

# On Science for Policy and Diplomacy Education in Switzerland and Beyond: A Brief Overview



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Some of the most pressing challenges worldwide, from global pandemics to the climate and environmental crisis, require efforts at the interface of science, policy, and diplomacy. To this end, skills development for scientists engaged with science for policy and diplomacy1-3\* is increasingly important, yet relevant educational offers in Switzerland and worldwide remain limited. Such training opportunities are crucial as engaging effectively at the science-policy interface requires specialized skills that go beyond traditional academic training and are essential for creating science-informed policies to address complex local and global challenges. The Swiss Young Network for Science Policy and Diplomacy (→ SYNESPOD) of the Swiss Young Academy (> SYA), in collaboration with the Geneva Science-Policy Interface (→ GSPI) and the → Franxini Project of → Reatch, considered educational offers in science for policy and diplomacy available for early-career academics, including courses, workshops, and webinars in Switzerland, across Europe, and beyond. Without being comprehensive, this report provides insights for academics and others interested in building capacity in science advice.

# Switzerland's Science for Policy and Diplomacy Environment

The strategic positioning of Switzerland as a neutral platform for dialogue and cooperation makes it uniquely suited for addressing global challenges through scientific and diplomatic means. This is enabled by the Swiss Federal Offices and Commissions, including the Swiss State Secretariat for Education, Research, and Innovation (→ SERI), the central body coordinating national science policy, as well as international collaboration for research, education, and innovation endeavours. Beyond, → Swissnex, a cooperative initiative of the SERI and the Swiss Federal Department of Foreign Affairs, plays a key role in connecting Switzerland with various global partners in education, research, and innovation. It expands scientific reach by promoting innovation and knowledge exchange and facilitates a network between Swiss researchers and the international community.

Switzerland hosts numerous international organizations that position Geneva as a central hub for global diplomacy and scientific collaboration. This unique environment, → International Geneva, actively contributes to the interface of science and policy globally and on multilateral issues. Recognizing the critical role of scientific evidence in policymaking within International Geneva and beyond, the Swiss Federal Department of Foreign Affairs (→ FDFA) has enhanced its focus on science diplomacy in recent years, for example, by supporting the Geneva Science-Policy Interface (→ GSPI), which is hosted at the University of Geneva and backed by leading Swiss and European research institutions. Founded in 2018 with the underlying vision that multilateral policy decisions need to be informed by scientific evidence, the GSPI facilitates engagement and collaborations between academic actors and international policy professionals within the Geneva U.N. ecosystem, including through an annual → call for projects. It also works to enhance science-policy engagement through a series of capacity-building workshops and week-long programmes aimed at researchers, policy professionals, and knowledge brokers. Another initiative receiving FDFA support is the Geneva Science and Diplomacy Anticipator (→ GESDA). Founded in 2019, GESDA aims to anticipate technological advancements to inform global governance and policymaking for emerging challenges. The related GESDA Science and Diplomacy Week Immersion Program brings professionals across sectors toward bridging science, diplomacy, and policymaking, enabling a new form of anticipatory diplomacy to address global issues.

At the national level, the Swiss Academies of Arts and Sciences (→ a+), including the Swiss Academy of Sciences (→ SCNAT), provide the largest scientific network in Switzerland. A+ strengthens the Swiss science-policy interface through its mandate for advising policymakers and broader society on knowledge-dependent and socially relevant issues. These efforts are complemented by the work of the Swiss National Science Foundation (→ SNSF), the national research funding body contributing to science (for) policy, by encouraging the communication of research findings to policymakers and the

<sup>\*</sup> **Note**: the definitions of science for policy and science (in/for) diplomacy considered in this report are based on the recognized terminology defined in ref.1–3 The discussion on these terms goes beyond the scope of this report.

public, as well as supporting science advice initiatives and capacity-building → workshops. These and other initiatives set the stage for ongoing efforts to strengthen the science-policy interface and contribute to effective global governance and sustainable development. In this context, building the capacity for science advice from early-career stages is vital.

