

Scientific & Technological Community Major Group Statement

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Planetary Boundaries and Urgency

The Rio+20 zero draft must be commensurate with the urgent need to move humanity to a sustainable path of development, and at present this urgency seems to be lacking.

New scientific evidence, including work on “planetary boundaries”, reaffirms that humanity has reached a point where the functioning of the Earth system as we know it is at risk. As a functioning Earth system is clearly a prerequisite for sustainable development, the zero draft must therefore reflect a recognition of our planetary boundaries and life support systems (in paragraph 11), alongside poverty eradication, human wellbeing, social equity and economic sustainability.

Overall, the zero draft needs to become actionable and measurable, with clear next steps, and monitoring and assessment of actions taken. The scientific and technological community will need to be engaged in these activities.

Science and Technology for Sustainable Development and a Green Economy

The draft should recognise that a strong interdisciplinary science and research base is of fundamental importance to addressing sustainable development and poverty eradication. The sciences and engineering will be required for developing systems of knowledge, defining targets, implementing solutions and monitoring progress. The full range of scientific disciplines (including the natural sciences, social sciences, political sciences, economics, humanities, engineering and technology) will be needed to address the three dimensions of SD in an integrated fashion, to develop green indicators that go beyond GDP, and to develop the Sustainable Development Goals (SDGs).

There is therefore a need for the establishment of a global mechanism for science for sustainable development, tasked to foster and coordinate integrated solution-orientated research. This mechanism should also focus on international scientific collaboration (including North-South, South-South and triangular cooperation), and scientific capacity-building in developing countries, alongside collaborative and participatory scientific agenda setting. This should build on existing international scientific cooperation bodies and programmes from inside and outside the UN system.

There is also a need for significantly increased large-scale public and private investment, at all levels, in science, clean technology, and innovation for sustainable development. At the global level, a mechanism for science coordination should play a pivotal role in coordinating this funding. All these issues should be included in the zero draft, and we have suggested language to this end (for the section on Science and Technology).

Institutional Frameworks and Science and Technology

To strengthen science-policy linkages (as called for in paragraph 53), science advisory bodies should be permanently integrated throughout the UN system, drawing upon existing institutional experiences such as the IPBES or the IPCC. Such advisory bodies should inform environment and sustainable development policy-making. In this regard we envision that a permanent science advisory body become a part of the decision support structure of an upgraded UNEP, as well as of a sustainable development council, or whichever institutional structures are decided at the Rio+20 conference.

We also support calls for regular 'state of the planet' assessments or 'global sustainability outlook reports', as are recommended in paragraph 52 of the zero draft and in the report of the High Level Panel on Global Sustainability. We also support the High Level Panel's recommendation that the Secretary-General consider naming a chief scientific adviser or establishing a scientific advisory board. Efforts to improve disciplinary integration across the international system will also be important.

The science base of decision-making also needs to be strengthened at regional, national and local levels, including through the creation or enhancement of specific interface mechanisms between science and policy-making, such as those suggested in the High Level Panel on Global Sustainability's report.

Further on institutional frameworks, the Principles of good governance (including transparency, participation, fairness, and accountability) should be adopted to guarantee that the right green technology and solutions are adopted and encouraged.

Science, Technology Assessments and Society

Proposals for international multistakeholder technology assessment and monitoring mechanisms to evaluate the potential impacts of existing and new and emerging technologies need to be further discussed, to gain the correct balance between safeguards and active innovation and technological development.

At the local level, technological and science solutions need to be assessed through a broad interdisciplinary process involving relevant stakeholders, to ensure that they are culturally and environmentally appropriate, take local needs into account and are supported by those who will be affected. This can be an opportunity for local level capacity building, for ownership and further development of knowledge and technologies. Indigenous, traditional and local knowledge and science should be an integral foundation for shifts towards green economy.

We would highlight that sustainable development, green economy and poverty alleviation cannot be achieved through technological solutions alone. Rather, these solutions should be an integral and integrated part of broader changes in economics, society, human behavior and politics, including consumption and production patterns.

The relationship between public and private ownership of science and technology also needs to be further discussed.

Access to information

We also support calls for further action and implementation of Principle 10 on access to information, as a means to improve civil society collaboration and engagement with science and technology issues. This could be organized through accessible regional or international databases compiling and making accessible information for all, and the establishment of a forum for cooperation among sub-global and thematic environmental information networks, as recommended by the Eye on Earth Summit.

Conclusion

Rio+20 should be a fundamental milestone in the implementation of a new social contract for science, technology and innovation for the benefit of present and future generations, with the participation of all society, including women, youth, vulnerable communities and indigenous peoples and their traditional knowledge. Ethics must underpin scientific endeavour for a green economy and SD.

Rio+20 is a crucial opportunity for governments to recognize, analyse and enhance the vital relationship between science, technology and policy-making. We urge you to make the most of this opportunity and we stand ready to assist.