Youth Leaders Learning Exchange Rosina Bierbaum, Chair Scientific and Technical Advisory Panel of the GEF GEF Assembly, Vancouver, August 2023

J. Hennessey, Black Bear, Kitasoo/Xai'xais Nation

Welcome to STAP Science Day

Morning:

Youth Leaders Learning Exchange -

- to inspire action

Afternoon:

Indigenous and Local Knowledge for greater GEBs

- case studies from the Arctic and Amazon



Douglass Neasloss and Coastal First Nations, Spirti Bear, Kitasoo/Xai'xais Nation



What is STAP ?

STAP provides independent scientific and technical advice to the GEF Council on GEF projects, policies, and programs.



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STAP has two main roles in the GEF Partnership

Provide advice

1

2

- State of science
- Horizon scanning
- GEF programming priorities
- Technical guidance
- Screen projects & programs
 - GEF full-sized projects
 - Integrated programs



M. Calcari Campbell, Dungeness Crab, Kitasoo/Xai'xais Nation



Drivers

Growing Human Pressure

Surprise

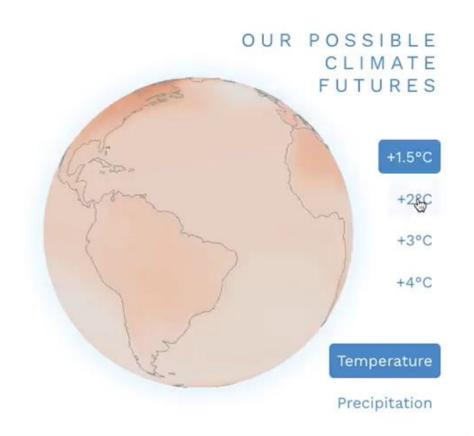
Ecosystem

decline

Climate change

Source: Modified from J. Rockstrom

Climate change futures

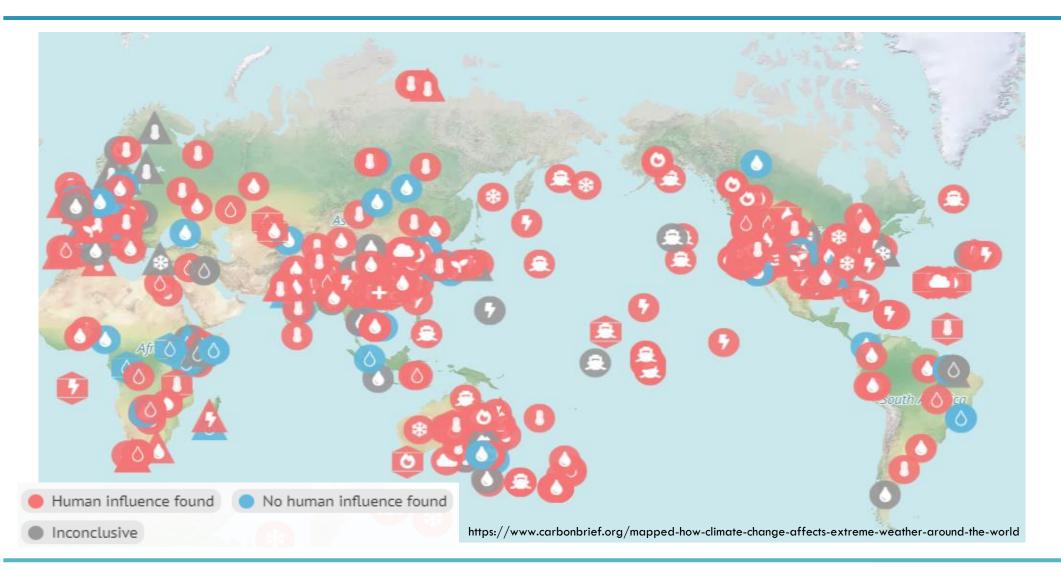


https://interactive-atlas.ipcc.ch/





Extreme weather can be attributed to climate change







Intensifying ecological trends

Land use change

 Loss of ecosystem services, such as filtration of air and water, climate regulation, cultural values

Biodiversity loss

• Continued decline in species number and composition of ecosystems, intactness, connectivity

Pollution

• Waste generation, anthropogenic water, land and air pollution, human health effects...

