

<https://doi.org/10.1038/s44168-024-00112-6>

Landing a global report on national territories: the reception of AR6 in France and Switzerland

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This article explores the reception of the IPCC reports on a national scale, focusing on the case of the Sixth Assessment Report (AR6) in France and Switzerland. It sheds light on the orchestration processes of national reception by the actors involved in the two science-policy interfaces, and introduces the theoretical concept of “landing” for the comparative analysis. Using mixed qualitative methods, it reveals that in both case studies, the domestic science-policy interactions stemming from the landing deviated significantly from expectations. Unusual actors different from the IPCC National Focal Points got involved in framing the conditions of the report’s domestic reception, and AR6 faced challenges when entering national Parliament. The results are discussed within the broader context of a global reflection on the imperative to enhance the dissemination channels of the IPCC scientific results to political audiences.

“It’s never too late to take action for the climate”. This was the title of an opinion column published by a group of twelve French IPCC experts from the Sixth Assessment Report (AR6) in April 2022, published in the French newspaper *Le Monde*. The group of experts challenged information provided by the *Agence France-Press* (AFP, the French News Agency), which stated that only three years remained to save humanity, as asserted in a Twitter post of April 4, 2022: “#BREAKING Emissions must peak before 2025 for ‘liveable future’: UN IPCC climate experts”. To the twelve French IPCC authors, this warning, added to the explicit mention of the ‘IPCC experts’, distorted reality. The sentence from AFP was inconsistent with the conclusions of AR6 and, even worse, “[was] contribut[ing] to obscure the key messages” of the report. In the experts’ views, the report did not establish a threshold beyond which there is nothing left to save, arguing that it is never too late to take action, and that “every fraction of a degree of warming avoided counts”.

Such ‘media reception’ issues are not new in the history of the IPCC. Similar deadline misstatements already emerged in the past following the Special Report on Global Warming of 1.5 °C (SR15), based on the circulation of a 12 years-deadline to avoid global climate disaster. In 2019, this message was relayed worldwide by the movement of youth climate school strikes and by the civil disobedience group Extinction Rebellion. Today, the reception of IPCC reports often gives rise to climate deadline rhetoric (or “deadline-ism”) by international or national policy actors. For instance, the publication of SR15 diffused in the Green New Deal proposal in the USA and a declaration of a climate emergency by the UK Parliament emerged following the report¹². In November 2021, the European Parliament also

approved a resolution declaring a climate and environmental emergency in Europe as well as globally. Such reception of the reports and reformulation of the IPCC conclusions at the national scale are far from being exceptions. This process of knowledge *re-scaling* asks an important question: How is the national reception of the IPCC reports orchestrated politically?

On the expected front line of this reception, the main domestic actors involved in the assessment cycle and shared by all IPCC member states are the IPCC National Focal Points (NFPs). The National Focal Points (who are generally bureaucrats or chief scientists) are affiliated to a Ministry of the Environment, a Meteorological Agency or a Department of State. These national institutions represent the “official national relays” of the IPCC process at the national level. During the whole time of the assessment cycles, National Focal Points (and their staff) participate in the following actions: the election of the IPCC Bureau; the selection of the national contributing authors; the diffusion of the report drafts within the national administrations and to national experts to collect their comments; and the line-by-line approval of the *Summaries for Policymakers* (SPMs) of each report. However, in the IPCC procedures, the exact tasks attributed to the NFPs are barely developed, and nothing deals with their explicit role in the national reception of the reports.

As presented in Fig. 1, of the 173 IPCC member states with an attributed National Focal Point for AR6, 82 member states (47%) chose their Ministry of Environment as their Focal Point (e.g., Bangladesh, Bulgaria, Chile, or Indonesia), whereas 61 countries (35%) selected their Meteorological Agency (e.g., the Bahamas, Antigua and Barbuda, Botswana, Benin,

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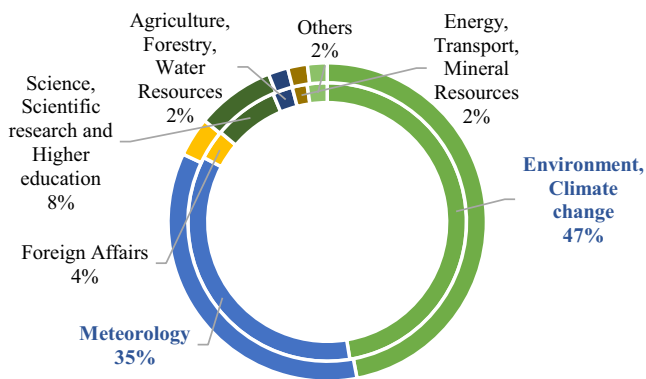


Fig. 1 | Affiliations of the 173 IPCC National Focal Points for AR6. Source: Author, from the IPCC website : <https://www.ipcc.ch/apps/contact/interface/focalpoints.php> - Consulted by the author on May 24, 2022.

