
TECHNOLOGY
& CLIMATE:
Pathways to Advancing
the Implementation
of Solutions under
the UNFCCC
PLATAFORMA
CIPÓ
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World-Transforming
Technologies



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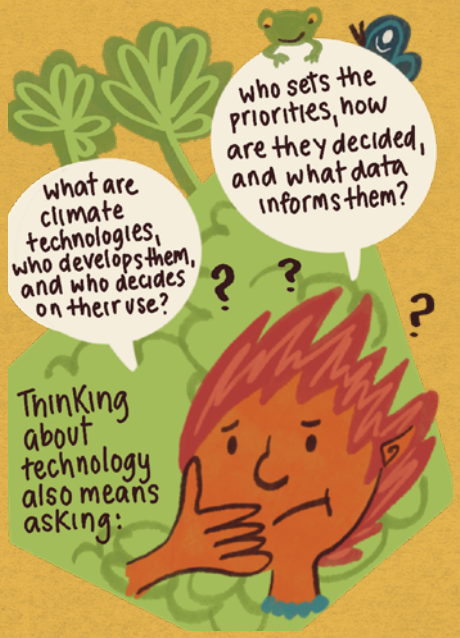
WHAT ARE CLIMATE TECHNOLOGIES, WHO DEVELOPS THEM, AND WHO DECIDES ON THEIR USE?

When we talk about climate technologies, what is the first thing that comes to mind? Renewable energy technologies, such as wind turbines, solar panels, and energy storage batteries, along with electric cars, hydrogen-powered buses, carbon capture systems, and AI-powered environmental monitoring sensors, are often the first things we think of. And while these are certainly important examples, **technology encompasses much more than that.**

Technology, after all, is not merely the end result; it is, above all, the process itself. It is not something that stands between nature and humans, but rather the very relationship itself - in other words, it concerns how a social group chooses to organize itself in response to a challenge. Technology is therefore an organized response to an actual problem or need, encompassing the accumulated knowledge that renders possible a particular artefacts or solution. Coming from this perspective, it is just as much a wind turbine as it is an ancient agricultural calendar. A soil management technique passed down from one generation to the next is as much a technology as a solar panel, just as a seed exchange network shared by Indigenous communities is every bit as much a technology as a monitoring satellite.

If technology is a process, then understanding it requires us to look beyond artefactss alone: it entails **science policy, resource allocation, decision-making processes, and power asymmetries**. In the specific case of climate technologies, this means looking well beyond mitigation. Needless to say, while mitigation technologies - such as those used for the energy transition, for instance - are undoubtedly important, climate technologies extend far beyond them. Rather than focusing solely on the volume of greenhouse gas emissions, they also encompass a wide range of issues related to climate adaptation, food sovereignty - including agroecological policies, family farming, just transition, keeping forests standing, and the territorial rights of Indigenous Peoples and traditional and local communities.

It is worth noting that technology comes with its own set of challenges since, on the one hand, while it can offer solutions and facilitate progress, on the other, it can also further deepen inequalities and injustices. Technology, in and of itself, is not inherently neutral, nor does it necessarily have an inclusive or distributive nature. Its outcomes, instead, depend on how it is designed, implemented, and disseminated.



These questions cut across every stage of the design, development, and implementation of climate technologies.

TECHNOLOGY UNDER THE UNFCCC: A BRIEF OVERVIEW

1970s

Debates over responsibilities and the right to development were already prominent.

1988

Establishment of the Intergovernmental Panel on Climate Change (IPCC), responsible for consolidating the scientific basis that would underpin political decision-making on climate action.

1992

Rio-92: establishment of the United Nations Framework Convention on Climate Change (UNFCCC)

- Technology as an important element of climate action;
- In line with the principle of Common but Differentiated Responsibilities (CBDR), the text stated that developed countries should take steps to promote, facilitate, and finance the transfer of environmentally sound technologies to developing countries.

It marked the consolidation of a paradigm: by placing technology transfer from developed to developing countries at the center, the Convention favored a top-down model of transfer over co-production and co-development. At the same time, this approach implicitly assumed that the main solutions were concentrated in the Global North.

1997

The Kyoto Protocol took important steps on the agenda and included technology-related instruments. The main one was the Clean Development Mechanism (CDM), which allowed developed countries to finance emission reduction projects in developing countries in exchange for carbon credits. The CDM partly served as a channel for transferring clean technologies from North to South and reinforced the same donor-recipient model.

Phase 1 Consolidation of paradigms (1970-2001)

This was the phase in which the core paradigms that still shape technology policies in international climate governance were established.

Phase 2 Institutionalization (2001-2015)

2001

Institutionalization of these structures:

- Article 4 of the UNFCCC was operationalized through the creation of the technology transfer framework and the Expert Group on Technology Transfer (EGTT), organized around five key themes: Technology Needs Assessments (TNAs), technology information, enabling environments, capacity-building, and mechanisms for technology transfer.
- This period also saw the first round of TNAs, the process through which developing countries identify their technology priorities for mitigation and adaptation and develop action plans to enable their implementation.

2007

Bali Action Plan: reinforced technology as one of the central pillars of climate negotiations. Four sub-themes were added: innovative financing, international cooperation, endogenous technology development, and collaborative research and development (R&D).

2008

Establishment of the Poznan Strategic Programme on Technology Transfer, aimed at scaling up funding for climate technology development and transfer activities. For the first time, climate technology had a dedicated funding stream within the Global Environment Facility (GEF).

2010

The agenda shifted in scale with the creation of a permanent institutional structure dedicated exclusively to technology: the Technology Mechanism. The Mechanism comprises two complementary bodies: the Technology Executive Committee (TEC), its policy arm, and the Climate Technology Centre and Network (CTCN), its implementation arm.

