

Climate Advisory Bodies: Experiences and Approaches for Effective Climate Change Policy

Annex to the main discussion paper, including methodology, case studies and mapping of climate advisory bodies around the world.

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Annex A. Research Approach

This study applied a qualitative research framework to draw out personal insights and reflections from key individuals involved in, or deeply familiar with, the operational aspects of the select climate change advisory bodies. The authors note that while the experiences and insights from individuals provide rich information about perceived impact, including strengths and weaknesses of specific advisory body approaches, this research methodology cannot determine causality.

Nine climate change advisory bodies from across six countries were selected for this study (see Table A1). The selection of case study countries and advisory bodies was informed by several factors and the desire to showcase experiences across mitigation and adaptation and across different sectors; a broad geographical representation; diverse advisory body characteristics, including the age, form, and role of the advisory body; and different national characteristics, including approaches to climate change and development planning and level of economic development. Given the short time frame of the study (it was commissioned in February 2021), an additional factor included WRI's existing relationships with experts in country in order to expedite the data collection phase. The selected case studies profiled in this work are not comprehensive of all advisory body experiences but rather aim to provide an in-depth sampling of experiences from a diversity of cases. For specific details on each advisory body, see Appendix B.

Table A1: Climate Change Advisory Bodies Included in this Study

Country	Climate Change Advisory Body
Finland	Finnish Climate Change Panel (FCCP)
India	Prime Minister's Climate Change Council (IPMCCC)
Mexico	The Climate Change Council (MC3)
Mexico	The Office of Coordination of Evaluation of the National Policy on Climate Change (MEC)
New Zealand	Climate Change Commission (NZCCC)
New Zealand	Interim Climate Change Committee (NZICCC)
New Zealand	Climate Change Adaptation Technical Working Group (NZCCATWG)
South Africa	Presidential Climate Commission (SAPCC)
United Kingdom	Climate Change Committee (UKCCC)

Data sources: Our main data sources are semi-structured expert interviews, survey responses, and complementary desk research. The seven authors conducted 26 semi-structured expert interviews in March and April 2021. Additionally, two respondents provided input in written form, for a total of 28 expert inputs. For the interviews, each author briefly explained the project and objective and how the responses would be used and requested informed consent from interviewees to release their names and titles as participants in the study. Interviews were not recorded without consent of the interviewee, and each author documented responses to each question. Evidence gathered from interviews were supplemented with reflections from the first International Climate Councils Meeting held in May 2021, where the initial findings of this work were presented.

Selection of experts: The study aimed to collect responses from at least two experts from each country (one government expert and one nongovernment expert) including current and former advisory body members, government counterparts, and climate policy experts. A long list of more than 60 potential experts was identified through multiple means, including reviewing published lists of advisory body members, soliciting recommendations from WRI colleagues in international offices, and fielding recommendations from the hosts of the meeting of International Climate Councils.

To guide the authors' review of expert responses, to ensure that we collected the intended coverage of perspectives (at least two per country, including both government and nongovernment), and to contextualize interview and survey responses, expert inputs were codified. Interviewee names have been replaced with a response code indicating the country, a government (G) or nongovernment (N) perspective, and the number of the interview. The list of respondents and corresponding response codes used for in-text citations are listed in Table A2.

Table A2. Expert Respondents and Response Code

	Country	Respondent	Title and/or Organization	Response code
1	Finland	Prof. Markku Ollikainen	Panel Chair and Research Director, University of Helsinki	FN1
2	Finland	Heta Heiskanen	Panel Secretary-General, Ministry of the Environment	FG2
3	India	Nitin Desai	Economist, PM Council Member	IN1
4	India	Dr. Jyoti Parikh	PM Council Member and Director, IRADe	IN2
5	India	Avinash Mishra	NITI Aayog	IG3
6	India	Shyam Saran	Former Special Envoy on Climate Change for the PM	IG4
7	India	Aditya Valiathan Pillai	CPR India	IN5
8	Mexico	Ibarraran Viniegra Maria Eugenia	Ibero University-Puebla	MN1
9	Mexico	Polioptro Martinez Austria	University of the Americas-Puebla	MN2
10	Mexico	Marco Heredia	Ministry of Environment and Natural Resources	MG3
11	New Zealand	Dr. Roderick Carr	Chairperson of the CCC	NN1
12	New Zealand	Dr. Judy Lawrence	Commissioner of the CCC; Co-Chair CCATWG	NN2
13	New Zealand	Dr. Suzi Kerr	Chief Economist, EDF; Member of Interim Climate Change Committee (Specialist Advisor)	NG3
14	New Zealand	James Hughes	Climate and Resilience Specialist, Tonkin + Taylor; member of CCATWG	NN4
15	South Africa	Mandy Rambharos	Member of SAPCC and head of Eskom's Just Energy Transition office	SN1
16	South Africa	Lebogang Mulaisi	Member of SAPCC and Congress of South African Trade Unions (COSTAU) labor market policy coordinator	SN2
17	South Africa	Crispian Olver	Executive Director: SAPCC	SN3
18	UK	Tim Lord	Senior Fellow, Tony Blair Institute for Global Change	UG1
19	UK	Alina Averchenkova	LSE	UN2
20	UK	Sam Fankhauser	LSE	UN3
21	UK	Tom Sasse	Institute for Government	UN4
22	UK	Erica Hope	ECF	UN5
23	UK	Mike Thompson	Director of Analysis/Chief Economist, UKCCC	UN6
24	UK	Kathryn Brown	Head of Adaptation, UKCCC	UN7
25	UK	Baroness Brown	Member of the CCC since its foundation, former Vice-Chair of the Mitigation Committee, current Chair of the Adaptation Committee	UN8
26	Ireland ^a	Sharon Turner	Visiting Professor at the University of Sussex and Adviser at ECF	IRN1

27	Australia ^a	Alex Kazaglis	Former Director at the Australian Climate Change Authority; former Head of Power Sector at the Government’s Committee on Climate Change (UK)	AN1
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Source: Authors

Notes: ^a Although Ireland and Australia were not specifically included among the countries and advisory bodies in this study, these experts were also recommended, given their knowledge and experience with climate advisory bodies included in this study.

Interview and survey questions: Experts who agreed to participate in the study were presented with a series of questions in order to identify the perceived impact, factors influencing success, and challenges facing the advisory body. Questions were broken into four parts: (1) experience related to outcomes and policy impact, (2) national climate change policymaking and the climate advisory body, (3) further questions on internal processes of the climate advisory body, and (4) general details on the climate advisory body. Most interviews focused heavily on the questions in the first section of the list (experience related to outcomes and policy impact). Notably, the interviews with experts from South Africa covered slightly different questions as the advisory body is still very new. The complete list of questions can be provided upon request but is excluded from this document due to length.

Interviews were conducted and responses were recorded in English, Finnish, and Spanish. Responses in Finnish and Spanish were then translated by the authors.

Literature review: A literature review was undertaken to provide background and context for the study and to supplement interview responses. This was supplemented by research materials gathered through internet search and review of the websites of the climate advisory bodies, and also with relevant papers provided by the interviewees and hosts of the meeting of International Climate Councils. As described in Appendix B, one paper, “Overview of National Climate Change Advisory Councils,” assembled by the Finnish Climate Change Panel in 2019, played a particularly significant role in providing information about existing climate advisory bodies (Weaver, Lötjönen, and Ollikainen 2019).

Case studies: Responses collected were reviewed by the authors, and common themes as well as unique factors were identified. Six in-depth case studies, one deep-dive per country, were then prepared summarizing the perspectives of respondents regarding the approach and impact of the advisory body(ies) in each country. Specifically, details regarding impact on national climate change policy and perceived influential factors and challenges were included in the case studies.

Synthesis of key takeaways: The results provided a wide range of information covering the perceived impact of each profiled advisory body. The responses were also compared *across countries*, and common themes as well as unique factors were documented in the synthesis section, which considers operating effective climate advisory bodies, enabling and influencing climate action, facilitating just transitions, and informing policy and overseeing delivery across key sectors and adaptation. These four categories were selected for focus in the synthesis section in the main report as they correspond to the discussions held at the meeting of International Climate Advisory Bodies and aimed to provide input into the discussion. If a specific country or advisory body is not mentioned under a particular theme or factor, this does not mean that it is not relevant; rather, the respondents simply did not provide any reflections on the particular aspect in question.

Global analysis: In addition to the synthesis and case studies, we also present a global landscape analysis based on desk research describing the basic setup and function of all identifiable national climate change-related scientific advisory bodies (see Appendix B). This landscape analysis—which describes the dates of activity, scope of coverage, membership, key responsibilities or mandate, foundation for establishment, and autonomy from government of each advisory body—is a descriptive collection of the basic functioning of each body, including those not explored further within the case studies. This may not be a comprehensive summary of all relevant bodies in the world and is only based on available information as a snapshot in time.

Annex B: Country Experiences - An In-Depth Exploration through Six Case Studies

CASE STUDY 1: Experiences of the Finnish Climate Change Panel (Suomen ilmastopaneeli): A Growing Influence

The Finnish Climate Change Panel (FCCP) is an independent scientific advisory body, established in 2012. In 2015, it was given a formal status and mandate under Article 16 of the Finnish Climate Change Act (609/2015). The FCCP is composed of a chair and 15 members, who are chosen based on scientific merit (FG2) representing a range of natural and social science disciplines. Candidates for FCCP membership are proposed by relevant research organizations¹ approved by the Ministry of the Environment, and appointed by the government for a four-year term (FG2).²

The FCCP's mandate, as defined by Article 16 of the Climate Change Act, is to support Finnish climate policy planning and decision-making. The FCCP is also tasked with collecting and evaluating scientific information concerning climate change mitigation and adaptation. The FCCP may also undertake other tasks related to informing the scientific basis behind national climate policymaking. A government bill, potentially proposing to strengthen the FCCP's mandate to revise the Climate Change Act, is expected later in 2021.

