

#### **Drought Impacts I: Migration**

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Climate

Econometrics



### Disentangling the issue

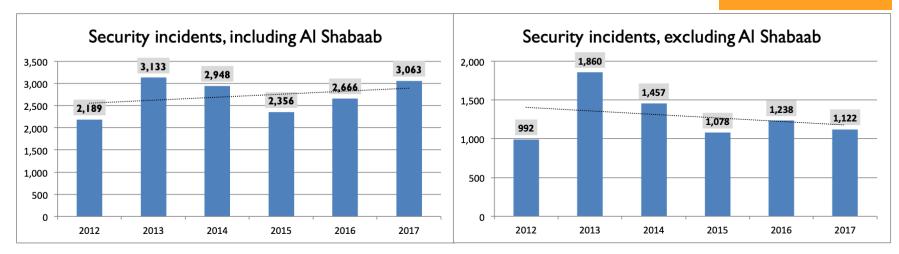
Migration drivers in the context of conflict and climatic stress are not well understood in the region of East Africa.

### Background

- Somalia has endured regular cycles of drought disrupting well-established migration paths.
- However, political instability and conflict over the past 20 years paired with prolonged drought conditions having struck much of the Horn of Africa since 2015, jeopardise the humanitarian and social situation in Somalia.

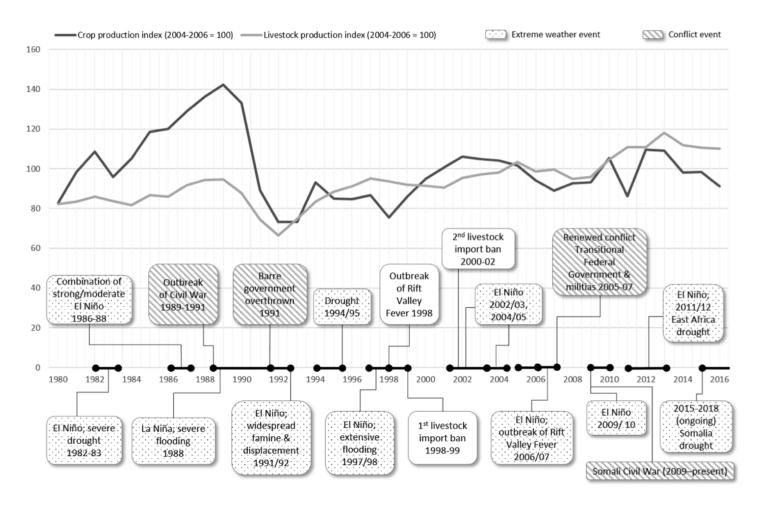


### **Motivation**

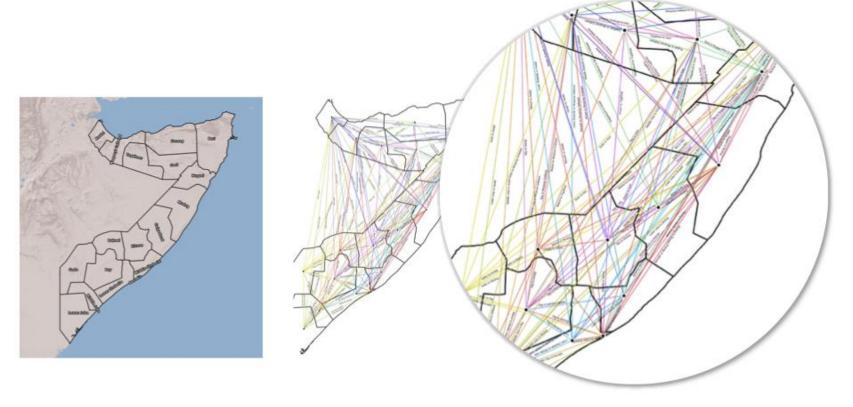


- A global debate has emerged whether the human impact of climate change can lead to armed conflict, and how conflict and extreme weather events interact and potentially induce large-scale displacement.
- Empirical evidence remains inconclusive: Recent scholarly work challenges the Homer-Dixon theory on causal links of resource scarcity and conflict.
- Data: ACLED

