

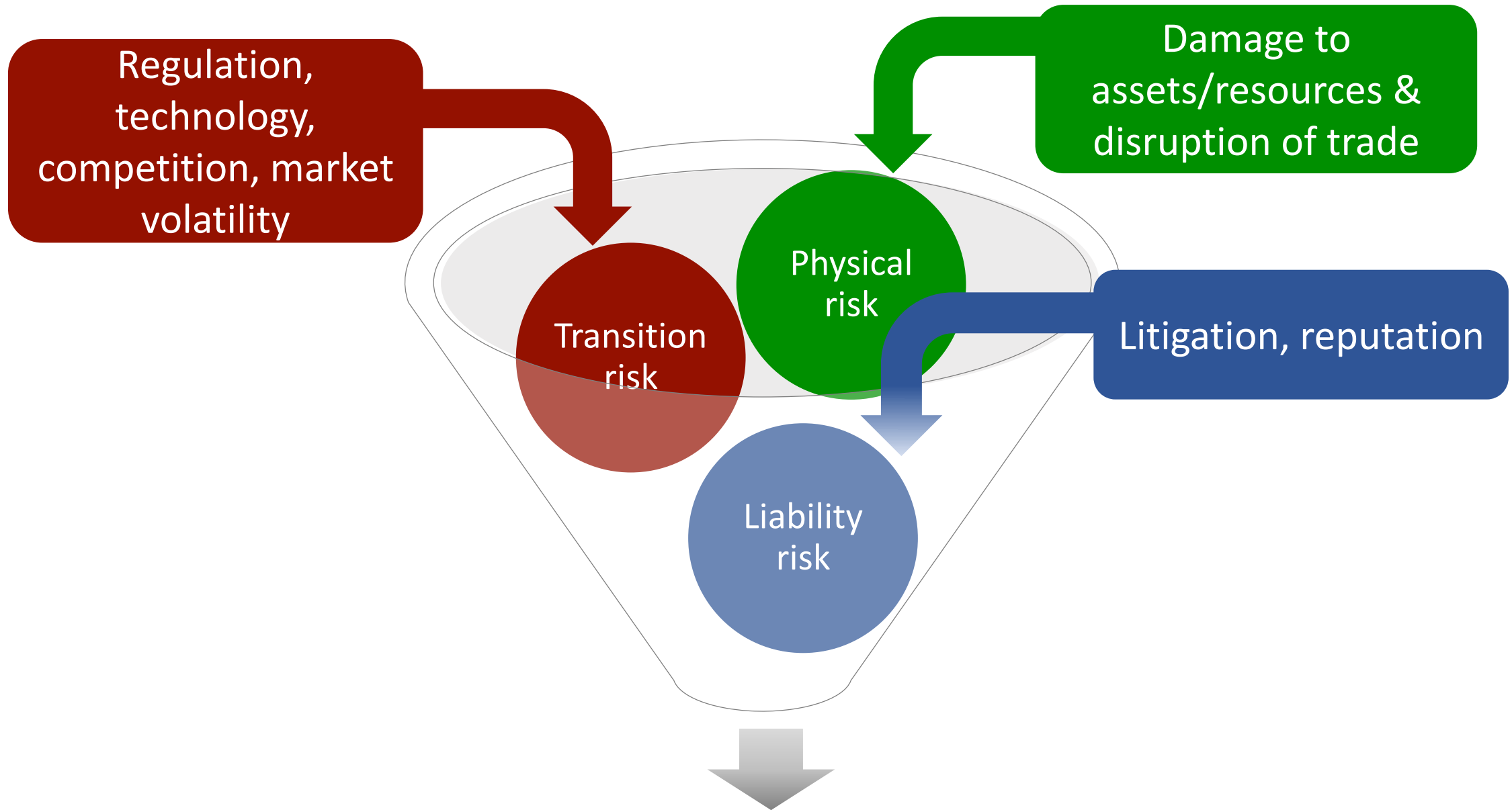
Managing Risk in a Changing Environment

Emily Shuckburgh
@emilyshuckburgh

Climate change is the Tragedy of the Horizon.

