

American Model United Nations Committee for Development Policy

# Report to the Committee for Development Policy on Science, technology and innovation for sustainable development

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## 1 1 Executive Summary

#### 2 1.1 Executive Summary

The Committee on Development Policy Expert Group (CDPEG) is pleased to present to the Economic and Social Council (ECOSOC) its final report on the topic of Science, Technology, Innovation for Sustainable Development. The report incorporates a combination of deliberations from three working groups, as well as a resolution recommended by the expert group for consideration by ECOSOC.

For the purpose of deliberations the discussions began in formal debate and consultative session and three main sub-topics were subsequently suggested. These three informal sub-topics include: create a set of STI-specific standards for policy-making; assist developing countries in finding meaningful use of technology; and develop strategies and ideas to support the sharing of crucial STI information between Member States.

In discussions the working groups sought to collaborate and communicate to allow further sharing of ideas. Out of these collaborations, the groups passed Resolution II/1, for consideration by ECOSOC, calling for action on the restructuring of intellectual property rights (IPR) with concern to sustainable development. The resolution came out the informal working group on subtopic two addressing how to best assist developing countries in finding meaningful uses of technology. It seeks to specifically address sustainability in both the economic and environmental sense. Secondly, there was discussion among experts of a second resolution draft addressing education in developing countries. It has been included for review, but was not passed by the CDPEG.

18 Subsequently, the second chapter of the report includes the summary of the deliberations of all three subtopic 19 working groups and covers the deliberations and proceeding of the CDPEG more broadly as well. The three sections 20 of deliberations are viewed by the CDPEG as interconnected, thus these subsections of deliberations were created 21 for efficiency rather than as restrictive categories.

## 22 2 Matters calling for action

#### 23 2.1 CDP II/1

24 Alarmed by the effect that man-made climate change has had on the planet,

*Confident* that the Earth can not endure non-sustainable industrialization like that of the first wave of industrialization occurring in the 19th and 20th centuries,

27 *Noting* that the use of fossil fuels has had a negative impact on mean global temperatures,

28 Bearing in mind that immediate action is required in order to meet the goals of the Paris Climate Agreement,

*Emphasizing* that sustainable development and action against climate change requires coordinated action by all Members States,

*Understanding* that intellectual property rights (IPRs), especially in certain industries, can take a significant amount of capital to create and that incentivizing the continued creation of IPRs is key to the progress of all countries of the world,

*Further noting* that in order to spur the creation of IPRs temporary monopoly periods held by IPR creators are necessary,

36 *Observing* that creators of monopolies can abuse their IPRs and gouge consumers,

37 *Confident* that the diffusion and sharing of intellectual property rights spurs further technological develop-38 ment and innovation,

39 Acknowledging the sovereignty of all member states in determining their IPR laws,

40 1. *Recommends* that Member States speed up the rate at which IPRs are released to the public domain;

2. *Further recommends* that Member States with IPRs pertaining to action against climate change share these IPRs as soon as possible without hindering their creation, as climate change is a major issue facing science, technology, and innovation in sustainable development;

3. *Suggests* that Member States evaluate the length of monopoly rights for IPRs and take an industry by industry approach in accordance with private corporations will owning those rights;

46 4. *Recommends* that States take action against abuses of intellectual property rights that impose excessive 47 costs upon consumers;

5. *Suggests* further improvement upon existing global relationships to encourage the sharing of adequate and appropriate resources to serve as stepping stones for populations in need to better assess their innovative capacities;

50 6. *Further suggests* enhancement of those initiatives in the direction of a people to people relation;

51 7. *Encourages* all Member States to support the investment of local populations in innovating in ways to 52 manage waste and recycling at the local, regional and national level;

8. *Encourages* the increased use of and further development of multinational research centers, and university partnerships to share technical training with the aim of tackling sustainable development goals.

## 55 3 Consideration of the status

#### 56 3.1 Deliberations

57 I. Creating a set of STI-specific standards for policy-making

In the creation of STI-specific policy, the Working Group stressed the importance of considering a multiaspect approach. This included the facilitation of scientific and technological capabilities, the construction of a framework for inter-institutional collaborations, improvement in infrastructure for the furtherment of Science Technology and Innovation (STI), promotion of a wider culture surrounding STI, and the trade and export of STI for greater competition.

A strong emphasis was directed towards the needs of developing countries in the extraction and production of raw materials. In such considerations, it is important that policy measures promote the refinement of raw materials in the countries in which they are extracted as to reduce the exploitative nature of many economic and trade structures in STI. Ghana specifically mentioned the importance of this policy in terms of oil and other raw materials in Least Developed Countries (LDC's) and developing countries.

It is the recommendation of this expert group that governments should seek to structure their policies in pursuit of more open access to internet as to promote the sharing of information and further education. Another important consideration addressed by the working group included the formation of policy in the service and promotion of human rights and basic needs. Needs were specifically brought up in terms of access to water, clean air, shelter, and security. The body of experts also recommends that Economic and Social Council (ECOSOC) refer to the World Health Organization (WHO) in the creation of policy that seeks to promote international health standards.

