SPECIAL REPORT 28/2026 **EN**

NGEU green bonds

Aligned with market principles but controls of green expenditure not always sufficient



EUROPEAN
COURT
OF AUDITORS

Contents

Paragraph

01-13 | Main messages 01

01-06 | Why this area is important

07-13 | What we found and recommend

14-64 | A closer look at our observations 02

14-48 | The NGEU green bond framework is aligned with ICMA green bond principles, but project oversight at EU level is lacking

15-23 | The NGEU green bond framework is aligned with the ICMA principles, but is less ambitious than the European green bond standard

24-48 | The Commission applies well-established eligibility controls for RRF green measures, but does not systematically control reported green projects

49-64 | The Commission does not report on the benefits and costs of NGEU green bonds

50-53 | Commission reporting on additional advantages of NGEU green bonds is insufficient

54-56 | NGEU green bonds attracted new investors but there is no evidence of influence on other issuers

57-59 | NGEU green bonds have strengthened role of the euro in the sustainable finance market

60-64 | There is insufficient evidence to assess whether green premium offsets NGEU green bonds' extra costs

Annexes

Annex I – About the audit

Annex II – EU taxonomy

Annex III – NGEU green bond framework vs European green bond standard

Annex IV – Projects with material overstatements in reported green expenditure relative to project size

Annex V – Geographical distribution of NGEU green bond eligible expenditure reported by 1 August 2025

Annex VI – Roles and responsibilities in the NGEU green bond framework

Abbreviations

Glossary

Replies of the Commission

Timeline

Audit team

01

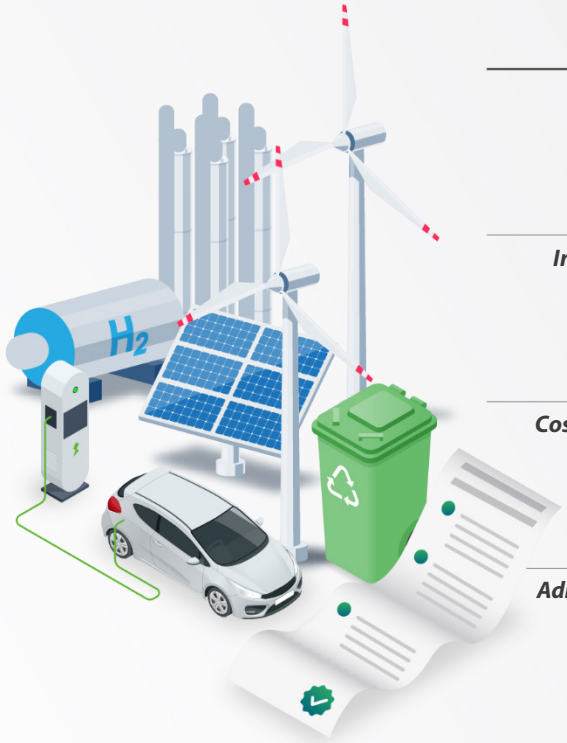
Main messages

Why this area is important

01 The Commission's 2020 announcement that it would finance 30 % of the NextGenerationEU (NGEU) budget of €750 billion through green bond issues underscores their importance in financing EU debt. The Council welcomed this target and agreed that member states should regularly report to the Commission on incurred expenditure funded by the Recovery and Resilience Facility (RRF) and contributing to climate change objectives ("green expenditure"). The RRF accounts for about 90 % of NGEU.

02 By the end of 2025, the Commission had issued NGEU green bonds worth €78.5 billion, which represents only 37 % of the €213.6 billion target based on the revised budget for NGEU. By the same time, the member states had reported €88.2 billion eligible green expenditure incurred under the RRF. Nevertheless, in the years 2021-2025, NGEU green bonds represented, on average, 15 % of the green bond issues on the European market from sovereign, supranational and agency issuers. At that time, this made the EU one of the biggest issuers of this type of debt instrument. The features of green bonds from issuers' perspective are described in ***Figure 1***.

Figure 1 | Green bond potential costs and benefits from the issuer's perspective



Feature	Green Bonds
Reputation	*Issuer demonstrates sustainability commitment, but is exposed to greenwashing risk if the use of proceeds is not green*
Investor base	*Potential for a wider and more diversified investor base and reduced execution risk for borrowing operations*
Cost of funding	*Potential for lower yields (greenium) thanks to satisfying investor's preferences to finance green projects*
Administrative burden	*Higher costs and administrative burden due to allocation reporting, auditing and verification of projects' impact on environment*

Source: ECA.

03 The Commission's approach for ensuring that only eligible green expenditure is financed with NGEU green bond proceeds consists of initially screening the RRF measures in the member states' recovery and resilience plans. Once a measure is considered eligible, the Commission lists the reported green expenditure in the allocation and impact reports for NGEU green bonds. Member states are responsible for selecting projects and ensuring that they meet the objectives set for the relevant measure as well as for reporting on the green expenditure disbursed in the reporting tool FENIX.

04 In our audit, we assessed whether NGEU green bonds had been successfully used to finance RRF measures contributing to the green transition, by examining whether the Commission:

- together with the member states, had put in place a control framework to ensure that NGEU green bonds only financed projects clearly benefiting the environment or the climate; and

- had demonstrated that the additional advantages of issuing NGEU green bonds compared to conventional EU bonds had been achieved and justified the additional administration costs.

05 To assess the reliability of the green expenditure reporting, we drew a statistical sample from seven member states which together had reported almost 88 % (€56.8 billion) of that expenditure as of 1 August 2025 (this is what we refer to as our audit "population"). While this sample is not representative of the total green expenditure reported by all 27 member states, it enables us to draw conclusions on the reliability of expenditure reported by these seven member states. More background information and details on our audit scope and approach can be found in ***Annex I***.

06 Given the large volume of NGEU green bonds, our audit aims to identify areas for improvement within the NGEU green bond framework before the final green bonds are issued and the proceeds allocated. Our audit findings and recommendations should be taken into account for other possible issuance of green bonds at EU level in the future.

What we found and recommend

07 We found that the Commission's due diligence process identifies the RRF measures that can be financed through NGEU green bonds. However, the Commission does not verify whether implementation of the green RRF measures only includes projects with climate or environmental impact, and relies on the member states to carry out these checks. The Commission mitigates the risk of issuing excess NGEU green bonds by keeping an internal buffer (the amount of NGEU green bonds issued being below the reported eligible green expenditure). Nevertheless, given our findings, we consider that the minimum buffer amount may not be adequate in the future. While the Commission's reporting on the use of the funds is comprehensive, discharge authorities are not sufficiently informed through the existing reporting about the additional costs and benefits of NGEU green bonds compared to conventional bonds.

The NGEU green bond framework is aligned with ICMA green bond principles, but lacks project oversight at EU level

08 We confirm that the NGEU green bond framework follows the International Capital Market Association (ICMA) Green Bond Principles. The Commission also aimed, where feasible, for consistency of the NGEU green bond framework with the more demanding European green bond standard based on the EU taxonomy. However, the NGEU green bond framework is only partially aligned with this more demanding standard, mainly because this framework predated the European green bond standard. This creates a perception of

inconsistency, as the Commission promoted the EU taxonomy-based standard as a benchmark while its own green bond issues did not fully meet its stricter requirements (paragraphs *15*-*23*).

09 We found that the Commission put in place due diligence for identifying suitable green measures to be financed with NGEU green bonds. However, the Commission's full reliance on member states' reporting of green expenditure represents a weakness, which is illustrated with our observations at project level. Following our detailed review of 60 projects, for 8 of them we found that the green expenditure was materially overstated. If extrapolated to our audit population, this would represent €5.5 billion or 9.8 % of the total green expenditure reported by the selected seven member states. Additionally, we identified that the reported green expenditure for 18 out of the selected 38 measures was higher by €3.4 billion (8 % of the total amount reported) than the total green expenditure of the underlying projects (paragraphs *24*-*43*).

Recommendation 1

Increase assurance that NGEU green bonds finance only green expenditure

The Commission, in cooperation with member states, should strengthen its existing due diligence on RRF measures, which is used to determine the eligibility of green expenditure for green bond financing. This approach should:

(a) take into account the audit findings and other information available to the Commission and identify those RRF measures where there is a significant risk that green bond proceeds could be used to finance non-eligible expenditure; and

(b) fully or partially remove such measures from the pool of measures that can be financed by NGEU green bonds.