2015

The Technology Mechanism gained strength and structure with its inclusion in Article 10 of the Paris Agreement, alongside the consolidation of the concept of means of implementation » the definitive recognition that technology transfer – together with finance and national capacity-building – is essential to climate action. The same technology transfer-centered paradigm remained in place.

Other instruments related to Science, Technology and Innovation were created, even outside the Technology Mechanism. Instruments such as the Local Communities and Indigenous Peoples Platform (LCIPP), the Nairobi Work Programme (NWP), aimed at generating and disseminating knowledge on adaptation and resilience, and the Santiago Network for Loss and Damage, which provides technical assistance to developing countries, among many others, include components related to technology and/or knowledge generation.

Phase 3 Steps toward implementation (2015-2025)

2025

At COP30 in Belém, the **Belém Technology Implementation Programme** (BTIP) was established. It aims to strengthen support for implementing the technology priorities identified by developing countries and to address the challenges identified in the first periodic assessment of the Technology Mechanism, mobilizing technical and financial support to implement these priorities.

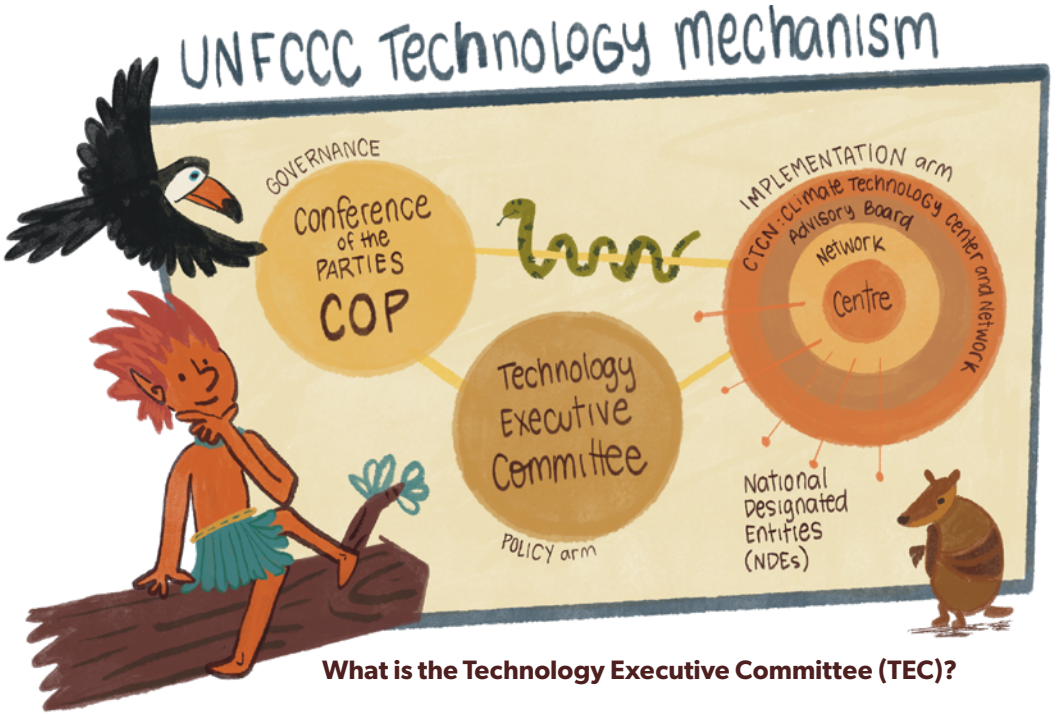
The COP30 decisions and the text establishing the BTIP recognize the importance of Indigenous knowledge and endogenous technologies, gender responsiveness, differentiated vulnerabilities, and the centrality of poverty eradication.

TECHNOLOGY UNDER THE UNFCCC: CURRENT STATE, CHALLENGES, AND OPPORTUNITIES

What is the UNFCCC Technology Mechanism?

The UNFCCC Technology Mechanism is a framework aimed at bringing about the development and transfer of climate technologies and assessing their suitability, sustainability, and potential detrimental impacts. Since 2018, following the adoption of the Technology Framework at COP24, the Technology Mechanism's efforts have focused on five core areas: innovation; implementation; capacity-building; collaboration and stakeholder engagement; and support.

The Mechanism comprises two main components: on one side, the Technology Executive Committee (TEC), its "policy" arm, and, on the other, the Climate Technology Centre and Network (CTCN), its "implementation" arm.



What is the Technology Executive Committee (TEC)?

The Technology Executive Committee (TEC) focuses on identifying priorities and submitting policy recommendations aimed at expediting the development and transfer of low-emission and climate-resilient technologies. It comprises 22 elected experts, 10 of whom come from developed countries and the other 12 from developing countries - including at least three each from Africa, Asia and the Pacific, and Latin America and the Caribbean.



The TEC Chair is elected for a one-year term. In April 2026, Brazilian diplomat Pedro Ivo Ferraz da Silva was appointed as Chair and French diplomat Céline Phillips as Vice-Chair. The TEC meets at least twice a year, typically in April and September, and submits reports on its activities to the Conference of the Parties (COP).

The TEC has the following responsibilities:

- Provide an overview of countries' climate technology needs and assess both policy and technical issues related to the development and transfer of these technologies.
- Recommend measures to promote technology development and transfer and overcome existing barriers and gaps.
- Promote and facilitate collaboration among stakeholders (countries, businesses, and organizations) in the climate technology sector, while striving to ensure cooperation and coherence across their activities.
- Catalyze the development and use of climate technology roadmaps and action plans.

