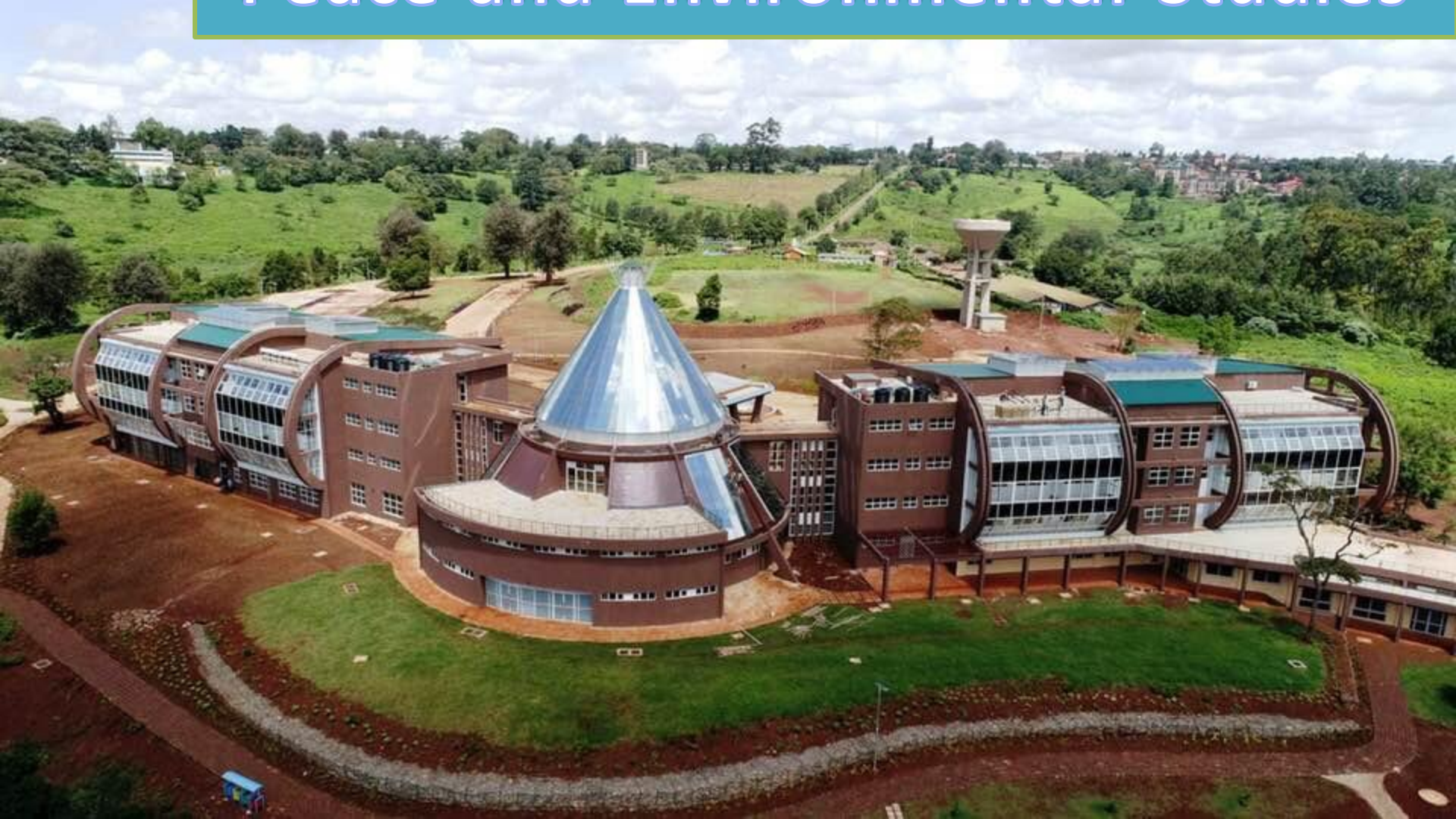




Prof. Henry Mutembei, Director Wangari Maathai Institute for Peace and Environmental Studies





- Vision

Excellence in Experiential Learning, Transformational Community Outreach and Research for sustainable environment and cultures of peace

