

Education as a tool for Climate Change Action

Allison Anderson

The climate crisis is an **urgent crisis** with negative impacts on children and their education

- Children are experiencing 3x as many climate disasters as their grandparents: wildfires, storms, heatwaves, floods, drought
- Impacting children's ability to thrive, learn and survive
- Harder to deliver quality education and keep learners, teachers and schools safe
- Even if children stay in school, hotter temperatures and air pollution affect cognitive development and learning
- Communities that have contributed the least to carbon emissions are the most vulnerable to climate change impacts
 - Compounded for communities facing multiple hazards

Climate Change Education

- **Education for mitigation:** Learning to change consumption and production patterns; carbon neutral, energy efficient schools, reducing their own ecological footprint and food waste
- **Education for adaptation:** Learning to prepare for and respond to current and *future* climate risks and uncertainties (adaptive capacity) - content and pedagogy

BROOKINGS

If only 16% of high school students in high- and middle-income countries were to receive climate change education, we could see a nearly 19 gigaton reduction of carbon dioxide by 2050. Imagine if 100 percent of students in the world received such an education.

The combination of women's empowerment and inclusive education—especially the 132 million out-of-school girls across the developing world—could result in an 85 gigaton reduction of carbon dioxide by 2050. By these estimates, leveraging the power of education is potentially more powerful than solely increasing investments in onshore wind turbines (47 gigaton reduction) and concentrated solar power (19 gigaton reduction).

No global climate change education framework but common components of frameworks include:

- **Quality, equitable and inclusive education for girls and boys (SD4)**, including literacy, numeracy + age appropriate environmental, climate and energy literacy, multi-hazard risk reduction education, education for sustainable consumption, green TVET
 - **Relevant skills for 21st century lives and livelihoods**: knowledge, attitudes and skills to respond to challenges and uncertainty, including critical thinking skills and problem solving
 - **Safe, climate resilient and sustainable learning spaces and school disaster management**
- Cross-cutting: children as agents of change; indigenous and local knowledge; teacher education; linkages between education policy makers and climate researchers
- Not just *what* (content) but also *how* (pedagogy): Hands-on-learning and solutions-oriented learning focused on local and actionable aspects of climate change
- Integrated, intersectoral and nexus-spanning approaches