The **TEC 2023–2027 Workplan** comprises four different work fronts:

1. National Innovation Systems (NISs), Research, Development and Demonstration (RD&D), and transformative digital and adaptation technologies.
2. Technology Needs Assessments (TNAs) and technology planning tools to support the implementation of Nationally Determined Contributions (NDCs).
3. Transformative and innovative solutions in water, energy, food, infrastructure, industry, and oceans.
4. Collaboration and engagement with existing UNFCCC processes and bodies, as well as other UN agencies.

The TEC's latest recommendations submitted to the Conferences of the Parties (COPs) address topics such as:

- Artificial intelligence (AI) for climate action.
- Deployment of climate technologies in infrastructure, including buildings.
- Deployment of early warning systems.
- Climate technologies for agrifood systems.
- National Innovation Systems (NISs).
- Climate technologies for adaptation.
- Technology to support the development and implementation of Nationally Determined Contributions (NDCs).

What is the Climate Technology Centre and Network (CTCN)?

The CTCN, which is the Technology Mechanism's implementation arm, aims to expedite technology development and transfer. It is currently hosted by the United Nations Environment Programme (UNEP) alongside the United Nations Industrial Development Organization (UNIDO) and supported by a network comprising more than 750 national, regional, sectoral, and international organizations.

Like the TEC, the CTCN also typically convenes twice a year, usually shortly after the TEC meetings, and also submits reports on its activities to the Conferences of the Parties (COPs). The CTCN has an Advisory Board comprising 30 expert members serving two-year terms, with nine representatives from developed countries; the other nine from developing countries; five chairs or designated representatives appointed by the Adaptation Committee, the Green Climate Fund (GCF), the Global Environment Facility (GEF), the Standing Committee on Finance (SCF), and the Technology Executive Committee (TEC); the CTCN Director, currently Ariesta Ningrum of Indonesia; and six representatives from observer organizations (ENGOs, BINGOs, IPOs, RINGOs, WGCs, and YOUNGOs).

The main focus of the CTCN is to help bring about transformative impacts and scale up its activities through two key **"technology enablers": National Innovation Systems (NISs)** and digitalization. These enablers encompass the policy, financial, institutional, and knowledge-related conditions required to enable, accelerate, and disseminate the development and transfer of climate technologies. National Innovation Systems (NISs) are public and private institutional networks whose activities and capabilities support technology development, diffusion, and transfer. Digitalization, in turn, refers to the use of digital tools and infrastructure aimed at reducing emissions and building climate resilience.

The CTCN takes a demand-driven approach to supporting technology development and transfer across **five key areas**:

1. Water-energy-food nexus.
2. Buildings and infrastructure.
3. Sustainable mobility.
4. Energy systems.
5. Business and industry.

The CTCN operates in three main ways:

1. Providing technical assistance to developing countries on technology-related issues.
2. Facilitating access to climate technology-related information and knowledge.
3. Promoting collaboration through its network of regional and sectoral experts.

At COP30, the Centre's functions were reviewed and expanded to include the provision of technical support aimed at identifying needs, strengthening capacities, and preparing projects through multi-country and programmatic approaches; fostering partnerships with the private sector and academia, as well as North-South, South-South, and triangular cooperation; coordinating the Network's activities, including efforts to secure funding; cooperating with the UNFCCC's financial mechanisms and bodies; and assessing the long-term impacts of the assistance it provides.



The CTCN provides five main types of Technical Assistance (TA):

1. **Technical Assessments:** Technology research and development, pilot projects and deployment according to local conditions, and feasibility studies.
2. **Governance and Planning:** Sectoral roadmaps, strategies, and recommendations on legislation, policies, and regulations.
3. **Capacity-building:** Stakeholder engagement, training programs and workshops, communication, and raising awareness on topics.
4. **Tools and Methodologies:** Decision-making tools, information sharing, and technology identification and prioritization.
5. **Implementation:** Collaboration with the Financial Mechanism, private sector engagement, and market creation.

Technical Assistance (TA) requests must be submitted to the CTCN through each country's focal point, known as the National Designated Entity (NDE). The CTCN then devises a technology transfer plan (the "Response Plan") and selects a consortium or Network member to implement the proposed technology solutions and, once they are in place, then introduces the plan itself. The CTCN is also responsible for analyzing and verifying the deliverables.

Parties to the UNFCCC must designate a **National Designated Entity (NDE)** to serve as the focal point for matters relating to technology development and transfer. These entities serve as facilitators of engagement with the UNFCCC Technology Mechanism and also support national coordination on climate technology issues. They are therefore a key part in connecting national needs with international resources. However, in practice many NDEs operate with limited authority, inadequate resources, and restricted connection to actual decision-making processes.

From its establishment through August 2025, the CTCN received 439 Technical Assistance (TA) requests from 115 developing countries, as follows:



38%: 167 completed
18.5%: 81 under implementation
28%: 123 currently in the design stage
15.5% 68 under review



41% focused on mitigation (mostly renewable energy, energy efficiency, or agriculture),
31% on adaptation (mostly water resources, agriculture and forestry, or coastal areas)
28% on both.



48%: Africa
29%: Asia and Pacific
22%: Latin America and the Caribbean
1%: Europe



25% involved decision-support tools and/or information provision
21% technology feasibility studies
15% technology identification and prioritization studies.

For the first time ever, the two arms of the UNFCCC Technology Mechanism now have a **Joint Work Programme** for the 2023-2027 term. The programme sets out three areas of joint activities for the TEC and the CTCN:



1. technology roadmaps;
2. digitalization; and
3. continued joint activities, including efforts on gender and technology, technology and Nationally Determined Contributions (NDCs), monitoring and evaluation, communication, and strengthening systematic feedback between both bodies.

