



Inter-Parliamentary Union
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139th IPU ASSEMBLY AND RELATED MEETINGS

Geneva, 14-18.10.2018

Assembly
Item 3

A/139/3-Inf.1
18 June 2018

Concept note for the General Debate on *Parliamentary leadership in promoting peace and development in the age of innovation and technological change*

Science is vital for the social and economic development of society. It contributes to shaping sound policies, improving the welfare of people, building capacity in developing economies, and fostering international cooperation between nations. Technological change is radically changing economic and social realities worldwide. STEM (Science, Technology, Engineering and Mathematics) education, basic and applied research, technology and innovation, novel social and public entrepreneurship models, are inextricably linked elements of a virtuous circle that can contribute to peace and sustainability, but also pose significant challenges in terms of governance and development.

The 139th Assembly is intended to serve as a platform from which the parliamentary community can strengthen the role and impact of the scientific community in development. Science can and should inform policy-making on a wide range of issues, but as technologies evolve, a legislative perspective is needed on how to answer to the significant shifts experienced by the global economy over the last decades. The parliamentary community recognizes that the most significant challenges we face are precisely driven by exponential technological change, as is evidenced by advanced robotics, artificial intelligence, clean technologies, nano- and biotechnology, and quantum computing, among others. An essential topic for discussion is the way in which rapid technological change has already changed, and will continue to change the nature of work—probably in a more radical way than after the Industrial Revolution. Preparing for the jobs of the future and moderating the impacts of workforce transitions—that comprise both opportunities and challenges—are the main issues to be addressed when discussing the impact of technological transformations in the skills market of a digital and knowledge-based economy.

Similarly, scholars have started to study how cutting-edge technologies can help to develop pro-peace innovations. Social innovation scholars in the world—such as the Stanford University Peace Innovation Lab—are at the fore-front of scientific innovation at the service of peacebuilding processes. Real-time use of big data, for instance, can be instrumental for a better understanding of conflict dynamics. Currently, such a tool is widely used for crime prevention, predictions on violence and early warning systems.

Science and technology undoubtedly provide a neutral umbrella under which parliamentarians with different political persuasions can work together for the achievement of a common objective. Science can be used to build bridges as evidenced by such an initiatives as was taken by CERN (European Organization for Nuclear Research) and Sesame (Synchrotron-Light for Experimental Science and Applications in the Middle East), which were able to bring countries in conflict together through scientific cooperation. More recently, the IPU in cooperation with CERN launched a new initiative—the Science for Peace Schools—aimed at bridging the worlds of science and politics, and at helping create parliamentary networks for nations to address common challenges together.



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Both science and technology have a pivotal role to play in the implementation of the 2030 Agenda for Sustainable Development. They are expected to provide the required know-how, operational models, technologies, and innovation that countries need in order to move from theory to concrete implementation. Investing in the mechanisms that link science to development and peace can pay high dividends for many countries.

Cooperation models developed by the world of science, based on joint projects and common objectives, can also substantively contribute to intercultural dialogue and peace. Science can help to identify and better understand long-term threats and emerging trends likely to impact upon the well-being of future generations, and help to shape the policies to address them. Moreover, it is important to explore how innovation and technological drivers will influence human-machine partnerships for development in the next decade. The topic can be explored either from the perspective of their impact on conducting business with social responsibility or of their disruption of the boundaries of artificial intelligence and automation literacy as tools to improve human development.

Although science is generally considered to play a beneficial role in society, quite often it is not involved early enough or in a structured manner in the discussions on the major challenges facing societies and in the design of the related policies. In some cases, science and scientific knowledge are simply being undermined, underfunded and marginalized, and thus driven nearly completely by private corporations. It is therefore critically important to establish stronger connections between the world of science and national authorities, international organizations, entrepreneurs and other policymakers, and to ensure that policies and decisions are informed by evidence, scientific inquiry, and thoughtful discussion.

Parliamentarians have a critical role to play in this process. They can significantly contribute by raising awareness in parliament of the importance of science, technology, innovation and STEM education for society; by making sure that science is systematically brought into public debates and decision-making, by considering the adequate regulation to be implemented to conduct technological innovation, and by helping to promote cross-boundary initiatives based on scientific cooperation. In an ever-changing world, parliaments should also be at the forefront of deliberations on new issues that can have a major impact on societies, such as artificial intelligence, bio- and nanotechnology, the management of big data, the governance of the Internet and other public spaces, among others. But parliamentarians can also play an important role in terms of identifying the benefits and opportunities that flow from technological advancement and prepare legislation aimed to advance innovations in peace and development efforts, share best practices in terms of workforce reskilling, use of big data for public policy purposes and emerging technologies to prevent conflict, rebuild the social fabric and foster humanitarian assistance.

Bringing the parliamentary community closer to its scientific counterpart will create conditions conducive to co-existence and peace and be instrumental in addressing global challenges related to the 2030 Agenda for Sustainable Development.

The General Debate at the 139th Assembly should foster parliamentary debate and knowledge on the role of science as an enabler of dialogue.

The following questions can help guide the debate:

- How can parliaments and parliamentarians better promote and develop science, technology, innovation and STEM education? How can more young people, and in particular young women, be encouraged to pursue scientific and engineering studies?
- Can science help create the conditions for multilateral talks and facilitate diplomacy?
- How can parliamentarians tackle the problem of digital literacy and help to adapt the transformation of workforce skills needed for the jobs of the future? How to provide holistic answers to the opportunity and challenges of robotization?
- What are the good practices of international scientific cooperation models that are conducive to dialogue and peace? How can these models be replicated and inspire other successful

cross-border initiatives? Can innovators be peacebuilders? How can peace innovation work in different settings of violence, crime prevention or peacebuilding?

- How can parliaments support the implementation of the 2030 Agenda for Sustainable Development, in terms of science, technology, innovation and STEM education? What can parliaments do to promote the effective transfer of knowledge and technology?
- What mechanisms are available to ensure that science and its impact on society are systematically factored into the work of parliaments? What monitoring and evaluation (M&R) tools can be developed to ensure evidence-based policy-making?
- How can parliaments guarantee that science informs policy-making to ensure the sustainable well-being of future generations?
- How can parliaments better manage the balance between science and ethics regarding controversial issues such as artificial intelligence, biotechnology and genetic engineering?
- How can parliaments contribute to the efforts to stem the abusive use of science for harmful purposes?