Summer School on Science Diplomacy: Improving Capacity of Science to Inform Policy

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Introduction

The summer school on Science Diplomacy: Improving Capacity of Science to Inform Policy was conducted from July 18th 2022, to July 23rd 2022, at Venice International University, Venice, Italy. The summer school was organised in partnership with Duke University, USA; Tor Vergata University of Rome, Italy and Boston College, USA. The summer school described the concept of science diplomacy and its growing importance in the 21st century. The summer school was organised and presided over by eminent faculty members [William Pan, Duke University, USA (Scientific Coordinator); Giulia Costa, Tor Vergata University of Rome, Italy; Philip Landigran, Boston College, USA; Kurt Straif, Boston College, USA; Sonia Silvestri, University of Bologna, Italy; Christian Lara, Duke University Rethinking Diplomacy Fellow – United Nations; Marga Gual Soler, Center for Science Diplomacy, American Association for the Advancement of Science (AAAS) and The World Academy of Science (TWAS)]. There were, in total, 23 participants. The summer school was conducted as a mix of expert sessions, group activities, and case studies to give practical orientation toward science diplomacy.

With the emerging global challenges and increasing risk to humanity, there is an immediate need to bring scientists, diplomats and policymakers together to address emerging issues. Science diplomacy can be used as a soft tool to undertake international dialogues and cooperation across the stakeholders to tackle the problems and challenges that pose a severe threat to humanity and the environment [1]. Several challenges have emerged from human practices, such as agriculture, trade, automation, cryptocurrency, security and

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peace, global health, pandemics, climate change and environmental degradation [2]. To resolve the emerging issues, it is necessary to communicate science in a relevant and reliable manner and to be used as evidence for undertaking steps to mitigate these issues [2, 3]. Science policies worldwide play a significant role in shaping the action plan to address current and emerging challenges at regional, national and global levels. Science diplomacy can bring stakeholders across the globe on a single platform to deliberate on the present situation of critical issues and foresight on possible solutions that can be well integrated with evidence-informed science policy making at regional, national and global levels [1].

Key Learnings from the Summer School

The summer school focused on how science diplomacy could be explored to address a diverse set of challenges existing worldwide. The key takeaways from the summer school were as follows:

Understanding Science Diplomacy: To implement science diplomacy, it is first necessary to understand what science diplomacy is. Diplomacy is regarded as undertaking international dialogue and engagements through negotiation, forming alliances and agreements by identifying areas of common interest and addressing conflict areas. Science diplomacy has emerged as one of the essential attributes of a country's foreign policies. Science diplomacy lies on the cusp between the enlightened self-interest of the country and its direct national interest. It is widely acknowledged now that science can be used as soft power and for diplomacy between nations. There are three dimensions of science diplomacy that have to be followed, *Science for Diplomacy, in which* science is to be used as a universal language to open channels for dialogues between the nations and ease the tension across borders; *Diplomacy for Science*: using diplomatic channels for facilitating science cooperation and sharing resources and *Science in Diplomacy*: Science is used as a tool for governance of international and transboundary issues.

Need for Formal Science Advice and Effective Science Communication: For practical scientific advice, the barrier between the scientist and policymakers must be streamlined and effective, and reliable scientific communication should occur. In general, policy and decision makers ask the scientists to provide advice that goes beyond evidence-based science and is regarded as value judgements. The other aspect that needs attention is how practical science is communicated to policymakers. Science must be properly and effectively communicated to policymakers so that it gets the required attention and action is taken.

Science Diplomacy to address Waste Management: Climate change and environment management are becoming one of the focus areas for countries across the globe. These issues have reached a global scale, and the international community has come forward to define planetary boundaries for safe operating space for society, ecology and humanity. Planetary boundaries are now placed at the forefront of policy-advisory processes leading up to the agreement of the global Sustainable Development Goals. Science diplomacy is used for addressing worldwide environment and climate change issues by exploring the international community's role in coming up with intergovernmental panels to define the global concerns and possible frameworks to be followed by countries to address global challenges.

Science Diplomacy for Global Health: Science diplomacy initiative named International Agency for Research on

Cancer (IARC) was established in 1965 as a specialised agency of the World Health Organization to address the global cancer threat. IARC comprises of a governing council and scientific council and has representatives from nearly 26 countries. IARC is one of the science diplomacy examples used widely to address the global challenge associated with cancer. It is widely contributing to Hazard Identification, Risk Assessment and Risk Management for Cancer.

Science Diplomacy for Pandemics: Science diplomacy can play a crucial role in addressing pandemic preparedness by promoting the concept of one health where global, national and local 'whole of society' response has to be generated. There should be provisions for global early warning systems that require increased local vigilance, early detection and rapid validation. As observed, COVID-19 continues to mutate, and assessing potential variants of concern takes months. Therefore, countries must come together to generate and share data based on which rapid analysis can be done. Globally, governments have to unite further to bring about behavioural change in addressing the global pandemic concerns, like countries which have joined together to get a behavioural shift to accept the vaccination against COVID. Science diplomacy should be used to develop one health competency in public health by prioritising one health approach.

Science Diplomacy in War Times: Further, due to the war situation, a dire humanitarian crisis and food security has emerged, and refugees are facing turmoil. It is time that the international community stand together to address the catastrophic humanitarian crisis. It's time for the scientific fraternity to stand up for their scientific friends in Russia and Ukraine to have opportunities to continue their research and technology projects and professionally ensure their stability. Science diplomacy should also be used to negotiate the terms between different countries involved to reach to best-suited solution for one and all.

There is a need to pave the way for stronger South-South and South-North science diplomacy engagement and establish organisations for science diplomacy relevant to the South. For this, the south has to come forward with institutionalising science diplomacy in their education and training modules, especially for the diplomats.

Conclusion

The emerging challenges have led to the evolution of science diplomacy, especially in the sectors such as health diplomacy, ocean diplomacy, climate diplomacy, disaster diplomacy etc. Science is regarded as a common ground for building international relationships, managing common resources and addressing the shared challenges faced by the countries. It is also widely explored for improving and strengthening political relations between countries. The covid pandemic has opened a new era for science and technology in foreign policy, global governance and geopolitics. Science diplomats are one of the emerging professionals. The role of science diplomats in connecting the world of Science with the world of diplomacy is more and more recognised. Countries should make possible efforts to institutionalise and build capacity in science diplomacy.

References

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