Challenges in integrating CS4RRA research findings into policy and practice

Akiça Bahri
Former Minister of Agriculture, Water Resources and Fisheries, Tunisia

CLIMATE SERVICES FOR RISK REDUCTION IN WEST AFRICA (CS4RRA)
THE STOCKTAKING CONFERENCE

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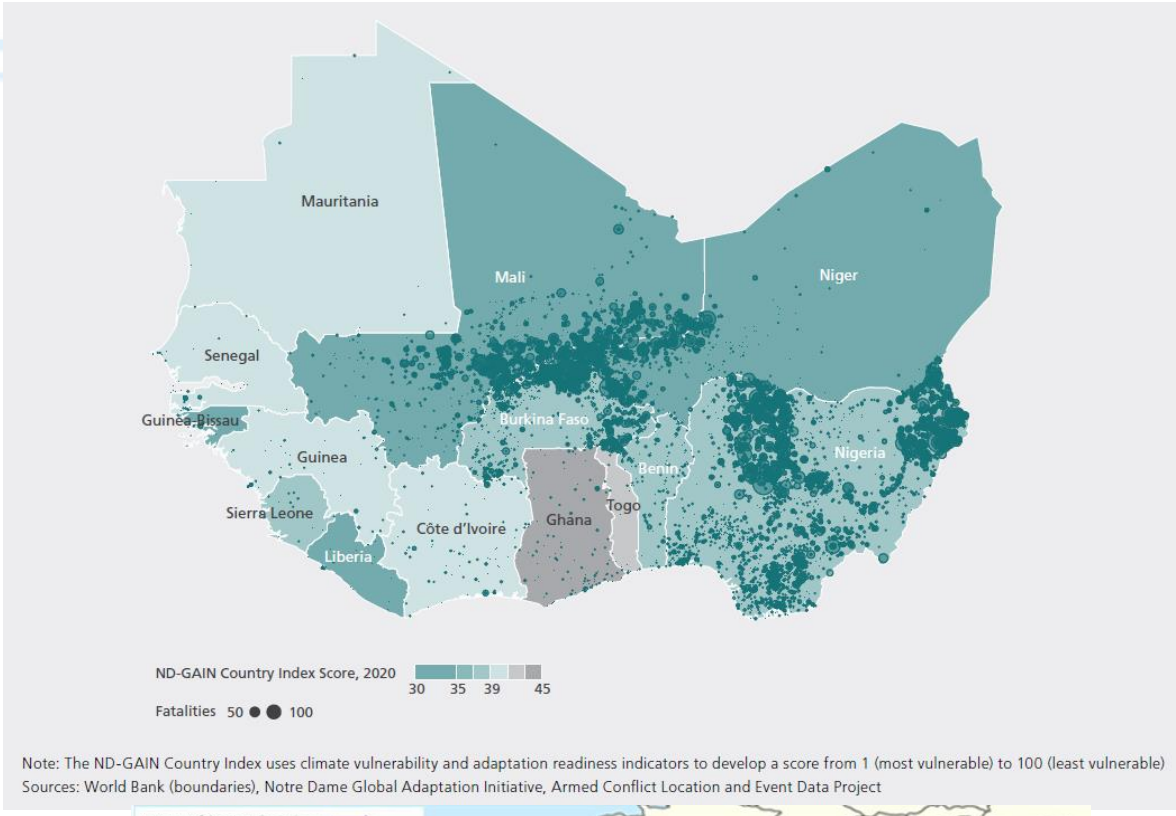
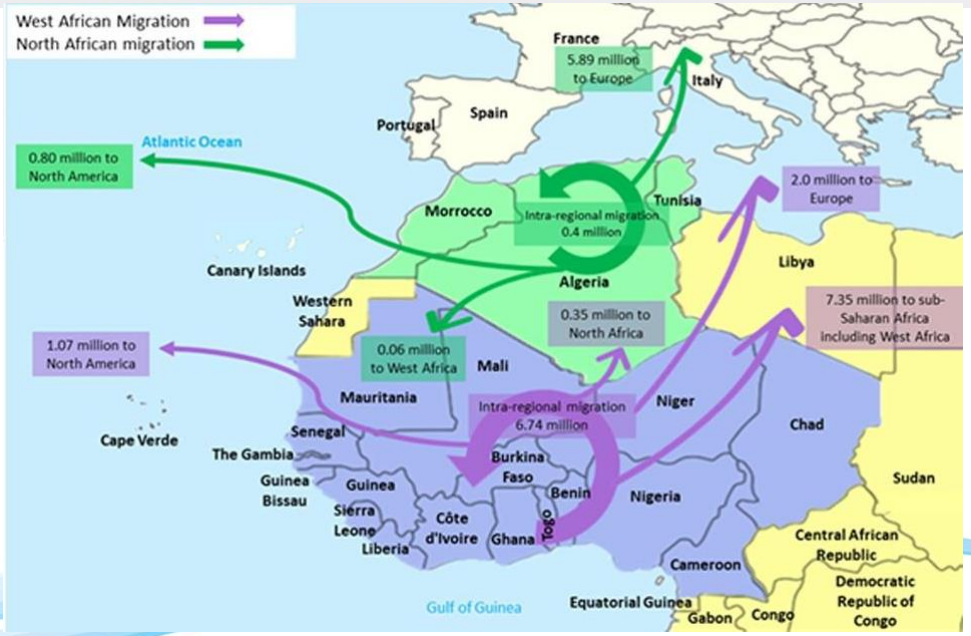
Introduction

1. “The world is plagued by a duo of dangerous crises: **climate and conflict**” (Zahidi, 2024)
2. The humanitarian and environmental catastrophe unfolding in Gaza and Ukraine puts **war, security and climate crisis on the agenda**
3. “**The conflicts are exacerbating the global climate emergency**, which goes far beyond the CO_2 emissions from bombs and planes” (after Lakhani, 2024)
4. “Armed conflict pushes humanity even closer to the precipice of climate catastrophe, and is an idiotic way to spend our shrinking carbon budget” (Boyd, 2024)
5. Atmospheric CO_2, responsible for heating the Earth, hit the highest-yet recorded levels in May 2024, followed by the hottest summer on record for 2,000 years