Target implementation date: November 2027

10 The Commission's risk management of proceeds is aligned with ICMA green bond principles. Moreover, to mitigate the risk of issuing too many NGEU green bonds, the Commission decided to put in place an adaptable internal buffer keeping cumulative issues lower than the cumulative green expenditure reported by member states. The Commission considered the minimal buffer set at the start of the borrowing programme to be appropriate and, after a reassessment, kept the level in the 2025 update of its internal NGEU green bonds manual. At the end of 2025, the Commission stayed well within this buffer. Based on our findings as described in paragraph *09*, we consider that the Commission needs to increase the size of the buffer to address the risk of issuing excess

green bonds. Once total green spending in NGEU has been determined, the Commission can issue new NGEU green bonds to replace some maturing conventional EU bonds and reduce the safety buffer (paragraphs *44*-*48*).

Recommendation 2

Increase the buffer to reduce the risk of issuing excess NGEU green bonds

To strengthen its management of the risk of issuing excess NGEU green bonds in the future, the Commission should increase the difference ("buffer") set out in its internal guidance between the reported cumulative green expenditure and the cumulative value of bonds it may issue.

Target implementation date: Q4 2026

The Commission does not report on the benefits and costs of NGEU green bonds

11 We consider the Commission's reporting on the additional advantages of issuing NGEU green bonds insufficient, primarily because there are no specific, measurable, and timebound targets or regular reporting on them. Therefore, it was difficult to assess the extent to which the expected advantages had been achieved. We found references to the advantages in various Commission reports, but they were fragmented, often expressed in broad terms and lacked specific evidence or detailed data (paragraphs *49*-*53*).

12 Our analysis shows that NGEU green bonds have attracted a more diverse and sustainability-focused investor base. The role of the EU and the euro in the sustainable finance market have grown, with the EU emerging as a major issuer of green debt. Nonetheless, we have not come across any conclusive evidence that NGEU green bonds have encouraged other issuers to issue green bonds or significantly boosted the wider green bond market (paragraphs *54*-*59*).

13 The Commission incurred estimated additional direct administrative costs of €0.35 million associated with green bond issuance between 2021 and 2025, instead of using conventional EU bonds. There were also additional staff and reporting costs incurred by both the Commission and member states (the latter unquantified). Based on the information provided by the Commission, the green premium, i.e. the cheaper funding costs obtained via green issues, should offset the additional quantified administrative costs of the NGEU green bond programme. However, we found that the actual green premium was considerably lower than the maximum levels that some academic analysis had

predicted at the start of the programme. We also note that the Commission did not report on the additional costs associated with NGEU green bonds (paragraphs *60*-*64*).

Recommendation 3

Report on both the costs and benefits of issuing NGEU green bonds

To improve transparency and provide comprehensive information for the discharge authority on the lessons learned, the Commission should report on the costs and benefits of issuing NGEU green bonds instead of conventional EU bonds.

Target implementation date: Q2 2028

02

A closer look at our observations

The NGEU green bond framework is aligned with ICMA green bond principles, but project oversight at EU level is lacking

14 The Commission is ultimately responsible for the proceeds from NextGenerationEU (NGEU) green bonds being allocated to green projects. These projects should support the green transition and help reach the EU's 2030 climate targets and 2050 climate neutrality. To achieve this, and to ensure credibility and transparency, the Commission established an NGEU green bond framework in September 2021. We would expect:

(a) the NGEU green bond framework:

  (i) to be aligned with green bond principles in determining the use of NGEU green bond proceeds; and

  (ii) where feasible, to be consistent with the EU taxonomy (***Annex II***) and the European green bond standard;

(b) the Commission:

  (i) to put in place methodology and controls to ensure that NGEU green bonds finance only green projects; and

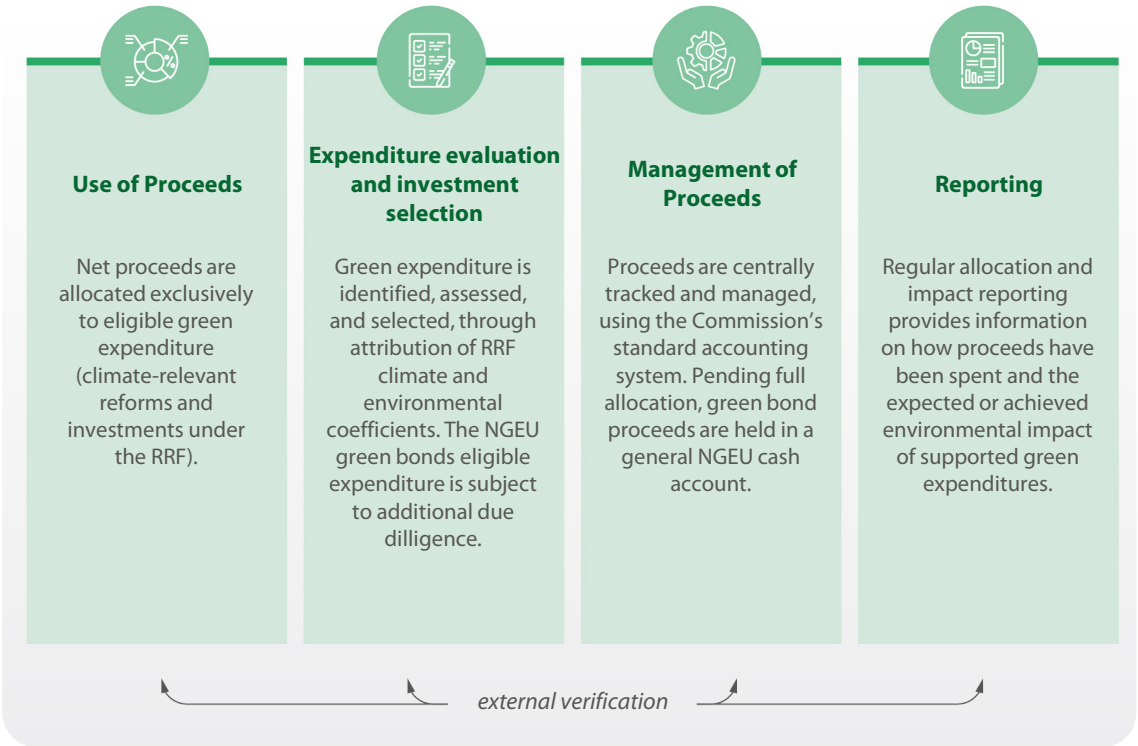
  (ii) to report regularly and transparently to investors on the green bond issues and allocation of proceeds.

The NGEU green bond framework is aligned with the ICMA principles, but is less ambitious than the European green bond standard

The NGEU green bond framework is aligned with International Capital Market Association green bond principles

15 The Commission stipulated that the "framework for green bonds issued under NGEU will be based on the International Capital Market Association (ICMA) green bond principles"[1]. We therefore examined whether the NGEU green bond framework was aligned with the four core ICMA green bond principles (***Figure 2***).

Figure 2 | The four core ICMA green bond principles in the NGEU green bond framework



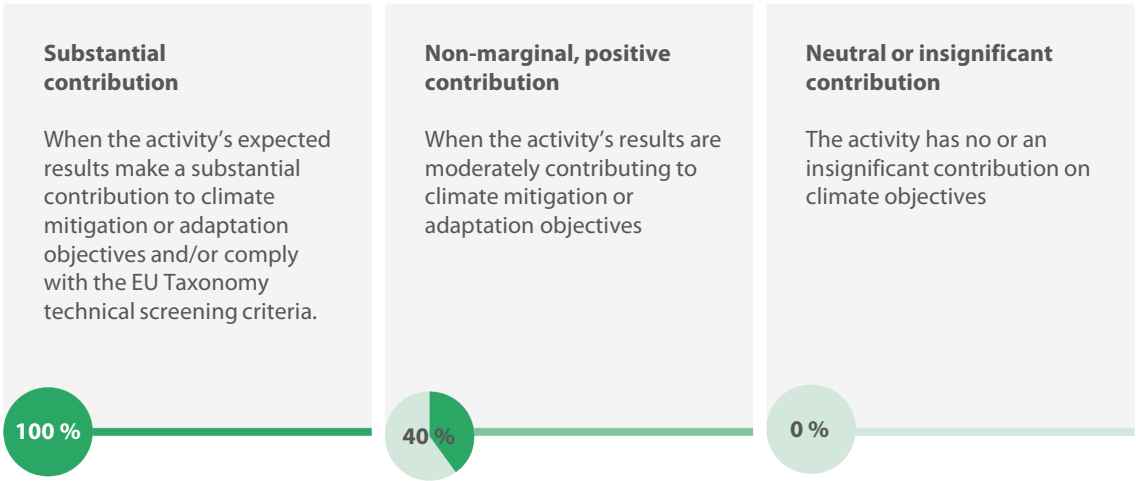
Source: Commission, 2025 A&I report, p. 13.

