

Foreign policy and science: Switzerland actions to address the climate crisis effects in the arctic through the arctic council

Ferga Aristama^{1*}, and Fredy Buhama Lumban Tobing²

¹Universitas Indonesia, Depok, Indonesia, email: ferga.aristama@ui.ac.id

²Universitas Indonesia, Depok, Indonesia, email: fredyblt@ui.ac.id

*Corresponding author

Article Info

Article history:
Submission: 2023-05-07
Accepted: 2023-06-04
Published: 2023-06-09



This is an open access article distributed under the CC BY-SA 4.0 license

Copyright © 2023, the author(s)

ABSTRACT

As a landlocked mountainous country located apart from the Arctic Region and like to have limited social-economy material advantage, Switzerland's action to actively and continuously participate in the Arctic Council is an interesting topic to discuss. Existing literature has captured Switzerland's actions to fight against the climate crisis, yet missed to address why it carried to participate in the Council amidst likely-limited materialistic returns. Deploying Foreign Policy Analysis and Resources Based Theory of Soft Power as an analytical approach and qualitative approach, this study argues that Switzerland's Foreign Policy which specifically emphasizes action in climate protection and global environment is the reason behind its active participation in various global communities, including in the Arctic Council. Interestingly, Switzerland utilizes science as an instrument of diplomacy and constructs its identity as a global science policy advisor in the environmental sector. Thus, the global climate crisis issues have been an opportunity for Switzerland as a small power to enhance its bargaining position in international politics through science as a soft power.

Keywords:

arctic council; foreign policy; science; Switzerland

Please cite this article in APA style as:

Aristama, F., & Tobing, F. B. L. (2023). Foreign policy and science: Switzerland actions to address the climate crisis effects in the arctic through the arctic council. *Jurnal Inovasi Ilmu Sosial dan Politik (JISoP)*, 5(1), 14–22. <https://doi.org/10.33474/jisop.v5i1.19746>

INTRODUCTION

The climate crisis issue has emerged as a non-military threat to global security. It is transnational and requires global community involvement to take charge. This issue falls under the category of non-traditional security, which is related to human welfare, and needs to put an end to cooperation between state and non-state actors. Such cooperation is relevant due to the vulnerability factors in identifying the global climate crisis issues that tend to be unclear. Hence, cooperation in the Arctic Council could be preferred. It promotes sustainable development and environmental protection in the Arctic Regions, especially

from the threat of melting polar ice caps to human welfare. The threat has turned into a vulnerability, leading to rising sea levels and a change in geographical land where humans live in it (Bintanja, 2018).

The Arctic Council was established in 1996, embarked by the Ottawa Declaration. It promotes cooperation, coordination, and interaction among the states and non-state actors, involving the indigenous people and arctic inhabitants to address Arctic-related issues. The Arctic States consisted of Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden, and The United States. Additionally, several other states participate in the council as observers, sharing their expertise. The observer states include China, France, Germany, Italy, Japan, Netherlands, Poland, India, South Korea, Singapore, Spain, Switzerland, and the United Kingdom. The observer position is important due to its ability to influence the forum by attending the meetings, making relevant contributions through their engagement, proposing projects, and writing and submitting statements.

Among all the states and observers joining the council, Switzerland's involvement is an outlier. Although coastline ownership is not a requirement to join, it is the only non-coastal state, which assumes having no interest in guarding its shore from the sea level rise. Moreover, it is a land-locked country, with the land most likely covered by mountains and territories not even directly adjacent to the Arctic area. Despite the fact that these mountains are covered with ice threatened to melt away, Switzerland's vulnerability score of 0.255 was the lowest in the world, based on the ND-Gain Country Vulnerability 2020 (Country Index, n.d.).

Furthermore, the economic benefits of Switzerland's membership in the Arctic Council could be very limited. First, the consensus within the council had agreed to limit the economic exploration in the area, indeed, maintain sustainable development and protect the environment in the Arctic region. Second, the contestation among the great powers, especially the United States and Russia, made the political maneuver in the forum more complicated (Sliwa & Aliyev, 2020). Thus, the cooperation would not always benefit all the members as each individual member pursues its own national interest that does not always align with the common interest (Anadza, 2019).

