

## The impact of disasters on humanitarian aid allocations: a storyline approach to Tropical Cyclone Idai & the food security crisis in Ethiopia

*Conference: Cross-border climate change impacts and systemic risks in Europe and beyond*

### Author:

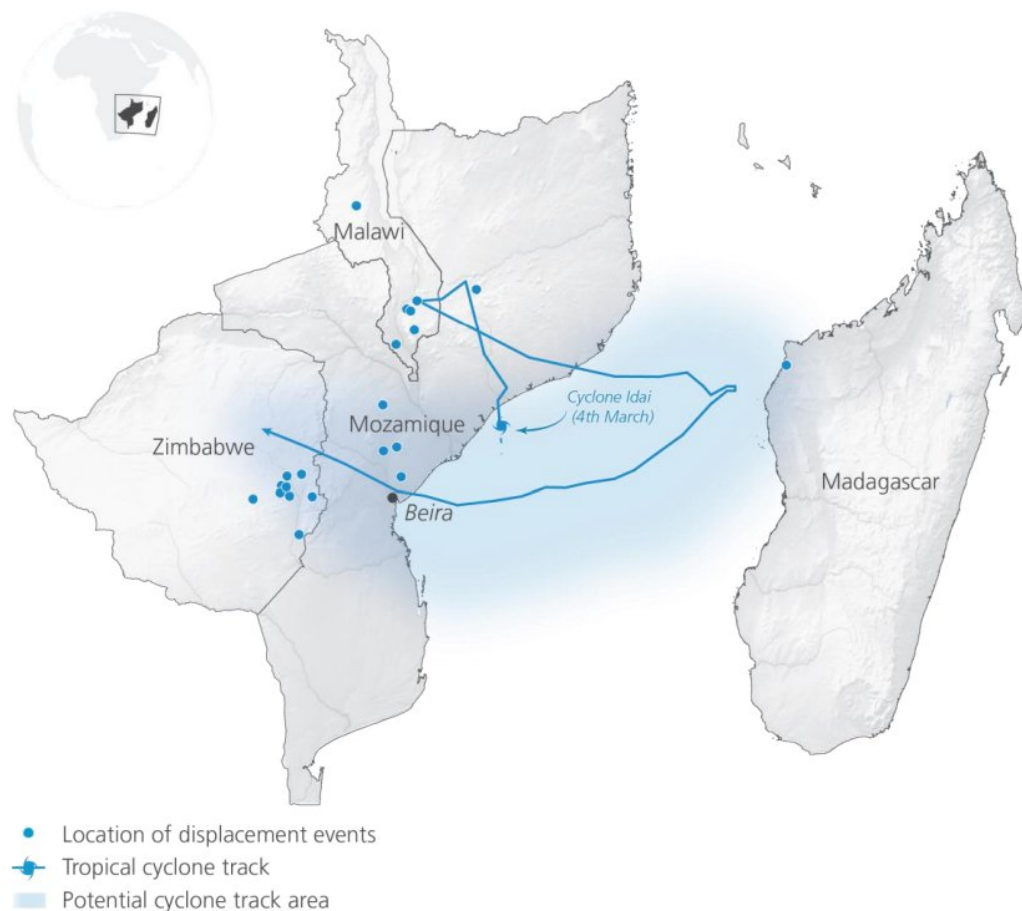
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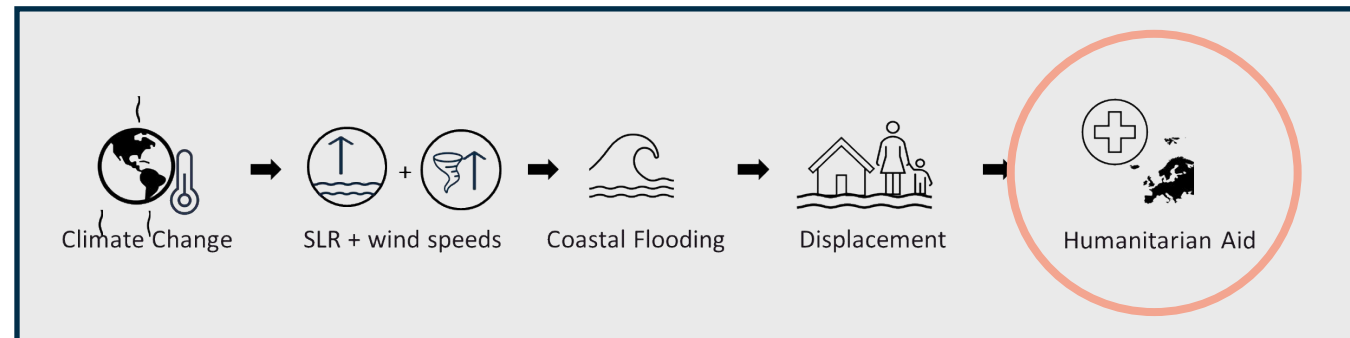


