

## WHERE AND HOW

Know-How

Technology Transfer

Know-What

Technology Assessment

Know-Why

Who Benefits?

### 1992 – AT THE EARTH

**SUMMIT:** Recognizing that UN had two facilities in New York already on technology transfer and technology assessment, Agenda 21 called for strengthening regional and national capacities to assess technologies in the context of the precautionary principle.

### 1993 – AFTER THE

**PARTY:** The UN Centre on Transnational Corporations (UN CTC), which advised developing countries on issues related to technology transfer (including technology alternatives, licensing arrangements, intellectual property, etc.) and the UN Center for Science and Technology for Development (UNCSTD), offering an early alert system for potentially important new technologies, were both closed down. Technically, UNCSTD was moved to Geneva where it carries on with almost no budget and a skeleton staff. While the global capacity for technology assessment evaporated, no moves were made to implement Agenda 21's call for regional and national support.



Illustration 1: Biomasters: The Board Game by Shtig

**2012 – MEANWHILE...** Powerful new global technologies including informatics, biotechnology, nanotechnology, genomics, robotics, synthetic biology, neurosciences, and geoenvironment are transforming agriculture, manufacturing and trade patterns in the absence of any credible early warning/early listening mechanism at global or regional levels. Only a handful of governments have any monitoring capacity.

### RIO+20 AND TECHNOLOGY ASSESSMENT

Technology Transfer (“Know-How”) without Technology Assessment (“Know What”) is like buying airplanes and training pilots without building airports and training air-traffic controllers. ETC Group’s series of issue papers and case studies call upon Rio+20 to establish UN-level Technology Assessment either through an Office of Technology Assessment attached to the UN General Assembly or through a specialized unit attached to a new sustainability facility associated with ECOSOC, UNCSD or UNEP.

**WHAT CAN BE DONE?** Rio +20 can call for a UN-level technology facility (either combining or separately addressing the need for technology transfer and technology assessment), the details of which can be scheduled for final negotiation in the follow-through to the conference. Grounded in the Precautionary Principle, the facility would have the institutional capacity to identify and monitor significant technologies, including an evaluation of the technologies’ social, economic, cultural, health and environmental implications. Assessments would be completed before a new technology is released. In order to minimize waste and risk, the monitoring process should accompany the development of the technology from science to shelf.

Because the UN technology assessment capacity may relate to other institutional changes or new facilities that could arise from Rio +20, a number of modalities can be considered:

- **OTA:** A UN Office of Technology Assessment, properly resourced, possibly attached to the UN General Assembly, could be equipped to provide regular and special reports to the General Assembly on new and emerging technologies including risks, opportunities and alternatives.
- **OMBUDSPERSON/HIGH COMMISSIONER FOR FUTURE GENERATIONS:** If this position is established, part of its horizon-scanning responsibilities would necessarily include monitoring and assessing new technologies.
- **CSD/UNEP TECH ASSESSMENT FACILITY:** Depending on decisions at Rio+20, either a new Council on Sustainable Development, an upgraded Commission on Sustainable Development or an enhanced UNEP could establish a special technology assessment facility capable of monitoring technologies and advising governments as to the global implications and their national options.
- **TREATY:** Rio could set a timetable for negotiations to develop an International Convention for the Evaluation of New Technologies (ICENT). The Convention could have a governing body supported by a scientific panel capable of convening specific technology working groups as required, with each working group representing a diversity of experience in science and other forms of knowledge, as well as a range of stakeholders. Reports of working groups would be submitted to the governing body, which would advise governments on the problem/potential of the new technology and its alternatives. Further, ICENT could support regional and national technology assessment and work with governments to monitor and support appropriate technology transfer.

**ON THE TABLE:** UNEP's latest Foresight Report, "21 Issues for the 21<sup>st</sup> Century," notes that the pace of introducing new technologies has increased while the role of regulatory bodies in protecting the public from the consequences of new technologies has diminished.<sup>1</sup> The report urges policymakers to "consider, for example, organizing a new international governance system which would produce, and potentially oversee, new international procedures to identify dangerous side effects of technologies and chemicals before they are produced."<sup>2</sup> It suggests that such a governance system would be anticipatory (to avoid the difficulties of regulating technologies and chemicals once they move beyond the laboratory); impartial (to avoid situations in which influential actors are in control of matters of safety and security relating to their own products); aware of the need to deal with the risks arising from interactions among multiple technologies developed for different purposes; universal (in order to address the global reach of new technologies); and ensure that individual countries and their corporate interests do not unilaterally make decisions that can have global impacts.<sup>3</sup>

According to the UNEP report, policymakers should work together with the scientific, environmental and other stakeholder communities to determine what a new governance system should look like.<sup>4</sup>

Governments cannot properly evaluate technologies on their own. Enormous financial and political interests are often mobilized to block "game-changing" new technologies from disrupting the *status quo*; or, as often, to propel new technologies into the marketplace prematurely to gain first-mover advantage. Given the importance of new technologies in government and social planning, "backup" assessment mechanisms are necessary.

**CIVIL SOCIETY'S ROLE:** Recognizing the political forces at play in the acceptance or rejection of new technologies, the UN should encourage the formation of dynamic civil society mechanisms that can offer an independent monitoring and assessment capacity to accompany intergovernmental processes. This initiative should encourage the formation of self-organized civil society structures at the regional and inter-regional level that could guide Technology Observation Platforms (TOPs) capable of

undertaking regionally-relevant reports on technology risks and opportunities to be considered by the UN. Secondly, the UN should encourage the formation of a “Technopedia” as an open access, web-based technology assessment tool monitored and maintained in the participatory style of Wikipedia.

## **FOR MORE INFORMATION**

ETC Group has published several documents on issues related to Rio+20 and Technology Assessment, including *Who Will Control the Green Economy?* and *Tackling Technology: Three Proposals for Rio (Submission to Zero Draft)*, available on our website: [www.etcgroup.org/en/rio](http://www.etcgroup.org/en/rio)

## **REFERENCES**

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1 UNEP, “21 Issues for the 21st Century: Result of the UNEP Foresight Process on Emerging Environmental Issues,” 2012, p. 40.

2 Ibid.

3 Ibid.

4 Ibid.