In practice, research projects and scientific reports form an important part of the FCCP's work (FG2, FN1). The FCCP also serves as an adviser to the ministerial working group on energy and climate policy and receives assignments from different ministries and ministerial working groups.³ Moreover, the FCCP gives statements on Finland's climate policy plans under the Climate Change Act. While the emphasis of the FCCP's work has been on mitigation, the current panel has a stronger expertise and focus on adaptation than the previous ones (FN1).

Impacts and Factors in Success

An independent evaluation of the FCCP in 2019 concluded that the panel's impact on Finnish climate policy has gradually increased (Laine et al. 2019). An important example is the FCCP's scientific analysis in support of strengthening Finland's climate policy to be in line with the 1.5 degree target (Laine et al. 2019). Finland's national target of being carbon-neutral by 2035 is underpinned by the FCCP's analysis of Finland's fair contribution to global mitigation efforts, which the FCCP calculated on the basis of equity principles and global carbon budgets (Ollikainen, Weaver and Seppälä 2019) (FN1). FCCP representatives also contributed to the level of ambition and scientific insight in multiparty roundtable discussions on

¹ The Climate Change Act requires the panel to be independent. For this reason, industry and civil society representatives have not been considered for panel membership (FG2). Instead, the panel members are employed by research organizations, universities, and other higher-level educational institutions (FG2). Candidates for panel membership must declare their relevant affiliations and potential conflicts of interest. Panel members taking up new nonscientific professional roles during their term have, in practice, always resigned (FG2).

² Relevant appointment criteria applied by the Ministry of the Environment when shortlisting candidates include their scientific merits and policy-relevant experience (FG2). The criteria for panel membership is likely to be specified in context of the ongoing revision of the Climate Act (FG2).

³ As explained on the panel's website: <https://www.ilmastopaneeli.fi/en/>.

Finland's future climate policy by Prime Minister Juha Sipilä at the end of 2018 (Laine et al. 2019) (FN1). These discussions resulted in an agreement by eight political parties⁴ on common climate policy goals for Finland ahead of the 2019 parliamentary elections. The parties agreed that Finland will strengthen its national emissions reduction target and reach a situation by the 2040s where its greenhouse gas emissions are clearly negative (Finnish Government 2018).

FCCP representatives also provided scientific input to negotiations on the 2019–23 Government Programme (FN1). The program includes, *inter alia*, the objective for Finland to be carbon-neutral by 2035 and carbon-negative soon thereafter, also setting out the government's plan to revise the Climate Change Act to incorporate these goals.⁵ The revision process is currently ongoing and the FCCP's recommendations for emission reduction targets in the revised Climate Change Act have been accepted as the basis of the forthcoming legislative proposal (Finnish Government 2021) (FN1, FG2). Moreover, the FCCP's analysis of the Finnish emissions gap—that is, the difference between current policies and those needed to achieve carbon neutrality by 2035—has influenced Finnish climate policy discussions (FG2).

Overall, the FCCP's comprehensive, interdisciplinary approach to Finnish climate policy has increased awareness of linkages between different sectors and especially the importance of the LULUCF sector (FN1). Stakeholders interviewed for the independent evaluation identified forests and transportation as policy areas where the FCCP has made a particularly tangible impact (Laine et al. 2019). The online tool prepared by the FCCP to calculate and compare differences in CO₂ emissions and costs of cars using different power sources has been popular among citizens (FG2). The FCCP's scientific advice has also been sought to resolve political differences within the current Marin Government concerning energy taxes and taxation of peat in particular (FG2).

Political pressure to act on climate from civil society and industry (FN1) as well as media attention (FG2) have been identified as key factors contributing to the FCCP's success. Also important are the FCCP's science-based, independent and systematic analyses, as well as trust that policymakers have in the credibility of the experts sitting on the body (FN1). The FCCP has also used helpful procedural approaches, consulting policymakers throughout its research process and explaining its key recommendations before publishing them (FG2).

Limitations and Challenges

LULUCF is a topic on which the FCCP has been active but where its impact on policy has been more limited (FG2, FN1). The explanation is that the sector is politically and economically sensitive in Finland (FG2, FG1). The FCCP's work on social justice and acceptability of climate policy are also topics where the body's impact has been less concrete (FG2).

⁴ These included all but one of the main parties in the Finnish Parliament, namely the Centre Party, the National Coalition, the Social Democratic Party, the Blue Reform, the Greens, the Left Alliance, the Swedish People's Party, and the Christian Democrats. The Finns Party, a right-wing populist party that won second place and 17.5 percent of the vote in the parliamentary elections of spring 2019, did not agree to these principles.

⁵ The Government Programme is *de jure* an informal policy document defining the agenda and priorities of a government during its four-year term that plays an important *de facto* role in Finnish political culture where governments are composed of several parties with different political ideologies and agendas. The program of Prime Minister Sanna Marin's government is available in English at <https://valtioneuvosto.fi/en/marin/government-programme>. Accessed April 7, 2021.

CASE STUDY 2: Prime Minister’s Council on Climate Change (PMCCC) and its Role in Shaping India’s National Action Plan on Climate Change (NAPCC)

The Prime Minister’s Council on Climate Change (PMCCC) was constituted in June 2007 and had its first meeting on July 13 (India 2008). The initial council was chaired by Prime Minister Dr. Manmohan Singh with the overarching objective to “coordinate national action for assessment [of], adaptation [to] and mitigation of climate change” (India 2021a). The establishment of the PMCCC elevated the status of climate change within the government’s agenda, attracting greater importance to the issue domestically and signaling internationally that India was serious about addressing climate change (IN1, IN5, IG4).

The PMCC initially comprised 27 members, cutting across ministerial boundaries and bringing together high-level government and nongovernment technical experts (India 2021a) (IN1). The PMCCC was an impact advisory body and served as a sounding board, providing the government with access to a wide range of expertise and bringing together different perspectives (IN2, IN5, IG4, IN1). One of the first major impacts was that all major climate-related decisions needed to go through the PMCCC, including the NAPCC as the PMCCC was expected to provide guidance on all matters related to coordinated national action on climate change (IN5) (India 2008).

Impacts and Factors in Success

When the PMCCC was established, several mitigation and adaptation programs were already under way, including several programs that became part of the eight national missions; however, the PMCCC greatly amplified their status (IN5). At the first meeting of the PMCCC, the group requested that a national document be developed, “compiling action taken by India for addressing the challenge of climate change, and the action it proposes to take” (India 2008). Around the same time, a technical study had been commissioned and was being led under the supervision of key advisors in the prime minister’s office and the principal scientific adviser analyzing how climate change would affect India, including what would be the impact from temperature rise on infrastructure and water supply, what happens in the transition away from fossil fuels, and how that aligns with India’s development strategies (IG4, IN5). The study was highly technical in nature and needed to be put in the larger context of national policy; accordingly, it was presented to the PMCCC (IG4).

The PMCCC discussed the technical study, including current and proposed mitigation and adaptation programs and concerns of the council members (IN1). The technical expert members gave recommendations and advice, the eight national missions were refined, and the final formulation of the NAPCC took shape (IN1, IN5, IN2). When the NAPCC was published, the technical study was included as an annex.

The PMCCC was not expected to develop specific policy proposals. Rather, the NAPCC was guided by key individuals in the prime minister’s office, including Shyam Saran, who was the prime minister’s special envoy on climate change and India’s lead climate change negotiator at the time, with support and input from the principal scientific adviser working with technical research organizations like TERI (IN5).

The PMCCC’s primary role was to help to solidify a coordinated response on climate change. The PMCCC emboldened the national determination to accept that climate change is happening, that India must

respond, and that this response must be serious enough that ministries and the whole country need to pay attention (IN2).

Several respondents reflected on the importance of Dr. Manmohan Singh and his role in the PMCCC. He was critical in setting up the council, took the issue of climate change quite seriously, and, as an academic by background, understood the importance of bringing evidence to bear and collecting as much advice from as wide a group as possible (IN5, IN2, IN1, IG4). At the time when the PMCCC was established, it was becoming clear that there was no alternative for India other than to make a shift away from fossil fuels, and, if that transition must be made, a discussion was necessary on how to go about it (IG4). The prime minister played a key role as a synthesizer, bringing together the ministers, to hear the views of experts on how India could make this transition and discuss priorities (IN1).

Executive leadership, combined with high-level technical experts on the panel, greatly influenced its effectiveness. At the time, there was extensive debate about the national solar mission, given the many assumptions about technology and costs. Questions were raised about whether India should be making a major commitment to a different energy future for India. Because of the overwhelming seniority of members, securing their buy-in for what was being proposed in the NAPCC made it easier to instruct ministries responsible for implementation to move forward (IG4). In addition, the fact that the ministries responsible for executing the plan were also part of the council's discussions ensured that they got the context right (IN2).

Once the NAPCC and eight national missions were finalized, they became guiding documents for the ministries to implement (IN1, IN5). At that point, the PMCCC concluded its work, although some council members continued to actively support ministries on specific missions after the plan launched (IN2). By the time the new government came into power in 2014, the missions were already baked into national policy. Once that happened, the case for the climate council weakened (IN1). It was reconstituted in 2014 and met in January 2015 under current Prime Minister Narendra Modi but included far fewer nongovernmental members and has not met since then (IN2) (Menon 2014; India 2021b).

The policy landscape in India has changed over the past decade, and there are now other institutions involved in climate change policy and implementation, including NITI Aayog, which was formed not long after the last meeting of the PMCCC (IN1, IG3). Different from the PMCCC, NITI Aayog is a permanent autonomous body, formed by a cabinet decision, that conducts independent research and prepares advice and recommendations for ministries (IG3).

