The UN Technology Facilitation Mechanism (TFM): *A Civil Society Guide for Action*

Action Group on Erosion, Technology and Concentration

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We need technology assessment to achieve the Sustainable Development Goals

In September 2015, UN Member States adopted the Sustainable Development Goals (SDGs). These seventeen goals outline an ambitious plan to address the world's most urgent challenges before 2030, including ending poverty and hunger, improving health and education, combatting climate change and protecting ecosystems. In the SDGs, technology comes up again and again. It is understood as a "cross-cutting means of implementation" that is essential to achieving each goal.[1] The need for technological innovation is mentioned specifically in thirteen of the seventeen SDGs. It seems we are putting a lot of stock in technology to save the world and its people.

This is not surprising. People often turn to technologies (both existing and aspirational) when trying to solve complex social, economic and ecological problems. But technologies can have a dark side. The precautionary principle demands that we carefully assess technologies before, not after, governments and intergovernmental bodies start funding their development and aiding their deployment around the world. **We must evaluate whether a technology will effectively solve the problem it aims to, and assess how it might impact the environment and livelihoods.**

However, in the context of massive trade and investment liberalization, governments and the UN have lost most of their ability to assess the potential impacts of new technologies. The United Nations is prescribing more technological solutions without the tools to choose wisely which technologies.

Without democratic governance based on the precautionary principle, harmful technologies can be marketed as silver bullet solutions to complex socio-ecological problems (false solutions) while useful and critical technologies (real solutions) may be overlooked or mismanaged. For example, the urgency of the food, energy, and climate crises has been used to justify aggressively promoting new and unregulated technologies. GMOs have been offered as a silver bullet for food security, nuclear for energy, and carbon capture and storage for climate change—yet each technology has backfired in its own way.[2]

There are now numerous groups across civil society who are campaigning and organizing against false solutions—from nuclear energy to GMOs, fracking, geoengineering, drones, pesticides, and more. In a new UN body, the Technology Facilitation Mechanism (TFM), there exists the opportunity to link up those campaigns and issues that appear fragmented, and to address the powerful, shaping role of technology in society and the future in a more systematic way.

Technology must be assessed democratically with the active participation of the people who are directly affected. Civil society organisations (CSOs) must be able to decide which technologies they want, and to reject technologies that are neither environmentally sound nor socially equitable.

The newly-established Technology Facilitation Mechanism (TFM) offers this opportunity for technology assessment at the global level. Still in its infancy, the TFM is a blank slate—if we engage with it now, civil society could turn the TFM into a meaningful forum where technological solutions, present and future, can be debated within the UN, with the full participation of civil society, indigenous communities, and affected peoples.

What is the Technology Facilitation Mechanism?

The TFM is a new international mechanism at the UN where governments, civil society, business, the scientific community, UN agencies and other actors can collaborate, network, discuss and evaluate how different technologies can help or hinder the achievement of the Sustainable Development Goals.[3]

In 2012, the UN Secretary General stressed the "need for a technology mechanism that can accelerate technology progress on a global scale and that is commensurate with the sustainable development challenge"[4] and the Rio+20 summit of world leaders in 2012 recognized the need to explore a global mechanism for Technology Facilitation:

> **From the Rio+20 outcome document, The Future We Want[5]:**
> 273. We request relevant United Nations agencies to identify options for a facilitation mechanism that promotes the development, transfer and dissemination of clean and environmentally sound technologies by, inter alia, assessing the technology needs of developing countries, options to address those needs and capacity-building. We request the Secretary-General, on the basis of the options identified and taking into account existing models, to make recommendations regarding the facilitation mechanism to the General Assembly at its sixty-seventh session.
>
> 275. We recognize the importance of strengthening international, regional and national capacities in research and technology assessment, especially in view of the rapid development and possible deployment of new technologies that may also have unintended negative impacts, in particular on biodiversity and health, or other unforeseen consequences.

There are already several UN bodies whose work impacts the development, transfer and dissemination of clean and environmentally-sound technologies, but they don't coordinate with each other, and the definition of what is meant by "clean" and "sound" technologies is ambiguous.[6]

One aim of the TFM is to ensure coherence, coordination and cooperation among the different initiatives, programs and institutions working on science, technology and innovation across the UN. As civil society, our role is also to make sure that important societal, environmental and health concerns are considered.