Recently, Switzerland has joined multilateral cooperation such as the United Nations to address climate crisis issues within the United Nations Framework Convention on Climate Change. It had joined the implementation towards the achievement of emission reductions and removals. Switzerland also actively participated in previous climate dialogues. Thus, its concerns about the global climate crisis had been actually carried through more extensive networks.

Given that background, Switzerland's preference to participate in the Arctic Council, amidst likely-limited materialistic returns, is an interesting topic to discuss. Thus, this study questions, "Why did Switzerland still need to participate in the Council?". This study aims to understand the reason behind Switzerland participation in the Arctic Council, amidst likely-limited materialistic returns. It objects to analyze its foreign policy principle to understand its involvement and active participation in the Arctic Council. Therefore, this study deploys Foreign Policy Analysis approach by Hudson & Day (2019), focusing on the immaterial factors to examine. This study argues that Switzerland's involvement is to construct self-image as a global science policy advisor in the forum, utilizing Science as a tool of diplomacy. This argumentation departs from the Fitriani et al. (2016) identification of the main cooperation focus in the Research and Development (RnD). This study also deploys the Resource Based Theory of Soft Power (Lee, 2009) as an analytical approach.

Existing literature has captured Switzerland's actions to fight against the climate crisis. First, they discussed its active promotion of the Kyoto Protocol to protect the global

environment (Casado-Asensio & Steurer, 2016) and its involvement as a scientific policy advisor on environment issues to the global community (Pfister, 2019). Second, the domestic dynamics associated with the policy formulation process related to environmental protection, such as energy transition (Desthieux & Joerin, 2022; Ingold & Fischer, 2014; Kammermann & Dermont, 2018; Lüth & Schaffer, 2022; Marcucci & Turton, 2012; Panos & Kannan, 2018; Sager et al., 2014; Seidl et al., 2019), forestry (Creutzburg & Lieberherr, 2021), and adoption of the Kyoto Protocol norms (Casado-Asensio & Steurer, 2016) as well as its implementation through multi-stakeholder collaboration (Ingold & Fischer, 2014) and the utilization of science (Hermann et al., 2017). Third, the reason behind Switzerland's participation to join global communities to fight against climate crisis effects (Seidl et al., 2019), includes social identity and society's risk perception (Creutzburg & Lieberherr, 2021; Kammermann & Dermont, 2018), protection of the Swiss Alps (Beniston, 2012; Vorkauf et al., 2021), reducing the impact of extreme climate change, ecosystems, infrastructure, health, and residents' livelihoods damage (Eriksen & Hauri, 2021; Savelsberg et al., 2018), and the protection of the tourism sector (Matasci et al., 2014).

Based on existing literature, the study on Switzerland's actions in addressing the effects of the climate crisis includes its international roles, the domestic dynamics of environment-related policy formulation and implementation, and the underlying reasons for Switzerland's actions in protecting global environment. Nonetheless, Switzerland's international role is an interesting topic to address. It could give more understanding about the contributions of small powers in international politics. Using the case study of Switzerland's actions in the Arctic Council, the small power role in international politics could carry through the non-traditional issue of environmental matters, using science as a tool of diplomacy. However, the discussion of the topic was limited. Thus, this study would contribute on this matter by two major significances. Academically, it contributes to describe Switzerland's action to address the non-traditional security issue using science as a tool of diplomacy, as a kind of small power contribution in the international politics issue. Practically, it contributes to the diplomacy practices for the small and medium powers in enhancing their bargaining positions in the international politic by utilizing science on foreign policy formulations and implementations, using the Switzerland experience in the Arctic Council.

This study is elaborated through four sections. The first section is an introduction, containing background, problems, scope, literature review, and purpose of writing. The second part discusses the methods for overcoming the problems addressed including the analytical approach and research subject description. Arguments containing research findings are presented in the third part of this study. This study ended with the fourth part containing recommendations and a summary of the study.

METHOD

This study adopts a qualitative approach through studying the relevant literature in acquiring knowledge. Bryman (2016) states that the method could be carried out by accessing private and public documents. This study exercises academic papers, books, and websites to overcome the addressed problem. This study's research subject is Switzerland, particularly its behavior to carry the participation in the Arctic Council amidst likely-limited materialistic returns.