Limitations and Challenges

Due to its ad hoc nature, the PMCCC has lacked continuity. Although its formation under the direction of the prime minister meant that it could quickly and easily be called together, without a formal or legal status, it could just as easily be discontinued if the government did not see value in it (IN5). Additionally, as the PMCCC only met a few times, it was unable to deeply explore many critical issues. The discussions related to the NAPCC prioritized mitigation and the energy transition, and the national solar mission and the national mission for enhanced energy efficiency received the most attention (IN1). Notably, these two missions had stronger footing at the outset of the PMCCC's work as a result of existing programs and policy, such as the Energy Conservation Act of 2001 (IG4). Respondents noted that other missions, including the national water mission, the national mission on strategic knowledge for climate change, and the national mission on sustaining the Himalayan ecosystem, have not advanced as far, although

they are still active and have undertaken projects related to urban resilience, disaster resilience, and flood management (IN2). There were no deep-dive diagnostic studies performed for several of the topics, and the nature of some issues was more complex, often requiring that a wide range of considerations be taken into account, thereby demanding more time (IN1, IN5). Moreover, some of the topics were not at the time, and are still not, exclusively managed at the federal level. For example, water policy in India is governed at the subnational level, complicating a federal response (IN5). Finally, while everyone agreed that it was critical to have the Himalayan mission, when it came time to implementation, it was not able to advance very far, in part because of the complexity of the issue and in part because of a lack of staffing and resources (IG4, IN5).

CASE STUDY 3: Advisory Bodies under the National Climate Change System in Mexico

Mexico's General Climate Change Law (LGCC), enacted in 2012, establishes the institutional mechanisms across government levels and sectors to address climate change. The LGCC establishes the National Climate Change System (SINACC), built to promote synergies between different institutions and levels of government to tackle climate change. SINACC, in turn, comprises:

- the **Interministerial Commission on Climate Change (CICC)**: The permanent body for coordinating institutional actions of the federal government on climate change, and its members are the heads of 13 relevant ministries.⁶
- the **Climate Change Council (C3)**: The permanent consultation body of the CICC, and its membership includes representatives from the social, private, and academic sectors.⁷
- the **National Institute of Ecology and Climate Change (INECC)**
- representatives of the 32 states and legally established municipal authorities' organizations and;
- the Congress (Government of Mexico 2013)

Mexico's Evaluation Coordination (MEC) is made up of the head of the INECC and six social advisors representing the scientific, academic, technical and industrial community with extensive experience in the field. Its function is to evaluate national climate change policy, taking into consideration the IPCC assessment reports, as well as the periodic assessments established within the framework of the Paris Agreement, in order to propose, if necessary, its total or partial modification or reorientation.⁸

Impacts and Factors in Success

Mexico's adherence to promoting institutional actions to tackle and adapt to climate change has not always been uniform. Rather, it has depended on the commitment of each government. The institutional foundation that has been built over the last decade provides a good example of how climate policy can support the Mexican government's broader plans and objectives.

Following the COP 16 summit in Cancun in 2010, the enactment of the National Climate Change Law and the subsequent establishment of the SINACC and the CICC provided important government-wide

⁶ The relevant ministries are Mexico's Ministries of: Interior (SEGOB), Foreign Affairs (SRE), Navy (SEMAR), Finance and Public Credit (SHCP), Wellbeing (SB), Environment and Natural Resources (SEMARNAT), Energy (SENER), Economy (SE), Agriculture, Livestock, Rural Development, Fisheries and Food (SAGARPA), Communications and Transport (SCT), Public Education (SEP), Health (SSA) and Tourism (SECTUR). The CICC's functions include "(1) formulating and implementing national policies for mitigation and adaptation to climate change, as well as [overseeing] their incorporation into the corresponding sectoral programs and actions; (2) develop[ing] the criteria of transversality and comprehensiveness of public policies to be applied by the agencies and entities of the centralized and decentralized Federal Public Administration; (3) approv[ing] the Climate Change National Strategy; and (4) participat[ing] in the preparation and implementation of the Special Climate Change Program (PECC)" (Government of Mexico 2013).

⁷ The MC3's functions include "(1) advising the CICC and recommending studies, policies, and actions, as well as setting goals to face the adverse effects of climate change and (2) promoting social, informed, and responsible participation through public consultations" (Government of Mexico 2013).

⁸ [Ley General de Cambio Climático \(diputados.gob.mx\)](http://leygeneraldecambioclimatico.diputados.gob.mx)

recognition of climate change, the need to include it within Mexico's federal budget, and the relevance of carefully designed policy instruments and plans (MG3). The key elements that led to the successful establishment of C3 included the involvement of champions from the beginning at a high political level,⁹ the political turning point reached in Mexico after hosting COP 16, existing examples of effective climate advisory bodies such as the UK CCC, involvement of key line ministries, links to public administration bodies and states, and having support from already working technical bodies (MG3).

Since its inception, MEC activities have focused primarily on climate policy assessment across sectors and subnational levels. Synthesis reports are submitted to Congress and published in the official gazette, however they have not had a major impact on stakeholders. This demonstrates that political participation is critical to ensure that recommendations are taken into account. A crucial factor for the success of the MEC is the political will of key decision makers. The MEC has worked with INECC to highlight climate change to officials in many ministries, the Senate and other decentralized agencies (MN1).

Limitations and Challenges

Mexico has the institutional arrangements to incorporate climate change into sectorial policies, but it has been challenging operationalizing climate action, even when specific planning instruments exist. To address this challenge, it is necessary to strengthen social participation schemes so that they are binding for decision making, defending the social welfare benefits associated with mitigation and adaptation efforts (MG3). Progress has been made in the Special Climate Change Program to ensure that institutions consider it in their planning with federal budget allocation, but this has not yet been fully achieved (MN1).

Although Mexico's climate policy structure has the potential for a science-based approach backed by research from institutes (INECC, IMTA) and universities (UNAM, UDLAP) the actual polity weight of these efforts is often not reflected in policy decisions; due to a lack of inter-institutional coordination and a vision of the territory, so that decisions have been made in a partial manner and according to the political interest of each institution (MN1). One way to combat this challenge is to work in coordination with government institutions, academia, private sector and civil society organizations with a comprehensive vision and joint objectives in the pursuit of climate goals.

⁹ The establishment and evolution of the MC3 shows the relevance of involving champions in the advisory process. During the body's first stage, world-class champions (e.g., Mario Molina) and domestic champions (e.g., the vice minister of planning within the Environment Ministry) were personally involved. The second stage involved champions that were more accustomed to administrative or ministerial logic. Finally, the third stage, the current body, has a different vision, which is centered on actions that involve the perspectives of communities and vulnerable groups.

CASE STUDY 4: Multifaceted Experience of New Zealand’s Climate Change Commission (and Interim Committee) and Climate Change Adaptation Technical Working Group

New Zealand’s Climate Change Commission (CCC) was established under the Climate Change Response (Zero Carbon) Amendment Act (2019), which sets long-term emissions reduction targets and a system of emissions budgets to meet those targets. The commission is mandated to review the country’s 2050 target; advise on the level and mechanics of emissions budgets; advise on policy direction for emissions reduction plans; monitor and review progress toward budgets and the 2050 target; prepare future national risk assessments, produce progress reports on national adaptation plans, and implement other tasks as requested by the minister or initiated by the commission. Its board includes a chair, a deputy chair, and five other independent experts, supported by a 35-member staff (He Pou A Rangi n.d.).

The commission’s work was informed by the Interim Climate Change Committee (ICCC), convened from 2018 to 2019 to begin work while the Zero Carbon Act moved through the legislative process (NN1). This body was tasked with engagement and analysis on bringing biogenic agricultural emissions under New Zealand’s ETS and transitioning to 100 percent renewable electricity by 2035 (Interim Climate Change Committee 2019a, 2019b). The Climate Change Adaptation Technical Working Group (CCATWG), active from 2016 to 2018, completed foundational work to move adaptation forward, including by leading a stock-take of climate change impacts and existing adaptation efforts and providing recommendations on further action (CCATWG 2018). The group was co-chaired by an independent expert and a deputy secretary from the Ministry for the Environment and included eight other experts in sectors exposed to climate risk or involved in adaptation planning (Ministry for the Environment 2018).

Impacts and Factors in Success

It is too early to judge the policy impact of the current CCC as its first draft advice was only published in February 2021 (He Pou A Rangi 2021), although one respondent reflected on how far the group and its predecessor have moved New Zealand forward when three years ago there was not yet a plan, only an estimation of the baseline (NN1). The commission’s work has thus far been credited with giving the private sector certainty and confidence to act on climate change and fostering a more mainstream conversation around climate action, facilitated by fairly extensive engagement across and beyond government, including interactions with more than 700 individuals or groups and public webinars and subsequently more than 15,000 submissions on the draft advice (NN1). The group’s political independence—in particular its status as a crown entity—and senior-level expertise across relevant fields were cited as key to instilling public confidence that the CCC’s work is not driven by a political agenda (NN1, NN2).

Looking backward, the ICCC’s work led to a new policy proposal to address biogenic emissions from agriculture, which have traditionally accounted for half of New Zealand’s GHG emissions and remain a challenge to address (NG3, NN2). Discussions about bringing these emissions into New Zealand’s ETS have been contentious since before the system began. The ICCC engaged with stakeholders from a broad set of perspectives and was able to advance the conversation, bring fresh ideas, and agree on a plan with specific timelines (NG3). The public-private partnership He Waka Eke Noa was formed to develop and propose an alternative farm-based pricing and measurement system option. The existing ETS in legislation will take effect in 2022 as a backstop.

The CCATWG's core recommendations have been implemented through the Zero Carbon Act, which articulates within it a process of developing regularly updated risk assessments and adaptation plans with the CCC serving as an independent monitor of progress to hold the government accountable (CCATWG 2018). Respondents noted this is the first time adaptation has meaningfully been addressed in New Zealand (NN4; NN2). After decades of little action, New Zealand now has national leadership, timelines, roles, and responsibilities transparently mandated. In 2020, the government completed New Zealand's first national risk assessment. The first national adaptation plan must be completed by 2022 (Ministry for the Environment 2020).