Images top to bottom:

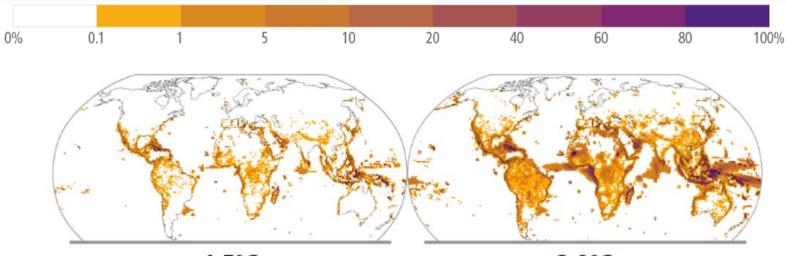
Shutterstock/WHO African Region

Deforestation in Indonesia; Ulet Ifansasti/Greenpeace

Toxic water discharge in Russia; James P. Blair/National Geographic



Biodiversity loss

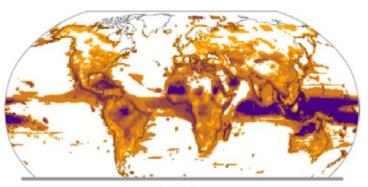


Risk of species losses

Percentage of animal species and seagrasses exposed to potentially dangerous tomperature conditions...



Includes 30,652 species of birds, mammals, reptiles, amphibians, marine fish, benthic marine invertebrates, krill, cephalopods, corals, and seagrasses. 2.0°C



3.0°C



SYNTHESIS REPORT OF THE IPCC SIXTH ASSESSMENT REPORT (AR6) – March 20, 2023

https://www.ipcc.ch/report/sixth-assessment-report-cycle/

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Pollution creates unjust outcomes

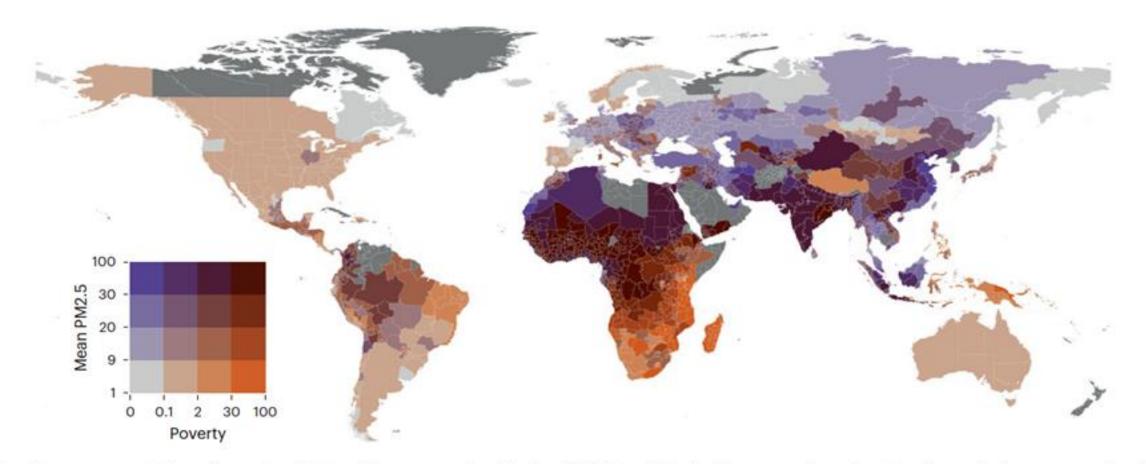


Fig. 3 | Mapping exposure to harm from air pollution. Exposure to air pollution (PM2.5) combined with poverty shows how local boundaries are crossed and how local people may be affected.

