

Forum: Conference of the Parties (COP28)

Issue: Promoting the development and accelerated transfer of environmentally sound technologies for low carbon and climate resilient, developing countries.

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Introduction:

Our world is quickly developing, and with this development comes many environmental challenges. A possible solution to these issues is promoting the development of environmentally sound technologies. These technologies should be low carbon, climate resilient, and accessible to developing countries as they have a rising demand for advanced technology as they further create. Whilst renewable energy technologies, such as solar panels, are the most well-known examples of this technology, there are many other examples. Examples include carbon capture and storage technology, sustainable agriculture and even recycling advancements. As simple as it may sound, promoting the development and transfer of these technologies to developing countries is a difficult task, a challenge that many nations have to, and will, debate to find a solution. This report offers more insight into this topic to help delegates understand the nuance and complexity.

Definition of Key Terms:

- 1. Environmentally Sound Technologies (ESTs):** Technologies that reduce adverse effects on ecosystems and natural resources in order to discuss pivotal environmental issues in order to better promote sustainable development.
- 2. Low Carbon Technologies:** Inventions that lessen greenhouse gas emissions compared to traditional options, aiding in international motivations that will work toward reducing our CO2 emissions.

3. **Climate-Resilient Technologies:** Technological advancements made to improve ecosystems' and communities' capacity to adjust to and recover from the effects of climate change.
4. **Renewable Energy Transition:** The transition to energy systems predominantly based on renewable energy sources, such as solar, wind, geothermal, and biomass, from fossil fuel-based systems.
5. **Nationally Determined Contributions (NDCs):** Country-specific climate action plans that outline their commitments to prevent and adapt to the impacts of climate change.
6. **The UNFCCC's Green Climate Fund (GCF):** A financial vehicle aimed at aiding developing nations in their attempts to tackle climate change, particularly through the adoption of eco-friendly technologies.
7. **Technology Needs Assessments (TNAs):** Procedures used by nations to determine their gaps, needs, and priorities in terms of technology for both adaptation and mitigation that serve as a foundation for foreign assistance.
8. **Carbon Capture and Storage (CCS):** A way to collect greenhouse gas emissions when fossil fuels are used to generate energy and conduct industrial processes.

Background Information

The task of promoting the development and accelerated transfer of environmentally sound technologies for low-carbon and climate-resilient developing countries is a critical topic with intricate complexity when it comes to the blend of political, economic, and environmental aspects.

It is essential to acknowledge prior challenges that have arisen with this issue in terms of budgetary restrictions, intellectual property rights, and resources.

Global Commitments:

When considering global commitments and cooperation, the UN has been able to prioritize environmental and climate-action-based projects, committees, treaties, and networks to support the corroboration of a myriad of other nations and governments. The Conference of the Parties (COP) committee has shown major contributions as important to acknowledge their and other commitments and background support.

The Paris Agreement (2015) and the Sustainable Development Goals (SDGs) have prompted the international community to highlight the critical need for coordinated climate action and sustainable development.



Caption: A visual representation of global collaboration and sustainable technologies.

Therefore, it is critical to recognize the historic Paris Agreement, which aims to reduce global warming within the framework of the United Nations Framework Convention on Climate Change (UNFCCC). In addition, member countries commit to the NDCs, which outline specific climate targets.

Beyond the Paris Agreement, the UN's environment division, along with the UNFCCC, has allocated a center that works toward the goal of the accelerated transfer of these technologies to developing countries. The network center, the Climate Technology Centre and Network (CTCN), has previously worked toward this goal.

This is important to consider as the advancement in the application of organizations like this substantially impacts the development of the current goal.

Budgetary Restrictions and Technical Capability:

Developing nations face obstacles to the uptake of critical technology for sustainable development, especially those most susceptible to the effects of climate change. Financial constraints are a significant obstacle that restricts the resources available to purchase and implement environmentally sound technologies (ESTs). Countries have different technical capacities, making it more challenging to implement ESTs effectively and create extensive capacity-building initiatives.

In addition to budgetary restrictions, developing countries often need more technical capability to develop and implement environmentally sound technologies. This makes it difficult for them to adapt to the impacts of climate change and reduce their greenhouse gas emissions. Therefore, developed countries must support the transfer of ESTs to developing countries.

Difficulties with Intellectual Property Rights (IPR):

Another difficulty is navigating the complex world of intellectual property rights (IPR), which necessitates striking a careful balance between preserving the rights of innovators and promoting the transmission of ESTs. The UNFCCC created the Technology Mechanism in response to these difficulties, which includes procedures such as Technology Needs Assessments (TNAs) and funding provided by the Green Climate Fund (GCF).

Moreover, Technology Needs Assessments (TNAs) are a crucial tool for developing countries to determine their gaps, needs, and priorities regarding technology for adaptation and mitigation that serve as a foundation for foreign assistance.

