



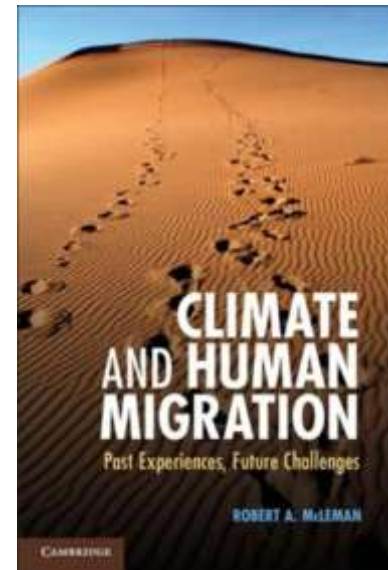
Presentation from
**2016 World Water
Week in Stockholm**

www.worldwaterweek.org

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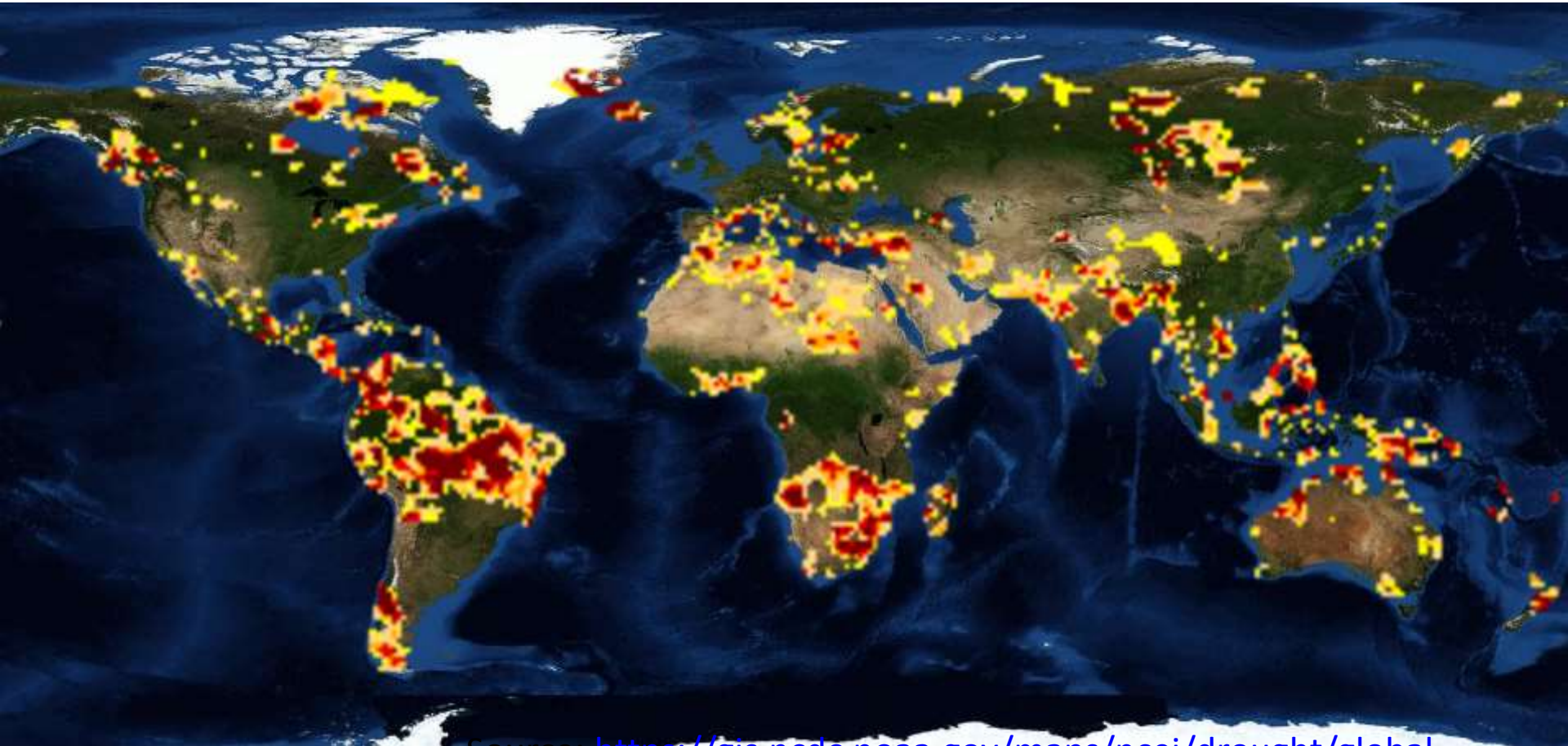
Climate change, droughts, & migration: Adaptation or conflicts, which will we choose?

