Scientists call for fundamental governance overhaul to ensure Earth's sustainability

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Some 32 social scientists and researchers from around the world, including a Senior Sustainability Scholar at Arizona State University, have concluded that fundamental reforms of global environmental governance are needed to avoid dangerous changes in the Earth system. The scientists argued in the March 16 edition of the journal *Science* that the time is now for a "constitutional moment" in world politics.

Research now indicates that the world is nearing critical tipping points in the Earth system, including on climate and biodiversity, which if not addressed through a new framework of governance could lead to rapid and irreversible change.

"Science assessments indicate that human activities are moving several of Earth's sub-systems outside the range of natural variability typical for the previous 500,000 years," wrote the authors in the opening of "Navigating the Anthropocene: Improving Earth System Governance."

Reducing the risk of potential global environmental disaster requires the development of "a clear and ambitious roadmap for institutional change and effective sustainability governance within the next decade," comparable in scale and importance to the reform of international governance that followed World War II, they wrote.

In particular, the group argued for the creation of a Sustainable Development Council that would better integrate sustainability concerns across the United Nations system. Giving a leading role to the 20 largest

economies (G20) would help the council act effectively. The authors also suggested an upgrade of the UN Environment Program to a full-fledged international organization, a move that would give it greater authority and more secure funding

To keep these institutions accountable to the public, the scientists called for stronger consultative rights for representatives of civil society, including representatives from developing countries, NGOs, consumers and indigenous peoples.

"We should seek input from people closest to the ground, not just from the elites, not just at the 30,000-feet level," noted Kenneth W. Abbott, a professor of international relations in ASU's Sandra Day O'Connor College of Law. "Consultations should not take place only at the global scale, where the broadest policies are created, but also at local scales, smaller scales, all scales," he said.

To improve the speed of decision-making in international negotiations, the authors called for stronger reliance on qualified majority voting. "There has to be a change in international negotiating procedures from the current situation, in which no action can be taken unless consensus is reached among all participating governments," Abbott said.

The authors also called for governments "to close remaining regulatory gaps at the global level," including the treatment of emerging technologies.

"A great deal of attention has been given to issues such as climate change, yet nanotechnology and other emerging technologies, which may bring significant benefits, also carry potential risks for sustainable development," Abbott said.

Relying on research by Abbott and his colleagues at ASU's College of

Law, the authors wrote that emerging technologies "need an international institutional arrangement–such as one or several multilateral framework conventions" to support forecasting and transparency, and to ensure that environmental risks are taken into account.

"Working to make the world economy more green and to create an effective institutional framework for sustainable development will be the two main focal points at this summer's United Nations Conference on Sustainable Development in Rio de Janeiro," Abbott said. "This article was written to bring urgency to those discussions and to outline specific 'building blocks' for a more effective and sustainable Earth system governance system."

The authors also argued for increased financial support for poorer nations. "More substantial financial resources could be made available through novel financial mechanisms, such as global emissions markets or air transportation levies for sustainability purposes," they wrote.

Lead author Frank Biermann, of Free University Amsterdam and Lund University, Sweden, said, "Societies must change course to steer away from critical tipping points in the Earth system that could lead to rapid and irreversible change. Incremental change is no longer sufficient to bring about societal change at the level and with the speed needed to stop Earth system transformation.

"Structural change in global governance is needed, both inside and outside the UN system and involving both public and private actors," said Biermann, who also is chair of the scientific steering committee of the Earth System Governance Project.

All 32 authors of the *Science* article are affiliated with the Earth System Governance Project, a global alliance of researchers and leading research institutions, specializing in the scientific study of international

and national environmental governance. ASU's Abbott is one of some 50 lead faculty of the Earth System Governance Project. Lead faculty are scientists of high international reputation who share responsibility for research on earth system governance. Additional information is at http://earthsystemgovernance.org.

Provided by Arizona State University

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