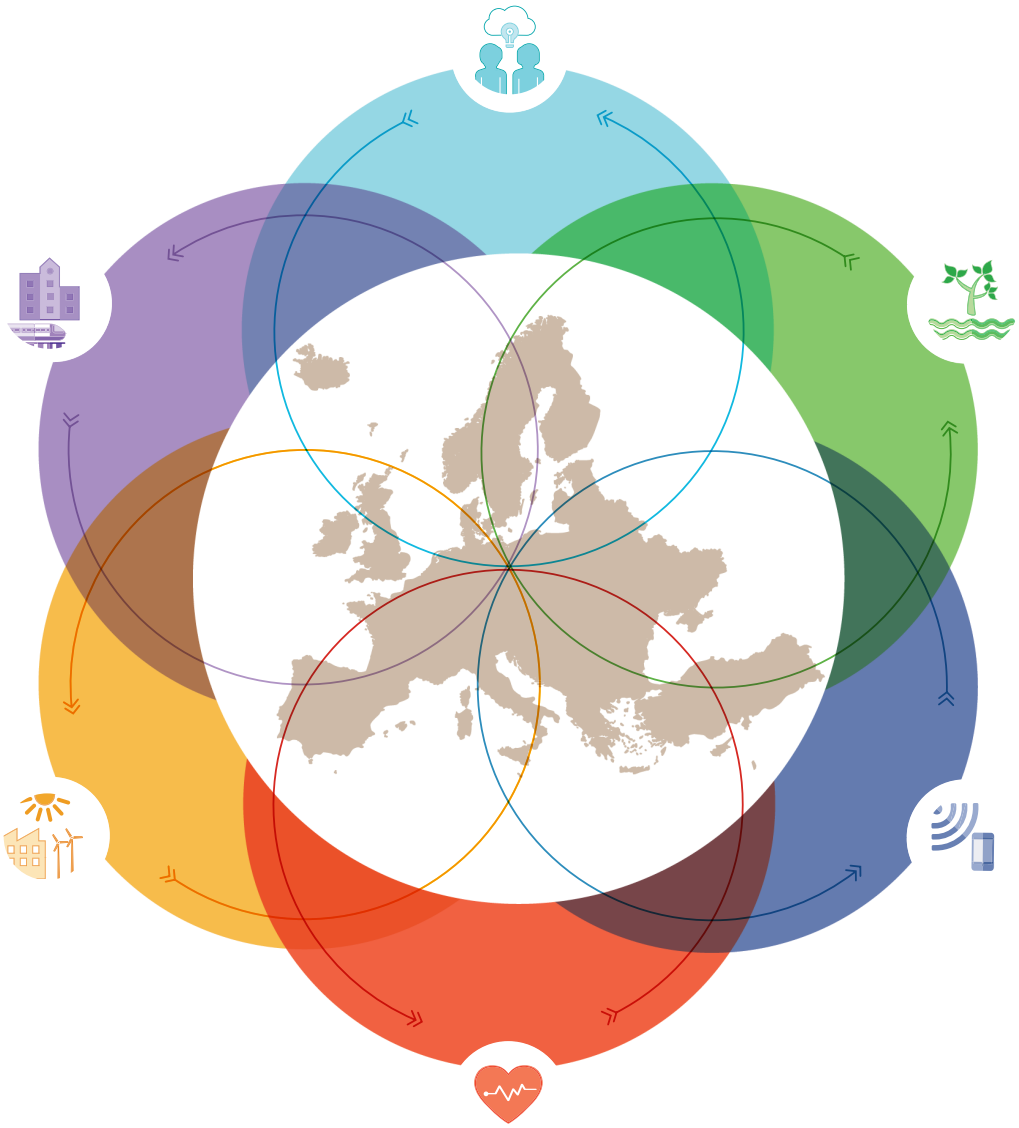
# EUROPE SUSTAINABLE DEVELOPMENT REPORT 2026

## SDG Pathways to 2030 and Mid-Century

*Includes the SDG Index for the European Union, its member states, and partner countries*



SDSN Europe

SUSTAINABLE DEVELOPMENT SOLUTIONS NETWORK
A GLOBAL INITIATIVE FOR THE UNITED NATIONS

*Foreword by Ambassador David Donoghue of Ireland, Co-Facilitator of the negotiations which led to the adoption of the SDGs in 2015*

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DUBLIN UNIVERSITY PRESS 1734

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SDSN Europe

# Acknowledgements

The seventh edition of the Europe Sustainable Development Report (ESDR2026) presents an updated version of the SDG Index and Dashboards for Europe. The report was prepared by the SDG Transformation Center at the UN Sustainable Development Solutions Network (SDSN) in Paris in close cooperation with SDSN Europe, the European Economic and Social Committee (EESC), and the Heinrich-Böll-Stiftung European Union | Global Dialogue. The editors and lead authors are Guillaume Lafortune and Grayson Fuller. Grayson Fuller led the preparation of Part 1 (The 2026 SDG Index and Dashboards for Europe), including the statistical work, in close collaboration with Guilherme Iablonovski and Ruben Andino, and under the overall guidance of Guillaume Lafortune.

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The analysis and opinions expressed in this report represent the views of the authors and do not necessarily reflect those of the Heinrich-Böll-Stiftung European Union | Global Dialogue; the organizations, agencies or programmes of the United Nations or the European Union; or of SDSN's Leadership Council members and their host institutions.

Dedicated country profiles for the EU as a whole and for all individual countries, the full Excel database, and indicator metadata are no longer included within the report but are available online. An interactive data visualisation platform is also available at https://sdgtransformationcenter.org.

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SUSTAINABLE DEVELOPMENT SOLUTIONS NETWORK
A GLOBAL INITIATIVE FOR THE UNITED NATIONS

SDSN Europe

HEINRICH BÖLL STIFTUNG BRUSSELS
European Union

European Economic and Social Committee

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# Foreword by Ambassador David Donoghue

David Donoghue is a former senior Irish diplomat. As Ireland's Permanent Representative to the United Nations (2013–2017), he co-facilitated, with his Kenyan counterpart, the negotiations that led to the adoption of the Sustainable Development Goals and the 2030 Agenda for Sustainable Development. He also co-facilitated the 2016 negotiations that resulted in the *New York Declaration on Refugees and Migrants*, as well as a 2013 special UN meeting that reviewed progress achieved under the Millennium Development Goals. Earlier in his career, he was one of the Irish Government's negotiators for the Good Friday Agreement (1998) which brought lasting peace to Northern Ireland.

A member of SDSN's Leadership Council and Chair of SDSN Ireland, he remains active in a range of think tanks and academic settings on sustainable development, conflict resolution, and migration and refugee issues. He is the author of *One Good Day* (Gill Books, 2022), an account of the negotiations that led to the Good Friday Agreement, and co-author of *Negotiating the Sustainable Development Goals* (Routledge, 2016).

I am very pleased to introduce the *Europe Sustainable Development Report for 2026*.

When agreement was reached just over a decade ago on the adoption of the 17 Sustainable Development Goals and the 2030 Agenda for Sustainable Development, we knew that the way ahead would not be easy. The 193 Member States of the United Nations were embarking on a course that would be deeply challenging for each of them and for the global community as a whole. Some of the challenges were clear at the time, others could not be easily anticipated.

Over the past decade, the combined pressures of an unforeseen global pandemic, spiralling conflicts, insufficient action in response to climate change, and a declining commitment to multilateral cooperation on the part of some states have inhibited the world's ability to meet the ambitious agenda it set for itself in 2015.

On the positive side, we are seeing some forward movement across almost all Goals. Many individual targets, however, are either standing still or are going into reverse.

**The SDGs and the 2030 Agenda are, of course, a demanding project.** They call for profound systemic transformation and for integrated policy actions on a scale never previously attempted. In 2015, the 193 governments deliberately agreed on a set of inter-connected goals and targets that would establish a high level of ambition. Implementing this agenda would inevitably require new ways of working within governments, along with a whole-of-society approach and a vast partnership bringing together highly diverse actors. Achieving all goals and targets for all countries within a 15-year timespan was always a utopian aspiration. If, as the 2030 deadline approaches, we are falling short (and falling short, indeed, by a considerable margin), that is not in itself so surprising.

What counts more, perhaps, is whether countries are working in the right direction, recognising that there is a need for real systemic change and that this requires a holistic approach to policy objectives, with synergies maximised and negative spillovers minimised.

In all of this, there is a vital need for high-quality, disaggregated data to enable effective measurement of performance. The Sustainable Development Solutions Network, the world's largest knowledge network for the SDGs, has been making an outstanding contribution in this area over many years. In Europe, SDSN reports complement official Eurostat reporting by drawing on a range of additional data sources and evaluating, both quantitatively and qualitatively, the progress being made by the European Union and its member states. Its overall SDG Index, furthermore, allows for direct comparisons to be made across all EU member states.

Globally, European countries have come closest to achieving the SDGs. But, as we can see, implementation in Europe is stagnating. While progress can be seen under some Goals, overall performance, whether at the level of the Union or of its individual member states, remains sluggish.

A number of factors are contributing to this. One is a shift in budgetary priorities, as some EU member states have concluded that a significant increase in defence spending is required in response to the security threat posed by Russia. Another is the changed political complexion of the Union; a gradual shift to the right in recent years has led to increased questioning of the Union's commitments on sustainability and other aspects of the liberal internationalist agenda.

Linked to these developments has been a failure to maintain the prominence previously assigned to the SDGs within EU policy-making. Declarations of support for the SDGs on the part of the EU – as distinct from its individual member states – have ebbed and flowed. Though the EU played an important role in the 2014/2015 negotiations, it showed less commitment during the initial years of SDG implementation. There was an evident concern not to undermine the national responsibilities of EU member states. No overall EU strategy to achieve the SDGs was drawn up. Nor did the Commission establish a dedicated mechanism to promote implementation; at best there was loose coordination between individual Commissioners. The EU's institutions failed to align behind the new agenda, and political impetus was lacking.

This changed with the first von der Leyen Commission (2019–2024). President von der Leyen asked her fellow Commissioners to align their work explicitly with the SDGs, leading to them being placed at the heart of the Commission's work programme – internally and externally – and integrated into the European Semester and the Better Regulation framework. President von der Leyen also oversaw the closely linked European Green Deal which, inter alia, committed the EU to achieving net-zero carbon emissions by 2050.

In a striking innovation, the EU in 2023 presented a comprehensive review to the High Level Political Forum on Sustainable Development (HLPF – the UN body tasked with monitoring SDG progress), which reported systematically on how each of the SDGs was being implemented across the Union. Intended as a complement to national reviews, this marked the first SDG progress report submitted by an international organization. The EU initiative attracted much interest and favourable comment.

Today there are signs of reduced prioritisation. As this report observes, the explicit references to the SDGs that featured in the Commission's work programme for 2019–2024 are absent from the successor work programme for 2025–2029. The *Political Guidelines* issued by von der Leyen as President of the Commission also fails to mention the SDGs. The mission letters sent to the individual members of the current Commission did, however, partially re-balance things, asking each Commissioner to ensure delivery of the SDGs within their policy areas and indicating that the Commission as a whole would be responsible for overall implementation.

There are other signs too of shifting priorities. For example, there is less emphasis on the 2030 Agenda's central premise that, in its implementation, governments and other stakeholders will 'leave no one behind' and will endeavour to 'reach the furthest behind first'. This commitment is not receiving the explicit and focussed attention it deserves. Furthermore, the current negotiations on a new Multiannual Financial Framework show evidence of efforts dilute objectives such as poverty reduction that are central to the SDGs and, traditionally, to the Union's internal and external action.

Under its Strategic Agenda for 2024–2029, the European Council pledged to make efforts to promote achievement of the SDGs 'in all international fora'. This was welcome. However, the absence of accompanying detail and of specific priorities for EU action smacks of mere box-ticking, and points to a diminished status for this agenda.

Within the European Parliament, a Vice-President holds responsibility for SDG implementation. Parliamentary representatives attend the annual HLPF at the United Nations, ahead of which the Development and Environment Committees prepare a joint annual report on SDG implementation and delivery. During the Parliament's previous term, an informal 'SDG Alliance' carried out some valuable work. But it has not proved possible to reconstitute this group in the current Parliament; nor, with the shift to the right, has there been sufficient political appetite to establish a more formal structure for this work.

One EU initiative, however, offers considerable potential, if handled correctly. The Global Gateway strategy responds to a wide range of global challenges and is aligned fully with the SDGs and the 2030 Agenda. It has mobilised more than €300 billion for sustainable, high-quality investments in areas ranging from climate change to improving health systems and boosting EU competitiveness. I hope that this initiative will make a real difference in terms of the Union's support for the SDGs and addressing their most pressing challenges.

**Now more than ever, we need EU leadership, both at home and globally, on this vital agenda.** The SDGs must be achieved for the benefit of societies and economies within the Union. But they are also a call for international partnership and solidarity, particularly at a time of mounting threats to these concepts. They are a global reaffirmation of the EU's core values and should underpin its engagement with all other countries.

The SDGs and the 2030 Agenda are still our best chance to bring about a peaceful, just and sustainable world. Even if the pace of implementation so far has been modest, they are almost universally recognised as the right approach to the challenges we face. They embody the values and objectives central to human and planetary well-being: ending poverty; ensuring equal treatment and social inclusion for all human beings; protecting the environment; and promoting peace and international cooperation.

**With only four years left to 2030, what will come after the SDGs?**

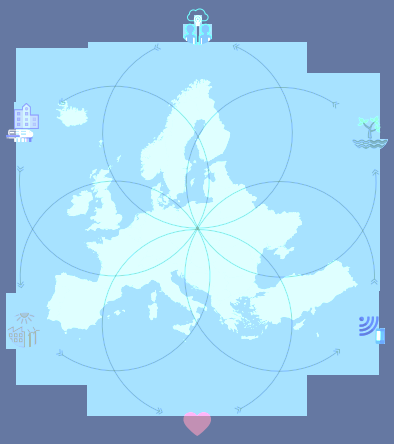
I expect that there will be a successor agenda, covering the next 15 years or possibly longer, and that there will be a large measure of continuity between it and the current framework. While a small number of countries may see an opportunity to backtrack on commitments made in 2015, I believe that the vast majority will wish to retain a single, integrated global agenda of this kind. There will no doubt be proposals of various kinds for updating or refinement of the present framework. But I anticipate something broadly along the lines of the 2030 Agenda continuing.

Meanwhile, there is much that the EU can do to ensure that progress is made on the current Agenda and to support its implementation in all parts of the world. I hope that the next Multiannual Financial Framework will give renewed impetus to the Union's efforts. We need to strengthen EU investment in areas critical to achieving the SDGs, such as development finance, green and digital technologies, climate adaptation and resilience, and public health.

I look forward to the European Union delivering a further voluntary review to the HLPF, to showcase such progress. And I look forward also to renewed emphasis placed on the significance of the SDGs during Ireland's Presidency of the European Council in the second half of this year.

I warmly congratulate SDSN Europe, finally, on the quality of the data and findings presented in this year's edition of the *Europe Sustainable Development Report*. This report is an indispensable guide for all of us in the run-up to 2030 and beyond.

*David Donoghue*



# 1

# SDG Performance, Commitment and Leadership in Europe

# Part 1.
# SDG Performance, Commitment and Leadership in Europe

**The *Europe Sustainable Development Report* (ESDR) is an annual assessment of progress made by European countries on the SDGs. It builds on SDSN's global SDG Index methodology. This year marks the seventh edition of the ESDR, prepared by SDSN's SDG Transformation Center in cooperation with SDSN Europe and the European Economic and Social Committee (EESC). The ESDR focuses both on Europe's international leadership and internal priorities for achieving the SDGs.**

## 1.1 Europe, the SDGs and leadership in a changing world order

### Europe's historical track record on sustainable development

Europe has long been a leader in promoting sustainable development and UN-based multilateralism. As early as 1971, the Club of Rome commissioned the groundbreaking study that led to the publication of *Limits to Growth* in 1972, ahead of the first UN Conference on the Human Environment, held in Stockholm. The European Union embedded sustainability into its policy framework well before the SDGs, starting with the 1997 Treaty of Amsterdam, which committed it to balanced and sustainable development. The EU launched its first Sustainable Development Strategy in 2001, introduced the world's first major carbon market in 2005 (the EU Emissions Trading System), and enshrined sustainable development as a core paradigm in the 2007 Treaty of Lisbon.