Robert McLeman
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Drought: a common phenomenon

- Global drought map, past 12 months



Source: <https://gis.ncdc.noaa.gov/maps/ncei/drought/global>

Also (sadly) a common phenomenon...



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FOOD AID

Severe drought elevates food crisis in Malawi to 'highest level'

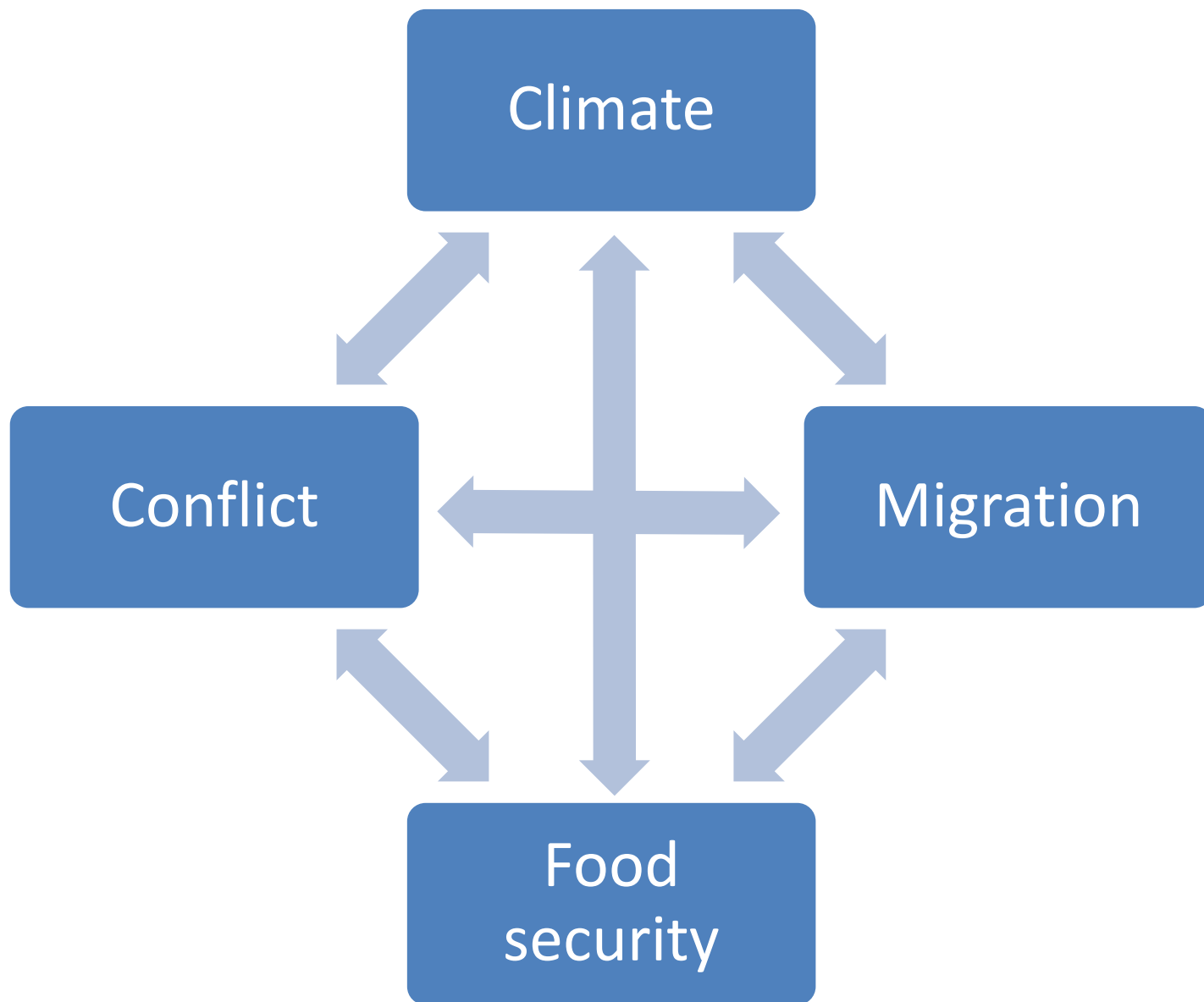
El Nino-related drought has led to food shortages in much of southern Africa. WFP Executive Director Ertharin Cousin told DW that more assistance is needed to feed those in need.