We don't need an army of actuaries to tell us that the catastrophic impacts of climate change will be felt beyond the traditional horizons of most actors – imposing a cost on future generations that the current generation has no direct incentive to fix.

Mark Carney, 2015



Climate risk to business & investments

Physical risks





2019 CO₂ 415 ppm

2010s warming 0.9°C

+ 100 ppm

+ 0.5°C

1980s warming 0.4°C

1960 CO₂ 315 ppm

Attributing extreme weather to climate change

Use the filters below to explore the studies

Finding

- Human influence found
- No human influence found
- Inconclusive

Impact

- Atmosphere
- Cold, snow & ice
- Coral bleaching
- Drought
- Ecosystem function
- El Niño
- Heat
- Oceans
- Rain & flooding
- River flow
- Storm
- Sunshine
- Wildfire

Select all Deselect all

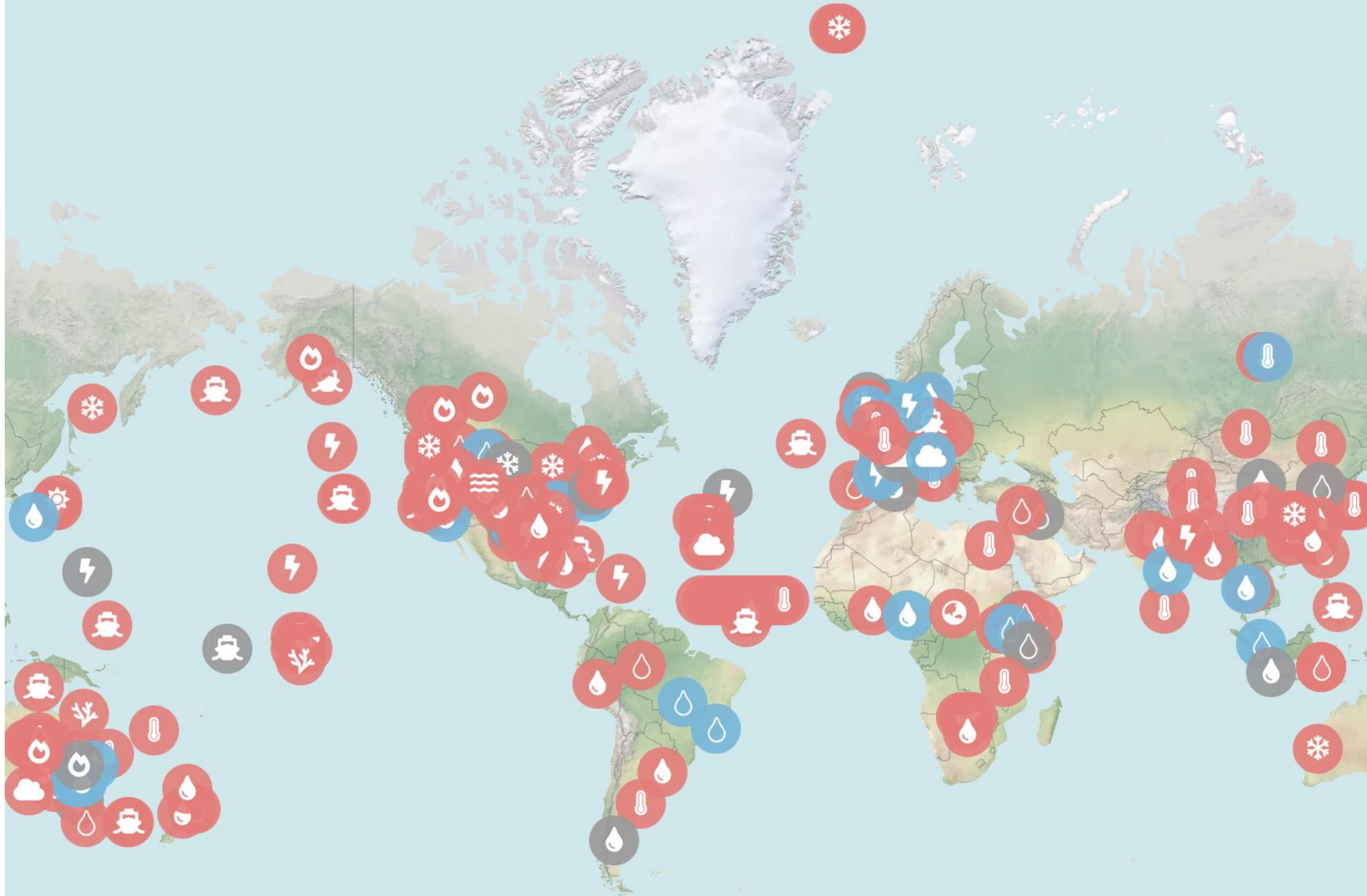
Year

All

Events

257

Over 200 studies where human influence found



Attributing extreme weather to climate change

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Impact

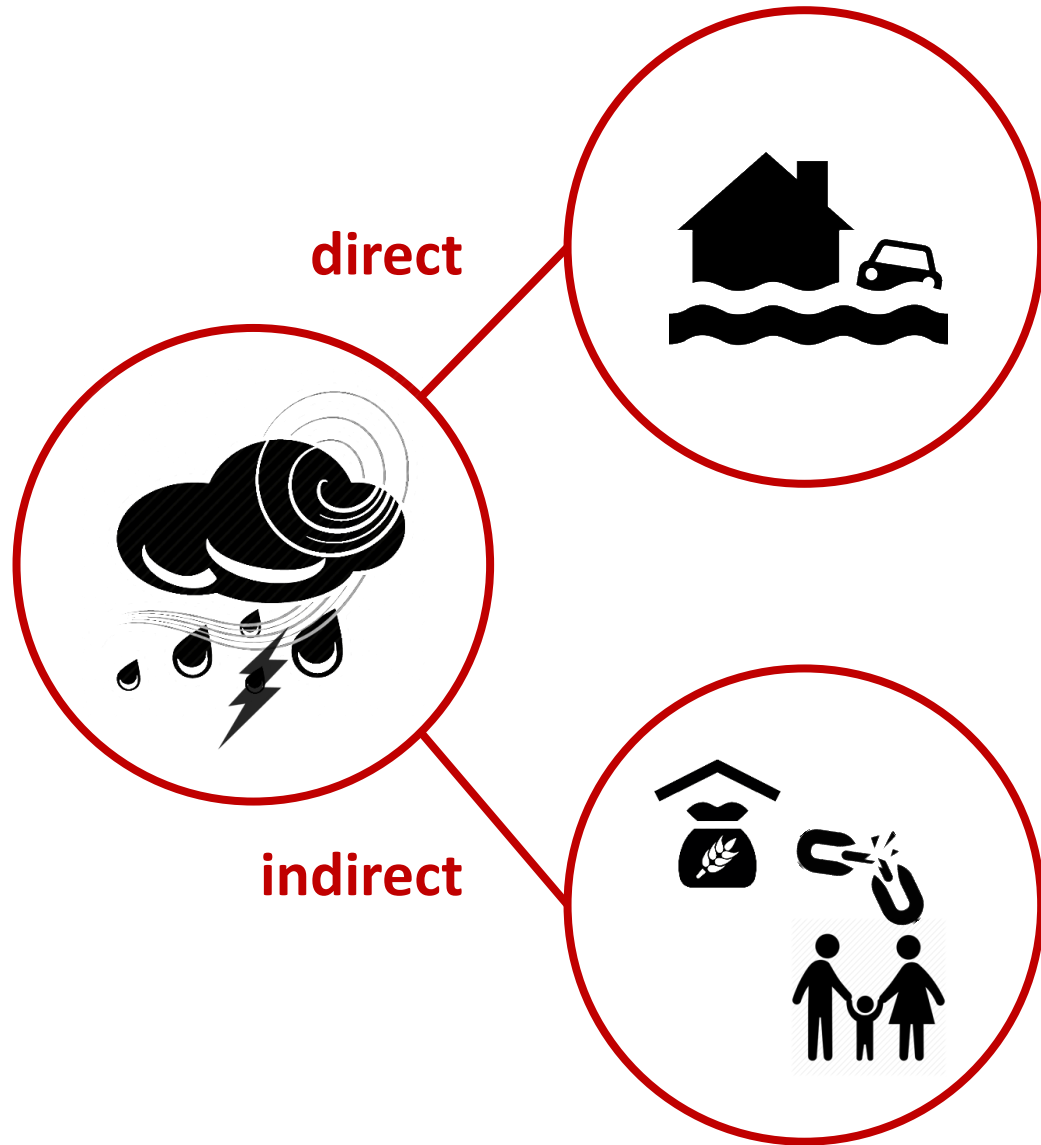
- ☁ Atmosphere ❄ Cold, snow
 - 💧 Drought 🌿 Ecosystem funct
 - 🔥 Heat 🌊 Oceans 💧 Rain &
 - ⚡ Storm ☀ Sunshine 🌪 Wil
- Select all Deselect all