Europe naturally took the lead in championing the SDGs leading up to 2015 and moved quickly to establish implementation frameworks following their adoption. The 2017 Joint statement by the European Commission, Parliament and Council, entitled *European Consensus on Development,* positioned the SDGs as the core guide for EU policies. That same year, the EU launched a multi-stakeholder SDG platform and Eurostat's first SDG monitoring report, which tracked 102 EU-relevant SDG indicators. Various EU agencies were also mobilized to support SDG implementation. In 2019, via the European Green Deal, the EU became the first continent to adopt a clear commitment to achieving net-zero emissions by mid-century. In the aftermath of the COVID-19 pandemic, the Recovery and Resilience Facility and NextGenerationEU were oriented toward a green and digital recovery (Lafortune et al., 2021). And in 2023, Europe became the first continent to present a bloc-wide voluntary national review (VNR) at the United Nations, with the EESC mandated to organize structured engagement with civil society in Europe (EESC, 2023).

From a global perspective, European countries remain the world's leaders in sustainable development and well-being in 2026, and the European model remains an inspiration for many parts of the world. Of the top 20 positions on the global SDG Index, only one is held by a non-European country (Sachs et al., 2025). Europe has reached unprecedented levels of well-being and prosperity – higher than any other region in the world (Helliwell et al., 2025). It benefits from a large internal market of around 450 million inhabitants, a very healthy and well-educated population, advanced social protection systems, and accessible and effective infrastructure, including transport and digital networks.

At the same time, Europe faces significant and interrelated challenges, including geopolitical, financial, economic, demographic, environmental and social pressures. As underscored in the 2024 Draghi and Letta reports, Europe must take decisive action to safeguard its socio-economic model and remain competitive in key 21st-century technologies. The Eurozone's economy is projected to grow by just over 1% between 2025 and 2027, below the average of other advanced economies, including Canada and the United States. In principle, Europe's large stock of savings represents a major opportunity to invest in infrastructure and in green and digital technologies. In practice, however, persistent fragmentation in Europe's capital market means that a large share of these savings is invested abroad, including in the United States. These dynamics call for a united, visionary and action-oriented European leadership to resolve on-going crises, accelerate investment in the green and digital technologies of the future, and forge new partnerships in a changing international order. As emphasized recently at Davos by Prime Minister of Canada, Mark Carney:

> *'It seems that every day we're reminded that we live in an era of great power rivalry, that the rules-based order is fading, that the strong can do what they can, and the weak must suffer what they must. […] In a world of great power rivalry, the countries in between have a choice – to compete with each other for favour, or to combine to create a third path with impact.'* (WEF, 2026)

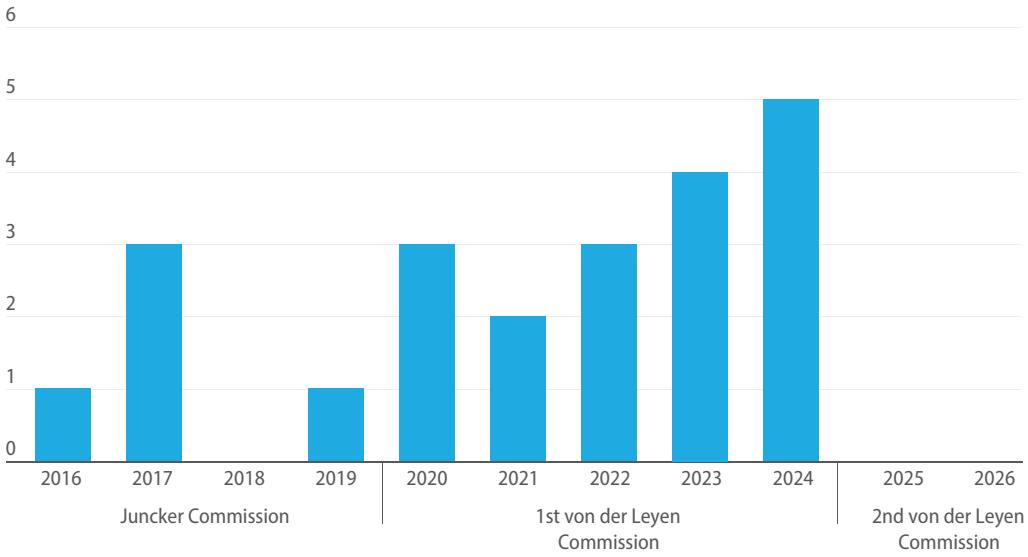
## The SDGs and the second von der Leyen Commission (2024–2029)

The war in Ukraine and the explicit opposition of the United States since 2025 to the SDGs and UN-based multilateralism represent significant challenges for Europe's commitment to sustainable development. The European Green Deal and associated regulatory frameworks, particularly those concerning corporate sustainability reporting or sustainable agri-food systems, are being progressively diluted – in part due to shifting political priorities and narratives focusing on simplification, strategic autonomy and competitiveness (Matthews, 2024; Sadeleer, 2025; Gros and Griera, 2025; Tocci, 2025; European Central Bank, 2025). Policy attention and investments are shifting away from sustainable investments and global cooperation – including official development assistance (ODA) – coinciding with an increase in spending on defence and security. Diplomacy remains, in principle, a very cost-effective strategy.

Since the Second World War, the United States has been Europe's closest international ally from a military and economic perspective. Yet Europe's principal ally now explicitly opposes the SDGs and UN-based multilateralism (Lafortune and Sachs, 2025). It opposes the use of terms such as 'sustainable development', 'climate' and 'gender'. The United States is increasingly policing the terminology used in international organizations and meetings, including G20 declarations (Eligon, 2025) and the framing of the 2026 World Economic Forum in Davos (Ruehl et al., 2025; Gelles, 2026). The United States withdrew from the negotiations at the Summit on Financing for Sustainable Development in Seville, Spain in June 2025, and from 66 United Nations organizations in January 2026.

Coincidently, Europe has adjusted its policy focus and rhetoric, a shift most evident since the start of the second von der Leyen Commission (2024–2029), the political guidelines of which make no reference to the SDGs or Agenda 2030. A careful review of the annual European Commission work programmes over the 2016–2026 period reveals that by 2025 and 2026 the European Commission no longer refers to the SDGs or the 2030 Agenda at all (Figure 1.1). Using the JRC SDG Mapper, a detailed analysis of European Commission President von der Leyen's 2025 State of the Union Address shows a marked decline in references to the SDGs overall, particularly to social and environmental goals. References to these goals have fallen to levels lower than those observed during the Juncker

**Figure 1.1 |** Explicit references to the SDGs in the annual work programme of the European Commission, 2016–2026 (number of occurrences)




*Note:* Tracks explicit reference to 'SDG', 'Sustainable Development Goal' and '2030 Agenda'.
*Source:* Author, based on SDG JRC mapper (Borchardt et al., 2023).

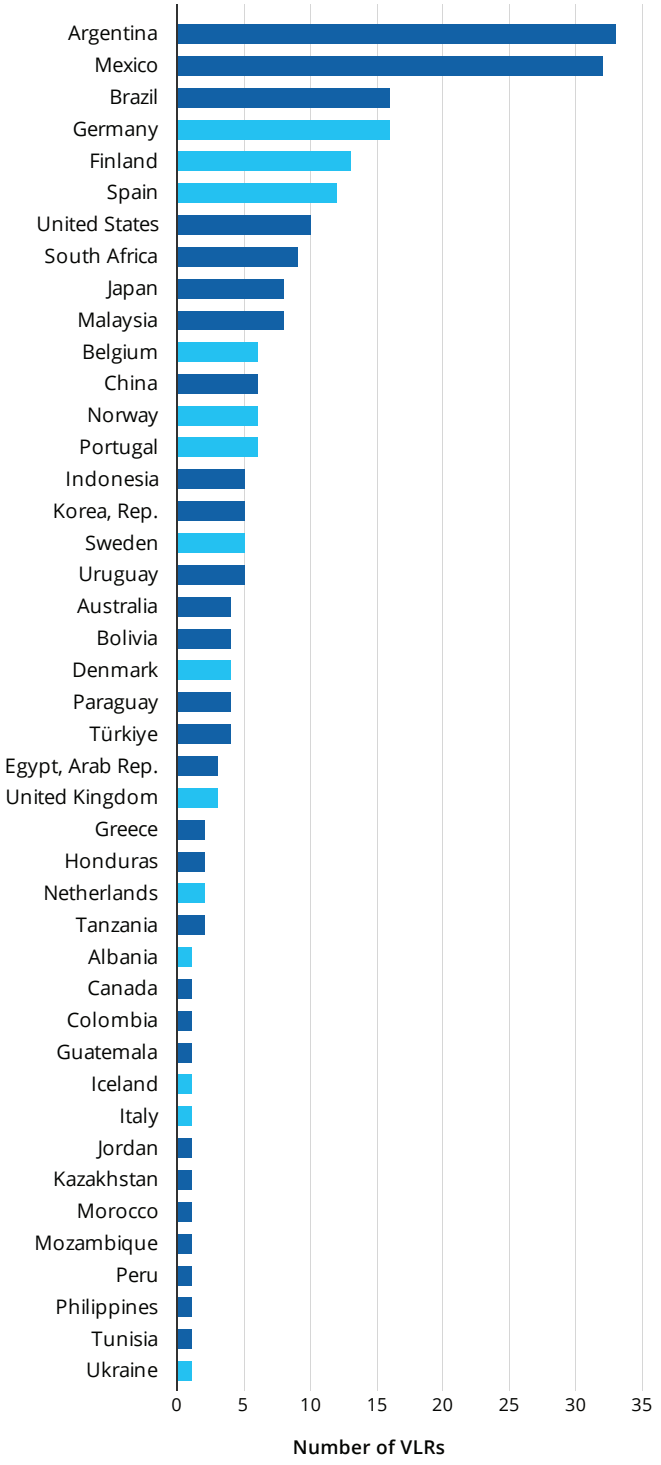
Commission, and are significantly reduced compared to the first von der Leyen Commission. There is an extensive literature showing how shifts in language, terminology and framing can influence actions both at the individual and collective level (Kangas et al., 2014; Markard et al., 2021; van Hulst et al., 2025; Flusberg et al., 2024). As described above, there is already evidence that the European Green Deal is being diluted.

## Beyond the European Commission's leadership: SDG momentum remains strong

Not all EU institutions have moved away from referencing the SDGs and the 2030 Agenda, however. The European Parliament issued its third SDG resolution in July 2025 (European Parliament, 2025), while the Council of the European Union referred explicitly to the SDGs in its Strategic Agenda 2024–2029 and maintained its Council Working Party on the 2030 Agenda. The EESC adopted a groundbreaking opinion in July 2025 on the interdependence between climate and peace, making multiple references to SDGs and notably to the concept pioneered by the SDSN of using Green Deal/SDG diplomacy to forge new alliances in Latin America, Asia, Africa and the Global South more broadly (EESC 2025a). All European countries have presented their action plans on sustainable development at least once via the Voluntary National Review (VNR) process, and six European countries covered in this report volunteered to present an updated VNR in 2026. Increasingly, cities and regions across Europe are also developing and presenting action plans on sustainable development via 'Voluntary Local Reviews' (VLRs), notably in Germany, Finland and Spain (Figure 1.2).

Internationally, while less than 20% of the SDG targets are on track to be achieved by 2030, the SDGs still benefit from a very broad consensus. At the Summit for the Future in 2024, all countries recommitted to achieving the SDGs, and only three of the 193 UN Member States have not yet taken part in the VNR process (Haiti, Myanmar and the United States). Vietnam introduced a government resolution in January 2026 to rank in the top 50 countries in the SDG Index

**Figure 1.2|** Number of Voluntary Local Reviews prepared by regional and/or local authorities, all countries 2016–2025 (European countries in light blue)




*Note:* As of 1 April 2025.
Source: Authors' elaboration based on data from UN Department of Economic and Social Affairs (DESA). https://sdgs.un.org/topics/voluntary-local-reviews

(Van Nguyen, 2026). Despite U.S. opposition, the international community reached ambitious agreements on financing for sustainable development in 2025 – unanimously adopting the Seville Commitment following the 4th International Conference on Financing for Development and agreeing on international levies on the shipping industry via the Net-Zero Framework of the International Maritime Organization (IMO).

Civil society worldwide also remains strongly mobilized around the paradigm of sustainable development. The SDSN has become the largest network of scientists and practitioners mobilized to identify solutions for sustainable development, and its national chapters and membership continue to grow globally. Through its SDG Transformation Center, the SDSN has deepened its cooperation with many countries, including those in Sub-Saharan Africa and Central Asia, to strengthen long-term monitoring, investment and policy frameworks for sustainable development.

Coalitions of countries are being formed to continue global cooperation for sustainable development. Priorities include the reform of the Global Financial Architecture and strengthening regulations for a sustainable trade system. These coalitions are likely to become key drivers of change in the coming years, particularly in the context of great-power politics and the rejection of UN-based multilateralism by some powerful nation-states.

## SDSN Index of support for UN-Based multilateralism (SDG17): Calling out the gaps between rhetoric and reality

As recognized under SDG 17 (Partnerships for the Goals), technological, financial and diplomatic cooperation within the United Nations framework is critical to achieving the SDGs. SDG17 is one of the goals that will undergo in-depth review this year at HLPF2026. In a nuclear era, military escalation carries the risk of catastrophic global consequences. The Doomsday Clock of the

Bulletin of Atomic Scientists measures each year how close humanity is to self-annihilation due to nuclear war, climate change, biological threats and disruptive technologies. In January 2026, the Clock was set at 85 seconds to midnight – the closest since its introduction in the aftermath of the Second World War (Mecklin, 2026). No country can single-handedly prevent pandemics or climate change from occurring and impacting the livelihoods of its citizens and by the same token, all countries stand to benefit from coordinating their policies on new technologies, including artificial intelligence, in order to maximize their benefits while minimizing associated risks.

