

Scientific Diplomacy in the European Union:
Bridging Research, Innovation, and Global
Collaboration

Nikolaos Moraitakis, Ph.D. (c) – UOC (University of Crete)





Scientific Diplomacy Definition

Scientific Diplomacy (or science diplomacy) merges scientific research and innovation with international diplomacy and foreign policy.

EU's Strategic Approach

The European Union (EU) leverages science diplomacy to project soft power and foster global partnerships, using scientific cooperation as a bridge between nations.

Comprehensive Overview

This lecture provides an overview of the EU's approach to science diplomacy: its evolution in EU policy, key initiatives and frameworks, and examples of how research collaboration advances diplomatic goals.

Key Focus Areas

Key topics include the EU's Global Approach to Research & Innovation strategy, Horizon Europe's international collaborations, science diplomacy networks, and the development of a European science diplomacy agenda.





Concluding Insights Preview

Challenges Ahead

Concluding insights will highlight challenges (like coordination and geopolitical competition) that the EU faces in science diplomacy implementation.

Strategic Opportunities

Opportunities for the EU to strengthen its role as a research and innovation powerhouse in global affairs will be explored.





What is Scientific Diplomacy?

Core Definition

Scientific diplomacy refers to the interplay of science and foreign policy – using scientific cooperation and evidence to advance diplomatic relations and vice versa. It treats science as a tool for building bridges between nations.

Bridge Building

Science serves as a neutral ground for international cooperation, enabling dialogue and collaboration even during times of political tension between nations.







Three Dimensions of Science Diplomacy

Diplomacy for Science

Diplomatic efforts that facilitate international R&D cooperation (e.g. negotiating research agreements, exchange programs).

Science for Diplomacy

Using science as a form of soft power to improve international relations and goodwill between countries.

Science in Diplomacy

Informing and supporting diplomatic decisions with scientific advice and evidence (for example, in climate negotiations or global health).





Why Science Diplomacy Matters Now



Global Challenges

Global challenges (climate change, pandemics, security issues) are increasingly complex and interconnected. Scientific expertise is essential to understand these issues, making science diplomacy critical for effective international cooperation.



Neutral Ground

Science is often seen as politically neutral and collaborative. Even amid political tensions, joint scientific projects (e.g. space missions, public health research) can maintain dialogue and build mutual trust.







EU as a Science Power

1 Research Leadership

The EU produces a significant share of the world's research and innovation. It recognizes that engaging internationally through science can enhance its global influence and uphold its values.

2 Strategic Recognition

Europe understands that scientific excellence can be translated into diplomatic influence and global partnerships.



Early Recognition and Policy Development







The term "science diplomacy" first appeared in EU policy in a 2012 European Commission communication. It outlined using international R&I cooperation as an instrument of soft power to improve relations with key countries – and noted that good diplomacy can in turn benefit research ties.



Open to the World Vision (2016)

The EU's R&I vision in 2016 emphasized openness in science. It highlighted that global research cooperation – through shared standards, researcher mobility, joint resources, and scientific advice in diplomacy – builds mutual understanding and trust between nations.

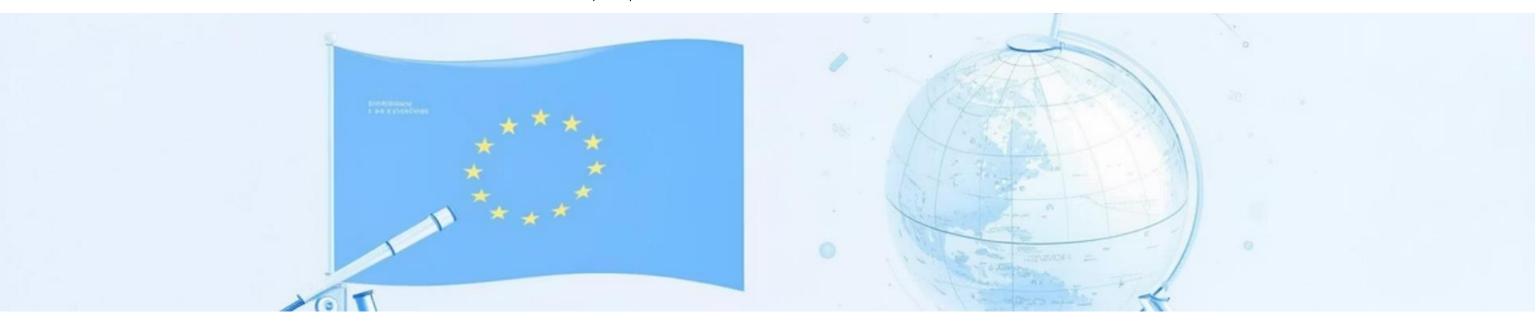


Recent Momentum

Science diplomacy gained prominence as the EU saw the need to assert itself in a changing geopolitical landscape. It became part of high-level discussions and strategies, linking research policy with the EU's external relations agenda.