Source: Gupta et al. (2023) Earth system justice needed to identify and live within Earth system boundaries. Nature Sustainability



Environment is "natural capital"

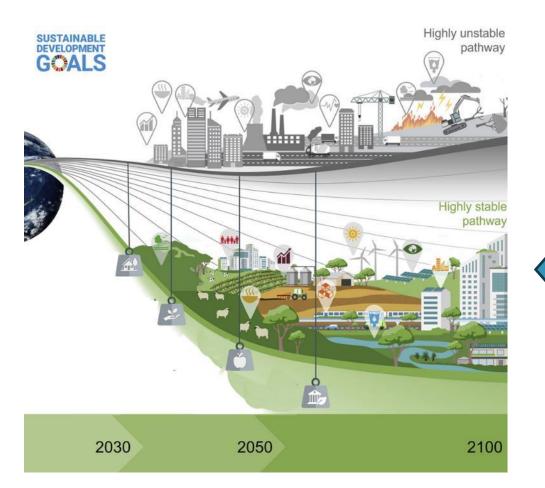


on nature

WEF, 2023

STAP SCIENTIFIC AND TECHNICAL ADVISORY PANEL

Nature-based solutions can assist reach goals



Source: "Early systems change necessary for catalyzing long-term sustainability in a post-2030 agenda"



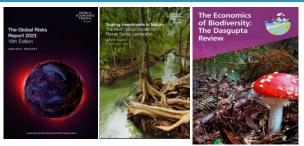
Source: "Getting the message right on nature-based solutions to climate change"



Great momentum to take climate, nature-positive actions

- Drumbeat of science
- Impacts are being felt and are expensive
- Attribution of climate change impacts on extreme events
- Climate change can't be solved without nature; biodiversity can't be preserved without slowing climate change
- Cost of clean energy and renewables dropping
- Cities, states, & countries are taking action
- Businesses are responding and taking risk seriously
- Investment community is activated!

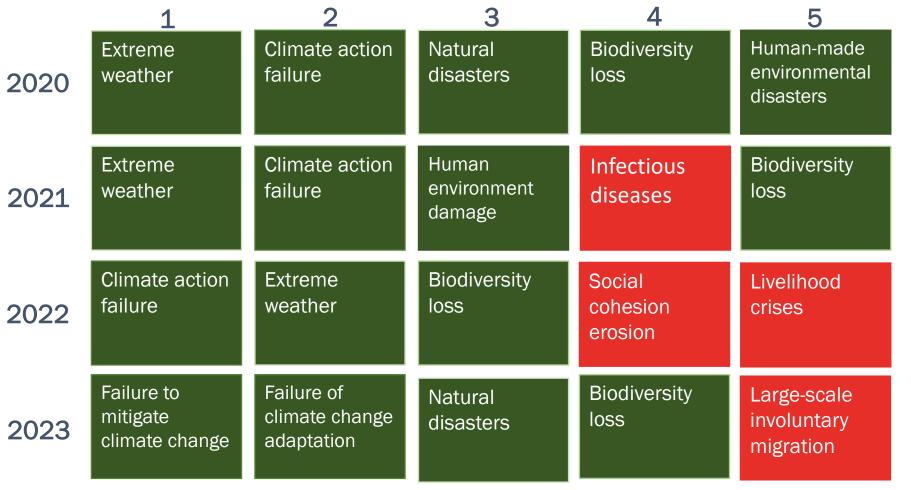








World Economic Forum Global Risk Reports



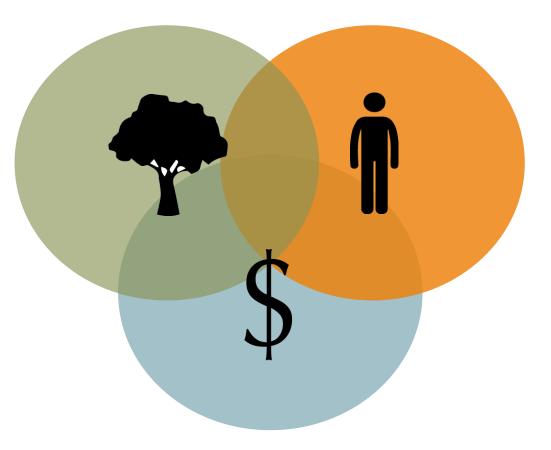
https://www3.weforum.org/docs/WEF_Global_Risk_Report_2020.pdf https://www3.weforum.org/docs/WEF_The_Global_Risks_Report_2021.pdf

https://www3.weforum.org/docs/WEF_The_Global_Risks_Report_2022.pdf https://www3.weforum.org/docs/WEF_Global_Risks_Report_2023.pdf

