACHIEVE

Conflict prevention

1

AA ACTIVITIES

Peacebuilding activity in areas at risk.

CHANGE WE EXPECT TO SEE

Escalation of conflict prevented - no surge of displacement.

Ensuring safer and better-informed displacement

2

AA ACTIVITIES

Pre-departure cash, protection and risk-education awareness, information on safe routes.

CHANGE WE EXPECT TO SEE

Lower exposure to protection risks; capacity preserved.

TRANSIT



THE CORRIDOR APPROACH

ARRIVAL

Yemen, Burkina Faso, Niger, Uganda, Somalia

WHAT WE AIM TO ACHIEVE

Protecting coping capacities of displaced population until traditional response onset

1

AA ACTIVITIES

Prepositioning and reception readiness ahead of an anticipated influx, so assistance reaches people sooner after they arrive.

CHANGE WE EXPECT TO SEE

Less negative coping at the point of assistance; lower unmet-need severity.

Preparing hosting communities capacity to receive influx of population

2

AA ACTIVITIES

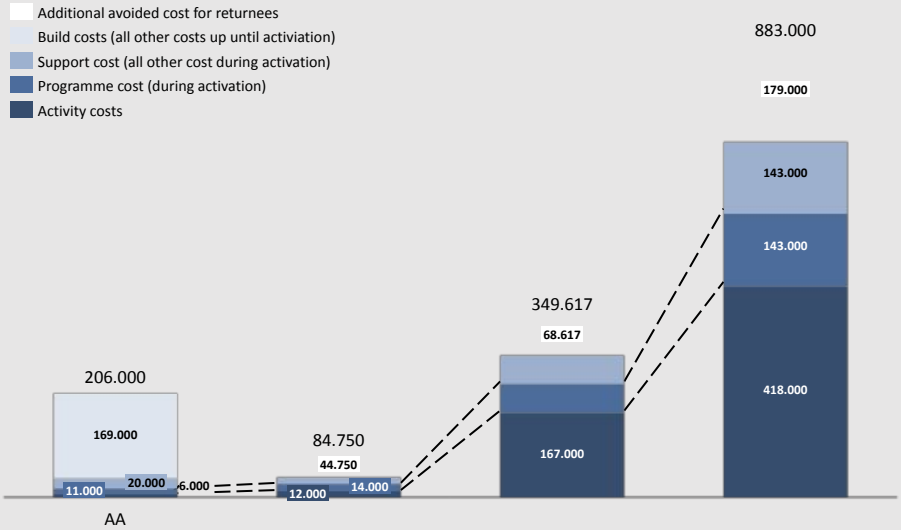
Social cohesion awareness with host communities ahead of an influx; training community leaders on dispute management; identifying sites and resources under tension.

CHANGE WE EXPECT TO SEE

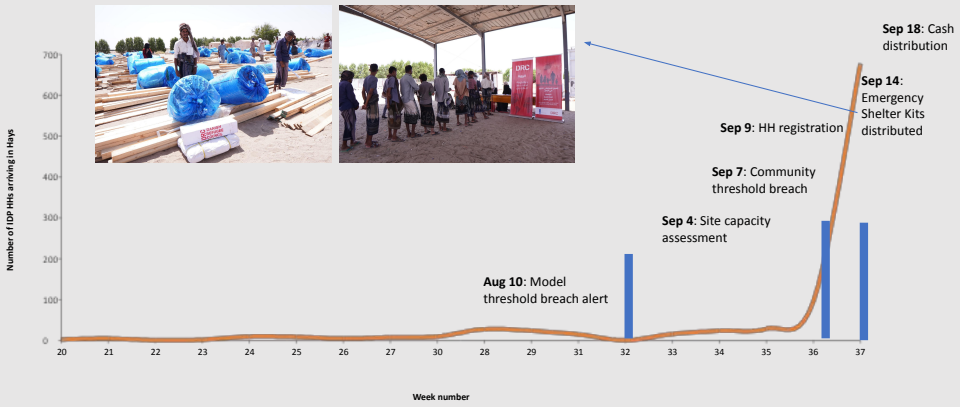
Preventing conflict between host and displaced communities.