Cabo Verde or China). By contrast, six countries (4%) have decided to propose their Ministries of Foreign Affairs (e.g., Japan, Peru, Samoa, Venezuela) or their Ministries in charge of other issues, such as the Ministry of Petroleum and Mineral Resources for Saudi Arabia. Besides, not all NFPs are similarly involved in the IPCC process. While some Focal Points are highly active in the Panel, in the governmental reviews, and during the SPM approvals, others are not and barely collaborate on the IPCC assessments with national authors³. To some interviewees, the location of the IPCC Focal Point within a “powerful” ministry or office also increases its credibility and facilitates its exchanges with the rest of the government and its administration. However, modifying the affiliation of the NFPs is not without consequences at the national scale. Hermansen et al. showed that a change of government in Poland in 2015 led to a significant decrease in the domestic attention dedicated to the IPCC, with strict minimum tasks dedicated to the panel⁴.

The role of the IPCC Focal Points in receiving the report is determined at the national level, by each country. *Outreach events* represent the sole specific events jointly organized between governments (mostly ministries or national universities) and the IPCC Secretariat. In parallel to these ‘national IPCC-related events’, other “national proceedings” are usually organized by the governments themselves just after the release of the reports. As the SPMs are approved by all the IPCC member states at the end of the assessment cycle, one might think that the IPCC reports’ transmission would *in principle* not constitute a very “politically-sensitive” issue at the national scale. However, while the selection process of national contributing authors has been presented as a “black box” for the IPCC⁵, the diffusion of the IPCC reports to the policy institutions represents another important black box of the IPCC functioning. This crucial question of how reports are disseminated, perceived and used at the national scale has received little attention and needs to be deepened⁴. More precisely, this specific process of “reception” of international expertise in domestic contexts has scarcely been analyzed in political science⁶, and very few articles have dealt with its precise modalities with the domestic actors involved. This article proposes to deepen the narrow definition of the process of reception by introducing the notion of “landing”, which was introduced in science studies by the sociologist Bruno Latour, albeit in a different context⁷. The analytical framework of the paper is extended by associating the concept of *landing* with different actor strategies developed by Sundqvist⁸—and applied empirically by Hermansen et al.⁹—, which I develop in the next section.

Designing the domestic landing of the IPCC reports

For decades, scholars in public policy analysis or in international relations acknowledged the persistent difficulty to move scientific information from “useful” to really “usable” science^{10–12}. Today, while considering the separation between science and policy as an ‘empty’ dichotomy concerning such complex issues as climate change, concepts such as the *co-production* between science and society or *civic epistemologies*¹³ are used in the literature to characterize different settings of science-policy interactions.

Assuming that climate science is a “carrier of values”¹⁴ and that IPCC messages are far from being value-free^{15,16}, “even countries that are *similar* in technological and epistemic terms evaluate the IPCC’s message *differently*”¹⁷. National contexts, political cultures, space, and time deeply influence the diffusion of its reports. Until now, only a small number of scholars in Science and Technology Studies (STS) or in environmental governance studies have proposed an analysis of the IPCC reports’ reception (or rejection) by national stakeholders^{18–23}. The specific case of India was early investigated (see e.g., Agarwal and Narain²⁴) as several counter-assessments on climate change emerged in the 1990 s. To Kandlikar and Sagar²⁵, the IPCC was mainly considered by the national scientific and political communities as an “international climate change enterprise” dominated by “Northern interests and agendas”, and the climate change topic framed in the terms of the IPCC was consequently not included in national policy debates at that time. Mahony²¹ also put forward the longstanding critical role played by Indian climate scientists within their country and set out how the former Indian Ministry of State for Environment and Forests wanted to stand out from a “Western institution”—the IPCC—that “challenge[d] the epistemic sovereignty of India”²¹. By contrast, in Russia, the clarification of the position of the country with the Kyoto Protocol ratification was followed by an adherence to the international scientific consensus on climate change⁶. In Australia, Zillman²³ stressed the positive reception of the IPCC reports by successive Australian governments as a support for domestic policy development until AR4. In the Netherlands, van der Sluijs et al.²² mentioned that in the 2000 s, the Dutch government had given the IPCC reports such a central role to introduce new national policies that it resulted in political conflicts about climate change between opponents that were nonexistent before. In the UK, Howarth and Painter²⁶ interviewed several domestic local policy representatives on their perception of the domestic impact of the IPCC. Their results showed that the IPCC needed to pay more attention to the useful (and useable) information which is transmitted to the “users”—mainly the policymakers—and thereby reconcile the difficult issues of keeping a sense of legitimacy, salience, and credibility²⁶.

In this article, I introduce the notion of “landing” to characterize *multiple* and *diverse* processes of reception of the IPCC reports. The verb “to land” is most commonly associated with the trajectory of planes that return to the ground after a flight, or with the generic act of hitting a surface after moving through the air. Used figuratively, the landing process also signifies reaching a place (or a situation) that was not planned or expected initially. The concept of landing is defined here as the process of official welcoming of a global report on a national scale, or of its presentation by its authors on request from interested actors. To continue the flying metaphor, I propose to analyze the two different processes of the AR6 reception according to its common and its more figurative meaning, i.e., by characterizing a first official and “prepared” landing, as well as a second, unexpected one. I analyze both landing processes in the light of different types of actor strategies developed by Sundqvist⁸ and build on a previous study developed by Hermansen et al.⁹ based on the diffusion and use of SR15 at the global, regional, and national levels. My approach is empirically similar, since I analyze the policy relevance of AR6, but the data collection remains at the national level, with the time-frame of the immediate reception of the report by the two governments.