As the analytical approach, this study deploys Foreign Policy Analysis approach by Hudson & Day (2019). Hudson & Day's model of analysis focuses on the nation's identity as the reason behind the state's decision in international politics. Furthermore, this study also deploys the Resource Based Theory of Soft Power (Lee, 2009). Lee's concept of soft power

states that soft power can be both cooperative and coercive, similar to hard power. Thus, it is useful for countries that may have limited hard resources, yet have the potential to develop soft resources. One of the goals of soft power is to improve the external security environment by projecting peaceful and attracting images of a country. Among the concepts of soft power, Lee's concept is still relevant due to its accordance with the reality that soft power can be both cooperative and coercive, and so can hard power. This definition considers that they are countries having limited in terms of hard resources but potentially develop soft resources. This study assumes the concept suits Switzerland's regard.

RESULT AND DISCUSSION

Switzerland Foreign Policy as a Foundation to Participate in the Arctic Council

Switzerland is an observer state in the Arctic Council. It formally joined the forum in 2017. This study argues that Switzerland's participation in the Arctic Council is closely related to its Foreign Policy Strategy 2016-2017 which stated, "the commitment to peace and security, and sustainable development and prosperity" as a foundation to actively and continuously participate in various international forums, including sustainable development related issues.

The policy mandated the Swiss government to work nationally and internationally with all relevant stakeholders to promote environmental protection, which particularly targets environmental protection. Moreover, the policy concerned with the implementation of the 2030 Agenda and global climate and environmental protection will be key, meaning global environment protection should be in line with its foreign policy agenda.

As an observer, Switzerland could contribute in the forum by working alongside the Arctic States. The contribution carried through its engagement in the Arctic Council primarily at the level of Working Groups, proposing projects through an Arctic State or a Permanent Participant, and submitting written statements at Ministerial meetings. Stefan Estermann, Head of the Sectoral Foreign Policies Division for Switzerland's Federal Department of Foreign Affairs, in an interview cited at Arctic Council Website ([Arctic Council, n.d.](#)) stated that the reason for Switzerland's global participation should be in line with its foreign policy objective, including in the Arctic Council. Furthermore, He stated that Switzerland's participation in the council allowed its promotion of dialogue between science and diplomacy. It explores Switzerland's long experience in research and development, especially on permafrost, ice, and glaciers. It was developed in the Swiss Alps back in the 19th century. Thus, there is an immaterial aspect targeted by Switzerland related to its foreign policy objective on Arctic Council's observer, that is an identity or self-image. [Hudson & Day \(2019\)](#) explained that the state's identity matters in determining decisions in international politics. It is carried through behaviors and actions to gain advantages, either intangible or tangible, from the external environment.

Switzerland's foreign policy objective accorded to the Federal Constitution of the Swiss Confederation Article 2 that the Swiss Confederation shall promote sustainable development. Furthermore, Section 4, Article 73 mandated the Confederation shall endeavor to achieve a balanced and sustainable relationship between nature and its capacity for renewal itself and the demands placed on it by the population.

Moreover, Switzerland's foreign policy strategy on climate change of 2016-2017 is part of its current development strategy 2017-2020 that integrates with its international cooperation. Since 2008, Switzerland has been implementing a separate global program on climate change and the environment in partner countries ([Ashraf et al., 2020](#)). It has continued until the current policy strategy of 2020-2023 which presents climate change as a challenge under the thematic priority of sustainability ([Ashraf et al., 2020](#)).

There are two permanent features of Switzerland's Foreign Policy (Graf & Lanz, 2013). Firstly, Switzerland's status as a small state can be traced back to its origins in 1291 when three valleys in central Switzerland united against the counts of Habsburg. While the modern states formed in 1848, this country was surrounded by great powers, thus its foreign policy sought to ensure a collective defense and neutrality at the same time. Second, the neutrality of its features of foreign policy relies on the consideration to prevent the country into alliances and wars. This principle has been used since the country's defeat in the Battle of Marignano in 1515 and in particular since the Thirty Years War in the 17th century, before receiving international recognition as a permanently neutral state at the Vienna Congress in 1815 (Graf & Lanz, 2013). As the foreign policy associated with different political groupings, Switzerland prevailed to promote peace and its role as an active 'mediator-integrator' (Graf & Lanz, 2013).