WORLD ECONOMIC FORUM

Global risks ranked by severity over the long term (10 years)

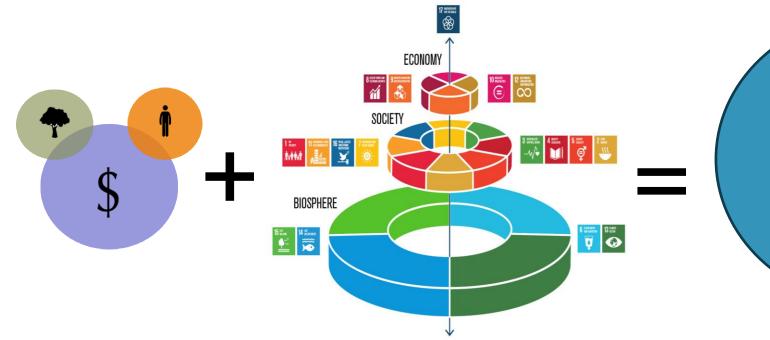
The 3 inter-dependent facets of sustainability



Source: J. Rockstrom



The world is responding...



Increased attention to nature-based solutions, equity, gender, youth, IPLCs, behavioral change, improved livelihoods, policy coherence...

Source: J. Rockstrom



Science doesn't have all the answers!



Behavior towards sustainability Erosion of social cohesion

Environmental activism

Youth influence

Polarization

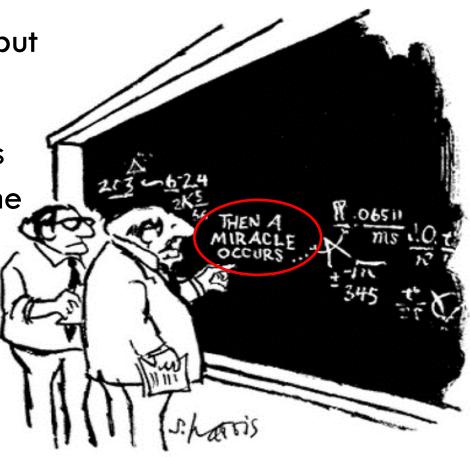
Backlash on equity, diversity, & inclusion

Emerging role of women, Indigenous peoples/local knowledge



Behavioral Change

- Many GEF projects assume behavioral changes, but this is often implicit
- Projects are more likely to succeed if communities are deeply engaged from the beginning to define goals and outcomes
- Changes must be rooted on social and gender values and norms



"I think you should be more explicit here in step two." Source: Google image search



Policy coherence

GEF is committed to "policy coherence" because it:

- creates synergies
- helps manage trade-offs
- avoids damaging behaviors
- ensures environmental benefits are not undermined





Involvement of communities in decision making



Livestock market, Ethiopia. www.icarda.org

Initial analysis suggested:

- 1. Focus is on land degradation
- 2. Natural resource management (NRM) pursued

With community involvement:

- 1. Scales to weigh sheep
- 2. Form farmer empowered co-operatives
- 3. Have access to microfinance for the co-operatives
- 4. Link co-operatives/sellers directly to buyers



Knowledge management – adding it all up!

- Is more than information management
- Is part of a continuum from learning → uptake
 → impact
- Need a 'learning culture' and 'systems thinking'





Great Bear Rainforest Agreements

- Established in 2006, Great Bear Rainforest Agreements first Project Finance for Permanence!
- Brings together First Nations of the North Pacific Coast, federal and provincial governments
- Led to conservation, employment, empowerment of youth, food security, and more





You are agents of change!