Hermansen et al. characterized the *policy relevance* of SR15 as a relational, indirect, and contingent issue, “shaped by actors in and beyond the IPCC, i.e., co-production”⁹. To them, Norway explicitly enhanced the ambition of its National Determined Contribution (NDC) between 2015 and 2020, in the context of a mass mobilization from the Norwegian youth referring to SR15 and demanding stronger climate action from their government. They highlighted that the *political situation*²⁷ “help[ed] determine which knowledge [wa]s relevant, while at the same time being co-constituted by the same knowledge”⁹. Policy relevance stems from a specific political context and from the active will of actors who wish to bring it out. Each new IPCC report published every five to seven years represents a regular “call to action” addressed to the governments. The temporality of the release of AR6 thus represents a specific political context in which to analyze the (non-)emergence of policy relevance. To capture the different processes

Table 1 | Synthesis of the comparison between the two ecosystems of the affiliations of the National Focal Points

	France	Switzerland
Institutional affiliation of the National Focal Point	ONERC	Rio Convention Section
Administrative location of the institutional affiliation of the National Focal Point	Independent within the Ministry of the Ecological Transition (equivalent to a sub-direction)	Dependent on the Division of International affairs of the FOEN
Institutional participation in the assessment cycle	ONERC, Ministry of Foreign Affairs, Ministry of the Ecological Transition, Ministry of Higher Education and Research	Rio Convention Section
Attributed tasks to the National Focal Point	International, national, and local issues (esp. adaptation)	Only international issues
Additional national science-policy interface?	No	Yes: ProClim

of domestic landings, two contexts are analyzed, France and Switzerland, for the same IPCC report's reception, AR6. The analytical lens of policy relevance is applied to analyze both landing processes according to two types of actor strategies developed by Sundqvist². The first strategy represents the attempt to “heat up” the debate, when “science [becomes] a resource for stabilizing political situations”, i.e., using the IPCC report in an optic of broadening the issue and connecting it with other actors. The second strategy focuses on the process of “cooling down” the debate and the involved actors, by “seeking to establish a clear separation between the scientific and the political”. In the article, both types of actor strategies help to frame and compare the two processes of landing within the two countries.

The comparative analysis is based on a ‘most-similar-systems design’ of comparison. Switzerland and France are two Western countries from the Global North. Both countries are two stable democracies composed of an executive and legislative system open to discuss climate policies and instruments. Both governments developed or revised their national long-term climate strategies between 2015 and 2020, and implemented national climate policies. France adopted its Climate and Resilience Law on August 22, 2021, and Switzerland voted for the revision of its CO2 Act on June 19, 2023. France and Switzerland also represent “IPCC regular member states”: they have attended most (if not all) plenaries since the creation of the IPCC in 1988³. The institutional position of their National Focal Point is also administratively high compared to other countries (see Fig. 1). Both countries have had a national representative in the IPCC Bureau in every assessment cycle since AR2 (except AR4 for Switzerland). For AR6, Dr. Valérie Masson-Delmotte was the co-chair of WGI and Dr. Andreas Fischlin was the vice-chair of WGII. Switzerland hosted the WGI Technical Support Unit (TSU) for AR5 between 2008 and 2014, and France hosted WGI TSU for AR6 between 2015 and 2022. Switzerland also hosted the TSU for the Synthesis Report (SYR) of AR6, and the Swiss TSU Head of the SYR, Dr. José Romero, was the former Swiss National Focal Point. France and Switzerland also fund national research institutions and scientists on climate change. Among the total of leading experts of the AR6 general report (i.e., bureau members, coordinating lead authors, and lead authors), 15 out of 32 French experts were affiliated with the French National Centre for Scientific Research (CNRS), and 10 out of 22 Swiss experts with the Swiss Federal Institute of Technology Zurich (ETH). Both research institutes count among the world's leading research institutions in environmental science.

Despite their similarities, however, both countries differed significantly in the domestic landing of the report, and divergent outcomes resulted from these processes. The introductory section below contextualizes the AR6 landing in relation to the National Focal Points in both countries. The following empirical section analyzes the first landing process, i.e., the official governmental reception of the report in both countries. The last empirical section develops the second landing process, i.e., the proposal of the presentation of AR6 within both legislative arenas. Both contexts and processes of landing are analyzed and compared, as well as the role played by the two National Focal Points in France and Switzerland.

