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**Report of the Multi-year Expert Meeting on Trade, Services
and Development on its tenth session**

Held at the Palais des Nations, Geneva, 10 to 12 July 2023



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Introduction

The tenth session of the Multi-year Expert Meeting on Trade, Services and Development, held from 10 to 12 July 2023 in Geneva, conducted discussions focused on the role of trade and services for enhancing science, technology and innovation to promote a fair transition to sustainable energy.

I. Chair's summary

A. Opening plenary meeting

1. In her opening statement, the Secretary-General of UNCTAD said that the international community was seeing an unprecedented acceleration in technological advancement, which held the promise of solving some of the most pressing challenges. At the same time, the world faced a looming climate crisis, widening economic inequalities, growing debt distress, fragmenting international cooperation and energy poverty. Due to the growing cost-of-living crisis and the war in Ukraine, in 2022, for the first time in decades, the number of people without access to modern energy was set to rise, mostly in the least developed countries. Around 75 million people who recently gained access to electricity were likely to lose the ability to pay for it, and 100 million people might have reverted to the use of traditional biomass for cooking. Globally, over 2 billion people, about one in every four people, remained energy poor. The action needed was to ensure no one was left behind in the transition to a more sustainable energy future.

2. Trade and services had indispensable roles in that transition. They were the channels through which knowledge, technology and innovation flowed across borders. That flow was not only a transfer, but also an exchange, a dialogue and a partnership.

3. Looking at the role of trade, science, technology and innovation should be embedded in an international framework that facilitated the transfer of renewable energy technologies. The international community should work towards the elimination of trade barriers that hindered the dissemination of clean technologies and services. Furthermore, active engagement by developed countries in capacity-building and technology transfer to developing countries would foster global partnerships and ensure accessible and affordable sustainable energy solutions for all. For example, solar energy was currently one of the cheapest sources of energy available, but only with the necessary technologies and start-up funding to set up solar panels, which were capital intensive.

4. The services sector needed to evolve, equipped with the necessary skills and knowledge to support and accelerate the energy transition. Development of renewable energy sources, modernization of grid infrastructures and implementation of energy efficiency measures all required specialized services. For example, implementing and operating smart grids, which incorporated digital sensors and automation and communication systems enabled by the "Internet of things", allowed real-time collection of data on energy demand, thereby reducing waste. According to the International Energy Agency, use of those technologies could cut total energy use in residential and commercial buildings by as much as 10 per cent by 2040.

5. Furthermore, the importance of inclusivity and fair transition should not be forgotten as new technologies were embraced. Addressing the social dimensions of that transformation included ensuring that workers in traditional energy sectors were reskilled and integrated into the emerging green economy and that vulnerable communities were given the support they needed.

6. Lastly, massive investment shortfalls had to be covered, particularly in the global South. UNCTAD estimated that developing countries faced an investment gap of \$2 trillion annually for the energy transition, out of a \$4 trillion annual funding gap for the Sustainable Development Goals. Since the 2030 Agenda for Sustainable Development was agreed in 2015, that gap had only widened, as international cooperation fragmented further.

Investments in renewables, however, would pay dividends in the form of cleaner air, healthier communities and a more resilient global economy. Bridging the investment gap was a matter of justice, peace and good economics.

B. The role of trade and services for enhancing science, technology and innovation to promote a fair transition to sustainable energy

(Agenda item 3)

