

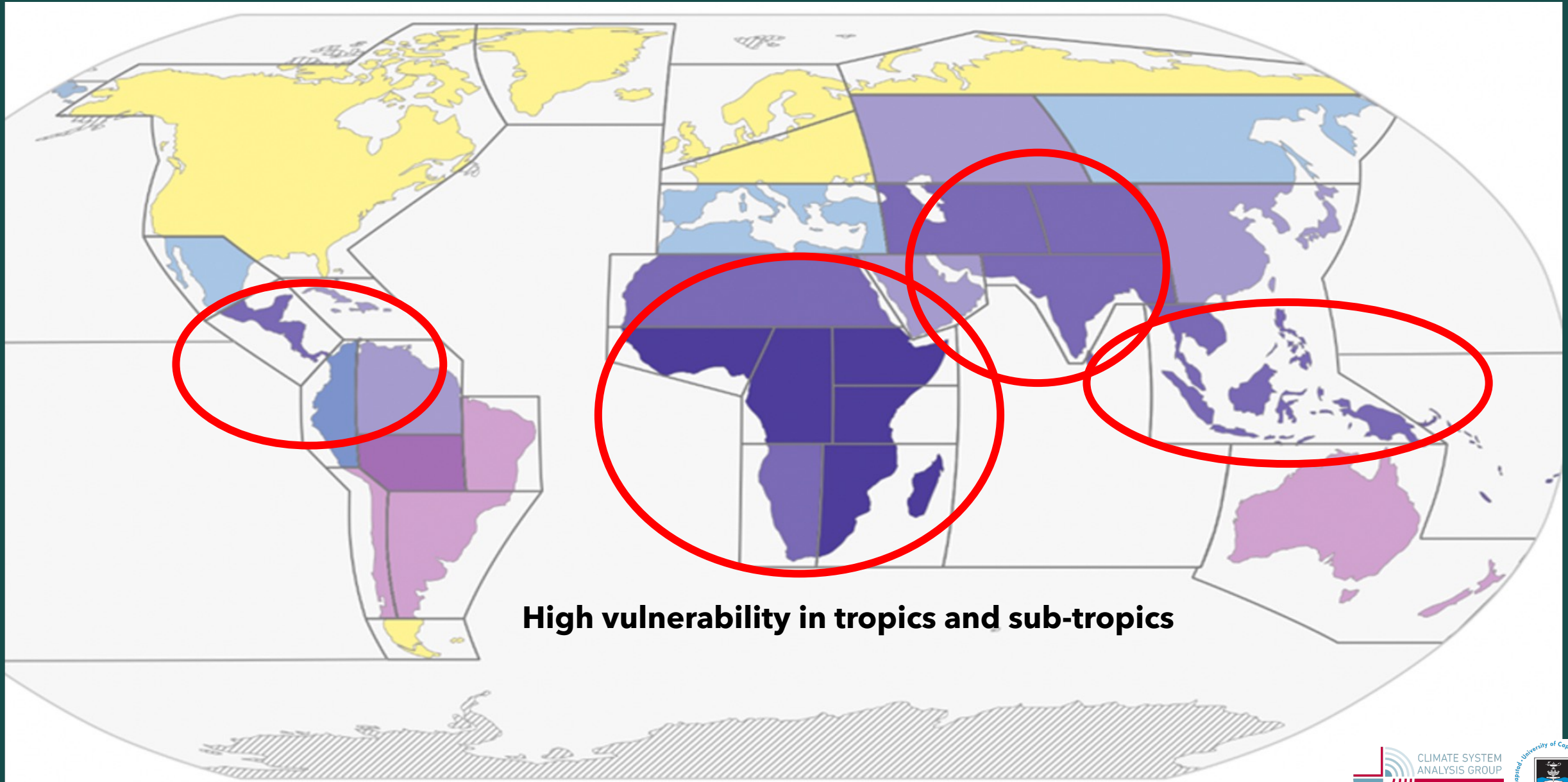
Building Capacity in the Global South for SRM