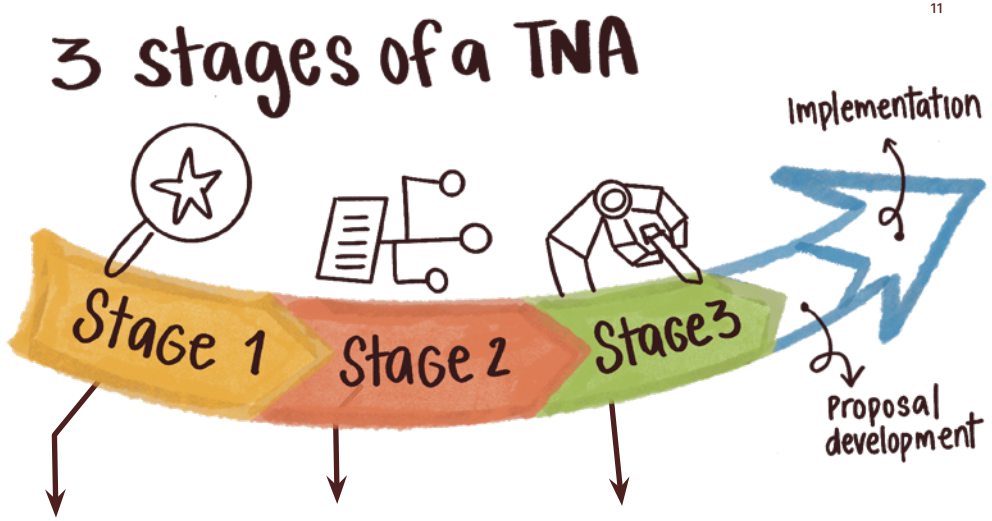
Moreover, the two entities share six scopes of activities:

1. National Innovation Systems (NISs);
2. water-energy-food systems;
3. energy systems;
4. buildings and resilient infrastructure;
5. business and industry; and
6. Technology Needs Assessments (TNAs).

What Are Technology Needs Assessments (TNAs)?

Technology Needs Assessments (TNAs) are comprehensive, country-driven, participatory, and action-oriented processes. They help **identify and prioritize the technologies required for climate change adaptation and mitigation in developing countries**. TNAs also pinpoint barriers to the development, transfer, and adoption of these technologies and signal potential pathways to overcome them, including through **Technology Action Plans (TAPs)**. The TNAs have the following five core traits:

1. **Country-driven:** The process is initiated, led, and controlled by the country itself.
2. **Participatory:** A wide host of stakeholders (government, the private sector, NGOs, academia, and local communities) take part in the TNAs.
3. **Flexible:** Assessments can encompass mitigation and/or adaptation technologies, span multiple sectors, and be integrated into other processes, such as Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs), and Biennial Transparency Reports (BTRs).
4. **Action-oriented:** TAPs provide a roadmap for tangible actions aimed at promoting the development, deployment, and transfer of prioritized technologies.
5. **Dynamic:** TNAs require regular updates and benefit from an iterative process to stay up-to-date and relevant.





Identification and prioritization of technologies for mitigation and adaptation

» Identify national priority sectors and technologies
» Assess technologies against national development priorities, costs, and GHG emission reduction or adaptation potential.



Barrier Analysis and Enabling Framework (BAEF)

» Identify and analyze barriers to implementing the prioritized technologies
» Identify and analyze policies and other measures to improve enabling frameworks
» Economic assessment of measures to transfer and diffuse the prioritized technologies



Technology Action Plan (TAP)

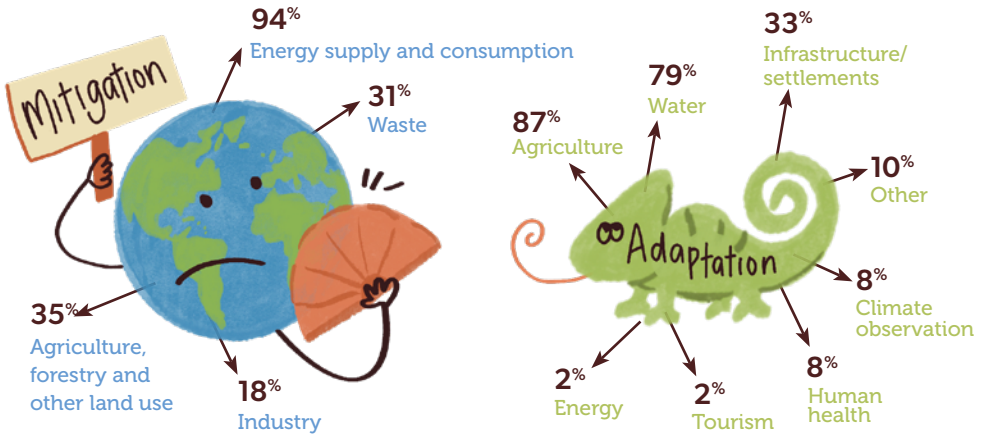
» Identify and describe the actions to be included in the TAP
» Identify the activities needed for the actions to be implemented successfully
» Specify timelines, resources, responsibilities, etc. for the activities

It is worth noting that a TNA does not encompass project development or implementation phases, in other words, while the process identifies priorities and barriers and develops a Technology Action Plan (TAP), it does not involve either securing funding or implementing measures needed to address whatever was diagnosed.