In regards to accessibility, the body of experts acknowledged the notable strides that have been made specifically in rural areas to provide internet through "hot-spots". There was also general agreement that the concerns of indigenous groups should be included in the promotion of Information Communication Technology (ICT). These considerations are especially relevant when preserving elements of cultural heritage, specifically language. Consulting with United Nations Education Scientific and Cultural Organization (UNESCO) in addressing these concerns in policy-making is of the upmost importance to the experts.

Additionally, the Working Group expressed the importance of varying regional concerns especially in terms of climate-relevant technology. Some examples of this may include, water preservation in deserts, monitoring technology for rising sea levels in Small Island Developing States (SIDS), and the use of solar, hydro, and wind power in consideration of geographically specific characteristics.

Relating, but not limited to the SDG's 7, 11, 12, and 15, this expert group discussed promoting sustainable 84 energy solutions and policies that support the combat of climate change within the field of STI's. This is not 85only an issue for developing countries with a high reliance on fossil fuels and natural resources for trade but also for 86 industrialized and developed countries. Currently forty-percent of the worlds greenhouse gases are emitted by cement 87 and energy production in China. In addition to encouraging sharing of information, this expert group believes that 88 policy shifts toward alternative energy solutions for sustainable development would be highly beneficial. Delegates 89 may look toward the case study of Costa Rica, which is currently leading the world in sustainability. Ninety-four 90 percent of energy production in Costa Rica is alternative with the goal of being 100% sustainable by 2025. An 91expert witness testified to this body that the conservation strategy for sustainable development includes a national 92development plan, which is re-evaluated every 4 years. This plan includes rewarding the population of Costa Rica 93 for planting trees and protecting the natural environment, subsidizing the agricultural platform, and the national 94creation of "green-driven" bodies. This body would encourage that the United Nation delegates look to Costa Rica's 95 policies in crafting sustainable solutions for future policy making in turning to sustainable energy and protection 96 of our environment. As reiterated in previous deliberations and draft resolutions, climate change is an ongoing 97 problem which this body believes must be addressed as we look at policies toward expanding science, technology, 98and innovation to further development worldwide. 99

The expert body suggested the importance of a partnership model between the various economic sectors recognizing state sovereignty in this aspect of policy decisions. Furthermore, the importance of differing regulatory approaches was addressed, specifically between small and medium enterprises (SME's) and larger or multinational enterprises. The working group suggested that ECOSOC encourage an approach to policy which allows for the development of SMEs and emphasizes their role in the creation of technological centers of development. Such effortswere specifically noted in the creation of "Silicon Savannah".

Finally, the expert body would like to stress the importance of agricultural and food security concerns in STI policy standards. The experts specifically sought to highlight the importance of policy promoting information sharing in regards to best practices in agricultural development, holding in balance economic and sustainability concerns as important priorities. Experts from the UK and Germany suggested the further exploration of hydroponic agricultural methods as a possible avenue for progress.

111 II. Assisting developing countries in finding meaningful and sustainable use of technology

A top priority is deciding ways to make STI (science and technology innovation) development more inclusive and accessible to all United Nations Member States by strengthening dialogue among stakeholders, promoting the sharing of ideas, and suggesting initiatives and partnerships to help achieve sustainable development through STI. In the informal subcommittee three, the implementation of the Sustainable Development Goals (SGDs) were discussed and how they directly affect technological advancements in developed and lesser developed countries.

117 Sustainable Development Goal 4 discusses the implementation of quality education. Specifically to this 118 topic, how prioritization of international science and technology education at the primary and intermediate levels 119 help focus the upcoming generations on innovation focusing on their nation's top needs in sustainable development. 120 Tax reductions may serve as an opportunity for incentives in research.

Sustainable Development Goal 5 focuses on the implementation of research as a key element in providing assistance to LCDs promotion of the empowerment of women through technology. This initiative provides access to information and communication as a way to minimize gender gap. Lack of women's technological preparation isolates them to only consider employment opportunities in the domestic sector. A case study in Guatemala's training of indigenous women in beekeeping technologies assisted the growth of entrepreneurship projects and encouraged community development.

Sustainable Development Goal 13 is concerned with international climate change action. Another case study for successful achievement of SDGs, is Viet Nam's 5 year plans SEDs and SEDPs. Viet Nam, like many other nations, is currently becoming more integrated into the global economy as it moves from a lesser developed country to a middle income nation, but because of this transition is left to be more at risk to climate change and global economic fluctuations. To help combat this Viet Nam has strongly committed themselves (through SEDs and SEDPs) to encouraging sustainable growth within the fields of science and technology.