Research

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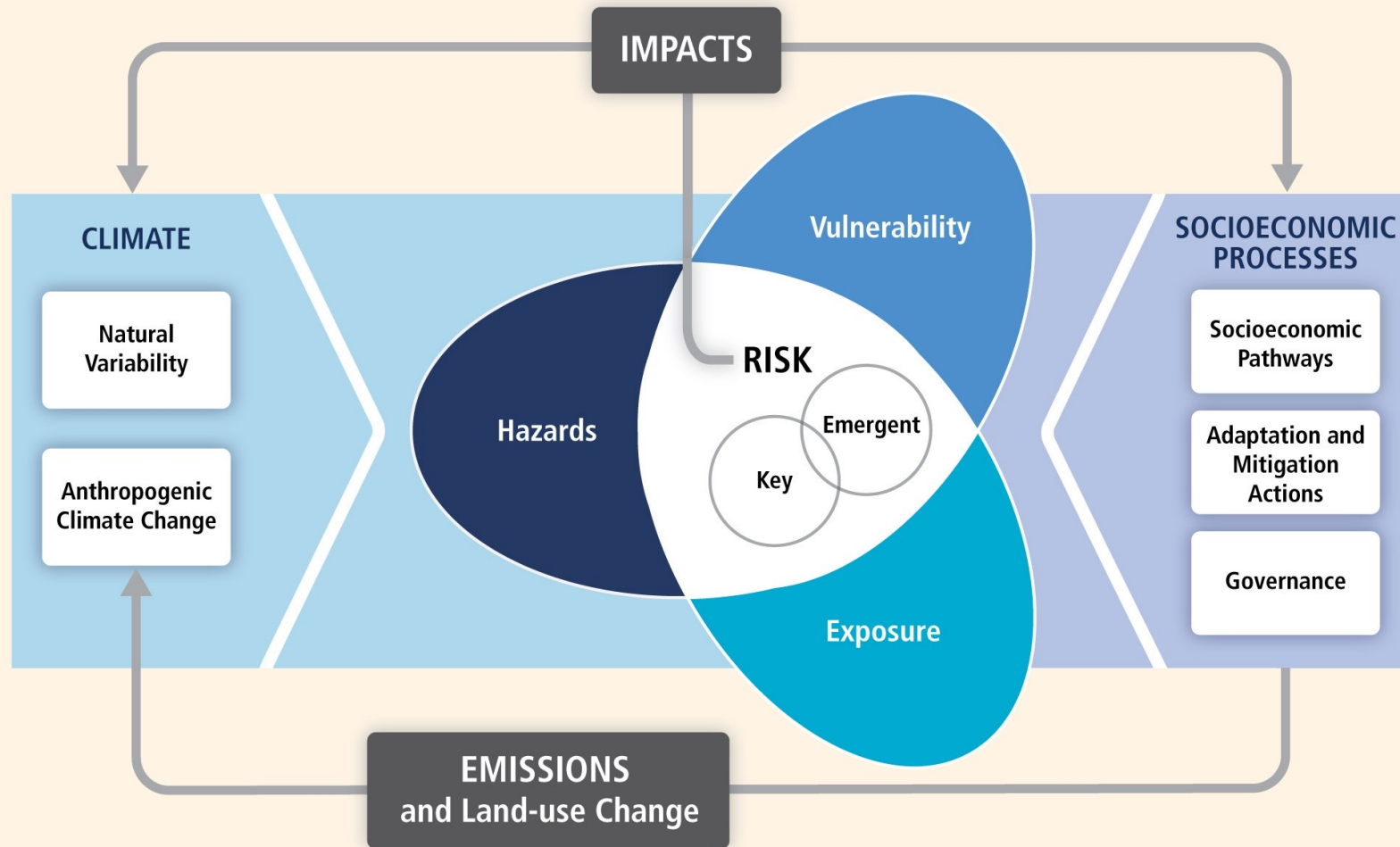


