Chapter 7
Evidence-Informed Policymaking: The Way Forward

The only thing that will redeem mankind is cooperation.

Bertrand Russell

The consortium S4D4C (Using Science for/in diplomacy for addressing global challenges) organized the First Global Meeting on Science Diplomacy titled “EU Science Diplomacy Beyond 2020” in Madrid in December 2019. As a result of this meeting, the *Madrid Declaration on Science Diplomacy*¹ was signed by a group of high-level experts who contributed to the conference. The Madrid declaration states a common vision of science diplomacy, highlights the added value that science diplomacy can bring to fostering international relations in addressing global challenges, and shapes good principles to foster science diplomacy worldwide. Science and technology are dimensions to be taken into account in foreign policy and international relationships at different political levels. The Global Policy Perspective Report on Science Diplomacy states (Riordan and Torres Jarrín 2020:10): “The essence of science diplomacy is not that scientists should act as diplomats or replace diplomats. Rather it is that science is becoming increasingly central to international relations and foreign policy… In its fundament we can see science diplomacy operating in two related ways. Scientists providing the expert information that diplomats need to enable them to engage effectively with scientific agendas at an international level, and diplomats applying the skills and mindsets of diplomacy to the international problems either revealed or generated by science.”

From the analysis of the last updated reports and papers published by the European Commission² we could infer a way forward for next years to generate

¹ https://www.s4d4c.eu/wp-content/uploads/2019/04/madrid-declaration-1.4.pdf.
² https://ec.europa.eu/info/sites/info/files/research_and_innovation/groups/sam/ec_rtd_scientific-advice_092019.pdf; https://ec.europa.eu/research/sam/pdf/topics/masos_consultation_meeting_summary_032019.pdf; https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/understanding-our-political-nature-how-put-knowledge-and-reason-heart-political-decision.
high-quality scientific advice for the European policy process. In this paragraph we will especially refer to the publication of the European Commission in September 2019 (European Commission 2019b) titled the Scientific Advice to European Policy in a Complex World, prepared by the Group of Chief Scientific Advisors, Directorate-General for Research and Innovation. Another interesting work is the publication by SAPEA,3 Making Sense of Science, Evidence Review Report (SAPEA 2019). It will be a simple review of these texts as my ideas and constructive critics on actions to take are proposed above and throughout this book.

Nowadays, in the European Commission’s words, evidence synthesis takes notably the following forms (European Commission 2019b:31–32):

1. Synthesis offered by the Joint Research Centre in its role as the EC’s science and knowledge service, whereby the demand for knowledge is coordinated with EC policy departments (JRC 2018). In addition, through its competence centres, the JRC works with the EC policy clients to develop primary evidence.
2. Evidence review reports commissioned by scientific advisory bodies from public organizations.
3. Evaluations and studies commissioned by the European Commission’s policy departments from external contractors.
4. Synthesized outcomes of the EU-funded research projects relevant to the policy.
5. Area in question (Projects for Policy—P4P27).
6. Other available review reports (e.g. World Bank, OECD, the European Parliament).

Unfortunately, we do not have a EU uniformity of practice for scientific advice. Under former President Juncker (2014–2019), the European Commission has committed to putting better regulation principles and scientific evidence at the heart of policymaking. In 2015, the European Commission set up the Group of Chief Scientific Advisors, as well as the Regulatory Scrutiny Board. The idea was to foster the role of scientific evidence and advice as a core value of the EU policymaking, especially nowadays when scientific uncertainty is often manipulated to nurture general distrust of science and to often pursue hidden agendas that ignore evidence. The inner and intrinsic ambiguity of the European Commission’s mission on backing evidence-informed policymaking approach is highlighted in practice by the societal issues the EU policies seek to address that are highly complex (European Commission 2019b). The scientific evidence is consequentially equally complex. As scientific advice acts as an intermediary between science and policy (SAPEA 2019:56), we understand how values and emotions strongly influence not only political behaviour but also perceptions of facts and advices’ formulation (Aquilar and

---

3SAPEA brings together knowledge and expertise from more than 100 academies and learned societies in over 40 countries across Europe. Funded through the Horizon 2020 program of the EU, the SAPEA consortium comprises Academia Europaea (AE), All European Academies (ALLEA), the European Academies Science Advisory Council (EASAC), the European Council of Academies of Applied Sciences, Technologies and Engineering (Euro-CASE), and the Federation of European Academies of Medicine (FEAM).
Cooperation and working relationship building between scientists and policymakers are fundamental never-ending human processes, which together with characteristics such as credibility, availability, clarity, relevance, and reliability of research findings (and actors on both sides as well) may facilitate the use of evidence by policymakers (Oliver et al. 2014). However, a very dangerous but real state of the art is represented by the inadequate understanding of how policymaking and politics work on behalf of scientific experts. The situation is made more complicated when, as it happened during the COVID-19 crisis (but not only), some scientists are caught up with the public debate about which policy option could be correct. If scientists cede to the seduction of the politics (or that of communication star system) and assume the attitude of politicians, they “sell their soul to the devil” insofar as devaluing the scientific evidence they claim to present (Boyd 2013; Aquilar and Galluccio 2008). Developing scientific advice on complex policy issues typically requires expertise from different scientific perspectives (SAPEA 2019:124). Insofar, implementation of multi- and interdisciplinary approaches when advising the European Commission is hoped for and very welcome. SAPEA has been financed by the European Commission’s program Horizon 2020 to investigate how sustainable science advice could be better provided to the European Commission’s policymakers, based on available evidence, under conditions of scientific complexity and uncertainty. According to SAPEA’s report, *Making Sense of Science*, research on advisory processes shows that the following 13 points are important to implement (SAPEA 2019):

