

Participatory Processes for the Design of Science Diplomacy Initiatives: Perspectives from Emerging Economies

Luisa F. Echeverría-King^{a,*}, Claudia Alarcón-López^b, Julián Prieto^c, Luz M. Cumba Garcia^d, Susan Benavides-Trujillo^e

^aUniversidad Simón Bolívar, Barranquilla, Colombia; ^bEPFL and ETHZ, Switzerland; ^cPenn State University Pennsylvania, USA; ^dAmerican Association for the Advancement of Science (AAAS) Science & Technology Policy Fellow / Inter-American Institute for Global Change Research (IAI) Science, Technology, Policy (STeP) Fellow; ^eUniversidad de América in Bogotá, Colombia
**Corresponding author: luisa.echeverria@unisimon.edu.co*

Introduction

Science diplomacy involves the intersection of scientific collaborations, technology, international relations, and public policy, emphasising how science can foster cooperation and address global challenges.¹ Participatory processes enhance science diplomacy by involving diverse stakeholders², including scientists, policymakers, and the public. This inclusive approach ensures a broader range of perspectives, promotes transparency and helps craft more effective and culturally sensitive science diplomacy strategies. By engaging various stakeholders, participatory processes enrich decision-making, facilitating the creation of policies and projects that better align with the needs and priorities of all involved parties, thereby boosting the impact and success of science diplomacy endeavours.

This article explores participatory processes employed in shaping science diplomacy initiatives in emerging economies. By examining practical cases and methodologies, we seek to identify best practices and opportunities associated with stakeholder participation in designing science diplomacy strategies in Latin America. The intent is to contribute to developing practical frameworks that facilitate the seamless integration of diverse perspectives in formulating and implementing science diplomacy policies and projects. This article presents a case study showcasing the mixed use of participatory processes and offering recommendations for a science diplomacy strategy to safeguard the Amazon region.

Participatory Processes in Science Diplomacy

Effective science diplomacy strategies are critical for addressing today's complex global challenges.³ Participatory processes play a crucial role in ensuring transparency, accountability, and legitimacy in implementing these policies. Transdisciplinary and cross-sector collaboration in the design of science diplomacy strategies allows the identification of shared priorities and the building of consensus, essential to confront cross-border challenges.⁴ By recognising global interdependence and the need for coordinated action, participatory science diplomacy is positioned as a powerful tool for building bridges between science and politics, as well as between countries and cultures, having networking at its core.¹

Figure 1 illustrates various participatory processes used in both developed and emerging economies:

- A. Stakeholder workshops: These workshops have been proven helpful in driving system innovations towards sustainable practices.⁵ In emerging economies, the case of the Argentinian think tank Center for the Implementation of Public Policies Promoting Equity and Growth (CIPPEC) is an example of successful stakeholder workshops that have been used to achieve positive policy outcomes.
- B. Scientific tourism: It involves scientists visiting communities for research purposes, contributing to Sustainable Development Goals (SDGs) by sharing scientific knowledge and supporting local socio-ecological development. This emerging field enhances participatory processes by showcasing problematics and potentials in real-world settings. In Ecuador, the SDGs have been achieved through this practice⁶, as well as in Mexico with the scientific tourism initiative [Ciencia Sí](#).
- C. Community engagement: In Latin America and the Caribbean (LAC) region, initiatives like the Science Diplomacy Network in Latin America and the Caribbean (DiploCientifica) foster science diplomacy practices through community engagement. Events like the Sustainable Research and Innovation (SRI) Congress and the Inter-American Institute for Global Change Research (IAI) capacity-building workshops are two examples that provoke tangible outcomes in science diplomacy strategy ideation in Latin American emerging economies.
- D. Consultations with experts: It contributes to evidence-based decision-making and policy formulation, ensuring initiatives align with international standards and best practices. The LAC region has gathered scientific elites to co-produce social processes.⁷
- E. Public consultation, networking, and partnerships: These processes provide access to knowledge circulation, resources, and collaborative opportunities, enabling emerging nations to leverage the strengths of the global scientific community.⁸
- F. Immersion programs: These programs equip science diplomacy enthusiasts, including trained scientists, with tools and mindsets for multilateral practices.⁹ Fellowships like the IAI Science, Technology, Policy (STeP) Fellowship similarly adhere to the principles of immersion programs. However, this specific program focuses on emerging economies in the LAC region, fostering cohorts from these developing nations.