Vulnerability of the Global South

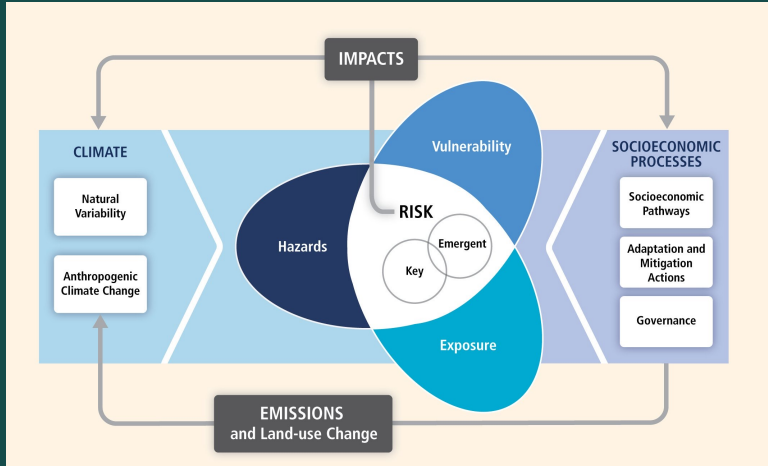


High vulnerability in tropics and sub-tropics

Vulnerability contributes to climate risk.....



Vulnerability contributes to climate risk.....



Future Risks in Africa

Above 1.5°C is high risk:

- Large regional crop losses
- Increasing poverty and inequality
- Increasing disease exposure
- Increasing drought
- Increasing heat mortality

Above 1.5°C is very high risk:

- Widespread crop yield loss
- 7 to 18% African species at risk of extinction
- Over 30% decline in fisheries catch potential
- Widespread heat-related mortality risk
- Severe risks of malnutrition

UNEP “SRM is the only option to cool the planet within years”, and this might reduce some of these risks.

However, SRM carries its own risk, so researching the balance of risks is crucial.