# Can we blame climate change for Somalia's humanitarian crisis?

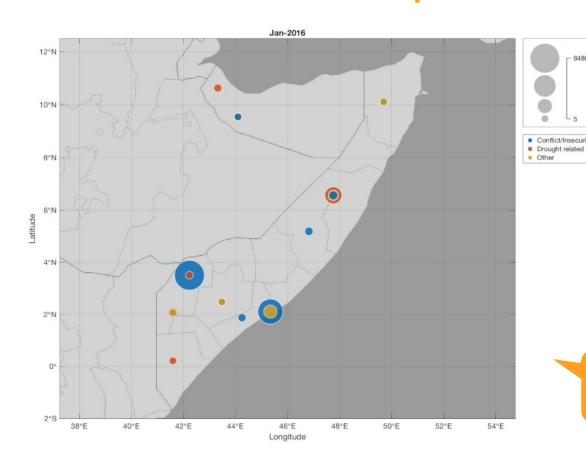


# In Somalia, migration stories have a climate-conflict chapter



 Network of weighted movements including displacement origin and destination across Somalia's 18 regions from 2016 to 2018.
Source: Protection and Return Monitoring Network (PRMN).

### Regional distribution of drought-& conflict-related displacement

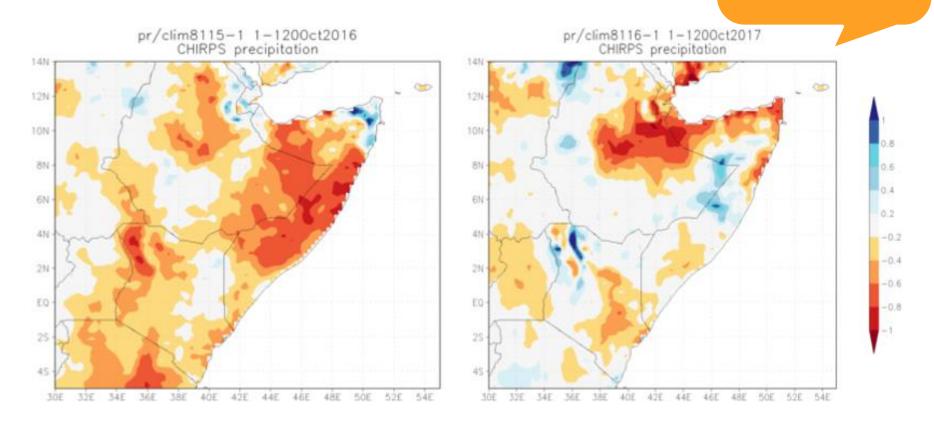


- Displacement due to drought, conflict, flood and other reasons.
- Time frame: Jan2016 Apr 2018
- Data: UNHCR

Data animation **here** 

# Validation through climate data and literature

Is there a climate signal in displacement?



Map of precipitation anomalies during the onset of the (on-going) drought October 2016 averaged over four months (left) compared to the same timeframe October 2017 (right). Daily observed rainfall baseline is 1981-2011. Dark red (-1) indicates no rainfall, bright red 0-20% of normal, dark orange 20-40%, grey about normal rainfall. Source: CHIRPS

### **Findings**

- In Somalia, displacement is multi-causal and cannot be seen without historical and economic interlinks;
- We demonstrate multi-causality through analysing 3 types of datasets: displacement, conflict, temperature and precipitation anomalies;
- We find lagged dynamics of drought-related displacement turning into conflict-related displacement;

### Findings (cont.)

- We find that armed conflict in Somalia is dynamic and complex, shaped by vested interests of actors, independent from climate factors;
- **Conflict** appears less of a driver of large-scale displacement, rather representing a constant feature in displacement dynamics across Somalia;
- Caveats in data availability: Mobility data shows only IDPs during a 2 y time horizon.

#### References

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- Thalheimer and Pretis. (2018). The multifaceted relationship between extreme weather events, displacement and conflict: New Insights from Somalia. https://www.essoar.org/doi/10.1002/essoar.10500422.1
- Thalheimer and Otto (forthcoming). Reviewing Extreme Weather Events and Human Mobility across East Africa.
- World Bank. 2018. Somalia Systematic Country Diagnostic (English). Washington, D.C.: World Bank Group. http://documents.worldbank.org/curated/en/554051534791806400/Somalia-Systematic-Country-Diagnostic

#### Websites and data

- KMNI Climate Explorer: <a href="https://climexp.knmi.nl/start.cgi">https://climexp.knmi.nl/start.cgi</a>
- ACLED data: <a href="https://www.acleddata.com/data/">https://www.acleddata.com/data/</a>
- UNHCR data: <a href="https://data2.unhcr.org/en/situations/horn/location/192">https://data2.unhcr.org/en/situations/horn/location/192</a>



### Thank you.

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