Contextualizing the IPCC landing : the roles of the National Focal Points in France and Switzerland

In France, the *National Observatory on the Effects of Global Warming* (ONERC in French) represents the institutional affiliation of the National

Focal Point. This Observatory is attached to the General Direction of Energy and Climate of the Ministry of Ecological Transition (MoET) (see Supplementary Fig. 1). While being specialized in adaptation issues, the members of the Observatory (i.e., the NFP and his/her staff) negotiate on both adaptation and mitigation issues in the IPCC, and provide a permanent link between the French government and the organization. In Switzerland, the institutional affiliation of the National Focal Point corresponds to the *Rio Conventions Section*, which depends on the International Affairs Division, an entire section devoted to the Swiss diplomatic issues. As a section specialized in international environmental conventions in which Switzerland is engaged, the Rio Conventions Section remains separated from the Climate Division in the Federal Office for the Environment (FOEN) administrative structure (see Supplementary Fig. 2). As opposed to the French Observatory, it does not hold any specific responsibilities in elaborating a national plan or strategy. However, the Rio Convention Section benefits from a crucial direct institutional relay, a “national IPCC” institution, which represents the Swiss climate science-policy interface, called ProClim (Table 1).

The official governmental landing of AR6: a cooling down process?

In France and Switzerland, the domestic landing of the IPCC reports traditionally consists of a national press conference or press release, following the official IPCC press conference.

Welcoming the report in France

In France, the governmental landing of AR6 went smoothly (for the WGI report especially), but was stuck by national political considerations (for the WGIII report). Following the first IPCC official press conference, the National Focal Point provided a strategy for the presentation and communication of AR6 to the three Ministries involved in the IPCC assessment cycle (the Ministry of Foreign Affairs, the Ministry of the Ecological Transition, and the Ministry of Higher Education and Research). For the WGI report, the MoET was fully involved in the governmental reception as well as in the diffusion of the report. On September 1, 2021, the French government officially welcomed the publication in a press conference, with the presence of a ‘science-policy duo’ made by the Minister of the MoET at that time, Barbara Pompili, and the French IPCC co-chair of WGI, Dr. Valérie Masson-Delmotte.

In her speech, the French Minister particularly insisted on the governmental support provided to the French IPCC scientists, by saying: “*In this battle, France has always been in the front line. [...] first to support the science and the scientists because we need this objective, rigorous and transparent work to move forward. Because decision-makers need science to make the right decisions.*” The presentation of the report by the IPCC co-chair immediately followed the Minister's introduction. Questions from the audience were directly addressed to the IPCC co-chair at the end of the presentation, but no time was dedicated to questions addressed to the Minister. The MoET officially acknowledged the publication of the report on its official website page and the Ministry relayed three specific messages on the report expressed by the three Ministers. The Ministry of Foreign Affairs linked the report to the specific involvement of French diplomacy in the context of the preparation of COP26, and thus, directly associated the scientific results of the IPCC reports to the international political

negotiations. The MoET reminded the parties of the French ambition to reduce its GHG emissions, notably through the 2021 French Climate and Resilience Law. Finally, the Ministry of Higher Education, Research, and Innovation welcomed the hard work of the scientists engaged in the IPCC.

For the reception of the WGII report of AR6 in March 2022, a video from the National Focal Point (the ONERC General Secretary) relaying the key messages of the SPM was produced by the MoET and diffused online. For the WGIII report, while the IPCC international press release was made on April 4, the French government was under a period of ‘electoral reserve’, which corresponded to one month before the presidential elections. In France, this represents a period during which the Ministers of the government (who are simultaneously spokespersons of the President’s campaign) cannot use the means of the State to speak as government ministers and can only deal with routine governmental affairs. Positioning itself on WGIII was thus considered as a political move that could influence the elections. This electoral context explains why it was decided to postpone the ministerial press release after the electoral period. However, French coordinating lead authors (CLAs) and lead authors (LAs) of WGIII —accompanied by Valérie Masson-Delmotte— presented directly to the Minister and her councilor the key messages of the WGIII report. All the discursive aspects of the governmental reception of AR6 indicated a ‘high governmental support’ expressed by the executive branch of the government, which was also confirmed by the interviews. This support may also be related to the fact that the French government has funded the WGI TSU for AR6 and supported the work of its co-chair since 2015. However, paying particular attention to the work of the IPCC can also be criticized and seen as a simple governmental ‘symbolic window’, or as an instrumental way of giving the illusion that the government takes the issue seriously and is active in climate policy.

Welcoming the report in Switzerland

In Switzerland, the government traditionally invests multiple resources in the ‘nationalization’ of the IPCC reports. Created the same year as the IPCC in 1988, the forum ProClim is mostly composed of climate and social scientists working on climate change. As a major relay, ProClim serves as a direct national intermediary to the governmental reception and diffusion, and it provides specific resources and organizes events for the official landing process. One month before the publication of the WGI report in August 2021, ProClim held a *media pre-event* with journalists to give some background information on the IPCC and to present how the reports were elaborated. Additionally, ProClim oversaw three hybrid press conferences of the three WG reports immediately after the IPCC official press conferences, with few journalists present, but without members from the government. This event was supplemented by a written translation in German of the SPM headline statements, in collaboration with the German, Austrian, and Luxembourgish governments.