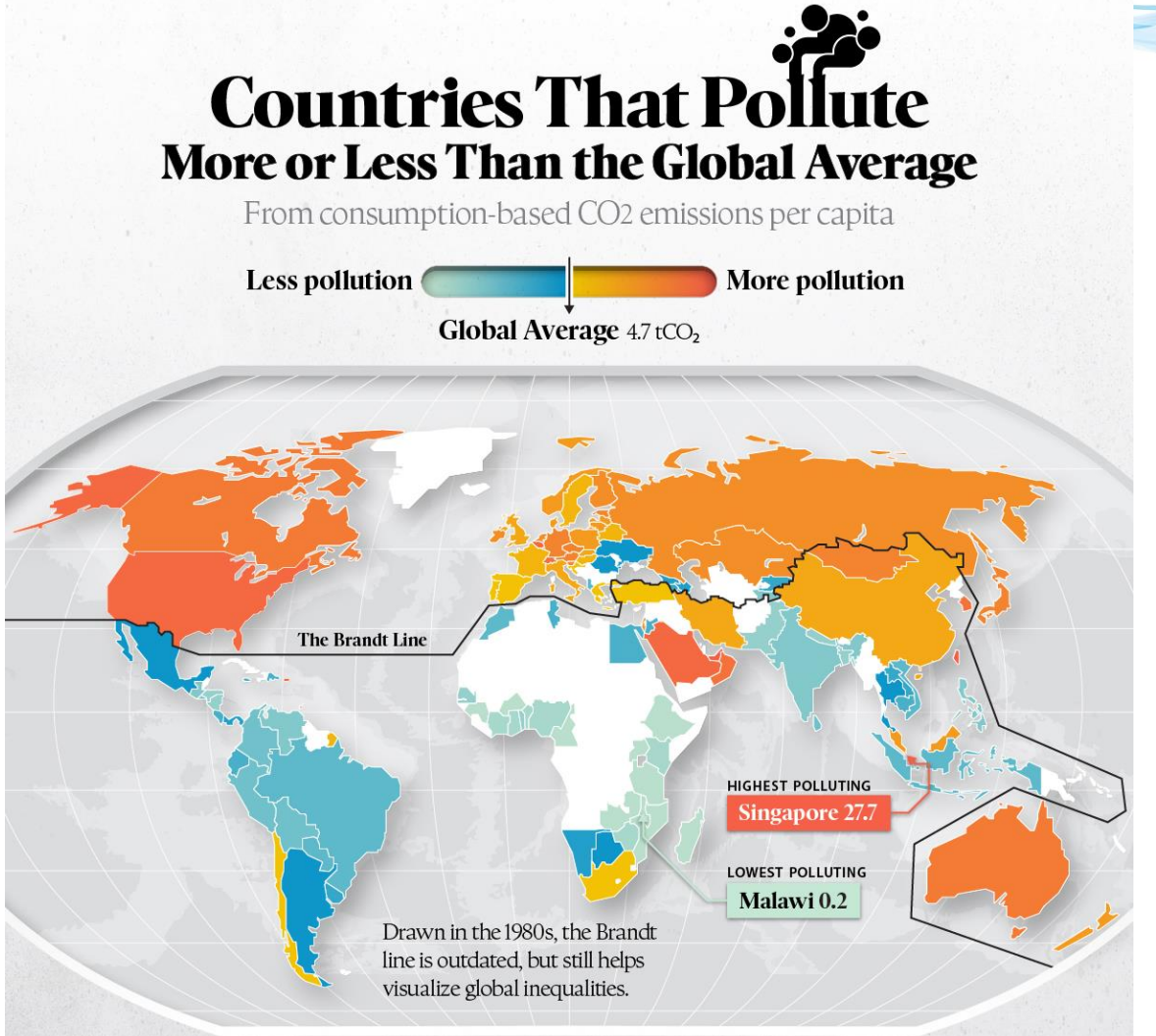
The climate and environmental impact of conflicts
Example of Gaza

1. The carbon emissions from the war are staggering, with an average estimate of **536,410 tons of CO_2 in the first 120 days of the war**
2. **This figure exceeds the annual C footprint of many climate-vulnerable nations (first 2 months of conflict** produced more planet-warming gases than **20 climate-vulnerable nations do in a year)**
3. **The air is contaminated with chemicals from weapons such as white phosphorus**
4. On average, **in April 2024, Gazans had access to around 2 to 8 liters/person/day,** compared to 85 liters/person/day before October 2023
5. **Nearly 60,000 cubic meters of untreated sewage flowing into the Mediterranean Sea daily**
6. **57% of Gaza's cropland has been damaged**
7. **The C footprint of rebuilding Gaza will exceed the annual greenhouse gas emissions produced by 135 individual countries** according to researchers in the UK and the US

‘No climate justice without peace’