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# Tropical cyclone Idai in Mozambique



Source: IDMC, 2019



The measure of **humanitarian aid** encompasses aid given for emergency response, reconstruction relief, and disaster prevention and preparedness sectors.

# Idai and Kenneth Humanitarian Response Plan (Mozambique Storyline)



TOTAL PEOPLE IN NEED

2.5 MILLION

TOTAL PEOPLE  
TARGETED

2.0 MILLION

TOTAL FINANCIAL  
REQUIREMENTS (US\$)

\$620.4 MILLION

(Nov 2018 - May 2020)

US\$620.5m total requirements of plan

\$314.4m

\$306.2m

50.7%

funded through this plan

49.3%

unmet requirements

**Humanitarian Response Plans:**  
defined on an annual basis, for  
requirements over 90 days.

**Flash Appeals:** coordinated short  
term response for sudden onset  
disasters (drafted in 5-7 days).

**At times, flash appeals and HRP  
are combined afterwards.**

Sources: UNOCHA, Financing  
Tracking System (UNOCHA)

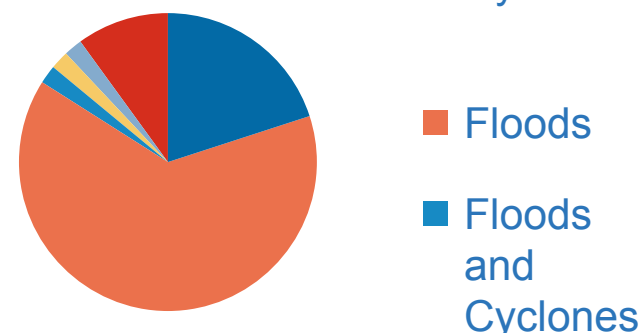
# Humanitarian Aid Costs I (Mozambique Storyline)

Emergency	Month	Year	Recipient	Flows (\$ M)
Floods	April	2001	Angola	0.07
Floods	March	2009	Angola	0.08
Floods	July	2010	Benin	7.1
Floods	July	2001	Ghana	0.69
Floods	June	2002	Ghana	8.20
Floods	July	2009	Ghana	0.17
Flood	June	2010	Ghana	0.16
Floods	September	2001	Guinea	0.77
Floods	September	2006	Guinea	0.06
Floods	August	2011	Guinea	0.39
Cyclone	February	2000	Madagascar	8.84
Cyclone Kesiny	May	2002	Madagascar	0.21
Cyclone Manou	May	2003	Madagascar	1.29
Floods	January	2003	Madagascar	0.65
Cyclone Elita	February	2004	Madagascar	0.48
Cyclone Gafilo	March	2004	Madagascar	12.03
Floods and Cyclones	January	2007	Madagascar	22.78
	April			
Cyclone Ivan	February	2008	Madagascar	24.90
Tropical Cyclone Fanele	January	2009	Madagascar	0.95
Tropical Cyclone Hubert	March	2010	Madagascar	2.04
Cyclone Bingiza	February	2011	Madagascar	2.10
Tropical Cyclone	February	2012	Madagascar	4.41
Cyclone Enawo	Year	2017	Madagascar	15.60
Regional Floods	September	2007	Mauritania	37.83
Floods	August	2009	Mauritania	0.13
Floods	January	2000	Mozambique	165.85
Floods	February	2001	Mozambique	23.16
Rains	January	2003	Mozambique	0.11