Experts from both the CCATWG and ICCC noted the importance of being able to speak independently, bolstered by the seniority, a diverse skill set, and experience of group members in facilitating trust and engagement of stakeholders (NN4, NG3). Members of all groups were chosen to bring expertise in certain sectors, not to act as representatives advocating for the interests of any group (NN1, NN2). A former CCATWG member noted that each individual's independence, combined with the presence of academic expertise, gave their work a sense of rigor, generated trust that they wouldn't bend to political pressures, and ultimately allowed their recommendations to be implemented (NN4). The ability to talk publicly about topics the government could not was described as a big advantage for the ICCC (NG3).

The presence of "political buy-in, drive, and mandate" (NN4) on both mitigation and adaptation, as well as particular cooperation across political parties, were underlying external factors that enabled success of all groups (NN2, NN1, NG3). In particular, surveyed participants noted that the CCC's legal mandate brings transparency to the process of developing and implementing climate policy with dates for action, roles, and responsibilities set in statute (NN2). Given inevitable implementation challenges and competing priorities, the mandate allows the CCC to hold the government of the day accountable if it is not advancing the legislated ambition and may accordingly prevent policy shifts (NN2) as leadership changes (NN1).

Limitations and Challenges

Some of the CCATWG's more challenging recommendations have not yet been implemented, for example, building capacity, supporting a formalized system for local governments to access information at low cost, developing funding mechanisms, and correcting misaligned legislative instruments (NN4, NN2). These actions, for the most part, require coordination across multiple departments and levels of government. Lack of agreement on coordination and cost-sharing between central and local governments were key barriers, in addition to limited funding at the local level (NN4, NN2). The need for high-level coordination across ministries was also described as a barrier to advancing from advisory body guidance on policy direction to implementation of specific policies (NN1, NG3, NN2). The Ministry for the Environment has increased staff focused on adaptation, and some gaps may be addressed in the national adaptation plan or new adaptation legislation expected in 2022 (NN4).

One expert noted that some of the ICC's proposals on agriculture, moreover, may have fallen off the radar due to lack of resources to push for policies that the government didn't initially take up and exacerbated by staff turnover (NG3). Once the full CCC was formed, it had to start immediately on emissions budgets; it wasn't focused on agriculture in the same way as the ICC and didn't have to actively follow through on the first reports (NG3).

Limited time and resources were also described in several other contexts: minimal time for up-front framing in the CCATWG “had potential to direct (and limit) discussions and outputs within certain areas,” which could have been improved in hindsight (NN4), while lack of clarity and control over funding was problematic for the ICC (NG3).

Finally, the role of the profiled bodies in New Zealand is and has traditionally been solely advisory. As a result, climate considerations are at risk of becoming third order in government decision-making (NN2). For example, the CCC developed principles to guide new projects, fast-tracked as part of the country’s COVID recovery, one of which stated that projects should not make future adaptation more difficult. Nevertheless, construction was approved by the government to build new housing in low-lying, risky areas endangered by increasing floods. This decision was made to address lack of affordable housing, which is another high-priority issue facing New Zealand, but such decisions can be maladaptive (NN2).

CASE STUDY 5: South Africa’s Presidential Climate Commission and Coordinating a Just Transition

South Africa’s Cabinet formally approved the Presidential Climate Change Coordinating Commission in September 2020 (now known as the Presidential Climate Commission or (PCC). The idea for the PCC originated at the Presidential Jobs Summit held in October 2018, when social partners agreed that an independent statutory body should be formed under the Climate Change Act or Bill to coordinate and oversee the just transition, including examining how to maximize the opportunities for jobs (Government of the Republic of South Africa 2018).

Under the terms of reference, the PCC will “advise on and facilitate a common understanding of a just transition, cognizant of the socio-economic, environmental, and technological implications of climate change . . . [covering] adaptation, mitigation as well as means of implementation” (The Presidency 2020). The PCC will also provide a platform for the engagement of key stakeholders on the National Employment Vulnerability Assessment and the Sector Job Resilient Plans (The Presidency 2020).

Twenty three members were appointed to the PCC in December 2020, including representatives from business, youth, labor, academia, advocacy, civil society, research institutions, and traditional leadership, which are collectively known as social partners (The Presidency 2020). The PCC is chaired by President Cyril Ramaphosa and deputy chaired by Mr. Valli Moosa. Dr. Crispian Olver serves as the executive director.¹⁰

The PCC met formally for the first time in February 2021 and meets on a quarterly basis, with smaller working groups meeting more regularly. Relevant experts and leaders in their field outside of the PCC are also co-opted to join the various working groups.

Envisioned Workplan of the PCC

Achieving a just transition in South Africa is *the* defining policy of the PCC, with one of the main objectives to “broker a partnership/social compact in South Africa that not only addresses climate mitigation and adaptation, but also the social issues at the heart of a just transition” (SN3). In the first year of operation, the PCC:

- 1. Conducted a landscape assessment of the existing work on just transitions to understand what has been done and what more needs to be done.** The PCC’s work is not starting from scratch, but rather building on and not duplicating years of learning and experiences on just transitions. This learning is from a broad array of sources, including the South African government, other social partners (SN1, SN3), as well other jurisdictions that have undergone transitions away from fossil fuel-reliant economies while at the same time entrenching just transition considerations and imperatives.¹¹

¹⁰ Moosa and Olver have both held high-level positions within South Africa’s government, including working together as minister and director general, respectively, of South Africa’s Department of Environmental Affairs and Tourism from 1999 to 2004.

¹¹ For example, the business community has developed a set of net-zero pathways for South Africa, which look at impacts on employment and technology development; Eskom (the national electricity utility) is examining pathways for reaching zero emissions; there have been several studies that examine a just energy transition in South Africa, including one done by the

2. **Defined a shared vision of “a just transition in South Africa”.** The social partners within the PCC have different viewpoints, depending on the constituency they represent. For example, from a trade union’s perspective, a just transition needs to include a deep understanding about how to bring along workers and communities that may be negatively affected by the transition, and accordingly, how to preserve and/or transition jobs for those most affected (including training and reskilling). Building a social compact around the just transition and coming together around a shared vision was one of the PCC’s first priorities.
3. **Provided advice on South Africa’s first updated NDC.** The PCC undertook significant technical work and deliberations to provide recommendations on South Africa’s first updated NDC, which were adopted by the government. For the first time, the low-end of South Africa’s mitigation target is compatible with a trajectory consistent with limiting warming to 1.5C, with the just transition being the core of climate action.
4. **Conducted a series of dialogues and commissioned a series of policy briefs on issues pertinent to the just transition South Africa.** Some of the key issue areas examined included governance, the coal value chain, gender, and finance, among others—all with the aim of informing a just transition framework for South Africa.
5. **Developed a framework for a just transition in South Africa.** This framework is the first building block towards reaching South Africa’s vision for just and equitable transition towards climate resilience and zero-emissions development. The framework sets out the vision, principles, planning elements and policy measures to achieve a just transition in South Africa, as well as the outcomes to be achieved over the short, medium, and long run. In so doing, the framework aims to bring coherence and coordination to just transition planning in South Africa.
6. **Embarked on the development of technically and socioeconomically feasible pathways for achieving a just transition to net-zero emissions in South Africa.** This includes detailed modeling to examine the transitions required in all sectors (e.g., energy, industrial processes, land use and ecosystems, water and food security, the built environment and infrastructure), especially examining the trade-offs (SN1, SN3), impacts on employment and the most vulnerable people (SN3), impacts on trade and economic competitiveness, and future investment needs.

Impact and Factors in Success

With the PCC being a fairly new body, it is too early to predict its impact and success; however, several early factors put its work in good stead:

- **The location of the PCC.** The PCC is chaired by South Africa’s president and is operated from within the Presidency. This is a deliberate decision, elevating the work of the body to cut across all government departments (SN1, SN3), many of which are beginning to take a much-needed leadership role on just transition issues (SN3).
- **The composition of the PCC.** The PCC is intended to embody a social partnership around a just transition, comprising senior members from most major stakeholder groups in South Africa (SN1,

National Economic Development and Labour Council. The Department of Forestry, Fisheries, and the Environment has also commissioned work to better understand the jobs and skills that are most at risk in the transition.

SN2, SN3)—in essence, helping to reach a broader constituency and reduce the fragmentation around the different views of a just transition in South Africa (SN2). This social partnership also extends outside of the PCC, through broad engagement processes that the commissioners help to design and facilitate (SN2, SN3).

- **The increasing prominence of, and need for, a just transition in South Africa.** There is deepening understanding of the opportunities and risks associated with the global transition to low-emissions development. For example, South Africa is heavily dependent on coal as a primary energy source, so achieving a just transition is crucial for South Africa to remain competitive, to attract investment, and see to the socioeconomic needs of its people (SN1). The ability to trade with global partners in a future low-emissions world is also a key imperative. Some social partners are also increasingly viewing this transition as an opportunity for redress, helping South Africa to solve some of its existing challenges such as poverty, inequality, and unemployment (SN2).

Limitations and Challenges

The PCC may face some potential challenges:

- **Vested interests.** While the diverse composition of the PCC is one of its strengths, it also may pose a challenge when defining a shared vision for a just transition in South Africa, due to the different viewpoints (SN2 2021). The PCC's biggest job will be to dislodge and potentially merge or reconstitute these positions toward a collective decision-making process (SN2, SN3). Indeed, the success of the PCC will depend on this social partnership (SN3).
- **Costs of the transition.** The achievement of a just transition will require significant financial resources (SN2), which may be challenging with South Africa's economy in recession and experiencing high unemployment (SN1). As such, the PCC is crucially interested in climate finance across the full spectrum (e.g., long-term equity investments, blended finance, grant finance, etc.) (SN3) and particularly looking at how existing problems may be solved by achieving a just transition to maximize future financial flows (SN1).
- **Risks to jobs.** The transition is intended to minimize the impact on livelihoods, with particular concern about the loss of jobs. Coal mining, for example, employs a lot of unskilled labor in South Africa, so there is a fear about not managing to employ the same people in more sophisticated industries like renewable energy (SN1). This is starting to be addressed through plans for local manufacturing, but more work still remains (SN1).