- Mission

To cultivate positive ethics, values and practices towards the Environment by training stewards who foster peace, holistic sustainable development and link Theory with Practice



1st Distinguished Chair



2nd Distinguished Chair



Our Emphasis-----

- WMI emphasizes on **Environmental Governance**:-
“human behaviour is influenced by decision making processes & the decisions themselves”

hence---

- the means by which society determines and acts on goals and priorities (IPCC threshold of 1.5 degrees Celsius limit), in relation to their management
(political, social and economical policies advocating sustainability as the supreme consideration)



Migration, Mobility, Conflict and Security in the Context of Climate Nexus



Migration & Mobility

- **Human Migration-** Movement from one place to another with intention of settling temporarily or permanently (long distances; country to country or region to region)
- **Drivers**
 - Lack of economic opportunities
 - Insecurity
 - Environmental pressure like drought/flooding
- **Geographic mobility** - the measure of how populations move over time (a statistic that measures migration within a population)
- **Consequences**
 - Shifts in global demographics
 - Changes in local development
 - Shifts in ecosystems
 - Positive or negative impacts



Climate Nexus in connection to Migration & Mobility

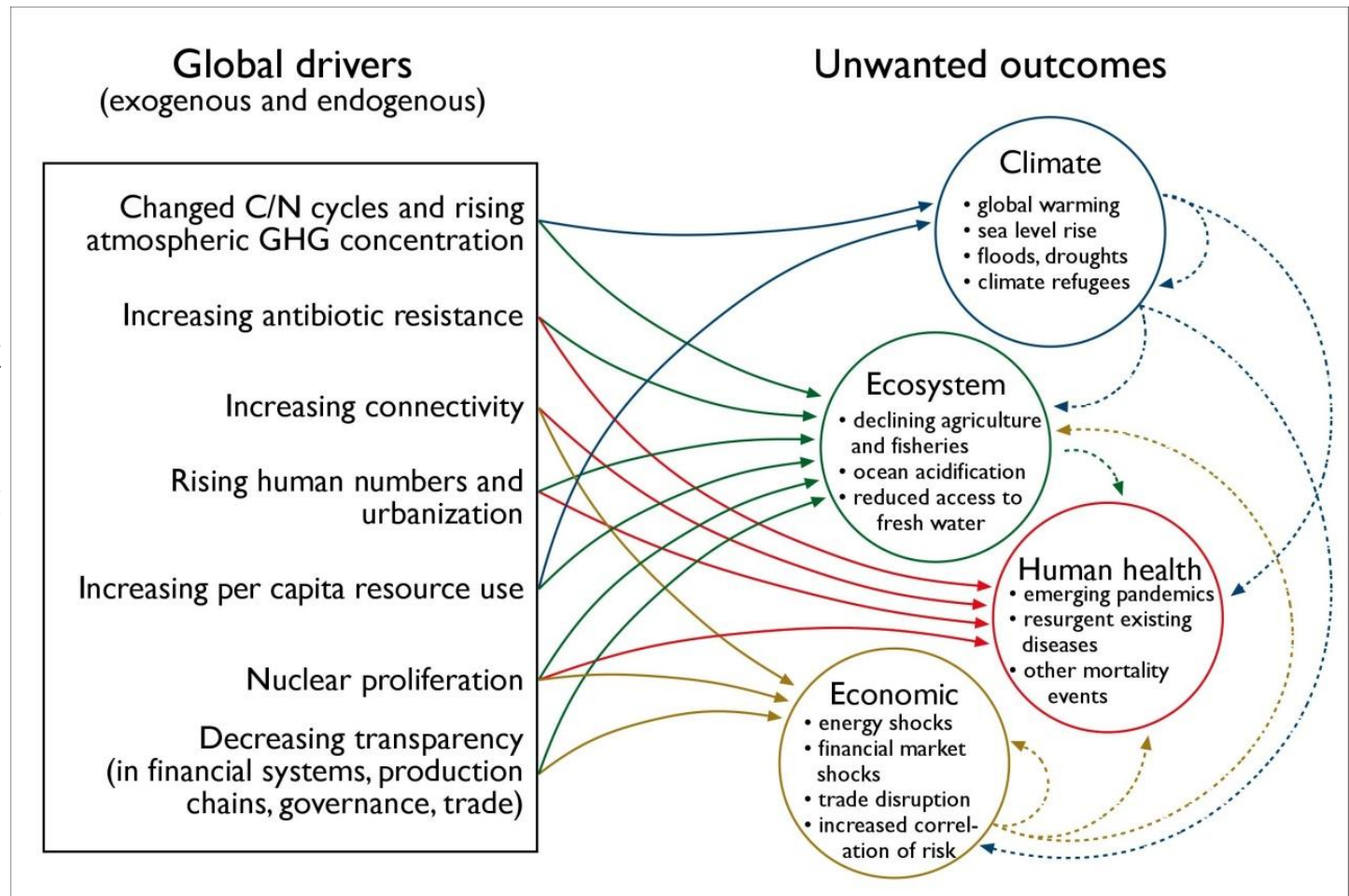


Ban Ki-moon High-Level Panel on Global Sustainability



Looming global scale failures and missing Institutions; People-Climate Nexus

Walker, B. et al., 2009. Science, 325: 1345-1346





Wangari Maathai Institute
(WMI)



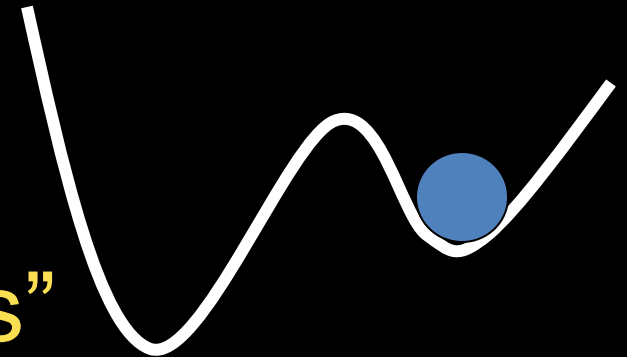
From:

"Buddened Carrying capacity"

"Set Guardrails" - Boundaries"

To:

"Tipping Point Catastrophes"





Climate Change

< 350 ppm CO₂
(>350 ppm CO₂ ;
(1.5°C threshold)

Ozone depletion

< 5 % of Pre-Industrial 290 DU
(5 - 10%)

Biogeochemical loading: Global N & P Cycles

Limit industrial fixation of N₂ to 35 Tg N yr⁻¹ (25 % of natural fixation)
(25%-35%)

P < 10x natural weathering inflow to Oceans
(10x – 100x)

Rate of Biodiversity Loss

< 10 E/MSY
(< 10 - < 1000 E/MSY)

Land System Change

≤15 % of land under crops
(15-20%)