ProClim also organized an annual event called the *Swiss Global Change Day* (SGCD), an entire day of presentations and networking, which involved IPCC authors (CLAs and LAs), climate experts, and some members of the administration. The event was mostly presented by the organizers as a “scientific event” to foster Swiss researchers’ networking. IPCC authors from the three working groups presented the main results of AR6. The Federal Councilor in charge of environmental issues (i.e., the Head of the FOEN) Simonetta Sommaruga, was present

and gave a speech at the beginning of the meeting. She underlined the Swiss climate strategy and the involvement of the Federal Council in progressing towards the net zero target and insisted on the renewed ‘scientific collaboration’ with ProClim. However, she did not stay to exchange views with the IPCC authors and the policy actors following her speech. The IPCC National Focal Point was present but attended the event as part of the audience. His role in the diffusion was mostly limited to transmitting the report to the agents of the Swiss administrations (especially the FOEN). In contrast to the French governmental reception, the two other offices indirectly concerned by the IPCC —the Federal Department of Foreign Affairs and the Federal Department of Economic Affairs, Education and Research—, did not send any peculiar relaying message on the report.

Comparison of the two official landings

In both countries, national political issues were discussed during the national welcoming events of the reports. Compared to Switzerland, the French government put more *political* considerations and resources in the reception of the IPCC report —especially for the WGI report, which was co-chaired—, as it involved three different Ministries. National political issues were raised by several Ministers who reappropriated the general results of the report and justified their domestic acts accordingly. By contrast, in Switzerland, the political side was mostly embodied by the very brief speech of the Head of the FOEN at the Swiss Global Change Day. Compared to France, the positions of the three different offices (environment, foreign affairs, research) were not on the front stage, or absent in the national reception. As a science-policy platform, ProClim mostly played the role of science-policy relay in welcoming the report, as well as of ‘scientific buffer’ to direct policy involvement. In other words, ProClim managed to ‘neutralize’ the political dimension of the report in a more ‘scientific way’, while the absence of this kind of interface in France made the diffusion more direct — and therefore more political.

Importantly, in the two configurations, the National Focal Points were rather holding back in the act of welcoming the report. The Swiss Focal Point did not intervene during the Swiss Global Change Day, nor did the French Focal Point during the WGI report press conference. Besides, it is worth mentioning that in the context of the reception of the WG reports, both in France and Switzerland, no time was dedicated to questions or discussions with the members of the Executive present in the room. During the press conference of the WGI report in France or during the Swiss Global Change Day in Switzerland, the IPCC report remained strictly confined to the *scientific* actors, language, and borders, and the configurations were not intended to produce a public political debate between the policy actors and the audience.

In sum, in both cases, the process of reception rather took the form of a top-down and *cooling down* landing process. The IPCC report was presented as an occasion for the Executive to legitimize its domestic actions in the sense of Boswell²⁸. The reception was rigorously framed to the presentation of the report, without any possibility of opening up a political debate on the domestic climate policy (Table 2).

The reception of AR6 could have stopped there in both countries, and the French and Swiss political life would have returned to normal, without any specific dialogue between scientists and policymakers about the IPCC report. Yet, in this case, the AR6 landing was reappropriated by other actors and extended in the following months.

Table 2 | Synthesis of the comparison between the two official landing processes of AR6

	France	Switzerland
Main organizers of the governmental reception	Ministry of the Ecological Transition, ONERC	ProClim
Other policy institutions involved in the governmental reception of the report	Ministry of Foreign Affairs, Ministry of Higher Education and Research	Federal Office for the Environment
Actor strategies and use of the IPCC knowledge	cooling down	cooling down

The unanticipated landing of AR6 in Parliament: unusual actors and heating up strategies calling for a broader dissemination of the report

Two requests from domestic actors to present the report emerged both in France and Switzerland following its release. Both initiatives had the same objective: to present the IPCC report directly to all deputies (Members of Parliament) in charge of voting on the national laws. This was a *première* in both countries as it had not been requested for the reception of the last assessment report in 2013.

A request made by unusual domestic actors

As previously mentioned, the French government officially welcomed the publication of the WGI report with a press conference on September 1, 2021. The following day, a deputy of the Green Party, Matthieu Orphelin, asked in a formal letter addressed to the President of the National Assembly, Richard Ferrand, to have AR6 presented by French IPCC WGI authors, in front of all the present deputies at the opening of the next parliamentary session. In parallel, the French IPCC co-chair, Valérie Masson-Delmotte, supported and made the same proposition to the President of the National Assembly. Several French climate scientists did not hesitate to comment on his Twitter publication, saying that they were available and enthusiastic to participate in this presentation. However, the President of the National Assembly immediately rejected this proposition, saying that it was not his responsibility to choose the agenda of the debates, which he believed was the duty of the government or the parliamentary groups. According to the parliamentary attaché of the deputy, nothing prevented the President from putting on the agenda a presentation of the IPCC WGI report, for instance, as sometimes happens with the visit of heads of state. This individual demand did not have much echo in the French media and remained confined to the Twitter social network, where a lot of positive feedback was given to this proposal by individual citizens.