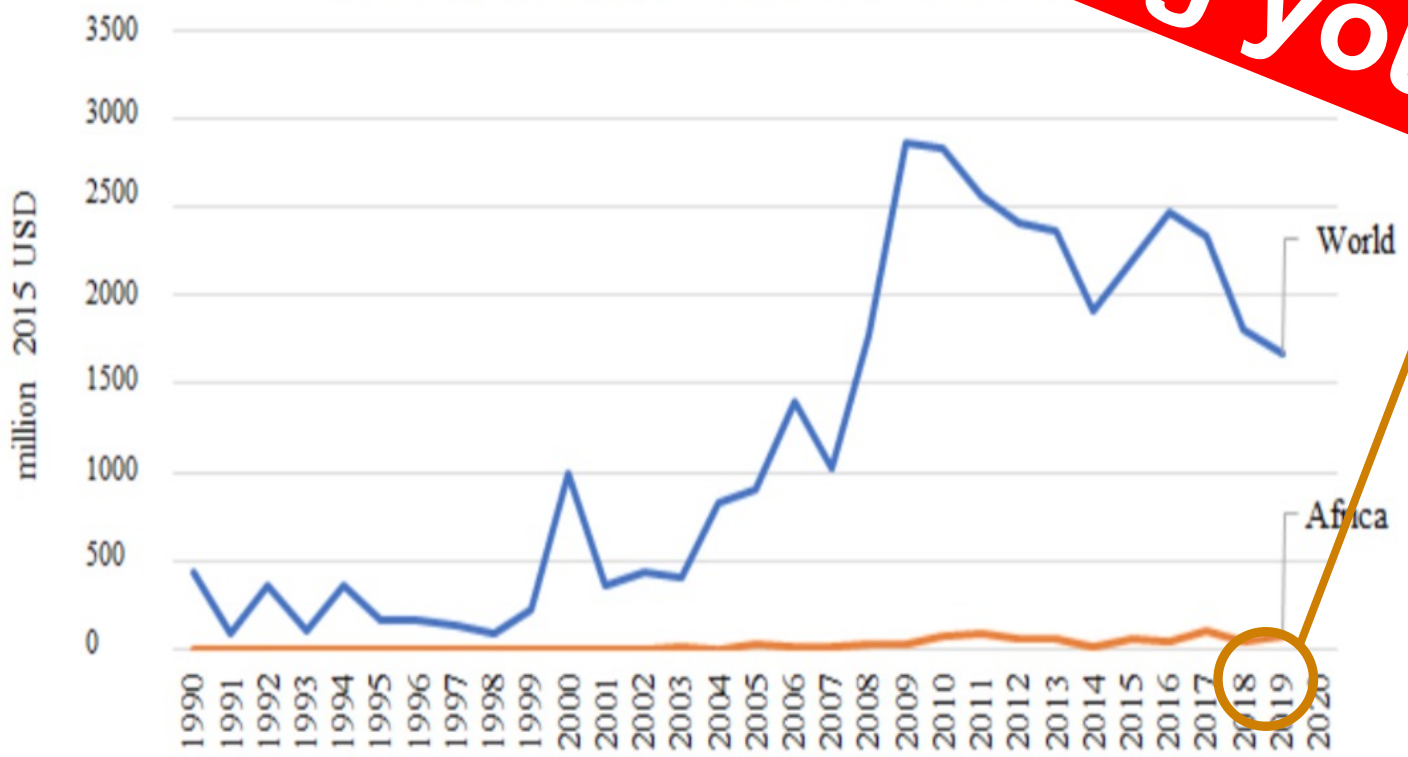
Research Funding for Africa

Very little funding for research on climate change in Africa:

Only 3.8% of global climate change funding was spent on Africa

This is not the funding you are looking for...

a) Funding for climate research on Africa and the world, 1990-2020



d) Top 10 country locations of institutions receiving funding for climate change research in Africa, 1990-2020, million 2010 USD



**Most funding for climate research in Africa goes to EU & US institutions
Less than 1% makes it to African Institutions!**



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[WHAT IS SRM?](#)

[DECIMALS FUND](#) ▾

[OUR WORKSHOPS](#)

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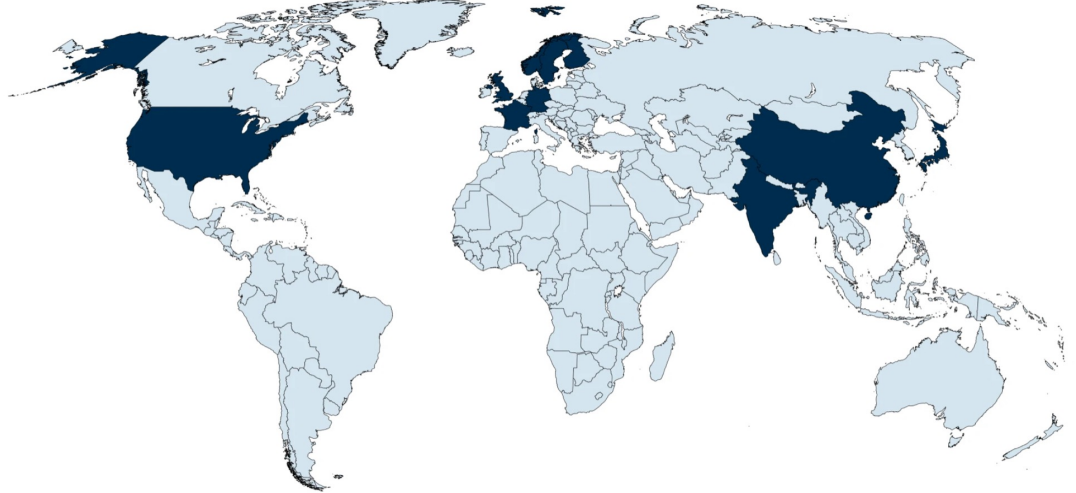
A world map with a color gradient from blue (oceans) to green (landmasses), serving as a background for the main text.