Global Approach to Research & Innovation





Core Foundation

EU's strategy for international R&I cooperation explicitly calls for integrating science diplomacy



Soft Power Projection

Stronger focus on science and technology in foreign policy

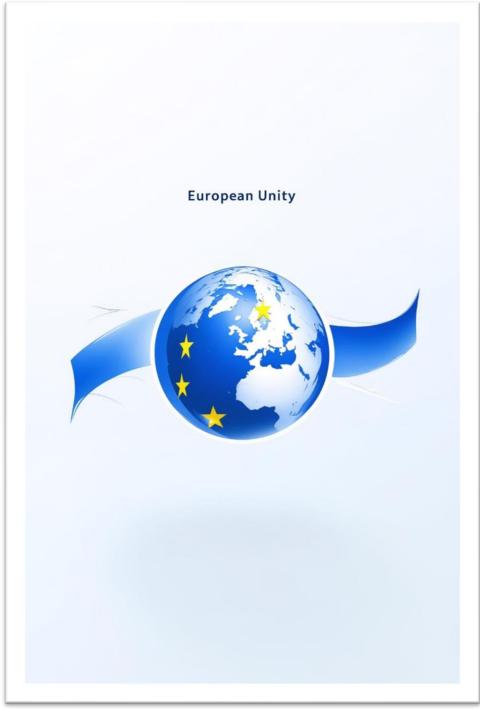


Strategic Integration

Science diplomacy into external action

The EU's strategy for international R&I cooperation (Global Approach) explicitly calls for integrating science diplomacy into external action. It argues that a *stronger* focus on science and technology in foreign policy will help the EU project soft power and advance its economic interests and fundamental values.





EU Council's Call and Policy Integration

Council Endorsement (2022)

EU Member States underscored the importance of science diplomacy

Institutional Coordination

Council urged Commission and EEAS to develop European Science Diplomacy Agenda

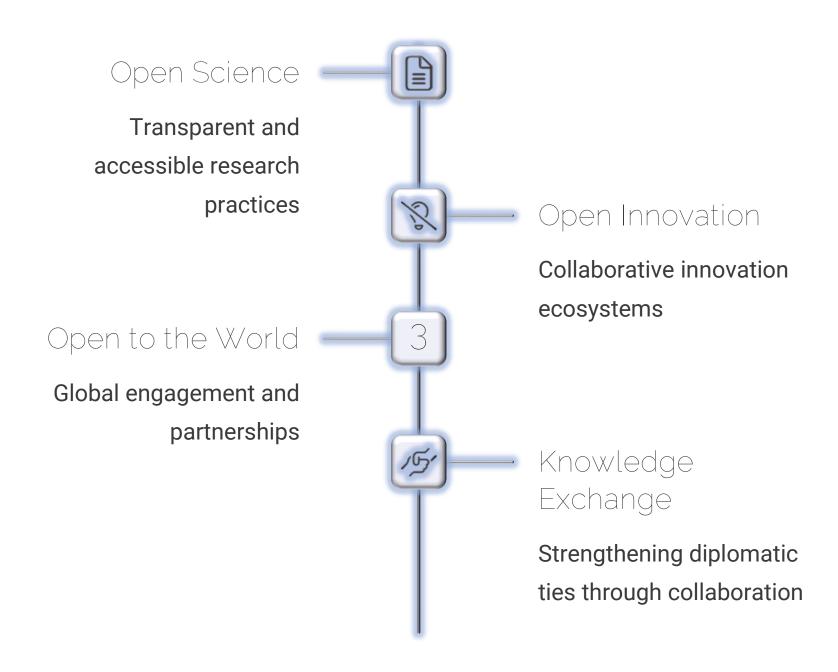
Cross-Cutting Integration

Science diplomacy embedded into EU foreign policy initiatives



Open Innovation

Open Science Vision







Horizon Europe & International Cooperation

Associated Countries

Countries participating in Horizon Europe under near-equal terms (e.g. Norway, Israel, UK, etc.)

Bilateral Agreements

Science & Technology agreements with countries globally

The EU's flagship R&I program, Horizon Europe, actively involves non-EU countries. Association agreements allow 19 countries to participate in Horizon Europe under near-equal terms. This openness builds scientific partnerships worldwide and serves as a diplomatic bridge connecting the EU with neighboring regions and global allies. The EU has Science & Technology agreements with ~20 countries globally and engages in regional science dialogues.





EU Science Diplomacy Projects

S4D4C Project

"Using Science for/in Diplomacy for Addressing Global Challenges" focused on how science cooperation can tackle global issues.

InsSciDE Project

"Inventing a Shared Science Diplomacy for Europe" – looked at historical and strategic aspects of European science diplomacy.

EL-CSID Project

"European Leadership in Cultural, Science and Innovation Diplomacy" examined science and innovation in EU external relations.