# Science for Policy and Diplomacy Education in Switzerland

With regards to science for policy and diplomacy within higher education institutions (HEIs), the Swiss Federal Institutes of Technology, ETH Zurich and EPFL, stand out. With the Science Policy Interface (→ SPI) unit at ETH Zurich, they have a dedicated contact point that also actively contributes to science advice capacity building through offering → programs and courses. Furthermore, the MSc in Science, Technology, and Policy (→ STP) at ETH Zurich was designed specifically for students with science backgrounds interested in exploring the interface of science and policy. Through its multidisciplinary curriculum, students learn to apply policy analysis to complex societal challenges, blending scientific understanding with policymaking. Additionally, ETH Zurich offers a Master of Advanced Studies, as well as a Certificate of Advanced Studies in Technology and Public Policy (→ MAS TPP), which aim to equip participants with a comprehensive set of skills in public policy analysis to address societal challenges. Furthermore, ETH Zurich and EPFL organize → summer schools on science and policy, stimulating engagement in science advice. HEIs on the cantonal level that actively contribute to education at the science-policy interface are the University of Luzern, the University of Geneva's Global Studies Institute (→ GSI), and the Institute for Environmental Sciences (→ ISE). The Zurich-Basel Plant Science Center – a joint initiative of the ETH Zurich, the Universities of Zurich, and Basel - offers a unique → PhD programme in science policy. They also regularly publish open-access → science policy workbooks for researchers.

Finally, impactful grassroots initiatives have emerged over the past decade. With the Franxini Project, the Swiss think-and-do tank → Reatch focuses on effective

decision-making at the science-policy interface and acts as a mediator in the dialogue between science, politics, and society. Their offering comprises two distinct approaches: the → Franxini further education courses last from half a day to three days and provide researchers with a theoretical and practical understanding of Swiss politics and of how, where, and when they can get involved at the science-policy interface; the → Franxini Hive stimulates exchange and effective collaboration between stakeholders from science, politics, and civil society tackling specific topics by creating stakeholder platform events. Furthermore, the → Franxini Project offers personalized coaching to projects that want to transfer scientific insights to policymakers and civil society actors. Similarly, → foraus, a Swiss think-tank with a focus on foreign policy, has contributed to shaping foreign policy while offering capacity-building. We provide a brief summary of other representative educational offers in Table 1 (in red).

# Science for Policy and Diplomacy Education in Europe

European institutions offer a variety of educational programs and initiatives focused on the intersection of science, policy, and diplomacy to foster expertise in science advice. In particular, the European Commission's Joint Research Centre (→ JRC) offers a variety of training programs for researchers and policymakers, such as workshops, fellowships, and other initiatives, including the opportunity for doctoral students to work on policy-relevant research projects. Furthermore, the EU Science Diplomacy project "Using Science for/in Diplomacy for Addressing Global Challenges" (→ S4D4C) and the emerging EU Science Diplomacy Alliance aim to provide a more structured approach to science diplomacy and enhance the capacity to use scientific knowledge in diplomacy. This involves training programs, workshops, and an → online course, covering key concepts, practical skills, and real-world case studies to provide an introduction to the field of science diplomacy. Similarly, the European Innovation Council (→ EIC) and the European Institute for Innovation and Technology (→ EIT), as well as the overarching research and innovation framework programme Horizon Europe, offer training and support for

researchers in science for policy and diplomacy, among other topics. Furthermore, there are other initiatives, such as the European university alliance  $\rightarrow$  ENLIGHT, that focus on building scientists' capacity in the area of research impact as well as further developing best practices on how to evaluate impact. Their  $\rightarrow$  repository of good practices on research impact provides publicly available resources. Finally, All European Academies ( $\rightarrow$  ALLEA) is a European Federation of Academies of Sciences and Humanities that works to support evidence-based policymaking at national and European levels through activities including independent science advice, facilitating interdisciplinary dialogues, and organizing workshops, conferences, and webinars.

Some of these and other programs available in Europe are summarised in Table 1 (in orange).

# Other Relevant Science for Policy and Diplomacy Education Platforms Worldwide

In addition to education programs in Switzerland and Europe, there are other opportunities for building capacity in science advice with a global perspective (Table 1, violet). For instance, the International Network for Government Science Advice (→ INGSA) supports various training programs, case studies, and regional workshops on science advice. Similarly, the International Science Council (→ ISC), closely linked with the U.N. and related institutions, remains committed to strengthening the voice of science in global policy, further contributing to capacity building worldwide. The Science Diplomacy Center (→ SDC) at the Inter-American Institute for Global Change Research (→ IAI) also organizes trainings and workshops to bolster science-policy dialogue and enhance collaboration in the Americas. Finally, the American Association for the Advancement of Science (→ AAAS) has a long tradition of training programs for scientists. The World Academy of Sciences (→ TWAS), together with the AAAS, offers a yearly → course on science diplomacy that invites participant pairs - a scientist and a policymaker - to partake in collaborative training to build skills

and gain knowledge on how science can be used to address global challenges and inform international policy.