Also (sadly) a common phenomenon...

Starving drought refugees, Oklahoma USA, 1936





Climate
- *Natural science*

Conflict
- *Political science,
security studies*

Migration
- *Social science*

Food security
- *Development,
agriculture*

Climate

- UNFCCC, IPCC

Conflict

- UN, national
govts, NGOs

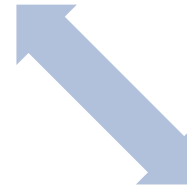
Migration

- IOM, UNHCR,
national govts

Food security

- FAO, UNDP, WFP,
markets

Climate
DROUGHT



Migration

Most migration is internal (i.e. within states)

- International migrant population estimated at ~215 million by UN DESA
- China's internal migrant population alone is estimated at ~200 million



Global refugee numbers are growing

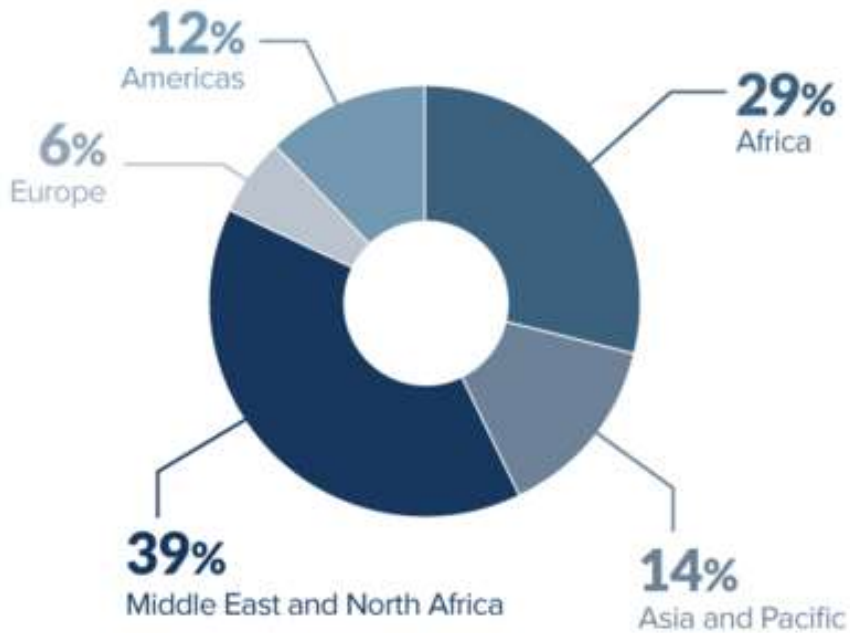
- UNHCR estimates 65 million people globally are forcibly displaced, including 21 million refugees
- In 2015, EU nations received 1.25 million asylum claimants

Migrants arriving in Greece,
Boston Globe photo



Disproportionality

Where the world's displaced people are being hosted



54% of refugees worldwide came from three countries



Disproportionality

- The world's most persistent refugee sources are in drought-prone, water scarce regions

