

## Framing planetary health: arguing for resource-centred science



Nature's goods and services are assets that shape human history, socioeconomic systems, and geopolitics.<sup>1</sup> They are the ultimate foundation of life and health, the substance of human rights. Humans are, individually and collectively, resource driven. However, humans frame resources incorrectly. Namely, governance systems underestimate the fact that economic and social development has been achieved through the unsustainable management of resources. They also create profitable scarcities and resource overexploitation leading to social inequity and environmental degradation and are not equipped to handle challenges such as the implementation and accountability of the Sustainable Development Goals (SDGs)<sup>2</sup> because resource governance across sectors and institutions does not exist.<sup>3</sup> Yet, 13 of the 17 SDGs make resources the measure of equitable and sustainable development in social, economic, political, cultural, and environmental terms.

We postulate that a resource-centred approach is the most parsimonious instrument to implement the SDGs while safeguarding the integrity of Earth's ecosystems. This approach is important because the major mutually enforcing stressors on public health and natural resources are<sup>4,5</sup> (over)consumption coupled with socioeconomic inequalities, concentration of economic and financial dominance to drive political decision, and institutional inertia, enforced by inadequate norms and poor accountability and transparency.

To act on these determinants, radical changes in resource governance and allocation must consider long-term socioecological threats via the inclusive planetary health concept, integrating the "health of human civilisation and the state of the natural systems on which it depends".<sup>6</sup> A reframed resource governance should consider the life-supporting capacities of ecosystems, population dynamics, and consumption patterns in given territories<sup>4</sup> as well as basic human rights and duties.

A resource-centred science can facilitate the design of a systems approach toward an integrated resource stewardship operating across disciplines and resource user groups. This approach will provide decision makers with sound scientific evidence and facts, making clear that the principle of sustainability is not compatible with the policy and politics that subordinate the health of humans and natural systems to short-term economic

goals. It will also contribute to a better understanding of the limits imposed by the finite world and by defining means to reconcile human needs with available resources. To that end, the resource-centred science has two requirements. First, a permanent alliance between natural sciences and legal and political studies is needed to integrate and articulate normative and legal instruments that provide fair access to resources for all, impose accountability of resource overuse and degradation, and help to achieve sustainable levels of resource use. For example, these objectives can lead to new forms of education, training, and practices that mobilise universities, other organisations and institutions, and resource user groups. Second, tools are needed to analyse, quantify, and simulate at different scales the matching between societal demand (expressed in satisfaction of basic needs) and sustainable supply (expressed in the fair access to resources and the true capacity to preserve life-supporting functions and services of the ecosystems). For example, natural capital accounting tools<sup>6,7</sup> exploit (near) real-time environmental and socioeconomic data streams measuring ecological values and degradation (such as land use changes, ecosystem services, or planetary boundaries) and associated health effects and costs.<sup>8</sup> The challenge is to incorporate these indicators into GDP-centred national accounting systems and into policy decision making.

Resource-centred science rests on a framework assembling three simple universal principles with the imperative of natural resource stewardship and fair allocation, and the inclusive planetary health concept. The principles promote human rights and duties and build upon the inclusive UN Economic and Social

	Principles: political endorsement frame	Planetary health: cultural acceptance narrative
Level 1	Inclusive resource stewardship	Individuals—universal social protection floor
Level 2	Human rights and wellbeing	Society—effective public health
Level 3	Human duties and environmental responsibility	Ecosystems—life support capacity maintained

Principles dictate the political endorsement frame. The cultural acceptance narrative is defined by an inclusive health concept. It aims to jointly implement a universal social protection floor and effective public health and environmental protection policies.

**Table: Foundations of resource-centred science**

Council injunction (1994) that “civil, cultural, economic, political, and social rights are universal, interdependent, and indivisible” and observing the “relationship between the quality of the environment and the enjoyment of basic human rights”, which was first recognised by the UN General Assembly in 1968. The inclusive health concept (health for people, societies, and ecosystems) expresses the interconnectedness of processes in the framework, seen as synergistic leverage factors of transformative change (table).

The framework is designed to counteract power asymmetries and other deleterious socioecosystemic determinants and operate as a common base overarching the diversity of emergent transition experiments across the world. A proof of concept case is the New Zealand Resource Management Act,<sup>9</sup> a pioneering reform toward an integrated natural resource sustainable management system. Other examples are the Vermont Common Assets Trust programme,<sup>10</sup> the EU5P initiative to reform the EU through social innovations,<sup>11</sup> and the hundreds of optimistic utopias<sup>12</sup> that shape the future through creative, bottom-up trajectories that change human–environmental relationships. To generalise such achievements, a health and resource-centred thinking in policy and governance should become the norm. For example, our framework is consistent with updating and enacting the UN conference on trade and employment known as the Havana charter for an international trade organization.<sup>13</sup> Such a novel architecture would balance the missions and activities of the Food and Agriculture Organization and the International Labor Organization with those of the World Bank, the International Monetary Foundation, and the World Trade Organization under the umbrella of a joint UN Development Program and UN Environment Program and an enforced resource panel, the International Resource Panel.<sup>3</sup>

In summary, resources are determinants of societal health and development and stand as the foundation of SDGs through social justice, environmental responsibility, and cultural acceptance. The goal of the resource-centred science is to translate and incorporate the framework into knowledge-led approaches and

scientific evidence-based decision making by developing new objects of law and new forms of institutions for resource stewardship.

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