

European Scientific Advisory Board on Climate Change

Annual work programme 2022

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1 The European Scientific Advisory Board on Climate Change

1.1 Establishment of the Advisory Board

The transition to climate neutrality and climate resilience poses an unprecedented challenge for the EU and its Member States: they must reconcile short-term actions on mitigation and adaptation with long-term goals, while tracking progress to remain on course.

Many countries have turned to two concrete policy innovations: framework climate laws and national advisory bodies. Climate laws formalise government processes, often enshrining iterative cycles for policymaking, planning and progress monitoring, and assigning responsibilities to new or existing institutions. Advisory bodies broaden the scope of stakeholder consultation and, especially in the case of independent scientific councils, inject evidence-based inputs into policy formulation.

Likewise, at the European level, the European Climate Law ⁽¹⁾, adopted in June 2021, enshrines into law the EU's objective to become climate neutral and climate-resilient by 2050, and establishes a European Scientific Advisory Board on Climate Change (the 'Advisory Board') to underpin the EU's climate action and efforts with independent scientific expertise and the best available, up-to-date and transparent evidence on possible pathways, targets and policy measures.

The Advisory Board is independent from Member States and EU institutions. It is formally established through an amendment of the founding regulation of the European Environment Agency (EEA) ⁽²⁾, introduced in Article 12 of the European Climate Law.

1.2 Role of the Advisory Board

Article 3(1) of the European Climate Law defines the role of the Advisory Board as follows:

The European Scientific Advisory Board on Climate Change (the 'Advisory Board') shall serve as a point of reference for the [European] Union on scientific knowledge relating to climate change by virtue of its independence and scientific and technical expertise.

1.3 Work and tasks of the Advisory Board

The tasks of the Advisory Board are broadly defined in Article 3(2) of the European Climate Law. They shall include:

- (a) considering the latest scientific findings of the IPCC reports and scientific climate data, in particular with regard to information relevant to the European Union (EU);
- (b) providing scientific advice and issuing reports on existing and proposed EU measures, climate targets and indicative greenhouse gas budgets, and their coherence with the objectives of this Regulation and the EU's international commitments under the Paris Agreement;
- (c) contributing to the exchange of independent scientific knowledge in the field of modelling, monitoring, promising research and innovation which contribute to reducing emissions or increasing removals;
- (d) identifying actions and opportunities needed to successfully achieve the EU climate targets;
- (e) raising awareness on climate change and its impacts, as well as stimulating dialogue and cooperation between scientific bodies within the EU, complementing existing work and efforts.

¹ Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999.

² Regulation (EC) No 401/2009 of the European Parliament and of the Council of 23 April 2009 on the European Environment Agency and the European Environment Information and Observation Network.

To provide robust and sound evaluation and advice and to explore pathways to achieve climate neutrality and climate resilience in a just, socially balanced, fair and cost-effective manner, the Advisory Board will be guided in its work by the best available and most recent scientific evidence, including the latest reports of the IPCC, IPBES and other international bodies. It will also build on data and knowledge available from European research, technology and innovation networks. The Advisory Board will seek to avoid any overlap in its mission with that of the IPCC at international level ⁽³⁾, and to complement the work of the EEA. It will also consider, where available, the work of national climate advisory bodies.

The Advisory Board shall follow a fully transparent process and make its reports publicly available.

1.4 Designation and composition of the Advisory Board

On 24 March 2022, the EEA Management Board designated the 15 members of the Advisory Board, following an open, fair, and transparent selection procedure. The members were appointed in a personal capacity for a term of four years, renewable once. There are no more than two members of the Advisory Board holding the nationality of the same Member State. The members of the Advisory Board shall give their positions completely independently of the Member States and the EU institutions. The 15 independent senior scientific experts composing the Advisory Board are:

- Maarten van Aalst (Dutch)
- Constantinos Cartalis (Greek)
- Laura Díaz Anadón (Spanish, American)
- Ottmar Edenhofer (German)
- Vera Eory (Hungarian, British)
- Edgar Hertwich (Austrian)
- Jette Bredahl Jacobsen (Danish)
- Lena Kitzing (Danish, German)
- Elena López-Gunn (Spanish, British)
- Lars J. Nilsson (Swedish)
- Suraje Rauto Dessai (Portuguese, British)
- Keywan Riahi (Austrian)
- Joeri Rogelj (Belgian)
- Nicolaas Schrijver (Dutch)
- Jean-Francois Soussana (French)

[Short bios of the members](#) of the Advisory Board are presented on the EEA website.