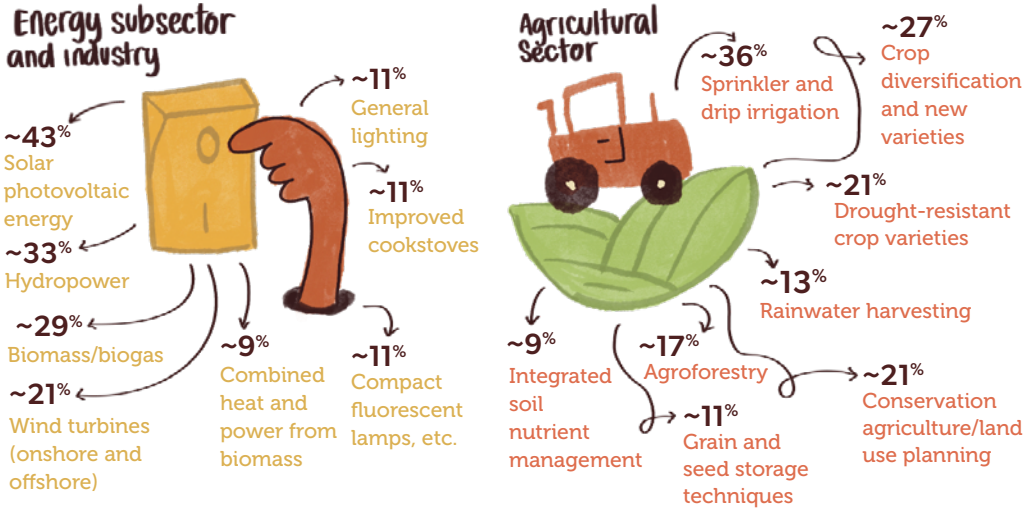
Countries are increasingly drawing on both their TNAs and TAPs to inform the development and implementation of their Nationally Determined Contributions (NDCs) and long-term low greenhouse gas emission development strategies (LT-LEDS) under the Paris Agreement. As of September 2026, 98 developing countries had already completed their TNAs, while another 17 were currently undertaking the process. Of this overall number, 26 developing countries mention TNAs in their NDCs.

According to the fourth TNA synthesis report published in 2020, which looks at 53 countries participating in Phases I and II of the Global TNA Project, energy was the most frequently prioritized sector for mitigation, whereas, on the other hand, agriculture came in first for adaptation, with the following technologies used:

Sectors prioritized in countries' technology needs assessment reports



Technologies prioritized in countries' technology needs assessment reports



The Global TNA Project is implemented by UNEP and by the UNEP Climate Centre in Copenhagen, on behalf of the GEF.

Of the 53 countries examined in the 2020 synthesis report, 94% had developed Technology Action Plans (TAPs) to put the findings of their TNAs in place. However, as the TEC points out in its assessment, many TAPs lack sufficient financial viability and their success, at the end of the day, is difficult to track.

There is no general agreement as well as no indicators regarding what in fact constitutes a successful TNA. Developed countries argue that TNA findings should be integrated into national development strategies and targets, whereas developing countries claim that TNAs should lead to viable Technology Action Plans (TAPs) capable of attracting climate finance for technology transfer.

Furthermore, there are structural, methodological, financial, and institutional constraints that undermine the effectiveness of TNAs. These include scarce resources that limit the scope of activities and discourage the engagement of strategic actors; a linear, sequential approach that makes it difficult to integrate different stages and also compromises the quality of the outcomes; and action plans that are poorly integrated with other climate policies, including NDCs, NAPs, and long-term low greenhouse gas emission development strategies (LT-LEDS), and additionally fail to incorporate key climate finance criteria.

Does the UNFCCC Technology Mechanism Work? Gaps and Criticisms

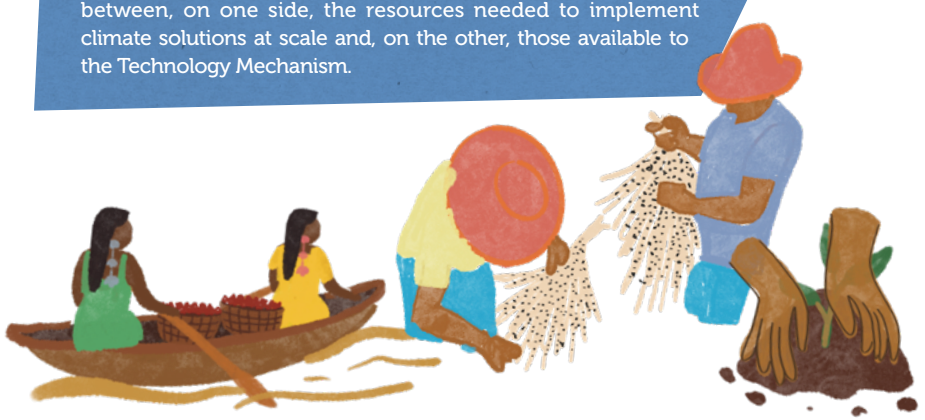
The Technology Mechanism's activities and outcomes fall short of what it could deliver, taking on a predominantly advisory and process-oriented approach rather than championing technology development and transfer. There are significant gaps in how the UNFCCC Technology Mechanism is structured and operates. **The Mechanism lacks instruments to promote technology co-development**, showcasing the absence of more inclusive and equity-oriented perspectives in its practices. The very conception of technology underpinning the Mechanism fails to account for social technologies, ancestral knowledge, and the practices of Indigenous Peoples and traditional and local communities. Moreover, the existing focus on technology transfer, based on the assumption that solutions are largely found in the Global North, overlooks the development of both low- and high-complexity technologies in Global South countries, particularly within the territories of Indigenous Peoples and traditional communities. **A supply-driven approach to technology takes precedence over the local needs and priorities of developing countries.**

The process of setting priorities also presents its own set of challenges. Since much of the CTCN's funding is already previously targeted by donors for specific purposes, technical assistance tends to be shaped by donor priorities, thereby clashing against the notion of a "demand-driven" mechanism and sidelining a core question: **Which solutions matter, to whom, and why?** The consequences are tangible. Forests and land use, the leading source of emissions in countries such as Brazil, do not rank among the CTCN's five key scope of activities. Standing forests and the territorial knowledge that sustains them - both recognized as forms of technology in this report - are largely overlooked. In agriculture, the sector most prioritized by developing countries for adaptation, support focuses on climate-smart agriculture, precision agriculture, and irrigation. Agroecology and family farming initiatives are few and far between, and the term "agroecology" itself, central to food sovereignty, is virtually absent from the CTCN's vocabulary.