1. Science advice can help to anticipate future challenges and assist in designing coping strategies or interventions.
2. The focus of science advice must be on a critical review of the available evidence and its implications for policymaking.
3. Scientific advice should not prescribe but inform policies.
4. The purpose and significance of scientific advice depend on the issue and the context.
5. Form and function are vital when designing appropriate policy-science interfaces.
6. Science advice for policymaking involves many legitimate perspectives and insights.
7. Scientists, as well as policymakers, should be sensitive to various biases and interests when drawing inferences from data and information.
8. Science advice is always affected by values, conventions, and preferences.
9. The effectiveness of scientific advice depends on the right composition of advisors and the quality of the dialogue between advisors and policymakers.
10. The relationship between science advisors and policymakers relies on mutual trust.
11. The most highly recommended science advice process combines analytic rigour with deliberative argumentation.
12. Stakeholders and citizens should be integrated into the process.
13. Science advice is not limited to policymakers but includes science communication to the wider society.

A question arises spontaneously: How could we translate from theory to practice all these interesting recommendations? The economic theory and the games theory show through logic-mathematical experiments that the cooperation could be the most effective if parties jointly take into account the mutual benefit of it. Unluckily, the cooperative solution is rather a long process where contextual as well as cognitive, emotional, motivational, and relational factors come into play. As previously explained, expert’s and politicians’ judgements are prone to cognitive shortcuts and heuristics among others. There is an idiosyncrasy between knowing to have cognitive biases and avoiding them (Aquilar and Galluccio 2008; Kahneman 2011). There is an inner tension in politicians/diplomats between keeping their world views and adapting their decision-making processes to dissonant evidence (Tetlock 2005). Evidence-informed policymaking does not mean leaving all the power to the scientists/experts. Especially in time of uncertainty when we come to social values, risks, and priorities we do need politics and diplomacy to take the lead for making critical choices in the interest of the citizen. Scientists and experts deserve respect, policymakers and diplomats deserve respect, democratic governance deserves respect, and citizenry deserves respect and a more central role in shaping its own future. Everybody must play his or her role in science diplomacy and evidence-informed policymaking. Everybody needs to take the responsibility to link evidence-informed to sustainable policymaking actions.

Concluding Remarks

The tendency to create new bodies and organizations into the field may lead to confusion, unevenness, and competence duplication. This situation will not only limit the inner potential of science in policy but also undermine the efforts, credibility, and unity of science diplomacy as a EU’s foreign policy strategic tool. Problems arise when it comes to coordinate the EU and its member states given the diversity of structures, approaches, and best practices. In order to improve the EU’s science diplomacy and advisory system the following steps could be supported:

1. **Member States’ science advice**: Encourage more intergovernmental discussions between Member States both within the EU’s European Council and through other international organizations such as the Organisation for Economic Co-operation and Development (OECD). Common standards and approaches at this level can further strengthen coherence, effectiveness, and improvement of the use of science and of the quality of scientific advice in the EU and abroad. Better practices should be shared with third countries and other regional blocs in order to facilitate and coordinate common efforts in science diplomacy.

2. **Challenge the “mantra” of best practice**: Best practices are important opportunities for any community, category, discipline, or organization, because they
enable actors to behave in a consistent and coherent way. They also provide evaluation, discussion, and advancement. However, best practice approach may oversimplify the cognitive, emotional, and motivational challenges when confronting specific complex situations under uncertainty and ambiguity. A strict reliance on evidence-informed policymaking does not mean strengthening the experience and skills of practitioners. It could mean just to provide a substitute for experience rather than implementing and calibrating experience, skills, and expertise. Better practices should be constantly scrutinized and evaluated especially in case of crisis situations such as the COVID-19. It is important to monitor the spread of knowledge and the amount of misinformation to enable governments, international organizations, and the media at large to foster adaptive responses in the interest of the civil society at large.

3. **Attention to fixed mindsets:** Scientists could be able to manage the tension present in policymakers (and in themselves as well) between a held core belief and world views at large and the adaptation of those beliefs and views to dissonant evidence. The monitoring of interpersonal relations will help scientists and politicians/diplomats to be less vulnerable to close-mindedness in dismissing too quickly dissonant evidence, which challenges held core beliefs (Tetlock 2005). Clinical practice is based on scientific evidence. But intuition and tacit knowledge are fundamental to avoid thinking about horses and not zebras when you hear hoof noises in the street.

4. **Pooling global financial and scientific advice mechanisms:** Using Horizon 2020 (Horizon Europe) as a better practice model, the EU should provide models and frameworks that unify existing financial mechanisms in order to generate economies of scale and provide further leadership in coordinating, clarifying, and simplifying evidence-informed policymaking.

Science diplomacy has a huge potential as a “soft power tool” for preventive diplomacy and conflict resolution. It could help to build bridges where formal diplomacy has failed. In this sense, it is an interesting tool for the foreign policy of the entire international community. In using the language and benefits of science, people from very different regions, religions, ideologies, and social backgrounds could develop coordinated approaches for tackling global issues, achieving development goals, and reducing risks, vulnerabilities, and violence. Science diplomacy’s importance during the Cold War and the European integration process shows how the EU can use this potential to consolidate its normative power on the international scene while using at the same time its strength in research and development to help countries achieve their sustainable goals. If science is properly channelled in domestic and international policy advice its transformative power could lead to a world of understanding, respect, and collective well-being. At the end of the day, the greatest winner from progress in science diplomacy will be all of us, both in the future and in the present.