At its third meeting of 16-17 May 2022, the Advisory Board elected from among its members Ottmar Edenhofer as its first chairperson, for a period of four years. Although not a requirement of the European Climate Law, the Advisory Board also intends to elect two vice-chairs at its fourth meeting scheduled for 28 June.

1.5 Resources of the Advisory Board

The Advisory Board's expenditure is included in the EEA budget, and the Advisory Board acts independently in discharging its tasks. This expenditure supports the functioning of a Secretariat, hosted by the EEA, of up to 14 additional full-time staff. It also includes an annual functioning budget of kEUR 500 to support a wide range of tasks, including communication, website maintenance, publishing reports, dissemination and outreach, Advisory Board members' travel and

³ See recital 24 of the European Climate Law

accommodation expenses, as well as honorarium for Advisory Board members in relation to e.g. participation of meetings.

2 Policy developments

The **European Green Deal**, adopted by the European Commission in July 2020, sets out a new growth strategy that aims to transform the EU into a fair and prosperous society, with a modern, resource-efficient, and competitive economy where there are no net emissions of greenhouse gases by 2050 and where economic growth is decoupled from resource use. It puts in place the building blocks for the economy of tomorrow with landmark strategies on biodiversity, circular economy, zero pollution, sustainable and smart mobility, renovation wave, sustainable food, soils, hydrogen, batteries, offshore renewable energy, and many other issues. It also aims to protect, conserve, and enhance the EU's natural capital and to protect the health and well-being of citizens from environment-related risks and impacts. At the same time, this transition must be just and inclusive ⁽⁴⁾.

A cornerstone of the European Green Deal, the **European Climate Law** was adopted in June 2021. It enshrines into law the objective of achieving a climate-neutral EU by 2050, in pursuit of the long-term temperature goal set out in the Paris Agreement. It also provides a framework for achieving progress in pursuit of the global adaptation goal established in the Paris Agreement. In addition, the European Climate Law:

- defines a 2030 target of reducing the EU's net greenhouse gas emissions by 55 %, compared to 1990 levels;
- sets out a process for setting a 2040 climate target, taking into account an indicative greenhouse gas budget for 2030-2050 to be published by the European Commission;
- sets out a process for monitoring every five years progress of the EU and its Member States, in line with the global stocktake exercise under the Paris Agreement;
- underlines the importance of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change.

In addition, the European Climate Law outlines opportunities for the Advisory Board to contribute directly to EU's climate policy cycle:

- The European Commission's 5-yearly assessments of progress (starting in 2023) shall be based *inter alia* on report(s) of the Advisory Board;
- The legislative proposal to include the EU 2040 climate target into the European Climate Law, the projected indicative EU greenhouse gas budget for the 2030-2050 period and the report on the operation of the European Climate Law, all to be submitted by the European Commission within six months of each global stocktake (i.e. starting in 2024), which shall consider *inter alia* the latest report(s) of the Advisory Board.

In July 2021, the European Commission adopted the '**Fit for 55**' package, a set of proposals to revise and update EU legislation in line with the new 2030 and 2050 ambitions set out by the European Climate Law and deliver the transformational change needed across EU's economy, society and industry. The package consists of a set of inter-connected proposals, based on an assessment by the Commission of the opportunities and costs of the green transition, and building on existing EU policies and legislation. Where possible existing legislation is made more ambitious and where

⁽⁴⁾ Communication from the Commission 'The European Green Deal' (COM(2019) 640 final).

needed new proposals are presented. Overall, the Fit for 55 package proposes a policy mix comprising pricing, targets, standards, and support measures, across a range policy areas and economic sectors: climate, energy and fuels, transport (including air and maritime), buildings, land use, forestry and agriculture.