Countries That Pollute
More or Less Than the Global Average

From consumption-based CO_2 emissions per capita

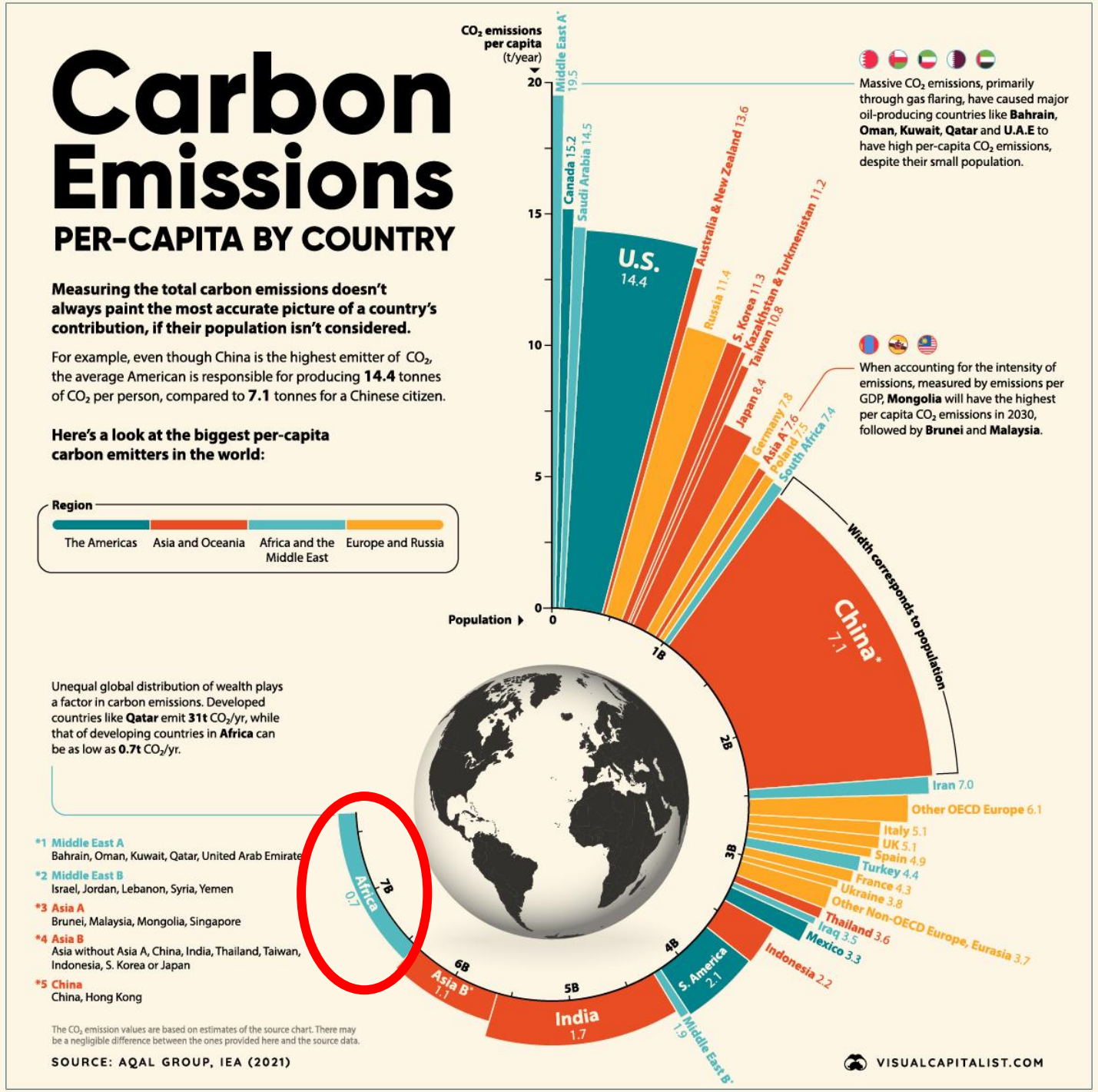


The Global North-South Divide

Economically developed countries contribute more to environmental degradation.

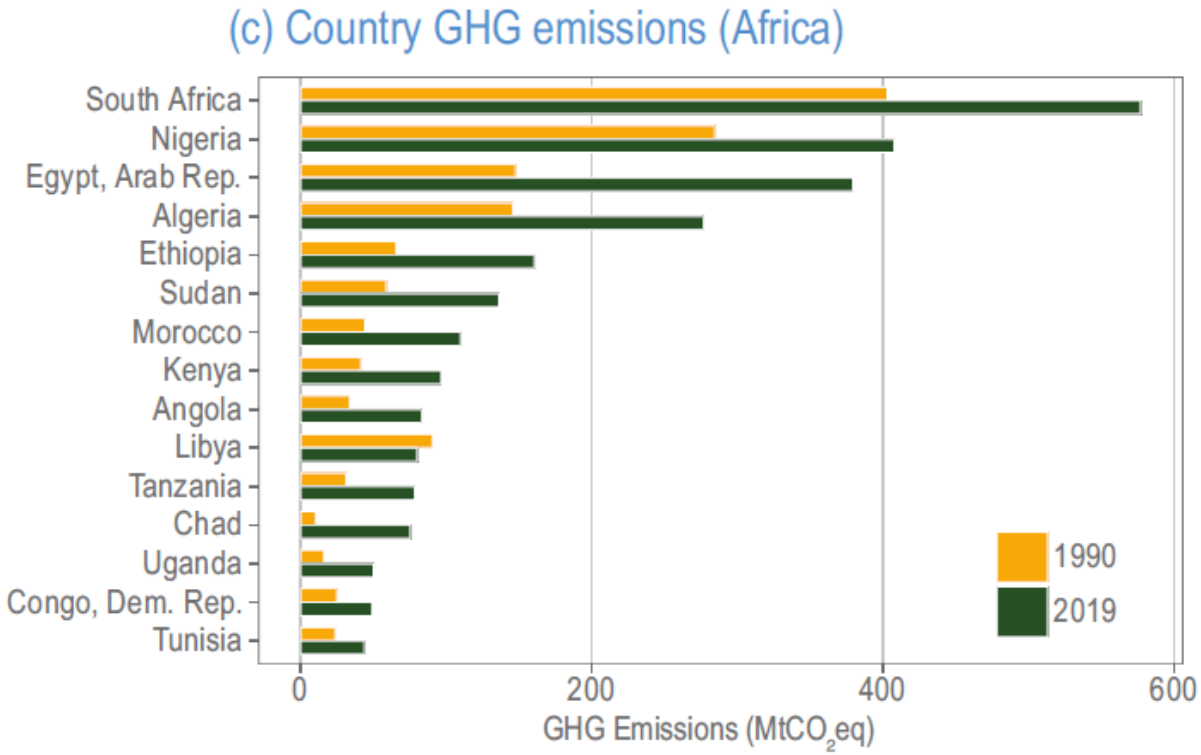
Developing countries contribute less to emissions but often face greater climate impacts.