16 The NGEU green bond framework mirrors the ICMA Green Bond principles by restricting the use of proceeds exclusively to measures benefiting the environment and the climate. This is done by applying a process for selecting eligible green expenditure, ensuring traceability of proceeds through internal tracking systems, and committing to regular allocation and impact reporting (A&I reports). The Commission, as the issuer, is ultimately

[1] NGEU green bond framework, p. 9.

responsible for explaining how the financed activities contribute to environmental or climate objectives. In the NGEU green bond framework, the Commission uses the climate coefficients as specified in Annex VI to the RRF Regulation (which are broadly based on the internationally established Rio-marker coefficients (0 %, 40 %, and 100 %))[2]. They allow to tag expenditure according to its contribution to environmental or climate objectives and its relevance for financing with NGEU green bond proceeds (***Figure 3***).

Figure 3 | Coefficients for contribution to climate change objectives



Source: ECA, based on Annex to NGEU green bond framework.

17 On the use of proceeds, the ICMA green bond principles state: "The cornerstone of a Green Bond is the utilisation of the proceeds of the bond for eligible Green Projects, which should be appropriately described in the legal documentation of the security"[3]. NGEU green bond issues are accompanied by a base prospectus, the same for all the issues, and a pricing supplement, specific to each issue. Our analysis of these documents and the information published for all five NGEU green bond series issued up to the end of 2025[4] confirms that they provide reliable and comprehensive information on the intention to use proceeds for eligible green projects only.

18 The ICMA green bond principles also recommend reporting on the use of proceeds. This can be done at project level or on an aggregated portfolio basis, where confidentiality agreements, competitive considerations, or a large number of underlying projects limit the amount of detail that can be made available. Due to the scale of the RRF, the Commission decided to include expenditure categories (see ***Annex I*** , ***Figure 3***) and member states in its

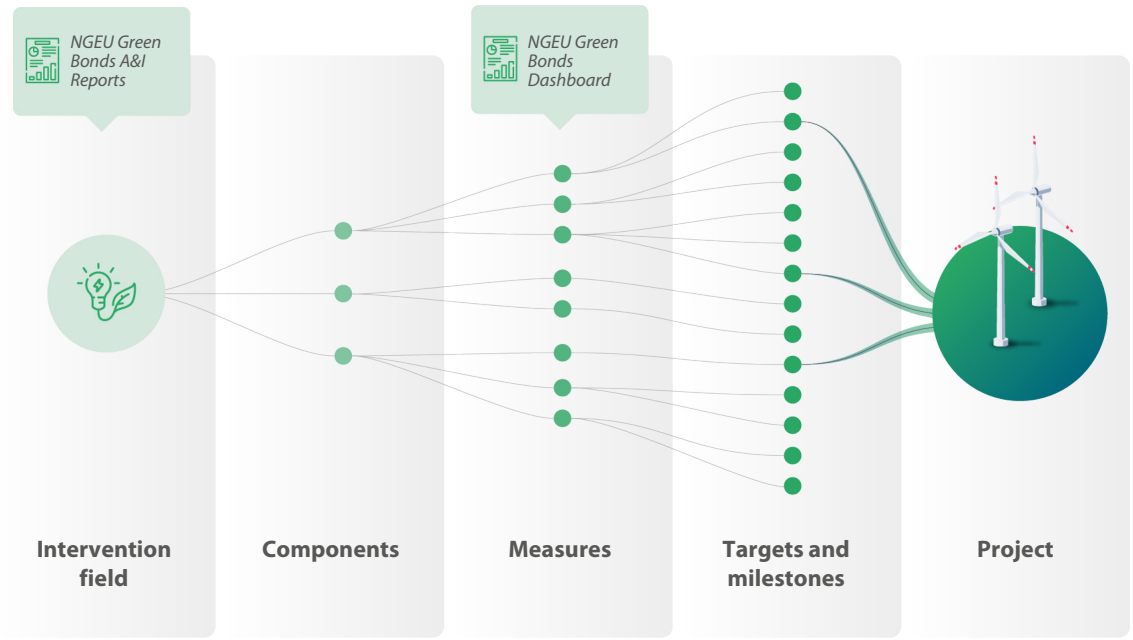
[2] Annex VI of the RRF Regulation.

[3] ICMA, Green Bond Principles, p. 3, June 2025.

[4] "Documents" and "Sustainable data" sections on each security website: EU000A3K4C42; EU000A3K4DG1; EU000A3K4DM9; EU000A3K4DW8; and EU000A3K4EU0 (13 July 2026).

A&I reporting on the aggregated portfolio basis (at RRF intervention field level, ***Figure 4***). More granular information at RRF measure level is provided in the NGEU green bond dashboard. The list of projects funded using NGEU green bond proceeds is not disclosed to investors.

Figure 4 | RRF structure and reporting on NGEU green bonds



Intervention field: Category of activities financed by the RRF; **Component:** Part of the recovery and resilience plan, grouping related reform and investment priorities

Source: ECA.

19 Our positive assessment of the NGEU green bond framework alignment with the ICMA green bond principles is consistent with the independent opinion of the external reviewer, who was appointed by the Commission as recommended by the ICMA[5].

The NGEU green bond framework is less ambitious than the European green bond standard

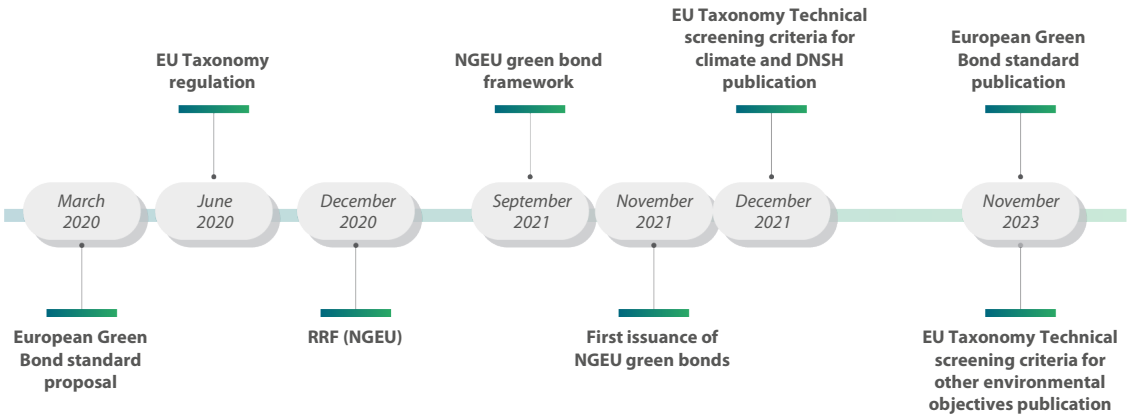
20 The Commission also stated that, where feasible, the NGEU green bond framework was intended to be aligned with the EU taxonomy and the upcoming European green bond standard (EuGBS)[6]. The NGEU green bond framework was adopted in September 2021, and the first NGEU green bonds were issued in October 2021. At that point, the EuGBS, based on the EU taxonomy, was still under development. The Regulation was published in

[5] ICMA "Guidelines for Green, Social, Sustainability and Sustainability-Linked Bonds External Reviews", June 2022.

[6] NGEU green bond framework, p. 9.

the Official Journal in November 2023 (***Figure 5***) and the standard became available to issuers in December 2024. The EuGBS is a voluntary standard that sets the requirements for issuers wishing to use the "European green bond" label. The EuGBS requirements include compliance with the "do no significant harm" (DNSH) principle and that at least 85 % of proceeds finance environmentally sustainable activities aligned with the EU taxonomy. In ***Annex III*** we compare the EuGBS with the NGEU green bond framework.

Figure 5 | Timeline for development of European green bond standard



Source: ECA.

21 The NGEU green bond framework takes into account the DNSH principle[7], so for this requirement it is aligned with the EuGBS. This is because compliance with the DNSH principle was one of the key eligibility features for RRF expenditure which the Commission verified when assessing member state recovery and resilience plans (RRPs) and their subsequent amendments. However, the NGEU green bond framework has not established any target or requirement for full alignment with the EU taxonomy.

22 The Commission estimates annually how well the RRF intervention fields align with the EU taxonomy's "substantial contribution criteria" and comply with the additional climate conditions set in the DNSH criteria. The measures themselves and the individual projects are not checked for taxonomy alignment, therefore, the reported level of alignment is indicative. According to the latest available Commission estimates[8], around 25 % of RRF expenditure financed by NGEU green bonds is fully aligned with the EU taxonomy, while an 85 % threshold for taxonomy-aligned expenditure would be required for full alignment

[7] Technical guidance on the application of the "do no significant harm" principle under the Recovery and Resilience Facility Regulation (C(2021) 1054 and C/2023/111).

[8] 2025 A&I report, p. 35.

with the EuGBS. The Commission also reported that a further 31 % of the expenditure was substantially aligned with the EU taxonomy[9].

