BACKGROUND GUIDE

UNITED NATIONS COMMISSION ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT

AGENDA: DISCUSSING FRAMEWORK AND METHODS OF TRANSFER OF KNOWLEDGE AND TECHNOLOGY FOR THE DEVELOPING NATION, WITH EMPHASIS ON EQUITABLE ACCESS TO TECHNOLOGY FOR EVERYONE.

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LETTER FROM THE EXECUTIVE BOARD

Esteemed Members of the United Nations Commission of Science and Technology for Development,

It is our honor to welcome you to Nath Valley Model United Nations 2024. This guide has been curated to serve as a starting point for research and provides an overview of the agenda at hand. We hope that the study guide will help you throughout the course of your preparation for the conference from now on.

However, the guide only provides a bird's eye perspective of the relevant topics of discussion. We strongly encourage you all to delve deeper into the complexities of the agenda, not letting the guide limit the scope of your research. This guide will provide you with a background that will form the basis for your research. Apart from the topics covered, delegates must understand the perspective of the allotted country and weave their research based on both- the given agenda and foreign policy.

We will firmly seek active participation from all of you in the debate and the committee work. Do not feel overwhelmed by the process of researching and feel free to contact us for anything you may need on our end. We look forward to a fruitful discussion and a wholesome exchange of ideas during the proceedings in the upcoming meeting of this association, with a strong emphasis on decorum and diplomatic etiquette.

We are certain that these proceedings shall prove to be successful in determining the path to be taken to solve some issues that prove to be a great challenge to the situation of drugs and crime in the global status quo.

All the best!

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INTRODUCTION TO THE COMMITTEE

The Commission on Science and Technology for Development (CSTD) is a subsidiary body of the Economic and Social Council (ECOSOC). It was established in 1992 as a result of the restructuring and revitalisation of the United Nations in the economic, social and related fields.

The Commission was established to provide the General Assembly and ECOSOC with high-level advice on relevant issues through analysis and appropriate policy recommendations or options in order to enable those organs to guide the future work of the United Nations, develop common policies and agree on appropriate actions.

It holds an annual intergovernmental forum for discussion on timely and pertinent issues affecting science, technology and development. Since 2006, the Commission has been mandated by ECOSOC to serve as the focal point in the system-wide follow-up to the outcomes of the World Summit on the Information Society (WSIS).

It is the forum that helps ask and frame the critical issues influencing the fields of science and technology today.

Some of the important normative issues raised include the technology and life interface, as well as governance of the use and development of frontier technologies – namely, big data analytics, biotech and genome editing, the Internet of things (IoT) and artificial intelligence.

INTRODUCTION TO THE AGENDA

"Technology is important because it creates the future. We're able to be a part of the 'next' and create things that don't exist". – MC Hammer.

The importance of international technology transfer (ITT) for economic development can hardly be overstated. Both the acquisition of technology and its diffusion foster productivity growth. As invention and creation processes remain overwhelmingly the province of the OECD countries, most developing countries must rely largely on imported technologies as sources of new productive knowledge. However, considerable amounts of follow-on innovation and adaptation occur in such countries. Indeed, these processes effectively drive technological change in developing nations.

RELATION BETWEEN TECHNOLOGY AND KNOWLEDGE FOR DEVELOPMENT:

Technology as a Catalyst
○ Technology drives progress by enabling efficiency, productivity, and innovation.
○ Access to advanced technology can significantly impact economic growth and quality of life.

Knowledge as the Foundation
○ Knowledge encompasses expertise, skills, and intellectual capital.
○ It fuels technological advancements and informs decision-making.
Mutual Reinforcement
○ Technology relies on knowledge for design, implementation, and optimization.
○ Knowledge expands through technology adoption, research, and education
Thus, both together intertwined pave the way for development

Developing countries have long sought to use both national policies and international agreements to stimulate ITT. National policies range from economy-wide programs (e.g., education) to funding for the creation and acquisition of technology, tax incentives for the purchase of capital equipment, and intellectual property rights (IPRs). A prominent episode of international efforts to encourage ITT came in the late 1970s when many developing countries sought a Code of Conduct to regulate technology transfer under United Nations (UN) auspices. Developing nations face a gap and rely on importing technologies. Determining technological capabilities is crucial for targeted transfer policies.

POINTS FROM PAST:
Mid 1990s - multilateral disciplines on ITT-related policies began to deepen. The WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) calls on countries to enforce

comprehensive minimum standards of IPR protection on a non-discriminatory basis. It also has provisions relating to ITT.

2000- Finally, Article 66.2 calls on developed country WTO members to provide incentives to their enterprises and institutions to promote technology transfer to least-developed countries (LDCs).

2001 - WTO members established a Working Group on Trade and Technology Transfer to examine the relationship between trade and the transfer of technology and explore what might be done under WTO auspices to increase ITT to developing countries. This can be seen as another reflection of a long history of efforts by developing countries to enhance the relevance of the WTO for development.

CHANNELS OF TECHNOLOGY TRANSFER

Numerous channels exist through which transfer of technology may occur.