The dimension of peace has transformed, and so did Switzerland's Foreign Policy focus. The country has increasingly prioritized non-security issues such as environmental issues. Since Switzerland has promoted policy coherence for development since the mid-1970s, it has contributed to the integration of climate change and circular economy into foreign policies (Ashraf et al., 2020). It was also part of the strategy to tackle the migration crisis (Ashraf et al., 2020).

Switzerland Foreign Policy and Science Utilizing in the Arctic Council: Towards Global Science Policy Advisor in Environmental Sector

Switzerland's involvement in the Arctic Council is an interesting topic to be discussed. This study finds that the involvement turns out to be a contribution from a small power to international political issues. It utilized science as a source of soft power. Estermann, Head of the Sectoral Foreign Policies Division for Switzerland's Federal Department of Foreign Affairs, as cited on the Arctic Council Website (Arctic Council, n.d.) mentioned that Switzerland's involvement, as a small yet internationally active country, in the Arctic Council remains a peacefully managed space, open for scientific research for the benefit of all. Moreover, its participation acknowledges its expertise and interest aiming to advance scientific knowledge and limit the environmental impact and socio-economic consequences of changes in the Arctic. Being part of the council is also a way to recognize the work of its scientists in the field of polar and high-altitude research.

The exploration of the cryosphere has been the Switzerland's expertise. It has been proved by its years of experience and a long tradition in the exploration, as well as heavily engaged in the studies of the Arctic Region (Jorio, 2021). Its contribution to the council has been well-recognized by sharing its scientific know-how on Alpine and polar regions (Jorio, 2021). This contribution has raised its significance in the discussions and decisions in the Council. First, it has shown by its active engagement in the working groups through the Arctic Monitoring and Assessment Programme (AMAP), the Conservation of Arctic Flora and Fauna (CAFF), the Sustainable Development Working Group (SDWG), and expert groups such as the AMAP Expert Group on Short-Lived Climate Forcers. Second, In a plenary session at the Arctic Circle Assembly 2019 in Iceland, Switzerland outlined the broad strokes of the its approach to the Arctic, Swiss Polar Policy, by six pillars: supporting research institutions, promoting international scientific cooperation, leveraging private sector capacity, engaging in the international dialogue in the Arctic, addressing climate change, and showing solidarity with Indigenous peoples (Sharp, 2019). The goal was to support a solid political framework to face the Arctic challenges. Switzerland's presence was the representative of the vertical Arctic, drawing parallels between the high altituded of the Alps and the Arctic (Sharp, 2019).

Furthermore, Switzerland's participation in the Council is supported by its capacity for research and development on the environment and energy-related issues. From 1996 to 2021, Switzerland has produced 6,683 scientific papers on the environment and renewable energy, indexed by Scopus. It places in the 17th position worldwide, with a citation per document of 35.71 and an H-Index of 194. Additionally, the experts regularly contributed to various groups of the Arctic Council (as mentioned in Table 2) through The Swiss Committee on Polar and High Altitude Research (SCPHAR) of the Swiss Academies of Arts and Sciences, which is coordinated by the Federal Department of Foreign Affairs (FDFA), in collaboration with other ministries, in particular with the Federal Department of Economic Affairs, Education and Research (EAER) and the Federal Department of the Environment, Transport, Energy and Communications (DETEC). It was established in 1851. During the 1990s, the association “was complemented by the expertise of two centers of competence that support the academies’ endeavors with their specific briefs on technology assessments and dialogue between science and society” (Pfister, 2019).

Table 1. The Switzerland Science Reputation in Scopus Publication, 1996-2021

Category	Number of Documents	Citation per Document	H-Index	Ranking Worldwide (H-Index)
Renewable Energy, Sustainability and the Environment	6.683	35.71	194	17

Source: Scopus Website (SJR, n.d.)

Table 2. The Switzerland Contribution in The Arctic Council

No	The Switzerland Contribution through Science	Description
1	Expert Group in Support Of Implementation of The Framework For Action On Black Carbon And Methane (EgbcM)	Assessing the implementation progress of The Framework For Action On Black Carbon and Methane (EgbcM)
2	Actions For Arctic Biodiversity	Implementing the Recommendation of the Actions For Arctic Biodiversity
3	Terrestrial Biodiversity Monitoring	Working with all related-parties to align and increase terrestrial biodiversity monitoring
4	Air Pollution, With A Focus On Short-Lived Climate Forcers (Slcfs)	Collecting New data and information about emission trends

Source: Arctic Council Website (Arctic Council, n.d.)

