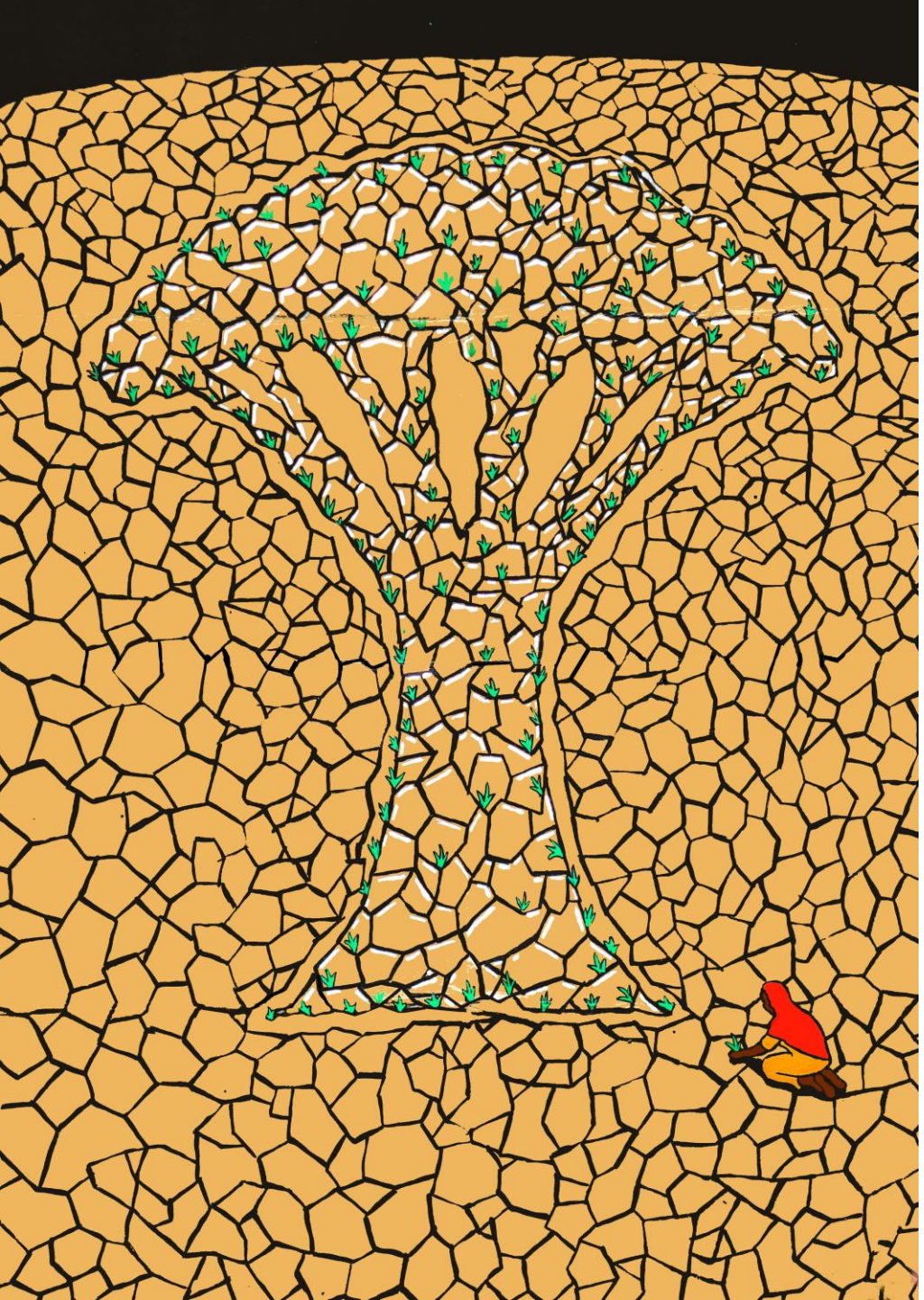

Desertification

Slow Onset Events

Technical Guide

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Desertification means land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors, including climatic variations and human activities (UNCCD 1994)