Evidence to date: Cost-effective and impactful

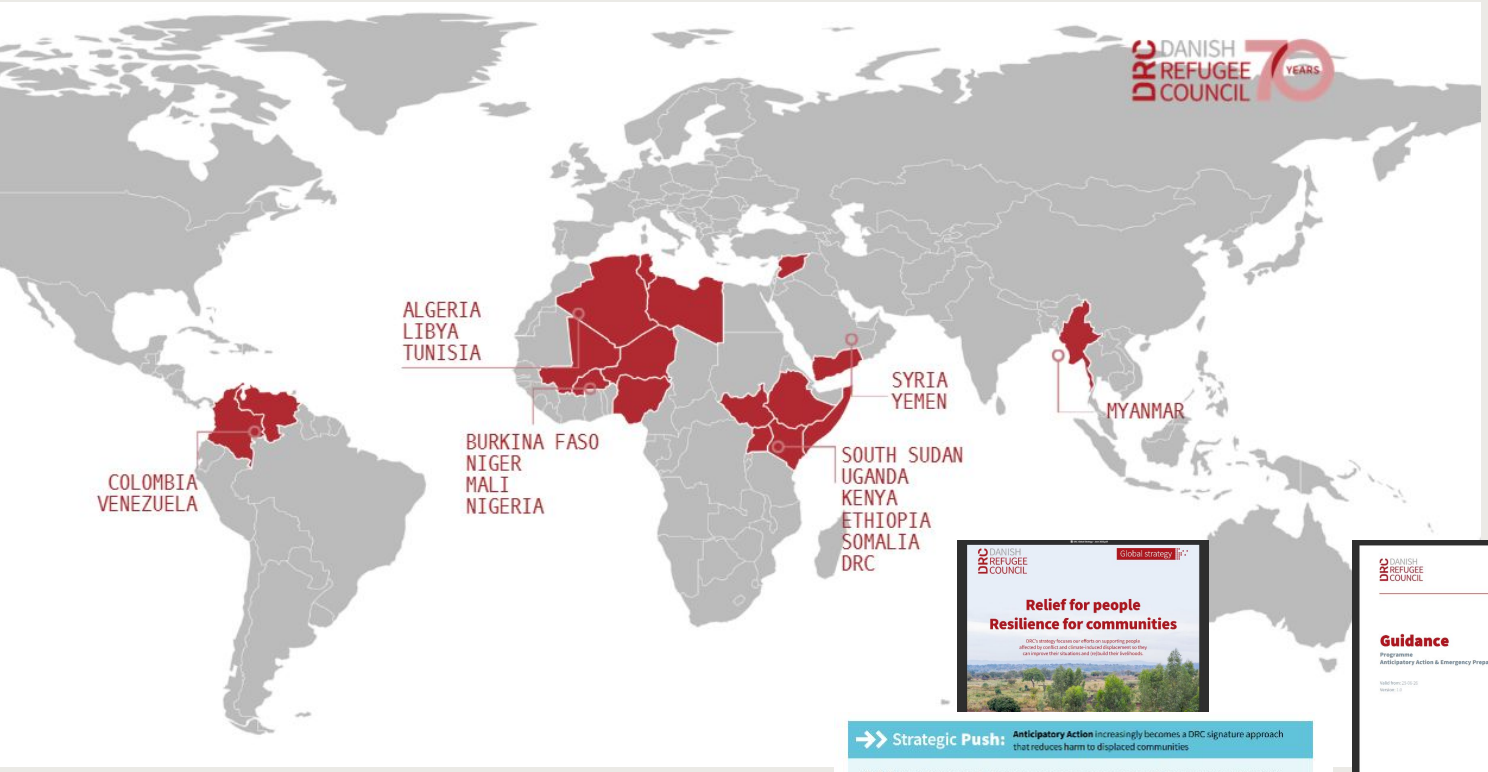
Deescalating and avoiding displacement

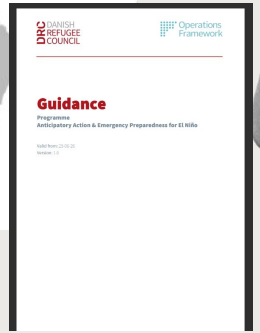


Responding timely to reduce needs from displacement



Current AA Footprint









ANCHOR

FOR CHOLERA

GOAL



ANCHOR | GOAL

01

Community Chatbot

Verified disease info, FAQs & advice in local languages — 24/7 community feedback channel

02

WhatsApp Data Collection

Real-time field insights via mobile: disease surveillance, referrals & rumour management

03

Predictive Modelling & Risk Forecasts

Climate, epidemiological, & other data modelled for localised early warning alerts & 3-week transmission horizons

04

Digital Community Networks

Cross-geography coordination for CLA, response & news sharing — optimised for low bandwidth

05

AI-Tagging & Analysis

Automated tagging of qualitative data to surface disease hotspots and emerging rumours fast

06

Live Dashboards

Integrated health system dashboards from national to local — supporting real-time decisions

INNOVATION

When warning works.

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JOURNEY

Don't replace what works. Build on it.



CHALLENGE

One step back. Two steps forward.

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LESSON

Same roots. Wider reach.





GET IN TOUCH

innovationlab@goal.ie



GLOBAL RESILIENCE PARTNERSHIP

Q&A

Scan the QR code to download the Landscape Analysis Brief