The coronavirus disease (COVID-19) crisis and its aftermath add a sense of urgency that the recovery plan should strengthen Europe's resilience and sustainability. A greater understanding is required of the environmental, social and economic impacts of the crisis.

Even more recently, Russia's aggression against Ukraine and subsequent tensions on energy and food products have pushed EU leaders to reconsider their current dependence on fossil fuels with greater urgency, in particular from Russia ⁽⁵⁾. In its **REPowerEU** Communication of March 2022, the European Commission proposed new actions to ramp up the production of green energy, diversify supplies and reduce demand, focusing primarily on gas. This was followed by a comprehensive plan proposed by the European Commission in May 2022 to make Europe independent from Russian fossil fuels well before 2030. The plan sets out a common strategy to accelerate diversification and more renewable sources of energy, frontloading of energy savings and electrification, with the potential to deliver as soon as possible the equivalent of the fossil fuels the EU currently imports from Russia every year. A better understanding of the implications of the Ukraine crisis for the decarbonization of Europe is needed.

In parallel, the EU co-legislators (European Parliament, Council) have been discussing their respective positions on the different elements of the Fit for 55 package and will enter negotiations, together with the European Commission, with a view to reaching political agreements in the second half of 2022.

The European Commission is also expected to begin or continue work on other policy developments, such as the 2040 target (to be proposed by 2024 following a thorough impact assessment), the review of the Common Agricultural Policy reform, the implementation of the multiannual financing framework with specific climate targets, etc.

3 Annual work programme 2022

3.1 Executive summary

In the second half of 2022, the Advisory Board will begin fulfilling its role, which is to *serve as a point of reference for the EU on scientific knowledge relating to climate change by virtue of its independence and scientific and technical expertise* (see section 1.2).

The Advisory Board will start preparing input to two key EU climate policy priorities for the coming two years: the EU's input to the global stocktake, with a progress assessment report expected in 2023; and the definition of a science-based EU greenhouse gas target for 2040 that is aligned with the EU's 2050 climate neutrality objective and its commitments under the Paris Agreement.

The Advisory Board also recognises the urgency of the current situation, to which the EU and its Member States must provide solutions in the short-term. It aims to deliver timely, relevant, and evidence-based advice to support response measures and policies at the EU and national level and ensure these will reinforce EU's capacity to reach its long-term goals.

⁵ The EU imports 90% of its gas consumption, with Russia providing more than 40% of the EU's total gas consumption. Russia also accounts for 27% of oil imports and 46% of coal imports.

In addition, the Advisory Board will scope possible work on issues such as mitigation options for agriculture, land use and forestry, and their links with adaptation to climate change, with a view to delivering first outputs on these matters in 2023.

While carrying out these activities, the Advisory Board will continue its development at the strategic and operational levels, in order to begin the implementation of a 2023 annual work programme as a fully established body.

The Advisory Board will also engage in a structured and transparent dialogue with relevant stakeholders to develop a better understanding of expectations and perspectives and frame its input into policy processes. These stakeholders may include EU institutions, national climate change advisory bodies, EU science and research networks, and civil society.

3.2 Framing elements for the 2022 annual work programme

The policy developments presented in section 2 are the first essential framing element for the work of the Advisory Board for 2022 and later years. In accordance with its mandate, the Advisory Board is expected to guide and advise on existing and proposed policies having an impact on the achievement of EU's long-term climate goals.

Timing and resources are two other important aspects to consider in relation to the Advisory Board's 2022 annual work programme, as described below.

Regarding timing, the scope of this work programme is limited to the second half of 2022. The Advisory Board members were appointed on 24 March 2022 and started meeting immediately after. Following an introductory meeting on 25 March, the members met twice, in April and May, and discussed several issues on which clarity is a pre-requisite for actual work to begin:

- establishing a shared understanding of the Advisory Board's mission, guiding principles, main tasks and key priorities;
- electing the Advisory Board's chairperson;
- establishing the Advisory Board's rules of procedures;
- defining a draft annual work programme for 2022.