The United Nations system remains at the centre of these efforts to coordinate action across its 193 Member States. At the same time, nation-states are the main actors within the UN system that can decide to support or undermine UN-based multilateralism. Many countries and experts have called for reforming the UN system to make it more effective and inclusive and better aligned with current realities, including shifts in balance of powers and the emergence of long-term challenges like climate change. In his speech at Davos, in addition to making multiple references to the paradigm of sustainable development, Mark Carney also emphasized the following:

> *'For decades, countries like Canada prospered under what we called the rules-based international order. […] We knew the story of the international rules-based order was partially false [… .] And we knew that international law applied with varying rigour depending on the identity of the accused or the victim. This fiction was useful, and American hegemony, in particular, helped provide public goods, open sea lanes, a stable financial system, collective security and support for frameworks for resolving disputes. So, we placed the sign in the window. We participated in the rituals, and we largely avoided calling out the gaps between rhetoric and reality.'*
>
> (WEF, 2026)

SDSN has, for many years, sought to shed light on some of the gaps between rhetoric and reality via its Index of countries' support for UN-based multilateralism (UN-MI). A detailed methodology of the UN-MI has been presented in a peer-reviewed paper (Lafortune and Sachs, 2024). SDSN incorporates this index in both the global and the European annual sustainable development reports as a metric under SDG 17 (Partnerships for the Goals), and it is now also used by UNDP in the Global Knowledge Index (UNDP and MBRF, 2025). The UN-MI is based on six narrowly defined headline indicators:

1. Ratification of major UN treaties
2. Percentage of votes aligned with the international majority at the UN General Assembly (UNGA)
3. Participation in selected UN organizations and agencies
4. Participation in conflicts and militarization
5. Use of unilateral coercive measures
6. Contribution to the UN budget and international solidarity

The poor performance of the United States (which has ranked last since the introduction of this Index in 2023) and of some of its allies suggests that the concepts of rules-based international order (repeatedly promoted by the U.S. federal government) and UN-based multilateralism are truly distinct – and arguably even opposite – frameworks. Table 1.1. presents the top 10 and bottom 10 countries in the 2025 UN-MI. The United States performs poorly on all six indicators (Sachs et al., 2025). In particular, no other country has used unilateral coercive measures as a pillar of hybrid warfare to destabilize financial systems, currencies and trade flows. The 2030 Agenda contains clear language calling on countries to refrain

**Table 1.1** | Index of countries' support for UN-based multilateralism (UN-MI), top and bottom 10 countries, 2025

| Top 10 | Bottom 10 |
|---|---|
| Barbados (1) | Sudan (184) |
| Jamaica (2) | Equatorial Guinea (185) |
| Trinidad and Tobago (3) | Syrian Arab Republic (186) |
| Maldives (4) | Russian Federation (187) |
| Antigua and Barbuda (5) | Iran, Islamic Republic (188) |
| Mauritius (6) | Somalia (189) |
| Chile (7) | Israel (190) |
| Uruguay (8) | Democratic People's Republic of Korea (191) |
| Philippines (9) | South Sudan (192) |
| Paraguay (10) | United States (193) |

*Source:* Authors' elaboration based on Sachs, Lafortune and Fuller, 2025

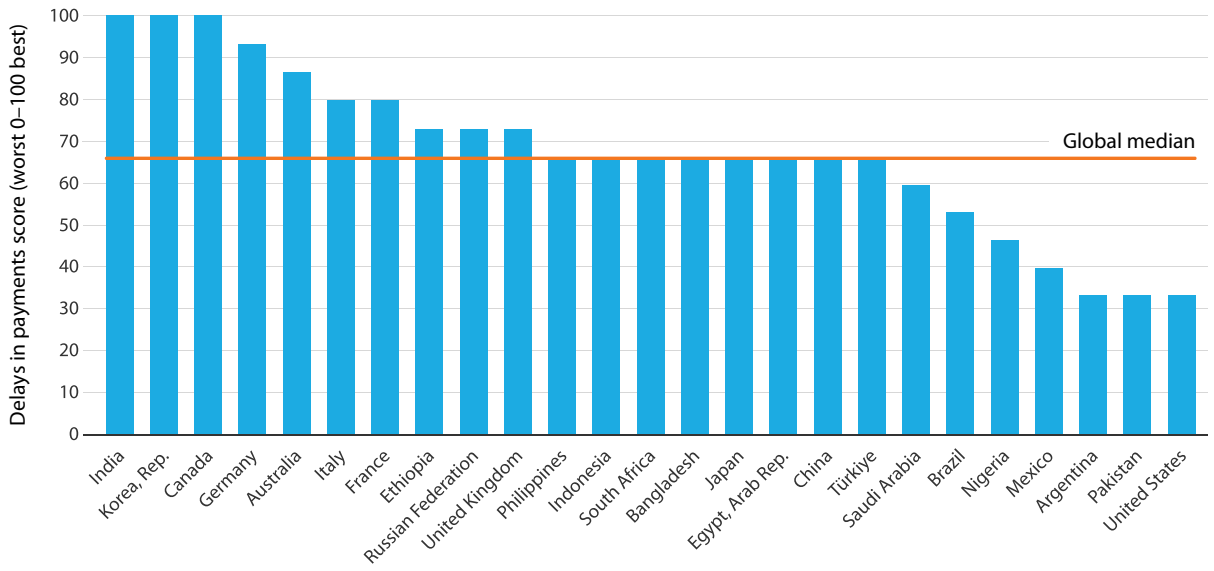
from using unilateral coercive measures.[1] In January 2026, the United States withdrew from 66 United Nations organizations. It also withdrew from major international treaties including the Paris Climate Agreement. This stands in stark contrast to the role that United States played in 1944–45 in establishing the United Nations, and to the momentum towards global cooperation, the SDGs and climate action observed at the subnational level in U.S. states and municipalities. It also contrasts sharply with the renewed commitments of major countries such as Brazil and China, both of which presented ambitious Nationally Determined Contributions (NDCs) at COP30 in Brazil.

There is also the growing issue of delays in payment of member states' assessed contributions. In January 2026, Secretary-General António Guterres warned that the United Nations was at risk of 'imminent financial collapse' due to Member States not paying their financial dues. Each year, the SDSN monitors the payment of Member States' assessed contributions, building on data compiled by the UN Fifth Committee on budgetary matters. This is one of the indicators included in the UN-MI. The SDSN tracks which countries pay on time, which pay with minor, or major, delays, and which are extremely late in fulfilling their financial obligations to the United Nations. According to this data, the United States is consistently among the countries with significant delays in paying its United Nations contributions, while most large European countries tend to meet their financial obligations either on time or with only minor delays.

Against the backdrop of the United Sates' growing opposition to UN-based multilateralism – and its implicit, and since 2025 explicit, rejection of the SDGs – Europe faces an urgent need to reassess its alliances to achieve its strategic objectives in an increasingly multipolar 21st-century world.

1. 'States are strongly urged to refrain from promulgating and applying any unilateral economic, financial or trade measures not in accordance with international law and the Charter of the United Nations that impede the full achievement of economic and social development, particularly in developing countries.' (UN, *2030 Agenda*, 2015).

**Figure 1.3** | Delays in payment of dues to the United Nations, G20 and large countries, 2020–2024



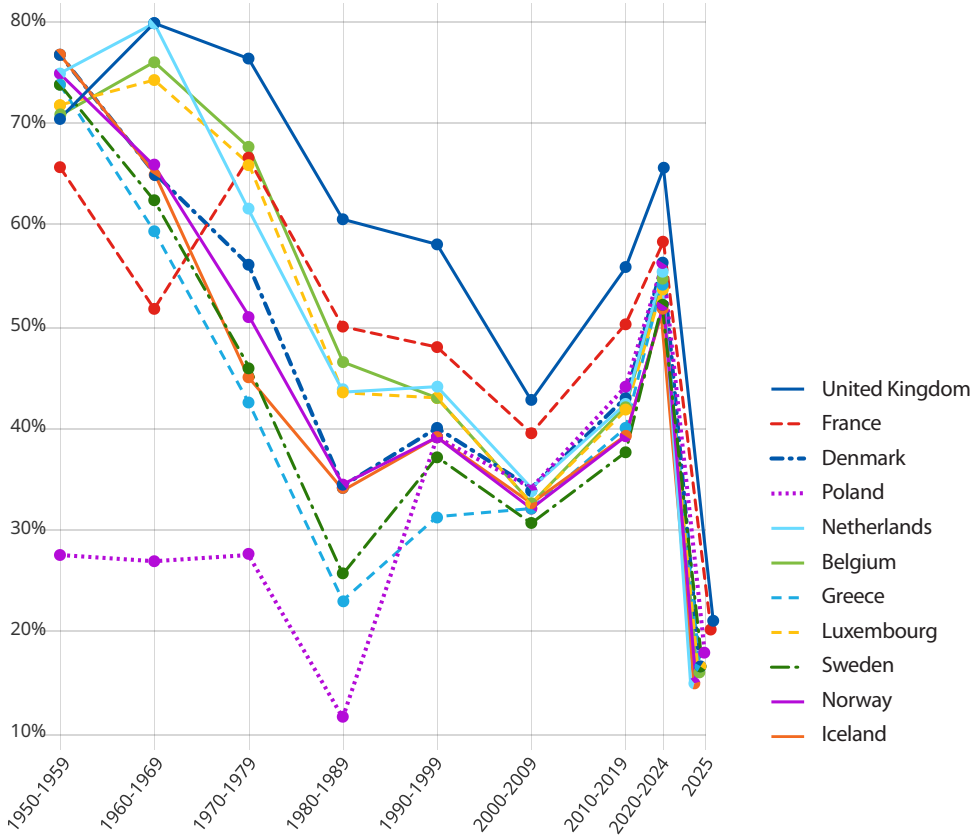

*Note:* A country receives a perfect score (100) for each year it appears on List I of the UNGA Committee on Contributions' annual 'honour roll' of member states that have paid their regular budget assessments in full and on time. Countries on the honour roll's List II – those whose regular budget assessments have been received in full, but after the 30-day due period – are given a score of 66 ('small delay in payment'). Those absent from the annual honour roll receive a score of 33 ('large delay in payment'). Countries still in arrears in the payment of their financial contributions under the terms of Article 19 by January of the subsequent year receive a score of 0. Final scores correspond to each country's average across 2020–2024.
*Source:* Sachs et al, 2025.

The paradigm of sustainable development is compatible in many ways with achieving Europe's strategic aspirations, including 'strategic autonomy'. Reducing Europe's dependence on fossil fuels via increased investments in renewable and other clean sources of energy contributes to Europe's independence and security, as also emphasized by the EESC (2025b). Investments in adaptation and resilience, clean air, and environmental sustainability generate multiple co-benefits, including social and health-related gains aligned with Europe's focus on inclusive well-being, as emphasized in a recent EESC opinion (EESC, 2025c).

At the same time, to quote Mark Carney, 'A world of fortresses will be poorer, more fragile and less sustainable' (WEF, 2026). Europe's aspiration to strategic autonomy should therefore build on a new wave of international partnerships and sustained efforts to promote a rules-based international order, including a fair and sustainable trade system.

Yet the transatlantic alliance has remained central to European leaders' priorities and initiatives over the past two decades. From the turn of the 2010s through 2024, voting alignment between major European countries and the United States at UNGA increased, even as substantial evidence pointed to the United States' steadily growing opposition to UN-based multilateralism

**Figure 1.4 |** Percentage of UNGA votes aligned with the United States, selected European countries (early members of the United Nations), 1950–2025 (average per decade)




*Source:* Authors

since the mid-1990s. In 2025, however, this pattern shifts dramatically, marked by a sharp decline in voting convergence between major European countries and the United States at UNGA (Figure 1.4). Yet, at the EU level, in July 2025 in Scotland, the President of the European Commission – in addition to no longer referring explicitly to the SDGs – agreed to three additional arrangements and dependencies vis-à-vis the U.S. economy, in the form of new tariffs, purchases of high-cost U.S. liquefied natural gas, and increased purchase of U.S. military equipment (Taylor, 2025; Politico, 2025; Cook and AP, 2025). It is difficult to comprehend how these decisions advance the European Commission's stated objective of achieving 'strategic autonomy'.

The U.S. threats directed at Greenland in January 2026 may mark a critical turning point for Europe. Since 2019, the SDSN and its partners have advanced the concept of SDG/Green Deal Diplomacy as a framework to deepen strategic partnerships with Africa, China, India, Latin America and other global actors. Recent developments underscore the relevance of this approach. Just days before his speech in Davos, Canada's Prime Minister signed a historic strategic partnership with China, while in late January the EU and India concluded negotiations on their landmark India–EU Free Trade Agreement. In both cases, these agreements represent significant steps toward the diversification of economic and trade partnerships.

As the EU seeks to broaden its alliances and reinforce its global role, success will depend on articulating a coherent European voice and translating it into consistent international action. For that purpose, it will be critical for Europe to demonstrate, in a coherent and consistent way, its support for UN-based multilateralism, notably via the systematic condemnation of violations of international law, including all wars of choice as well as all covert and overt regime-change operations prohibited under the UN Charter. The SDSN, including its Leadership Council, has made clear recommendations on how the UN system can be reformed to achieve sustainable development in a multipolar world (Sachs et al., 2024). Some of these recommendations could be taken up by Europe's leadership. As the universal language for sustainable development, Europe should continue to uphold and explicitly reference the SDGs.

## 1.2 Performance of Europe on the SDGs

### The 2026 SDG Index and Dashboards for Europe

The SDG Index for Europe covers 41 countries, including the 27 EU member states, 9 candidate countries, the 4 EFTA member states, and the United Kingdom. The methodology is transparent, and the global edition has been peer-reviewed by *Nature Geoscience* and Cambridge University Press, as well as being statistically audited in 2019 by the European Commission's Joint Research Centre (Schmidt-Traub et al., 2017; Lafortune et al., 2018; Papadimitriou et al., 2019). Compared with other available reports and monitoring instruments, the ESDR places greater emphasis on incorporating data on international spillovers and combining official and non-official data sources – leveraging data from the academic community, NGOs and new technologies – to measure distance to and progress toward pre-defined thresholds (Lafortune et al., 2020). Compared with earlier editions, only limited adjustments to the indicators were made this year, primarily to align with the latest updates in indicator work across Europe, including on inclusive and sustainable well-being (Benczur et al., 2025).

From a global perspective, European countries remain the leaders in sustainable development. Of the top 20 positions on the global SDG Index, only one is occupied by a non-European country (Japan, ranking 19th). However, there are still major SDG challenges in Europe on many dimensions of sustainable development, and SDG progress is uneven across European countries. The ESDR 2026 identifies these challenges and provides an in-depth analysis of the strengths and weaknesses of European countries. Due to missing data not all countries can be ranked in the Index. In total, this year's SDG Index for Europe covers 35 countries with sufficient data availability to calculate an overall SDG score, including one additional country (Albania) compared with last year's edition.

**Table 1.2** | *Europe Sustainable Development Report 2026*, country coverage

| Total | Country Groups | Countries |
|---|---|---|
| 27 | EU member states | Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden |
| 9 | Candidate countries | Albania, Bosnia and Herzegovina, Georgia, Moldova, Montenegro, North Macedonia, Serbia, Türkiye, Ukraine |
| 4 | EFTA countries | Iceland, Liechtenstein, Norway, Switzerland |
| 1 | Partner/Former EU | United Kingdom |

**Figure 1.5 |** The 2026 SDG Index for Europe

| Rank | Country | SDG Index Score |
|---|---|---|
| 1 | Finland | 80.8 |
| 2 | Sweden | 78.7 |
| 3 | Denmark | 78.1 |
| 4 | Austria | 76.7 |
| 5 | Norway | 75.6 |
| 6 | Germany | 74.7 |
| 7 | Slovenia | 73.6 |
| 8 | United Kingdom | 73.6 |
| 9 | Switzerland | 73.5 |
| 10 | Czechia | 73.3 |
| 11 | Iceland | 73.3 |
| 12 | Netherlands | 72.7 |
| 13 | Poland | 72.7 |
| 14 | France | 72.5 |
| 16 | Estonia | 72.1 |
| 17 | Italy | 72.1 |
| 18 | Ireland | 71.7 |
| 19 | Croatia | 71.6 |
| 20 | Latvia | 70.7 |
| 21 | Portugal | 70.6 |
| 22 | Spain | 70.3 |
| 23 | Malta | 69.6 |
| 24 | Slovak Republic | 69.5 |
| 25 | Hungary | 69.1 |
| 26 | Lithuania | 68.6 |
| 27 | Luxembourg | 67.8 |
| 28 | Romania | 65.8 |
| 29 | Greece | 65.4 |
| 30 | Serbia | 65.3 |
| 31 | North Macedonia | 63.7 |
| 32 | Bulgaria | 63.3 |
| 33 | Albania | 62.4 |
| 34 | Cyprus | 62.1 |
| 35 | Türkiye | 59.1 |