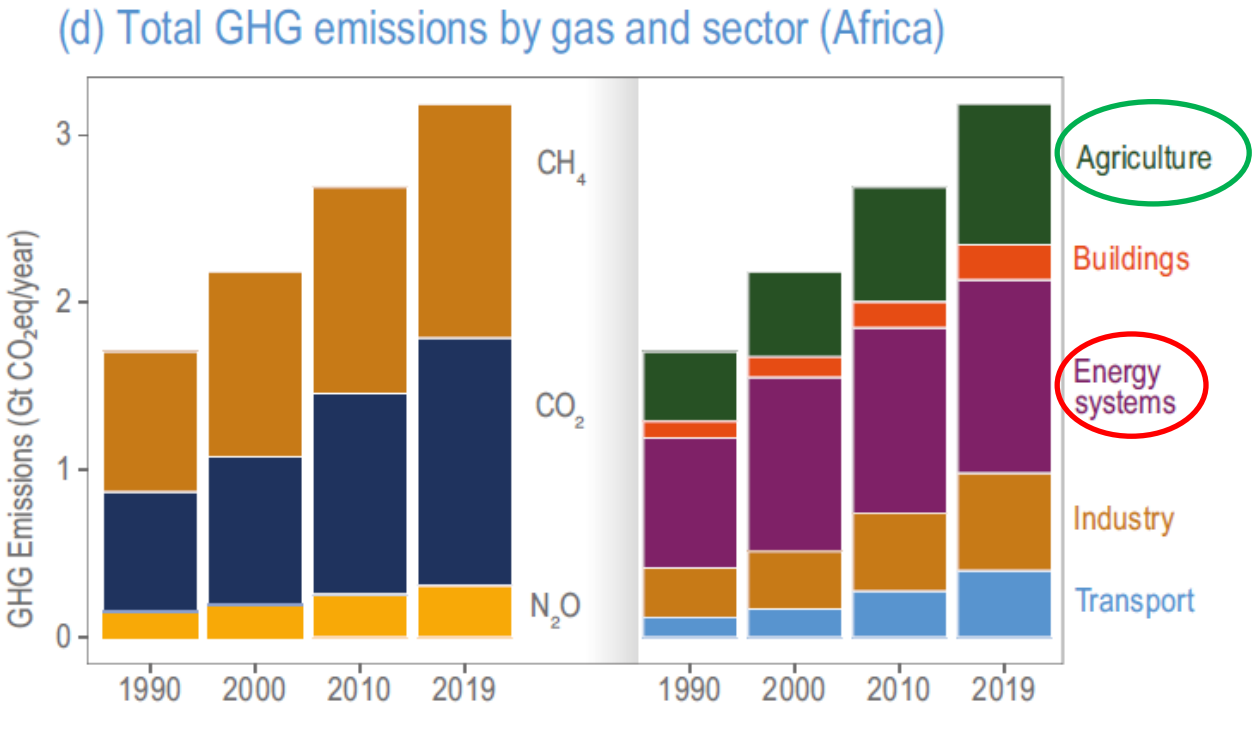
Source Our World in Data (2021)



- **Africa contributes less than 4% of the global green gas emissions**
- Most vulnerable region in the world
- **7 of the 10 most vulnerable countries to climate shock in the world are in Africa**

Historical greenhouse gas (GHG) emission trends for Africa



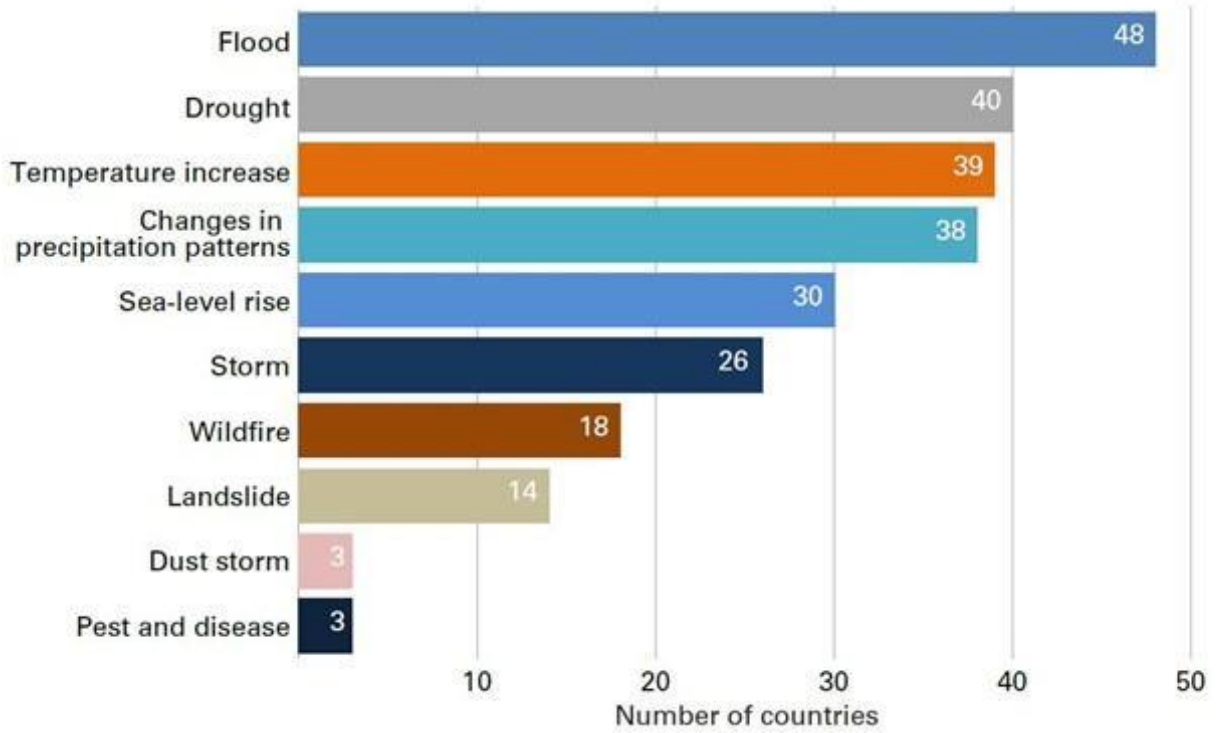


Source: Trisos et al., 2022 (IPCC)