7. The Acting Director of the UNCTAD Division on International Trade and Commodities introduced the topic, discussing the interconnectedness of trade, services and the energy transition. The transition would reduce greenhouse gas emissions, enhance energy security, through diversified sources, and lower energy costs and could stimulate new economic activities. Data from the International Renewable Energy Agency showed that the global renewable energy sector saw a 70 per cent growth in jobs between 2012 and 2021. Services played a crucial role in implementing energy transition projects on the ground, encompassing among other areas legal services for site acquisition and power purchase agreements, financial services for securing funding, engineering and construction services for grid installation and maintenance services for grid operation. Additionally, information and communications technology (ICT) services were vital for digitalizing the energy sector. Some developing countries might encounter obstacles in accessing high-quality, reliable and affordable services to support their energy transition. Obstacles could be due to limited knowledge and experience, as well as insufficient skilled labour and access to finance. Trade could minimize the challenges by improving access to quality services and ultimately improving domestic services capacity. Trade could also be a vehicle for technology, knowledge and skills transfer, for investment attraction and new export opportunities – including at the intraregional level – and for greater cooperation among countries in aligning their trade and energy transition policies. That alignment could be undertaken by revisiting the contents of trade and investment agreements to see if provisions could be modernized to help trade and investment growth contribute to the energy transition, and vice versa.

Synthesis of discussions from 10 to 12 July 2023

8. Some panellists noted that services were critical to the various stages of the renewable energy value chain, from early-stage development to decommissioning of infrastructure. Another panellist said services were important to design, build and maintain renewable energy initiatives. One panellist said that the business model of manufacturing firms providing to the energy sector had evolved with time. Renewable energy equipment manufacturers currently saw themselves as service providers for the whole life cycle of renewable projects due to the servicification of the renewable energy sector. After selling a solar panel, installation, maintenance and other services were also provided.

9. Another panellist said that services were also important for energy transition due to other transformations in the energy sector. The decarbonization and digitalization of the sector had increasingly integrated different energy sources that contributed to electricity generation. Energy management was also more decentralized to households and local communities. That decentralization linked energy management locally, nationally and internationally. The integration of different energy sources and management levels called for new hardware and services. Hardware consisted of equipment such as solar panels, wind generators, batteries and electrical vehicles. Services were critical to adapting hardware to the specificities of a country or region, such as availability of natural resources, energy demand and institutional culture.

10. Another panellist said that energy transition potentially provided export opportunities for developing countries with a comparative advantage in certain services sectors. For instance, companies could set up services centres to monitor remotely, through digital means, wind and solar generation facilities around the world. Another panellist added that those services centres could thus contribute to improving the efficiency of renewable energy projects. Digital provision of such monitoring services in a centralized way relied on digital capabilities.

11. One panellist said that the creative economy had grown significantly in Indonesia during the pandemic, which accelerated the digital transformation process. Examples of that could be seen from growth in the workforce of several subsectors, such as film, animation, video, culinary, visual communication, music and photography. Strengthening the policy and regulatory framework was important in promoting renewable energy investment, including on how creative economy sectors could contribute to carbon emission reduction efforts. Enhancing intellectual property rights, education and training tailored to the creative industries would help to attain a sustainable creative economy while contributing through a low-carbon economy.

12. One panellist said that trade could improve access to services relevant to the transition to renewable energy, through foreign sourcing. Another panellist said that developing countries needed that access to services to build capacity and pursue export opportunities related to the new green economy, including energy transition. Another panellist shared an example of wind power projects where wind turbines could not be disassembled and were challenging to recycle, due to insufficient availability of the required services. Trade could play a role in providing those services. One participant gave the example of retrofitting services that converted diesel buses into electrical buses. Retrofitting replaced engine and transmission with batteries, while relocating components in the bus. Those services reduced greenhouse gas emissions, promoted the circular economy and provided gains from lower maintenance and lower investment compared to importing electrical buses. Trade facilitated the required investments and access to some components.

13. One panellist said that trade liberalization and avoidance of the global trading system's distortions unleashed the potential of trade in services for energy transition. Another panellist said that the Services Trade Restrictiveness Index of the Organisation for Economic Co-operation and Development showed that barriers to construction services trade were associated with higher greenhouse gas emissions from the energy sector, and barriers to engineering services trade were linked to lower energy productivity.

14. Among the service sectors that were critical for energy transition, one panellist identified infrastructure services in his country. Another panellist gave the example of solar photovoltaic energy generation and transmission, which required assessment, advisory, research and development, installation, logistics, construction, testing, certification, operation, maintenance and recycling services. Another panellist said that, in her country, ICT services were critical for the digitalization of energy grids and monitoring them.