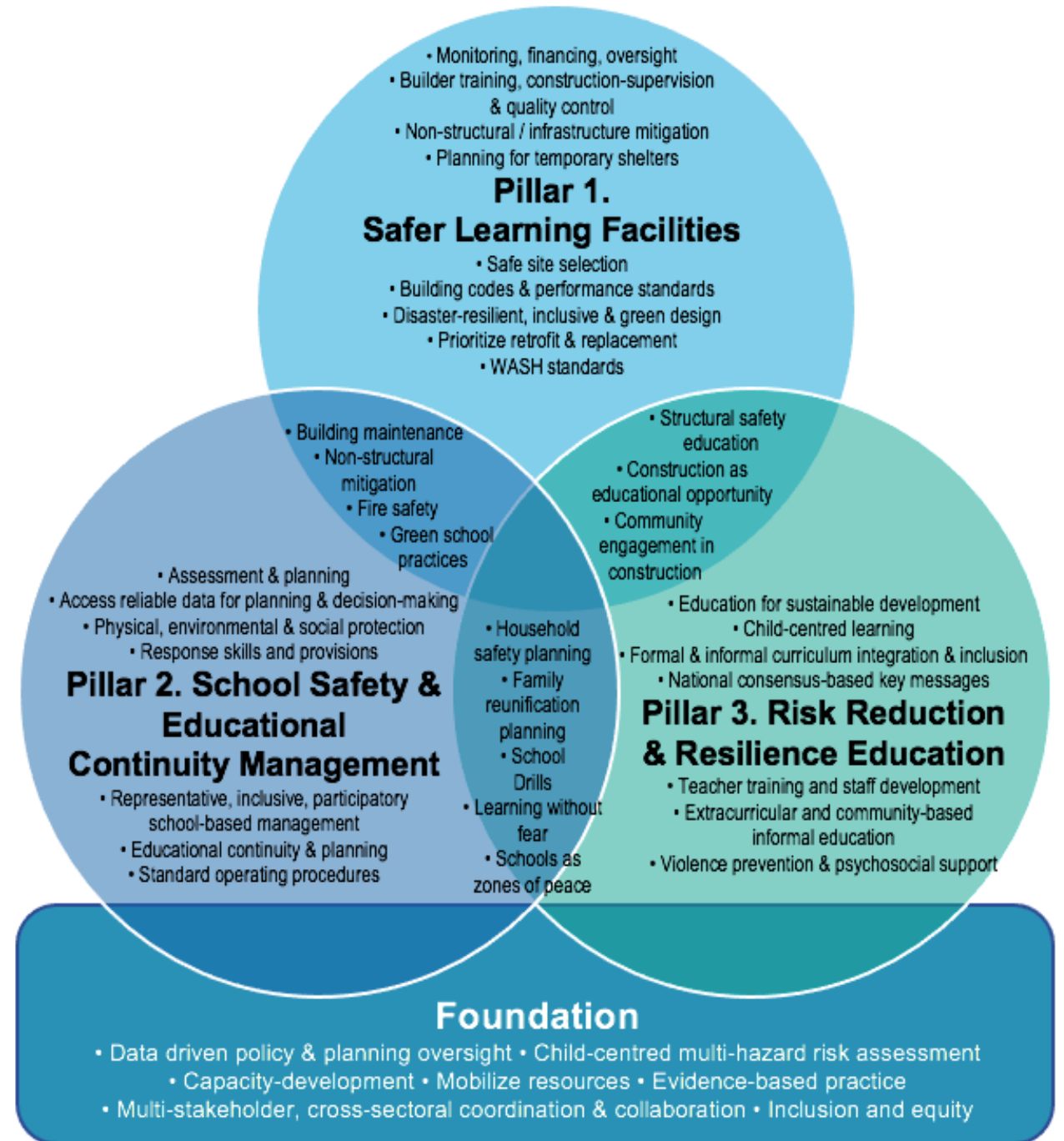
Comprehensive School Safety Framework (CSSF)

- The CSSF 2021-2030 global framework promotes sustainability and resilience in the education sector, progress towards SDGs
- A comprehensive approach to reducing risks from *all* hazards, including climate, confronting education sector populations, systems and programs

Pilar 1: Safer Learning Facilities

Pilar 2: School Safety and Educational Continuity Management

Pilar 3: Risk Reduction and Resilience Education



Climate Change Impacts in the Philippines

- Located in Pacific typhoon belt, one of the most flood prone areas in the world
- 60% of population lives on the coast, at risk of flooding
- Every year 20 typhoons hit the region
- As global temps rise, even more unsafe: typhoons are more intense and less predictable
- School infrastructure, learning materials damaged, educational continuity and learning interrupted



Climate Change Education in the Philippines



- Department of Education, Disaster Risk Reduction and Management Service commitment to increase climate literacy, support climate action through the education sector
- Government Climate Change Act of 2009, Enhanced Basic Education Act of 2013
- DOE policies on Adaptation and Mitigation and on Disaster Risk Reduction and Management
- Strengthened curriculum integration of DRRM and CCA in K- junior high (health, science, languages); DRRM in STEM in high school, climate change in earth and life sciences
- Changes in curriculum complemented by institutional policies and procedures for sustainable consumption, climate resilient infrastructure and co-curricular and non-formal activities (linked to education sector):
 - Youth for Environment in Schools
 - Climate Science Youth Program
 - Tree Planting / National Greening Program