23 The Commission introduced the European green bond standard as a gold standard for green bond issues. It does not apply this standard to NGEU green bonds, because it was adopted after the NGEU green bond framework had been established. This may create a perception of inconsistency, as the Commission promoted the new EuGBS as the benchmark for green bond issues, while its own NGEU green bonds are not fully aligned with the EuGBS's more stringent requirements. In the NGEU green bond framework and allocation and impact reports, the Commission was transparent about the alignment of NGEU green bonds with the ICMA principles.

The Commission applies well-established eligibility controls for RRF green measures, but does not systematically control reported green projects

The Commission has a well-established due diligence to check the eligibility of RRF measures for green bond funding

24 The NGEU green bond framework defines the green expenditure categories eligible for financing from the proceeds of NGEU green bonds. These categories are then linked to RRF intervention fields and include examples of projects[10]. We assessed whether the Commission had put in place a methodology to ensure that NGEU green bonds financed only eligible RRF measures. We expected the Commission to have developed and applied relevant guidelines to achieve this.

25 The Commission's internal manual on NGEU green bonds indicates that the key processes in the due diligence on the RRPs include initial screening and classification, application of exclusion criteria, in-depth review, and updates following changes to these plans. ***Figure 6*** sets out the detail of this process. The Commission compiles all RRP measures with a positive climate coefficient into a database and assigns them a risk score based on their characteristics and intervention fields. While most of the due diligence work was done after the RRPs were adopted, the Commission updates its assessment annually for A&I reporting purposes, mainly because of RRP amendments.

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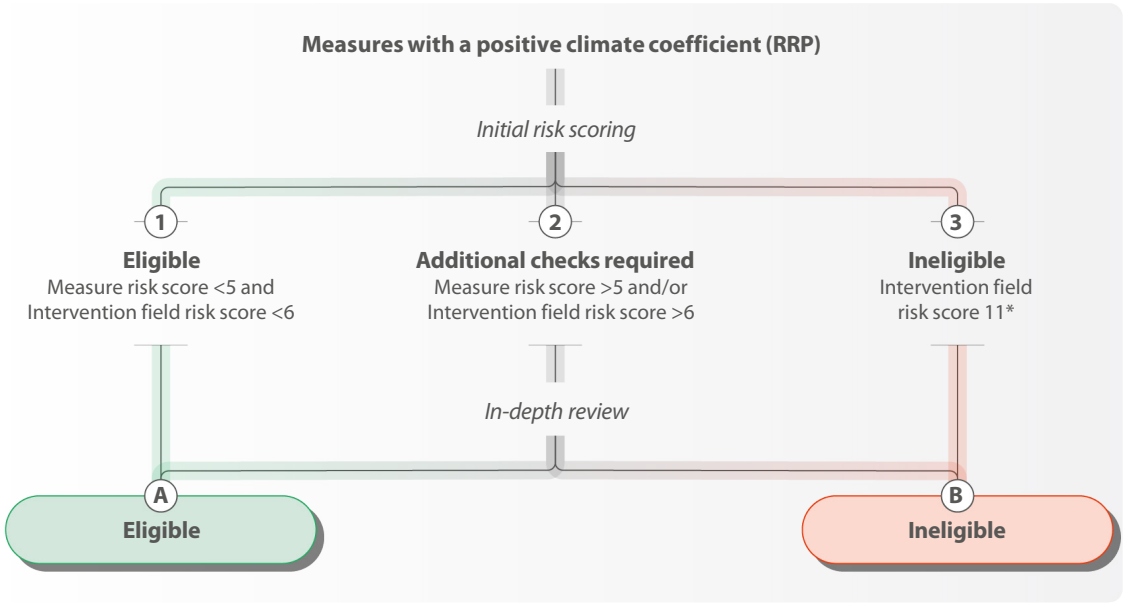
[9] Idem, p. 36.

[10] NGEU green bond framework, pp. 10-11.

Figure 6 | Due diligence on RRF measures for A&I reporting on green expenditure



Note: *The risk scoring is based on an assessment of several uncertainty factors and comprises two dimensions: (i) related to the measure's activities (e.g. links to gas or nuclear energy) and (ii) associated with the intervention field (e.g. "do no significant harm" concerns or the climate relevance of the activities covered).*

** The maximum intervention field risk score is 11. It reflects a high-risk assessment for all uncertainty factors and results in the measure being considered ineligible after the initial risk assessment.*

Source: ECA, based on Commission's manual.

26 The due diligence results in a pool of measures eligible to be financed with NGEU green bond proceeds. This process allows the Commission to be more prudent in determining whether a particular measure and its underlying reforms and investments are green enough to be financed with NGEU green bonds or pose an implementation risk. This partly addresses findings in our special report 14/2024, where we concluded that the Rio-marker coefficients assigned to measures did not always properly reflect the underlying actions implemented under these measures and resulted in the risk of climate expenditure being overestimated, in particular for complex measures.

27 The pool of measures eligible to be financed with NGEU green bond proceeds is updated on a regular basis to reflect revisions to RRPs, new measures, or error corrections, resulting in changes over time. Between 2022 and 2025, the pool expanded from 823 to 1 045 measures. We noted that 208 measures have been removed from the eligible pool since the start of the screening procedure. There are many reasons for exclusions, for example, support for gas or nuclear-energy-related activities or doubts about the contribution of the financed activities to climate action. The Commission's analytical dataset used for the 2025 A&I report includes a risk assessment of 1 401 RRF measures with regard to the potential financing of non-green expenditure.

28 We welcome the Commission's decision to temporarily exclude RRF financial instruments from green expenditure that is eligible to be financed with NGEU green bond proceeds because of the risk of declaring green expenditure before it is disbursed to projects. According to the dataset provided by the Commission, green RRF measures to be funded by financial instruments amount to €38.7 billion. This represents a significant part of the NGEU green bond pool, estimated at €222 billion at the end of 2025. At the time of our audit, the Commission was preparing specific guidelines for member states on green investments supported by RRF financial instruments. These guidelines aim to address the risk of prematurely reported green expenditure, particularly when payments are made to financial intermediaries before the funds reach actual projects on the ground.

Reporting to investors is transparent, but there are no systematic checks at EU level on the projects underlying reported green expenditure

29 Reporting to investors on the use of green bond proceeds should be transparent and reliable. According to the ICMA green bond principles[11], issuers of green bonds should clearly inform investors about the environmental sustainability objectives of the eligible green projects and the process by which issuers determine how the projects fit into the eligible green project categories. These principles also recommend that an external auditor or other third party should review how issuers manage their green bond proceeds, and check the internal tracking and allocation of these proceeds to eligible green projects. We therefore examined the A&I reports published by 2025 and other means of reporting to investors.

30 All four A&I reports issued to date have been accompanied by an external auditor report providing limited assurance that there are no major issues or problems related to the reported data[12]. The scope of the audit work described in these reports did not include an audit on the tracking of funds at project level in member states or on-the-spot checks of eligible green projects. The Commission did not carry out specific checks on the use of NGEU green bond proceeds at project level. Under the RRF Regulation, it is member state authorities that are responsible for ensuring that projects are in line with the objectives of RRF measures[13]. At EU level there are no checks on whether projects that do not meet green criteria are excluded from the member states' green expenditure declarations.

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[11] ICMA, Green Bond Principles, p. 5, June 2025.

[12] A&I reports for 2022 pp. 20-22, 2023 pp. 44-46, 2024 pp. 54-56, and 2025 pp. 62-64.

[13] Articles 18 and 22 of the RRF Regulation.

31 By issuing the A&I reports, the Commission provides investors with information in addition to data in the publicly available NGEU green bond dashboard. The Commission states that it is committed to releasing the A&I reports on an annual basis until NGEU green bond proceeds have been allocated in full. The Commission also makes regular presentations to investors. It provides a consolidated overview of NGEU funding operations and regularly includes a section on NGEU green bonds.

32 Our analysis of the 2022-2025 A&I reports did not find any major issues regarding the evolution and coherence of key data on the pool of investments related to NGEU green bonds. Nonetheless, we did find that five measures deleted from the Bulgarian RRP, worth €0.5 billion in potential green expenditure, had still been included in the NGEU green bond pool reported in the 2025 A&I report. These measures had been formally removed from the Bulgarian RRP in a revision of the plan on 2 July 2025. A delay in the update of the FENIX database used to manage the RRF meant they were still in the database on 1 August 2025 – the cut-off date for the 2025 A&I report.

Despite Commission guidance, the green expenditure reported by some member states was not always traceable and included non-green projects

33 Member state reporting should follow Commission guidance, be accurate and timely, and concern expenditure for green projects. Moreover, member states should be able to provide underlying information for the cumulative expenditure disbursed reported to the Commission, including financial information about the specific projects (audit trail evidence). The implementation of projects financed from NGEU green bonds should contribute to environmental or climate benefits.