Strategic Forum Recommendations

1 SFIC Task Force

The EU's Strategic Forum for International S&T Cooperation convened a Science Diplomacy Task Force. In 2020, it issued an input paper urging a clearer, more strategic role for EU science diplomacy.

2 Platform Proposal

Among its suggestions were creating a European Science Diplomacy Platform and a roadmap to coordinate efforts across the EU.





Recognizing Current Gaps

Fragmentation Challenge

Despite various efforts, a 2022 report noted EU science diplomacy activities remain fragmented and uncoordinated, lacking an EU-wide approach. This fragmentation can weaken Europe's position in a world where other powers deploy science in foreign policy more strategically.

Ministerial Commitment

July 2023 marked the first-ever EU ministerial discussion on science diplomacy. Research ministers meeting in Santander highlighted the need for a united strategy, signaling strong political commitment to elevate science diplomacy as a policy priority.



Developing the European Framework

Framework Development

The European Commission, together with the EEAS and stakeholders, is now drafting a European Science Diplomacy Framework/Agenda.

Stakeholder Support

This process is supported by an ERA Forum subgroup and a steering team representing key communities (scientists, diplomats, policymakers).

Inclusive Approach

Hundreds of experts from both science and diplomacy communities have been involved in shaping this agenda.







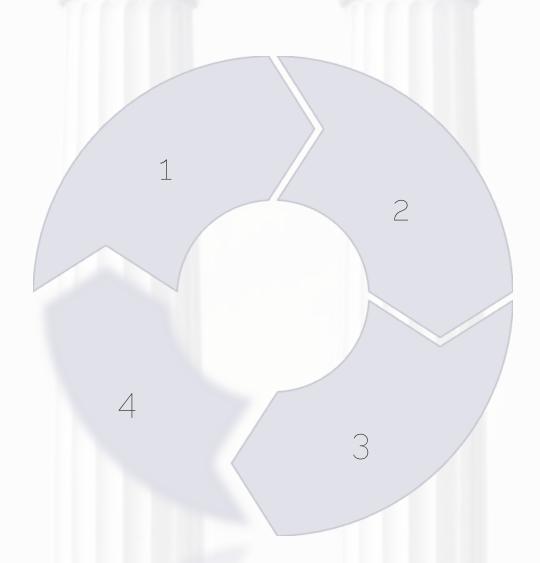
Four Priority Strands

Geopolitical Challenges

Use science diplomacy more strategically to address a fragmented, multipolar world – e.g. scientific collaboration to ease tensions or solve cross-border problems.

Capacity Building

Develop skills and networks for science diplomacy – training programs for scientists & diplomats, common platforms for exchange.



Evidence-Based Diplomacy

Strengthen the role of scientific evidence and foresight in EU foreign policy, to make diplomacy more strategic, effective, and resilient.

Global Outreach

Expand science diplomacy capacity in EU delegations and Member State embassies, and foster the EU's global outreach through scientific partnerships.



Science Diplomacy in Action: Climate Leadership

Scientific Foundation

The EU's leadership in climate negotiations (Paris Agreement and beyond) is underpinned by science diplomacy. European climate science research (e.g. IPCC contributions) and clean tech innovation bolster the EU's credibility.

Diplomatic Leverage

Science provides the evidence base for diplomatic agreements on emissions targets, climate finance, etc., enabling it to rally other nations in forging ambitious climate commitments.





EU-Africa Partnership and Global Research Infrastructure



EU-Africa Collaboration

- Science cooperation forms the cornerstone of EU-African Union relations.
- Through structured high-level dialogue, both unions collaboratively develop research initiatives addressing shared challenges.
- Their joint Innovation Agenda, formally acknowledged at the 2022 EU-AU Summit, strategically leverages scientific advancement to catalyze sustainable development.
- This multifaceted partnership simultaneously strengthens diplomatic ties while tackling critical issues in health security, agricultural sustainability, and renewable energy transition across the African continent.

International Research Infrastructures

- Europe's strategic participation in global scientific infrastructure serves significant diplomatic purposes beyond scientific discovery.
- CERN exemplifies this dual benefit, advancing fundamental physics while fostering peaceful collaboration among scientists from diverse nations.
- Similarly, the EU's substantial involvement in ITER (the international fusion energy project) and its support for the Square Kilometre Array Observatory demonstrate how large-scale scientific endeavors can effectively build enduring international partnerships and goodwill.





Key Takeaways

- Science diplomacy bridges research, innovation, and foreign policy.
- EU can leverage science diplomacy to enhance global influence and tackle global challenges collaboratively.
- Strategic coordination needed to overcome fragmentation and geopolitical competition.
- Strengthening capacity in science diplomacy is critical for future EU international leadership.





The future of scientific diplomacy in the EU depends on our collective commitment to bridge research, innovation, and international collaboration in an increasingly complex global landscape.