Youth demand climate change action and justice in the Philippines

Youth are spearheading the climate justice movement in the Philippines, along with women's and indigenous groups

- DOE Climate Action Training for Adolescents + seed funding
- DOE supports the participation of learners in climate strikes
- Youth Strike 4 Climate Philippines: Youth Declaration for Climate Justice, calling for divestment from fossil fuels, protection of vulnerable groups, increased implementation of environmental education



Education is the most powerful weapon which you can use to change the world. - Nelson Mandela





unicef 

Urban areas and the climate crisis

Geoffrey Payne

The challenge - context

- Rachel Carson 1962
- Barbara Ward/Henri Dubos, Meadows, Stockholm conference 1972
- Bruntland Commission, Thatcher, IPCC, COP-26
- Wallace-Wells (2019) noted “we have done as much damage to the fate of the planet and its ability to sustain human life and civilization since Al Gore published his first book on climate than in all the centuries – all the millennia – that came before”.
- Ukraine and its impact – more effective than the Covid-19 pandemic?

The challenge – urban areas

- Cities contribute no less than 40% of global greenhouse emissions and, given current demographic trends, this is likely to increase over time.
- Urban areas constitute 'heat islands' as a result of building activity, transport systems, and energy consumption and it is projected that average temperatures in many cities will increase by between 1°C and 4°C by the 2050s, 50 years ahead of the global average.
- The 55% of the world's population now living in cities is projected to increase to 68% by 2050, representing an additional urban population of 2.5 billion in just over 30 years. Nearly 800 million of these will be in sub-Saharan Africa where more than 50% of the current urban population live in various forms of informal housing.

The challenge – four major impacts in cities

- **The local energy system:** current energy use and consumption levels would require the resources of three planets. Poorer countries using local non-renewable energy sources.
- **Water supply, demand and wastewater treatment:** Many cities are suffering a water supply shortage with few alternative supply options.
- **Transportation:** Vehicle emissions are a major cause of death and bad health. Bangkok's traffic police are trained in midwifery.
- **Public health:** 49 of the world's 50 most polluted cities are in the Indian sub-continent.
- Urban planning is making things worse – Vietnam and Indonesia



The challenge – the poor suffer most

In Ho Chi Minh City, storms that delivered 100 mm of rainfall in three hours previously occurred once in four years, but now occur four times annually, and the drainage system is unable to cope, causing regular flooding in predominantly low-lying residential areas.

In cities like Phnom Penh, people live along canals and other vulnerable locations.



Chennai, India is one of 100 smart cities in India, but basic drainage has not been addressed



Rising to the challenge:

Urban land and housing are the physical expression of much wider issues:

- Managing increasing demand for land and housing due to population increase and urbanization
- Reducing inequality in terms of wealth and incomes due to neoliberal economic policies
- The impact of urban areas in contributing to the climate crisis.

Rising to the challenge 1: Managing demand

- Start by accepting increased demand and maximizing the public benefit from private investment.
- Land pooling is an efficient means of managing demand in an equitable and self-financing manner.
- Transport Oriented Development can also help to guide new urban growth.

Rising to the challenge 2: Reducing inequality

Various tax-based, fee-based and development-based policies exist for reducing inequality:

Tax-based instruments for affordable housing

- Land value increment taxes

Fee-based instruments for affordable housing

- Sale of development rights

Development-based instruments for affordable housing

- Developer charges and impact fees
- Land sales and leases
- Land Pooling or Land Readjustment (LP/LR)
- Inclusionary housing
- Requests for Proposals (RFPs)
- Land Banking