Dadaab refugee camp, Kenya,
home to 340,000 people



Continuum of migrant agency

low agency

high agency

No control over migration decision, timing or destination



Complete control over migration decision, timing and destination



Continuum of migrant agency

low agency

high agency

No control over migration decision, timing or destination

Complete control over migration decision, timing and destination



Critical threshold

Continuum of migrant agency

low agency

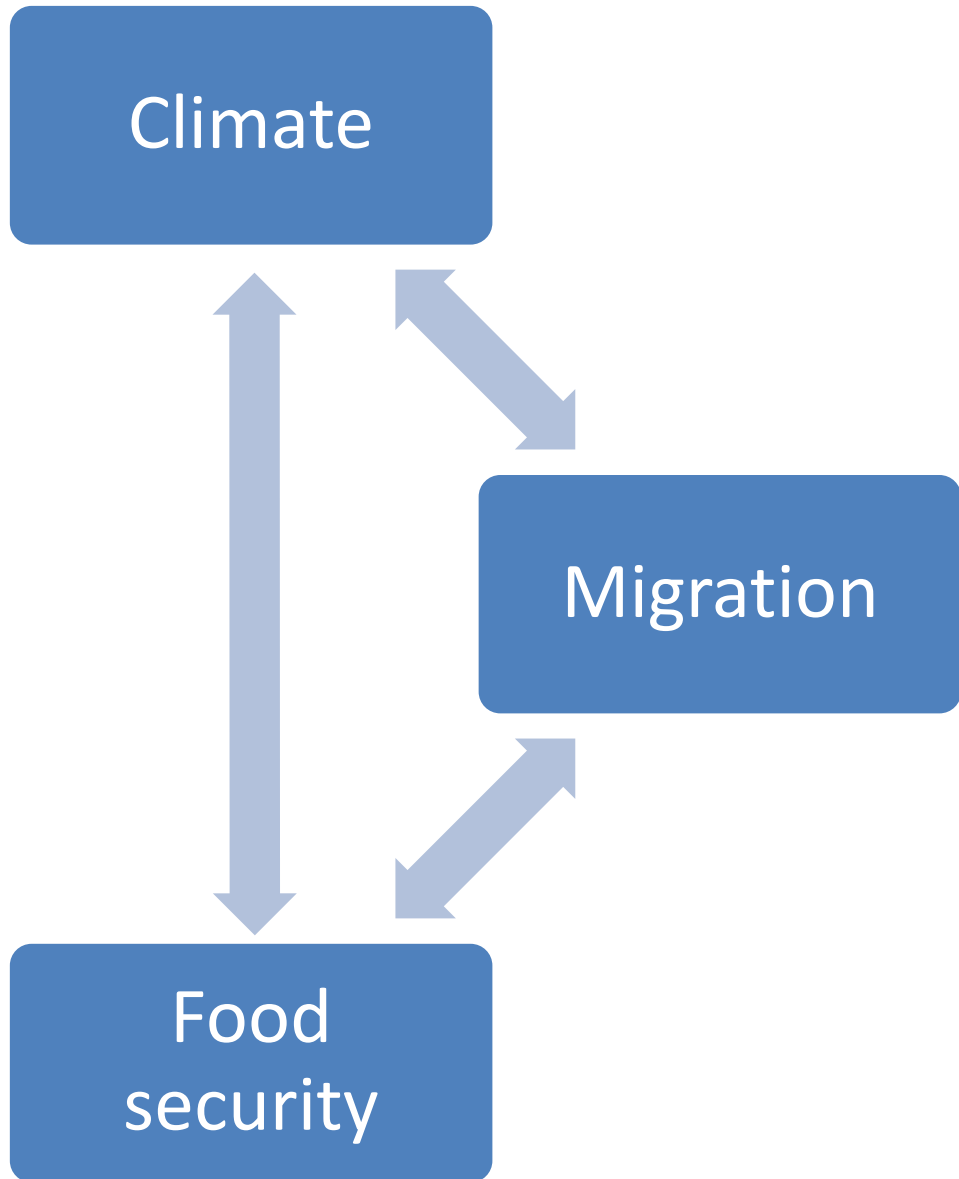
high agency

No control over migration decision, timing or destination

Complete control over migration decision, timing and destination



What drought does



When do we notice food insecurity?

- Famines, protests, food riots



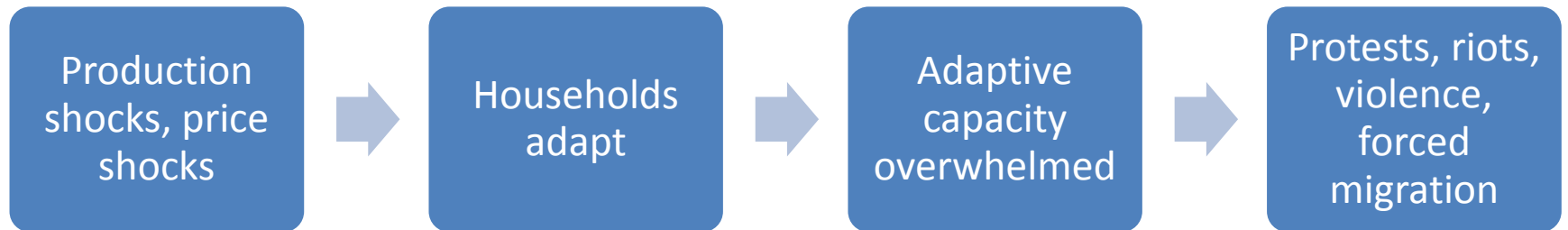
Is this the process?