How does the Technology Facilitation Mechanism work?

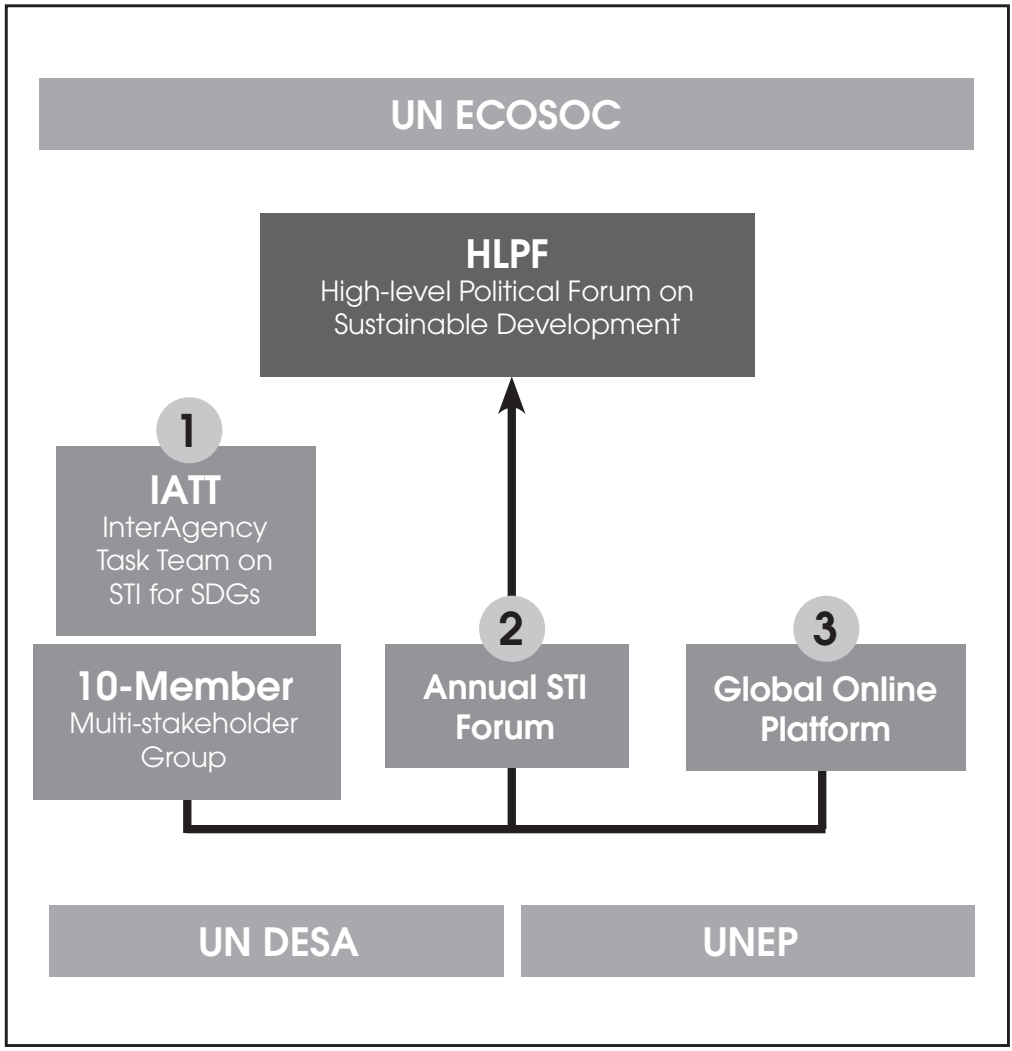

Figure 1: TFM Structure

The TFM consists of three parts:

1) The **UN Inter-Agency Task Team on Science, Technology and Innovation (STI) for the SDGs (IATT).** The IATT is the coordinating body of the TFM. Its mandate is "to promote coordination, coherence, and cooperation within the UN System on STI related matters, enhancing synergy and efficiency, in particular to enhance capacity building initiatives."[7]