By describing Switzerland's involvement and participation, it could discover that science has been a tool to implement foreign policy objectives. Deploying the Resource Based Theory of Soft Power put forward by Lee (2009), the utilization aims to increase its soft power. The soft power could be utilized by the small power, Switzerland, to increase its bargaining position on the global stage. Soft power is the power to construct the preferences and images of self and others through ideational or symbolic resources that lead to behavioral changes in others (Lee, 2009). Switzerland's engagement with the Arctic Council as a Global Science Policy Advisor in the Environmental Sector reflects its diplomatic approach in assisting societies to address real-world challenges by providing scientific knowledge at the science-policy interface, facilitated by the Swiss Academies of Arts and Sciences. There are six practices on the production and dissemination of knowledge into policy carried out by Switzerland (Pfister, 2019). First, a scientific policy advice is a long-term engagement. Second, compromising the independence, credibility, and quality of the scientific evidence have to be compromised by the academies. Third, science policy advice should be making the best scientific evidence, available offering policy options, and gauging

the expected consequences. Fourth, scientific advice should be relevant for developments at the policy level. Fifth, mutual understanding is key in a dialogue between science and society. Sixth, the publication of a report, statement, or the like should not be the end of the story for its messages to have a meaningful impact.

Ashraf et al. (2020) stated that diplomacy, in collaboration with science, is one of key importance for Switzerland's bilateral and multilateral relations. Thus, it has given a chance to influence forums on unilateral policy (Ashraf et al., 2020). Moreover, it also contributed to domestic matters due to its focus on environmental issues towards a more circular economy strengthening the country economy (Ashraf et al., 2020).

CONCLUSION

Based on the given explanation, this study concludes that Switzerland's foreign policy objective, which had accorded to the Federal Constitution of the Swiss Confederation and emphasized the global environment and climate protection, is the reason behind its decision to join the Arctic Council. This decision is preferred while other cooperations in similar forums and organizations had been carried. It has also considered its geographical condition and limited materialistic benefits offered by the cooperations. Furthermore, identity is an important variable that determines Switzerland's decision. Switzerland shapes its identity as a global science policy advisor in environmental sector by its active participation in the Working Group through advance scientific knowledge in the field of polar and high-altitude research. It has been supported by its capacity for research and development on the environment and energy-related issues. Furthermore, Switzerland has also contributed to shape a solid political framework in facing the Arctic challenges by presenting Swiss Polar Policy, to the Forum.

Moreover, using Hudson & Day's approach of foreign policy analysis, this study argues that this concept is relevant to understand the Switzerland's action. Interestingly, Switzerland utilizes science as an instrument of diplomacy and constructs its identity as a global science policy advisor in the environmental sector. It has taken the role as a peacemaker, derived by the foreign policy features, "neutrality" and status as a small state. The use of science has enhanced Switzerland's position when discussing the global climate crisis in the Arctic Council. It emphasizes the potential of soft resources development as stated by Lee. This study contributes to understanding the small power contribution in international politics, using science as a tool of diplomacy, in environmental issues.

This study recommends the practitioners and policy makers in other small and middle power states consider involving science as a tool of diplomacy to enhance their contributions to international politics, such as Indonesia (Aprianto, 2020), Iran (Riazi et al., 2019), as well as Turkey, Saudi Arabia, and Malaysia (Noruzi et al., 2020). It could effectively improve the state bargaining position in certain issues, such as the environment. The most prior prerequisite is to strengthen the capability of scientific institutions and the political commitment to align the science outcomes to the policy.

Lessons from the Switzerland have shown six practices on production and dissemination of knowledge into policy: (1) the consideration that scientific policy advice is a long-term engagement; (2) compromising the independence, credibility, and quality of the scientific evidence have to be compromised by the academies; (3) science policy advice should be making the best scientific evidence, available offering policy options, and gauging the expected consequences; (4) scientific advice should be relevant for developments at the policy level; (5) mutual understanding is key in a dialogue between science and society; (6) the publication of a report and statement or the like should not be the end of the story for its messages to have a meaningful impact.