Operationally speaking, and beyond the aforementioned TNA-related issues, there are also **financing challenges** in terms of amount as well as quality and predictability. While the CTCN's annual budget is approximately USD 10 million, the initial target for effective global deployment of climate technologies is at least USD 500 million per year, reaching USD 2 billion annually by 2030. Each CTCN technical assistance request is subject to a USD 300,000 ceiling - a significantly low figure compared with the needs and pressing challenges of the developing world. Coordination between the Technology Mechanism and the UNFCCC Financial Mechanism – as well as its two operating entities, the GEF and the GCF – is still sub-par and needs to be enhanced. The Convention's excessive **fragmentation** is also reflected in the Technology Mechanism's interactions with other structures, including the Local Communities and Indigenous Peoples Platform (LCIPP) and the Santiago Network, further weakening the capacity for action and coordination efforts across the technology agenda. Additionally, **support for NDEs is limited**, resulting in fragmented stakeholder engagement and limited coordination at the national level. Finally, barriers related to **intellectual property** and broader political resistance also hinder the full operation of both the Mechanism and its mandate.

While the Mechanism delivers recommendations, knowledge products, and opportunities for dialogue and exchange, the climate emergency calls for much more than that. Effective technology transfer and development, overcoming systemic barriers, and monitoring results using implementation and climate justice indicators are all pressing and necessary measures.

To put the scale of the challenge into perspective, consider that a single project in Kenya, whose preparation was supported by the CTCN, was initially estimated at USD 218 million - a sum exceeding the total USD 134.9 million in contributions received by the Centre itself since its establishment. In April 2026, the project moved on to a USD 96.9 million operation, with USD 43.6 million in financing approved by the GCF. This example showcases both the catalytic potential of the CTCN's technical assistance and the sheer disparity between, on one side, the resources needed to implement climate solutions at scale and, on the other, those available to the Technology Mechanism.



What is the Belém Technology Implementation Programme (BTIP)?

The Belém Technology Implementation Programme (BTIP) arose from the finding that the Technology Mechanism has not enabled implementation at the pace and scale it requires. The BTIP could help bring about a paradigm shift: moving from identifying what is needed - as reflected in Technology Needs Assessments (TNAs) - to addressing how to enable the large-scale deployment of climate technologies, as set out in Technology Action Plans (TAPs).

TAPs set forth concrete actions, timelines, responsible institutions, and potential sources of support for implementing prioritized technologies, thereby bridging the gap between identifying needs and actual implementation.

Launched at COP30 in 2025, the BTIP will seek to enhance national leadership, strengthen institutional capacities, and help bring about greater alignment between, on one side, national technology priorities and, on the other, international cooperation and financing mechanisms. Its key elements are:

- To address challenges in **implementing** developing countries' technology priorities across different stages of the technology cycle, as well as challenges identified in the first periodic assessment of the Technology Mechanism, including through the exchange of information on enabling factors, good practices, challenges, and lessons learned.
- To strengthen **National Innovation Systems (NISs)** and enabling environments - such as policy and regulatory frameworks – to help implement and diffuse technologies, thus ensuring that research, development, and demonstration continue to inform effective technology implementation, including with regard to Indigenous and endogenous technologies.
  - To provide support to developing countries, including **National Designated Entities (NDEs),** regarding integrating their climate technology priorities into national policies, programs, and projects.
  - To promote **capacity-building** aimed at developing project concept notes and preparing financially feasible projects, in addition to promoting coordination and partnerships to enhance support for climate technology implementation, consequently mobilizing the resources and expertise of relevant bodies and entities.
  - To mobilize both **financial** and non-financial **resources** to ramp up support for the Technology Mechanism, with the aim of assisting with the implementation of the Paris Agreement.

The BTIP decision explicitly mentions Indigenous and endogenous technologies!

SO NOW, WHAT CAN BE DONE?

Next steps

Following the establishment of the BTIP, a number of things still need to be defined, namely how the programme will operate, including its governance structure and key operational pillars; strengthening dialogue between the Convention's Technology and Financial Mechanisms to expand access to implementation-focused resources; establishing mechanisms for monitoring, periodic assessment, and social participation; and defining priority topics for the BTIP's inaugural global dialogue, which resulted in a new timeline of the next steps. It is essential for civil society to closely follow these processes and come together to participate in them - whether by providing submissions and proposals, engaging with country negotiators, or attending on-site meetings and events.