The IATT currently has 30 members from UN agencies, bodies and institutions and is coordinated by both the UN Department of Economic and Social Affairs (UN DESA) and the UN Environment Programme (UNEP) in New York.[8]

The **10-Member Multi-stakeholder Group** is made up of representatives from civil society, the academic and scientific community, and the private sector. It works closely with the IATT to prepare for the annual STI Forum, and to develop the Online Platform (see below). Members of the 10-Member Group are appointed by the UN Secretary General for a term of two years.[9]

2) The **Annual Multi-stakeholder STI Forum** is two-day meeting in which various stakeholders (civil society, the scientific community, private sector, innovators, and technology users/providers) will discuss how Science Technology and Innovation (STI) can best help achieve the SDGs.[10] The STI Forum is co-chaired by two UN Member-States who also write a summary of the discussions. This summary is then presented to the High-Level Political Forum on Sustainable Development (HLPF), which is the global platform for follow-up and review of how the Sustainable Development Goals are being achieved.

Each STI Forum will be organized around a theme determined by the HLPF and the IATT (with the 10-Member Group), which links to the theme of the annual HLPF meeting. For example, in 2016 the HLPF theme was "Leaving No One Behind" and the STI Forum's linked theme was "realizing the potential of science, technology and innovation for *all* to achieve the Sustainable Development Goals."

What is Science, Technology and Innovation (STI)?

In this context, STI is a means through which we can come up with new solutions to complex challenges. STI is often equated with entrepreneurial, proprietary technological advancement by institutions or companies—to the detriment of people- and community-driven innovations in socioecological systems. To achieve the 2030 Agenda and SDGs, the functional definition of STI must be expanded so that indigenous, traditional and/or local knowledge systems and solutions are included and regarded as on par with institutional STI.

3) The ***Global Online Platform*** will be an information hub of existing initiatives, mechanisms and programmes that deal with science, technology and innovation within and beyond the UN. The Online Platform will:

a. Share information, knowledge, experiences, best practices and lessons learned from efforts to facilitate science, technology, and innovation in service of the SDGs.
b. Disseminate relevant open-access scientific publications from around the world.
c. House information about other technology initiatives in and outside of the UN. This will help ensure that the TFM works in synergy with existing technology initiatives.

The structure and function of the Online Platform is being developed through independent technical assessment.[11]

The TFM is under the authority of the UN Economic and Social Council (ECOSOC) and is supported through the Department of Economic and Social Affairs (UN DESA) and the UN Environmental Program (UNEP) in the office of the UN Secretary General. It is based at the UN Headquarters in New York City.

Why should civil society participate in the TFM?

It is, obviously, not only governments or the private sector that should discuss and evaluate technologies. Civil society should participate in the TFM to shape it into a platform for people's participation in the assessment of technology at the global level—where people can evaluate the potential environmental, economic, socio-cultural and gender impacts of new technologies that are being promoted to achieve the Sustainable Development Goals.

Civil society organisations can potentially benefit from the TFM, especially those that are involved in the development, transfer and deployment of technologies to achieve the different Sustainable Development Goals. Engaging in the TFM process can allow organisations to:

- Build civil society pressure to turn the TFM into a forum for meaningful technology assessment.
- Build a movement of civil society groups that can help counter the deployment of harmful false solutions, and promote diverse local technologies and real solutions.
- Promote successful national or local participatory STI initiatives that integrate a diversity of knowledge systems. (e.g. respecting indigenous knowledge)
- Learn from the experiences of other civil society organisations and other actors from different parts of the world that could enrich or inspire these objectives.
- Network with other technology actors, providers, and users in specific areas of the Sustainable Development Goals.
- Connect with potential donors that might be interested in funding the upscaling of proven or effective innovations promoted by civil society.
- Connect and network with other civil society organisations, communities and scientific institutions and explore opportunities to establish mutual relationships to develop and adapt innovations.
- Establish partnerships with potential users or providers of technologies

How can CSOs participate in the TFM?

There are many direct ways for civil society to engage in the TFM. (More detailed information is available at https://sustainabledevelopment.un.org/TFM)

IATT and 10-Member Group

The TFM mandate explicitly requires that the 10-Member Group includes representatives from civil society, academia and the private sector. Civil society and Indigenous Peoples representatives can guide CSO and social movements on opportunities to influence the deliberations and strategic directions of the TFM, and can consult with civil societies about how best to represent their interests in the TFM.

