

How can the global science community meet the challenge of the Sustainable Development Goals?

Professor Jacqueline McGlade

University College London, UK & Maasai Mara University, Kenya
jacquie.mcglade@ucl.ac.uk j.mcglade@mmarau.ac.ke



Anthropology of Sustainability



Convergence and Contradiction



CLIMATE CHANGE
Targets: 1.5, 7.2, 7.3, 13.1, 15.2



RESILIENCE TO DISASTERS AND CONFLICTS
Targets: 1.5, 11.5.1, 11.b, 16.1.2, 16.6



HEALTHY AND PRODUCTIVE ECOSYSTEMS
Targets: 1.b, 2.1, 2.4, 3.3, 6.3, 6.5, 6.6, 7.2, 11.4, 11.6, 11.a, 12.6, 12.7, 12.8, 13.3, 14.1, 14.2, 14.3, 14.4, 14.5, 14.6, 14.c, 15.1, 15.2, 15.3, 15.4, 15.5, 15.6, 15.7, 15.8, 15.9, 15.a, 17.5, 17.14, 17.19



ENVIRONMENTAL GOVERNANCE
Targets: 1.4, 10.2, 11.6, 12.4, 14.c, 15.6, 15.8, 15.9, 15.a, 15.c, 16.3, 16.6, 16.7, 16.b, 17.9, 17.14, 17.16



CHEMICALS, WASTE AND AIR QUALITY
Targets: 3.9, 7.a, 11.6, 12.4, 12.5



RESOURCE EFFICIENCY
Targets: 2.4, 4.7, 8.4, 8.9, 9.5, 11.b, 11.c, 12.1, 12.2, 12.3, 12.6-8, 12.a, 12b, 17.10, 17.16



ENVIRONMENT UNDER REVIEW
Targets: 1.5, 2.4, 3.9, 4.7, 5.a, 6.3, 6.6, 7.2, 7.3, 8.4, 9.4, 10.7, 11.5-7, 12.3-5, 13.1, 14.1, 14.3, 14.5, 15.1-5, 15.c, 16.4, 16.10, 17.6, 17.7, 17.18, 17.19

SDGs aim to reach a **convergence** between economic development, social equity and environmental protection

The goals have been reformulated as a series of measurable and verifiable indicators, some of which are in **contradiction** with each other

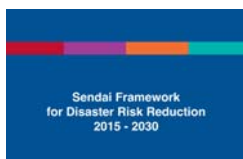
For instance, the goal of ‘eliminating poverty’ (SDG 1) is in tension with the dominant approaches towards ‘protecting terrestrial ecosystems’ (SDG 15).

This tension often produces **contradictions** between conservation and development aims.

Multiple Transformational Pathways



Transforming the planet and human societies



Transforming the relationship between development and resilience.

GRAND BARGAIN

Transforming aid to get more means into the hands of people in need and improve the effectiveness and efficiency of humanitarian action



Transforming government action on corruption through greater citizen engagement, transparency & access to information



Anthropocene and Plantation ecologies

Our modern world is a combination of plantation ecologies, industrial technologies, state governance projects, and capitalist modes of accumulation.

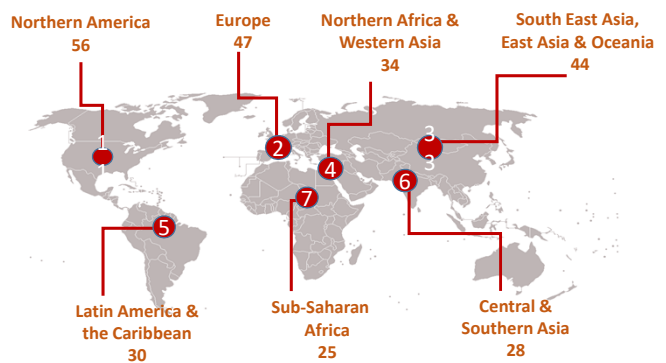
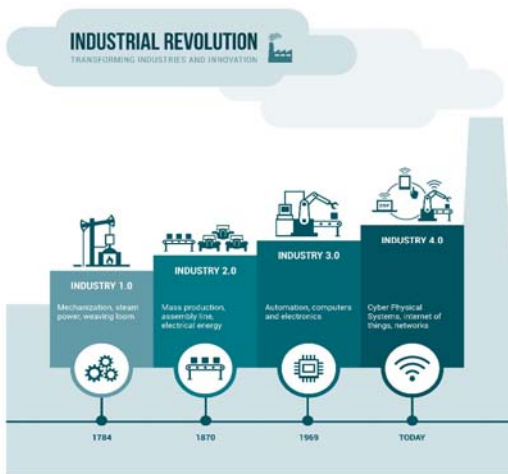
These have moved more soil than the glaciers did and changed the earth's climate. Extinction rates have rocketed.