# Summary and Outlook

Current trends in science (for) policy highlight the growing importance of bridging the gap between science and policy, particularly in areas such as environmental sustainability, public health, and digital transformation. This is reflected in the emergence of educational programs at the interface of science, policy, and diplomacy. By fostering international collaborations, establishing platforms, and integrating scientific evidence into policymaking, Switzerland can take on a leading role in addressing global challenges. The ongoing efforts and future directions in science for policy and diplomacy will contribute to a more interconnected and scientifically informed governance landscape at all levels. Looking forward, the Swiss science-policy interface ecosystem will likely further promote the integration of scientific insights into policymaking and diplomacy, enhance international collaborations, and further the development of new platforms to address emerging global issues. Toward this goal, the emergence of educational platforms for early-career professionals and scientists will play a pivotal role in building capacity for science advice. The brief overview of the current educational offers at the interface of science, policy, and diplomacy (Table 1) provides insights into opportunities to build such capacities in the community for the present and the future.

### Reference

- $^{1}$  ightarrow "New Frontiers in Science Diplomacy." 2010. London: The Royal Society.
- <sup>2</sup> → P. Gluckman, "The Science-Policy Interface." Science 2016, 353, 969.
- 3. → P. Gluckman, A. Bardsley, and M. Kaiser. "Brokerage at the Science-Policy Interface: From Conceptual Framework to Practical Guidance." Humanities and Social Sciences Communications 2021, 8, 1.

Table 1. Summary of a selection of educational offers in science for policy and diplomacy

Program	Institution	Format	Location	Cost	Eligibility
Switzerland					
→ PhD Program in Science & Policy (12 ECTS)	ETH Zurich	PhD Program/ courses	Zurich	Free	ETH PSC PhD students, external for a fee
→ Master in Science, Technology and Policy (MSc ETH STP)	ETH Zurich	Masters degree	Zurich	Paid*	Bachelor degree holder in natural sciences or engineering
→ Science and (Global) Policy- making	ETH Zurich Communica- tion Academy	Short courses	Zurich	Free	PhD students, postdocs, senior scientists and professors at ETH Zurich, PSI, Empa, WSL and Eawag
→ Summer School in Science and Policy	ETH Zurich - EPFL	Summer school	Switzerland	Free	PhD students and other registered participants
→ Science-Policy Interfaces and Global Challenges	EPFL, GSPI	Short Course	Switzerland	Free	PhD students from the EPFL PhD Excellence Program
→ Swiss School of Public Health PhD program	University of Lucern, SLHS	PhD Program	Lucerne; Bern	Paid	SLHS PhD students
→ Evidence Informed Policy and Stakeholder Dialogue	University of Lucern, SLHS	Short course	Lucerne	N/A	UofL PhD students, Postdocs, Faculty
<ul> <li>→ Writing for Policy-Makers:</li> <li>Developing Policy Briefs to</li> <li>Support Decision-Making</li> </ul>	University of Lucern, SLHS	Short course	Lucerne	N/A	UofL PhD students, Postdocs, Faculty
→ Franxini Boot Camp	Reatch, partner institutions	Short course	Location of the partner institution	Paid	Partner institution's researchers of all career levels; German, English or French language
→ SNSF Politics Course for Researchers	Reatch	Short course	Bern	Free	Researchers (at least PhD candi- date) based in Switzerland; German, French, and English language
→ Policy skills: Building Successful Multi-Stakeholder Partnerships	Polisync	Short course	Online or Geneva	Paid*	Open to anyone, designed for early career professionals
→ Policy Skills: Learn Data Visualisation	Polisync	Short course	Online	Paid*	Open to anyone, designed for early career professionals
→ Policy Skills: Transform Research into Policy Impact	Polisync	Short course	Online	Paid*	Open to anyone, designed for early career professionals
→ Geneva Summer School: Listen, Engage, Connect: Explore The Science Communication Arena	UNIGE GSS	Summer school	Geneva	Paid*	Bachelor, masters, and PhD students (any university), junior professionals
→ Geneva Summer School: Science & Policy for Environmental Action	UNIGE GSS	Summer school	Geneva	Paid*	Early career researchers (at least PhD candidate), policy professionals, knowledge brokers
→ International Geneva Study Trip	UNIGE, GSPI	Short course	Geneva	Free*	Early/Mid- career researchers (post-doc, lecturers, professors)
→ Science in Diplomacy Lab (SciDLab)	UNIGE, ETH Zurich	Research program	Geneva	Free*	Scientists across disciplines (post-doc, lecturers, professors)
→ Diplomacy, Negotiation and Policy	IHEID	Course with Diploma	Geneva (hybrid)	Paid	Bachelor's degree, 8+ years of professional work experience, English proficiency
→ Science-Policy Interface for Scientists: An (Inter)national Perspective	SYNESPOD, GSPI, Reatch	Short course	Bern	Free	Early career researchers
Science Diplomacy Immersion Week	GESDA	Short course	Geneva	Paid*	Young professionals