Chemical Pollution

Plastics, Endocrine Disruptors,
Nuclear Waste Emitted globally
To be determined

Atmospheric Aerosol Loading

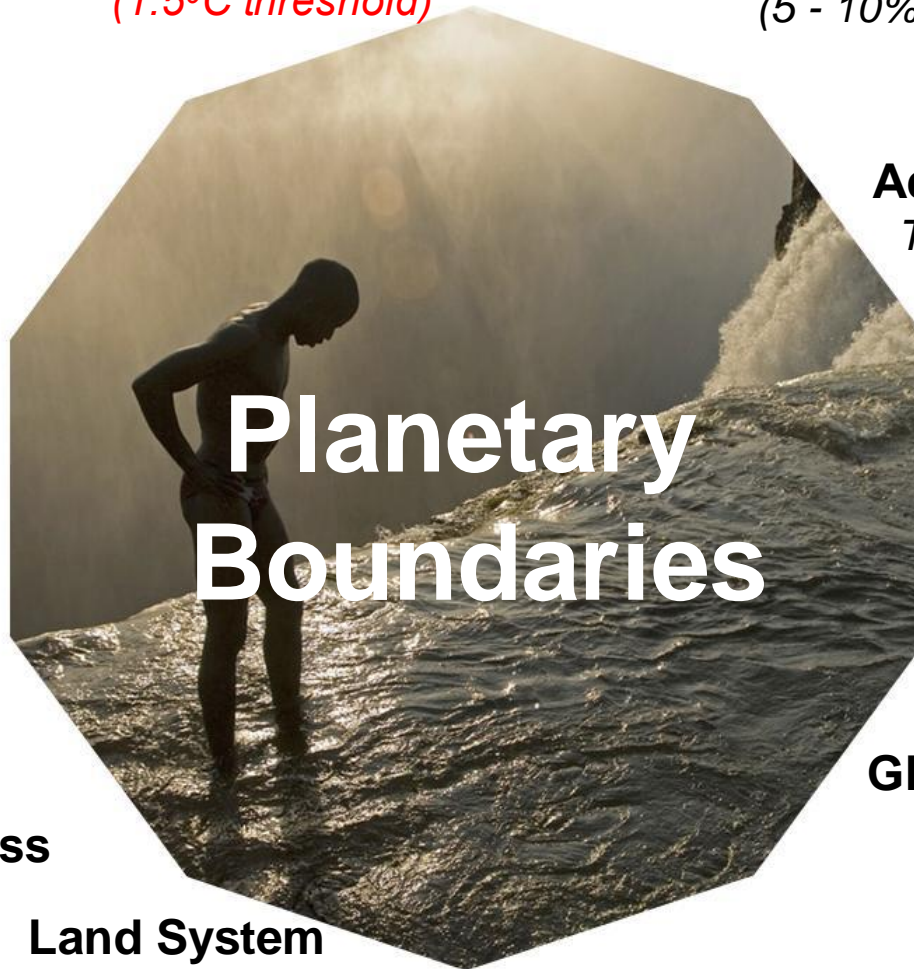
To be determined

Ocean acidification

Aragonite saturation ratio > 80 % above pre-industrial levels
(> 80% - > 70 %)

Global Freshwater Use

<4000 km³/yr
(4000 – 6000 km³/yr)