Green Climate Fund (GCF):

Current advancements in ecologically friendly technology reflect the world's transition to sustainability. A noteworthy trend is the shift away from energy systems

based primarily on fossil fuels and towards those that rely on renewable energy sources like solar, wind, geothermal, and biomass. Moreover, the promise of technologies like Carbon Capture and Storage (CCS) to reduce emissions from industrial processes and energy generation based on fossil fuels is drawing attention.

The UNFCCC's Green Climate Fund (GCF) is one financial vehicle aimed at aiding developing nations in tackling climate change, mainly through adopting eco-friendly technologies. However, the GCF has faced challenges in mobilizing sufficient resources to support developing countries in transitioning to a low-carbon and climate-resilient future. The issue of promoting the development and accelerated transfer of environmentally sound technologies for low-carbon and climate-resilient developing countries is a critical one that requires collaborative efforts from all nations. The Conference of the Parties (COP) provides a platform for nations to come together and discuss possible solutions to this challenge.

COP-28:

In terms of background information, it is important to understand the COP committee's objectives and historical background. COP meetings are annual, with each consecutive meeting numbered accordingly. The vitality of the Paris Agreement and CTCN is generally under the UNFCCC, while COP is considered the supreme decision-making body of the UNFCCC (a treaty adopted in 1992 in Brazil).

The Paris Agreement itself was implemented in 2021 by the COP26 committee. This led to the commitments enabling the Glasgow Climate Pact. This pact previously had the purpose of reducing coal usage to combat climate change, as an example of the work done by committees working toward the same overall goal.

COVID-19's Involvement:

When writing resolutions to promote sustainable development, it is necessary to take COVID-19's integration into account of solutions and how the historical context has been impacted and influenced by such.

For example, there was a clear diversion of resources. With governments and society as a whole, the pandemic directed attention and resources toward the economy

and health aspects. Additionally, the pandemic has disrupted international supply chains. This has impacted the supply and demand of technologies. In terms of funding, due to the main focus of financial support directed towards the pandemic, this has placed a clear economic constraint on climate-action projects.

Current Situation

On the topic of COVID, the current situation in the sense of the promotion of the development and accelerated transfer of environmentally sound technologies for low carbon and climate resilient, developing countries have been addressed. However, with the pandemic, involvement has recently slowed.

While taking into account the challenges that the outbreak has posed in the sense of financial resources, focus, and the disruption of global supply chains, there is more elaborate positives to the current situation. For example, as mentioned above the framework by UNFCCC has been integrated into a plethora of nations, the CTCN has had clear international success, the GCF has been able to present incredibly beneficial reports to better understand the progress of current plans, the International Energy Agency (IEA) has worked toward establishing better policies on the topic at hand, and the COP meetings in the past have shown clear advancement in terms of promoting sustainable development and transport of sound technologies. Furthermore, national governments and agencies have updated policies and projects on official websites related to the goal, the World Bank has been great aid to the mitigation of climate change and the technology transfer with information on their projects on their website, and organizations such as the International Renewable Energy Agency (IRENA), the World Resources Institute (WRI) have also been able to publish critical reports and analysis on technology transfer in the context of climate change.

Significant Parties Involved and Their Views

United Nations Framework Convention on Climate Change (UNFCCC):

The UNFCCC is an organization under the UN that addresses climate issues, focusing on climate change. COP is the main decision-making body of the UNFCCC. Hence, this convention is crucial to this topic and this committee. The UNFCCC has made some efforts to promote environmentally sound technologies, such as their above-mentioned green climate fund for developing countries.

UNFCCC Technology Executive Committee (TEC):

A subsidiary body of the mentioned UNFCCC, the TEC is crucial to this topic due to its technological focus. The TEC comprises 22 technology experts who work to further the sustainable development of technology and report yearly to COP. It is the policy arm of the UNFCCC technology mechanism.

United States of America:

The United States of America is the second largest investor in green technology, with 114 billion U.S. dollars invested. Additionally, the U.S. is the world's largest foreign aid donor, contributing 35.5 billion U.S. dollars in 2020. Due to this, the U.S. will be able to have a significant impact on promoting and aiding the development of green technology worldwide.

China:

China is the largest producer of goods worldwide, with over 20% of all worldwide goods produced in China; due to this, they will have an enormous impact on making production sustainable, and they are currently using that impact well. With 274.4 billion U.S. dollars invested into renewable energy worldwide in 2022, China is by far the largest investor in this industry. China is also one of the largest exporters of its green energy

products to developing countries. Hence, China is one of the significant parties influencing this topic.

Germany

Europe is one of the leading areas in green technology, and Germany is a crucial example of this. With over 60 billion U.S. dollars pledged to invest in green technology next year, they are one of the largest investors in this industry. Additionally, the EU has shown a strong interest in green technology, and as Germany is a part of the EU, those laws will also apply to them.