Annual STI Forum

The annual STI Forum is the primary space for multi-stakeholder engagement with the TFM, and has the potential to influence the broader discussions on sustainable development and how to achieve the SDGs. If possible, CSOs should attend the STI Forum.

Civil society can actively engage in the STI Forum through:

- Interactive Panel Discussions: Resource people and experts from civil society, Indigenous Peoples, the scientific community, business sector and institutions will be invited as panelists and as moderators in interactive and participatory discussions that tackle the annual theme of the STI Forum.
- Global Call for Innovations for the SDGs: Before each STI Forum, a global call for innovations for the SDGs will be circulated. The call will encourage stakeholders to submit their experiences implementing innovations to achieve specific SDGs. The best innovations will be showcased at the STI Forum, based on parameters and criteria decided by the IATT (with the 10-Member Group).

- Side Events: Designated time and spaces for side events will be provided to complement the official discussions, and civil society and other participants are encouraged to apply for slots to highlight initiatives or discuss issues relevant to the annual theme of the STI Forum.
- Exhibits and Special Events: Exhibits and special events that highlight experiences and lessons learned from innovations for the SDGs will be encouraged.
- Online Discussion: Organisations who are not able to attend STI Forums can contribute to a Global Online Discussion.[12] The online exchange tackles the same guiding questions that will be addressed by the STI Forum and responses will be synthesized and submitted to the Forum.

Because the TFM operates using existing resources, the annual STI Forum is held at the UN in New York unless a Member State volunteers to host. The location could limit the direct participation of global civil society. However, this may change if the STI Forum generates active multi-stakeholder participation and provides relevant and strategic inputs on the implementation of the SDGs. Active civil society participation in the early days of the TFM will hopefully lead to a greater support for civil society there in the future.

Global Online Platform

Once the Global Online Platform is established, civil society, Indigenous Peoples and other organisations, can contribute their experiences, best practices and lessons learned in science technology and innovations for SDGs, including relevant publications that need to be disseminated. The independent technical assessment will explore options for developing prototypes of the Global Online Platform—the developers will seek feedback from various sectors, including civil society, on how to make the Platform relevant, useful and effective in making available and accessible information, knowledge, experiences and lessons learned from STI for the SDGs.

A call to action

The TFM is a hard-won opportunity for technology assessment at the global level, but it will only help achieve the Sustainable Development Goals if civil society actively and critically participates in the process. It is civil society organisations and Indigenous Peoples who work directly with potential users of proposed technological solutions to the SDGs and who can ensure that community, indigenous and informal systems of innovation are recognized and promoted at the TFM.

Strong civil society engagement in all aspects of the TFM—the 10-Member Group, the Online Platform, and the STI Forum—will help ensure that the TFM produces policy recommendations and actions that promote real, fair, gender-just and ecologically-wise technological solutions to the food, energy, and climate crises.

Appendix: History of the TFM

- **June 2012:** Rio+20 global summit recognizes the need to explore a global mechanism for Technology Facilitation.
- **2012-2013:** UN Secretary-General presents options for a global technology facilitation mechanism in two papers (one in August 2012 and one in August 2013).
- **2013-2014:** A series of workshops and dialogues were held among member states (2013) and various stakeholders (2014).
- **2014-2015:** These deliberations fed into the 18-month negotiations on the SDGs, which included a technology facilitation mechanism in the package of means of implementation to support the SDGs.
- **July 2015:** The negotiations on the package of means of implementation for the SDGs was integrated into the processes of the Third International Conference on Financing for Development in Addis Ababa, Ethiopia—this is where Parties agreed to establish a Technology Facilitation Mechanism.
- **September 2015:** The TFM was launched at the UN Summit on the Post-2015 Agenda for Sustainable Development in New York.