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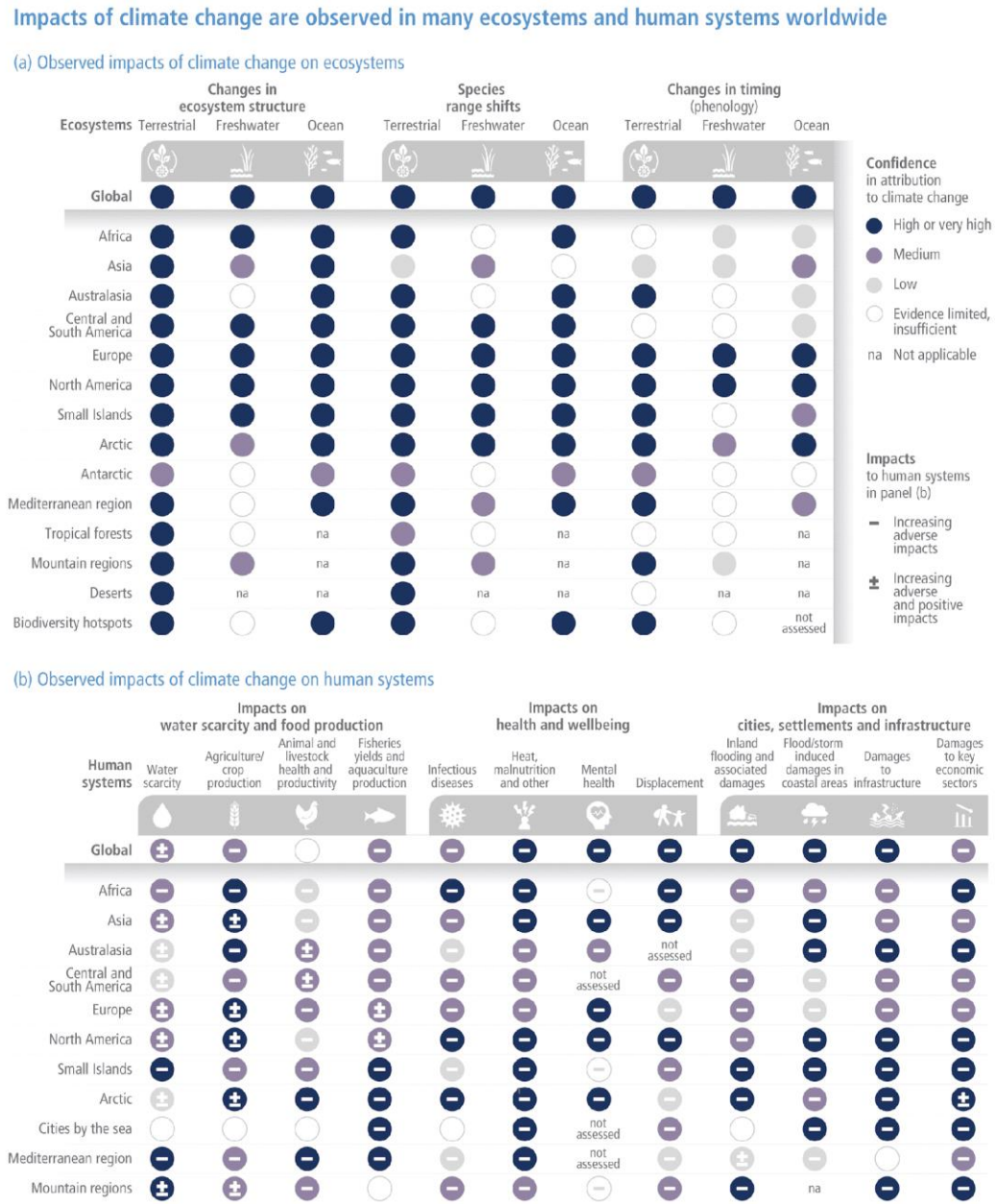