Production
shocks, price
shocks

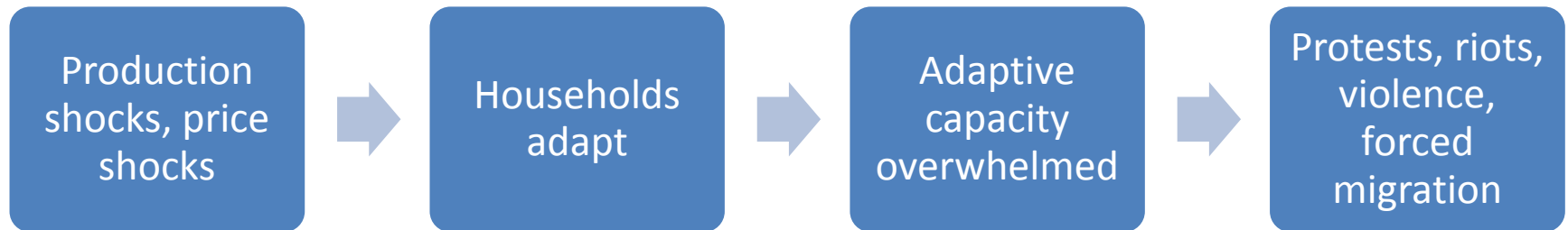


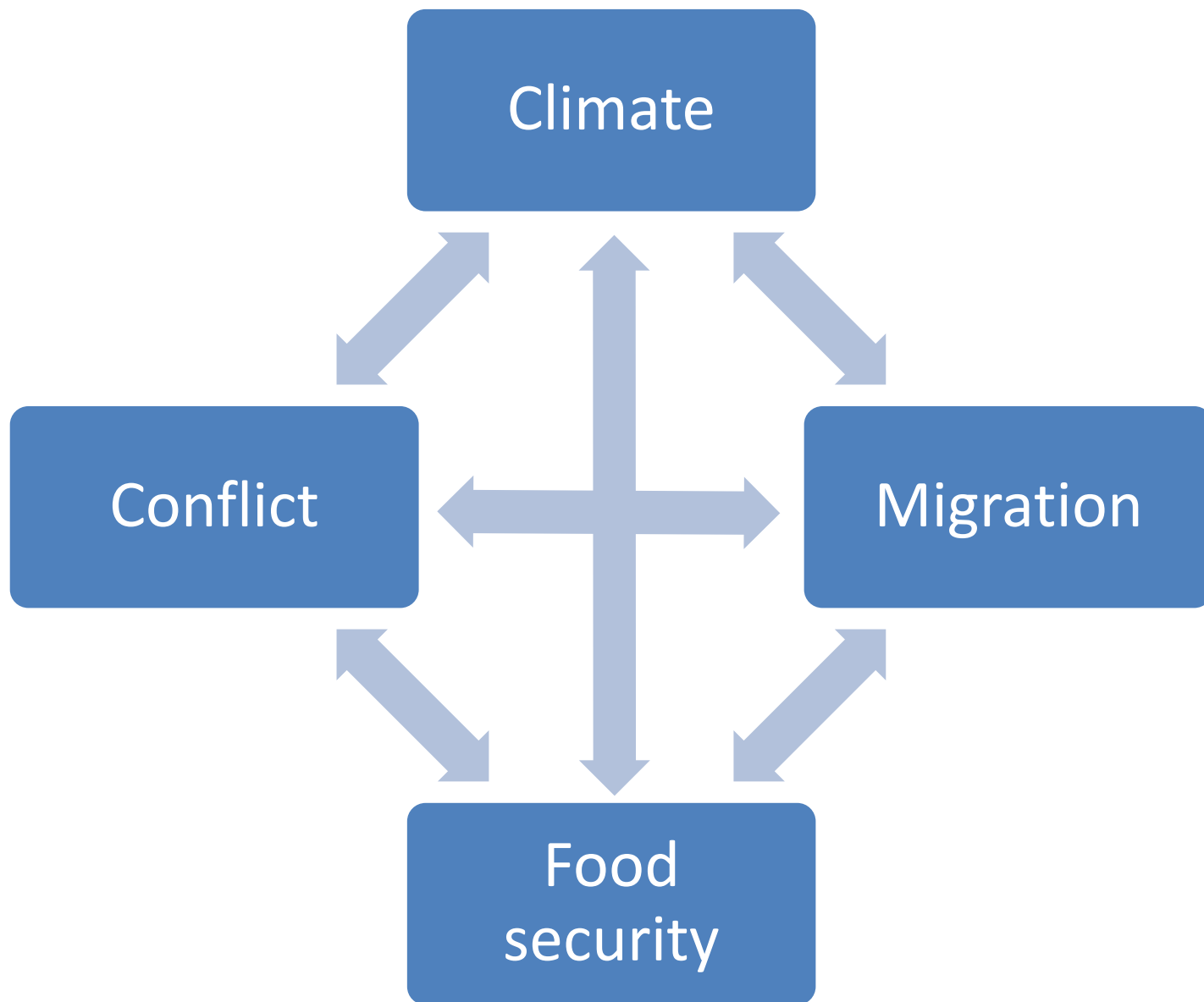
Protests, riots,
violence, forced
migration