Final Reflections

The momentum and enthusiasm for the PCC in South Africa is evident (SN1, SN2, SN3). Although the body does not have policy-setting or regulatory powers, it aims to provide independent recommendations to government that are evidence-based (i.e., technically feasible, financially feasible, backed by science, with consideration of just transition factors) and endorsed by all social partners, particularly business and labor as critical stakeholders (SN2, SN3).

Ideal outcomes are that the PCC

1. becomes a trusted and reliable forum to engage on just transition issues (SN3);

2. provides policy-relevant advice that is accepted by government because of its credibility, integrity, and scientific research base (SN3); and
3. goes beyond a talk shop to present recommendations that inform actual project implementation (i.e., looking at the factors needed to get projects done on the ground) (SN1). This includes identifying pilot projects that provide a real opportunity to test concepts and build confidence toward a just transition in South Africa, without the PCC having to go as far as being an implementing body (SN2).

CASE STUDY 6: Broad Impact of the United Kingdom’s Climate Change Committee

The United Kingdom’s Climate Change Committee (CCC) is an independent climate change advisory body that was established by the country’s 2008 Climate Change Act and that is jointly sponsored by the UK Department for Business, Energy and Industrial Strategy, the Department of Environment, Farming and Rural Affairs (Defra), the Northern Ireland Executive, the Scottish Government, and the Welsh Government. The CCC’s stated purpose is “to advise the UK and devolved governments on emissions targets and to report to Parliament on progress made in reducing greenhouse gas emissions and preparing for and adapting to the impacts of climate change” (Climate Change Committee 2021). The CCC is comprised of two committees, one focused on Mitigation: Chaired by Lord Deben with eight independent experts, and one focused on adaptation: Chaired by Baroness Brown with six independent experts. The Committees are supported by an analytical and policy secretariat of more than 30 staff. The CCC conducts independent analysis in climate science, economics, and policy and consults with a wide variety of stakeholders to inform the recommendations that it ultimately puts forward to meet its legislated mandate. Government representatives do not sit on the CCC, but there is a memorandum of understanding with the UK Government to share evidence and modeling from across government when developing the CCC’s recommendations and advice.

Impacts and Factors in Success

Interviewees raised several examples in which the CCC has had a significant impact on the policymaking process, including, for example setting the UK’s net-zero target (UG1, UN4, UG1, UN8, UN6), establishing carbon budgets (UG1, UN2, UG1, UN8), banning the sale of new petrol and diesel vehicles (UG1, UN4, UG1, UN8, UN6), promoting offshore wind (UG1, UN4), driving electricity market reform (UN3, UN6), promoting green finance (UN4), opposing the Cumbrian coal mine (UG1, UN8), and enhancing flood policy (UN7). Several factors were identified as drivers of this success:

Providing sound, trusted, rigorous analysis: The CCC was able to help the United Kingdom become the first G7 nation to put forward a net-zero target. The underlying analysis on the benefits, costs, and technology pathways was a critical input to the decision (UG1). The CCC has been described as a “trusted arbiter” and “knowledge broker” (UN3) and has a reputation for strong quality and rigor (UG1, UN8). A wide range of both private industry and NGOs use the CCC as an authoritative source showing the significant standing from which the CCC benefits (UN3). Averchenkova and colleagues analyzed a decade’s worth of parliamentary debate records and found that the CCC was being cited by all political parties; it is seen as a trusted and independent source (UN2; Averchenkova et al. 2021).

Credibility of leaders: The strength and credibility of the chairs of the CCC has been identified as a key driver in its success (UG1, UN2). For example, Lord Adair Turner was a well-known economist, and Lord

Deben was a former conservative minister. They are “technocrats rather than campaigners,” as one respondent put it (UG1). In the case of electricity market reform, for example, Lord Adair Turner was a well-respected expert with significant experience on the topic and brought a high level of credibility to the cause (UN3). Baroness Brown, who chairs the Adaptation Committee, is a respected engineer and peer in the House of Lords, and has played a key role in raising the profile of adaptation up the political agenda.

Mandate for government to respond to recommendations: The UK Climate Change Act requires the government to respond within a limited amount of time to the CCC’s advice. The carbon budgets are set 12 years ahead of time. The CCC recommends a budget in December, and the government must legislate it by June of that year. For example, the Fifth Carbon Budget was recommended in December 2015, legislated in June 2016, and covers 2028 to 2032. The government could be legally challenged if this process does not happen. This call-and-response mandate was noted by several interviewees as a key driver of the CCC’s success (UG1, UN2, UN6). Had the CCC simply been issuing reports, the government could have ignored it, but, rather, there is a consistent drum beat (UG1). This means that the CCC is a permanent feature of the national discourse on climate change. The regularity and authority of the advice creates space to advance action (UN5). There is one exception, however, where there is no clear timeline: After a carbon budget has been passed, the Climate Change Act requires the establishment of an implementation plan, but there is no firm date associated with this (UN3).

Independence: The CCC is an independent body, with long-term appointments for members (UG1). The committee members are esteemed experts, largely from academia (UG1). There are open calls for expertise and publicly available terms of reference and open processes. The experts are not nominated by political parties or decided by political committees (UN2, UG1, UN8). Additionally, the fact that the CCC is technocratic, as opposed to representing interest groups, has aided its credibility. Unlike other advisory committees, the CCC does not have regional or interest-group representation (UN3). With regard to the fourth and fifth carbon budgets, the CCC assessed the United Kingdom as falling short on achieving its set ambition, which was widely covered in the media and which has required government response and engagement. The CCC is an independent watchdog in that regard (UN2).

Clear core statutory responsibilities and strong legal basis: The United Kingdom’s Climate Change Act provided clear responsibilities for the CCC and government which has aided the body’s overall effectiveness (UN3, UN7).

Presence of an NGO community that is calling for even greater ambition: In the case of the United Kingdom’s target for net-zero GHG emissions, the NGO community had already put forward a call for a very ambitious earlier timeline for achieving climate neutrality. In comparison, the CCC’s timeline for 2050 seemed more plausible (UG1). At the same time, a central right think tank called Bright Blue issued its “Hotting Up” report in May 2018, in time for the 10th anniversary of the Climate Change Act and at a fitting time to advance a net-zero target (UN5). In the case of banning the sale of petrol and diesel vehicles, groups like Extinction Rebellion had already been calling for action. The CCC provided evidence-based analysis on the achievability of such targets and demonstrated that achieving net-zero GHG emissions would not be possible without doing so (UG1).

Limitations and Challenges

Providing recommendations related to politically contentious areas: While the CCC has been successful in shaping carbon budgets, the net-zero target, and select policies (e.g., phasing out of petrol-fueled cars and promoting offshore wind), interviewees noted that the body's success was more limited related to issues that were politically challenging (UG1). For example, in the buildings sector, the CCC has been less influential; and more political will is necessary to move progress forward (UG1, UN4, UG1, UN8). Contrastingly, in the case of electric vehicles, the economics are in their favor, there isn't a strong automotive industry leading pushback, and there is greater turnover of car fleets (UG1). Respondents pointed out that the CCC's job is ultimately to recommend the target (UG1, UN8). Sometimes policy is implied, but recommendations regarding how the target is achieved are a delicate line to tow (UG1, UN8). Other areas in which the CCC has been less successful pertain to fuels and aviation, in which there has been a lack of willingness to make changes to the tax system (UN4). Less progress has also been made in the cases of farming, taxing meat, carbon pricing, house building, red diesel, carbon capture and storage, and decarbonization of space heating (UN4, UN6).

The CCC being "nonpolitical and technocratic is fine up to a point" (UG1). There were differing views among respondents as to whether the CCC should move into politically contentious areas. For example, it was mentioned that if a technocratic organization were to do so, they'd act more like a pressure group (UG1). That being said, over time, the CCC's advice has been bolder in its recommendations (UN5). It has proved itself to be increasingly unafraid to say difficult things (UN5). In addition, some of the challenges are reflected in the analysis, and shifting from an 80 percent emissions reduction target to a net-zero target forces one to consider and address all potential emissions sources, even those that are most challenging or contentious (UN6).

Softer timelines, mandates, and metrics on adaptation: The CCC's adaptation committee issues its risk assessments every five years (UG1, UN8). It's quite challenging when this cycle overlaps with the timing of the assessment of progress (UN7). Furthermore, the adaptation committee only advises on a risk assessment, but the government decides what it will do in response (UG1, UN8, UN7). Typically, the recommendations are initially embraced (UN7). The adaptation committee then reviews the government's progress but does not independently set targets (UG1, UN8) and does not weigh in on the strength of policy recommendations (UN7). This is a fundamental difference in the scope of the mandate between mitigation and adaptation (UG1, UN8), wherein the statutory requirements applying to the latter are much weaker (UN7). Additionally, adaptation does not have the equivalent of a carbon budget in terms of quantified targets, which poses complexities of its own (UG1, UN4).

Resources for secretariat: The CCC is comparatively well resourced, has relatively stable funding and has independence on how it spends its budget as well as programmatic autonomy (UN2, UN3). Some have suggested, however, that the CCC could benefit from additional funding to conduct further communications and outreach on recommendations (UN5). The adaptation committee also has a significantly smaller budget, which comes from Defra and fewer people as well (UN4) with five staff as opposed to 25–30 staff for mitigation (UN7). Some have called for a more independent budget that is sheltered from budgetary cuts. For example, the national audit office's budget is set independently (UG1, UN8).