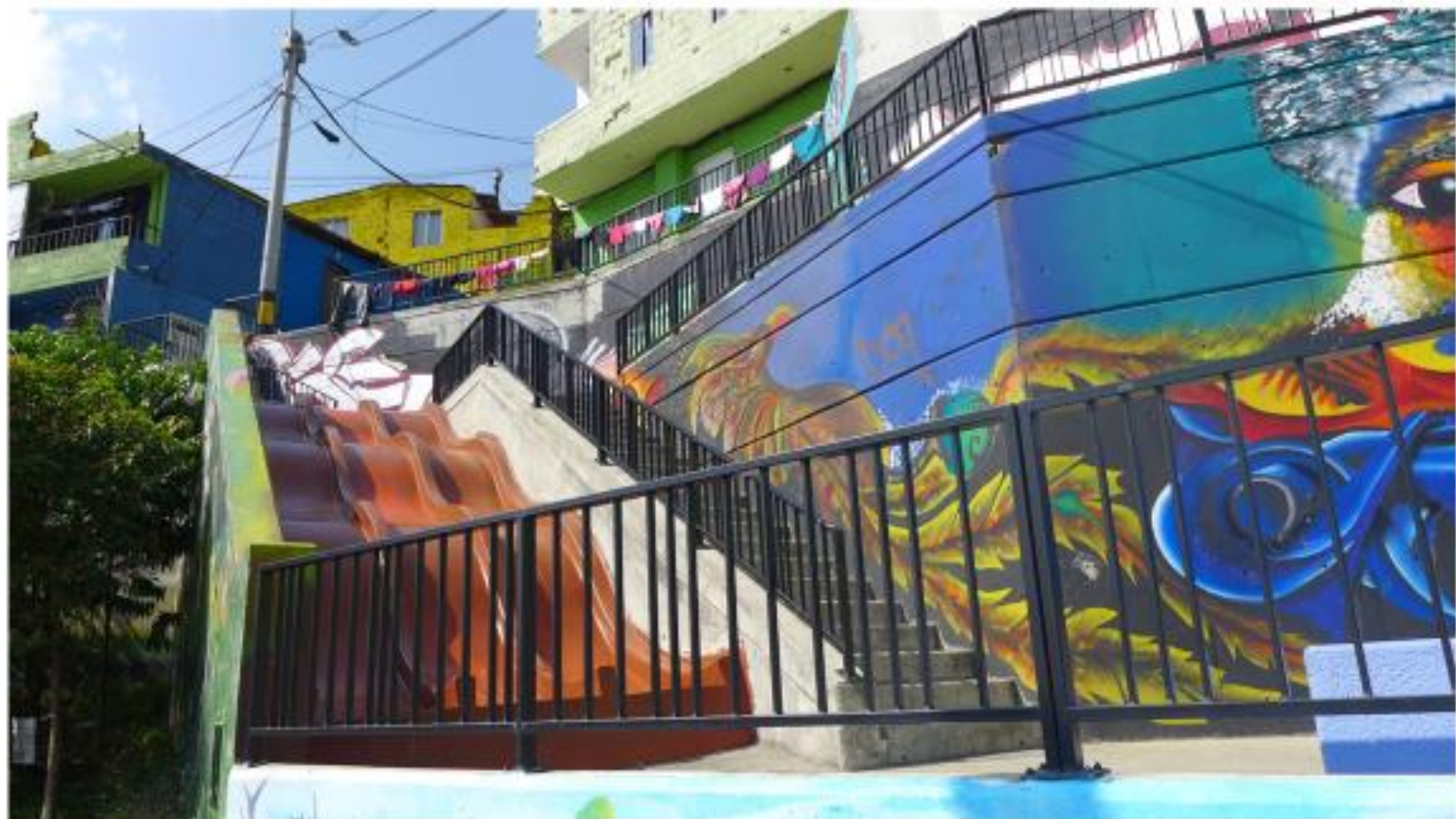
.... and

- Promote diverse supply options can challenge existing vested interests.
- Review/revise regulatory frameworks or urban planning standards, regulations and administrative procedures and ensure they are based on realities not aspirations (eg Uganda).
- Promote a wide range of non-market and communal forms of land tenure and property rights.
- Promote incremental, community-led, housing development.
- Focus on providing those aspects that people cannot provide for themselves: basic security, basic services and improved access to jobs.