REFERENCES

- Anadza, H. (2019). Dominasi Kedaulatan Negara dalam Integrasi Pemerintahan Uni Eropa: Penolakan Yunani Terhadap Pengungsi Syria. *Jurnal Inovasi Ilmu Sosial Dan Politik (JISoP)*, 1(2), 157–166. <https://doi.org/10.33474/jisop.v1i2.4803>
- Aprianto, A. (2020). Sains sebagai Sumber Soft Power Indonesia [Science as a Source of Soft Power for Indonesia]. *Jurnal Politika Dinamika Masalah Politik Dalam Negeri Dan Hubungan Internasional*, 11(1), 85–105. <https://doi.org/10.22212/jp.v11i1.1444>
- Arctic Council. (n.d.). *Switzerland | Arctic Council*. <https://arctic-council.org/about/observers/switzerland/>
- Ashraf, N., Knaepen, H., Seters, J. van, & Mackie, J. (2020). The integration of climate change and circular economy in foreign policies. *Ecdpm*. <https://ecdpm.org/work/the-integration-of-climate-change-and-circular-economy-in-foreign-policies>
- Beniston, M. (2012). Impacts of climatic change on water and associated economic activities in the Swiss Alps. *Journal of Hydrology*, 412–413(4), 291–296. <https://doi.org/10.1016/j.jhydrol.2010.06.046>
- Bintanja, R. (2018). The impact of Arctic warming on increased rainfall. *Scientific Reports*, 8(1), 1–6. <https://doi.org/10.1038/s41598-018-34450-3>
- Bryman, A. (2016). *Social Research Methods* (5th ed.). Oxford University Press.
- Casado-Asensio, J., & Steurer, R. (2016). Mitigating climate change in a federal country committed to the Kyoto Protocol: how Swiss federalism further complicated an already complex challenge. *Policy Sciences*, 49(3), 257–279. <https://doi.org/10.1007/s11077-016-9247-z>
- Country Index. (n.d.). *Notre Dame Global Adaptation Initiative*. <https://gain.nd.edu/our-work/country-index>
- Creutzburg, L., & Lieberherr, E. (2021). To log or not to log? Actor preferences and networks in Swiss forest policy. *Forest Policy and Economics*, 125, 1–12. <https://doi.org/10.1016/j.forpol.2021.102395>
- Desthieux, G., & Joerin, F. (2022). Urban planning in Swiss cities has been slow to think about climate change: why and what to do? *Journal of Environmental Studies and Sciences*, 12(4), 692–713. <https://doi.org/10.1007/s13412-022-00767-9>
- Eriksen, C., & Hauri, A. (2021). Climate Change in the Swiss Alps. *CSS Analyses in Security Policy*, 290, 1–4. <https://doi.org/10.3929/ETHZ-B-000496457>
- Fitriani, E., Mantong, A. W., Intarti, Y. R., Kusumasomantri, A. R., & Tamzil, C. F. (2016). *Konflik dan Kerja Sama di Kutub Utara dalam Perspektif Indonesia*. PT. Raja Grafindo Persada.
- Graf, A., & Lanz, D. (2013). Conclusions: Switzerland as a paradigmatic case of small-state peace policy? *Swiss Political Science Review*, 19(3), 410–423. <https://doi.org/10.1111/spsr.12048>
- Hermann, A. T., Hogl, K., & Pregernig, M. (2017). Science–policy interactions in Austrian, Dutch, and Swiss climate policy: a comparative account. *Journal of Environmental Policy & Planning*, 19(2), 168–182. <https://doi.org/10.1080/1523908X.2016.1180238>
- Hudson, V. M., & Day, B. S. (2019). *Foreign Policy Analysis Classic and Contemporary Theory* (3rd ed.). Rowman & Littlefield.
- Ingold, K., & Fischer, M. (2014). Drivers of collaboration to mitigate climate change: An illustration of Swiss climate policy over 15 years. *Global Environmental Change*, 24, 88–98. <https://doi.org/10.1016/j.gloenvcha.2013.11.021>
- Jorio, L. (2021). Switzerland has a role to play in the Arctic. *SWI Swissinfo.Ch*. https://www.swissinfo.ch/eng/business/rotte-commerciali-e-risorse_switzerland-has-a-role-to-play-in-the-arctic/46348358
- Kammermann, L., & Dermont, C. (2018). How beliefs of the political elite and citizens on