133 Water accessibility, sustainable agriculture and sustainable cities and communities, (SDGs 2, 6 and 11), examines the sustainable agriculture, agri-business and agro-industry development and their linkages with other 134sectors in LDCs. Promoting labour productivity in agriculture ensures that food security, better nutrition and 135increased rural income are becoming more stable. Facilitating technology transfer to LDCs, under mutually agreed 136terms and conditions in line with national and international laws and commitments is another key element in the 137138development of infrastructure. However, for LDCs, we can use agriculture as a labor market and slowly transition into an industrial phase. Aiding farmers in improving the quality of soil and NGO (non governmental organization) 139or governmental interaction directly with farmers will help safely rotate crops. Buffer zones is another step in the 140advancement of agriculture innovation. Buffer zones surrounding agricultural areas with tall roots to prevent water 141pollution. 142

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III. Developing strategies and ideas to support the crucial sharing of STI information between Member States

The experts from the Committee for Development Committee working on the topic of Intellectual Property 144Rights and knowledge sharing suggested several ideas for sharing critical STI information between Member States. 145An expert from China suggested sharing patents with an International Patent Bank (IPB) to grant international 146access to patents after a period of time allotted for private ownership, with the intention to incentivize development. 147Innovators would share their patents with this third party Organization that would, once the patent time expires, 148have the ability to share the patents with corporations in any public/private organizations that are willing to utilize 149this technology for a reduced cost or long term payments. The IPB will be able to share patents with corporations 150related to sustainable STI development. In return, the IPB will receive a small fee or long-term payment from the 151organization accepting the patent access. In this manner, critical STI information may exist in the private corporate 152benefit sector as an incentive to foster research and development. Eventually, it will be shared with the international 153community as a whole to prevent monopolization and the decentralization of critical knowledge sharing. Member 154States must greatly enhance the rate of which they release patents pertaining to sustainable development and fighting 155

156 climate change.

The experts discussed how developing countries need increased access to these existing technologies. Intellectual property rights are currently dominated by the private sector and developed nations. While the private sector has interest in promoting access to existing technologies, the problem lies in creating products and services aimed at markets with little or no ability to pay. We must promote access to new technologies for all and rethink how to best disperse existing technologies. This exchange of products, processes, or knowledge transfers must be prioritized in order to attain sustainability and continual growth for developing and developed countries.

163The experts from China, Ethiopia, Ghana, Sudan and Russian Federation highlighted the critical need for 164supporting research and development to increase the release of patents pertaining to sustainable development. The experts discussed how developing countries need increased access to these existing technologies. Intellectual property 165rights are currently dominated by the private sector and developed nations. While the private sector has interest 166in promoting access to existing technologies, the problem lies in creating products and services aimed at markets 167168 with little or no ability to pay. We must promote access to new technologies for all and rethink how to best disperse existing technologies. This exchange of products, processes, or knowledge transfers must be prioritized in order to 169170attain sustainability and continual growth for developing and developed countries.

Suggestions for inclusive innovation policy include a balanced framework for intellectual property rights 171across a well-functioning science, technology, and innovation ecosystem. This framework needs to include political 172stability, an educated workforce, sound research and education infrastructure, links between public and private 173innovation actors, and enterprises committed to research and development. This ecosystem must include national, 174175regional, and international partners including the United Nations and its agencies, funds, and programmes in order to ensure that innovation is integrated into the national development priorities in Least Developed Countries. The 176United Nations must promote dissemination of technological information and find a balance between accessibility and 177reward for this innovation. Specifically, internet connectivity and the related spread of communication technologies 178particularly with the application of technology-supported learning which can increase the effectiveness, outreach, and 179awareness-raising of education should be a top priority in least developed countries and nations in which access to 180181 technologies directly inhibits further growth.

The experts from Sudan and China emphasized the importance of focusing on relationships between Member 182States and other organizations. Additionally, these experts see a need to focus not only on typical progressive 183technology, but also to look closely at more traditional forms of technology that have been underutilized. Experts from 184Sudan global incorporation of what has been considered traditional forms of technology alongside progressive/modern 185186 models of technological innovation can better accommodate the various capacities of States. The experts highlighted the existing global agreements between China and Africa on which they would like to see further progress. The 187human and innovation capacity existing in developing states need resources that can help lock in the progress. Those 188 resources could be due to infrastructure initiatives, investment, funds and further assistance from international 189190partners.

Experts stated that it was necessary for the global community to incorporate what has been considered "traditional" forms of technology alongside progressive/modern models of technological innovation to better accommodate the various capacities of States. They noted that the issue for States was not the lack of innovative capabilities, but a shortage of resources has limited many States from investing and expanding implementation of such capacity. Specifically, the experts from Sudan and China suggest placing emphasis on transportation, communication, and energy technologies to reach human capacities that lack the resources necessary for more formal innovation. The allocation of resources to the most vulnerable Member States is the most critical need in STI knowledge-sharing.

#### 198 3.2 Actions taken by the Committee

As its meeting on 20 November, 2018, CDPEG approved for recommendation for adoption by ECOSOC resolution II/1 with no amendments and by consensus with no abstentions. Resolution II/1 was sponsored by experts from Ethiopia, France, Japan, Pakistan, Republic of Korea, Slovenia, Spain and Sudan.

## 202 4 Adoption of the Report

At the 29th AMUN conference, on 20 November 2018, the draft report of the Committee was made available for consideration. The Body considered the report and with no amendments, adopted the report by consensus with

205 no abstentions.

Passed by consensus, with 0 abstentions