**Index scores by region, 2026**

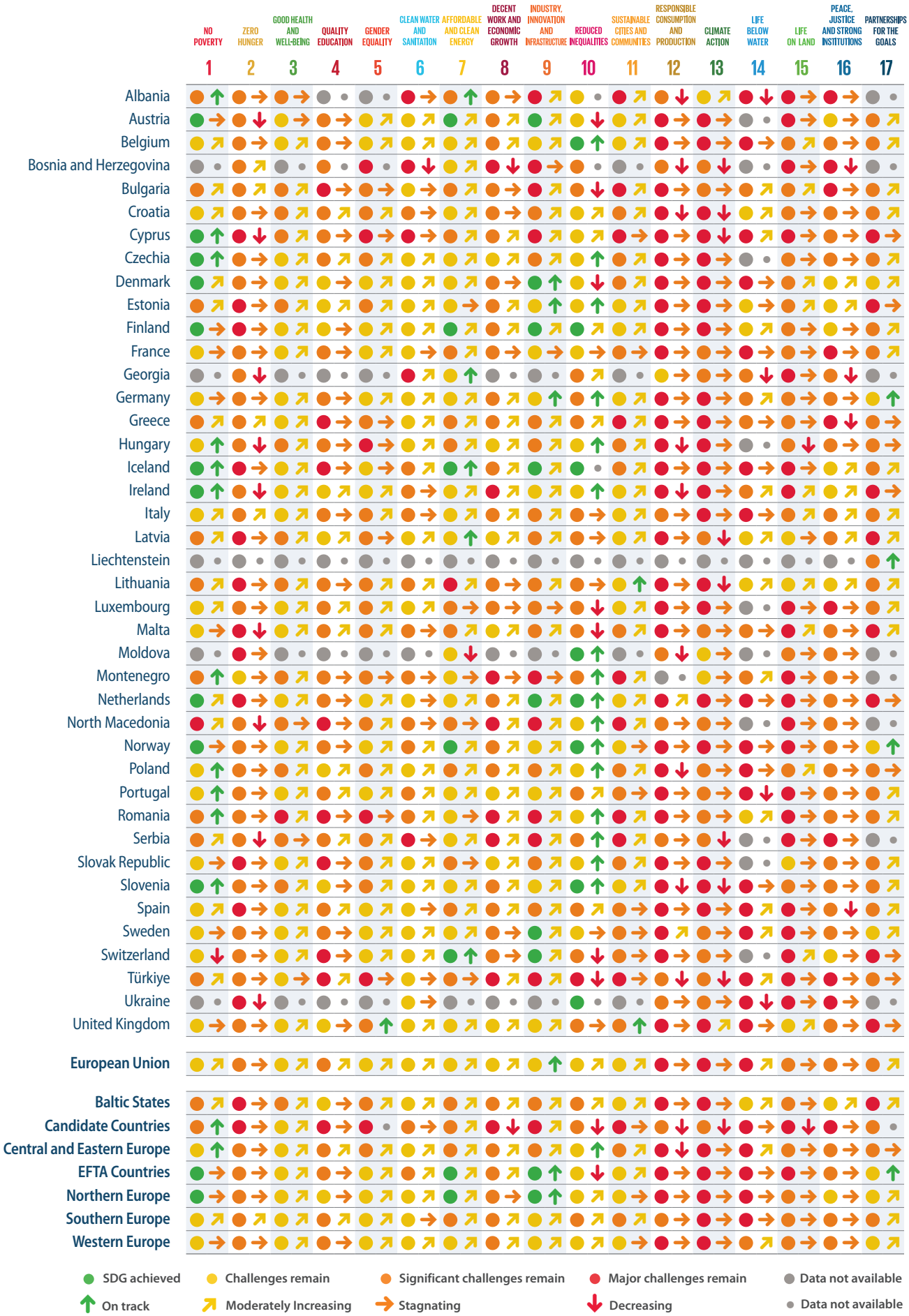
| | |
|---|---|
| **European Union** | **72.4** |
| Northern Europe | 79.7 |
| EFTA Countries | 75.0 |
| Western Europe | 73.7 |
| Southern Europe | 70.7 |
| Baltic States | 70.1 |
| Central and Eastern Europe | 69.8 |
| Candidate Countries | 61.0 |

*Source:* Authors

The 2026 edition of the SDG Index for Europe is topped by Finland, Sweden and Denmark. Historically, Nordic countries have consistently performed well on international assessments of SDG progress. Regionally, Northern Europe, the EFTA countries and Western Europe all have SDG scores above the EU average. A special SDG report for Nordic countries, released in January 2025, highlights progress made as well as shedding light on some specific challenges and emerging issues faced by Nordic countries in advancing sustainable development (Eriksson et al., 2025). By contrast, candidate countries show a sizable gap (of 11.4 percentage points) relative to the EU average, indicating a need to accelerate convergence in sustainable development outcomes.

The SDG Dashboards for Europe show that all European countries face at least two major challenges across the 17 goals – these are goals showing a red dashboard rating (Figure 1.6) European countries tend to face their greatest challenges in sustainable agriculture (SDG 2), sustainable consumption and production (SDG 12), climate action (SDG 13), and biodiversity protection (SDGs 14 and 15). On the other hand, the region tends to perform best on good health and well-being (SDG 3), eliminating poverty (SDG 1), and clean water and sanitation (SDG 6).

**Figure 1.6** | The 2026 SDG Dashboards for Europe




*Source:* Authors' calculations

**Figure 1.7** | 2026 Leave-no-one-behind Index for Europe

| LNOB Index Rank | Country | LNOB Score |
|---|---|---|
| 1 | Norway | 86.8 |
| 2 | Iceland | 85.3 |
| 3 | Finland | 84.4 |
| 4 | Sweden | 82.7 |
| 5 | Denmark | 82.7 |
| 6 | Netherlands | 82.4 |
| 7 | Ireland | 81.7 |
| 8 | Belgium | 81.1 |
| 9 | Slovenia | 80.0 |
| 10 | Austria | 78.6 |
| 11 | Germany | 77.8 |
| 12 | Malta | 77.2 |
| 13 | Croatia | 76.5 |
| 14 | Czechia | 76.4 |
| 15 | Spain | 76.4 |
| 16 | Luxembourg | 76.4 |
| 17 | Switzerland | 76.0 |
| 18 | France | 75.2 |
| 19 | Poland | 75.1 |
| 20 | Estonia | 74.6 |
| 21 | United Kingdom | 72.5 |
| 22 | Latvia | 72.3 |
| 23 | Portugal | 72.3 |
| 24 | Slovak Republic | 72.3 |
| 25 | Italy | 71.7 |
| 26 | Lithuania | 69.7 |
| 27 | Cyprus | 68.5 |
| 28 | Hungary | 67.1 |
| 29 | Serbia | 66.8 |
| 30 | Romania | 66.5 |
| 31 | Albania | 63.9 |
| 32 | North Macedonia | 62.3 |
| 33 | Greece | 61.9 |
| 34 | Bulgaria | 60.2 |
| 35 | Türkiye | 45.9 |


**LNOB scores by region, 2026**

| | |
|---|---|
| **European Union** | **75.3** |
| Northern Europe | 83.7 |
| EFTA Countries | 82.8 |
| Western Europe | 77.8 |
| Southern Europe | 72.8 |
| Central and Eastern Europe | 71.7 |
| Baltic States | 71.6 |
| Candidate Countries | 53.1 |

*Source:* Authors

## Box 1. The Leave-no-one-behind Index (LNOB)

The Leave-no-one-behind (LNOB) Index measures inequalities within countries. It is composed of a subset of 35 indicators and reflects the progress of European countries on four main dimensions of inequality:

- **Poverty and material deprivation** (e.g. poverty after social transfers, people unable to afford to keep their home adequately warm);
- **Income inequality and respect for fundamental labour rights** (e.g. GINI coefficient, Palma Ratio);
- **Gender inequality** (e.g. gender pay and employment gaps, under-representation of women in leadership roles in the public and private sectors); and
- **Access to and quality of services** (e.g. disparities across population groups in relation to key services including education and health).

The LNOB Index is scored on a scale of 0 to 100, where higher scores represent better performance and therefore less inequality. More information on indicator sources and aggregation is accessible online.

## Leave no one behind

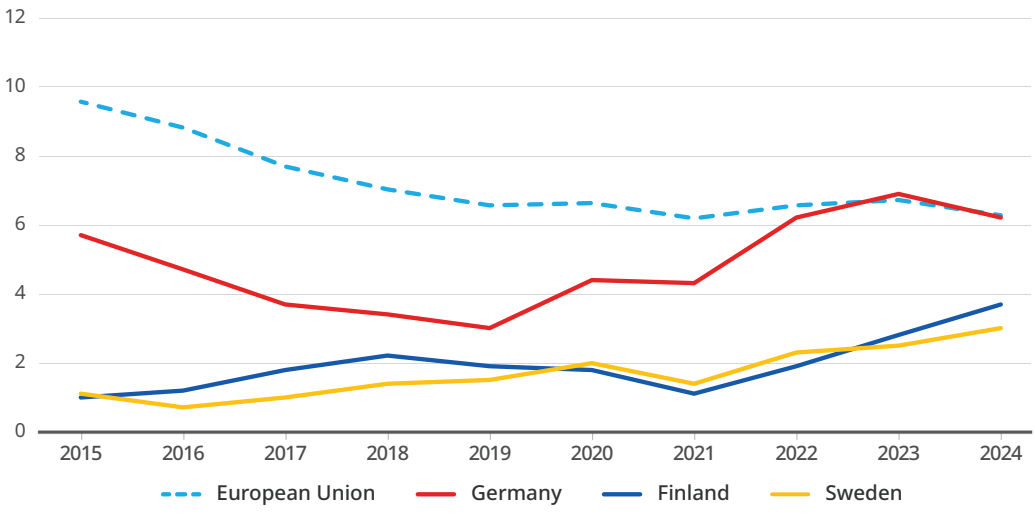
In general, European countries tend to perform better on the socio-economic aspects of the SDGs. Yet even on these aspects, results are uneven both across countries and within them. Recent trends do not necessarily point in the right direction.

This edition of the Europe Sustainable Development again presents a Leave-no-one-behind (LNOB) index for Europe, to evaluate the region's progress on this key principle underlying Agenda 2030. Specifically, the LNOB principle calls on countries to tackle inequalities in outcomes across population groups for all SDGs. This year, the LNOB Index comprises 35 indicators, including a new measure: the *Gap in population reporting pollution, grime or other environmental problems, by income (percentage points)*. The full list of indicators is available online.

Norway, Iceland and Finland top the 2026 LNOB Index for Europe. The regional groupings of Northern Europe, the EFTA countries and Western Europe all perform above the EU average. Persisting within-country inequalities in the Baltic States and Central and Eastern European countries, however, result in these appearing at the bottom of the 2026 LNOB Index. EU candidate countries continue to face significant challenges in catching up with EU member states on LNOB measures, primarily due to their substantially higher rates of material deprivation and poverty.

Looking at performance over time, some indicators show stagnation over recent years, with reversals of progress in certain countries. Figure 1.8 shows that even countries that perform above the EU average on the LNOB Index show negative trends on their rate of severe material deprivation. In Finland and Sweden, countries in which only 1% of the

**Figure 1.8** | Severe material and social deprivation rate, EU-27 (%), 2015–2024

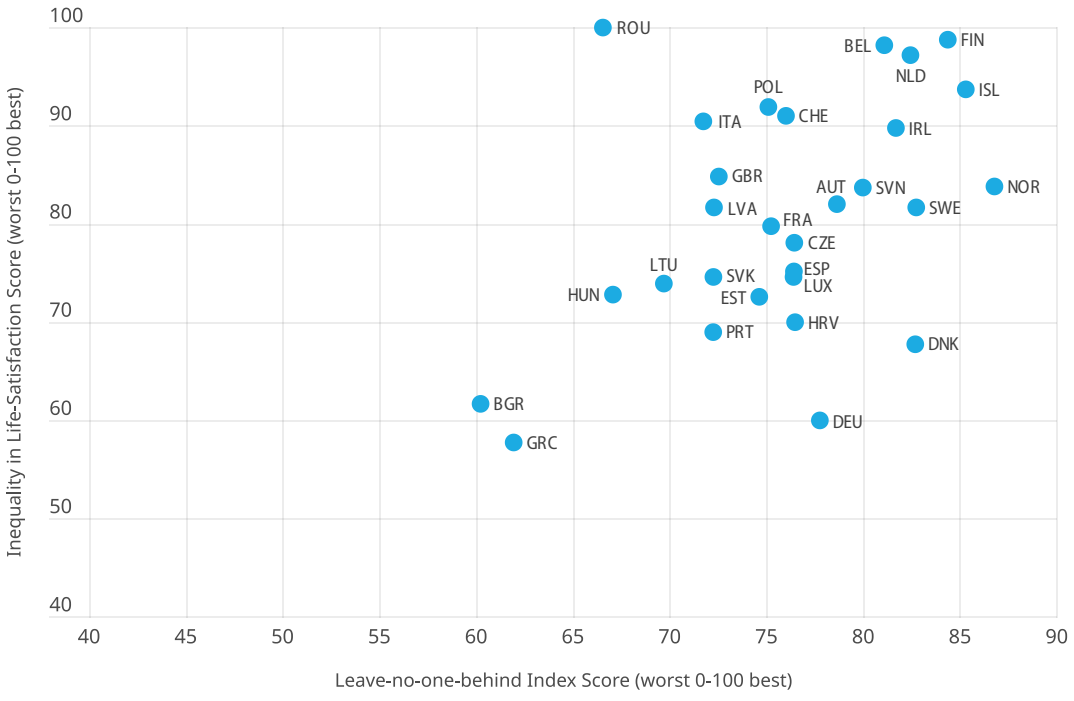



*Source:* Authors' elaborations, Eurostat.

population faced severe material deprivation in 2015, this rate has since tripled, with a marked deterioration beginning in 2021. Germany had made progress in reducing its number of severely materially deprived people up to 2019, but since 2020 the rate has increased back to pre-2015 levels. Averaging across the EU, although progress was made in reducing the severe material deprivation rate until 2021, this has since stalled.

The LNOB Index is, unsurprisingly, a good predictor of equality in measures of life satisfaction within a country. Figure 1.9 shows the LNOB Index score plotted against an OECD indicator on inequality in life satisfaction, measured as the ratio of the life satisfaction scores of the most- and least-satisfied quintiles within each country. Countries that are successfully tackling inequalities, as measured by the LNOB Index score, also tend to be those where life satisfaction is the most equal across the population.

**Figure 1.9 |** Correlation between the LNOB Index and inequality in overall life satisfaction, 2024




*Source:* Authors' elaborations, Eurostat

## Governance and partnerships for the Goals

Good governance and international cooperation are key to enabling the achievement of the SDGs: SDG 16 (Peace, Justice and Strong Institutions) calls on countries to govern responsibly and peacefully, while SDG 17 (partnerships for the goals) calls on countries to cooperate with one another and increase policy coherence for sustainable development.

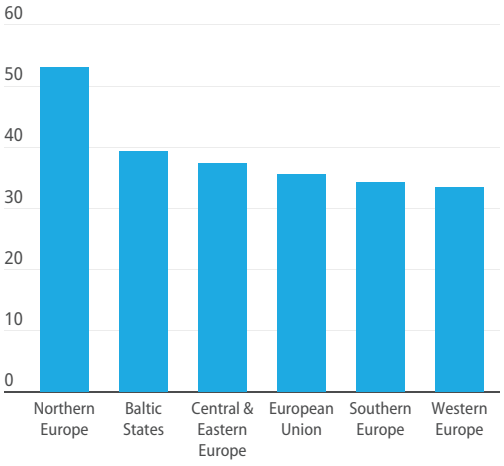
Figure 1.10 shows that, based on data from the *Standard Eurobarometer* – a biannual survey of the population perceptions in Europe – there is a large degree of variation in how much Europeans trust their own national governments. Trust tends to be highest in Northern Europe, while Western Europeans tend to trust their governments the least. In 2025, less than 40 percent of people in France, Germany, and the United Kingdom trust their government, which can make reforms and policy implementation more challenging. In all three countries, trust in government has declined from 2020 levels (at the start of the COVID-19 pandemic), although it has increased in the United Kingdom since 2022, where it was below 20 percent.

Global problems call for global solutions. Countries generate positive or negative spillover effects when their domestic policies have consequences beyond their borders, affecting the ability of other countries to attain sustainable development (Box 2). The SDSN tracks these transboundary impacts through a dedicated spillover index that measures them across three dimensions: 1) environmental and social spillovers embodied in trade, 2) spillovers related to economic and financial flows, and 3) peacekeeping and security spillovers.