PUTTING DEVELOPING COUNTRIES AT THE CENTRE OF THE SRM CONVERSATION

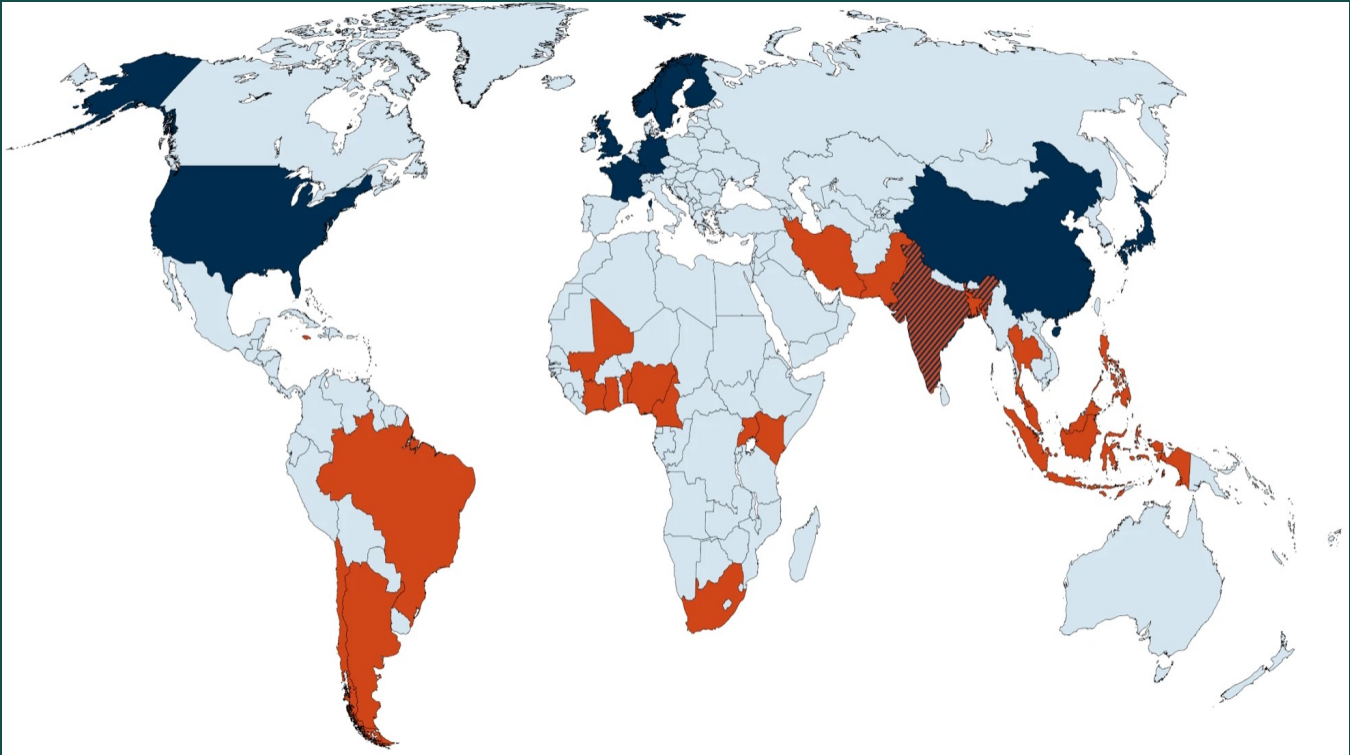
SRM Research in the Global South currently...