Disproportionate burden from climate change and adaptation costs in Africa

(WMO State of the Climate in Africa 2023 report)

1. Between 1970 and 2021, Africa accounted for 35% of weather, climate, and water-related fatalities
2. **Only 40% of the African population has access to early warning systems** – lowest rate of the world
3. African countries are **losing 2–5% of GDP**
4. **Up to 9% of the budget** of many African countries redirected to **respond to climate extremes**
5. In SSA, cost of adaptation estimated to be between US$ 30-50 billion annually over the next decade, or 2-3% of the region's GDP

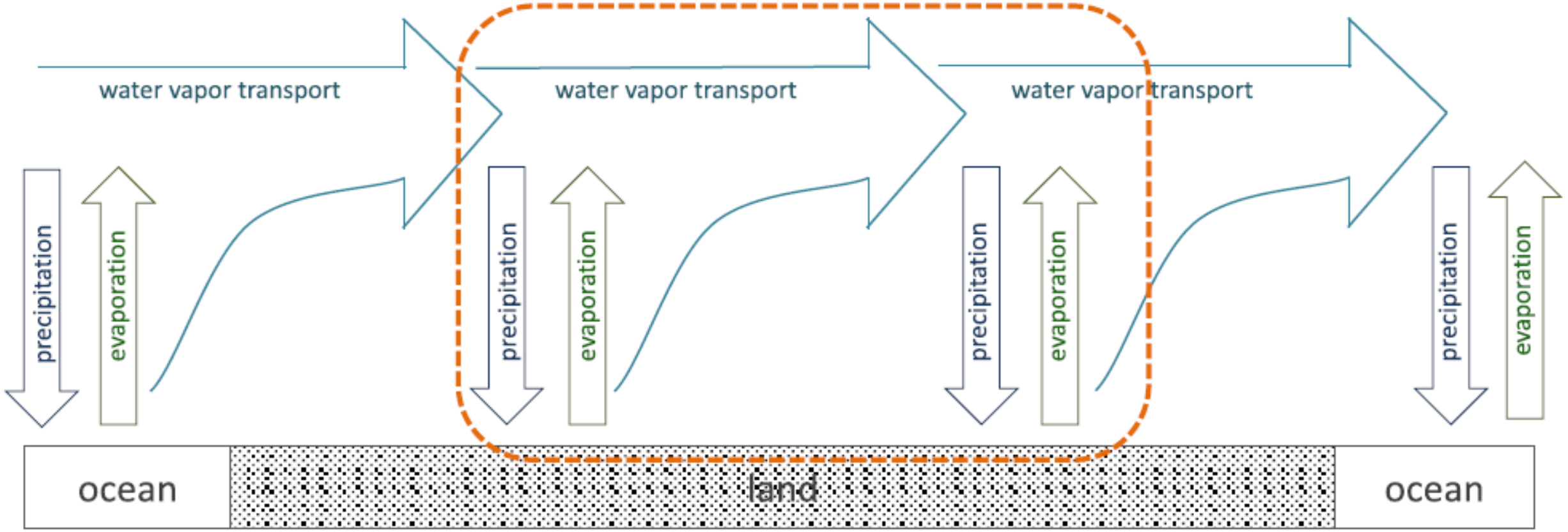


Hazards of greatest concern for the African region

Graph generated by WMO using the NDCs of 53 countries in Africa based on the active NDCs submitted as of June 2024

‘To tackle the climate crisis, we need accountability’

Understanding the planet's climate and ecosystems as a system allows for conceptual and practical division of water resources

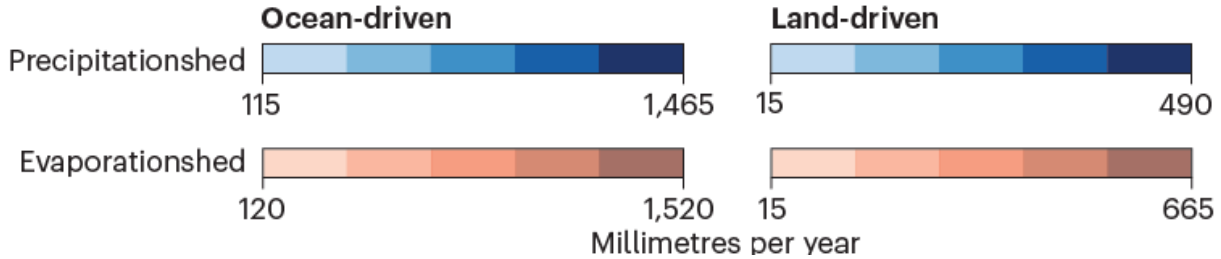


Distinguishing between green and blue water allows for conceptual and practical division of water resources between green water for landscape-scale agricultural and ecosystem initiatives, and blue water for municipal, industrial, and aquatic ecological demands"