Brazil

With 14.8 billion U.S. dollars invested in renewable energy, Brazil is one of the most significant contributors to this industry worldwide. Additionally, this contribution is very close to that of the Americas combined (minus Brazil and the U.S.). Hence, they will considerably influence the development of technology within the region.

UN Involvement, Relevant Resolutions, Treaties and Events

The UN has been intensely involved in this topic and has established many treaties crucial to solving this issue. The major UN treaty focused more generally on environmental matters, explicitly reducing global warming, is the Paris Agreement, a legally binding international UN treaty under the UNFCCC. The Paris Agreement aims to hold the increase in global temperature below two degrees Celsius;

- Paris Agreement, 12 December 2015,
 - The Paris Agreement is a highly effective treaty, with 196 parties adopting it. Many nations have taken this treaty exceptionally seriously, with all signed nations outlying their individual goals to meet the overarching goal the Paris Agreement presents.

The UNFCCC mentioned above is a highly relevant international treaty for this topic. Specifically, article 4, paragraph 5 of the UNFCCC provides a critical statement towards furthering the development of environmentally sound technologies in developing countries;

- The developed country Parties and other developed Parties included in Annex II shall take all practicable steps to promote, facilitate, and finance, as appropriate, the transfer of, or access to, environmentally sound technologies and knowhow to other Parties, particularly developing country Parties, to enable them to implement the provisions of the Convention. UNFCCC, Article 5, Paragraph 4, 1992
 - The UNFCCC is a significant treaty and UN organization for this topic. This paragraph outlines the need to find a solution and for nations to look for solutions. However, it needs more specific details about how to achieve the goal stated in the above paragraph.

Finally, the Kyoto Protocol operationalizes the UNFCCC by committing industrialized countries and economies to limit and reduce their greenhouse gas emissions. However, it also has aspects that directly address this topic. Specifically, the clean development mechanism (CDM) is an aspect of this protocol that directly addresses the promotion of sustainable development in developing countries;

- Kyoto Protocol, 1997,
 - The Kyoto Protocol is an efficient resolution on this topic, with the CDM addressing specific ways to support developing countries toward more sustainable technologies,

Possible Solutions

There are many actionable solutions for this issue that focus on aiding the development of green technology in developing countries; here are eight possible solutions;

1. Mobilizing funds from developed nations to aid less developed countries can be done through a UN-managed fund, which nations can provide funds towards, or can be done privately between countries,
2. You are furthering the infrastructure within developing countries, focusing on developing green infrastructure. Examples could concentrate on the energy sector, where turning current non-renewable energy infrastructure into renewable sources would drastically reduce a nation's environmental impact. However, other infrastructure can also be built upon, such as agriculture or transport,
3. Educating the governments of nations on ways to develop green technology. This can be done through meetings between governments and experts in the field or through conferences where many nations can share their knowledge and experience to find a solution.
4. More specifically, delegates could focus on the technologies developing nations could focus on implementing to further their green technology efforts. Some examples include Carbon Capture, Carbon storage, and Genetic engineering, so crops require less water and energy-efficient building materials. These are just some of the many technologies delegates could mention in their solutions,
5. Sustainable waste management is a crucial aspect of green technology. As simple as it may seem, waste disposal is a complex task, which commonly ends with pollution via a landfill. However, there are other solutions to waste management, such as recycling,
6. Incentives for developing countries to move towards green technology will ensure they both want to progress with this technology. They will ensure they are economically supported as they venture into sustainable development. Delegates could look at achievable goals to be rewarded with the incentive, and delegates could focus on more than simple funds as an incentive. Possible other incentives include aided Infrastructure development, UN humanitarian support,

strengthening connections between countries who have progressed this technology,

7. For incentives, there would need to be a clear set of targets laid out for developing countries working towards green technology. These goals could also encompass the required aid from MEDCs to support the LEDCs. Goals should include actionable points (i.e., “minimum 15% renewable energy), year of achievement (i.e., “to be achieved by 2030), and parties to whom it applied (i.e., “applying to any less economically developed countries”).
8. Finally, delegates could look into ways to monitor and report on developing countries' progress towards environmentally sound technologies. These could include reports from the nation to the UN, UN representatives sent to the nation/working with the nation, and yearly reports published by the UN stating to the globe each nation's progress.

Bibliography

Useful Links

- [Paris Agreement: Official Text](#)
- [Sustainable Development Goals \(SDGs\): Official SDGs Website](#)
- [Technology Mechanism of the UNFCCC: Technology Mechanism](#)
- [Investing in Green Technology](#)
- [\(Video\) Green growth in developing countries? 11 experts explain that it's possible](#)

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