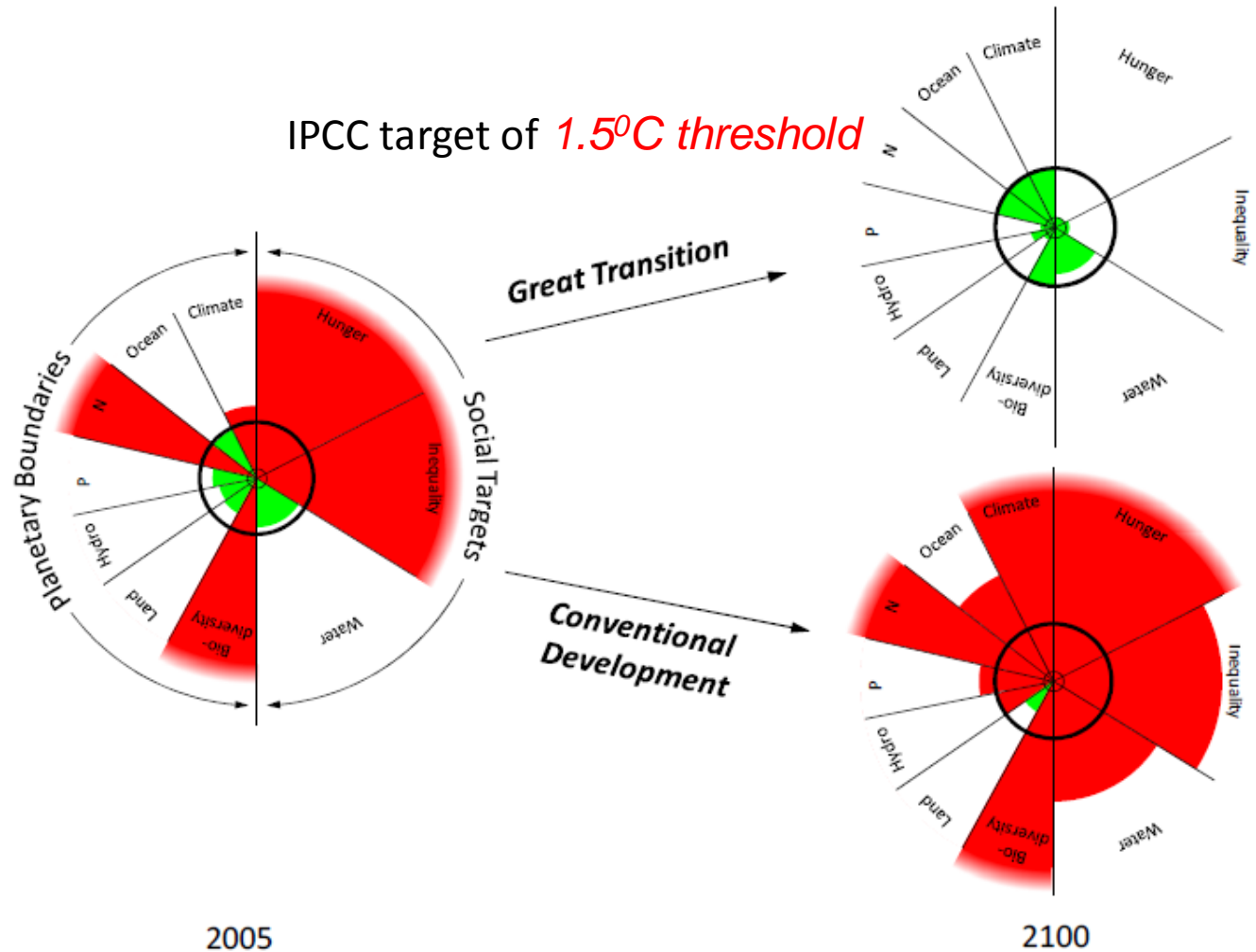


Planetary Boundaries

The Possibility of the Future: global scenarios, social goals, and planetary boundaries



Michael D. Gerst^{a,b}, Paul D. Raskin^{b,1}, and Johan Rockström^c





Drought-Induced Reduction in Global Terrestrial Net Primary Production from 2000 Through 2009