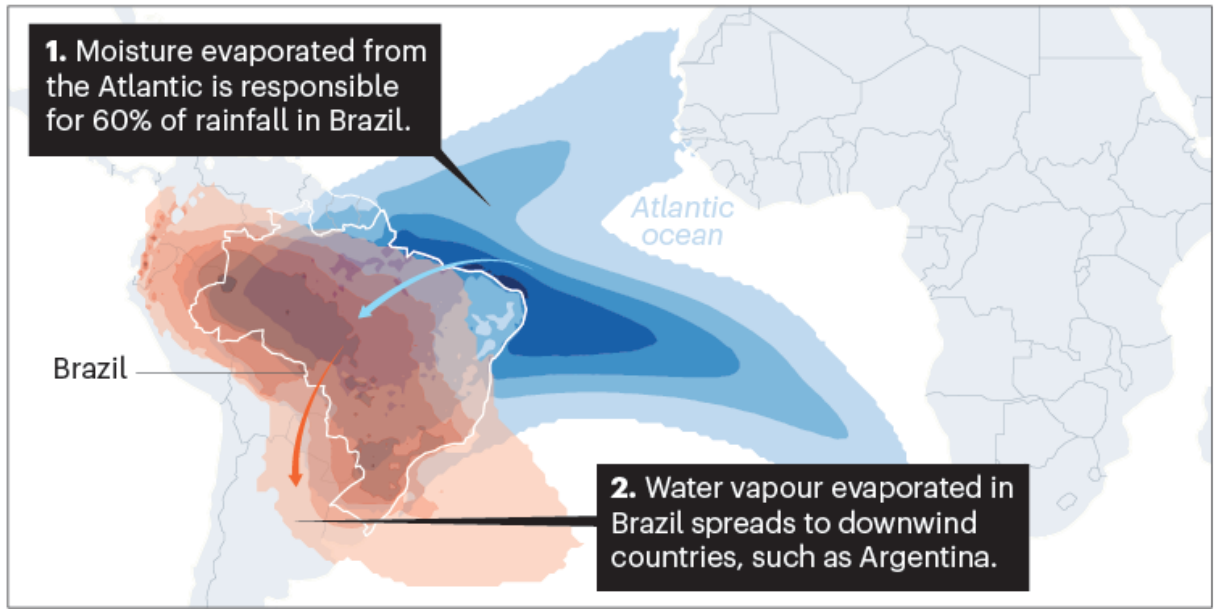
Source : Keys and Falkenmark, 2018

ATMOSPHERIC WATERSHEDS

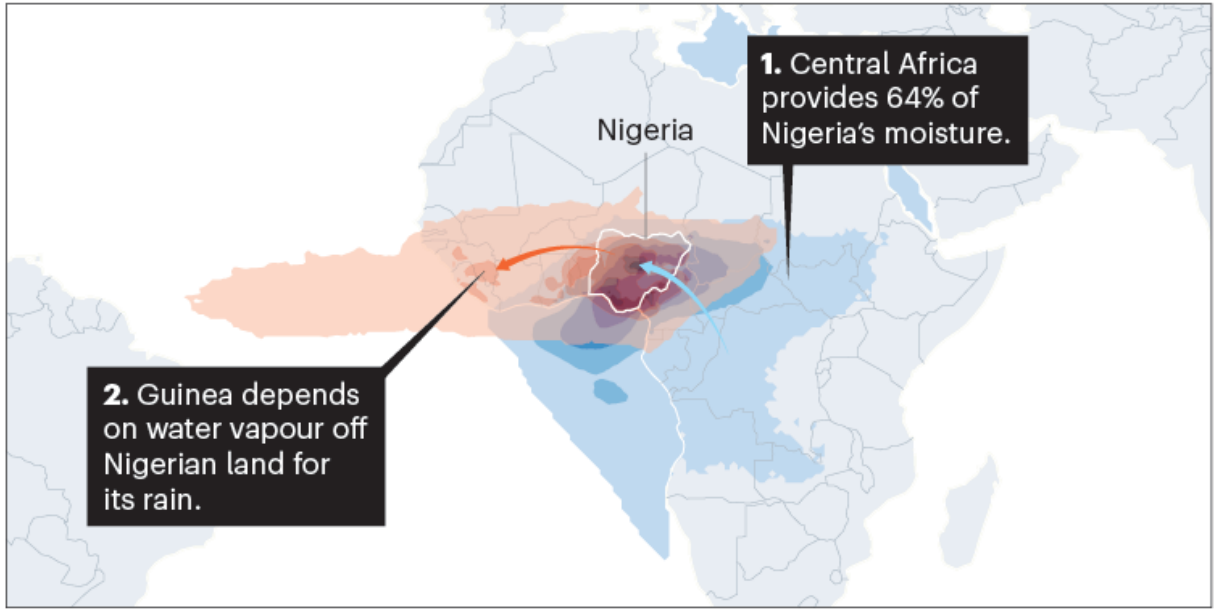
The atmosphere harbours precipitationsheds (regions that act as sources of precipitation to a certain area) and evaporationsheds (regions that receive this area's evaporation, which falls as precipitation). In addition to evaporation from the ocean, the water cycle is driven by moisture from evapotranspiration from terrestrial land and vegetation, and land-cover changes in one country can affect another's rainfall.



