



## United Nations General Assembly (UNGA)

### Topic B: Measures to promote global access to green technologies

#### **Introduction:**

Green Technologies, also known as “Green Tech,” were created with the purpose of being environmentally friendly. The term can also be used to refer to the production of clean energies, the use of alternative fuels and any technology that reduces harm to the environment. Green Tech’s aim is to protect the environment and reverse the damage caused by global warming, with the expectation to preserve Earth’s natural resources. As of today, these kinds of technologies have become essential in the industry, thus providing a mechanism to reach goals on environmental, sustainability and governance aspects.

The UN has considered the relevance of Green Technologies within the scope of its organs with the capacity of making changes. The Technology and Innovation Report 2023 from UNCTAD, released on March 16, has been essential in establishing measures to avoid potential economic disparities, where developed countries will enjoy technologies such as artificial intelligence, The Internet of Things (IoT) and availability of electric vehicles, in contrast with developing countries lacking most of those services.

Approximately 80% of the world’s population live in nations that rely on fossil fuel imports, totaling around 6 billion people. This dependence exposes them to geopolitical uncertainties and crises. The potential of renewable energy as a solution remains untapped. According to the International Renewable Energy Agency (IRENA), it is projected that 90% of global electricity could and should be derived from renewable sources by 2050.

Digital finance plays a pivotal role in fostering innovation. This is attributed to the relaxation of constraints on corporate financing, leading to the modernization of industrial structures and advancements in manufacturing. The impact is particularly pronounced in small-scale private companies and areas where the local government has greater governance control. Efficient management of green technologies is crucial for fostering economic growth, and “financial development is an important driving force for promoting green technology innovation” (Feng, Zhang and Li, 2022).

#### **Concepts and definitions:**

- **Fossil fuels:** any class of hydrocarbon-containing materials of biological origin occurring within Earth’s crust that can be used as a source of energy. All of them contain carbon and





were formed because of geologic processes acting on the remains of organic matter produced by photosynthesis. The most used in the energy sector are coal, petroleum, and natural gas.

- **Green innovations:** various forms of innovations that play a role in developing essential products, services, or processes aimed at minimizing environmental harm, impact, and degradation while also optimizing the utilization of natural resources.
- **Green technology:** technology intended to reduce and even reverse the effects of human activity on the environment.
- **IEA:** International Energy Agency.
- **Innovation management:** business discipline that aims to drive a sustainable innovation process or culture within an organization.
- **IRENA:** International Renewable Energy Agency.
- **Renewable energy:** energy that comes from natural sources that are replenished faster than they are consumed.
- **SDGs:** United Nations' Sustainable Development Goals.
- **UNEP:** United Nations Environment Program.

#### **Current issue:**

Clean Energy is a key solution against the damage caused by climate change. Most greenhouse gasses trapped in the atmosphere are due to fossil fuel burning; this accounts for 75 percent of greenhouse gasses emissions. To avoid irreversible damage, emissions need to be reduced by almost half by 2030 and reach net-zero by 2050 (United Nations, 2015).

Energy should be obtained through affordable and sustainable methods and should only be used if it is clean and reliable. Renewable energy has many advantages. It can be obtained using sun, wind, water, waste, and heat, making it a real possibility to harvest effective and affordable energy in every geographic spot. In addition, green technology has proven to be cheaper and healthier. Regarding employment, while the fossil energy industry employs about 5 million, potentially 15 million jobs could be created with the production of clean energy.

The IEA considers that global additions of renewable power capacity are expected to increase significantly. The factors contributing to this growth show that policy momentum, higher fossil fuel prices, and energy security concerns, indicate a positive shift towards cleaner and more sustainable energy sources. Meanwhile, it is estimated that the world's total renewable electricity capacity will reach 4,500 gigawatts by the following year (equivalent to the total output





of China and the USA put together) making it a key priority to adopt renewable energy sources on a global scale (IEA, 2023).

The usage of renewable electricity not only addresses environmental concerns related to climate change, but also contributes to the diversification of the energy mix, reducing dependence on finite fossil fuel resources. As technology advances and economies of scale come into play, renewable energy sources become cost-competitive, further driving their adoption.