From the 2030 Agenda for Sustainable Development[13]:

70. We hereby launch a Technology Facilitation Mechanism which was established by the Addis Ababa Action Agenda in order to support the Sustainable Development Goals. The Technology Facilitation Mechanism will be based on a multi-stakeholder collaboration between Member States, civil society, the private sector, the scientific community, United Nations entities and other stakeholders and will be composed of a United Nations inter-agency task team on science, technology and innovation for the Sustainable Development Goals, a collaborative multi-stakeholder forum on science, technology and innovation for the Sustainable Development Goals and an online platform.

Endnotes

[1] The other three means of implementation are financing, capacity building, and global partnership. It is important to remember that the 2030 Agenda, the SDGs, and the means of implementation are considered "universal, indivisible, and interlinked": the SDGs cannot be achieved without means of implementation, and means of implementation must not compromise any of the SDGs.

[2] See these publications for more information on false solutions: ETC Group briefing: "Why Technology Assessment?" 1 March 2011. http://www.etcgroup.org/content/why-technology-assessment; ETC Group communique: "Geopiracy: The Case Against Geoengineering" 18 October 2010. http://www.etcgroup.org/content/geopiracy-case-against-geoengineering

[3] UN General Assembly resolution 70/1, *Transforming our world: the 2030 Agenda for Sustainable Development*, A/RES/70/1. 25 September 2015, para. 70. https://sustainabledevelopment.un.org/post2015/transformingourworld. It is important to note that the TFM is a mechanism, not a new UN body or agency. It draws from existing resources of the UN.

[4] UN Secretary General, "Options for a facilitation mechanism that promotes the development, transfer and dissemination of clean and environmentally sound technologies," 4 September 2012, p. 16 http://www.un.org/ga/search/view_doc.asp?symbol=A/67/348&Lang=E

[5] General Assembly resolution 66/288, The Future We Want, A/RES/68/288. 27 July 2012. https://sustainabledevelopment.un.org/futurewewant.html

[6] There are other UN agencies that have their own technology facilitation mechanisms; those efforts exist within the mandate of those specific UN agencies. These include: the UN Industrial Development Organization (UNIDO), or programs on specific thematic areas at the World Health Organization (WHO) on research and development on vaccines. Other UN bodies have established their own technology mechanisms that cover facilitation, such as the Technology Mechanism of the UN Framework Convention on Climate Change (UNFCCC) created in 2010.

[7] UN General Assembly resolution 70/1, *Transforming our world: the 2030 Agenda for Sustainable Development*, A/RES/70/1. 25 September 2015, para. 70.

[8] UN InterAgency Task Team on STI for the SDGs, more information available online at: https://sustainabledevelopment.un.org/topics/technology/facilitationmechanism/iatt

[9] 10-Member Group that supports the Technology Facilitation Mechanism (TFM), more info available online at: https://sustainabledevelopment.un.org/topics/technology/facilitationmechanism/10membergroup

[10] UN General Assembly resolution 70/1, *Transforming our world: the 2030 Agenda for Sustainable Development*, A/RES/70/1. 25 September 2015, para. 70.

[11] *Ibid*.

For more information on the Online Platform and independent technical assessment see: https://sustainabledevelopment.un.org/TFM

[12] Technology Facilitation Mechanism Global Online Discussions, available at: https://sustainabledevelopment.un.org/TFM/STIForum/OnlineDiscussion

[13] UN General Assembly resolution 70/1, *Transforming our world: the 2030 Agenda for Sustainable Development*, A/RES/70/1. 25 September 2015, para. 70.

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ETC Group is an international civil society organization (CSO), addressing the socioeconomic and ecological issues surrounding new technologies that could have an impact on the world's poorest and most vulnerable. We investigate ecological erosion (including the erosion of cultures and human rights); the development of new technologies (especially agricultural but also new technologies that work with genomics and matter); and we monitor global governance issues including corporate concentration and trade in technologies. We operate at the global political level. We work closely with partner civil society organizations and social movements, especially in Africa, Asia and Latin America.

ETC Group has consultative status with the United Nations Economic and Social Council (ECOSOC), Framework Convention on Climate Change, Food and Agriculture Organization (FAO) and FAO Committee on World Food Security, Conference on Trade and Development (UNCTAD), and Convention on Biological Diversity (CBD). We also have a long history with the Consultative Group on International Agricultural Research (CGIAR).

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