The first opportunity to present a draft annual work programme to the EEA Management Board being at its meeting of 16 June, the annual work programme could be adopted by the Advisory Board at the earliest in the second half of June. This annual work programme therefore covers the period from 1 July to 31 December 2022.

Concerning resources, the Advisory Board will operate in 2022 with limited resources. While its 15 appointed members represent the first resource of the Advisory Board, the staffing of the Advisory Board Secretariat, hosted by the EEA, will not be fully operational until the autumn/winter of 2022. The implementation of the 2022 annual work programme will begin with a Secretariat consisting of two staff members, with the objective to appoint all other members (to reach the full capacity of 14 staff) by the end of 2022.

Finally, several aspects of the organisation and work of the Advisory Board remain to be further defined and developed during the second half of 2022, from procedural (e.g. rules of procedure, organisation of the work amongst Advisory Board members and with the Secretariat) to strategic issues (e.g. type and timing of outputs, communication and outreach, and stakeholder engagement). This situation, specific to 2022, will require mobilising some of the limited 2022 resources from the Advisory Board and its Secretariat.

Considering these constraints (short implementation period, limited Secretariat resources and remaining procedural and strategic aspects to clarify), the main aim of this annual work programme is to set a strong foundation and basis for the activities of the Advisory Board, and to allow the Advisory Board to start its work as soon as possible while recognising that several aspects (e.g. in which form or forms and in what areas the Advisory Board will deliver its scientific advice) will be further clarified in the course of 2022.

The Advisory Board will therefore aim to achieve two key objectives in 2022: to pursue and complete its own establishment, and to begin delivering on its main tasks in accordance with its mandate.

3.3 Activities

3.3.1 Supporting EU's input to the 2023 global stocktake

The Paris Agreement sets out a process for taking stock of its implementation, with the aim to assess the world's collective progress towards achieving its long-term goals – the 'global stocktake'. The first global stocktake runs from 2021 until the end of 2023. Through this activity, the Advisory Board aims to provide relevant and timely input to the European Commission's report assessing the collective progress made by all Member States towards climate neutrality and on adaptation, and the consistency of EU and national measures to achieve EU climate neutrality and progress on adaptation.

The Advisory Board will:

- identify existing monitoring frameworks and initiatives and their underpinning methodologies (e.g. EEA 'Trends and projections report', European Commission's annual climate progress report under the Governance Regulation, Climate Action Tracker);
- identify relevant datasets (e.g. IPCC scenario databases) and indicators that could support a robust assessment of progress;
- clarify the scope and aspects to be covered in its assessment, notably through interactions with relevant stakeholders;
- develop a methodology to assess progress of the EU and its Member States towards the objectives of the European Climate Law, ensuring to avoid duplication with the work of other organisations.

Considering that the Commission's progress report is due by 30.09.2023 to allow for a timely input to the global stocktake, the Advisory Board expects to establish in 2022 a methodology that it could use to assess progress, and to publish in 2023 a robust report serving as an input to the Commission's report. This means that the Advisory Board does not intend to publish a report or scientific advice on this topic in 2022. It will further determine whether it should produce any specific output related to this work before the publication of its assessment in 2023.

3.3.2 Supporting the determination of a 2040 target and 2030-2050 greenhouse gas budget

This activity aims to provide relevant and timely input to the Commission's proposal of a 2040 target and report on a greenhouse gas budget for the period 2030-2050.

The Advisory Board will clarify the timing and scope of work that needs to be undertaken in order to produce relevant input to the Commission's proposal. This may for example include the review of available quantitative information of existing pathways. Another important aspect of this work will consist in interacting with relevant stakeholders, for the Advisory Board to better understand the expectations and perspectives of various groups, and thereby improve the framing and timing of its input to this policy process.

The Advisory Board does not intend to publish a report or scientific advice on this topic in 2022. It will further determine whether it should produce a specific output related to this work or only a report to be published in 2023.