15. Several delegates noted that strengthening services to promote fair energy transition required building skills and know-how in developing countries. Some panellists said that developing the workforce was part of the strategy of some countries, to promote energy transition by strengthening services. Some panellists said that the increasing role of local authorities and communities, due to the decentralization of renewable energy systems, called for extending capacity-building at the local level.

16. One panellist said that, in the European Union, energy transition was being promoted by harmonization of smart grids and meters. While energy equipment was somewhat standardized and increasingly traded, services supporting the energy sector faced different energy institutional and regulatory contexts and were therefore less traded. The convergence of energy governance rules would facilitate trade in services and promote less fragmented and ad hoc solutions for energy transition.

17. Another panellist shared the experience of the charging stations of her company's network of solar panels, which contributed to the uptake of electric vehicles. The network also sold grid services, increasing renewable energy consumption. The company could develop those services due to regulatory clarity on the need to move towards electrical vehicles. However, those services would have also benefited from regulations that harmonized charging stations from an early stage, integrating the grid and using open-source software.

18. Some panellists and delegates emphasized that building capacity in services to promote energy transition required a mix of domestic and trade policies, such as strengthening technological capacities, public-private partnerships, academia-industry

collaboration and integration in value chains. One panellist shared the experience of his country's renewable energy strategy, which focused on stimulating demand, increasing industrial capacity by building skills and technological capacities, and improving integration in value chains. Incentives and trade policies, such as export promotion, were required. Another delegate said that trade in services facilitated other policies, such as capacity-building, investment, financing, knowledge-sharing, policy support and technology transfer.

19. One panellist said that energy transition required innovation in the relevant service sectors to develop new technologies, such as tidal energy and energy storage. A representative of the UNCTAD secretariat explained that services were also required for on-site value addition in the critical minerals value chain. That value addition could consist of moving from only extracting lithium, to producing battery cell components or lithium batteries. That shift would be a welcome diversification, particularly for countries dependent on those commodities. Relevant services for on-site value addition included research and development, engineering and infrastructure services, such as transport and logistics, and training, financial and legal services. Some delegates and the UNCTAD secretariat representative said that, for developing countries to add value to their participation in the critical minerals value chain through services, financial, technological and know-how building assistance from the international community, as well as investment, were required. One delegate said it would be useful to have information from UNCTAD on quantifying the investments needed to move up in those value chains.

20. One delegate stressed that innovation in services required investment in human capacity, which was necessary for all services that supported the transition to renewable energy. Those services included technical testing and battery recycling services for electrical vehicles. One panellist added that the potential to building innovative capacities in services called for skill upskilling and reskilling, while another panellist noted that building skills required support through formal education and training. Another panellist said that trade helped in fostering innovation and skill building in service sectors, for instance through networks of professionals. Another panellist shared that skill improvement was pursued in the European Union by networking and through knowledge sharing, with a knowledge hub to inform on available resources and funding, as well as an education system coordinated with Government and industry. Trade in services within the European Union facilitated skill improvement through the free movement of services providers.

21. Some delegates and the Chair of the session noted that attracting investment in services was critical considering that renewable projects were capital intensive. One panellist said that addressing the challenge of attracting investments in services involved in commodities value chains could include building partnerships with leading firms downstream in a value chain. She considered that policies and incentives were key in drawing private sector investments. In the case of services adding value to commodities used in battery production, another panellist said that attracting the necessary investments could involve partnerships with battery manufacturers or, further downstream, with automotive manufacturers. The UNCTAD Acting Director added that services required investments but strengthening services such as ICT, transport and financial services also had benefits for inward investments towards energy transition and transforming commodities in higher value added products.