Ocean-driven

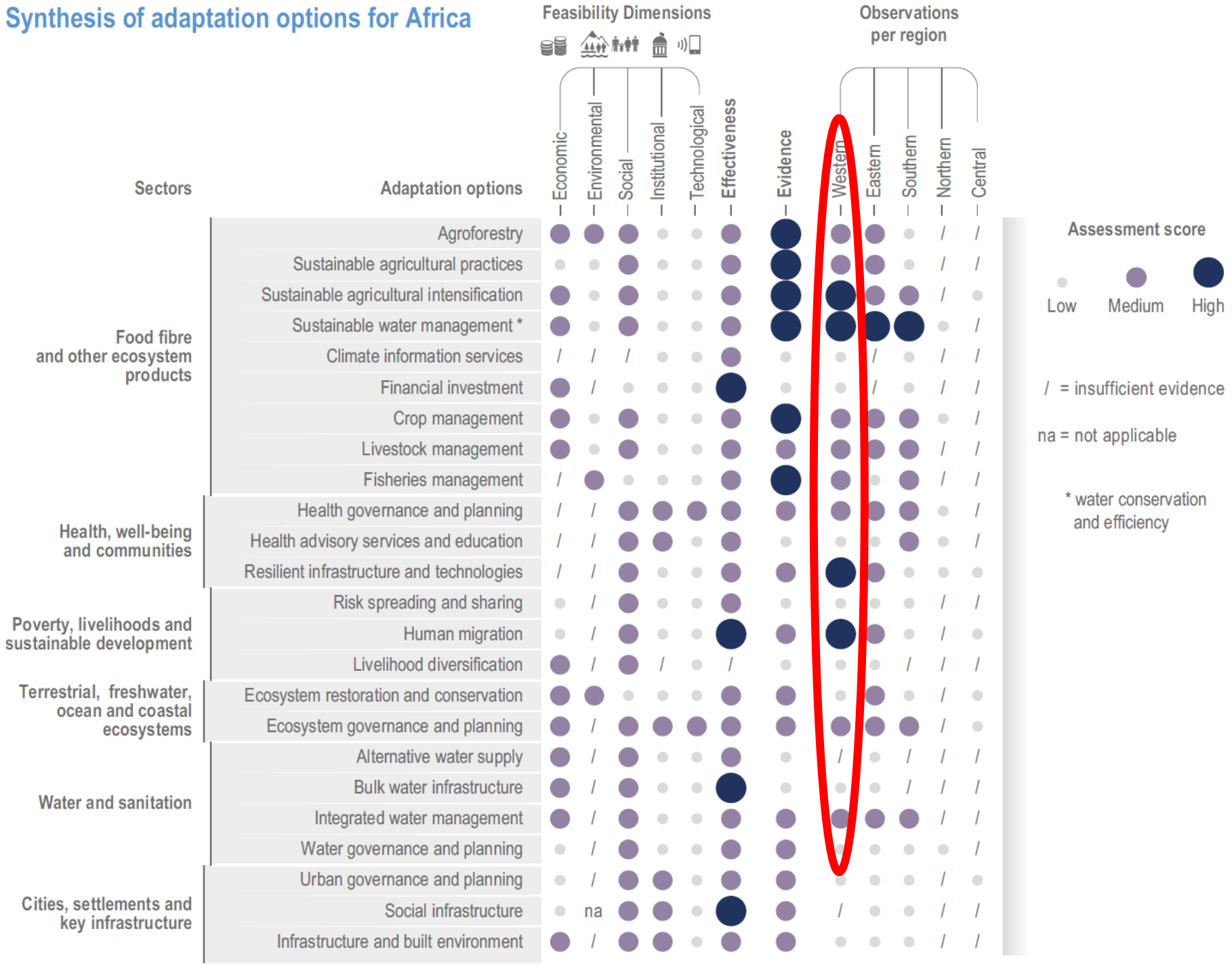


Land-driven



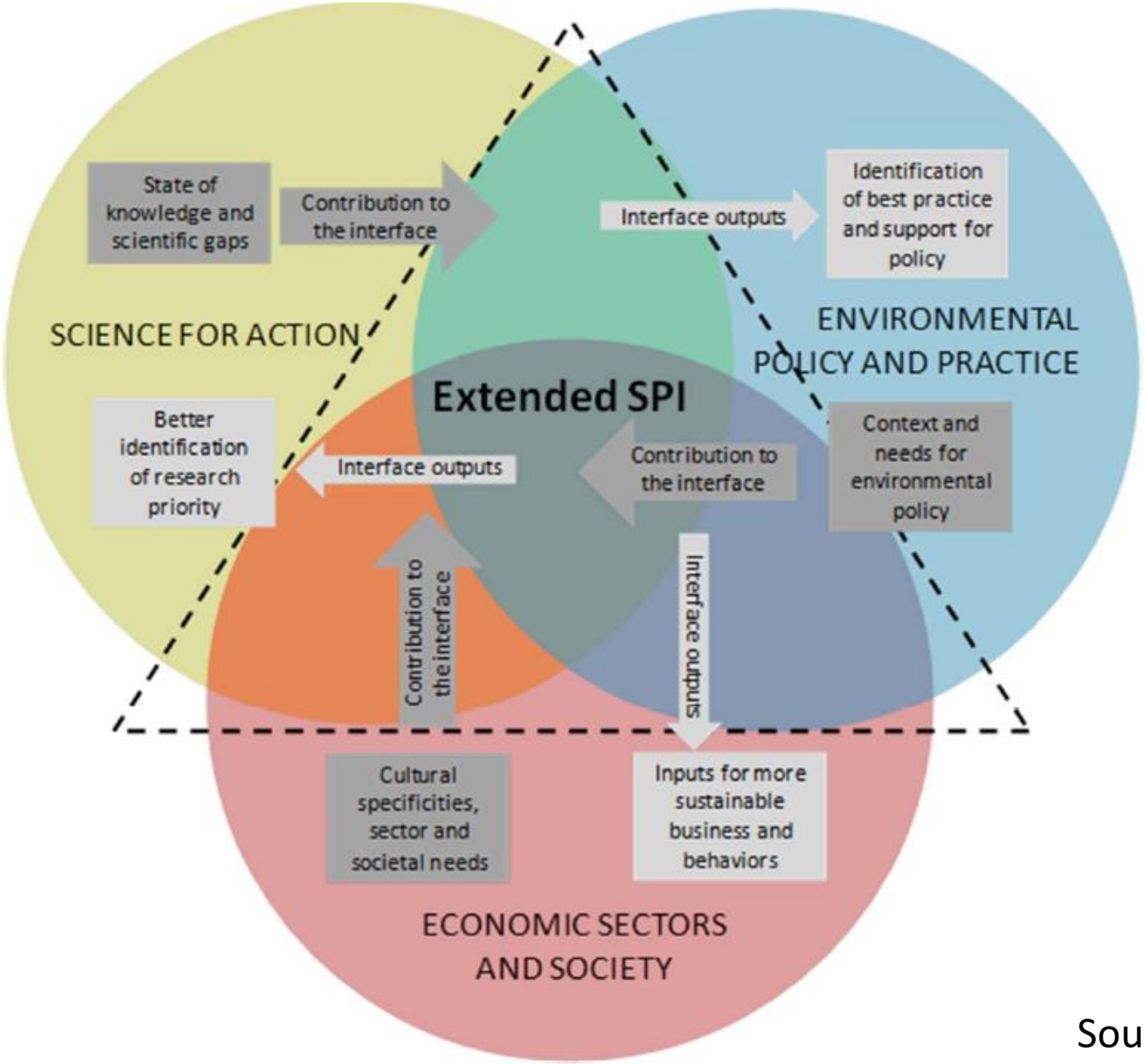
Source: Rockström et al., 2023

Synthesis of adaptation options for Africa



Source: Trisos et al., 2022 (IPCC)