Given the ongoing transformations in the globalized landscape, there is a pressing need for both companies and governments to become more flexible as society progresses and undergoes significant changes. Organizational frameworks have been structurally impacted, leading companies to reconsider their approaches to information exchange and the requisite capabilities. The widespread application of technologies to support this evolving reality has experienced substantial growth across various sectors, including finance, agriculture, and the planning and organization of cities (Boca et al., 2022).

The concept of a smart city becomes relevant, as it integrates social capital, human investment, and infrastructure, to foster economic and sustainable development through the utilization of technologies (Macke et al., 2019). A smart city is characterized by sustainability and intelligence, encompassing various technological features such as renewable energy, intelligent housing, control of pollutant emissions, multimodal mobility, digital inclusion, and efficient financial management, among others (Boca et al., 2022).

UNCTAD projects that the 17 frontier technologies highlighted in their report could generate a market exceeding \$9.5 trillion by 2030, three times the current size of the Indian economy. However, the current scenario reveals that developed economies are disproportionately capitalizing on these opportunities, leaving developing economies further behind. The report indicates a significant disparity in the export of green technologies, with developed countries experiencing a surge from \$60 billion in 2018 to over \$156 billion in 2021. In contrast, exports from developing nations increased modestly from \$57 billion to approximately \$75 billion during the same period. Consequently, the global share of exports from developing countries declined from over 48% to under 33% within three years (UNCTAD, 2023).

UNCTAD's analysis underscores the urgency for developing nations to act swiftly to leverage this potential, steering their development toward more diversified, productive, and competitive economies. Drawing on lessons from past technological revolutions, the report emphasizes that early adopters can forge ahead more rapidly and establish lasting advantages.





## International initiatives:

- **IRENA** is an intergovernmental organization aiding nations in their shift toward a sustainable energy future. It is a primary platform for global cooperation, a hub of expertise, and an archive of policy, technology, resource, and financial information related to renewable energy.
- The **SDG Actions Platform** is a global registry of voluntary policies, commitments, multi-stakeholder partnerships and other initiatives made by governments, the UN system, and a broad range of stakeholders to support acceleration of the UN Sustainable Development Goals (SDGs) (United Nations, n.d.c). Members are welcome to register their policies, initiatives or commitments that will help with the implementation of SDGs in a platform including detailed information such as details of implementation, beneficiaries, budget and resources, timeline, and evaluation.
- The UN, in cooperation with organizations, companies and the science community, are working in using cutting edge technology making it possible to create cleaner, greener, and more efficient solutions within all aspects of sustainable development. Most of the work is done in Nairobi at the **UN Science-Policy-Business Forum on the Environment**. The Goal is to unite organizations and individuals in different sectors working towards the same goal: using the environment sustainably for the benefit of all.
- The **Green Technology Startup Hub** is an accelerator and incubator of start-up innovation for the environment, as it examines the enabling policies and actions necessary to transform the world into a sustainable and greener one (UN Environment, 2019). Other solutions include electric mobility and green building designs, making an effective use of natural resources and encouraging environmental alternatives. Transformation of the market and economic growth are key in any alternative such as sustainable cities, food systems and private sector initiative in climate change issues.
- For over five decades, **UNEP** has collaborated with governments, civil society, the private sector, and other UN entities to address critical environmental issues, ranging from ozone layer restoration to the protection of seas and the advancement of a green, inclusive economy. UNEP is actively engaged in driving transformative change by addressing the fundamental causes of the triple planetary crisis, encompassing climate change, nature and biodiversity loss, and pollution. The objective is to assist countries transitioning toward low-carbon and resource-efficient economies. The expected actions are to enforce governance and law, expecting to protect ecosystems and furnishing evidence-based data to guide policy decisions. UNEP collaborates with its 193 Member States to realize the Sustainable Development Goals and promote harmonious coexistence with nature. Their approach is systemic in nature, involving the cultivation of digital





infrastructures, norms, and incentives that prioritize sustainability. Additionally, efforts are directed towards fostering innovative technological solutions to address intricate environmental challenges.

### Guiding questions:

- What is your delegation's policy on implementing green technologies?
- What impact do green technologies have on employment in your delegation?
- Are incentives or tax exemptions provided to companies "going green" in your delegation?
- What obstacles and difficulties can you identify for the implementation of green technologies in your delegation?
- Has your delegation implemented any successful green initiatives?
- What strategies can be followed to make green technologies more accessible?

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