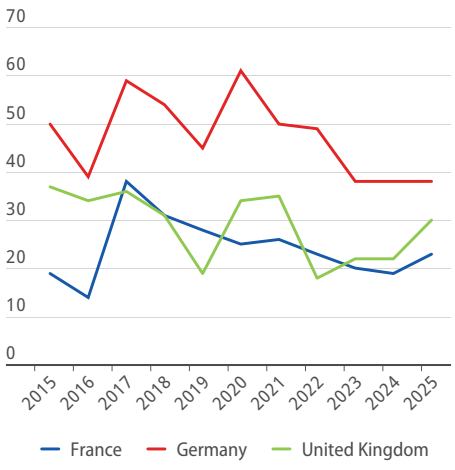
Official Development Assistance (ODA) is a key positive financial spillover generated by high-income countries. It plays a critical role in facilitating sustainable development in low- and middle-income countries, which often suffer from limited fiscal capacity, high debt

**Figure 1.10** | Trust in government

**(a)** Trust in government by European sub-region, 2025




**(b)** Trust in government 2015–2025, France, Germany and the United Kingdom



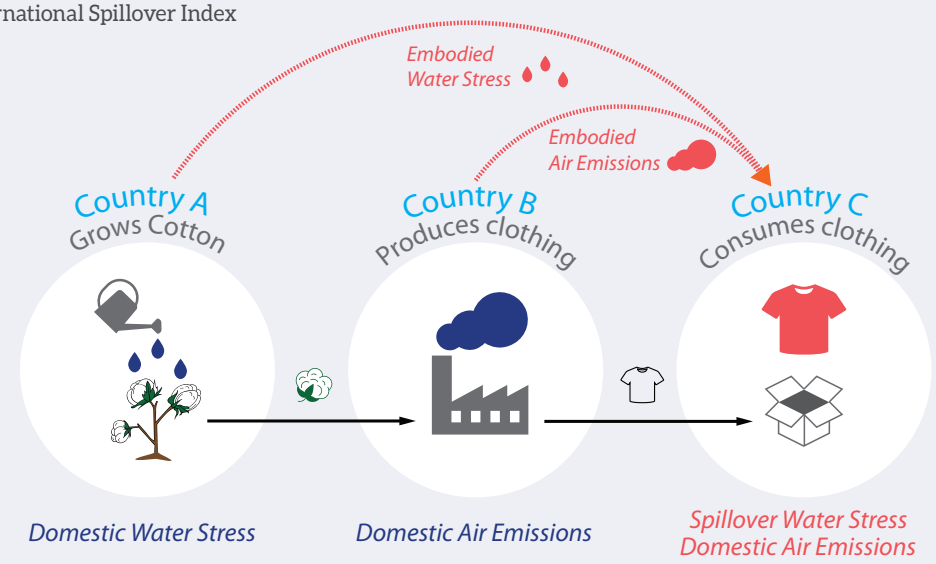

*Source:* Authors' elaborations, Eurobarometer

## Box 2. The International Spillover Index

The 2026 Spillover Index for Europe comprises 15 indicators that are also included in the overall SDG Index. It measures Europe's progress in reducing negative transboundary impacts affecting other countries. These impacts can be categorized into four categories:

- **Environmental and social spillovers embodied in trade.** These cover international impacts related to pollution and the use of natural resources, as well as social impacts generated by the consumption of goods and services. Multi-Regional Input–Output (MRIO) models, combined with satellite datasets, provide powerful tools to track such impacts generated worldwide by consuming countries. This category of spillovers, which also includes exports of toxic pesticides and the illegal wildlife trade, are particularly connected to SDG 8 (Decent Work and Economic Growth), SDGs 12 through 15 (related to responsible consumption, climate and biodiversity), and SDG 17 (Partnerships for the Goals). They also indirectly affect all other SDGs.
- **Spillovers related to economic and financial flows.** These include unfair tax competition, corruption, banking secrecy, profit-shifting, tax havens and stolen assets, which all undermine the capacity of other countries to leverage resources to achieve the SDGs. They also include positive spillovers (or handprints) such as international development finance (for example, ODA). These types of spillovers are closely related to SDG 16 (Peace, Justice and Strong Institutions) and SDG 17 (Partnerships for the Goals) – and indirectly to all other SDGs, notably through ODA.
- **Peacekeeping and security spillovers.** These include negative externalities such as organized international crime or exports of major conventional weapons or small arms (which can have a destabilizing impact on poor countries), as well as positive spillovers like a country's support for UN-based multilateralism as measured by the UN-MI. Among other positive spillovers in this category are investments in conflict prevention and peacekeeping. These spillovers are particularly related to SDG 16 (Peace, Justice and Strong Institutions) and SDG 17 (Partnerships for the Goals), but they are also indirectly connected with most of the other SDGs, including those relating to poverty, hunger and health, and other socio-economic goals.
- **Direct cross-border flows of air and water.** These cover effects generated through physical flows – for instance of air and water – from one country to another. Cross-border air and water pollution are difficult to attribute to a country of origin, and this remains an important data gap. Unfortunately, the International Spillover Index does not currently include any indicators to track these types of spillovers. They are particularly related to SDG 6 (Clean Water and Sanitation) and SDGs 12 to 15 on climate and biodiversity, but they also concern many other goals, including SDG 3 (Good Health and Well-Being). Further details on indicator sources and aggregation for the International Spillover Index are provided online.

**Figure 1.11**
The International Spillover Index

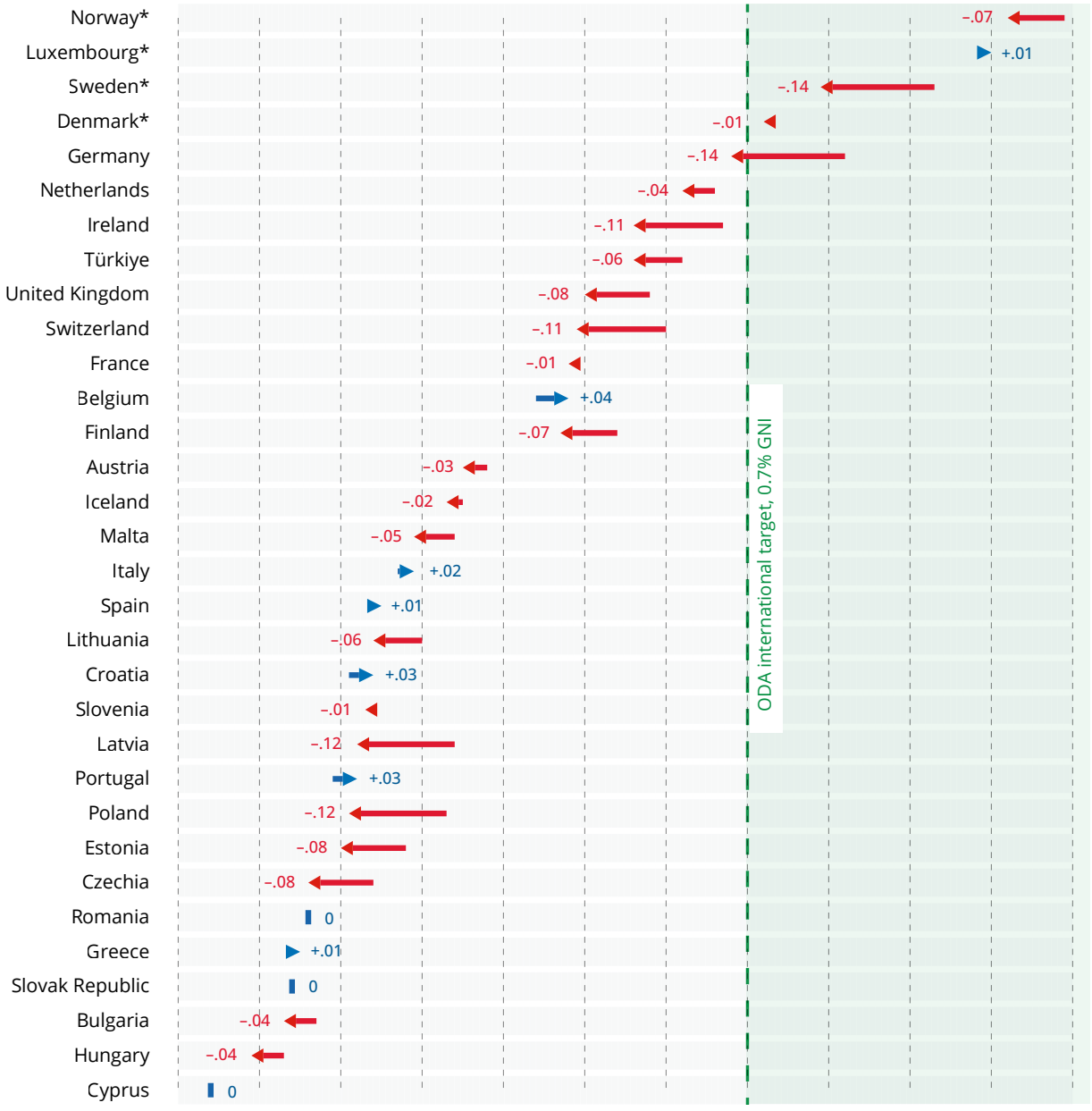



*Source:* Ishii et al. 2024

burdens and restrictive borrowing conditions on international markets. In 2024, ODA levels dropped in most European countries, and only four – Norway, Luxembourg, Sweden and Denmark – currently meet the international target of 0.7 percent GNI (Figure 1.12). Germany, despite having met this target in 2023, reduced its ODA contributions more than any other European country in 2024.

The International Spillover Index shows that high-income countries are responsible for the lion's share of negative spillover impacts, notably those embedded in unsustainable

**Figure 1.12** | Change in Official Development Assistance, 2023 to 2024 (percentage points)

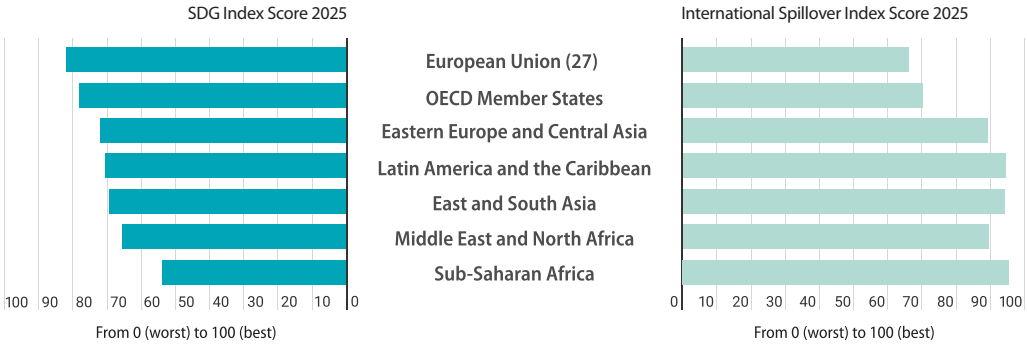



*Note:* * indicates the four countries meeting the international ODA target of 0.7% of GNI. Red arrows denote a decline in ODA from 2023 to 2024.
*Source:* Authors' elaborations, OECD

consumption and trade (Ishii et al., 2024), with OECD members and the European Union scoring the lowest on the Spillover Index among world regions (Figure 1.13). The volume of GHG emissions generated via trade illustrates the scale of these impacts (Figure 1.14). More than 40 percent of the European Union's GHG emissions are generated abroad. This means that efforts to decarbonize energy systems domestically must be accompanied by efforts to clean supply chains.

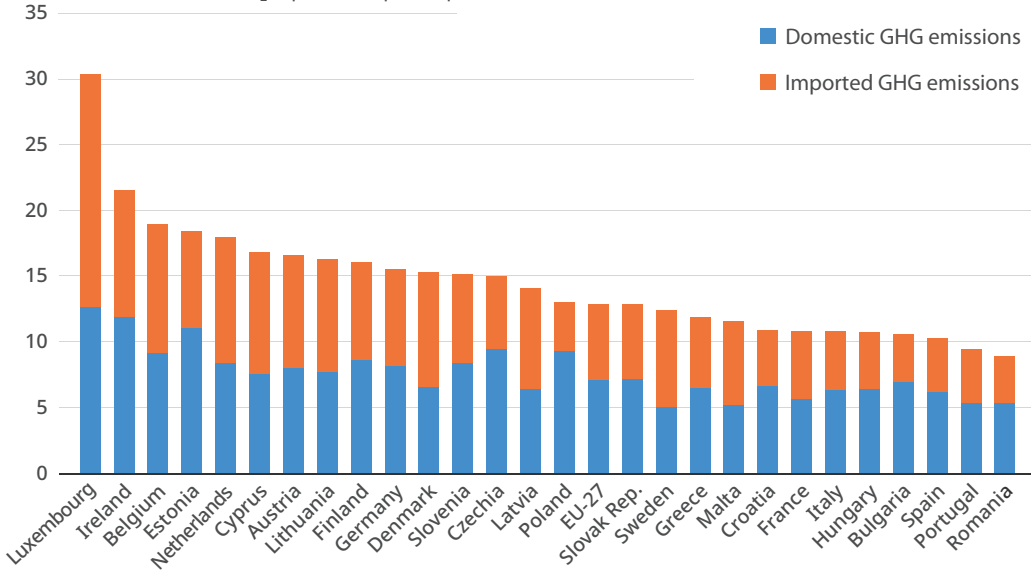
Building notably on the *Villars Framework for a Sustainable Global Trade System*, coalitions of the willing– including medium-sized countries – should continue to strengthen regulations promoting a fair and sustainable trade system under the auspices of the World Trade Organization (Trachtman et al., 2023). Governance reforms in specific supply chains are also needed (Malik et al., 2021; 2023; 2024). In addition, valuing natural capital and integrating nature into balance sheets are critical levers for mitigating international spillovers.

**Figure 1.13** | SDG Index score vs International Spillover Index score by region, 2025




*Note:* A low score on the International Spillover Index denotes high negative spillovers.
*Source:* Authors, based on Sachs et al, 2025

**Figure 1.14** | GHG emissions, domestic vs spillover impacts, EU-27 (tonnes $CO_2$ equivalent per capita), 2024




*Source:* Authors' elaborations, SCP-HAT & EDGAR.

## Outlook

In a fragmented multilateral context, the SDGs represent an aspiration for Europe and medium-sized economies that want to promote balanced development, global cooperation and a rules-based international order. Practically speaking, Europe could reaffirm its commitment to the SDGs and 2030 Agenda via a joint declaration by the Council, Parliament and European Commission. The EU could also commit to presenting a second Union-wide Voluntary Review by July 2027, in time for the SDG Summit at Heads of State level in September 2027. This review could address the areas identified in this report as particularly challenging, such as international spillovers and socio-economic progress and convergence, while also articulating a clear vision and a set of concrete proposals for an ambitious post-2030 framework and the means of implementation needed to advance sustainable development. The SDSN and its network stand ready to assist the European leadership in these efforts to advance sustainable development internally and internationally. Part 2 provides ideas and solutions from SDSN networks and partners on pathways to achieve the SDGs.

## Box 3. Regional and subnational editions

SDSN and its partners have been documenting territorial inequalities in SDG performance for some years now. Globally, more than 40 individual SDG reports have been released by the SDSN and its networks since 2015. SDG Index and Dashboards reports for individual countries and regions underline differences in achievements within countries and territories. SDSN Networks have published assessments for Greek, Italian and Spanish cities, and for cities and regions in Benin, Brazil, Malaysia and the United States, among others. A special edition for Northern Europe was released in January 2026. These tools provide a more comprehensive overview of SDG gaps and challenges at the territorial level and across European subregions. The SDG index has been recognized by the European Parliament research Service as being among the 10 composite indices most useful for policymaking (EPRS 2021).

**Figure 1.15 |** SDG Index and Dashboards: global, regional and subnational editions (2016–2026)


*Source:* SDG Transformation Center. www.sdgtransformationcenter.org

## Annex: Methods (summary)

The *Europe Sustainable Development Report 2026* provides a quantitative assessment of SDG priorities for the EU, EFTA countries, the United Kingdom and candidate countries. The report builds on the methodology of the *Sustainable Development Report*, developed by the SDSN and Bertelsmann Stiftung to track countries' performance on the 17 SDGs. The methodology has been peer-reviewed (Schmidt-Traub et al., 2017) and statistically audited – using the 2019 global edition – by the European Commission Joint Research Centre (Papadimitriou et al., 2019). The SDG Index has been retained by the European Parliamentary Research Service as one of the 10 composite indices useful for policymaking (EPRS 2021).

The data of this edition were extracted in October and November 2025. The 2026 SDG Index for Europe comprises 115 indicators, including 108 that permit an evaluation of progress over time. The same indicator set is used for all countries, to generate comparable scores and rankings. Approximately 75% of the indicators come from official statistics (primarily services of the European Commission) and 25% from non-official data sources (NGOs, academia). The full list of sources by indicator is available online. The selection of indicators and performance thresholds benefited from inputs received during various rounds of stakeholder consultations, including an online public consultation on preliminary data and results in December 2025, and a workshop with the European Economic and Social Committee on December 9, 2025.