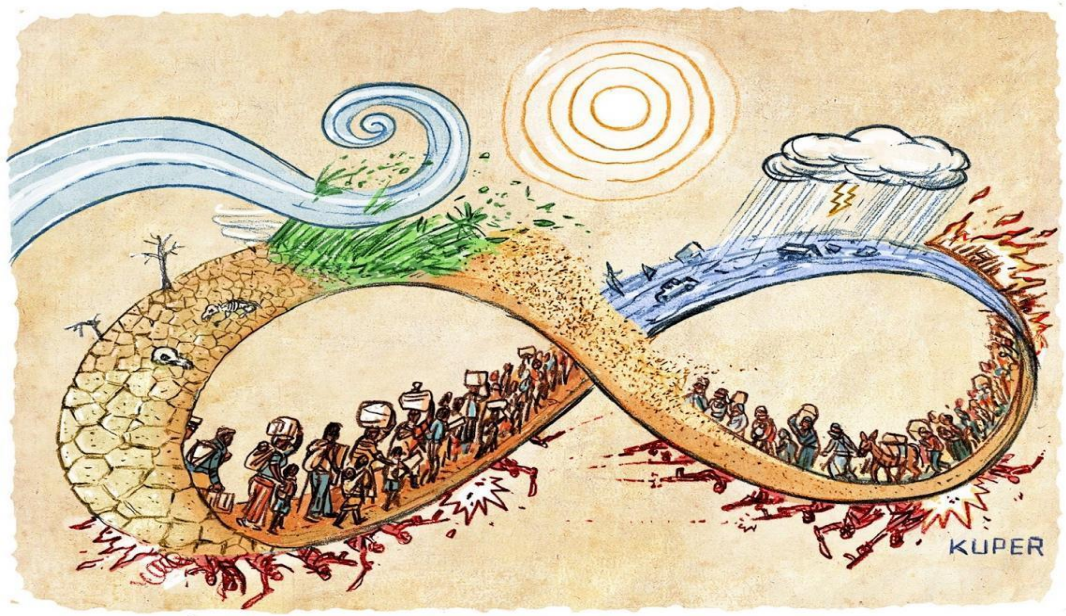
Desertification trends

- **Land degradation impacts the well-being and livelihood of approximately 3.2 billion people in the world** who live in dryland such as deserts and semiarid areas with lower adaptive capacities (IPCC, 2022).

- Most affected are populations in South Asia, circum Sahara region and the Middle East (IPCC).

- There is high confidence that **climate change will exacerbate the vulnerability of dryland populations to desertification**, and that the combination of pressures coming from climate change and desertification will diminish opportunities for reducing poverty, enhancing food and nutritional security, empowering women, reducing disease burden, and improving access to water and sanitation (IPCC, 2019)

Desertification trends



- Compounding crises including climate change, drought, socioeconomic factors call for a **holistic and integrated approach to adaptation** (IFRC, 2022)
- The adverse effects of degradation dynamics are hard to detect immediately because they are gradual and nonlinear. Consequently, **methods for assessing future land degradation risks and developing risk reduction strategies lag** behind those for sudden natural hazards like floods or earthquakes (von Keyserlingk, Thieken, and Paton, 2023).