3.3.3 Addressing policy responses to the current energy and food situation in Europe
With this activity, the Advisory Board aims to provide meaningful advice regarding the discussions, proposals and decisions taken at the EU and national levels to respond to the current worldwide and EU situation resulting in particular from the Ukraine crisis.

The Advisory Board will analyse EU and national proposals and plans put forward to address EU's current dependency on fossil fuel imports, in particular from Russia, as well as rising energy, food and fertilizer products prices. It will assess the impacts, particularly but not limited to the climate impacts and related compound risks, that these policy actions are having or may have at the European and global levels. The Advisory Board will further determine the type and timing of output(s) it will deliver in relation to this activity.

3.3.4 Exploring sectorial mitigation solutions, in particular for land use, forestry and agriculture, and their links with adaptation

The Advisory Board will scope possible work on mitigation solutions and greenhouse gas emission pathways in relevant sectors. In doing so, it will adopt a systemic approach covering relevant socio-economic aspects, such as the demand side.

The Advisory Board will for example investigate the key aspects of climate change mitigation in the agriculture, land use and forestry sectors, such as their potential contribution to further reduce greenhouse gas emissions and enhance carbon dioxide removals, their links with adaptation and resilience to climate change, and the governance of carbon dioxide removals. The Advisory Board would aim at delivering a first output on this matter in 2023.

Other scoping topics could be explored and considered for further work (e.g. decarbonisation strategies for specific industrial sectors, urban areas), depending on available time and resources.

3.3.5 Pursuing the strategic and operational development of the Advisory Board

Throughout the second half of 2022, the Advisory Board will seek to clarify several of its strategic objectives and establish working procedures, to enable the achievement of its goals and mandate in an efficient and robust manner.

The Advisory Board aims to develop a number of internal strategic documents and operational procedures covering issues such as:

- internal organisation;
- data and knowledge management;
- definition of outputs and product types;
- processes and types of stakeholder engagement and collaborations (see also section 3.3.5);
- communication and outreach.

As regards data and knowledge management, a key task for the Advisory Board will be to establish a **data infrastructure**, functioning as a standardised repository for data on greenhouse gas emissions, targets, scenarios, relevant socio-economic parameters, policy instruments and policy evaluations, as well as climate literacy, at the national and EU levels, etc.

Concerning the specific aspect of communication, the Advisory Board will develop a **visual identity**, a **website and communication tools** and channels. It will engage with stakeholders to clarify mutual

expectations regarding the work of the Advisory Board, and the support it can provide to and obtain from various stakeholders.

The Advisory Board will also continue framing future activities, notably through the preparation of its 2023 annual work programme, taking into account the outcomes of 2022 scoping activities, further internal discussions as well as stakeholder interactions.

3.3.6 Engaging with experts and stakeholders

The Advisory Board aims to engage with and consult a range of key relevant stakeholders, with a view to clarify mutual expectations, explore partnerships and plan joint work where relevant.

The Advisory Board will actively engage with experts from various **science and research initiatives and networks**, as well as relevant **EU organisations**, with the aim to facilitate the exchange of independent scientific knowledge in the field of modelling, monitoring, promising research and innovation on climate change mitigation and adaptation. When appropriate, the Advisory Board will also interact with EU organisations to convey important research and knowledge gaps identified. Such engagement could take the form of regular online workshops on issues relevant to the implementation of this work programme.

The Advisory Board will establish and maintain a regular dialogue with **EU institutions** to closely monitor and improve understanding of the relevant policy processes and policy questions that could benefit from scientific advice. These stakeholders include the European Commission, the European Parliament, and the Council of the EU.

The Advisory Board will also seek to establish and structure a relationship with representatives from **national climate change advisory bodies**. Concretely, the Advisory Board could consider organising a stakeholder event in October 2022, focusing on such national climate councils.

Finally, the Advisory Board will also interact with **civil society representatives**, such as environment, consumer and climate NGOs.

The Advisory Board expects that such interactions and dialogue with stakeholders in 2022 will inform the preparation of its stakeholder engagement strategy, as well as its work and its planning for further activities. It will also help identify windows of opportunity for the Advisory Board to deliver relevant and timely input to EU policy cycles.