This has been achieved through large-scale engineered projects across long distances that convert places into the monotony of the plantation – a green desert – which effaces the relations maintained through highly biodiverse, resilient worlds

Anthropocene is an epoch in which multispecies livability has become endangered. (Tsing 2019)



Drivers of Innovation and Transformation



Global Innovation Index 2018 average by region, with top scoring countries for each region

Multispecies Liveable Future Earth

The **intrinsic value of diversity** – whether cultural or biological – emerges as the foundation for a liveable future earth.

The scientific revelation is that the human body is not a singular organism, but can only exist in **symbiosis with complex bacterial and other communities**.

Dietary and political-economic factors such as class, fashion or income shape the development of human microbiomes, so our bodies reflect our daily activities and cultural traditions, and are key to our health.

This now requires dominant **learn** from those most resilient to modernity.

A liveable future **requires collectors** not selectors, and new ways of living



Liveable Future Earth - Food security and diversity



Opportunities for future research and innovation on food and nutrition security and agriculture
The InterAcademy Partnership's global perspective



Synthesis by IAP based on four regional academy network studies

ISBN: 978-92-847034-5-9
This report can be found at www.interacademies.org



Sound knowledge

Statistics and indicators

Integrated policies and actions

Effective governance



Liveable Future Earth – Air Pollution and Health

“Air pollution is a major and manageable threat to the health and well-being of the human population

An estimated 7 million premature deaths each year across the world. All countries are affected, but the poor and the powerless are affected most severely. Nobody remains untouched by dirty air.”

“The scientific evidence is unequivocal: Air pollution shortens life expectancy, drives unhealthy ageing and causes early death. It damages lungs, hearts, brains, skin and other organs and increases risk for disease and disability in virtually every organ of the human body. It harms health across the lifespan from earliest infancy to extreme old age.”

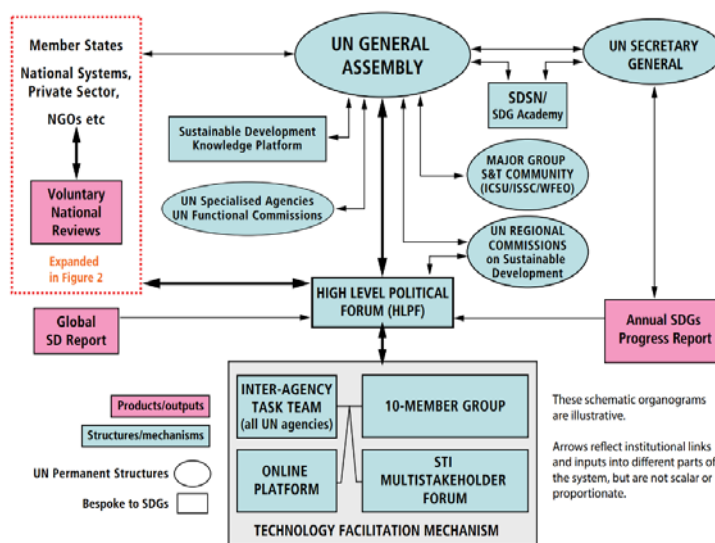
“Combustion is the most important source of air pollution. The costs of air pollution to society and to the economics of developing countries are enormous. These economic losses are so great that they can undercut sustainable development. “

“Economic growth that accepts air pollution, ignores the public health and environmental impacts, is unsustainable, unethical, and represents an affront to human dignity. “

Academies of Germany, Brazil, South Africa and USA



Mapping science advice in the UN SDGs process



Recommendations for Academies UN SDGs process

Take the lead in bringing together the diverse fields of knowledge that will be needed to create the multiple pathways of a liveable future

Develop a greater appreciation of the geostories and idonistic pathways which communities have traditionally adopted to avoid extinction and ensure these are not destroyed

Ensure that knowledge about the processes which endanger the human biome and species diversity is gathered and identified and **used advise on policies to restrict them** e.g. the global compact on air pollution

Take a lead in discovering the dietary, cultural and political-economic factors that can help **ensure the resilience of our biome and those of other species** as these are key to our health.

A liveable future requires academies to help locate strategies and ways of living which ensure prosperity and well-being.