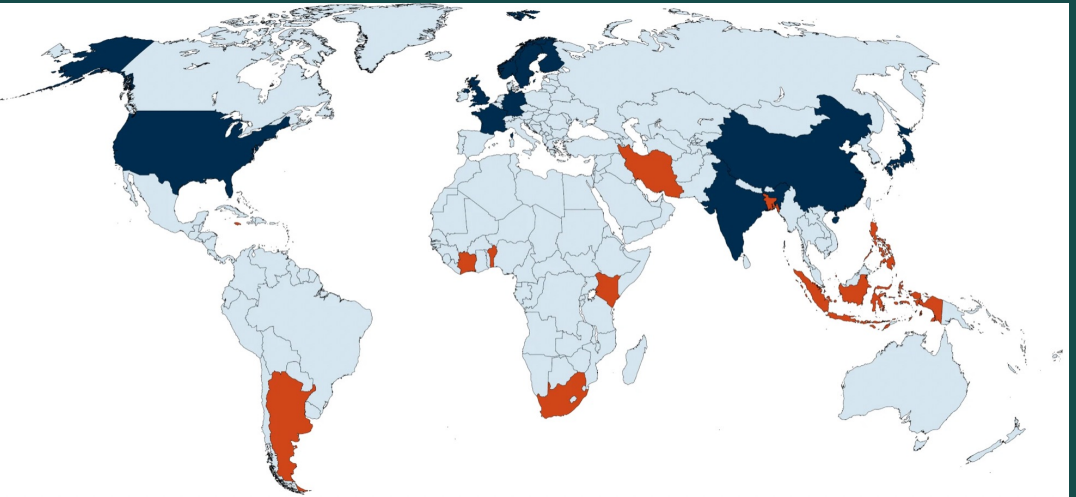
Pre 2018



2023



2018



SRM Research in the Global South currently...



DMF research papers to date

As of 14 March 2023

Tan et al. 2023: Impacts of Solar Radiation Management on Hydro-Climatic Extremes in Southeast Asia [PDF]

Published in Water

Obahoundje et al. 2022: Influence of stratospheric aerosol geoengineering on temperature mean and precipitation extremes indices in Africa [PDF]

Published in International Journal of Climate Change Strategies and Management

Camilloni et al. 2022: La Plata Basin Hydroclimate Response to Solar Radiation Modification With Stratospheric Aerosol Injection [PDF]

Published in Frontiers in Climate

Carlson et al. 2022: Solar Geoengineering Could Redistribute Malaria Risk in Developing Countries [PDF]

Published in Nature Communications

Alamou et al. 2022: Impact of Stratospheric Aerosol Geoengineering on Meteorological Droughts in West Africa [PDF]

Published in Atmosphere

Pomalegni et al. 2022: Response of the Equatorial Atlantic Cold Tongue to Stratospheric Aerosol Geoengineering [PDF]

Published in Aerosol Science and Engineering

Abiodun et al. 2021: Impacts of Stratospheric Aerosol Injection on Drought Risk Managements Over Major River Basins in Africa [PDF]

Published in Climatic Change

Kuswanto et al. 2021: Impact of Solar Geoengineering on Temperatures over the Indonesian Maritime Continent [PDF]

Published in International Journal of Climatology

Clarke et al. 2021: The Caribbean and 1.5 °C: Is SRM an Option? [PDF]

Published in Atmosphere

Odoulami et al. 2020: Stratospheric Aerosol Geoengineering Could Lower Future Risk of 'Day Zero' Level Droughts in Cape Town [PDF]

Published in Environmental Research Letters

Da-Allada et al. 2020: Changes in West African Summer Monsoon Precipitation Under Stratospheric Aerosol Geoengineering [PDF]

Published in Earth's Future

Karami et al. 2020: Storm Track Changes in the Middle East and North Africa Under Stratospheric Aerosol Geoengineering [PDF]