Year All



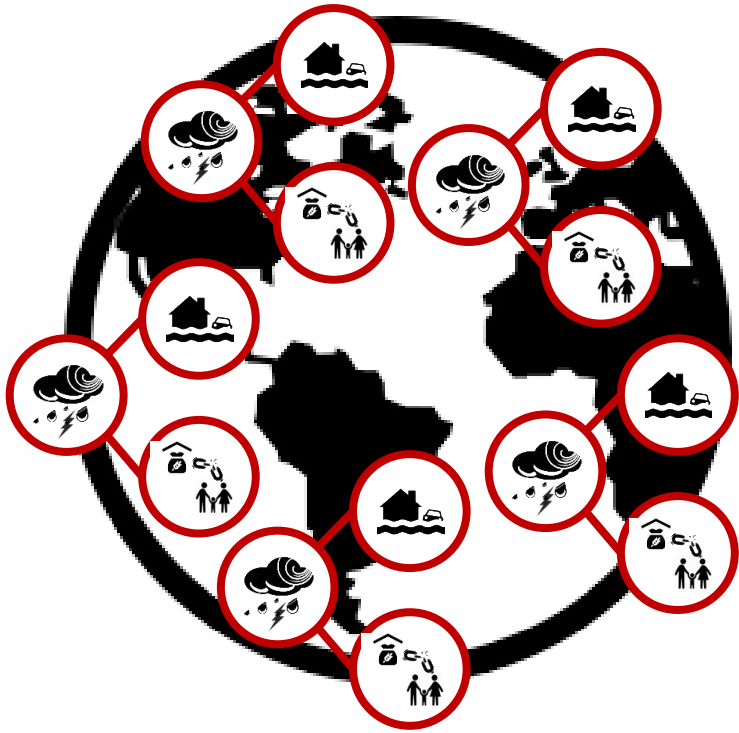
Over 200 studies to-date where human influence found





- impair asset values
- undermine ability to repay loans
- threaten the creditworthiness of borrowers
- result in raised insurance premiums
- increase credit exposures
- challenge portfolio diversification
- change investor sentiment
- induce climate-related regulations
- etc...