Lack of communications mandate: The legislation does not specify a mandate to communicate with the public, and there is no budget for communication with the public and making materials accessible (UG1, UN8, UN7). This is problematic, given the need for significant behavioral change to get to net-zero

emissions (UG1, UN8). At times when budget decisions are being made, the government departments that provide budgets in the United Kingdom first assess requirements under legislation. If public engagement is not in the legislation, there is a real danger that it will get cut (UG1, UN8). That being said, there have been efforts to ensure that findings produced by the CCC are easily digestible. The CCC reports are well-designed, aiding communication (UN2). For example, with the review of progress on adaptation, scores are given on different metrics, which has helped as the scores serve as an incentive for officials to improve their ratings (UN7).

Annex C. Global Landscape Analysis

The following global landscape analysis presents a high-level descriptive overview of all identifiable climate change advisory bodies. Drawing on a typology for classifying scientific advisory bodies established by Groux et al. (2018) we categorize 39 identified climate change advisory bodies according to 7 key indicators (Groux, Hoffman, and Ottersen 2018). More information about each indicator is provided in the bullets below:

- **Status:** whether the advisory body is currently in operation (active) or no longer in operation (defunct)
- **Dates of Activity:** the dates during which the advisory body has been active
- **Scope of Coverage:** whether the advisory body covers mitigation, adaptation, or both under its purview
- **Membership:** a description of the members of the advisory body
- **Key Responsibilities or Mandate:** a description of the key responsibilities and mandate under which the advisory body operates
- **Foundation for Establishment:** a description of the way in the advisory body came to exist
- **Autonomy from Government:** whether the advisory body is directly integrated or embedded into government operations through formal housing within government or explicit membership from government (embedded); connected to government through clear channels or representation, but maintains a degree of separation nonetheless (arm's length); or entirely independent from government with no formal connection (independent)

The data contained within this annex have been compiled via a combination of desk research and expert interviews. All sources are cited via footnotes, but it is important to note here that one resource in particular, "Overview of National Climate Change Advisory Councils," played a particularly large role in providing the information collected and categorized within this appendix (Finnish Climate Change Panel 2019). This report also drew on the information compiled in a report authored by the Ecologic Institute and the Institute for Sustainable Development and International Relations (IDDRI), titled *Climate Governance Systems in Europe: The Role of National Advisory Bodies* (Evans and Duwe 2021). The primary contribution that this appendix offers beyond what other reports have already achieved is to categorize the extracted information into the aforementioned indicators while integrating new or more current information collected during our own research process.

This assessment may not be comprehensive and was compiled using available information at a snapshot in time.

Table B1. Global Landscape Analysis of Climate Advisory Bodies

Country	Body Name	Status	Dates of Activity	Scope of Coverage	Membership	Key Responsibilities/Mandate	Foundation for Establishment	Autonomy from Government
Australia	Australian Climate Change Authority ¹²	Active	2011–present	Mitigation	Comprising a chair, a chief scientist, and up to 7 other members from academia and the private/public sectors.	Plays an important role in the governance of Australia's mitigation policies, undertaking reviews and making recommendations on the Carbon Farming Initiative, and the National Greenhouse and Energy Reporting System. Reviews are also undertaken on other matters as requested by the minister responsible for climate change or the Australian Parliament.	Established by law (The Climate Change Authority Act 2011).	Arm's length
	Australian Climate Council ¹³	Active	2013–present	Mitigation and adaptation	Comprising 12 climate scientists, researchers, policymakers, and business leaders.	Provides clear and independent information on climate change to the Australian community. The council is completely independent and apolitical.	Established independently from government and supported by public donations.	Independent
	Australian Climate Commission ¹⁴	Defunct	2011–13	Mitigation and adaptation	Comprising a chief commissioner and other sub-commissioners from academic and scientific backgrounds.	Communicated reliable and authoritative information about climate change in Australia through the release of a number of reports on climate change science, health impacts, international action, and renewable energy, as well as through holding public events.	Established by executive order from the Labor government before being abolished by the subsequent administration.	Arm's length
Austria	National Climate Protection Committee (Nationales)	Active	2011–present	Mitigation and adaptation	Comprising one representative from each of the political parties represented in the national council and one high-ranking representative from each of several ministries and interest groups.	Advises on fundamental issues concerning Austrian climate policy in the light of the objectives of the Paris Agreement.	Established by law (The Climate Protection Act).	Embedded (housed by the Federal Ministry for Agriculture and Forestry, Environment and Water Management)

¹² Source: <https://www.climatechangeauthority.gov.au/>

¹³ Sources: <http://www.climatecouncil.org.au/>; (Weaver, Lötjönen, and Ollikainen 2019)

¹⁴ Source: Expert interview (AN1)

	Klimaschutzkomitee) 15							
	Austrian Council on Climate Change ¹⁶	Defunct	1996– unknown	Mitigation and adaptation	Comprising 11 members from economic, science, and technology-related fields	Advised the Austrian Government on all questions regarding climate change, participated in international research programs, organized workshops for various target groups, published a newsletter 4 times a year, and strived to create awareness of global environmental problems by providing information to the public.	Unknown	Unknown
Belgium	The Federal Council for Sustainable Development for Belgium (FRDO) ¹⁷	Active	1997– present	Mitigation and adaptation	Comprising voting members from environmental organizations, development organizations, consumers, employees' and employers' bodies, youth organizations and academia. Nonvoting members include representatives of the federal government, language communities and regions, and environmental councils and socioeconomic councils.	Advises and coordinates with the Belgian federal government on sustainable development policy, focusing on international commitments, including under the UN.	Established by law (The Law of 5 May 1997).	Arm's length
Bulgaria	National Expert Council on Climate Change ¹⁸	Active	2014– present	Unknown	Comprising scientists, government officials and stakeholders (environmental NGOs, businesses, and local municipal agencies). Composition varies by topic under discussion.	Unknown	Established by law.	Arm's length

¹⁵ Sources: <https://climate-adapt.eea.europa.eu/countries-regions/countries/austria>; <https://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2015/05/AUSTRIA.pdf>; (Weaver, Lötjönen, and Ollikainen 2019)

¹⁶ Sources: <https://www.accc.at/englisch/index.htm>; (Weaver, Lötjönen, and Ollikainen 2019)

¹⁷ Sources: <https://www.frdo-cfdd.be/en/the-council>; (Weaver, Lötjönen, and Ollikainen 2019)

¹⁸ Source: (Evans and Duwe 2021)

Cambodia	National Climate Change Committee (NCCC) ¹⁹	Defunct	2006–15	Mitigation and adaptation	Comprising representatives from relevant government ministries.	Prepared, coordinated, and monitored the implementation of policies, strategies, legal instruments, plans, and programs related to climate change. With an amendment in 2014, the NCCC functioned as an interministerial mechanism for coordination of climate change response in the country.	Established by Royal Decree.	Embedded
	Cambodia's National Council for Sustainable Development (NCSD) ²⁰	Active	2015–present	Mitigation and adaptation	Comprising high-level representatives (secretaries and undersecretaries of state) of concerned government ministries and agencies, with the prime minister as honorary chair and the minister of environment as chair.	Took over responsibilities of NCCC; in addition to its role in defining policies and legal frameworks on sustainable development, NCSD has a role in monitoring and reporting on Cambodia's implementation of its international commitments in the area of sustainable development.	Established by royal decree.	Embedded
Canada	Canadian Institute for Climate Choices ²¹	Active	2019–24	Mitigation and adaptation	Comprising a combination of research staff, directors, expert panels on mitigation, adaptation, and clean growth, and advisory council leaders from government, industry, and civil society.	Provides independent and expert-driven analysis to help Canada move toward clean growth in all sectors and regions of the country.	Won a bid offered by Environment and Climate Change Canada for the creation of a policy-oriented organization focused on clean growth and climate change led by independent experts.	Independent

¹⁹ Source: (Weaver, Lötjönen, and Ollikainen 2019)

²⁰ Sources: <https://ncsd.moe.gov.kh/>; (Weaver, Lötjönen, and Ollikainen 2019)

²¹ Sources: <https://www.canada.ca/en/environment-climate-change/services/climate-change/expert-engagement-initiative.html>; (Weaver, Lötjönen, and Ollikainen 2019)

	Canadian Net-Zero Advisory Body ²²	Active	2021–present	Mitigation	Comprising 14 members bringing together a diverse range of expertise in science, business, labor, policymaking, rural economic development, and Indigenous governance.	Identifies pathways to help Canada achieve net-zero emissions by 2050. Under the proposed Canadian Net-Zero Emissions Accountability Act, the minister must provide the advisory body with the opportunity to share its advice when setting or amending a national greenhouse gas emissions target or establishing or amending an emissions reduction plan.	Established by tabled legislation (Canadian Net-Zero Emissions Accountability Act of 2020).	Arm’s length
Chile	Chilean Scientific Advisory Committee on Climate Change (Comité Científico Asesor de Cambio Climático) ²³	Active	2019–present	Mitigation and adaptation	Comprising academics with expertise in climate change, mitigation, adaptation, oceans, water, biodiversity, and cities.	Identifies scientific evidence and delivers recommendations to the government that can support the design of public policies in seven thematic areas.	Originally convened in advance of Chile hosting COP 25; the body is currently being formalized via legislation.	Arm’s length
China	National Leading Committee on Climate Change of China ²⁴	Active	2006–present	Mitigation and adaptation	Comprising 42 members in science and economics-related fields. The committee is a governmental entity with members coming from relevant governmental ministries and bureaus but does host many members with academic or expert backgrounds.	Studies and formulates major national strategies, guidelines, and countermeasures against climate change; studies and examines international cooperation and negotiations on major issues; implements the guidelines and policies of the state council on energy conservation and emission reduction work; unifies the deployment of energy conservation and emissions-reduction work, and studies and deliberates on major policy suggestions.	Established by the state council.	Embedded

²² Source: <https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/net-zero-emissions-2050/advisory-body.html>

²³ Source: Expert (Maisa Rojas Corradi)

²⁴ Sources: <http://www.china.org.cn/english/environment/213624.htm>; (Weaver, Lötjönen, and Ollikainen 2019)