22. Some panellists said that engaging with development banks could mobilize investments. One panellist noted that attracting financing would require that public strategies for promoting energy transition provide good investment opportunities, aligned with investors' interests and acceptable risks. One participant stressed that legal certainty was important to secure those investments. One panellist said there was a need to rely more on blended financing, unlocking capital from investors such as sovereign wealth funds and family offices. One delegate and another panellist stressed that financial assistance was important to strengthen services useful for energy transition.

23. One delegate said that, in Malawi, renewable energy needed investment, technology transfer, skills and better functioning value chains. The country's energy strategy assessed the role of services. Trade in services was being used to address technology and skills shortages. Services liberalization aimed at attracting investments, with no restrictions on

foreign capital. He requested that UNCTAD help countries identify services that were critical to energy transition and help them gauge domestic supply capacity and strategize on how trade policy should be mobilized.

24. One panellist explained that, in Egypt, concentrated solar power technology captured heat from sunrays and stored it to produce electricity for night-time or cloudy days. The approach increased energy reliability due to storage capacity, addressing intermittency issues usually associated with other forms of renewable energy generation and enhancing opportunities for exporting energy. For example, trade could allow Europe to benefit from renewable energy generated in places with abundant sun, such as North Africa, and without supply fluctuations due to intermittency. That energy trade would benefit from reliable electricity transmission services.

25. Another panellist said that, in South Africa, an energy storage consortium connected universities and research centres. Over time, the consortium shifted its focus from research and development services for battery value chains to skills building. Partnerships with foreign entities developed capabilities, skills and entrepreneurship to provide services for the energy sector.

26. One delegate explained that, in Mexico, some renewable energy initiatives attracted investment in construction, ICT (including data analysis), engineering and financial services. To benefit from the linkages between trade and innovation, countries should avoid discriminatory barriers and use trade agreements to facilitate technology transfer. The focus should be on developing skills, regional integration and public-private partnerships. The ability to use trade to support innovation in clean energy, along with the existing automotive manufacturing capacity in the country, could increase its production of electric vehicles.

27. Some delegates noted that trade in services could support knowledge sharing, capacity-building, technology transfer and investment, as could policy support from North-South and South-South international cooperation, from technical assistance and from enhanced science, technology and innovation for fair energy transition. Several panellists said that international cooperation allowed for the exchange of best practices on shifting to renewable energy, collaboration on research and development services to accelerate innovation, promotion of opportunities to adopt international standards and support for regulatory harmonization. Another panellist noted that regulatory harmonization would improve access to services and skills required by services. One delegate requested that UNCTAD continue using upcoming expert meetings as a platform for knowledge sharing.

28. One panellist said that the comprehensive approach of the African Continental Free Trade Area supported energy transition. The legal elements of the African Continental Free Trade Area included provisions related to standards, technology transfer and capacity development. Market access and regulatory frameworks for financial, communication, transport and business services were also supported. The Southern African Development Community had also adopted an ambitious trade in services agenda where energy related services were one of the priority sectors in the first round of negotiations. Coverage ranged from business services related to energy distribution, technical testing and site remediation, to consultancy, construction of power plants, engineering, environmental services and transportation of fuels. One delegate highlighted that significant efforts were required to bring down the costs of energy generated from renewable sources. UNCTAD could help on that point by working with other international partners.

29. One panellist explained that the European Union trade strategy supported its energy transition strategy. Several services supported the European Union strategy for energy transition. For example, offshore wind power was supported by financial, engineering, ICT, coastal shipping and port services. The trade strategy supported those and other services, recognizing the digitalization and servicification of energy supply. At the multilateral level, the European Union promoted services liberalization, including through a joint statement initiative on domestic regulation and a similar initiative on electronic commerce. European Union trade policy was explicit in considering that energy transition was driven by services and data. It was thus important to ensure cybersecurity and data privacy, and coherence between digitalization and energy policies. In that context, the European Union aimed at

mainstreaming energy transition in multilateral functions and free trade agreements and including obligations to implement the Paris Agreement in recent bilateral trade agreements. Another panellist added that that was the case for all future comprehensive trade agreements.