Program	Institution	Format	Location	Cost	Eligibility
Europe		•			•
→ Collaborative Doctoral Partnership Program	JRC	PhD exchange program	JRC site (TBC)	Salaried Position	PhD student in relevant field at partner HEI/university
→ Evidence for Policy Schools	JRC	Short course	Online	Free	For scientists and policymakers
→ E-Learning Resources	JRC	Short course	Online	Free	Publicly available
→ Dual Degree in Environmental Science and Policy with Sorbonne Université	Sciences Po	Masters degree	Paris, FR	Paid*	Bachelors in science or engineering, English proficiency
→ Evidence-Based Policy Research Methods	UNU-Merit	Course	Online or Maastricht, NL	N/A	Designed for working professionals
→ Science Diplomacy in Times of Conflict (2023)	Sciences Po	Short course	Paris	Free	N/A
→ Knowledge Brokers Academy	UCL	Program	London, UK	N/A	UCL academic and professional services staff
→ Generating Evidence for Policy and Practice (2022)	STEPPS	Short course	London, UK	Paid	Policy workers, academics, researchers
→ Knowledge Brokering between Research and Government (2021)	STEPPS	Short course	Online	Paid	Policy workers, academics, researchers
→ Multilateralism Training	UNITAR	Various	Various	Various	Various
<ul> <li>→ Public Policy Engagement Online Series</li> </ul>	UCL	Short course	Online	Free	Publicly available
→ European Science Diplomacy Online Course	S4D4C	Short course	Online	Free	Publicly available
→ Science and Technology Diplomacy Summer School	SciTech DiploHub	Summer school	Barcelona, ES	Paid	Graduate degree holder, 3-5 years of experience in research, international relations or project management

Program	Institution	Format	Location	Cost	Eligibility
World					
→ Public Leadership Credential: Evidence for Decisions	Harvard Ken- nedy School	Short course	Online	Paid	Bachelor degree holder with 5+ years work experience, English proficiency
→ Public Leadership Credential: Policy Design and Delivery	Harvard Ken- nedy School	Short course	Online	Paid	Bachelor degree holder with 5+ years work experience, English proficiency
→ Diplo Module on Science Diplomacy	Diplo Founda- tion	Short course	Online	Paid	Diplomacy, international organisa- tions, academia, or NGO profes- sionals
→ Short Learning Programme: Practices of Evidence- Informed Decision-Making	Univ. of Johan- nesburg	Course	Johannes- burg, SA (hybrid)	Paid	Bachelor's degree holder with previous exposure to evidence-informed decision making
→ Science, Technology and Public Policy Course	Australian National Univ.	Graduate course	Canberra, AUS or online	Paid	
→ Transdisciplinary Library	IAI	Various resources	Online	Free	Publicly available
→ AAAS-TWAS Science Diplomacy Course	TWAS	Short course	In-person (Variable)	Free	Early career scientist and policymaker living/working in same country

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# **Swiss Young Academy**

The Swiss Young Academy is a network for early career academics and provides an inspiring environment for inter- and transdisciplinary exchange and innovative ideas. The Swiss Young Academy belongs to the network of the Swiss Academies of Arts and Sciences.

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