... and urban regeneration in Medellin, Colombia



Medellin

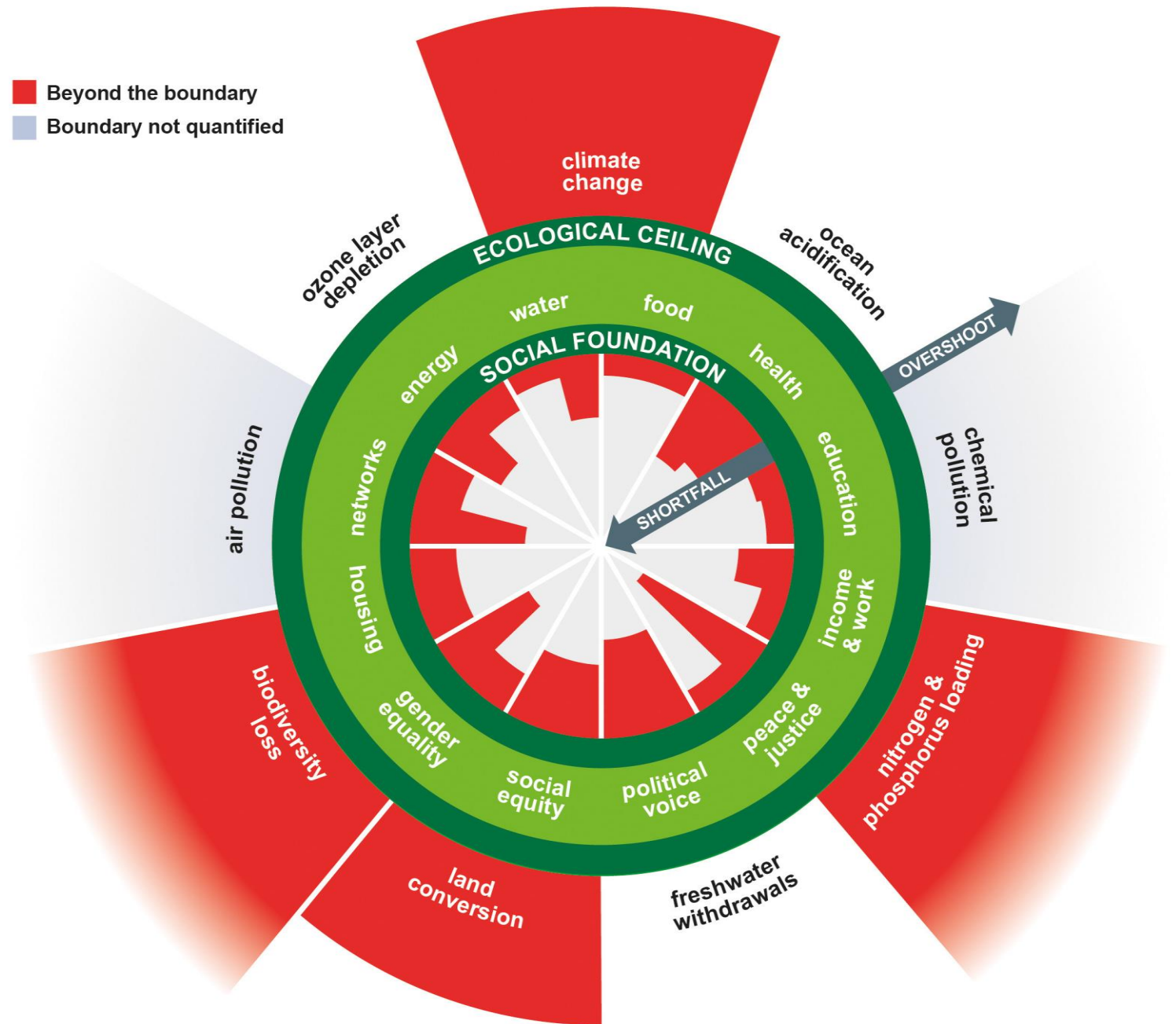




Rising to the challenge 3: The climate crisis

- Promote the concept of the circular economy (reduce, re-use, recycle) as advocated by the Doughnut Economics Action Lab (DEAL).
- This has already been adopted by Rotterdam and Amsterdam and the network is increasing.
- Create or expand community networks to build local self-sufficiency and resilience (e.g. Transition Towns).
- Spatial planning can significantly reduce carbon emissions by creating compact, multi-nodal, urban areas with mixed land use and promoting the 15-minute city.
- Avoid tall buildings and build on vernacular traditions.
- Improve public transport.
- Raise public awareness and pressure for change!

Keeping within the limits of the sustainable doughnut means that those consuming and polluting too much need to be levelled down so that those in greatest need can be levelled up.



Thank you!

**Further information on urban development,
land and housing issues can be found at
www.gpa.org.uk**



Gender and Climate Change

Why does it matter?

Dr Marlene Buchy

“Gender”: a concept and an approach

The concept: Gender is a social construction which shapes roles and relationships between men and women and based on unequal power relationships

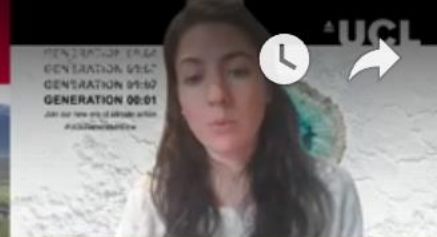
- Gender doesn't mean women
- Being a man or a women 'here' isn't the same as 'there'
- And unless we find out we can't presume...

The approach: a mental reflex. How do power relationships impact on men and women lives, choices, options...? Who has what? Who wants what?

But it is not just based on 'Sex' but also of many other social factors: we all are gendered but also have multiple identities

Thus intersectionality is important too.

Gender and Climate change: why are women at more risk from global heating?



The Lakes gated community, 200 meters away from the sprawling community of Masiphumelele, Western Cape, South Africa. Masi has almost 40,000 people, many living in shacks, with no reliable sanitation, services, or employment. Photo: Johnny Miller