34 The expenditure reporting obligation is included in Article 7 of the RRF financing agreements and Article 8 of the RRF loan agreements. When submitting a payment request, member states must report the disbursed cumulative expenditure for each RRF reform and investment contributing to climate change objectives, associated with a positive climate marker (40 % or 100 %, see paragraph ***16***).

35 To facilitate member state reporting on RRF green expenditure, the Commission created a dedicated tool for the RRF, to collect and monitor data (FENIX)[14] and provided related instructions in the FENIX user manual, which we consider clear and fit for purpose. The manual indicates that the green expenditure should be reported on a cash account basis as recorded in the national or regional budget. In most cases, it should represent a cumulative payment of the RRF support to final recipients. The reporting of green expenditure disbursed is therefore an exception in the RRF framework where payments made by the

[14] Special report 26/2023 on the RRF performance monitoring framework, paragraph 54.

Commission to member states do not require any reporting on the actual costs incurred. The costs of achieving targets and milestones were estimated *ex ante* in order to determine the size of the RRF financial contribution made available to each member state, and the payments made by the Commission are solely related to the fulfilment of milestones and targets, and not based on real costs. Conversely, the green expenditure reported for the NGEU green bond allocation purposes must consist entirely of cumulative expenditure actually incurred.

36 However, the reliability and accuracy of this reporting largely depend on member state authorities and their control systems[15]. While the Commission monitors the fulfilment of milestones and targets based on detailed information provided by member states when they submit requests for RRF payments, these checks do not include the amounts member states report as disbursed green expenditure. This means that the Commission relies on the information reported by member states and does not reconcile or check documents or data underlying the green expenditure reported. We consider that such an approach does not sufficiently mitigate the risk of overstated green expenditure reported for NGEU green bond allocation purposes.

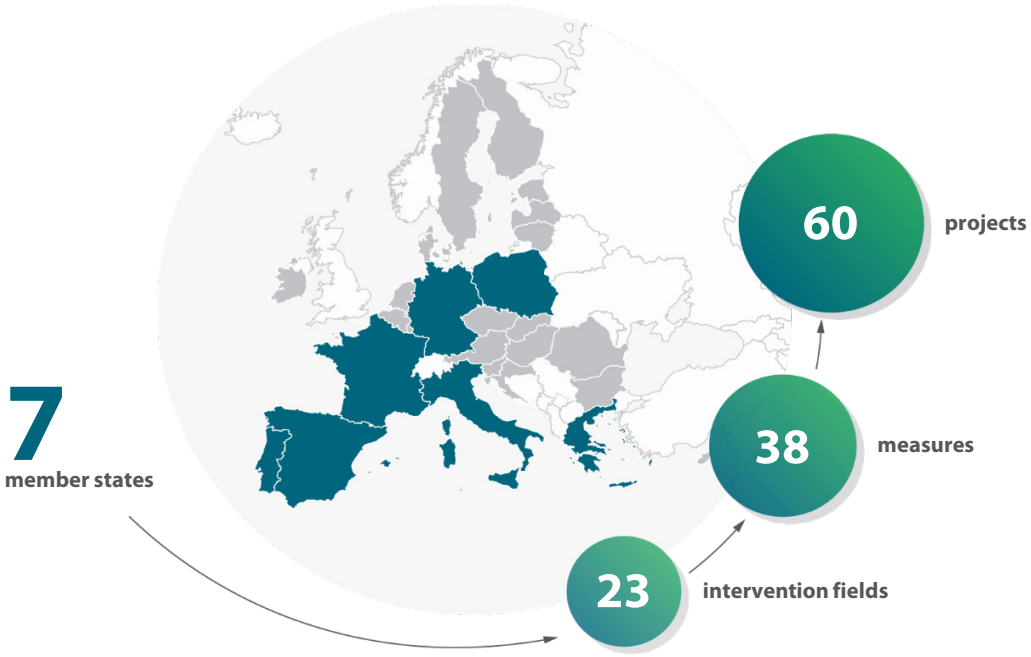
37 The incurred green expenditure reported in FENIX has to be cumulative. The system does not allow member states to reduce the reported amount in subsequent reporting periods without the Commission's approval. Amounts are expected to increase or remain unchanged. In duly justified cases, such as the removal of a project, member states may request corrections to previously reported data, and the Commission may also require corrections where inaccuracies are identified. In 2025, such cases included:

- typing mistakes or clerical errors when inputting data into FENIX;
- expenditure repaid by the project promoter to the government because project progress was lacking; and
- revision of the RRP reduced the amounts for the reported measure.

38 To check whether the green expenditure reported by member states in FENIX was correct, we decided to draw a monetary unit sample (MUS) of 60 underlying projects (see ***Annex I***, paragraph ***12***) from green expenditure of €56.8 billion reported by seven member states as at 1 August 2025. As this required two-stage sampling, we first drew a sample of 38 RRF measures from seven member states, see ***Figure 7***. We then asked all seven member states to provide us with lists of the projects underlying their green expenditure reported in FENIX.

[15] Special report 16/2023 on NGEU debt management at the Commission, paragraph 83.

Figure 7 | ECA sample coverage



Note: The boundaries used on this map do not imply official endorsement or acceptance by the European Union.

Source: ECA.

Administrative boundaries: © EuroGeographics © OpenStreetMap
Cartography: Eurostat – IMAGE, 05/2026

39 According to the data provided by the Commission for the 38 RRF measures sampled, the cumulative green expenditure reported by member states in FENIX amounted to €49.9 billion, of which €42.1 billion was financed from NGEU green bonds. The difference results from applying a 40 % coefficient to the amount reported by member states, and excluding the fossil-fuel-related expenditure. For 18 measures, the totals for the underlying projects provided by member states to the ECA were lower than the green expenditure used in the 2025 A&I report. These differences together amounted to €3.4 billion (8 % of €42.1 billion). The detailed breakdown is as follows:

- €1.5 billion for recapitalising the French national railway company (SNCF) – this was the difference between the total for the underlying projects provided to us and the expenditure reported in FENIX;
- €0.4 billion for thermal renovation of public buildings and private households in France – this was the difference between the total for the underlying projects and the expenditure reported in FENIX;
- €1.4 billion for delayed updates of the data in electronic systems collecting information on the RRF at member state level in Germany, Greece, Italy and Spain; and

- €0.1 billion for revocation or cancellation of certain projects or expenditure initially classified as “green” in Spain.

40 After receiving the lists of the underlying projects for each of the 38 measures sampled, again using the MUS method, we sampled 60 projects. For 52 projects, we confirmed that the reported green expenditure was correctly represented in the 2025 A&I report. In the reported green expenditure, for eight projects, we identified material overstatements relative to project size. This took place for the following reasons (for more details, see ***Annex IV***).

- For two projects, we noted that the cumulative RRF amounts paid to the final recipients were significantly lower than the green expenditure reported in FENIX.

- For two projects, a 100 % coefficient was applied to the full amount reported by the member state, although climate mitigation was not the main objective of those projects (paragraph ***16***). This resulted in overstatements of the reported green expenditure for these projects by 60 %.

- For four projects, we found that either the whole project or part of it did not match the climate or environmental objective of the measure under which the green expenditure had been reported. This resulted in overstatements of the reported green expenditure for these projects ranging from 24 % to 100 %.

41 By extrapolating the results from our findings in the sample of 60 projects to the audit population of €56.8 billion (green expenditure reported by the selected seven member states as at 1 August 2025), we can estimate the overstatement in that whole population. For the eight projects where we found that reported green expenditure was overstated, this extrapolation would give an amount of €5.5 billion or 9.8 % of the total.

42 Proceeds from NGEU green bonds should only be used for RRF expenditure that complies with the “do no significant harm” principle as defined in Article 17 of the Taxonomy Regulation and specified in the 2021 DNSH technical guidance notice. We noted that reference was always made to this principle at measure level in the RRPs. We did not observe any non-compliance with the DNSH principle in the 60 projects we were able to review.

43 We conclude that the NGEU green bond expenditure, reported by the Commission and based on member states’ reporting, was not always correct or supported by an audit trail. It was sometimes overstated or did not allow full reconciliation of the amounts reported in FENIX with the lists of underlying projects provided to the ECA by member states.

The minimum buffer established by the Commission to mitigate the risk of issuing excess green bonds may not be adequate in the future

44 We were expecting Commission guidance for NGEU green bond issuance to adequately reduce the risk of issuing more green bonds than the reported green expenditure disbursed. The Commission has developed an internal manual, setting out a structured process for defining the recommended minimum and maximum amount of possible NGEU green bond issues for any relevant period. This is used to draw up semi-annual funding plans and monthly borrowing schedules. We analysed whether the Commission applied this manual in practice and whether its provisions were adequate to mitigate the risk of issuing more NGEU green bonds than the reported green expenditure.