Designing Science Diplomacy Strategies in Emerging Economies

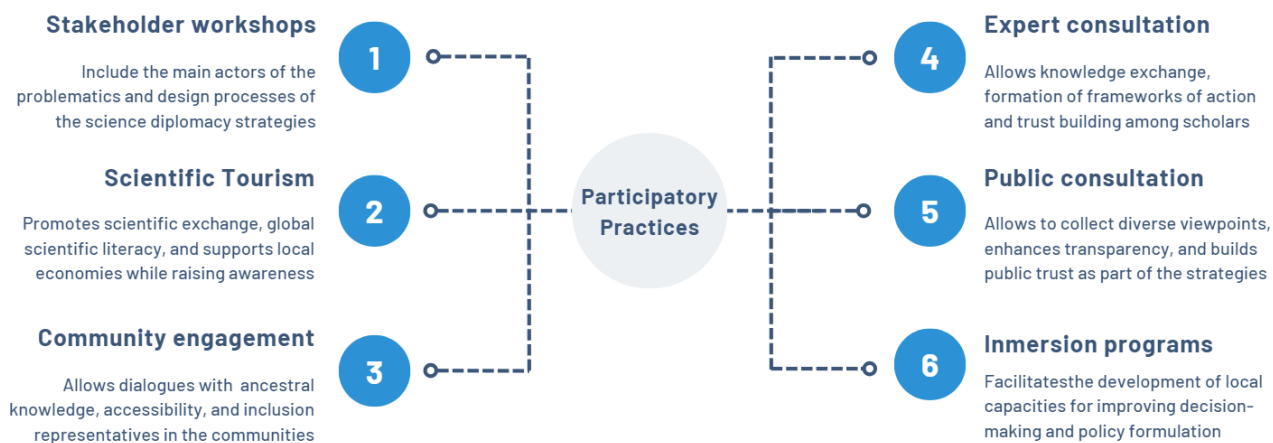


Figure 1. Participatory processes that could lead to the design of science diplomacy strategies

These collaborative spaces empower emerging nations to bridge scientific, diplomatic and socio-economic gaps, facilitating the development and implementation of effective science diplomacy strategies that address their unique challenges while promoting mutual understanding and cooperation with the international community.

Case Study in Emerging Economies

Science diplomacy is vital for addressing multifaceted challenges and promoting sustainable development in emerging economies.¹⁰ These countries often grapple with limited resources and confront complex global issues such as climate change, public health crises and technological disparities.¹¹ The Amazon rainforest, spanning 7 million square kilometres across nine countries, is home to over 47 million people, including 500 indigenous communities.¹² Anthropogenic actions such as agriculture, illegal logging, infrastructure development, and livestock expansion have caused the transformation of 17% of the forest, and another 17% has been degraded.¹³ In the absence of collective action from all countries, this ecosystem faces the threat of losing its primary function, leading to a tipping point from which recovery may be impossible.¹⁴

Diplomatic efforts in the region have been initiated since 1987 when the Organisation for the Amazon Cooperation Treaty (OTCA as its acronym in Spanish) was created. Diverse efforts, initiatives, and commitments have been developed to promote equitable and sustainable development. Global engagement in these regional efforts has been fundamental to advancing the understanding of the challenges faced and the potential solutions. The United Nations joined forces to set up the Scientific Panel for the Amazon, which delivered an assessment report in 2021.¹⁵ This report is an example of remarkable science diplomacy efforts involving over 200 researchers from the region to analyse the Amazon as a territorial entity, its socio-ecological transformations, and potential solutions to the current crisis.

The regional and international acknowledgement of the importance of this ecosystem for global climate regulation has triggered significant funding commitments toward reforestation and adaptation efforts. This created a fertile window of opportunity for a participatory process, resulting in a White Paper of policy recommendations to safeguard Amazon in 2023.¹⁶ This case study demonstrates three primary participatory mechanisms for science diplomacy:

1. **Regional science diplomacy networks:** Organisations like DiploCientifica are pivotal in initiating the concept and facilitating broader engagement among leading members in structuring and developing the project.
2. **International Conferences - Stakeholders workshop:** The 2023 SRI Congress in Panama provided a platform for conducting a collaborative workshop to gather valuable input from more than 30 participants, including scientists, policymakers, civil society organisations, and indigenous representatives.
3. **Expert consultations:** The emerging ideas from the 2023 SRI collaborative workshop were organised by clusters and further discussed with regional science diplomacy experts to assess their feasibility.

Supported by DiploCientifica and the IAI, the publication of the White Paper incorporated a communication strategy targeting policymakers from the nine countries within the Amazon region, as well as multilateral agencies and donor countries.

Conclusion

Participatory processes are not only desirable but indispensable for developing effective science diplomacy strategies that are relevant to the complexities of the 21st century.¹⁷ Employing diverse participatory approaches, as seen in the case study of the Amazon region, can provide a robust approach to addressing emerging challenges in a constantly evolving world. This case study underscores the importance of regional and international collaboration in tackling intricate worldwide issues and highlights the role of science diplomacy in fostering mutual understanding and cooperation.

Direct engagement of various stakeholders in formulating science diplomacy strategies ensures that policies are not only scientifically sound but also socially relevant, culturally sensitive and politically viable. This approach enhances the sustainability and efficacy of these strategies in tackling the multifaceted global challenges of our time.

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