### Changes to the 2026 edition

The *Europe Sustainable Development Report 2026* covers 41 European countries. Due to time lags and data gaps, the data for Ukraine do not fully reflect the severe consequences of the war since February 2022. This year, the report includes four new indicators – 1) E-Government: Online Services Index, 2) Inequality in life satisfaction, 3) Gap in the population reporting pollution, grime or other environmental problems, by income, and 4) Population that reports having trust in their national government. In addition, the indicator 'Mortality rate from alcohol use disorders' was introduced to replace 'Population engaging in heavy, episodic drinking at least once a week'. Lastly, the quantitative thresholds for 'Women in senior management positions' were updated to align with the EU Directive on gender balance in corporate boards (2022/2831). For the full list of new indicators and modifications, as well as the full indicator metadata, please consult the Codebook, which is available for download online.

### Method for defining performance thresholds (decision tree)

Performance thresholds ('upper bound') for each indicator were determined using the following decision tree:

1. Use **absolute quantitative thresholds in SDGs and targets:** e.g. zero poverty, universal school completion, universal access to water and sanitation, full gender equality.
2. Apply t**he principle of 'leave no one behind'** when no explicit SDG target is available.
3. When available, use **science-based or technical targets** that must be achieved by 2030 or later (e.g. net-zero greenhouse gas emissions from energy by 2050, 80% yield gap closure).
4. For all other indicators, use **the average of the top performers.**

The lower bound (0%) was defined at the lowest 2.5$^{th}$ percentile, either from the global *Sustainable Development Report* or from the European countries included in the Europe-specific datasets.

## Normalization

To make the data comparable across indicators, each variable was rescaled from 0 to 100, with 0 denoting worst performance and 100 describing the optimum. After establishing the upper and lower bounds, variables were transformed linearly to a scale between 0 and 100 using the following rescaling formula for the range [0; 100]:

$$x' = \frac{x - min(x)}{max(x) - min(x)} \times 100$$

where $x$ is raw data value; *max/min* denote the bounds for best and worst performance, respectively; and $x'$ is the normalized value after rescaling. Each indicator distribution was censored, so that all values exceeding the upper bound scored 100, and values below the lower bound scored 0. The rescaling equation ensured that higher values indicated better performance. In this way, the rescaled data became easy to interpret: a country with a score of 75 has covered three quarters of the distance from worst to best.

## Weighting and aggregation

To compute the SDG Index, we first calculate scores for each goal using the arithmetic mean of the scores of the indicators for that goal. These goal scores are then averaged across all 17 SDGs to obtain the SDG Index score. Equal weights are used for aggregating indicator scores into the goal scores, and for aggregating goal scores into the overall index score.

Averaging across all indicators for an SDG might hide areas of policy concern if a country performs well on most indicators but faces serious shortfalls on one or two metrics within the same SDG (often called the 'substitutability' or 'compensation' issue). As a result, the SDG Dashboards are based only on the two variables on which a country performs worst – except for Goal 3, where the three worst indicators are used. The dashboards use a 'traffic light' colour scheme (green, yellow, orange and red) to illustrate how far a country is from achieving a particular goal. A red rating is applied only if both the worst-performing indicators score red. Similarly, in order to score green, all indicators under the goal must be green.

## Trends

Using panel data, we estimate how fast a country has been progressing towards an SDG and determine whether – if continued into the future – this pace will suffice to achieve the SDG by 2030. To estimate SDG trends, we calculated the linear annual growth rates needed to achieve the goal (green threshold) by 2030 (2015–2030), which we compare to the average annual growth rate over the most recent period, starting from the year of the adoption of the SDGs (2015–2024). A green arrow denotes 'on track or maintaining performance above goal achievement', the intermediate yellow and orange arrows denote insufficient progress, and a red arrow indicates movement away from the target. Countries that have already achieved an SDG target but whose performance has worsened since 2015 are assigned an orange arrow, 'stagnation'.

## Country groupings and averages

To simplify the analysis, we provide population-weighted averages using the country groupings described in the table below. The online database provides detailed results by individual country, as well as country groupings for all indicators and goals.

## Country profiles and data visualization

The *Europe Sustainable Development Report 2026* is accompanied by an online data visualization tool, which can be accessed at sdgtransformationcenter.org. Dedicated country profiles, the full excel database and indicator metadata are all available online.

**Table1.3** | Country groupings used in the ESDR25

| Baltic States | Central and Eastern Europe | Northern Europe | Southern Europe | Western Europe | Candidate Countries | EFTA Countries |
|---|---|---|---|---|---|---|
| Estonia | Bulgaria | Denmark | Cyprus | Austria | Albania | Iceland |
| Latvia | Croatia | Finland | Greece | Belgium | Bosnia and Herzegovina | Liechtenstein |
| Lithuania | Czechia | Sweden | Italy | France | Georgia | Norway |
| | Hungary | | Malta | Germany | Moldova | Switzerland |
| | Poland | | Portugal | Ireland | Montenegro | |
| | Romania | | Spain | Luxembourg | North Macedonia | |
| | Slovak Republic | | | Netherlands | Serbia | |
| | Slovenia | | | | Türkiye | |
| | | | | | Ukraine | |

*Source:* Authors

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# 2

# Expert Solutions and Contributions

# Part 2.
# Expert Solutions and Contributions

## Integrated governance for climate neutrality and adaptation by 2025: insights from simulating 35 European energy plans

*By Prof. Dr. Phoebe Koundouri and Dr. Angelos Alamanos*

### Overview: the need for integrated sustainability pathways

Achieving climate neutrality by 2050 requires coordinated action across energy, agriculture, land use and water resources. Fragmented sectoral policies and unclear financing strategies threaten progress. We present key findings from the SDSN Global Climate Hub's first-ever simulation of the impacts of implementing 35 European National Energy and Climate Plans (NECPs) to 2050. We highlight data gaps, policy inconsistencies, and sector- and country-level inequalities, then offer a concise set of recommendations for a timely and equitable transition to a climate-neutral Europe.

### Analytical approach

European nations have set ambitious emission-reduction targets through their NECPs, the Common Agricultural Policy (CAP), and related strategies. Yet these plans often lack financial rigor – failing to cost infrastructure, technology upgrades and adaptation projects – or simply neglect impacts on land and water. A pan-European analysis published by the Global Climate Hub in 2025 integrates future policy scenarios and resource management proposals, highlighting targeted financing tools as essential insights for success (Kondouri et al., 2025). The study combines five modelling tools for the first time:

- FABLE Calculator (agricultural and livestock production, diet shifts, land-use, GHG impacts);
- LEAP – Low Emissions Analysis Platform (sectoral energy demand/supply and multi-pollutant emissions);
- BiofuelGCH calculator (domestic bioethanol and biodiesel production potential);
- LandReqCalcGCH model (land-area and investment costs for solar and wind infrastructure); and
- WaterReqGCH tool (sectoral water use and supply sources).

These models simulate the projected impacts of the NECPs of 35 European countries, annually, through to 2050.

### Key findings

- **Current accounts:** Without any interventions, agricultural emissions stagnate, energy emissions fall only marginally, renewable expansion remains limited, and Southern Europe faces persistent water stress.
- **NECP scenario:** Full NECP implementation delivers deep cuts in all emissions, high renewables and hydrogen penetration, but rising net electricity imports and underused biofuel capacity.
- **Land use:** Solar and wind land-requirements are achievable overall, provided 'smart' siting avoids conflicts with farming, conservation, or local communities.
- **Water management:** Severe irrigation deficits afflict Southern member-states, yet NECPs and River Basin Management Plans lack enforceable, sector-specific demand management targets.
- **Cost planning gaps:** Many NECPs omit detailed finance estimates for renewables, hydrogen facilities, and water-efficiency measures, undermining effective project delivery.

## Summary of key recommendations

- **Cross-Sector Coordination:** Establish a unified NECP–CAP–Water-Policy platform, with a common 2050 planning horizon and inter-operable data.
- **Transparency and Monitoring:** Create a nexus monitoring committee and consolidated data portal for continuous progress tracking.
- **Project Management Capacity:** Establish national funding management offices equipped with a European Central Bank Pillar 2 requirement (ECB-P2R) catalogue, to match each adaptation project with appropriate financial instruments (loans, guarantees, grants).
- **Industry:** Invest in clean-energy infrastructure and circular-economy upgrades for steel, cement and chemicals.
- **Transport:** Expand public transit, electrification infrastructure and biofuel blending mandates with subsidies.
- **Agriculture and Land:** Promote agrivoltaics, agroforestry and CAP eco-schemes for agroecological practices, while safeguarding farmland.
- **Biofuels:** Scale advanced biofuel production in high-demand countries; redirect surplus production in exporters to domestic use.
- **Water:** Embed binding, sectoral consumption targets in river basin management plans and CAP; apply spatial planning tools for balanced water use.
- **European Cooperation:** Form a trans-European committee to coordinate infrastructure projects, share best practices and align financing, especially to support less-developed regions. Tailored fiscal incentives and technology transfers via Just transition funds should bolster Southern and Eastern Europe.

## Conclusion

Only a systemic, cross-sector approach, supported by scientific tools and driven by shared goals, harmonized timelines and robust oversight can deliver an economically efficient, environmentally sustainable and socially equitable pathway to climate neutrality across Europe.

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### Resources

FABLE Calculator: Food, Agriculture, Biodiversity, Land-Use, and Energy (FABLE) Consortium, https://fableconsortium.org/tools/fablecalculators/.

LEAP Low Emissions Analysis Platform: Stockholm Environment Institute (SEI), https://www.sei.org/tools/leap-low-emissions-analysis-platform/

*See also* SDSN Global Climate Hub: https://unsdsn.globalclimatehub.org/

SDSN Global Climate Hub

# Estimating fair levels of GHG emissions from agriculture for the EU until 2050

*By Mr. Davide Cozza, Ms. Maria Diaz, Ms. Clara Douzal and Dr. Aline Mosnier*

## Introduction

The principle of 'common but differentiated responsibilities and respective capabilities' (CBDR–RC) provides a foundation for fairness in global climate action. As updated in the 2015 Paris Agreement, it establishes that every country should contribute to the 1.5 °C global mitigation goal based on its capacity 'and reflect its highest possible ambition' (UNFCCC, 2015). However, it is up to each country to decide how to put this principle into practice. This is particularly challenging for the agriculture and land-use sector, which simultaneously acts as a source and sink of emissions, and is critical to meeting other priorities, such as food and nutrition security, biodiversity conservation and economic development.

For the European Union, the CBDR-RC principle holds dual significance. At the global level, the EU bears a high level of responsibility, as it is both a historically large emitter and a bloc with considerable financial and technological resources to drive ambitious climate mitigation action (Table 2.1). Within the Union, historical and projected emissions vary widely among EU member states. As a result, the EU's overall mitigation efforts must balance principles of fairness and equity – both towards the rest of the world and towards its own members.

In 2018, the EU introduced the Effort Sharing Regulation (ESR) to translate the principle of 'a fair share' into concrete mitigation targets (European Parliament and Council of the EU, 2018). The EU has committed to achieving a climate-neutral economy by 2050, (EU, 2021) and to reducing GHG emissions by at least 55% by 2030 and 90% by 2040, compared with 1990 levels (Council of the EU, 2025). To achieve these objectives, the ESR sets binding national emission-reduction targets for 2030 that apply to aggregated emissions from several sectors, including agriculture. In total, the ESR covers about 60% of the EU's total GHG emissions and spans all 27 EU member states, as well as Iceland and Norway.

GDP per capita is the criterion used to determine national emission-reduction targets, including for agriculture, within the ESR-regulated sectors. The ESR also includes several flexibilities to help member states manage year-to-year fluctuations in emissions, such as the use of credits from the land-use sector. Notably, EU countries in which agriculture accounts for a larger share of total emissions have access to higher land-use credits. In this way, the ESR reflects the lower short-term mitigation potential of agricultural sources (European Commission, 2023). Additional mechanisms include: access to a safety reserve, subject to the collective achievement of the EU's reduction target; the option to bank surpluses in emissions; the capacity to borrow a limited amount of allocations; and the ability to buy and sell allocations among member states.

However, there are no specific mitigation targets for the agricultural sector at the EU level; it is up to each member state to determine the share of agriculture within its national ESR allocation. Given agriculture's central role in the EU's sustainable development and the diversity of agricultural systems across member states, it is crucial to assess how countries can plan their food and land-use systems in alignment with the objectives of the European Climate Law and the Common Agricultural Policy while upholding principles of fairness and equity. The widespread farmers' protests across Europe in early 2024 underscored the urgency of ensuring a just and socially inclusive transition to more

sustainable and resilient land-use systems, and of reconciling climate ambition with economic viability in both rural and urban contexts (European Union, 2024).

While fair-share methodologies have long been used to assess economy-wide GHG emission reduction targets (Höhne et al., 2014; Van Den Berg et al., 2020; Climate Action Tracker, n.d.; Yuwono et al., 2023), in this study, we examine fairness in projected future agricultural emissions across countries. We identified three 'fair share' principles and applied them to agricultural emissions through 2050, using two pathways – 'Current Trends' and 'Global Sustainability' – modelled by the Food, Agriculture, Biodiversity, Land Use and Energy (FABLE) Consortium (Douzal et al., 2024; FABLE 2025). Agricultural emissions in these alternative futures result from different policy choices and levels of ambition. In this study, we compute fair allowances for 2050, compare results across EU countries and regions, and identify where the largest gaps emerge.

## Fair-share approaches applied to the EU

The **Ability to Pay (AP)** approach allocates lower emission allowances to countries with lower vulnerability (Notre Dame Global Adaptation Initiative, 2024) and projects higher cumulative per-capita GDP over 1961–2049. It builds on the capability principle: countries with greater economic, technological and institutional capacity should shoulder a larger share of global mitigation efforts (Höhne et al., 2014; Climate Action Tracker, n.d.). Between 1961 and 2019, the EU accounted for roughly 23.8% of global cumulative GDP, while representing only about 8.4% of the world's population. Over 2020–2049, the EU is projected to account for 16.3% of global GDP and just 5.2% of the world's population. Relative to most regions, the EU possesses greater financial resources, technological expertise and institutional capacity to implement ambitious climate mitigation policies, including making significant reductions in agricultural emissions.

**The Historical Responsibility (HR)** approach assigns smaller emission allowances to countries with higher per-capita historical emissions. It is grounded in the responsibility principle: countries that have contributed more to global warming in the past should bear a greater share of today's mitigation efforts (Climate Action Tracker, n.d.; Höhne et al., 2014). Between 1961 and 2019, the EU accounted for roughly 10.3% of global historical agricultural emissions (Gütschow et al., 2023) and is projected to contribute about 6.3% between 2020 and 2049 (Douzal et al., 2024). This reflects a long legacy of higher agricultural emissions and high emissions per hectare of agricultural land (FAO, 2024), driven in part by large-scale livestock production and intensive use of natural and mineral fertilizers (Mielcarek-Bocheńska and Rzeźnik, 2021). By contrast, many countries in Africa and Asia have historically relied on more subsistence-oriented farming systems, with significantly lower agricultural output per capita and lower per-capita emissions. Under the HR approach, this historical imbalance places a greater mitigation responsibility on European countries.

The **Immediate Per Capita Convergence (IEPC)** framework allocates emission allowances based on population size, reflecting the principle that each individual has an equal right to emit (Pozo et al., 2020; Höhne et al., 2014; Climate Action Tracker, n.d.). Because the EU represents a relatively small share of the global population – especially when compared to rapidly growing regions in Asia and Africa – European countries receive lower agricultural emission allowances under this framework, placing greater pressure on them to reduce emissions faster than other regions.