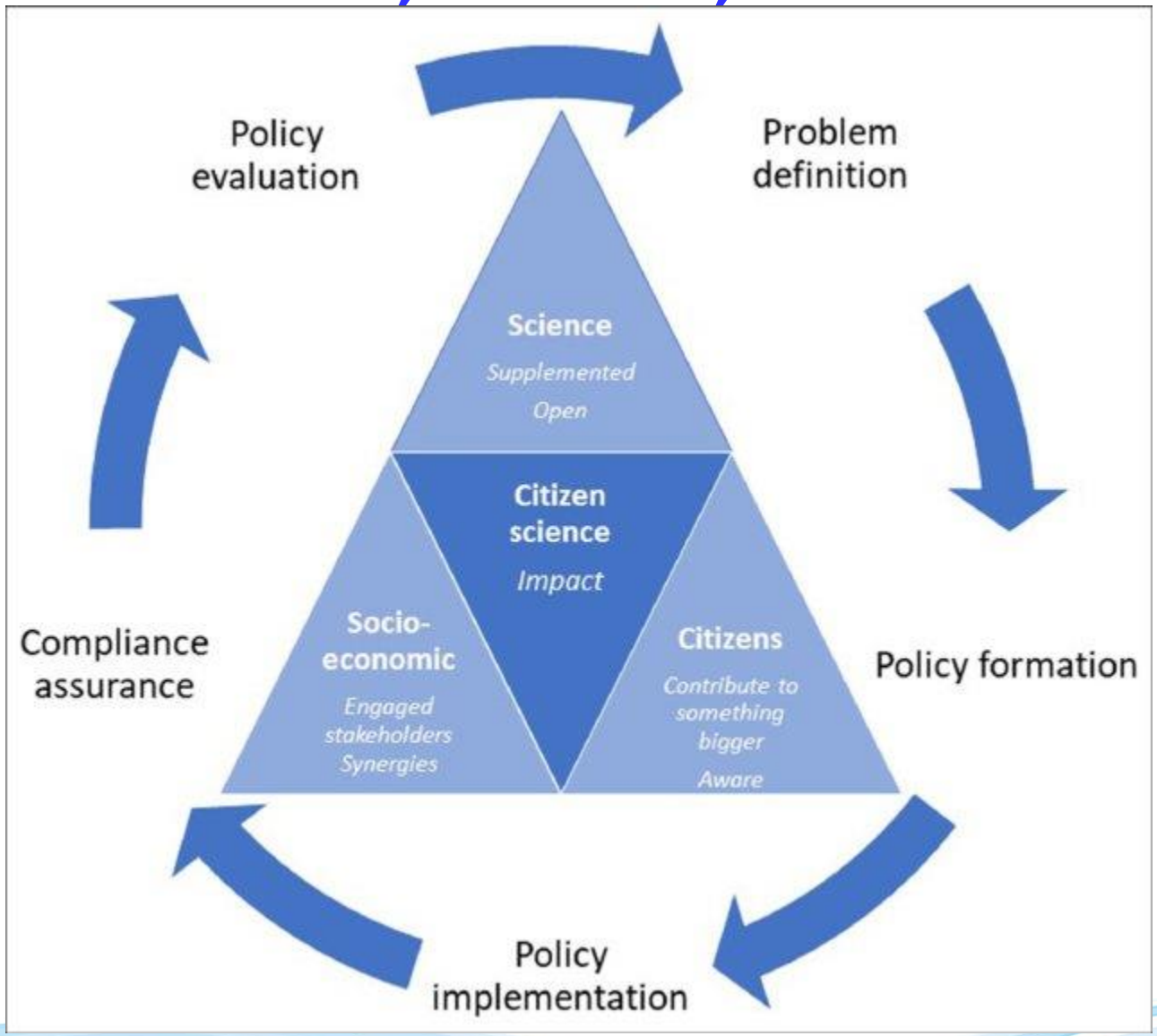
Science-Policy-Society Interfaces



Source: Bocci and Ramieri, 2020

The dialogue necessitates building partnerships and engaging a wide audience to be effective

The three key dimensions of citizen science: citizen scientist, scientific, socio-economic



Source: Turbé et al., 2019

Building blocks of policy coherence for sustainable development
Coherent policies across multiple ministries/sectors

Inform decision-making, and adjust policies in light of potential negative effects

Systematically **consider the effects of policies** on people's well-being "here and now", "elsewhere" and "later"

Engage all relevant actors to identify challenges, set priorities, align actions and mobilise resources

Align priorities and **promote coordinated action at different levels of government**

Mobilise whole-of-government action and orient policy development towards sustainable development

Support present needs and those of future generations in a balanced manner

Capitalise on synergies and address trade-offs between economic, social and environmental policy areas

Resolve divergences between policies, including between domestic and external policies

Source: Adapted from OECD (2018[2]), Policy Coherence for Sustainable Development 2018: Towards Sustainable and Resilient Societies, https://dx.doi.org/10.1787/9789264301061-en.

Conclusion

- Security and climate change threats in West Africa are complex and require **greater regional coordination and cooperation** to address the conflict issues and structures
- Addressing climate-related security threats and fostering collaboration can be achieved through **governance**. **Policy dialogues** on the shared management of natural resources, more inclusive natural resource governance, and improved integration of regional resource management techniques with pertinent national laws are all necessary to accomplish this
- It is necessary to **translate climate-related security threats into the language of local policies and link them to local goals**. Responses to conflicts should strengthen how people organize, govern, and adapt while addressing fundamental human security concerns and climatic vulnerabilities
- West African security and climate change are pressing issues that need **iterative solutions that combine learning and action**
- **Still significant knowledge gaps about the region's climatic vulnerabilities**. **Building capacity** in local research, identifying, connecting, and scaling up resilience-building and peacebuilding successes, and adjusting funding to match changing difficulties are all necessary to close these gaps

ONLY ONE EARTH

Thank you!