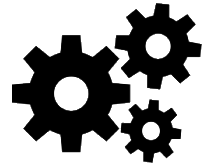
warming world



increasing risks



- sustained damage to infrastructure & resources



- correlation across geography, time & between conditions



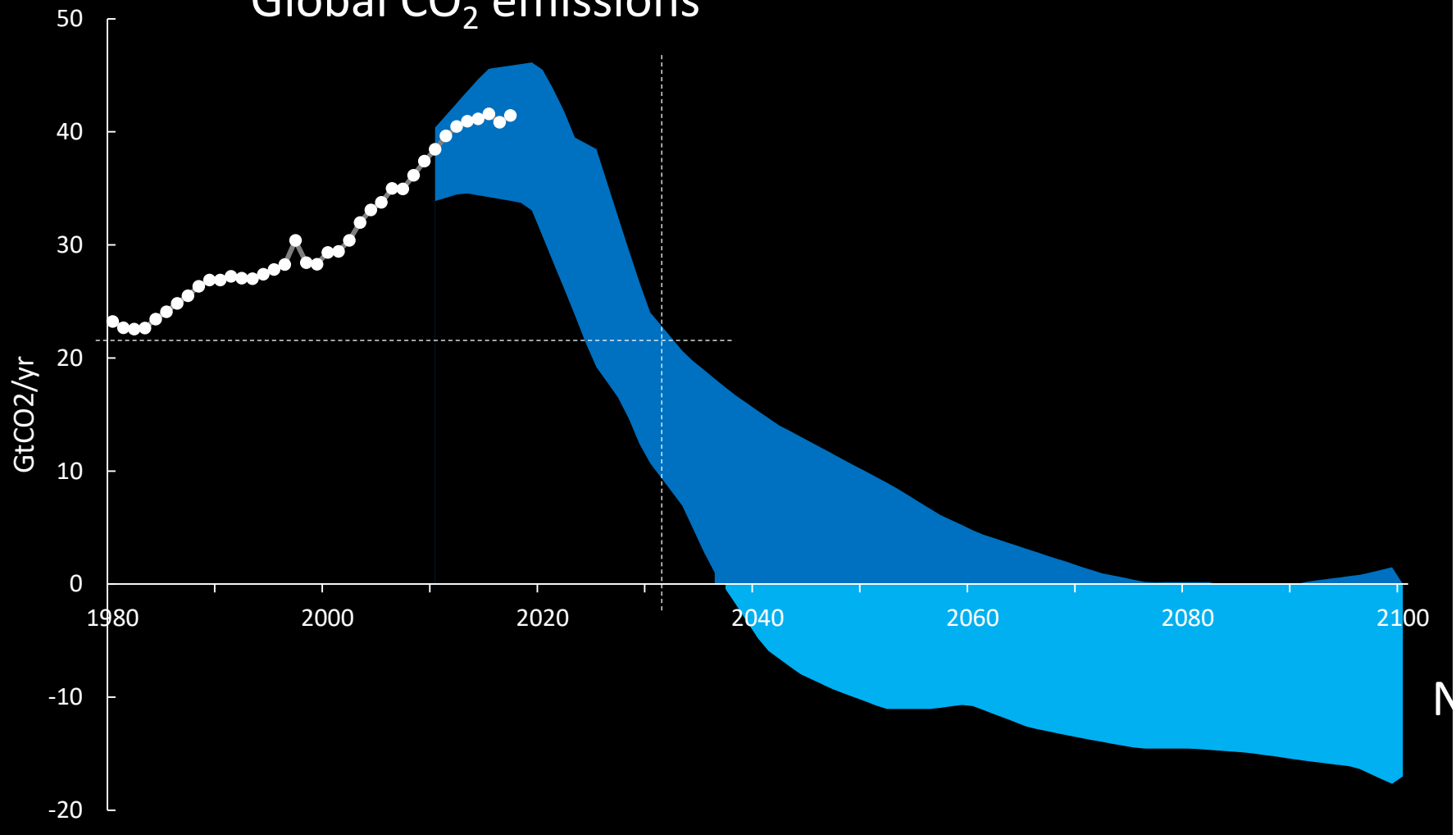
- interconnected risks across systems



Transition risks



Global CO₂ emissions



Liability risks





NE ALI...
DSSIN

I HAVE
A DREAM
A VERT
LATE DE TERRE

LA COMODIDAD
ES UN ESTADO DE DEFENSA
ENTRE EL HOMBRE Y
LA TIERRA
#CREAREVOLUCION

QUAND LA
PLANETE
REBOOT

YA PAS QUE
POUR
LIVER LA

LA PLANETE
EST PLUS
CHAUDE QUE
MEUF

ARRÊTE
DE NIGUER

LES DE NATURE
LAB PAS DE

for future
PLANET

SKOLSTREJK
FÖR
KLIMATET

GREVE
MONDIALE
POUR LE
FUTUR



Catastrophic shocks





Greenland ice core