Maosheng Zhao* and Steven W. Running

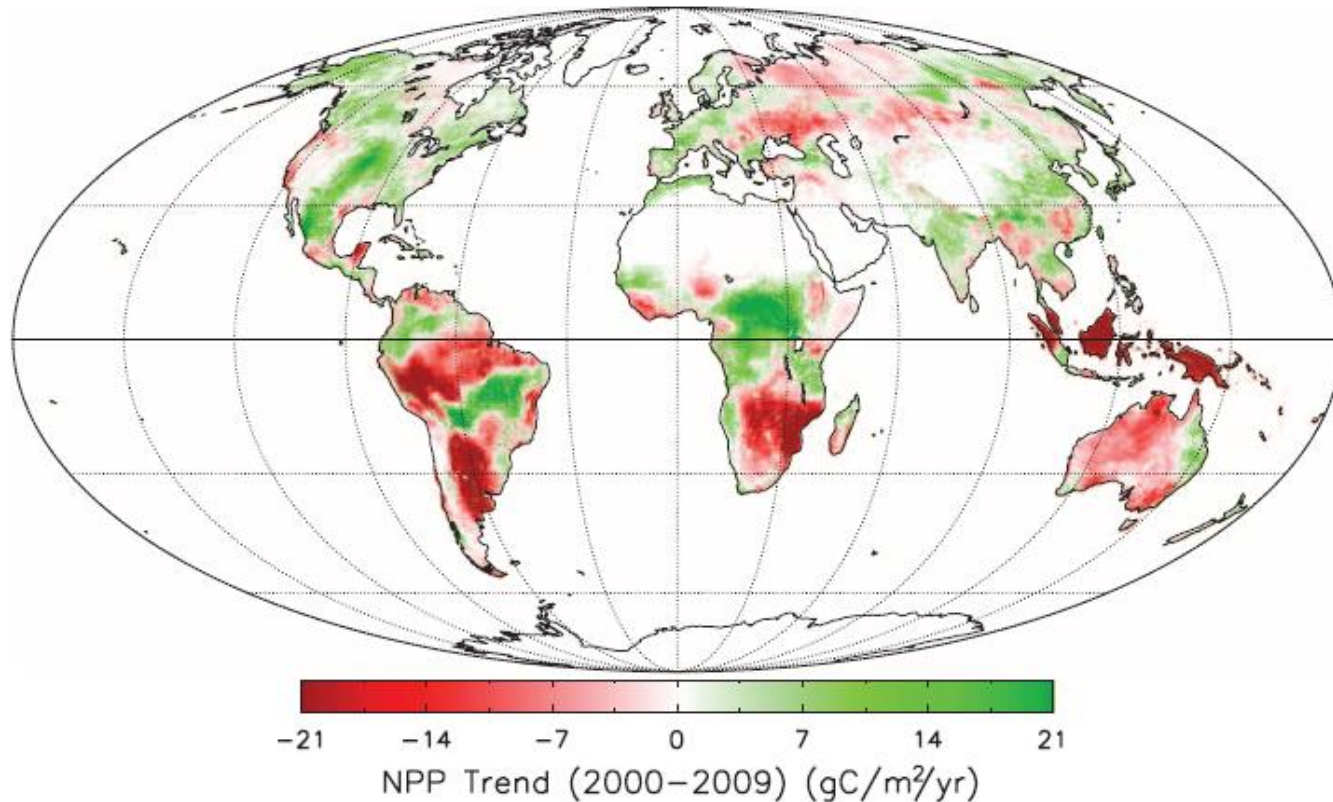


Fig. 2. Spatial pattern of terrestrial NPP linear trends from 2000 through 2009 (SOM text S1) (8, 10).



The Peace Connection

Failure to comply to IPCC threshold (1.5 Degrees C)

- ✓ Global warming with irreversible catastrophes like droughts and floods
- ✓ Increased environmental burdens leading to lack of economic opportunities
- ✓ Massive migrations occurs
- ✓ Uncontrollable shifts in livelihoods patterns
- ✓ Mobility caused negative impact on environment
- ✓ Accelerated further climate change
- ✓ Conflicts over natural resources
- ✓ Uncontrollable Global insecurity
- ✓ Global catastrophe

Reaching the Tipping point means- “ Non-peaceful Nature’s Pay Back Time”- disasters



Facts

In Sudan the Sahara
has advanced by
100km in 17years

In the last 50 years, 65
million hectares of the
Sahel have turned to desert

Desertification is now
estimated to be spreading
at a rate of 1.5 million
hectares per year in the
Sahel

Case Study: The Sahel- Desertification causing migration crisis - conflicts/insecurity

- 2/3 intra Africa
- 82% extra regional
towards Europe





Case Studies:

1. Kenyan Mau invasion - conflicts
2. Drought migration - Laikipia - Samburu Conflicts
3. Water Resource conflicts - Low water levels (Muranga)





What are we doing on our part at Wangari Maathai for Peace and Environmental Studies

- **Developing capacity on climate Governance for all stakeholders (PhD in Environmental Governance and Management, Msc in Environmental Governance, Short courses on EIA/A, Short course of Community scholars for championing change)**
- **Creating stewards for cultures of Peace (environmental peace walks, conferences on Peace and Environment, advocacy on planetary boundaries and Peace, carry on the spirit of Prof. Wangari Maathai)**
- **Conduct Climate change research to inform and advice policy (Questionnaires you have—please fill in and stand to be Counted)**



What are we doing on our part at Wangari Maathai for Peace and Environmental Studies

- **We are the World University Association SDG Cluster Leader for SDG 16: Peace, Justice and Strong Institutions**
- **Aim to work with governments, civil society, NGOs and Communities to find lasting solutions to conflict and insecurity (share successful case studies, Build global partnerships for Peace building, Build evidence base to inform policy and provide advocacy)**



Global emission pathways in compliance with the 1.5 °C guardrail

My Quote “(Whatever you do to nature you should be ready to receive billing invoices for your actions and be Ready to Settle them)”- **some bills will be too expensive to settle -make Nature into bankrupt (TIPPING POINT) -lead to irreversible catastrophes**

- ✓ **Massive Advocacy for:**
 - Green economies for decarbonisation;
Green Investment Funds and Incentives
 - Carbon Sequestration initiatives;
preserving our trees and forests & planting trees
 - Appropriate legislative & Policy Support



Thank You

The legacy of Professor Wangari Maathai lives on



Please do something to prevent
bankruptcy of mother nature