WHAT IS IT?	WHAT DOES IT MEAN?	WHEN?
BTIP global dialogues.	Annual thematic forums for exchanges among Parties and a wide range of stakeholders on the implementation of climate technologies. Each dialogue has a focus topic defined by the TEC the previous year and produces a synthesis report that helps inform the annual reports submitted to the CMA.	Annually, during the first SBI session of the year, starting in June 2027 (SB66)
Submissions of proposed topics for the BTIP dialogues.	Each year, Parties and observer organizations can use the UNFCCC submission portal to send suggestions for topics to be discussed at the BTIP global dialogues. The TEC examines these submissions and selects the theme of each dialogue. This is the main entry point for civil society to be able to leverage the programme's agenda.	Annually, by July 1st, starting in 2026
High-level ministerial dialogue on technology development and transfer.	A high-level political space to assess progress under the BTIP and discuss priorities as well as the next steps for technology development and transfer.	2028, at COP33
Programme review.	A comprehensive assessment of the BTIP's implementation and outcomes to steer its continuation and improvement.	2034

Plataforma CIPÓ and WTT contributed to the selection of the topic of the first dialogue through a submission that was also signed by Instituto Decodifica, Coletivo Boas Práticas (FIOCRUZ), the Adaptation Research Alliance, Coordinadora de las Organizaciones Indígenas de la Cuenca Amazónica (COICA), and the Institute of Asian Studies at Chulalongkorn University.

Outstanding Questions

Against this backdrop, there are still a number of open questions that need to be addressed:

Effectiveness of existing instruments – How can we assess and strengthen the effectiveness of existing instruments (such as the TEC, CTCN, and TNAs), given the finding that the Technology Mechanism has made limited progress regarding implementation?

Incorporation of the BTIP into the Technology Mechanism – How will the BTIP be incorporated into existing UNFCCC structures, given the need for a paradigm shift demanded by the climate emergency?

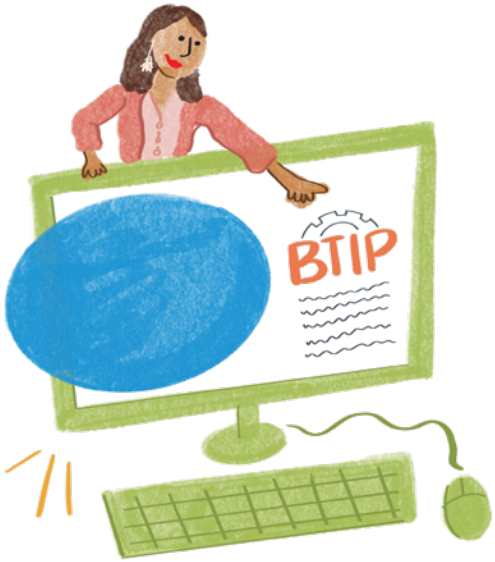
Technology prioritization – How can defined financing priorities respond to local needs, turning around the current supply-driven approach to technology solutions and transfer?

New knowledge production and technology development paradigms – How can we develop a co-learning approach within the Global South itself? How can we strengthen both learning and cooperation networks? How can we put in place processes and infrastructure for data interoperability across countries in a fair and sustainable manner? How can we avoid the so-called "technological fetishism" - the uncritical adoption by the Global South of solutions developed in the Global North? How can these new paradigms overcome systemic barriers, such as intellectual property issues?

Monitoring and evaluation of results – What results should the BTIP and the Technology Mechanism strive to achieve? What criteria and indicators should be used to measure and assess their performance? How are these new paradigms reflected in this framework?

Social participation at the local level – How have countries been defining and structuring their technology priorities? In this context, how can we ramp up social participation in Technology Needs Assessments (TNAs)?

Social participation in the UNFCCC – How can we ensure the participation of stakeholders based in traditional territories so that other conceptions of technology are also reflected in how the BTIP and the Technology Mechanism operate?



Recommendations from Brazilian Civil Society

Between 2025 and 2026, Plataforma CIPÓ and WTT engaged in dialogue with more than 60 civil society organizations and social movements across Brazil on the UNFCCC technology agenda. These discussions resulted in a number of recommendations, presented below:

» **Create social participation mechanisms to support decision-making related to developing and implementing technology prioritization policies.**

→ Build consultation processes to identify and catalyze Indigenous, traditional, and local technologies - a process that could be linked to the formulation of TNAs, which currently still offer limited opening for broader and more inclusive dialogue.

→ Enable broader participatory processes within the BTIP's global and regional dialogues, with a focus on engagement and the identification of priorities, coupled with ongoing learning mechanisms such as regular, open workshops and meetings aimed at strengthening the capacities of organizations working on technology and climate issues.

→ Expand institutional dialogue between National Designated Entities (NDEs) and civil society. A number of questions can help shape this governance system: What mechanisms do NDEs currently have in place for dialogue with civil society, and how can they be improved? How can assessing the NDEs' performance help consolidate global and regional dialogues as well as the identification of national priorities? What opportunities exist to ramp up NDEs' performance in the Global South?



Strengthen existing instruments by engaging both governmental and non-governmental actors, putting together dignified, effective, and inclusive processes for dialogue with civil society organizations, and linking them to ongoing technology and climate-focused capacity-building processes.



» **Create learning instruments and spaces focused on fostering technology co-development processes and strengthening South-South cooperation.**

→ Alongside the BTIP's regional and global dialogues, establish a formal, CTCN-backed structure to achieve the following goals:

› To showcase examples (technological artefacts) and case studies (technology development, methodologies, good practices, and program and project design) across two different levels: Level A) large-scale infrastructure and highly complex, highly technologically mature technologies, focusing on decarbonization and combating deforestation and environmental degradation; Level B) social technologies and successful experiences at the territorial level.

› To ensure data interoperability by establishing processes and infrastructure that enable locally produced data, including through citizen-led data generation methodologies, to interact with global climate information systems and help ensure that financing is allocated more equitably.

An example of an organization that works with the Citizen Data Generation methodology and is a reference in the field.

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› To internalize concepts such as social technologies and citizen-led data generation methodologies.



Identifying, systematizing, and sharing real-world cases from Global South countries and fostering co-learning networks and advancing alternative sociotechnical imaginaries beyond the technocratic realm; building regional, national, and international dialogues geared toward developing new instruments within the UNFCCC Technology Mechanism.