- Trade in goods and services is one. All exports bear some potential for transmitting technological information. Imported capital goods and technological inputs can directly improve productivity by being used in production processes.
- A second channel is foreign direct investment (FDI). Multinational enterprises (MNEs) generally transfer technological information to their subsidiaries, some of which may 'leak' into the host economy.
- A third major channel of transferring is via technology licensing. This may occur within firms, among joint ventures, or between unrelated firms.
- Patents, trade secrets, copyrights, and trademarks can all serve as direct facilitators of knowledge transfers.
- Technology transfer involves the purchase and acquisition of equipment; the know-how to use, maintain and repair it; the ability to make it through "emulation" or reverse engineering; to adapt it to local conditions; and eventually to design and manufacture original products.
- The widespread availability of the internet and digital platforms allows for the dissemination of technical knowledge and best practices globally.

Technology transfer is a multifaceted process involving various actors, including multinational corporations, governments, research institutions, and international organizations. Through foreign direct investment, trade, R&D collaborations, technical assistance, and government policies, countries can acquire and adapt new technologies, driving development and innovation. Effective technology transfer requires not only the dissemination of technology but also the development of local capacities to use, modify, and improve upon these technologies to suit specific local needs and conditions.

STEPS TO PROVIDE EQUITABLE ACCESS TO TECHNOLOGY FOR EVERYONE

1. **Infrastructure Development**
   - *Expand Broadband Access:* Invest in expanding broadband infrastructure to rural and underserved areas. Governments can partner with private companies to develop and implement these projects.
   - *Affordable Internet:* Implement policies that make internet access affordable. This could include subsidies, reducing taxes on internet services, and promoting competition among service providers to lower prices.

2. **Education and Digital Literacy**
   - *Digital Literacy Programs:* Launch widespread digital literacy programs to teach people how to use technology effectively. This includes basic computer skills, internet navigation, and understanding digital security.

3. **Financial Inclusion and Support**
   - *Microloans and Grants:* Offer microloans and grants to small businesses and entrepreneurs to invest in technology, helping them improve their operations and expand their reach.

4. **Local Content and Services**
   - *Develop Relevant Content:* Encourage the creation of digital content and services that are relevant to local communities, including in local languages. This makes technology more accessible and useful to diverse populations.
   - *E-Government Services:* Implement e-government services that make it easier for people to access public services online, reducing the need for physical travel and streamlining administrative processes.

These basic steps have turned out to be profitable for countries. The committee appreciates more innovative steps introduced by the delegates.

ECOSOC RESOLUTIONS

1. **ECOSOC Resolution 2021/255: Participation of non-governmental organizations and civil society entities in the work of the Commission on Science and Technology for Development**

    Key points of the resolution include:
    a. *Consultative Status:* NGOs and civil society entities are encouraged to seek consultative status with ECOSOC, which would formalize their involvement and provide a structured framework for their contributions.
    b. *Contribution to Policy Discussions:* The resolution underlines the importance of including these organizations in policy discussions to ensure diverse viewpoints are represented. This inclusion is crucial for developing comprehensive and inclusive science and technology policies.
    c. *Capacity Building and Collaboration:* There is a focus on building the capacities of NGOs and civil society entities, enabling them to contribute more effectively. Collaboration between these groups and governmental bodies is also promoted to foster a cooperative approach to development.
    d. *Implementation and Monitoring:* The resolution highlights the need for effective implementation of these participation mechanisms and the continuous monitoring of their impact. This ensures that the engagement of NGOs and civil society entities leads to tangible improvements in science and technology initiatives.

2. **ECOSOC Resolution 2021/256 focuses on the participation of academic and technical entities in the work of the Commission on Science and Technology for Development (CSTD). Adopted at the 13th plenary meeting on July 22, 2021, the decision aims to integrate the expertise and insights of academic institutions and technical organizations into the commission's activities.**

    Key Points of the Resolution
    a. *Encouraging Participation:* The decision encourages these entities to actively participate in CSTD meetings and activities. This involvement is intended to ensure that the latest scientific research and technological advancements are incorporated into policy discussions.
    b. *Consultative Status:* Academic and technical entities are urged to obtain consultative status with ECOSOC. This status allows them to formally participate in the work of the CSTD, providing a structured mechanism for their contributions.
    c. *Enhancing Collaboration:* The resolution promotes collaboration between academic institutions, technical organizations, and member states. Such

collaboration is seen as essential for addressing complex global challenges and achieving sustainable development goals.

d. *Capacity Building:* Emphasis is placed on building the capacities of academic and technical entities to enhance their ability to contribute effectively. This includes providing support for research initiatives and fostering an environment conducive to innovation.

e. *Implementation and Monitoring:* The resolution calls for the effective implementation of participation mechanisms and continuous monitoring of their impact. This ensures that the involvement of academic and technical entities leads to meaningful contributions to the CSTD's work.