45 The Commission regularly calculates key parameters for the reported green expenditure. As regards the risk tolerance for unallocated NGEU green bond proceeds, the Commission laid down in its internal manual at the start of the programme in 2021 that, from the beginning of 2026, the cumulative amount of NGEU green bonds issued should remain below the cumulative reported green expenditure by at least a specified amount (a buffer). The maximum amount that can be issued is constrained by three safeguards:

- the predefined and gradually evolving risk tolerance for unallocated proceeds;
- the cap limiting green bonds to, at most, 60 % of planned long-term NGEU issues per semester; and
- the requirement that cumulative amounts of green bonds issued never exceed total expected green expenditure in the pool of eligible green measures.

46 NGEU green bonds may still be issued beyond the RRF deadline of 2026 by rolling over maturing green bonds or refinancing conventional bonds, if member states continue to report green expenditure, for example through the completion of green investments in financial instruments. Once the final total of NGEU green spending has been determined, the Commission can reduce the safety buffer by issuing new NGEU green bonds to replace some maturing conventional EU bonds.

47 The 2025 A&I report[16] states that as of 1 August 2025, unallocated proceeds amounted to €10.2 billion. This is the difference between the funds raised from NGEU green bond issues (€75.1 billion) and green expenditure reported by member states (€64.9 billion). The Commission informed us that there were no unallocated proceeds at the end of 2025. There was a difference of €9.7 billion between the green bonds issued (€78.5 billion)

[16] 2025 A&I report, p. 7.

and reported green expenditure (€88.2 billion). In other words, bond issuance was much less than the reported green expenditure at this point in time, mitigating the risk of green bond issue volumes being too high compared to reported green expenditure.

48 Given the overstated green expenditure we detected in our sample (see paragraphs ***40***-***41***), we consider that the current minimum buffer may not be adequate to continue to fully mitigate the risk that NGEU green bond issues exceed the reported green expenditure.

The Commission does not report on the benefits and costs of NGEU green bonds

49 The Commission should, where relevant, set appropriate targets for the additional expected advantages of using NGEU green bonds (***Annex I***, paragraph ***03***) so that these can be measured. After the bonds have been issued, the Commission should collect the relevant data and transparently report on whether these advantages have materialised. In this section, we assess whether:

- the Commission provided enough information about the costs and additional advantages of NGEU green bonds following its decision to issue these bonds instead of conventional bonds;
- the NGEU green bond issues boosted the green bond market and helped the Commission to access a wider range of investors;
- the Commission strengthened the role of the EU and the euro in the sustainable finance markets; and
- the Commission was able to provide information on the additional costs and financial benefits of issuing NGEU green bonds (compared to conventional bonds).

Commission reporting on additional advantages of NGEU green bonds is insufficient

50 The Commission's primary objective was to fund up to 30 % of the NGEU programme with green bond issues[17]. The Commission also mentioned additional expected advantages of using NGEU green bonds[18], but without any specific, measurable and timebound targets (***Annex I***, paragraph ***03***). This makes it difficult to assess how far these advantages have materialised.

51 The Commission reports on NGEU debt management, including NGEU green bonds, in several different reports (Annex IV to our special report 16/2023). We reviewed the following reports to check whether they contained any references to the expected advantages of using NGEU green bonds:

- A&I reports (2022, 2023, 2024 and 2025);
- half-yearly reports on EU borrowing and lending operations;
- report from the Commission to the European Parliament and the Council on contingent liabilities arising from budgetary guarantees and financial assistance and the sustainability of those contingent liabilities; and
- the Commission's 2024 budgetary transparency report.

52 Even though we found references in some of these reports to the advantages claimed by the Commission, these were very general statements. They lacked the specific data needed for a clear assessment of whether the additional benefits associated with NGEU green bond issuances had been achieved.

53 We consider that the Commission did not provide sufficient information about the achievement of the additional expected advantages from issuing NGEU green bonds instead of conventional ones. Nevertheless, in the next two sections, we provide analysis showing that some of the expected advantages of NGEU green bonds had materialised. This analysis concerns three out of six additional advantages claimed by the Commission (***Annex I***, paragraph ***03***) as the remaining three are political statements of intent.

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[17] President von der Leyen's State of the Union Address of 16 September 2020.

[18] European Commission, NextGenerationEU green bonds.

NGEU green bonds attracted new investors but there is no evidence of influence on other issuers

54 The Commission expected that the NGEU green bonds might attract a new category of investor with a stronger focus on sustainability, thereby contributing to greater investor diversification. The data provided by the Commission illustrates that more investors are interested in the syndications of NGEU green bonds compared to conventional EU bonds. By the end of 2025, green bond syndications had attracted, on average, 26 % more investors than conventional EU bonds (351 versus 279). Moreover, investor demand for new debt issued by the Commission through syndications was higher for NGEU green bonds than for conventional EU bonds. Investor demand ("cover ratio") was, on average, fourteen times the value of the NGEU green bonds on offer, in comparison with twelve times the value of the conventional bonds offered.

55 Further data provided in ***Table 1*** shows that in 2021 to 2025, the syndications of NGEU green bonds attracted at least 109 investors who did not participate in the conventional bond syndications. Of these, 99 investors succeeded in the green bond syndications, investing a total of €1.2 billion in NGEU green bonds. These investments were, on average, €12.4 million per investor. This amount is lower than the average investment of each investor (€56.8 million) made in NGEU green bonds syndications by all investors. This shows that the NGEU green bonds attracted a new group of investors, different from those regularly investing in conventional EU bonds.

Table 1 | Participation of investors in NGEU green bond syndications

Investors	Number of interested investors	Orders by interested investors	Number of investors selected	Amounts invested in these bonds
	2021 to 2025 (*million euros*)			
Investors who participated in NGEU green bond syndications only	**109**	**7 691**	**99**	**1 243**
All investors who participated in NGEU green bond syndications	**1 063**	**744 777**	**1 022**	**58 021**

Source: Commission.

56 Green bonds have become an increasingly prominent feature of sovereign and supranational debt issuance[19]. The NGEU green bond programme addressed the growing investor demand for green bonds. In the primary market, NGEU green bonds have attracted strong investor demand and provided significant volumes of funding. However, the Commission has not provided any reports, analysis or studies to show how far NGEU green bond issues encouraged other green bond issuers. Neither our documentary research nor our consultation with an expert provided any evidence in this regard.

NGEU green bonds have strengthened role of the euro in the sustainable finance market

57 In this section, we analyse data on green bond issues to assess the share of NGEU green bonds in the relevant segment of the European bond market. Our aim was to consider whether NGEU green bonds strengthened the role of the euro in the sustainable finance market.

58 The green bonds offered on the European market by sovereign, supranational and agency (SSA) issuers increased from around €6 billion in 2015 to €103 billion in 2025. The growing number of NGEU green bond issues contributed to this increase by accounting for a major share of this sustainable finance market segment, reaching a maximum of 23 % in 2022 (*Table 2*).

Table 2 | Share of NGEU green bonds in SSA green bond issues

Year	SSA green bonds (billion euros)	NGEU green bonds (billion euros)	Share of NGEU green bonds in SSA green bonds
2021	91.1	12	13.2 %
2022	106.5	24.4	22.9 %
2023	103.0	12.5	12.1 %
2024	114.7	19.3	16.8 %
2025	103.0	10.2	9.9 %

Source: ECA, based on Commission data received from EU primary dealers.

[19] OECD, Global Debt Report 2026: Sustaining Debt Market Resilience under Growing Pressure, 4 March 2026; OECD, Sustainable Bonds: Trends and Policy Recommendations, 17 November 2025.

59 Net new issues under the NGEU programme will end in 2026. After that, the Commission can still issue NGEU green bonds if member state reporting includes more green expenditure, for example, funded by RRF financial instruments (see paragraph ***28***). By the end of 2025, the total volume of NGEU disbursement was €459 billion and NGEU green bond issues represented 17 % of this amount (compared to the 30 % target), standing at €78.5 billion.

There is insufficient evidence to assess whether green premium offsets NGEU green bonds' extra costs

60 The Commission's debt management, which commits budgetary expenditure to cover the related costs of the debt, is expected to focus on performance, including the relationship between the resources employed and the results achieved[20]. The Commission should be able to provide information on:

- additional administrative costs for issuing green bonds (e.g. costs of certification, external reviews or audits, training, etc.); and
- the lower cost of funding versus conventional EU bonds (green premium or "greenium"), as far as this exists.

61 In different reports which we analysed (paragraph ***51***), the Commission did not report on additional administrative costs and estimated funding costs savings resulting from the use of NGEU green bonds instead of conventional EU bonds. NGEU green bonds are covered by the same debt issuance programme and procedures as conventional bonds. According to the Commission, there are consequently no identifiable excess costs concerning the preparation and execution of these green bond issues. However, the decision to use NGEU green bonds did entail additional costs compared to issuing conventional bonds, mainly related to establishing the NGEU green bond framework, reporting on the environmental impact and the use of proceeds from these green bonds, and staff training (***Table 3***).

