Towards a Planetary Commons Approach for Environmental Governance

We live in an era in which human activity is the dominant influence on the environment. As Johan Rockström and his colleagues point out in a recent paper, our impacts on the environment are systemic and increasingly unmanageable. The impacts are systemic because they do not stay in neat silos: global warming affects a range of biological systems; deforestation affects the amount of carbon taken up by the atmosphere; pollution drives biodiversity loss. These cascading impacts and interactions mean the environment can cross irreversible tipping points in unpredictable ways. Today we understand the environment as all living and non-living systems and processes that determine and regulate liveability on Earth. In their paper, Rockström et al. include the nine planetary boundaries that determine the resilience, stability and health of all environmental systems, and thus the planet. These life-support systems are changing faster than expected, undermining environmental conditions that form the basis for human well-being. Even five years ago, few scientists predicted the current rate of increase in global temperatures, the rapid loss of Arctic Sea ice, or the extent of coral bleaching we see today. The assumption that the world will remain largely stable and predictable is proving false in the Anthropocene, a concept covering the overwhelming scientific evidence that we humans (Anthros in Greek) have become the dominant (geological) force of change on planet Earth.

Our failing global governance system

The core argument of this group of scientists is that the global governance framework we have today is ill-equipped to address systemic, irreversible changes in the environment. Dozens of separate environmental treaties may help to curb some of our most harmful activities, but they do not prevent broader planetary impacts.

The established concept of "global commons" offers a helpful starting point for a new approach. Global commons refers to planetary domains that are owned by nobody, and thereby collectively by all human beings. Global commons are systems located beyond national jurisdiction, which require global governance. So far, four global commons have been recognised and associated with different legal treaties. These include the high seas/deep seabed, Antarctica, the atmosphere, and outer space. International agreements limiting the exploitation of global commons play an important – if insufficient – role in preventing more widespread harm to the planet. Today they constitute a widely accepted legal framework for governing collective resources at a regional to planetary scale.

A planetary commons approach

This group of scientists proposes an expansion of the global commons concept to a "planetary commons" framework. The justification for this is the scientific evidence that we need to redefine (or at a minimum complement) how we define global commons in the Anthropocene. A global commons can no longer be only systems that need to be collectively regulated (for their use) as they are located outside natural jurisdictions. We now also need to recognise that there are several environmental systems upon which we all, as humans, societies, nations and economies, depend for our livelihoods, prosperity and equity, *irrespective* of whether they lie within or outside national jurisdictions. Planetary commons thereby acknowledges that certain environmental systems are integral to sustaining life on Earth and should be managed collectively. These systems can be broadly categorised into five "spheres": the atmosphere (air), hydrosphere (water), biosphere (life), lithosphere (land), and cryosphere (ice). The first, obvious, set of "planetary commons", i.e., environmental systems that we all depend on irrespective of where they are located, and where we live, are referred to as "tipping elements". We have the most scientific evidence of the 16 climate-tipping elements that can tip over

(if put under too much unsustainable pressure, e.g., biodiversity loss, water scarcity, and climate change), from a state that stabilises the climate system (through dampening feedbacks that cool the planet) to states that self-amplify warming (through reinforcing feedbacks, e.g., when ice melts and surfaces become darker, absorbing more heat, or when forests burn and release carbon, instead of storing carbon).

These tipping elements do not respect national borders, and tailored governance and protection are required to avoid irreversible damage. For example, irreversible degradation of rainforests, or accelerated loss of the Greenland ice sheet, could cause system-wide destabilisation of the environment, affecting living conditions across the entire world, i.e., irrespective of which country you live in.

Governance of the planetary commons would require a shift from present-day nationalistic, siloed approaches to environmental protection, recognising the core fact that our planet is composed of interconnected, interdependent systems. Instead of a fragmented, treaty-based system, the planetary commons approach proposes a "nested" governance structure involving multiple layers of regulation enacting highly tailored local responses, all overseen by a global governance body.

Challenges and next steps

Shifting towards a planetary commons framework would constitute a tectonic set of changes in our international legal system. Today's system is predicated on the sovereign right of nation-states to exploit resources within their national boundaries with little regard for global consequences. A concept of global stewardship of planetary commons as environmental resources we all depend on would run directly against this core understanding of international law and would face stiff resistance, including from developing countries that might see such a step as impinging on their ability to develop quickly. However, the science is increasingly clear and incontrovertible: without a major change to governance frameworks, our planet will become increasingly unstable, unpredictable, and unliveable. The planetary commons may be the only way to manage systemic change in the Anthropocene.