LIST OF ACRONYMS

ACRONYM	MEANING
AI	Artificial Intelligence
APIB	Articulation of Indigenous Peoples of Brazil
BAEF	Barrier Analysis and Enabling Framework
BINGOs	UNFCCC constituency of business and industry non-governmental org.
BTIP	Belém Technology Implementation Programme
BTRs	Biennial Transparency Reports
CBD	Convention on Biological Diversity
CBDR	Common but Differentiated Responsibilities
CDM	Clean Development Mechanism
CMA	Conference of the Parties serving as the meeting of the Parties to the Paris Agreement
COICA	Coordinator of Indigenous Organizations of the Amazon River Basin
COP	Conference of the Parties
CTCN	Climate Technology Centre and Network
EGTT	Expert Group on Technology Transfer
ENGOs	UNFCCC constituency of environmental non-governmental org.
GCF	Green Climate Fund
GEF	Global Environment Facility
GHG	Greenhouse gases
IPCC	Intergovernmental Panel on Climate Change
IPOs	Indigenous Peoples Organizations
LCIPP	Local Communities and Indigenous Peoples Platform
LEDS /LT-LEDS	Long-term low greenhouse gas emission development strategies
NAPs	National Adaptation Plans
NDCs	Nationally Determined Contributions
NDEs	National Designated Entities
NGOs	Non-governmental organizations
NISs	National Innovation Systems
NWP	Nairobi Work Programme
R&D	Research and Development
RD&D	Research, Development and Demonstration
RINGOs	UNFCCC constituency of research and independent non-governmental org.
SB66	66th session of the UNFCCC Subsidiary Bodies
SBI	Subsidiary Body for Implementation
SCF	Standing Committee on Finance
STI	Science, Technology and Innovation
TA	Technical Assistance
TAPs	Technology Action Plans
TEC	Technology Executive Committee
TNAs	Technology Needs Assessments
UN	United Nations
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
WGC	Women and Gender Constituency
YOUNGOs	UNFCCC constituency of youth non-governmental organizations

Many of the topics addressed in this publication are the result of conversations, exchanges, and dialogues held with multiple civil society organizations and grassroots movements in Brazil and other countries. Some of this content also appears in other documents:

Submission **"Opiniões sobre Opções para o Fortalecimento da Coerência das Políticas, Incluindo um Possível Programa de Trabalho Conjunto das Convenções do Rio"** (*Views on Options for Strengthening Policy Coherence, Including a Possible Joint Work Programme of the Rio Conventions*), submitted to the Convention on Biological Diversity (CBD) and signed by the Articulation of Indigenous Peoples of Brazil (APIB), Plataforma CIPÓ, and WTT (May 2025). Available at: https://plataformacipo.org/wp-content/uploads/2025/09/Texto-PT-sem-margens.pdf).

Policy brief **"Rethinking the Role of STI in Global Climate and Environmental Governance,"** authored by Adriana Erthal Abdenur, Lara Ramos, Gaston Kremer, Marília Closs, and Valentina Calado Pompermaier (September 2025). Available at:https://plataformacipo.org/publicacoes/reavaliando-o-papel-de-cti-na-governanca-climatica-e-ambiental-internacional-volume-2-n-3-2025/.

Open letter **"COP da implementação se faz com políticas justas de CT&I"** (*An Implementation COP Requires Just STI Policies*) (November 2025). Available at: https://wttventures.net/publicacoes/.

Summary Report of the **Reunião Estratégica de Tecnologia e Clima (***Strategic Meeting on Technology and Climate*) (May 2026). Available at: https://wttventures.net/publicacoes/.

Submission **"Suggested Topics for the First Belém Technology Implementation Programme (BTIP) Global In-Session Dialogue at SBI 66"**, led by Plataforma CIPÓ and WTT and signed by Instituto Decodifica, Coletivo Boas Práticas (FIOCRUZ), the Adaptation Research Alliance, Coordinadora de las Organizaciones Indígenas de la Cuenca Amazónica (COICA), and the Institute of Asian Studies at Chulalongkorn University, and submitted to the UNFCCC (June 2026). Available at: https://submissions.unfccc.int/?cfsid=1534.

FOR MORE INFORMATION

1. What is the Technology Executive Committee (TEC)?: https://unfccc.int/ttclear/
2. What is the Climate Technology Centre and Network (CTCN)?: https://www.ctc-n.org/
3. Does the UNFCCC Technology Mechanism Work? Gaps and Criticisms:
   - → Oh. (2019). Political Economy of International Policy on the Transfer of Environmentally Sound Technologies in Global Climate Change Regime. New Political Economy, 24(1), 22–36. https://doi.org/10.1080/13563467.2017.1417361
   - → Deenapanray & Trærup. (2021). Technology needs assessment for climate change adaptation: Experiences of Mauritius and Seychelles. Regional Environmental Change, 22, Article 2. https://backend.orbit.dtu.dk/ws/portalfiles/portal/265739714/TNA_for_CC_Adaptation_experiences_of_Mauritius_and_Seychelles_2021.pdf
   - → Silva, Britto, Poppe & Penna. (2025). Beyond planning: Making climate technology implementation finally happen. Parcerias Estratégicas, 30(55), 169–193. https://seer.cgee.org.br/parcerias_estrategicas/article/view/1061
   - → Prempeh. (2026). After Belém: Securing a just technology transition pathway for Africa. Africa Policy Research Institute (APRI). https://afripoli.org/after-belem-securing-a-just-technology-transition-pathway-for-africa
   - → Yu III (2026). Implementing the Belém Technology Implementation Programme through the Technology Executive Committee and the Climate Technology Centre and Network. Third World Network. https://twn.my/title/climate/climate13.htm



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