In Switzerland, an analogous request—but coming from the civil society—was made on November 1, 2021. Three months after the publication of the WGI report, a bottom-up initiative was launched by an individual Swiss citizen from the Gruyere region, Guillermo Fernandez, who decided to address a letter as well as a video to the Federal Councilor and Head of the FOEN, Simonetta Sommaruga. This citizen requested her to convene the Federal Assembly for a mandatory training session of the deputies on the climate crisis by the Swiss IPCC and IPBES experts, and in the meantime he began a hunger strike in front of the Parliament. His letter remained without response, but his call was supported by a second open letter addressed to the media, the Parliament, and the Federal Council (the Executive), co-written by several IPCC and IPBES experts and offering to organize this training immediately.

The answer of the Parliaments

In France, instead of presenting the report to the entire audience of deputies, on September 22, 2021, four French IPCC CLAs from WGI were invited by the sustainable development committee of the National Assembly to present a synthesis of the report, followed by a discussion with the members of the commission. In parallel, the President of the Parliamentary Office for Science and Technology Assessment (OPECST in French) and an individual

deputy member of this parliamentary office also requested a presentation of the WGI report on September 23, 2021, by the French IPCC co-chair alone. On October 6, 2021, other IPCC experts were similarly invited by the President of the Senate to present the outlines of the three WG reports to the sustainable development commission, followed by a dialogue with the senators. Moreover, on June 20 and June 22, 2022, at the initiative of the same deputy from the Green Party, Matthieu Orphelin, and the IPCC climate scientist Christophe Cassou, a large pavilion was installed near the National Assembly in Paris for the national science-policy event called ‘*A mandate for climate and biodiversity*’. During three entire days, 35 climate scientists, oceanographers, hydrologists, geographers, members of think-tanks, IPCC or IPBES members offered mini sessions of “training” to the newly elected deputies of the National Assembly. Short discussions between climate scientists and policymakers covered environmental issues, especially the climate crisis and the erosion of biodiversity. While a total of only 27% of the deputies came to discuss with the scientists present, the whole event was described as a huge success by the organizers who called for further future exchanges.

In Switzerland, on December 9, 2021, after 39 days of hunger strike by the activist Guillermo Fernandez, the Swiss Academy of Natural Sciences acted to resolve the controversial situation, announcing that it would hold an information session open to all deputies, involving most of the Swiss IPCC and IPBES experts. The meeting was set for May 2, 2022, with the goal of informing deputies of the latest research findings on climate and biodiversity. This decision was previously discussed and decided in accordance with the Swiss National Focal Point. The event was organized by ProClim with a team of Swiss IPBES and IPCC authors, which testified to a joint and new collaboration between scientists that had rarely collaborated in Switzerland. As one of the participants commented on the situation of the climate crisis, the Swiss climate scientists were at the beginning “extremely naïve” on the biodiversity crisis (as were biodiversity scientists about climate issues). As in the French case, less than a third of the Swiss deputies attended the May 2 session. Several deputies did not appreciate the link between the hunger striker and the organization of the presentation. Others simply refused to come as they perceived the session to be an unacceptable political pressure tactic that would force them to tolerate an unwelcome lecture provided by scientific actors. The low number of participants among the deputies also demonstrated an explicit lack of interest by the deputies to mix the scientific and the political communities, or to engage under those circumstances in an exchange with specialists on climate issues and policy options necessary for the ecological transition of Switzerland (Table 3).

Comparison of the two ‘parliamentary landings’

As illustrated previously, in the two countries, new and unusual actors entered the stage, i.e., members of the civil society, individual deputies, and climate scientists. Both requests in Switzerland and France reflected two similar strategies held by these actors not involved in the official landing process of the report, which corresponded to two *heating up* strategies. In both cases, the use of knowledge was explicitly to strengthen their position and call for the organization of a science-policy discussion with the members of their Parliaments, who are usually not part of the official reception

Table 3 | Synthesis of the comparison between the two unanticipated landing processes of AR6

	France	Switzerland
Actors and institutions involved	IPCC authors, policymakers (national deputies from the National Assembly and the Senate), members of the civil society	IPCC authors, policymakers (national deputies from the National Parliament), members of the civil society, ProClim, Swiss Academy of Natural Sciences
Actor strategies and use of the IPCC knowledge	heating up	heating up
Answer given to the request	negative	positive
Veto and opposition	President of the French National Assembly	individual national deputies
Format of the AR6 presentation	restricted to environmental parliamentary commissions	open parliamentary session

process. Therefore, their intent was to *broaden* the presentation of the report and to *connect* with other policy actors, i.e., the national deputies.

The answer coming from the Parliaments demonstrated that the parliamentary presentations served to be more than the simple transmittal of a report. Rather, they were seen as a highly political act, one that was intensely discussed, criticized, and even opposed by some political actors. Surprisingly, several national blockages opposed the landing of the report in both countries. In Switzerland, the opposition mainly came from individual deputies. In the French case, the decision from the President of the National Assembly was taken as if the report could not be directly presented and openly discussed by all the French deputies, and the WGI report was eventually “relegated” to the two environment parliamentary commissions, thus to ‘expert’ parliamentary institutions.