In addition to these general fairness principles, we incorporate two indicators – yield gap and self-sufficiency ratio (SSR) – to refine the allocation of 'fair shares' for agricultural emissions, balancing mitigation objectives with food security goals (FABLE 2025). A large yield gap indicates room to increase agricultural

Table 2.1 | **The EU average share of global agricultural emissions, population, and GDP**

| | Agricultural Emissions | Population | GDP |
|---|---|---|---|
| 1961–2019 | 10.3% | 8.4% | 23.8% |
| 2020–2049 (FABLE Current Trends Pathway) | 6.3% | 5.2% | 16.3% |

*Source:* PRIMAP Database for historical agricultural emissions (Gütschow et al., 2023); World Bank for historical GDP (2024a) and population (2024b); Douzal et al. (2024), for future emissions, population and GDP.



productivity through improved practices and technology, allowing countries to reduce emissions per unit of output. Countries with smaller yield gaps receive slightly higher emissions allowances because they have limited potential to increase productivity further. The SSR reflects a country's ability to meet its food demand domestically. Countries with a low SSR are allocated higher emissions allowances, to ensure they can produce enough food domestically and are not pushed into greater dependence on imports. In the EU, yield gaps are generally low, which increases emission allowances. However, the region's relatively high SSR reduces the need for higher allowances, partly counterbalancing the effect of low yield gaps.

## Results

According to this study, the EU's fair share allowances amount to 9.6–11.1 megatonnes of carbon dioxide equivalent (Mt $CO_2$-eq) per year under the AP approach, 139–147 Mt $CO_2$-eq under the HR approach, and 202–214 Mt $CO_2$-eq under the IEPC framework. When compared with 1990's agricultural emissions of 489 Mt $CO_2$-eq (EEA, 2025), these fair-share allocations imply a reduction of approximately 98% under AP, 70% under HR, and 56–59% under IEPC by 2050.

### The EU and the rest of the world

The EU is far from achieving its fair share level of agricultural emissions under both the 'Current Trends' pathway – a low-ambition trajectory largely shaped by existing policies – and the 'Global Sustainability' pathway – a high-ambition trajectory designed to bring countries and regions closer to meeting global sustainability targets, including the Paris Agreement and the SDGs (FABLE, 2024).

Figure 2.1 illustrates the gap between the EU's fair-share allowance and its projected emissions from agriculture under both pathways, and compares this gap with that of other major agricultural producers (Brazil, China, India, Russia, and the United States).

Using the AP approach, the EU's fair-share allowances would cover only 2% of its projected 2050 emissions under the Current Trends pathway and 4% under the Global Sustainability pathway, placing it, alongside the United States (1% and 2%) and Brazil (3% and 9%), among the countries or regions farthest from meeting their fair-share allocations. Russia (10% and 14%) and China (22% and 36%) perform relatively better, though their positions remain highly insufficient. India, by contrast, is the only country to meet or exceed its fair share under both pathways (130% and 200%), reflecting its low per-capita GDP.

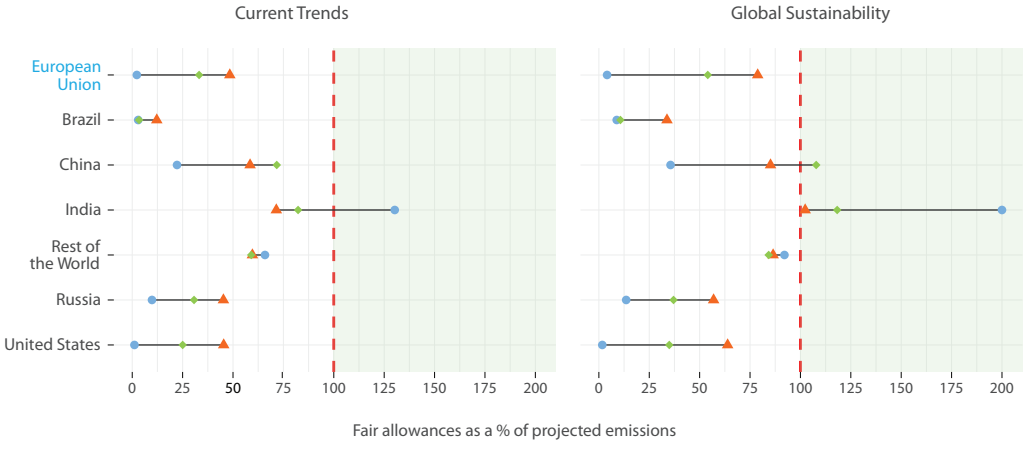
Under the HR approach, the EU's position relative to its fair share improves, but it remains highly insufficient. The EU's fair allowance would account for only 32% of its projected 2050 emissions under the Current Trends pathway, rising to 54% under Global Sustainability. The EU would still emit three times (Current Trends) or two times (Global Sustainability) the level of emissions it is entitled to. By contrast, China (72% and 108%) and India (82% and 118%) come close to meeting – or in the case of Global Sustainability, exceed – their fair shares. Brazil, however, exhibits a larger gap under either pathway between its fair share and its actual emissions (3% and 11%), reflecting high agricultural emissions driven by its large-scale export-oriented production of soybeans, beef and other commodities.

Using the IEPC framework, the EU comes closer to meeting its allocation but still falls short, with its fair allowance accounting for 48% of its projected 2050 emissions under the Current Trends pathway and 79% under Global Sustainability. This implies that the EU would still need to cut its 2050 agricultural emissions by roughly half (Current Trends), and by about 21% (Global Sustainability) to fully align with its fair-share allocation. Under the more optimistic pathway, India (71% and 102%) attains its fair share and China (58% and 85%) comes close to achieving it, while Russia (45% and 57%), Brazil (12% and 34%), and the United States (45% and 64%) remain far from reaching their fair-share targets.

## Within the EU

To examine fairness within the EU, we consider agricultural emissions based on pathways developed for five EU countries – Denmark, Finland, Germany, Greece and Sweden – and for Norway. The rest of the EU countries are grouped together into a single 'rest of the EU' region. These six countries were selected because they have FABLE teams, contributed to the 2023 Scenathon, and fall within the scope of the ESR framework. Overall, European countries exhibit broadly similar characteristics: high per-capita GDPs, high per-capita agricultural emissions, with

**Figure 2.1 |** Agriculture emissions in the EU and other regions: 'fair share' allowances vs. projections, based on three fair-share approaches




This figure presents fair-share allowances as a percentage of projected 2050 agricultural emissions. Higher values indicate that a region is closer to achieving its fair share (dashed red line). Values above 100% (green zone) mean that a region's fair allowance is greater than its projected emissions, implying that it will meet or even surpass its fair share goal under one of the three approaches

*Source:* Authors

small to medium populations in 2050 compared with other world regions. Nevertheless, there are some notable differences among them, shaping their distinct positions across the three fairness approaches.

### Current trends

Under the AP approach, all European countries exceed their fair emission allowances by a wide margin, with fair-share allocations representing only about 1–4% of their actual agricultural emissions in 2050. But although all EU countries remain very far from limiting emissions to their fair share, Greece performs roughly four times as well as the Nordic countries, largely due to its comparatively lower per-capita GDP.

Using the HR approach, the situation improves slightly, but all countries continue to overshoot their fair allowances. Germany performs better than the others, overshooting its fair-share level by 35% (Figure 2.2).

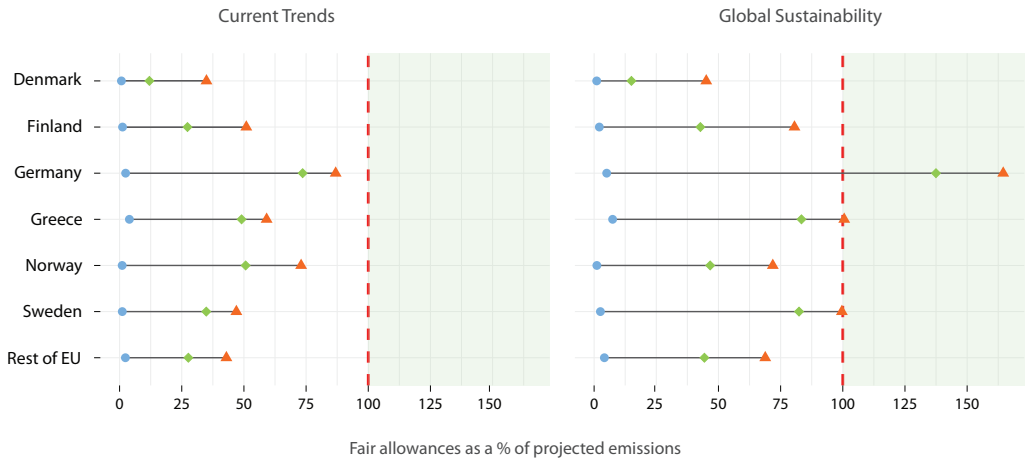
Using the IEPC framework, the situation improves further. Because fair-share allocations are based solely on projected 2050 population size, European countries receive higher allowances under this approach (on average 21 $MtCO_2eq$ per year higher than AP and 1.5 $MtCO_2eq$ higher than HR). This occurs because, although Europe's population is small compared to the rest of the world, this demographic gap is much narrower than the gaps between the EU and other regions in historical agricultural emissions and economic capacity. Germany and Norway come the closest to attaining their fair-share levels, with allowances equivalent to 87% and 73%, respectively, of their 2050 projected emissions.

### Global sustainability

The Global Sustainability pathway brings significant progress toward fairer emission levels, particularly under the HR and IEPC approaches.



**Figure 2.2 |** Agriculture emissions in EU countries: 'fair share' allowances vs. projections, based on three fair-share approaches




This figure presents fair-share allowances as a percentage of projected 2050 agricultural emissions. Higher values indicate that a region is closer to achieving its fair share (dashed red line). Values above 100% (green zone) mean that a region's fair allowance is greater than its projected emissions, implying that it will meet or even surpass its fair share goal under one of the three approaches:

*Source:* Authors

Table 2.2 | Overview of Fair Share compliance

| Country/Region | Current Trends | | | Global Sustainability | | |
|---|---|---|---|---|---|---|
| | AP | HR | IEPC | AP | HR | IEPC |
| Denmark | 1% | 12% | 35% | 1% | 15% | 45% |
| Finland | 1% | 27% | 51% | 2% | 43% | 81% |
| Germany | 2% | 74% | 87% | 5% | 137% | 165% |
| Greece | 4% | 49% | 59% | 7% | 83% | 101% |
| Sweden | 1% | 35% | 47% | 3% | 82% | 100% |
| Rest of EU | 2% | 28% | 43% | 4% | 44% | 69% |
| Rest of the World | 58% | 56% | 55% | 88% | 85% | 84% |

Projected emissions are lower than fair allowances in 2050, meaning the cluster respects its fair share.
Emissions exceed the fair share allowance, signaling an overshoot.
The % indicates fair allowances as share of projected emissions.

*Source:* Authors

Under HR, most EU countries narrow the gap between their fair allowances and their actual emissions. Greece achieves 83% compliance and Sweden 82%, while Germany does not consume the entirety of its carbon budget, with a surplus of 37% of its 2050 emissions.

Under IEPC, Germany, Greece and Sweden fully comply with their fair-share allocation, Finland closes 81% of its gap, the 'rest of the EU' group 69%, while Denmark remains far above its allocated allowance. Under AP, EU countries also improve their relative position by a factor of two or more, mainly because this pathway entails a significant reduction in their agricultural emissions by 2050. However, their high economic capacity continues to penalize them, resulting in fair allowances that still represent only a very small share of their projected 2050 emissions, between 1% and 7%.

## Conclusion

This analysis highlights the importance of integrated modelling approaches. The emission reductions in the Global Sustainability pathway result from using an integrated approach that simultaneously addresses climate mitigation alongside food security, biodiversity conservation and economic development, avoiding a 'carbon tunnel vision'. Through the FABLE methodology, countries developed pathways that balance multiple objectives, ensuring that emission reductions reinforce rather than undermine sustainability goals.

Achieving sustainability and fairness requires coordinated interventions across the EU food system. Shifts toward healthier diets, with increased consumption of fruits, vegetables and legumes while rebalancing protein intake

from animal- to plant-based sources is critical. Supply-side measures include increasing EU competitiveness in these commodities to avoid the outsourcing of carbon footprints through imports, promoting sustainable livestock practices such as extensive grazing, and reducing food loss and waste. This combination of demand and supply measures creates opportunities for alternative land uses through agricultural land saving (Lafortune et al., 2024).

Fair-share approaches reveal wide differences in the mitigation burdens facing EU countries. The three methodologies generate markedly different allowances, highlighting that the choice of fairness criteria has significant implications for policy ambition. Nevertheless, the Global Sustainability pathway demonstrates that ambitious measures can bring European agriculture in alignment with fairness principles – Germany, for example, achieves a 37% surplus under the HR approach – however considerable disparities persist across countries.

The ESR Framework should explicitly address agricultural emissions. Currently lacking an agricultural carbon budget, the ESR leaves member states to determine agriculture's share in mitigation efforts independently. Extending the CBDR-RC principles specifically to the agriculture sector reveals hidden inequities that economy-wide targets may not show. Establishing clearer agricultural emission guidelines based on fairness principles could help governments assign a greater priority to agriculture in national climate-mitigation efforts. This fair share methodology aims to inform the ESR framework and to highlight agriculture's specific role, which deserves separate attention given its complexity.

The EU's latest climate mitigation commitment introduced a binding intermediate target for 2040 of a 90% reduction in net greenhouse gas (GHG) emissions, compared with 1990 levels (Council of the EU, 2025). This commitment increases its previous ambition while reiterating concerns regarding competitiveness, the need for a just transition, uncertainty surrounding natural removals, and the diversity of conditions across EU member states. The post-2030 framework discussion will be critical to ensure that the latest commitments reflect fairness both within the agriculture sector and at the economy level, without diluting the EU's original ambition reflected in the Paris Agreement and the Green Deal.

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# Bioeconomy and SDG interactions: evidence, priorities and the post-2030 agenda

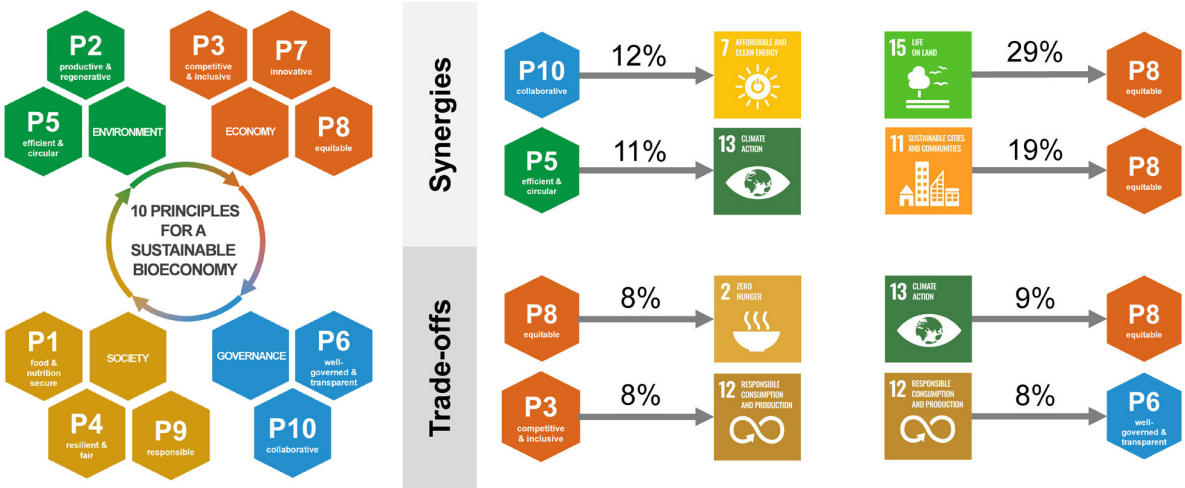
*By Dr. Anne Warchold and Prof. Prajal Pradhan*

## European bioeconomy and sustainability: the need for integrated sustainability agendas

The bioeconomy has evolved from a biotechnology-centred concept to a transformative force for sustainable development, increasingly emphasising climate-change mitigation through low-carbon value chains that utilise biological resources to meet food, energy and material needs (Patermann and Aguilar, 2018). Acting as a bridge between global sustainability aspirations and local realities, the bioeconomy translates principles such as circularity, resource efficiency and climate neutrality into actionable pathways for transformation. Yet, examples illustrate both the promise and the complexity of bio-based transitions, as seen in algae-based biofuels (Abdullah et al., 2024; Kumar et al., 2016) and in wood use for buildings (Himes and Busby, 2020; Mishra et al., 2022), which offer low-emission solutions. At the same time, their expansion can intensify pressures on biomass supply, land use and life-cycle impacts, indicating that the bioeconomy is not inherently circular (Giampietro, 2019) or sustainable (Heimann, 2019).