30. One participant noted that the Strategic Partnership Agreement between the European Union and Japan facilitated energy transition. The agreement covered digitalization – required for smart grids – and energy and emphasized collaboration with developing countries for green development, thereby providing a framework for cross-border collaboration. International cooperation could also facilitate green finance and collaboration between policymakers, academia and private sector on energy transition initiatives.

31. Some participants noted that regional cooperation in Latin America and the Caribbean facilitated access to services for energy transition. One participant said that, for example, producing and trading wind turbines required, among other things, consulting, assessment, project management and training services. Regional cooperation and trade in Latin America and the Caribbean facilitated accessing those services and strengthening national capacities in renewable energies. Another participant said that international cooperation benefited from networks of services experts, such as the UNCTAD Global Services Forum, and of services firms, such as those supported by the Latin American Association of Services Exporters.

32. Some panellists noted that regional integration facilitated services support to energy transition. One panellist further noted that infrastructure services were necessary to create a pan-Arab electricity market. That market, which was being designed, would increase cross-border transmission, improving energy security, reducing energy costs and promoting renewable energy investments and a higher share of renewables in energy generation. Another panellist said that, in Latin America, the Central American Electrical Interconnection System ensured trade in energy transmission services to improve regional energy access and stability, with growing incorporation of renewables. The system built on technical and financial assistance, as well as international cooperation, to integrate energy markets and infrastructure.

33. The UNCTAD Acting Director reported progress in relation to an informal working group on data for services trade and development policies. The informal working group had met for the first time in June 2023, and participants suggested creating a publicly available data depository. As next steps, UNCTAD would discuss resource issues and develop a work plan. A panellist from the secretariat said that UNCTAD was also undertaking capacity-building activities in services trade statistics. One participant asked how the Economic Community of West African States region could benefit from UNCTAD capacity-building activities to address challenges in data collection and compilation and expressed interest in the trade-in-services statistics information system. Better data on trade in services would support member States of Economic Community of West African States in negotiating the services protocol under the African Continental Free Trade Area. The panellist from the secretariat confirmed that a project could be designed and implemented in the community when funds were available.

34. One panellist emphasized that, to understand services trends, data for trade in services were needed for policymaking though data were hard to obtain. Another panellist also noted that data drove trade policies that could support structural transformation. The panellist from the secretariat said that statistics on international trade in services were essential but difficult to compile because of the intangible nature of services. Another panellist said that difficulty in data compilation was also due to the complexity of conceptualizing and measuring the increasingly dematerialized value creation throughout industries because of servicification. Another panellist said that cost was also a challenge in compiling data on trade in services. The panellist from the secretariat said that developing countries faced other challenges in collecting services trade data, such as lack of IT infrastructure, knowledge and institutional arrangements.

35. One panellist said that data on trade in services required several improvements. Disaggregated data were still limited. Another panellist noted that data on bilateral services

trade flows by sector for African countries would be needed as a foundation for research into trade costs and diversification. Another panellist said that firm-level services trade data were limited but important for energy transition-related indicators, such as energy consumption, while one delegate noted that those data were also important for trade negotiations. One panellist said that novel services trade statistics should be examined. Those statistics should cover embodied services inputs, value added trade and digitally enabled services trade. Another panellist said that a new category of manufacturing services could capture the interaction between services and manufacturing. Another panellist noted that a new category of green services could provide useful information for energy transition strategies.

36. One panellist noted that policies were needed to improve trade in services data. Good practices included legal provisions requiring banks to provide balance of payment data to central banks and national statistical institutes. The success of that practice required building political capital and showcasing results, such as stronger databases. Another panellist stressed that obtaining more firm-level data called for inter-agency cooperation to improve taxation and incentives policy design. Another panellist and one delegate emphasized that financial assistance was necessary to support policies to improve trade in services data in developing countries.