I also want to bring here a caveat

Women are proportionately more affected than men because..

- They start from a structurally unequal position in most places (cf Azongteta 2018 Vulnerability and resilience of female farmers in Oku, Cameroon, to Climate Change ,African Sociological Review VOL 221 2018)
- ✓ Women have less access to financial, natural capital (land tenure) and decision making than men
- ✓ Lower levels of education Eg: in Cameroon 54% girls is secondary education compared to 68% boys (OCHA 2021)
- ✓ Higher presence in informal sector, especially agriculture (71% of informal workers in agriculture are women)
- ✓ Women depend more on natural resources for subsistence

In the Nepal context...

- Similar situation, in terms of informal presence in Agriculture, lower levels of education, limited property rights, limited participation to decision making (formally or informally) , strict gender roles but also highly hierarchical society around castes..
- National policy of male out-migration
- Less labour force to maintain agriculture production but also to engage in climate adaptation measures
- Who benefits from CC adaptation infrastructures? (such as irrigation canals)

Issues (in Nepal)

- Nepal has progressive Gender and Social inclusive policies but not translated into practice...
- CC adaptation interventions are infrastructure focused and power blind:
 - ✓ Local Authorities (and bureaucracy) are male and high castes dominated
 - ✓ Projects are high castes and males dominated
 - ✓ Donors are high castes dominated

What to watch for in evaluations?

- Outcome as opposed to output indicators
- Integrate the gender dimension within questions rather than separate gender focussed questions
- Add to the team someone with gender expertise at least for inception stage and methodology development
- Watch out for 'low hanging fruits': which women are involved, benefitting or targeted?