Floods	February	2007	Mozambique	50.49
Cyclone Jokwe	March	2008	Mozambique	8.17
Floods	January	2008	Mozambique	24.06
Tropical Cyclone	January	2012	Mozambique	4.17
Floods	January	2013	Mozambique	17.96
Floods	Year	2015	Mozambique	11.96
Cyclone Dineo	February	2017	Mozambique	6.03
Tropical Cyclone Idai & Kenneth	March	2019	Mozambique	363.77
	April			
Floods	May	2003	Namibia	0.20
Floods	April	2004	Namibia	0.03
Floods	February	2006	Namibia	0.97
Floods	March	2009	Namibia	4.15
Floods	January	2011	Namibia	2.45
Floods	January	2002	Senegal	0.36
Floods	September	2008	Senegal	0.09
Floods	August	2009	Senegal	1.40
Floods	August	2005	Sierra Leone	0.18
Floods	October	2010	Togo	1.27
Floods	May	2004	Zambia	0.04
Floods	January	2007	Zambia	1.92
Floods	March	2000	Zimbabwe	3.30
Floods	March	2001	Zimbabwe	0.10

- ✓ Adaptation of **IFRC methodology\*** on calculation per capita cost of response.
- ✓ **Matched** humanitarian aid flows requested in Humanitarian Flash Appeals with fatality and people affected data per event.
- ✓ Estimated **per capita humanitarian aid cost** ranges from \$32-\$68, with \$50 average value.

Events by type 2000-2019 (EMDAT)



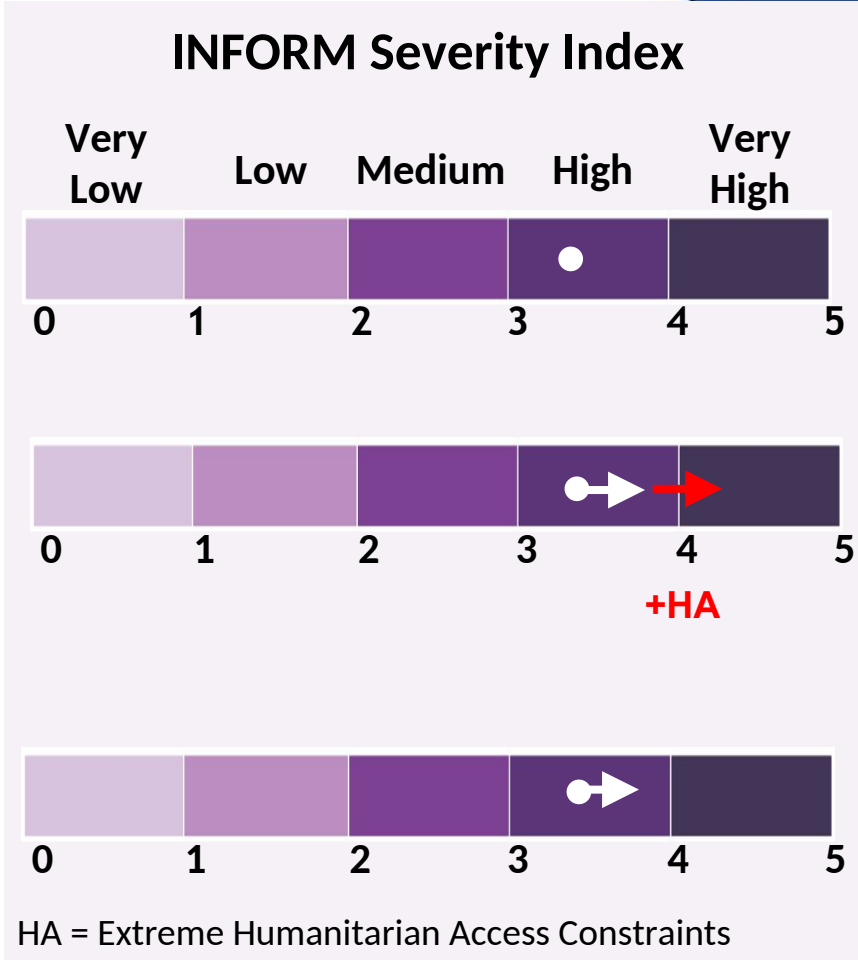
Sources: data from Financing Tracking System and EMDAT.

\*IFRC, 2019. The cost of doing nothing - Appendix Methodology.