C. Closing plenary meeting

37. Summarizing the discussions, the Chair said that experts had examined increasing the role of trade in expanding access to services that were necessary to shift from fossil fuels to more sustainable energy, as part of efforts to address climate change. Services could also contribute to structural transformation and diversification. The role of services in energy transition faced challenges, though that role could be supported by trade promoting innovation in services sectors and through international cooperation. Experts had also discussed other sectors, such as the creative economy and tourism, which could contribute to reducing carbon emissions and support energy transition and to the Sustainable Development Goals. As a delegate, he also suggested consideration of the creative economy and its contribution to achieving the Goals as a future topic. He further stated that the Government of Indonesia would table a second draft resolution on the creative economy at the upcoming seventy-eighth session of the United Nations General Assembly and expressed his wish for support from other countries on the draft resolution.

38. One delegate reiterated that, at the session, his delegation and another delegation had placed particular importance on the matter of technology transfer and the significant funding needed to implement projects in developing countries. Another delegate recalled the lack of firm-level data on trade in services observed; data were needed, as through technological advance, the services sector could grow in the coming years.

39. The Acting Director of the UNCTAD Division on International Trade and Commodities expressed appreciation for the knowledge and experiences shared by experts and participants on how countries could strengthen production and access to renewable energy, as well as to quality services essential to planning and operationalizing energy transition. She said that UNCTAD would continue working on the topic and with experts, continuing to share and exchange information, experiences and analysis.

II. Organizational matters

A. Election of officers

(Agenda item 1)

40. At its opening plenary meeting, on 10 July 2023, the Multi-year Expert Meeting on Trade, Service and Development elected Mr. Febrian Ruddyard (Indonesia) as its Chair and Ms. Sara Nasr (Lebanon) as its Vice-Chair-cum-Rapporteur.

B. Adoption of the agenda and organization of work

(Agenda item 2)

41. Also at its opening plenary meeting, delegates at the multi-year expert meeting adopted the provisional agenda for the session (TD/B/C.I/MEM.4/28), as follows:

1. Election of officers;
2. Adoption of the agenda and organization of work;
3. The role of trade and services for enhancing science, technology and innovation to promote a fair transition to sustainable energy
4. Adoption of the report of the meeting.

C. Adoption of the report of the meeting

(Agenda item 4)

42. At its closing plenary meeting, on 12 July 2023, delegates at the multi-year expert meeting authorized the Rapporteur, under the authority of the Chair, to finalize the report after the conclusion of the session.

Annex

Attendance*

1. Representatives of the following States members of the Conference attended the session:

Angola	Namibia
Barbados	Nepal
Brazil	Nicaragua
Cabo Verde	Nigeria
Cambodia	Panama
Chile	Paraguay
China	Peru
Dominican Republic	Philippines
Ethiopia	Russian Federation
Gambia	South Africa
India	Spain
Indonesia	Sri Lanka
Iran (Islamic Republic of)	State of Palestine
Iraq	Trinidad and Tobago
Lebanon	Türkiye
Lesotho	United Kingdom of Great Britain and Northern Ireland
Madagascar	Uruguay
Malawi	Viet Nam
Malaysia	Zambia
Mexico	Zimbabwe
Morocco	

2. The following intergovernmental organizations were represented at the session:

Common Fund for Commodities
Economic Community of West African States
European Union
Inter-American Development Bank
League of Arab States
Organisation for Economic Co-operation and Development
Organization of Eastern Caribbean States
Organization of Islamic Cooperation
South Centre
Southern African Customs Union

3. The following United Nations organs, bodies and programmes were represented at the session:

Economic and Social Commission for Western Asia
Economic Commission for Africa
Economic Commission for Latin America and the Caribbean
Food and Agriculture Organization of the United Nations
International Trade Centre
United Nations Entity for Gender Equality and the Empowerment of Women
United Nations Regional Coordinator Offices
Universal Postal Union
World Intellectual Property Organization

* This attendance list contains registered participants. For the list of participants, see TD/B/C.I/MEM.4/INF.10.

4. The following non-governmental organizations were represented at the session:

General category

Consumer Unity and Trust Society International

International Network for Standardization of Higher Education Degrees