Reflecting this nuance, newer definitions frame the bioeconomy around four interconnected pillars: environmental, economic, social and governance (Faulkner et al., 2024). These pillars align with the 'aspirational principles and criteria for a sustainable bioeconomy' (Figure 2.3),

Figure 2.3 | Bioeconomy framework, sustainability principles and SDG interactions




Bioeconomy framework with the 10 principles (P) for a sustainable bioeconomy (left, developed by Bracco et al., 2019) and the top bioeconomy principles and Sustainable Development Goal (SDGs) interactions (right), categorized by directionality and strength (%) for synergies and trade-offs. The interactions are identified in at least one-third of European countries

agreed upon by the UN Food and Agriculture Organization (FAO) and the International Sustainable Bioeconomy Working Group (Bracco et al., 2019). In practice, advancing a sustainable bioeconomy will require policy and governance mechanisms that translate these principles into implementation.

Given the inherent complexity and multisectoral nature of the bioeconomy, effective strategies will demand a multi-level framework that leverages synergies across the four pillars (Ahenkora, 2025), ensures coordination from local to global scales (Filipe, 2024), and aligns with global sustainability frameworks such as the 2030 Agenda (Schütte, 2018). Building on this foundation, the interaction between the bioeconomy and the SDGs is approached as a relationship between two intertwined systems – one defined by the FAO's bioeconomy framework and the other by the 2030 Agenda.

Empirical analysis of causal interactions between the bioeconomy and SDGs across 48 European countries reveals that bioeconomic transitions over the last 20 years have generated both synergies and trade-offs for sustainable development (Figure 2.3) (Warchold and Pradhan, 2025). In Europe, the bioeconomy shows a particularly strong connection with SDG 13, supporting mitigation efforts through reduced fossil-fuel dependence and innovation in low-carbon value chains. However, the expansion of bio-based production can also intensify land-use change and resource competition, leading to trade-offs with SDG 12 and SDG 15. Governance- and collaboration-related principles drive many of these interactions, indicating that institutional quality and cooperation are decisive in leveraging synergies. Country-level patterns highlight regional asymmetries. Northern and Western Europe tend to experience more synergy-dominant transitions, whereas Southern and Eastern Europe face stronger trade-off dynamics. Overall, the bioeconomy contributes moderately – rather than transformatively – to SDG progress.

Despite growing empirical evidence on interactions between the bioeconomy and SDG progress, European policy strategies have yet to reflect such systemic perspectives. An analysis of 29 bioeconomy strategies at national, regional, and EU levels reveals that sustainability dimensions are integrated unevenly: environmental and economic goals dominate, while social inclusion and governance remain peripheral (Warchold et al., 2025). The European Green Deal and the FAO's framework position the bioeconomy as a transformative pathway to achieve the SDGs, and many countries have pledged to transition their national economies towards a bio-based model. Yet evidence points to fragmented implementation and weak systemic alignment (*ibid.*).

Thus, across both policy and science domains, Europe faces an integration deficit: strong sectoral strategies but limited systemic alignment. Most strategies emphasise innovation, competitiveness, and resource efficiency, while neglecting evidence on trade-offs. Blind spots include the limited integration of cross-cutting principles such as collaboration, equity and institutional capacity. This fragmentation mirrors broader gaps within global sustainability assessments. An analysis of the IPCC's Fifth and Sixth Assessment Reports found that, although references to all 17 SDGs have increased, coverage remains uneven and primarily focuses on environmental goals, with minimal attention to social and governance dimensions (Pradhan et al., 2025). Both the policy and scientific assessment communities, therefore, continue to operate in silos – sectoral or disciplinary – hindering a truly holistic understanding of sustainable development.

In many contexts, the bioeconomy serves as a bridge between the aspirational framing of the global 2030 Agenda and the concrete processes of transformation at local levels, making sustainability transitions more tangible, actionable and measurable. Holistically integrating sustainability considerations into bioeconomy strategies is therefore essential

to leverage synergies and mitigate trade-offs in Europe's sustainability transition. Taken together, the empirical and policy analyses highlight several implications for strengthening Europe's bioeconomy and enhancing coherence in sustainability governance:

- Integrate SDG interactions into policy, governance and practice by treating synergies and trade-offs as inherent dynamics of sustainable development that inform SDG prioritisation, evaluation and action.
- Embed evidence on bioeconomy-SDG interactions into European policy design by guiding sustainability strategies with systemic, interaction-aware approaches rather than isolated sectoral goals.
- Reinforce science-policy interfaces by connecting analytical results from SDG interaction studies, bioeconomy assessments or climate analyses with decision-making across EU, national and regional levels.
- Build cross-framework coherence by aligning thematic strategies (bioeconomy, circular economy, climate change) with the 2030 Agenda – within a shared sustainability logic and coherent policy instruments – as the foundation for next-generation strategies.
- Shift from narrative-driven to evidence-informed bioeconomy strategies, ensuring that social inclusion, equity and collaboration are treated on par with environmental objectives.
- Develop a synergy-driven bioeconomy by using it as an accelerator to advance the 2030 Agenda and the European Green Deal through coordinated, multi-level action.

## Timely preparation for the post-2030 agenda and Europe's engagement

With 2025 marking the beginning of the final five years before the 2030 deadline, and progress being off track, SDG efforts must be intensified rather than abandoned (Biermann et al., 2023; Fuso Nerini et al., 2024). Yet global and regional SDG research and actions too often remain siloed, with strategies insufficiently aligned. Responding to these challenges, a sequence of workshops and research dialogues has engaged diverse stakeholders from across the SDG community to reflect on the 2030 Agenda and the future of sustainable development beyond 2030.

A workshop held in Groningen in 2024 examined how to strengthen scientific methods for investigating sustainability, and improve their communication and dissemination to better support science-based policy and systemic SDG acceleration. Discussions highlighted the need to operationalise the SDGs' principles of integration and indivisibility through three interconnected foci – mapping SDG interactions, advancing integrative models, and developing decision-support tools – which together support more coherent and evidence-informed decision-making (Pradhan et al., 2024).

The GlobalGoals 2024 conference in Utrecht further advanced this debate by convening international experts to discuss the future of SDGs to and beyond 2030. The conference produced a roadmap structured around four priorities for renewing SDG governance: reforming the global sustainability governance architecture, enhancing national and subnational SDG coordination, consolidating goals and recalibrating targets and indicators, and advancing a paradigm shift in economic policy (Biermann et al., 2024). In parallel, the discussions articulated an emerging policy vision integrating four complementary reforms – differentiation, dynamization, legalization and institutionalization – to strengthen the post-2030 agenda (Biermann et al., 2023).

Building on this momentum, a follow-up workshop in Groningen in 2025 shifted the focus towards practice, exploring transformative partnerships. By bridging science, policy, governance, the private sector and civil society, the workshop underscored the importance of strengthened interfaces to enable coherent, multi-level SDG implementation.

Collectively, these initiatives demonstrate Europe's proactive engagement in shaping a more integrated, systems-oriented, participatory and forward-looking framework for accelerating sustainable development to 2030 and beyond.

- Advance Europe's engagement in shaping a post-2030 agenda by contributing SDG research, governance innovation and stakeholder dialogue to global discussions on renewing the 2030 Agenda.
- Integrate systems approaches into long-term sustainability governance by leveraging the three foci – SDG interaction analysis, integrative modelling, and decision-support tools – to improve SDG prioritisation and implementation through 2030 and beyond (Pradhan et al., 2024).
- Reform the global sustainability governance architecture by embedding within it principles of SDG differentiation, dynamization, legalization and institutionalization (Biermann et al., 2023).
- Strengthen multi-actor and multi-level collaboration by bridging science, policy, governance, the private sector and civil society to support coherent implementation and monitoring of sustainability efforts to 2030 and beyond.

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A member of SDSN's Leadership Council and Chair of SDSN Ireland, he remains active in a range of think tanks and academic settings on sustainable development, conflict resolution, and migration and refugee issues. He is the author of *One Good Day* (Gill Books, 2022), an account of the negotiations that led to the Good Friday Agreement, and co-author of *Negotiating the Sustainable Development Goals* (Routledge, 2016).

**Prof. Dr. Phoebe Koundouri** is an economist renowned for pioneering human-centric, interdisciplinary, mathematical systems that enable sustainable interaction between nature, society and the economy. She is currently Professor at Athens University of Economics and Business; and Visiting Professor in the Department of Earth Sciences, University of Cambridge; and Senior Research Fellow at Peterhouse, University of Cambridge (her alma mater).

She is the founder of the Alliance of Excellence for Research and Innovation on Aeiphoria-AE4RIA, which involves some 200 researchers. She is included in various prestigious rankings among the top 2 percent of world scientists, having authored 20 books and more than 800 published papers, as well as leading 100 projects with an impact in 120 countries. She serves as Chair of the World Council of Environmental Resource Economists Association, Chair of the SDSN Global Climate Hub and Co-Chair of SDSN Europe. She was a member of the Financing for Development in the Jubilee Year 2025 project of the Pontifical Academy of Social Sciences and advises numerous multilateral institutions and national governments worldwide.

In 2025, she was invited by António Guterres, Secretary-General of the United Nations, to co-chair the Independent Group of Scientists responsible for drafting the 2027 UN Global Sustainable Development Goals Report. She is a member of the Nominating Committee for the Nobel Prize in Economics and an elected Fellow of several prestigious academies and scientific associations – including Academia Europaea; the World Academy of Art and Science (where she also serves as a trustee); the European Academy of Sciences and Arts; the Academy of Engineering and Technology of the Developing World; the InterAcademy Partnership; the European Association of Environmental and Resource Economists; and the European Forest Institute. She is a member of the Women Climate Leaders Network, co-author of the Lancet COVID-19 Commission, and a recipient of the European Research Council Synergy Grant, the Academy of Athens Excellence in Science Award (an honour conferred only once every four years), and the Award of Excellence of the Republic of Cyprus. She serves as an Ambassador for the European Research Council and in 2022 was named World Ambassador of Happiness and Peace by the Government of India.

**Dr. Angelos Alamanos** is a Civil Engineer specializing in hydrology and water resources management, decision-support systems and sustainability. His academic and policy experience spans research, advisory and analytical roles across Europe and North America. He has served as a Visiting Research Fellow at the Norwegian Institute of Bioeconomy Research (NIBIO), a Postdoctoral Fellow at the University of Waterloo in Canada, a Research Associate at Athens University of Economics and Business, and a Policy Analyst in Water Services at Ireland's national Water Forum (An Fóram Uisce), based at the Dundalk Institute of Technology.

**Dr. Aline Mosnier** is Scientific Director of the FABLE (Food, Agriculture, Biodiversity, Land-use and Energy) Pathways Consortium. She collaborates with researchers in more than 20 countries to develop long-term, quantitative national pathways for sustainable land use and food systems that are globally consistent. Prior to joining SDSN, Aline worked at the International Institute for Applied Systems Analysis (IIASA), where she contributed to developing the partial equilibrium economic land-use model, GLOBIOM (Global Biosphere Management Model). Her research focuses on the indirect impacts of biofuel policies, the effects of climate change on agriculture, international trade and agricultural trade policies, and strategies to reduce deforestation and forest degradation in the tropics. In collaboration with local research institutes, she co-developed regional versions of GLOBIOM for the Congo Basin, Brazil and Indonesia. She also developed the FABLE Calculator, an open, Excel-based model for analysing food and land-use systems. Aline holds a PhD in Agricultural and Environment Economics from the University of Natural Resources and Life Sciences, Vienna, and a Master's degree in Development Economics from the Center for Studies and Research on International Development (CERDI) of the Université d'Auvergne in Clermont-Ferrand, France.

**Mr. Davide Cozza** is a Junior Analyst within the FABLE (Food, Agriculture, Biodiversity, Land and Energy) consortium. He primarily focusses on advancing the FABLE Scenathon methodology by incorporating equity criteria to evaluate countries' contributions towards achieving the Sustainable Development Goals globally. In this role, he also assesses and strengthens both quantitative and qualitative submissions from FABLE country teams participating in the Scenathon. Holding a degree in Sustainable Development Economics from Université Paris 1, Davide's work reflects his profound interest in impact evaluation and green economy. He is fluent in Italian, English and French. Beyond his professional activities, his passions extend to sports, geopolitics and historical detective novels.

**Ms. María Gabriela Díaz** is Manager of the FABLE (Food, Agriculture, Biodiversity, Land Use and Energy) Consortium, a global network of national research organizations developing food and land-use strategies aligned with global sustainability goals. With a passion for sustainable development, she supports FABLE's mission through policy outreach, global engagement, strategic communications, and partnership-building at the science-policy interface. María brings extensive experience in mobilizing diverse stakeholders to advance sustainable development. Prior to joining SDSN, she served as Project Manager for the Global Alliance for Trade Facilitation at the International Chamber of Commerce, where she facilitated public-private partnerships to support implementation of the WTO Trade Facilitation Agreement in developing and least developed countries. María has worked with the UN Committee on World Food Security (through her role at consulting firm, Emerging ag inc) to provide communications and public affairs services to the agri-food sector, and at theV Institute for Sustainable Development and International Relations (IDDRI) in Paris, where she analysed private-sector involvement in global governance of food security and nutrition. María holds a bachelor's degree in political science from the Central University of Venezuela and a master's degree in international development from Sciences Po's Paris School of International Affairs (PSIA).

**Ms. Clara Douzal** is a research analyst for the FABLE Consortium, working within the SDSN Secretariat in Paris. Her work focuses on enhancing the FABLE Calculator and developing innovative tools to streamline and strengthen the FABLE methodology. She contributes to the processing of global spatial and non-spatial datasets, refines the trade-adjustment methodology used in the FABLE Scenathon, and contributes to the development of new modules, with particular emphasis on crop productivity. Prior to joining SDSN in 2019, Clara worked as a biostatistician for Pierre Fabre dermo-cosmetics. She holds a Master's degree in Science in Statistics and Econometrics and a BA in Economics and Mathematics from the Toulouse School of Economics, France.

**Prof. Prajal Pradhan** studies agricultural engineering and environmental management and was awarded the European Research Council Starting Grant in 2022. He is a coordinating lead author of the IPCC Seventh Assessment Report (AR7) Working Group III and a Visiting Scientist at the Potsdam Institute for Climate Impact Research in Germany. Prajal was a contributing author of the IPCC Sixth Assessment Report (AR6) for both working groups II and III and a lead author of the 2022 IPCC Special Report on Climate Change and Land. He has extensive experience designing and leading research on food systems, climate change, and sustainable development. His current research focuses on identifying the conditions required for long-term sustainability, from achieving the SDGs to advancing urban transformations and strengthening climate resilience.

**Dr. Anne Warchold** blends insights from sustainability science, systems analysis and economics to develop research that drives progress towards a more sustainable future. Her work leverages quantitative methods grounded in systems thinking to enhance understanding and implementation of sustainability initiatives including the UN Agenda 2030, compromising its 17 Sustainable Development Goals (SDGs), and the European bioeconomy strategy for 2050. She is an economist by training, with an MSc in sustainability management and a BSc in business administration and economics with a specific focus on environmental management and energy economics. Her doctoral work quantifies the complexities of the SDG system, identifying both internal synergies and trade-offs, as well as interactions with external drivers like the EU bioeconomy transition, ultimately aiming to accelerate progress towards sustainable development. Prior to joining RUG, Anne's research at the Potsdam Institute for Climate Impact Research (PIK) tackled diverse sustainability challenges, including bridging inequality gaps, exploring sustainable food systems, strengthening sustainability education, and identifying decarbonization pathways for cities. Notably, she is involved in a project promoting Himalayan development by reinforcing teaching and research on SDGs.

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SDG Pathways to 2030 and Mid-Century

*Includes the SDG Index for the European Union, its member states, and partner countries*

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