# Humanitarian Aid Costs II (Mozambique storyline)

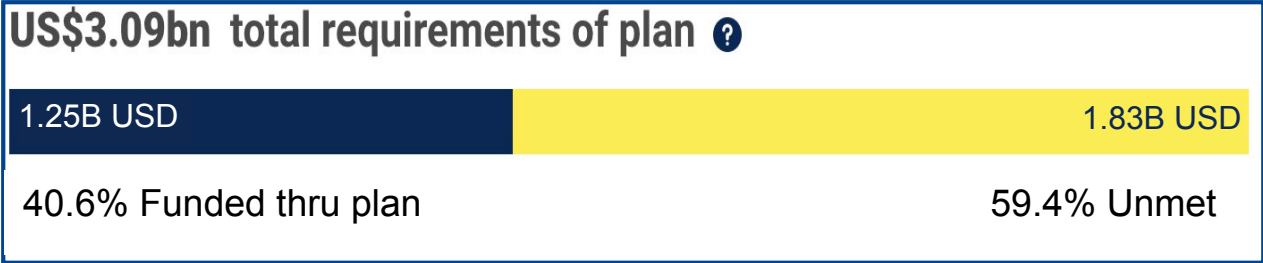
Scenario	Affected (M)	Internal Displacements (M)	Damage <sup>2</sup> (M USD)	Aid Req'd <sup>1</sup> (M USD)
Factual: TC Idai	1.0	0.77	257	95
2100 SSP5-RCP8.5 <sup>3</sup>  + HA	2.6	1.04	871	128
2100 SSP1-RCP2.6 <sup>4</sup>	2.1	0.84	361	105



<sup>1</sup> Aid required per person affected = \$50 (32 to 68)  
<sup>2</sup> Beira only & no agriculture; World Bank Mozambique estimate = \$656M to \$773M  
<sup>3</sup> 2100 RCP8.5 = 33% Wind & 156cm SLR  
<sup>4</sup> 2100 RCP2.6 = 21% Wind & 39cm SLR



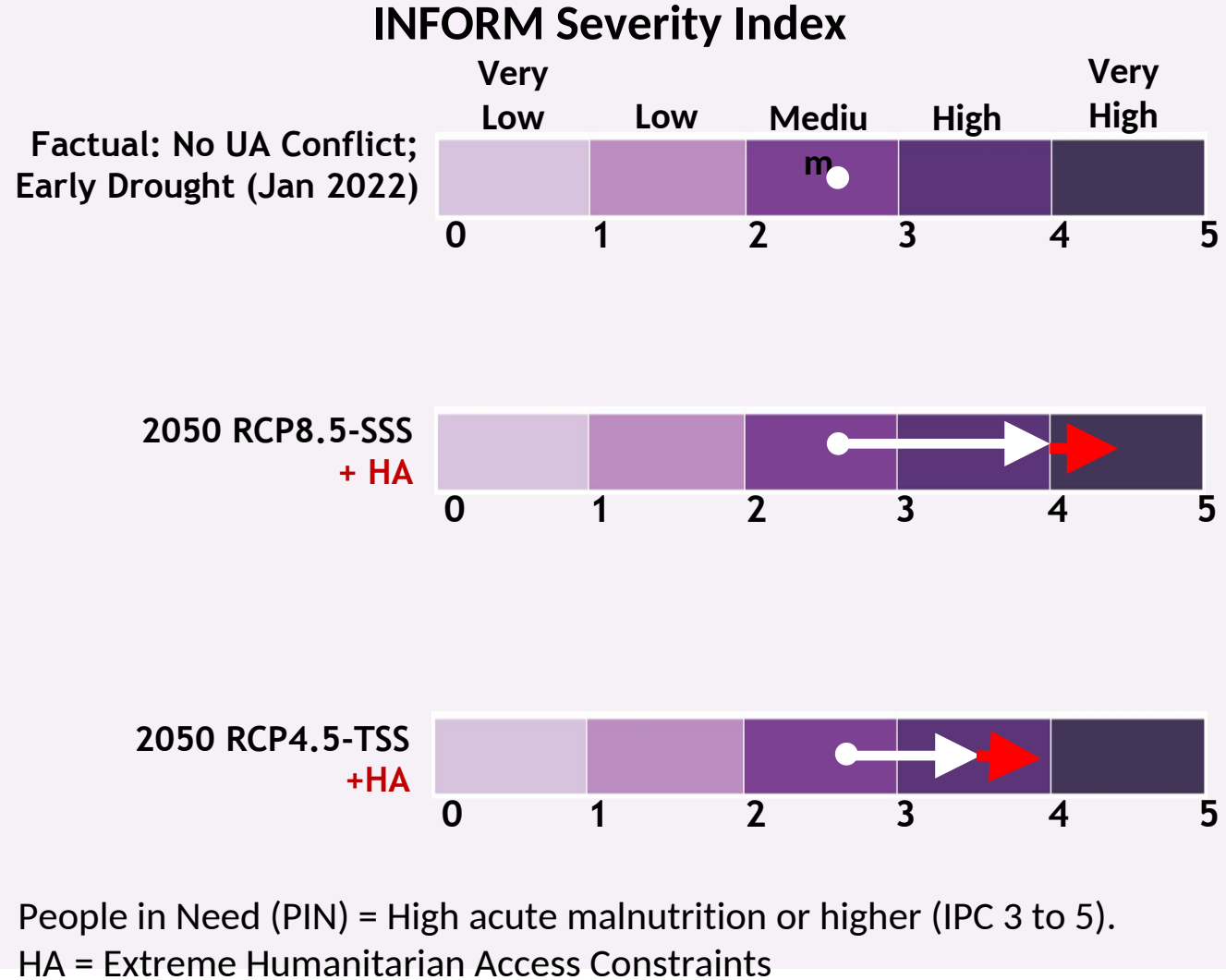
## Ethiopia Humanitarian Response Plan 2022 (UNOCHA FTS)