Or this?



Each box represents an opportunity for intervention by governments and the international community





Do droughts cause conflicts?

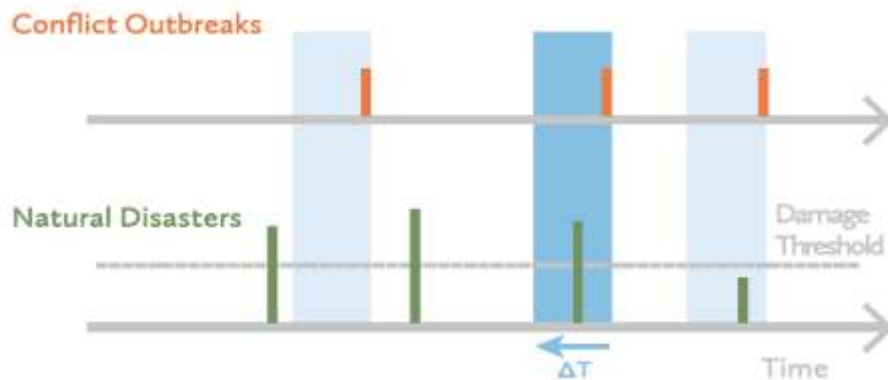
- On their own, no.



Front lawn in drought-stricken southwestern Ontario, summer 2016

Do droughts cause conflicts?

- Where political tensions, weak institutions, economic problems, group rivalries are already present...
- Droughts can increase the risk of conflict arising and exacerbate ongoing conflicts



2016 study by Schleussner et al in PNAS finds that 9% of armed conflicts between 1980-2010 coincided with droughts, heat waves

Our future: adaptation or conflict?

- We know how to build adaptive capacity to deal with drought...