3. **ECOSOC Resolution 2021/257 focuses on the participation of business sector entities, including the private sector, in the work of the Commission on Science and Technology for Development (CSTD). Adopted during the 13th plenary meeting on July 22, 2021, this decision highlights the importance of involving the private sector in advancing the global science and technology agenda.**

Key Points of the Resolution

a. *Encouraging Active Participation:* Business sector entities are encouraged to engage actively in CSTD's activities. This participation aims to incorporate private sector insights into the development and implementation of science and technology policies.

b. *Collaboration and Partnerships:* The resolution promotes collaboration between the private sector, governments, and other stakeholders. It highlights the importance of public-private partnerships in driving technological advancements and achieving sustainable development goals.

c. *Contribution to Policy Development:* Involving the private sector is seen as critical for the formulation of effective science and technology policies. Their practical experience and market-driven insights are valuable for creating policies that are both innovative and implementable.

d. *Capacity Building and Knowledge Sharing:* The decision emphasizes building the capacities of business sector entities to engage more effectively in the CSTD's work. This includes knowledge sharing and providing platforms for the private sector to showcase innovations and best practices.

e. Objectives and Outcomes

- **Enhanced Innovation**: By involving the private sector, the CSTD aims to accelerate innovation and technological development.
- **Economic Growth**: Leveraging the private sector's role can drive economic growth and create new opportunities.
- **Sustainable Development**: The collaboration is expected to contribute significantly to achieving the Sustainable Development Goals (SDGs) through technology and innovation.

CASE STUDIES

1. **Estonia:**

   Estonia's transformation into a digital society showcases how strategic use of technology and knowledge can drive national development. The e-Estonia initiative, launched in the 1990s, laid the foundation by digitizing public services. Mandatory digital ID cards introduced in 2002 enabled secure access to various services, including online voting and digital signatures.

   The e-Residency program, launched in 2014, allowed global entrepreneurs to access Estonian services.

   the X-Road platform, a secure data exchange layer connecting public and private sectors, ensuring seamless and secure data transfer. Virtually all government services are online, increasing efficiency. Education programs like ProgeTiiger integrate IT into schools, and platforms like eKool improve school management. Estonia's startup ecosystem has produced notable companies like Skype and Wise. In healthcare, digital health records and e-prescriptions streamline services.

   Estonia's digital services have reduced costs, increased transparency, and attracted foreign investment, significantly contributing to GDP. A robust cybersecurity framework and data embassies ensure resilience against cyber threats.

2. **Rwanda:**

   Rwanda has effectively leveraged technology and knowledge to drive its development, particularly through the Vision 2020 plan, which emphasizes ICT as a key driver of economic growth. Significant investments in broadband and mobile networks have expanded internet access across the country, including rural areas.

   The Kigali Innovation City tech hub fosters innovation and entrepreneurship, attracting investments and nurturing startups. Education initiatives, such as the One Laptop per Child program, provide laptops to primary school students, enhancing digital literacy and preparing a tech-savvy workforce. The Irembo platform offers online access to various government services, reducing bureaucratic inefficiencies and improving service delivery. Additionally, mobile banking services have increased financial inclusion, allowing more Rwandans to access financial services. These efforts have resulted in significant economic growth, improved public services, and established Rwanda as a leader in ICT in Africa.

3. **India:**

   India has harnessed technology and knowledge to drive development through the Digital India initiative, launched in 2015 to transform the country into a digitally empowered society. Key components include the Aadhaar biometric identification system, which provides over a billion residents with a unique ID for accessing various services, and the

Unified Payments Interface (UPI), which has revolutionized digital payments and financial inclusion. The Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA) promotes digital literacy in rural areas, while extensive investments in broadband and mobile networks have expanded internet access. These initiatives have streamlined government services, boosted economic growth, and enhanced financial inclusion, positioning India as a leading digital economy.

FURTHER READINGS

1. **https://unctad.org/topic/commission-on-science-and-technology-for-development**
2. Resolution 2023/4: Science, technology and innovation for development
3. Resolution 2021/30: Open-source technologies for sustainable development
4. GA Resolution 78/160: Science, technology and innovation for sustainable development
5. https://documents1.worldbank.org/curated/en/737591468762912473/pdf/wps3332.pdf

SCOPE FOR DISCUSSION IN THE COMMITTEE

a. Discussing methods to avail, and transfer technology amidst conflicts
b. Frameworks for developing countries to adopt technology and knowledge.
c. The role of social media in the transfer of knowledge and development.
d. Discussing the role of academic institutions for development through technology.
e. Methods to avail technology in remote areas.

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- https://files.eric.ed.gov/fulltext/EJ855000.pdf

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- https://press.un.org/en/2023/gaef3587.doc.htm

- https://www.weforum.org/agenda/2022/03/rwanda-leveraging-the-fourth-industrial-revolution-to-strengthen-post-covid-resilience/

- https://www.un.org/africarenewal/magazine/april-2011/information-technology-super-charging-rwandas-economy

- https://courier.unesco.org/en/articles/global-lessons-estonias-tech-savvy-government

- https://www.economist.com/the-economist-explains/2013/07/30/how-did-estonia-become-a-leader-in-technology

- https://www.weforum.org/agenda/2023/05/india-technology-opportunity/