Denmark	The Danish Council on Climate Change (Klimarådet) ²⁵	Active	2014–present	Mitigation and adaptation	Consists of six members, together with a chairman, who are all appointed for a four-year term of office by the incumbent minister of climate and energy.	Provides recommendations on climate initiatives in the transition to a low-carbon society, based on independent professional analyses centered on the country's objective for 2050. The council also investigates what the best solutions are for Denmark in the short, medium, and long term in relation to Denmark's security of supply, competitiveness, and opportunities for continued growth and development for the benefit of citizens' welfare.	Established by law (Climate Change Act).	Arm's length
Dominican Republic	The National Council for Climate Change and Clean Development Mechanism of the Dominican Republic (El Consejo Nacional para el Cambio Climático y Mecanismo de Desarrollo Limpio) (CNCCMDL) ²⁶	Active	2008–present	Mitigation and adaptation	Chaired by the president and composed of the heads relevant government ministries. There are also members from the Central Bank of the Dominican Republic, the National Energy Commission, the Office for the Reorganization of Transport, the Superintendence of Electricity, the Dominican Corporation of State Electric Companies, the Association of Banks of the Dominican Republic, the Association of Industries of the Dominican Republic, the private generators of the national energy sector, the National Council of Private Enterprise, and representatives of civil society organizations.	Formulates the public policies and strategies necessary for the prevention and mitigation of greenhouse gases and adaptation to the adverse effects of climate change and ensures that public-private entities and key actors of civil society are provided with a high level of information, awareness, and education about climate change.	Unknown	Embedded

²⁵ Sources: <https://www.klimaraadet.dk/en>; (Weaver, Lötjönen, and Ollikainen 2019)

²⁶ Sources: <https://www.preventionweb.net/organizations/25191/view>; (Weaver, Lötjönen, and Ollikainen 2019)

European Union	European Scientific Advisory Body on Climate Change ²⁷	To be established	N/A	Mitigation and adaptation	To be established	To be established	Envisaged by a provisional political agreement between the European Council and Parliament setting into law the objective of a climate-neutral EU by 2050.	To be established
Finland	The Finnish Climate Change Panel (Suomen Ilmastopaneeli) ²⁸	Active	2012–present	Mitigation and adaptation	Consists of 15 members plus chair representing scientific fields ranging from economics and law to environmental education and soil science. Representatives from relevant ministries, who are nominated from their respective ministries as liaison officers, may be present in the panel's meetings but do not have influence in decision-making within the panel.	Provides recommendations to the government on climate policy, strengthens the multidisciplinary approach of climate change science, serves as an advisor to the Finnish ministerial working group on energy and climate policy, and assesses the coherence of climate policy and the sufficiency of the implemented measures to answer the challenges of climate change. The panel can receive assignments from different ministries and ministerial working groups to provide background information required for developing climate policies.	Established by law (Climate Change Act of 2015); prior to this formal legislation, the body operated for two terms informally.	Arm's length

²⁷ Source: <https://www.consilium.europa.eu/en/policies/climate-change/>

²⁸ Sources: <https://www.ilmastopaneeli.fi/en/>; (Weaver, Lötjönen, and Ollikainen 2019)

France	The High Council on Climate of France (Haut Conseil pour le Climat) (HCC) ²⁹	Active	2018–present	Not stated	Consists of 11 experts in climate science, economics, agronomy, and energy.	Provides independent advice and recommendations on the development and achievement of France's carbon budgets and the policies put in place to combat climate change; monitors France's progress in reducing greenhouse gas emissions and respecting carbon budgets; and conducts independent analysis in the fields of climate science, economics, and public policy.	Established by the president.	Independent
Germany	The German Advisory Council on the Environment (Sachverständigenrat für Umweltfragen) (SRU) ³⁰	Active	1971–present	Not stated	Consists of 7 university professors from different disciplines who have expert knowledge and experience in environmental protection; the body is not especially close to policymaking but is in close interaction with government officials in regard to current topics and gaps in information.	Describes and assesses environmental conditions, problems, and political trends and points out solutions and preventive measures. The SRU monitors various fields of action in environmental policy, focusing on the main sectors affecting the environment, including energy, transportation, and agriculture.	Established by a charter of the Federal Ministry of the Interior as part of the federal government's environmental program.	Arm's length
	Council of Experts on Climate (Expertenrat für Klimafragen) ³¹	Active	2020–present	Mitigation and adaptation	Comprising a chairman and vice chairman, as well as three other experts from academia.	Supports implementation of the Federal Climate Protection Act by examining the annual data on greenhouse gas emissions compiled by the Federal Environment Agency, assessing this data against the country's target, and advising on other policy questions.	Established by law (Federal Climate Protection Act of 2019).	Arm's length

²⁹ Sources: <https://www.strategie.gouv.fr/reseau-france-strategie/conseil-climat-hcc>; (Weaver, Lötjönen, and Ollikainen 2019)

³⁰ Source: (Weaver, Lötjönen, and Ollikainen 2019)

³¹ Source: <https://www.expertenrat-klima.de>

Greece	Greek Special Scientific Committee for Climate ³²	Active	2020–present	Unknown	Comprising academics, researchers, representatives of the business community, and members of civil society.	Unknown	Unknown	Unknown
Guatemala	The National Council on Climate Change of Guatemala (El Consejo Nacional de Cambio Climático) ³³	Active	2013–present	Mitigation and adaptation	Comprising public and private participants and chaired by the presidency of the republic.	Regulates, supervises, and monitors national climate change policy, the climate change fund, and the strategies and action programs built to support mitigation and adaptation to the impacts of climate change.	Established by law (Framework Law to Regulate the Reduction of Vulnerability, Compulsory Adaptation to the Effects of Climate Change and the Mitigation of Greenhouse Gases, Decree 7-2013).	Embedded
Hungary	The National Environmental Council of Hungary (Országos Környezetvédelmi Tanács) ³⁴	Active	1996–present	Mitigation and adaptation	Comprising 22 members, of which 7 are university professors, scientists, or researchers, 7 are representatives from industry/the private sector, 7 are selected by green NGOs, and 1 (the chair) is the state minister responsible for environmental protection and acts as a contact person between the government and the council.	Advises on key elements of environmental programs, on the legal rules and decisions related to environmental protection, and on other issues related to environmental protection. The government is obliged to request the opinion of the council on environmental issues when there is a legislative proposal pending and environmental impact reports are being reviewed. The council is also authorized to suggest topics for the agenda of the government.	Established by law (Environmental Act 1995).	Arm's length

³² Source: <https://www.tornosnews.gr/en/tornos/green-travel/38419-greek-scientific-committee-on-climate-change-meets-in-athens.html>

³³ Source: (Weaver, Lötjönen, and Ollikainen 2019)

³⁴ Source: <https://www.oktt.hu/>; (Weaver, Lötjönen, and Ollikainen 2019)

Iceland	Icelandic Climate Council ³⁵	Active	2018–present	Mitigation and adaptation	Comprising members from the business community, academia, municipalities, the labor movement, and environmental NGOs. Additionally, representatives from other stakeholders can be asked to participate as considered necessary at any given point in time. The minister for the Environment and Natural Resources appoints the chair and the vice chair of the council and has also appointed representatives of youth.	Independent body whose role is to hold authorities accountable and provide advice on policy objectives and specific measures related to climate change.	Established by law (Icelandic Climate Act of 2019).	Arm's length
India	Prime Minister's Council on Climate Change (PMCCC) ³⁶	Defunct	2008–15 (sporadic meeting)	Mitigation and adaptation	Comprised 27 members, cutting across ministerial boundaries and bringing together high-level government and nongovernment technical experts.	Coordinated national action for assessment of, adaptation to, and mitigation of climate change. The council was expected to provide guidance on all matters related to coordinated national action on climate.	Established under the direction of the prime minister.	Embedded
Ireland	The Irish Climate Change Advisory Council ³⁷	Active	2016–present	Mitigation and adaptation	Consists of a chairperson, and 10 other members. The director general of the Environmental Protection Agency; the chief executive of the Sustainable Energy Authority of Ireland; the director of Teagasc, the Agriculture and Food Development Authority; and the director of the Economic and Social Research Institute have automatic ex-officio membership on the council. The additional 6 members are nominated or approached by the minister for Communications, Climate Action and Environment to serve on the council.	Advises, assesses, and monitors government policy and its impact on the behavior of industry, agriculture, and the energy and transportation sectors in terms of the country's international obligations to become carbon-neutral by 2050. The council gives advice to the government and comments on climate plans and publishes evidence-based reports.	Established by law (Climate Action and Low Carbon Development Act 2015).	Arm's length

³⁵ Sources: <https://www.loftslagsrad.is/english/about/>; Ecologic Institute and IDDRI paper

³⁶ Expert interviews

³⁷ Expert interview (IRN1); (Weaver, Lötjönen, and Ollikainen 2019)

Kenya	The National Climate Change Council of Kenya ³⁸	Unknown	2016–unknown	Mitigation and adaptation	Comprising 9 members, 5 of which are government officials (cabinet secretaries). The other 4 members are appointed representatives from the private sector, civil society, marginalized and indigenous communities, and academia.	Designed as an overarching national climate change coordination mechanism to approve and oversee implementation of the National Climate Change Action Plan, advise the national and county governments on legislative, policy and other measures, and provide policy direction on research and training. It also administers the Climate Change Fund and sets the targets for the regulation of greenhouse gas emissions.	Established by law (Climate Change Act 2016).	Embedded
Luxembourg	Climate Observatory (Observatoire du climat) ³⁹	Active	2020	Unknown	Comprising scientists only.	Unknown	Established by law.	Unknown
Mexico	The Inter-Secretarial Commission on Climate Change (Comision Intersecretarial de Cambio Climatico or CICC) ⁴⁰	Active	2012–present	Mitigation and adaptation	Comprising 13 secretaries of state from various environmental ministries.	Coordinates institutional actions of the federal government on climate change. It is tasked broadly with formulating and implementing national policies for mitigation and adaptation to climate change in Mexico.	Established by law (Mexico’s General Climate Change Law 2012).	Embedded
	The Climate Change Council (Consejo de Cambio Climatico or C3) ⁴¹	Active	2013–present	Mitigation and adaptation	Composed of a minimum of 15 members from the social, private, and academic sectors with recognized merits and experience in climate change.	The C3 is the permanent consulting body of the CICC (above). C3 advises the CICC and recommends policies and action in addition to bringing to light issues requiring more research.	Established by law (Mexico’s General Climate Change Law 2012).	Arm’s length