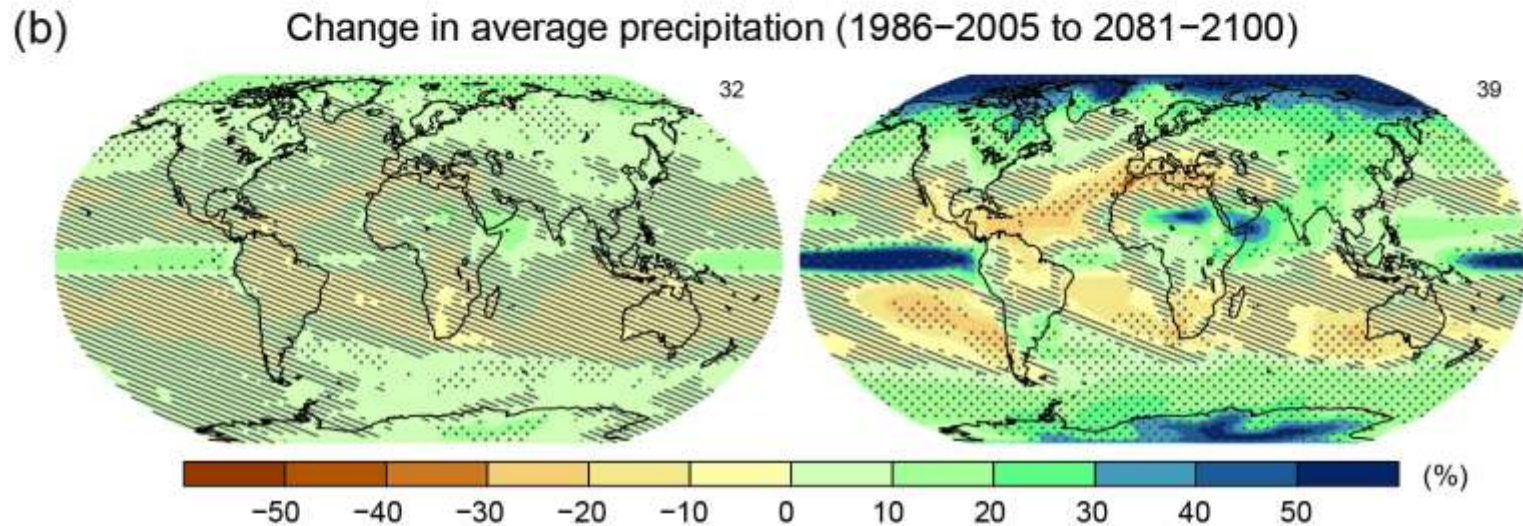
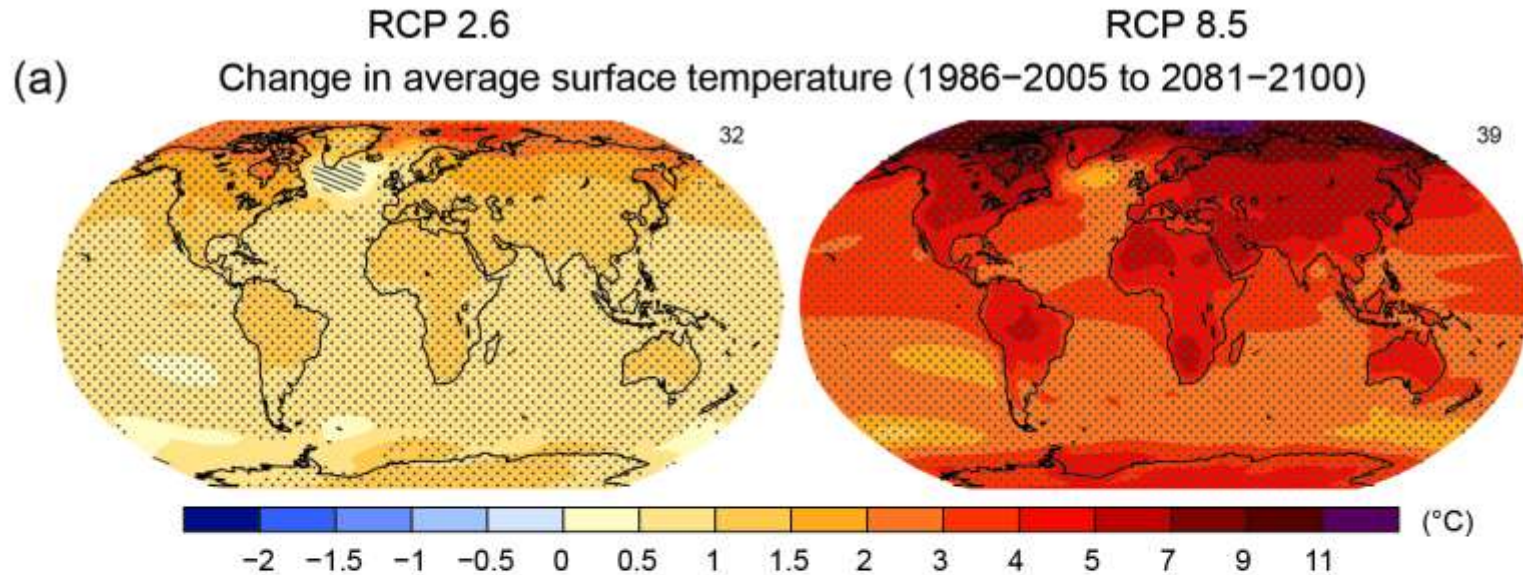
Drought refugees starving in Oklahoma, USA, in 1936.

This does not happen there anymore.

Why does it still happen elsewhere?



Our hotter, dryer future...



So what will the future be?

- Greater adaptive capacity?
- Or greater conflict and more humanitarian crises?

Thanks! Vielen dank! Merci! Tack!

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