[20] Article 33 of the EU Financial regulation.

Table 3 | Specific costs for NGEU green bonds tracked by the Commission

Cost		Costs incurred 2021 to 2025 (*euros*)
1.	External expert opinion	15 000
2.	Development of impact calculation methodologies	185 400
3.	Limited assurance reports for allocation of proceeds	63 000
4.	Limited assurance reports for impact	80 587
5.	Training on green bonds	3 515
6.	Business trips relating to the NGEU green bonds programme	20 000
Total		**352 502**

Source: Commission.

62 *Table 3* does not include certain additional costs related to issuing NGEU green bonds that are not quantified or available to the Commission. These include the additional cost of Commission staff working on the development and implementation of the NGEU green bond framework, among other tasks, costs at member state and Commission level related to green expenditure reporting and verification, and additional Commission staffing and other costs related to the preparation of annual A&I reports. *Table 4* includes the Commission's estimate of the full-time equivalent (FTE) of staff who have worked on NGEU green bonds between 2021 and 2024.

Table 4 | Additional Commission's staff working on NGEU green bonds

Year	2021	2022	2023	2024
FTE	2	2.5	3.5	1.5

Source: Commission.

63 On the other hand, the Commission's analysis suggests that, on average during the observation period, NGEU green bonds offered an estimated green premium of 0.004 % (0.4 basis points). This green premium is the difference between the yield of a conventional bond and that of an equivalent green bond. This green premium can be generated because some investors are willing to accept lower monetary compensation for their investments; for example, because they consider the green label and reporting have additional value or a positive societal impact compared to conventional bonds.

64 When NGEU green bonds were first issued in 2021, evidence of a green premium in sovereign bond markets was mixed, with only 56 % of primary and 70 % of secondary market studies indicating its presence[21]. According to an academic analysis published in the same period and based on data from 2014 to 2021, "the evaluated expert interviews and regression analysis lead to an expected green premium for the NGEU green bonds of up to -4 basis points, with the potential to further increase in the secondary market"[22]. The Commission estimated it had obtained a green premium for NGEU green bonds from 2021 to 2025 that was lower than the maximum level experts had predicted in the analysis from 2021. We agree with the Commission's arguments that this premium is difficult to measure, predict and compare because:

- the greenium is not static over time and is a function of many parameters, including market conditions and the supply and demand for specific green bonds, making it hard to compare the green premium across different bonds; and
- the analysis of the wider green bond markets, especially for sovereign, supranational and agency issuers, shows that the market conditions between 2021 and 2025 are very different from 2014 to 2021, leading to a decline in the green premium across issuers in recent years.

This report was adopted by Chamber V, headed by Mr Jan Gregor, Member of the Court of Auditors, in Luxembourg on 29 September 2026.

For the Court of Auditors

Tony Murphy
President

[21] Greenium in sovereign bond markets, Bruegel, 2022.

[22] Hinsche, Isabelle Cathérine (2021): A greenium for the next generation EU green bonds: Analysis of a potential green bond premium and its drivers, CFS Working Paper Series, No. 663, Goethe University Frankfurt, Center for Financial Studies (CFS), Frankfurt am M.

Annexes

Annex I – About the audit

Description of the audit area

01 In May 2020, the EU launched the temporary NextGenerationEU (NGEU) programme to help member states recover from the COVID-19 pandemic. The programme was also intended to finance the green and digital transformation of the EU economy, with the Recovery and Resilience Facility (RRF) accounting for 90 % of its total budget. The Commission has been using borrowed funds, up to €806.9 billion in current prices, to provide grants and loans to member states. The actual amount borrowed by the Commission for NGEU will largely depend on the implementation of the RRF by the member states.

02 Under the RRF Regulation, member states' recovery and resilience plans (RRPs) had to allocate at least 37 % of their budget to green measures[1]. In the NGEU funding strategy adopted in April 2021, the Commission indicated that it planned to finance up to 30 % of NGEU through green bond issues. Since the revised NGEU programme is likely to amount to €634 billion[2] (instead of €806.9 billion as originally planned), total NGEU green bond issues could reach €190 billion. All NGEU liabilities, including the green bonds, must be repaid by 2058.

03 The Commission did not aim to obtain lower funding costs by issuing NGEU green bonds instead of conventional bonds, but claimed that NGEU green bonds could generate numerous additional advantages for the EU, the capital markets and the market for sustainable finance (***Figure 1***).

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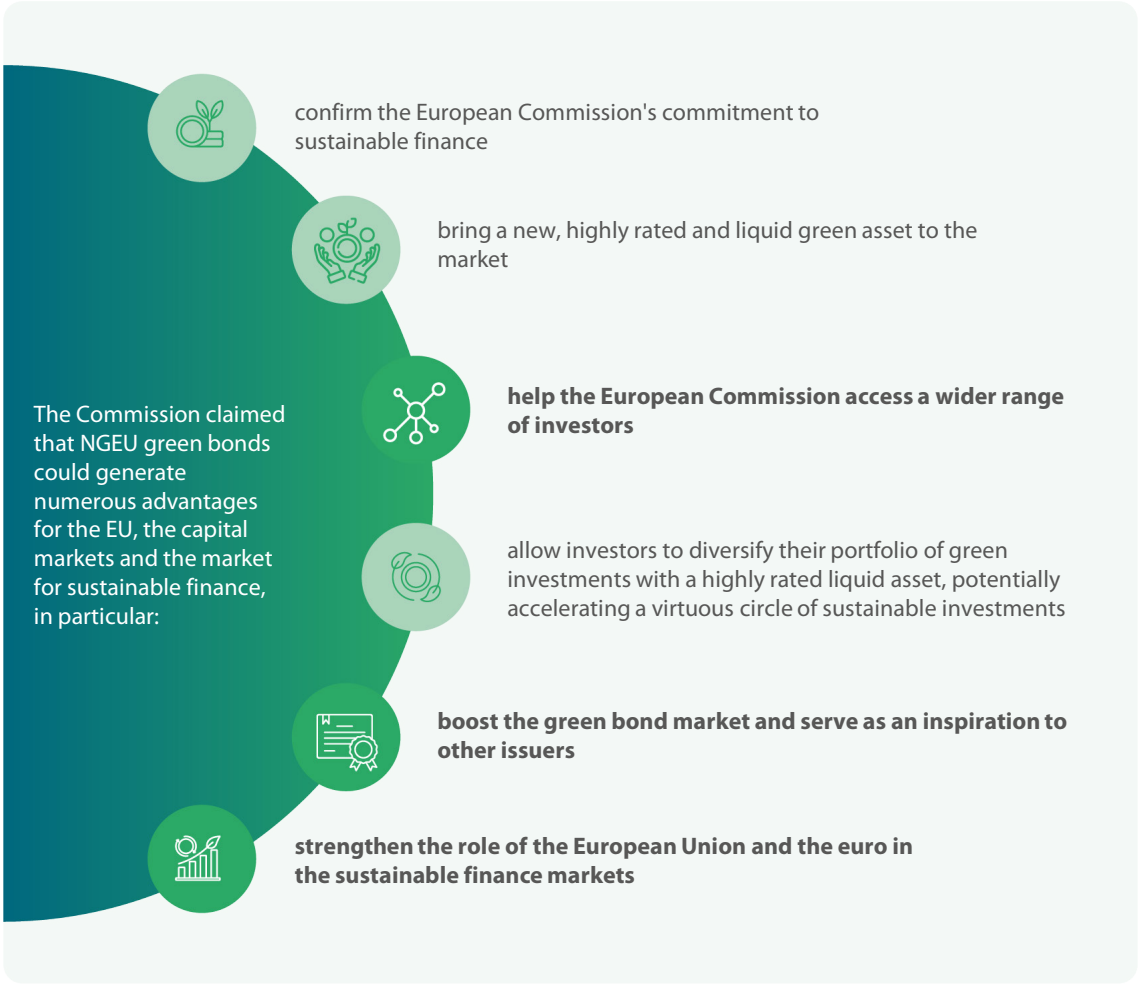
[1] Recital 23 of the RRF Regulation.

[2] NextGenerationEU, European Commission.