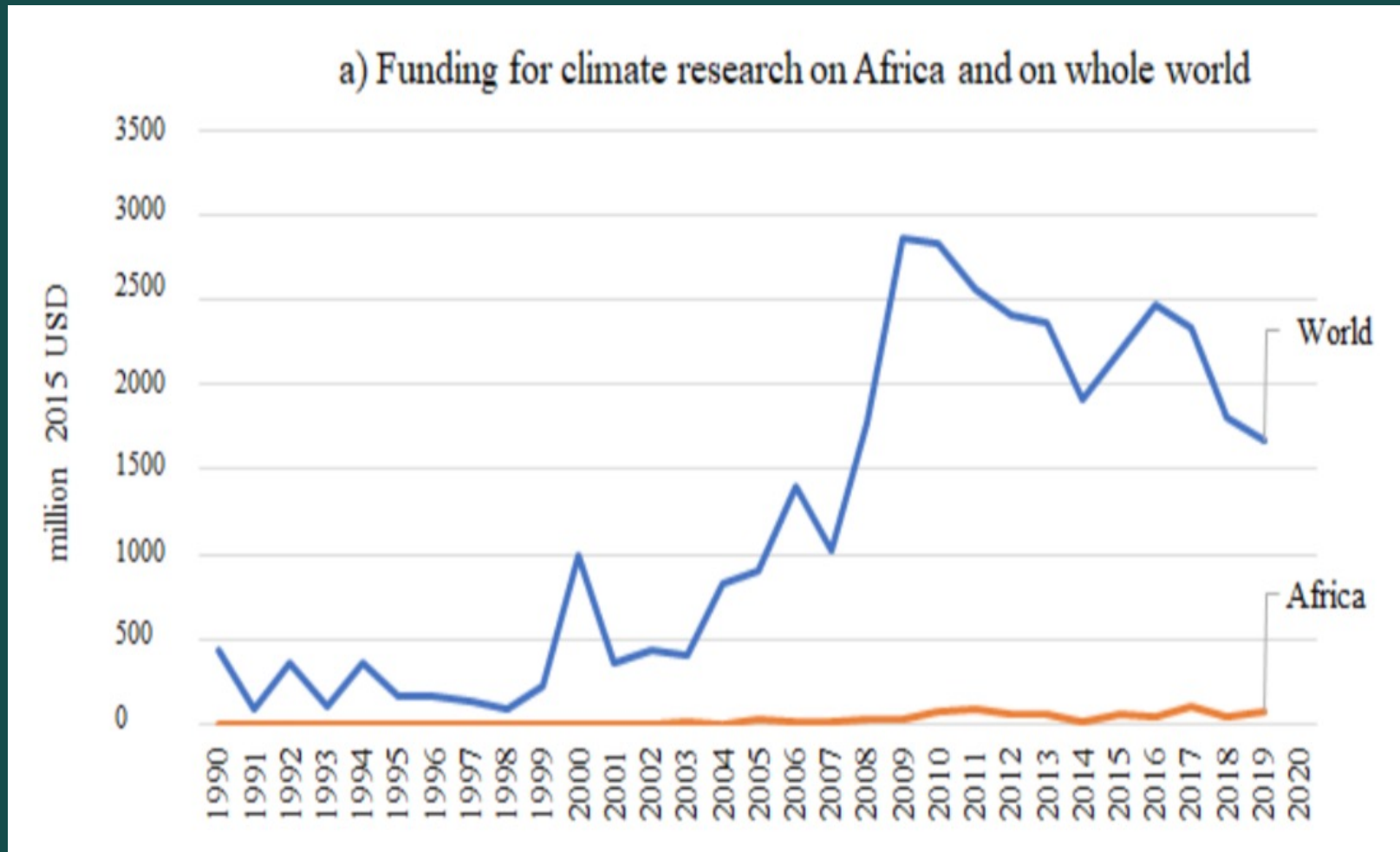
Published in Geophysical Research Letters

Pinto et al. 2020: Africa's Climate Response to Solar Radiation Management with Stratospheric Aerosol [PDF]

Published in Geophysical Research Letters

Five more this year and many more in the next 3 years

A very small bit of funding has gone a very, very long way...



Where to from here.....

Where to from here.....a southern research hub/centre?



Impacts science

Hydrology and water resources
Agriculture/crop modelling
Health modelling
Energy

Social science

Ethics
Climate governance
Climate risk perceptions
Behaviour change
Economics

**Understanding
Regional Climate Risk
in a Risk-Risk Framing**

Climate science

Process studies
Scenario development
Climate model development
Regional downscaling

Other aspects

Political science

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-
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