Results

The political challenges of re-framing a national landing

The objective of this article was to contribute to major considerations about the policy relevance of the IPCC reports domestically. The contribution of the article was twofold. Theoretically, the concept of ‘landing’ was introduced to define two divergent modalities of reception of the IPCC report at the national scale. The first category related to an “official” and formal landing of the report with the ‘traditional’ climate policy actors involved. The second category defined an unforeseen landing, led with the participation of non-traditional actors of the domestic climate community, and addressed to national Parliaments. Empirically, the comparative analysis of both landing processes in France and Switzerland illustrated how policy relevance is produced, but also *contested* by different actor strategies, building on earlier studies by Sundqvist and Hermansen et al.^{8,9} This study also crucially showed the importance of actors, institutions, and processes in enhancing or limiting a report’s landing in a domestic context.

The governmental protocol of landing developed in France and Switzerland both reflected *cooling down* processes by the traditional institutions, with the separation of the scientific and the political sides of actors and institutions, the stabilization of the political situation through science, and the control of the official landing process to avoid politicization. When the report was received, the three Ministries in France justified several of their actions addressing climate change at the national level, and the Federal Councilor at the *Swiss Global Change Day* recalled Switzerland’s commitments before leaving directly afterward. In both countries, the quiet and discrete official landing process highlighted a kind of ‘political strategy’ aimed at keeping the noise down, maintaining the status quo, and guarding against any possible criticism of governmental inaction. However, additional actors different from the Focal Points got involved in both case studies (i.e., national deputies, civil society members, and climate scientists), and proposed a new and larger audience to AR6. These additional climate actors modified the borders of the conventional official landing, employed *heating up* strategies to make themselves heard and to physically ‘connect’ for the first time scientific experts and members of the Parliament. The science-policy interface radically changed the type of reception the policy received, expanding the participating actors and moving the process from a symbolic, routinized, and *cooling down* approach to a completely different dynamic of *heating up*.

The repercussions on the national science-policy interfaces

The extended domestic landing of AR6 was particularly significant for the contextual analysis of science-policy interactions due to three reasons. First, the empirical results highlighted that an *a priori* ‘simple’ act of welcoming AR6 can have a significant ‘symbolic and political weight’ at the domestic level. A myriad of domestic actors different from the unique National Focal Points were involved and took positions according to their understanding of the report, its circulation, and its potential impact. Discussions, reaction times, and governmental answers demonstrated the lack of preparedness of traditional domestic actors and the destabilizing effect the process had on those actors faced with unexpected demands. These positions were even more visible as the proposition to diffuse the report in Parliament extended a ‘routine’ of official reception that was in place for a long time, with

legitimated institutions that were traditionally involved in this reception. The veto from the President of the National Assembly in France and the very long debate during the hunger strike over the organization of the session in Switzerland were demonstrations of the preference for avoiding excessive debate in parliamentary institutions as much as possible. However, the involvement of the National Focal Points differed between the two countries. In Switzerland, the National Focal Point was consulted on the format of the presentation in Parliament, whereas the French NFP did not interfere in the special request for the presentation to the Parliament. Therefore, the role played by the NFPs in the domestic reception was eventually not as important for the second landing process, and the NFPs did not constitute a major relay in the AR6 reception.

Secondly, the empirical results challenged the assumption, stressing that IPCC authors do not have control over how knowledge is disseminated and taken up by domestic actors nationally. By contrast, ethnographic observations and interviews underlined that in the precise case of AR6, IPCC experts got actively involved in the national reception by proposing to present the report’s main findings on numerous occasions, but also by partnering with political actors and activists to directly bring the science to the institutions that represent citizens. They thus ‘appropriated’ the frame of landing to the parliamentary arenas, proposing alternative pathways.

Thirdly, both bottom-up requests revealed that today many citizens wish to modify and *accelerate* the current dynamic of the science-policy interface of their country and expect that IPCC reports can bring policy changes. In their view, these reports logically need to be transmitted and presented to a larger audience, such as their deputies who vote for their national laws. Until now, the interface involved in the domestic landing of IPCC reports was thought to be “IPCC-Executive” exclusively. To such bottom-up initiatives, the landing should no longer be the sole prerogative of governments, and they call for an extended “IPCC-Executive-Parliament” interface.

Discussion

This article proposes an original contribution to the literature in STS on the role played by the IPCC reports outside of the assessment cycle and its production process. It illuminates the contextual ‘domestic outcomes’ of the IPCC reports’ release within different political arenas and the modalities of their political dissemination. With the introduction of the concept of *landing*, which is not a translation or a policy transfer process, the comparative analysis in both countries eventually demonstrates the weaknesses of the simplistic and illusionary *linear* model of science-policy interactions between “coproducers-senders” and “consumers-receivers”. This article shows a far more complex, contextual, and nuanced relationship between IPCC scientists and decisionmakers, as well as the arduous nature of the task of delivering policy-relevant global scientific reports. While a part of the results reflected a variable acceptance and only a partial legitimacy by the policy actors to the report, new formats of discussion also emerged that climate scientists and deputies were not used to and had to *learn* to find a common language to interact together.