1.66B USD for Drought Response Plan to target 17M people (9.9M PIN)  
100 USD per person targeted

# Humanitarian aid costs (Ethiopia storyline)

Scenario	People in Need (M)	Aid Req'd <sup>1</sup> (B USD)
Factual: Jan 2022: No UA Conflict	0.3	0.03*
2050 RCP8.5-SSS UA Conflict Severe Drought  + HA	25.5	2.51
2050 RCP4.5-SSS UA Conflict Severe Drought  + HA	4.7	0.47



\*Based on regional drought response plan for the Horn of Africa (Jan-Jun 2022)

- The complex multi-dimensional structure of the Ethiopian and Mozambique storylines shows that the **climate factors amplify the need for humanitarian assistance**, gap in aid provision, and the necessity for a larger and shared international cooperation to address future events.
- Composite indices such as **INFORM Risk** offer invaluable insights to bridge climate-security risks with human development and peace-building efforts, offering a holistic approach to EU foreign policy making.
- Efforts directed to development-oriented approaches to forced displacement; restoration plans; and towards **anticipatory actions** in preparedness (for example Impact-Based Forecasting), but also **climate change mitigation and adaptation** investments are key to reduce population vulnerability and exposure.



# THANK YOU

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## Financial Tracking Service Data Info and background:

- Tracks and updates funding flows between donors (government and private) and operational humanitarian actors (UN agencies, the Red Cross Movement, NGOs and CSOs)
- Monitor funding progress against humanitarian response plan (HRP) and appeal requirements (raised by affected countries)
- Data is provided as individual flow streams to HRP/appeals or outside these
- HRP and appeals can cover multiple emergencies situations (extreme events, drought, war etc) and multiple countries (regional appeals also exist), usually they are drafted with reference to a specific year.
- Appeals especially flash appeals are faster and following a specific emergency
- HRP are drafted after a more comprehensive humanitarian situation assessment

# HRP costing methodology

- The methodology for costing most HRPs is Project based costing: relies on summing funding requirements submitted by different agencies.
- An alternative methodology - Unit based costing
  - identifies a unit cost 'driver'. Example from DRC 2018 (per person) on right.

Cluster	Average Unit Cost, Non-Refugees	Average Unit Cost, Refugees
Education	\$65.00	\$33.87
Food Security	\$77.70	n/a
Health	\$18.00	\$20.67
NFI/Shelter	\$38.40	\$31.72
Nutrition	\$99.30	\$25.49
Protection	\$8.30	\$27.33
WASH	\$11.40	\$26.34
Non-Sectoral Refugee Response	n/a	\$39.53

- In a food insecurity crisis, INFORM Severity Index labels people in need of humanitarian assistance as people under stress levels 3, 4 and 5, which according to the (IPC, 2004) classifications are in a situation of crisis (3), emergency (4) and famine (5).
- IFRC's analysis (IFRC, 2019b) uses data from IFRC GO, a public repository of IFRC global operations and appeals (from 2000-2019) to estimate the average cost of humanitarian response per person in need, following a disaster. IFRC's methodology compared the sum of funds requested per-disaster over the sum of per-disaster year-equivalent beneficiaries targeted. According to IFRC's analysis, in a food insecurity crisis (including drought), the mean per capita cost for a person in need of aid is \$13.94, and ranges between \$7.19-\$35.96.