³⁸ Sources: <https://climateactiontracker.org/countries/kenya/>; (Weaver, Lötjönen, and Ollikainen 2019)

³⁹ Source: (Evans and Duwe 2021)

⁴⁰ Sources: Expert interviews; (Weaver, Lötjönen, and Ollikainen 2019)

⁴¹ Sources: Expert interviews; (Weaver, Lötjönen, and Ollikainen 2019)

	The Evaluation Coordination of the National Climate Change Policy	Active	2013	Mitigation and adaptation	Composed of the head of INECC and 6 social advisers, who are representatives of the scientific, academic, technical and industrial community with extensive experience in environmental matters, particularly in issues related to climate change.	The national Climate Change Policy will be subject to periodic and systematic evaluation through the Evaluation Coordination, taking into consideration the IPCC evaluation reports, as well as the periodic evaluations established within the Paris Agreement, in order to propose, if necessary, its modification, addition, or total or partial reorientation.	Established by law (Mexico's General Climate Change Law 2012).	Embedded
New Zealand	New Zealand's Climate Change Commission (CCC) ⁴²	Active	2019–present	Mitigation and adaptation	Comprising a chair, a deputy chair, and 5 other independent experts.	Reviews progress toward New Zealand's 2050 climate target; advises on the level and mechanics of emissions budgets; advises on policy direction for emissions reduction plans; monitors and reviews progress toward budgets; and prepares future national risk assessments, progress reports on national adaptation plans, and other reports as requested.	Established by law (Climate Change Response (Zero Carbon) Amendment Act 2019).	Arm's length
	New Zealand's Interim Climate Change Committee (ICCC) ⁴³	Defunct	2018–19	Mitigation	Comprising a chair, a deputy chair, and 5 other independent experts.	Functioned as an independent advisory group within the Ministry for the Environment tasked with engagement and analysis on bringing biogenic agricultural emissions under the country's ETS and transitioning to 100% renewable electricity by 2035.	Executively convened.	Arm's length
	New Zealand's Climate Change Adaptation Technical Working Group ⁴⁴	Defunct	2016–18	Adaptation	Co-chaired by an independent expert and a deputy secretary from the Ministry for the Environment and included 8 other experts in sectors exposed to climate risk or involved in adaptation planning	Completed foundational work to move adaptation forward in New Zealand, including by completing a stock-take of existing efforts and providing recommendations on further action that could be taken.	Executively-convened.	Arm's length

⁴² Source: Expert interviews

⁴³ Source: Expert interviews

⁴⁴ Source: Expert interviews

Norway	Climate Council (Klimarådet) ⁴⁵	Active	2014–present	Unknown	Comprising scientists, government officials and stakeholders (business, trade organizations, environmental NGOs, local government).	Unknown	Unknown	Unknown
Philippines	Climate Change Commission ⁴⁶	Active	2009–present	Mitigation and adaptation	Composed of the president of the Republic of the Philippines and three commissioners appointed by the president. The commission is also advised by a board of governmental and nongovernmental experts.	Develops and mainstreams evidence-based climate adaptation and mitigation policies through coordination among key stakeholders with the goal of achieving a climate-resilient and climate-smart Philippines with healthy, safe, prosperous, and self-reliant communities.	Established by law (Climate Change Act of 2009).	Embedded
Puerto Rico	Puerto Rico Climate Change Council (Consejo de Cambios Climáticos) ⁴⁷	Active	2010–present	Adaptation	Comprising more than 140 volunteer researchers, planners, economists, architects, sociologists, health professionals, hydrologists, and other professionals.	Ensures a coordinated effort in assessing risks and impacts from coastal hazards and climate changes and in recommending adaptation strategies.	Volunteer advisory group	Independent
Spain	Environment Advisory Council of Spain (CAMA) ⁴⁸	Active	1944–present	Not stated	Consists of 15 members from civil society, employers, trade unions, associations of farmers, environmental NGOs and other representatives. Members from the local and regional authorities also work with the council, but they do not have the right to vote. The council is chaired by	Advises on environmental issues and sustainable development with special attention to sustainable land use, nature conservation, and biodiversity. The council's mission is to protect the environment and nature as well as to preserve biodiversity and to serve as a platform for public participation	Established by Royal Decree.	Arm's length

⁴⁵ Source: (Evans and Duwe 2021)

⁴⁶ Source: <https://climate.gov.ph/our-story>

⁴⁷ Sources: <http://www.pr-ccc.org/>; (Weaver, Lötjönen, and Ollikainen 2019)

⁴⁸ Source: (Weaver, Lötjönen, and Ollikainen 2019)

					the minister for Agriculture, Fisheries and Food and the Environment.	and dialogue on sustainable land use, nature conservation, and biodiversity.		
South Africa	South Africa's Presidential Climate Commission (PCC) ⁴⁹	Active	2020–present	Mitigation and adaptation	Comprising 22 representatives from business, youth, labor, academia, advocacy, civil society, research institutions, and traditional leadership and chaired by the South African president.	Advises on and facilitates a common understanding of a just transition, cognizant of the socioeconomic, environmental, and technological implications of climate change covering adaptation and mitigation as well as means of implementation.	Approved by the South African Cabinet after proposed at a presidential jobs summit.	Arm's length
Sweden	The Swedish Climate Policy Council (Klimatpolitiska Rådet) ⁵⁰	Active	2018–present	Mitigation	Consists of a chairman, a vice chairman and 6 other members. All members are appointed by the government, based on a proposal from the council, (The council nominates people who have high scientific competence in the fields of climate science, climate policy, economics, social sciences, and behavioral science.)	Tasked with evaluating how well the government's overall mitigation policy approach is aligned with the climate goal of no net greenhouse gas emissions by 2045. To this end, the council evaluates whether the focus of different relevant policy areas contributes to or counteracts the potential to achieve the climate goal, identifies policy areas that require further action, evaluates the bases and models on which the government builds its policy, and fosters more debate in society on climate policy.	Established by the Swedish Climate Policy Framework, adopted by the Riksdag (national legislature) in 2017.	Embedded

⁴⁹ Source: Expert interviews

⁵⁰ Sources: <https://www.klimatpolitiskaradet.se/summary-in-english/>; <https://www.regeringen.se/artiklar/2017/06/det-klimatpolitiska-ramverket/>; (Weaver, Lötjönen, and Ollikainen 2019)

	Swedish National Expert Council for Climate Adaptation ⁵¹	Active	Unknown–present	Adaptation	Comprising a chairman and other members who have competence in the areas of area industries, spatial planning, health, industry, innovation, climatology, crisis preparedness, the environment, public administration, and the economy.	Evaluates climate adaptation in Sweden and advises the government on preparing for climate change.	Unknown	Arm's length
Switzerland	Swiss Advisory Body on Climate Change (Organe Consultatif sur les Changements Climatiques or OCCC) ⁵²	Active	1996–present	Mitigation and adaptation	Composed of a 9-member committee and a pool of experts, whose members can be consulted for specific issues or from which appropriate working groups can be assembled.	Formulates recommendations of a strategic nature on climate change issues and on Swiss climate policy from a scientific point of view.	Established by the Department of Home Affairs and the Department of the Environment, Transport, Energy and Communications.	Arm' length
United Kingdom	The United Kingdom's Climate Change Committee (CCC) ⁵³	Active	2008–present	Mitigation and adaptation	Consists of a chairman and 8 independent members, along with a parallel 6 Adaptation committee members. The CCC is jointly sponsored by the Department for Business, Energy and Industrial Strategy, Department for Environment, Food and Rural Affairs, the Northern Ireland Executive, the Scottish Government, and the Welsh Government. Although government representatives do not sit on the CCC directly, the CCC is in close communication with relevant government stakeholders when developing its recommendations.	Provides independent advice to the UK government on setting and meeting carbon budgets and preparing for climate change; monitors progress in reducing emissions and meeting carbon budgets and targets; and conducts independent analysis of climate change science, economics, and policy as it relates to carbon budgets and adaptation. Over time, the CCC has also become engaged in proposing its own research topics and providing recommendations on climate-related topics that its experts deem to be important.	Established by law (Climate Change Act of 2008).	Arm's length

⁵¹ Source: [In English \(xn--klimatanpassningsrdet-92b.com\)](http://xn--klimatanpassningsrdet-92b.com)

⁵² Source: <http://www.occc.ch/>

⁵³ Sources: Expert interviews; (Weaver, Lötjönen, and Ollikainen 2019)

United States	The United States Advisory Committee for the Sustained National Climate Assessment ⁵⁴	Defunct	2015–2017	Mitigation and adaptation	Comprising 15 members with diverse backgrounds in science and technology and from academia, industry, society, and government. Members were appointed by the undersecretary of commerce for Oceans and Atmosphere and NOAA administrator, in consultation with the director of the White House Office of Science and Technology Policy.	Discussed the scientific uncertainties in the findings of the U.S. Global Change Research Program (USGCRP); analyzed the effects of climate change and global change trends in the next 25 to 100 years; acted as a hub for knowledge on climate change’s effect on social, economic, and ecological features of the United States; addressed risks and vulnerabilities for business and industry; and supported decision-making on climate.	Established by the National Oceanic and Atmospheric Administration (NOAA) under the provisions of the Federal Advisory Committee Act (FACA).	Embedded
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Source: Authors

⁵⁴ Source: Finland paper