More generally, the climate crisis forces us to rethink both the immobility and the path-dependency of certain institutional models, as well as the role played by the climate scientists in political debates. All these new fruitful, but still slow, science-policy connections could contribute towards the construction of a future paradigmatic change, closer to more *reflexive* modes of learning²⁹, and to more *co-production* models¹³ between scientific and policy actors. Further similar studies on the reports’ national dissemination are also needed. In-depth comparative analyses of actors involved in these processes of landing could help to understand which audiences are targeted or reached at the national level and which are not. As climate issues encompass a wide range of problematics, these knowledge transmissions would certainly benefit from being extended to more diverse commissions (e.g., health, agriculture, energy, and so forth) and lead to new discussions and solutions in the future. Finally, additional inquiries on science-policy interfaces coming from the Global South are more than necessary and would also bring a lot to the comparison.

Table 4 | Ethnographic observations realized by the author

Ethnographic observations, events, and venues	Ethnographic observations dates
IPCC	
Approval sessions of the three Summaries for Policymakers (SPMs) of AR6, virtual observations	SPM WGI : July 25, 2021 to August 6, 2021 SPM WGII : February 14, 2022 to February 27, 2022 SPM WGIII : March 21, 2022 to April 3, 2022
COP 26, Glasgow, Scotland, on-site observations :	
- Informal discussion between IPCC authors and students (1 French and 1 Swiss IPCC author present), Open space in front of the Science Pavilion	November 5, 2021
- Panel – How has science influenced climate action: IPCC and the policy process, Science Pavilion	November 10, 2021
SWITZERLAND	
National science-policy event, on-site observation: Swiss Global Change Day organized by ProClim (4 Swiss IPCC authors from AR6)	April 12, 2022
National science-policy event, on-site observation : Reversing the trend of climate and biodiversity: Parliament meets the scientific community (5 Swiss IPCC authors from AR6 present with national members of the Parliament), Swiss National Parliament	May 2, 2022
FRANCE	
Presentation of the conclusions of the WGI report by the French co-chair in the Ministry of Environment, virtual observation – <i>Publication et conclusions du rapport du GIEC sur l'évolution du climat</i>	September 1, 2021
Parliamentary hearings, virtual observations:	
- Hearing of French experts from the Intergovernmental Panel on Climate Change, National Assembly, sustainable development commission (4 French IPCC authors from AR6 present)	September 22, 2021
- Hearing of French experts from the Intergovernmental Panel on Climate Change, Senate, land development and sustainable development commission (4 French IPCC authors from AR6 present)	October 6, 2021
- Hearing of the French co-chair, Parliamentary Office for Science and Technology Assessment (OPECST in French), (the French IPCC co-chair from AR6 present)	September 23, 2021
National science-policy event, on-site observation: "A mandate for climate and biodiversity", Training delivered by IPCC experts from AR6 to the newly elected deputies in front of the French National Assembly (8 French IPCC authors from AR6 present)	June 20–21, 2022

Methods

Description of the qualitative methodology

In this paper, the qualitative methodology of analysis of the two processes of landing consisted of a combination of several sources: an in-depth analysis of the official documents and reports produced by the IPCC and the two administrative entities of the National Focal Points; three two-week observation time periods of the virtual SPM sessions of AR6 in July 2021 and February and March 2022 and seven direct observations (virtual and on-site) of national events dedicated to the presentation of the Working Group (WG) reports (see Table 4). Ethnographic data were configured as non-participant observations, as a direct observer or as part of the audience. The comparison of the interventions of the IPCC experts, the Ministerial members, and the deputies for the ten observations constituted the most important part of the work. In parallel, field notes related to the general setting of the science-policy interactions, the different spatial occupations, the postures of the participants, and the feelings present during the observed situation were carefully analyzed. Ten semi-structured interviews were conducted with French and Swiss actors (IPCC Focal Points, IPCC authors, national deputies, members of NGOs): six interviews for the Swiss case and four interviews for the French case, complemented by additional informal discussions with several actors involved in the AR6 reception. Permission was received to record the interviews, which were all transcribed and analyzed by the author. The empirical analysis was based on the release of the WGI, WGII, and WGIII reports of AR6, which were delivered on August 9, 2021, February 28, 2022, and April 4, 2022, respectively (Table 4).

Data availability

The datasets generated during the current study are not publicly available due to study participant confidentiality concerns but are available from the author upon reasonable request.

Received: 25 January 2023; Accepted: 27 March 2024;
Published online: 08 May 2024

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Acknowledgements

I am especially grateful to Kari De Pryck for the very constructive comments and suggestions received throughout the journey of this article. I also thank Stéphane Nahrath, Paul Marshall and Megan Taylor for proof-reading the manuscript.

Author contributions

The sole author contributed to the entire production of the content of the paper: data production (document analysis, ethnographic observations, interviews), data analysis, production of figures, and final redaction.

Competing interests

The author declares no competing interests.

Additional information

Supplementary information The online version contains supplementary material available at <https://doi.org/10.1038/s44168-024-00112-6>.

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