- climate change influence support for Swiss energy transition policy. *Energy Research & Social Science*, 43, 48–60. <https://doi.org/10.1016/j.erss.2018.05.010>
- Lee, G. (2009). A theory of soft power and Korea's soft power strategy. *Korean Journal of Defense Analysis*, 21(2), 205–218. <https://doi.org/10.1080/10163270902913962>
- Lüth, M., & Schaffer, L. M. (2022). The electoral importance and evolution of climate-related energy policy: evidence from Switzerland. *Swiss Political Science Review*, 28(2), 169–189. <https://doi.org/10.1111/SPSR.12520>
- Marcucci, A., & Turton, H. (2012). Swiss Energy Strategies under Global Climate Change and Nuclear Policy Uncertainty. *Swiss Journal of Economics and Statistics*, 148(2), 317–345. <https://doi.org/10.1007/BF03399369/METRICS>
- Matasci, C., Kruse, S., Barawid, N., & Thalmann, P. (2014). Exploring barriers to climate change adaptation in the Swiss tourism sector. *Mitigation and Adaptation Strategies for Global Change*, 19(8), 1239–1254. <https://doi.org/10.1007/S11027-013-9471-1/FIGURES/4>
- Noruzi, E., Kushki, R. M., & Mashayekh, J. (2020). Iran and Strategic Multilateralism Based on Science Diplomacy : A Comparative Study of the Presence of Iran, Turkey, Saudi Arabia and Malaysia in International Science and Technology Organizations. *Political Science*, 23(89), 121–158. <https://doi.org/10.22081/psq.2020.69263>
- Panos, E., & Kannan, R. (2018). Challenges and opportunities for the swiss energy system in meeting stringent climate mitigation targets. *Lecture Notes in Energy*, 64, 155–172. https://doi.org/10.1007/978-3-319-74424-7_10/COVER
- Pfister, R. (2019). Scientific Policy Advice in Switzerland: A Case Study on Climate Change and General Insights. *European Review*, 27(1), 33–40. <https://doi.org/10.1017/S1062798718000492>
- Riazi, S. A., Baghestan, A. G., Ideris, A., Khaniki, H., Akhtari-Zavare, M., & Farahmand, E. (2019). Science and Technology Diplomacy and the Power of Students: The Case of Iranian Student in Malaysia. *Pertanika Journal of Social Science and Humanities*, 27(1), 649–662. <http://www.pertanika.upm.edu.my/>
- Sager, F., Bürki, M., & Luginbühl, J. (2014). Can a policy program influence policy change? The case of the Swiss EnergieSchweiz program. *Energy Policy*, 74, 352–365. <https://doi.org/10.1016/j.enpol.2014.07.005>
- Savelsberg, J., Schillinger, M., Schlecht, I., & Weigt, H. (2018). The Impact of Climate Change on Swiss Hydropower. *Sustainability (Switzerland)*, 10(7). <https://doi.org/10.3390/su10072541>
- Seidl, R., Wirth, T. von, & Krütli, P. (2019). Social acceptance of distributed energy systems in Swiss, German, and Austrian energy transitions. *Energy Research & Social Science*, 54, 117–128. <https://doi.org/10.1016/j.erss.2019.04.006>
- Sharp, G. (2019). The Swiss Arctic Policy Draw Parallels Between the High Altitude of the Alps and the Arctic. *High North News*. <https://www.highnorthnews.com/en/swiss-arctic-policy-draw-parallels-between-high-altitude-alps-and-arctic>
- SJR. (n.d.). *International Science Ranking*. <https://www.scimagojr.com/countryrank.php>
- Sliwa, Z., & Aliyev, N. (2020). Strategic Competition or Possibilities for Cooperation Between the United States and Russia in the Arctic. *The Journal of Slavic Military Studies*, 33(2), 214–236. <https://doi.org/10.1080/13518046.2020.1763132>
- Vorkauf, M., Marty, C., Kahmen, A., & Hiltbrunner, E. (2021). Past and future snowmelt trends in the Swiss Alps: the role of temperature and snowpack. *Climatic Change*, 165(44), 1–19. <https://doi.org/10.1007/s10584-021-03027-x>