Resilient Livelihoods

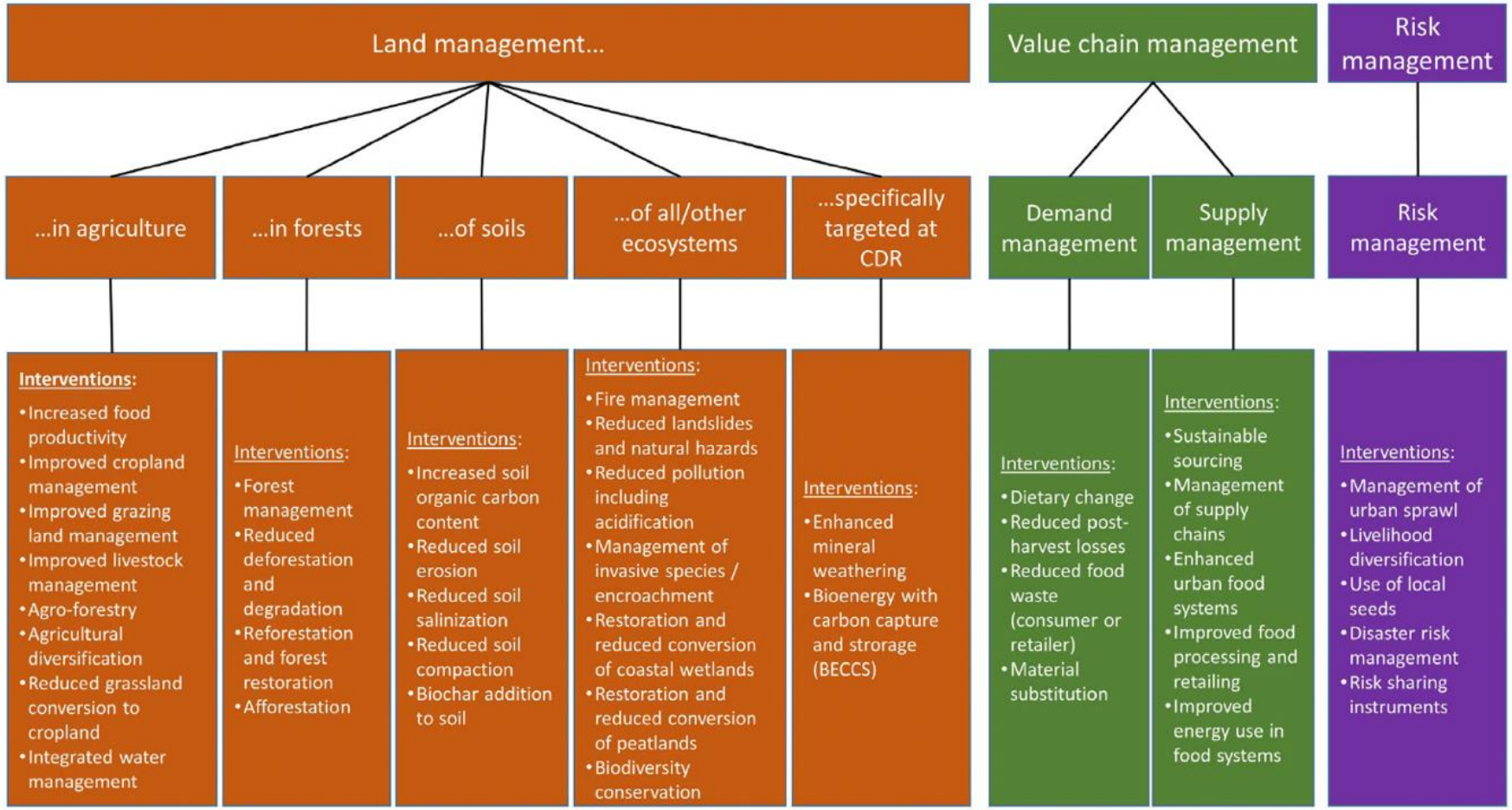
- Livelihoods depend on **ecological and socioeconomic systems** and are context-specific.
- **Land degradation is leading to increasing poverty and worsening inequality by negatively affecting the agricultural sector**
- impacts on quality of life, causing declines in economic opportunity, food security, physical and mental health, water security, safety from conflict, and personal and cultural identity

- **Agricultural yields could fall by up to 50%** in some African countries if production practices are not changed

Livelihoods and compound and cascading risk

- **Sand and dust storms have increased dramatically in recent years** and are aggravated by climate change, drought, and desertification; they damage crops, kill livestock, and strip topsoil, harming food production and local livelihoods
- **There is a direct relation between desertification and drought**
- **Land degradation may also amplify water scarcity and increase vulnerability to droughts**
- **Drought impacts cascade across the full spectrum of economic sectors and social and environmental systems**
- **Slow-onset changes**, especially those provoking crop failures and heat stress, could affect household or individual migration decisions
- **Avoiding maladaptive outcomes can often contribute both to reducing the risks from climate change and combating desertification**

Categorization of practices



(Smith et al, 2019)

Adaptation Options

Increase resilience of current livelihood strategies

Integrated crop–soil-water management

Grazing land management

Sustainable forest management

Regenerative Agriculture, Agroecology

Locally led adaptation, local knowledge and livelihoods

Approaches to increasing agency

Systems approach

No thanks, we're going to create some alternative options over here. Want to join?

Kendra Allenby / CartoonCollections.com

Summary

- Desertification is happening at scale, increasing in severity and reach
- Drivers of desertification are related to climate, biophysical and human systems
- Current and future livelihoods are impacted
- Compound and cascading risks are severe
- Solutions from single technology to an integrated systems approach
- Anticipatory policy, considering short to long term time scales