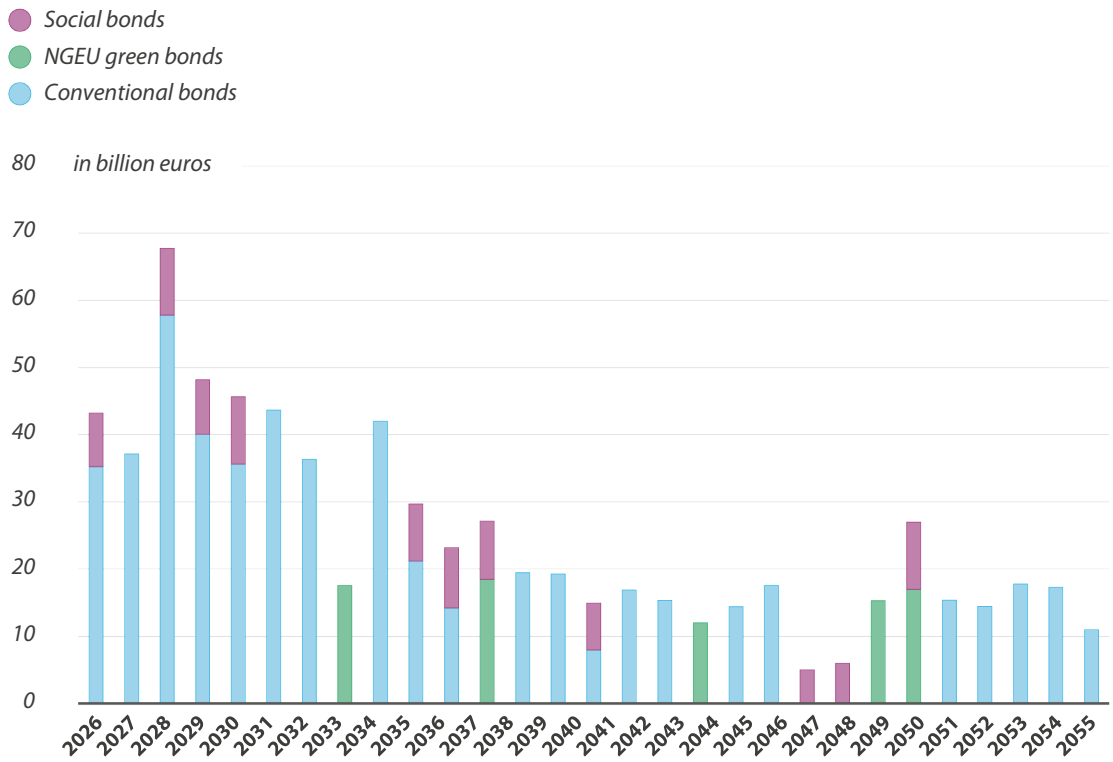
Figure 1 | Expected additional advantages from NGEU green bonds



Source: ECA, based on Commission's NGEU green bond website.

04 The Commission issued its first NGEU green bond in October 2021, raising €12 billion. At the time, this made it one of the world's largest green bond transactions. According to the NextGenerationEU green bond dashboard, by the end of March 2026, the Commission had launched 22 syndications and auctions of NGEU green bonds amounting to €80.4 billion. The maturities of these bonds range from 7 to 26 years; the longest maturity date (i.e. when the borrowing through the bond must be repaid) is 2050 (***Figure 2***).

Figure 2 | Annual volumes of maturing EU bonds outstanding as at 30 March 2026



Social bonds: debt instrument used to finance projects that address specific social needs or challenges, as in the case of the EU programme Support to mitigate Unemployment Risks in an Emergency.

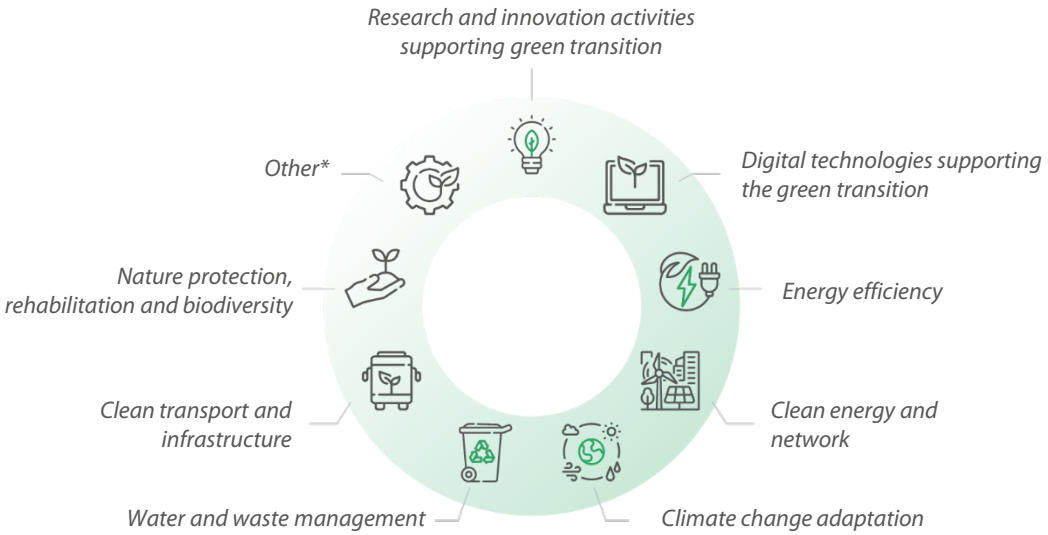
Source: Commission, EU debt securities data, April 2025.

NGEU green bond framework

05 The Commission issues NGEU green bonds using the standard debt management procedures and organisational arrangements but with the specific guidance of the NGEU green bond framework established in September 2021. In this document, the Commission stipulates that the "framework for green bonds issued under NGEU will be based on the International Capital Market Association (ICMA) green bond principles".

06 The Commission's process for evaluating expenditure and selecting investments starts with RRF measures in the RRPs which already have positive climate coefficients of 40 % or 100 % for their intervention fields. These measures are then subject to additional due diligence to minimise the risk that underlying projects financed by NGEU green bonds are not in line with the standards that investors expect. As per the NGEU green bond framework, the proceeds from NGEU green bonds can finance only the nine categories of expenditure shown in ***Figure 3***.

Figure 3 | Categories of expenditure eligible for financing from NGEU green bonds



***Other:** Largely contains enabling activities which serve to support the green transition measures under other categories. Air quality and noise reduction is included in addition.

Source: ECA, based on NGEU green bond framework.

07 Member states report their green expenditure in the non-publicly accessible FENIX database, which is the key tool for reporting on RRF implementation. Since publishing an allocation report about NGEU green bonds proceeds in December 2022, the Commission has issued four allocation and impact reports relating to NGEU green bonds. These inform investors and other stakeholders about the pool of expenditure eligible to be financed with NGEU green bonds, the allocation of proceeds from green bonds to reported expenditure, EU taxonomy alignment, and the climate impact of the investments funded.

Roles and responsibilities for NGEU green bonds

08 The Commission implements the RRF under direct management, with the member states as beneficiaries. Within the Commission, the Reform and Investment Task Force (REFORM), under the Secretariat-General, along with the Directorate-General for Economic and Financial Affairs (DG ECFIN), have the main responsibility for the RRF. They assessed the initial RRPs, approved changes to the plans, and checked the fulfilment of milestones and targets so that payments could be made to member states following their payment requests. The initial assessment of the climate-relevant measures was conducted by these two directorates.

09 The Directorate-General for Budget (DG BUDG) carries out the core functions of NGEU debt management, including selling the bonds, checking the rules for spending on green projects, handling the funds raised, and providing a legal service. The Commission's Chief Risk Officer is responsible for overseeing the risks of all EU financial operations, including borrowing, and debt and liquidity management. NGEU green bond issues are largely managed by the same teams that deal with conventional EU bond issues[3]. DG BUDG is also responsible for reporting on the allocation and impact of the expenditure financed from NGEU green bonds, to which member states contribute by reporting on the cumulative green expenditure incurred (***Annex VI***).

Audit scope and approach

10 We assessed whether NGEU green bonds have successfully been used to finance RRF green projects, by examining whether the Commission had:

- together with the member states, put in place a control framework to ensure that NGEU green bonds only financed projects clearly benefiting the environment and the climate; and
- demonstrated that the additional advantages of issuing NGEU green bonds compared to conventional bonds had been achieved and had justified the additional administration costs.

11 We examined NGEU green bond issues from October 2021 up to the end of 2025. Our main auditee was the Commission (DG BUDG). With regard to the allocation of green bond proceeds, we assessed the NGEU green bond allocation and impact report issued in December 2025, with data as of 1 August 2025. Our report does not cover sections 5 and 6 of that report, which estimate the climate impact of the projects funded and provide examples of investments. It was too early to assess the impact of RRF green measures, most of which were still being implemented during our audit.

12 Our audit methodology complies with the audit standards of the International Organization of Supreme Audit Institutions (INTOSAI). The following points describe our main evidence sources.

— We obtained evidence from documentary reviews of reports and procedures, and interviews with representatives from DG BUDG and DG ECFIN. These mainly concerned debt management for NGEU green bonds and the systems in place to ensure that proceeds were only allocated to green projects.

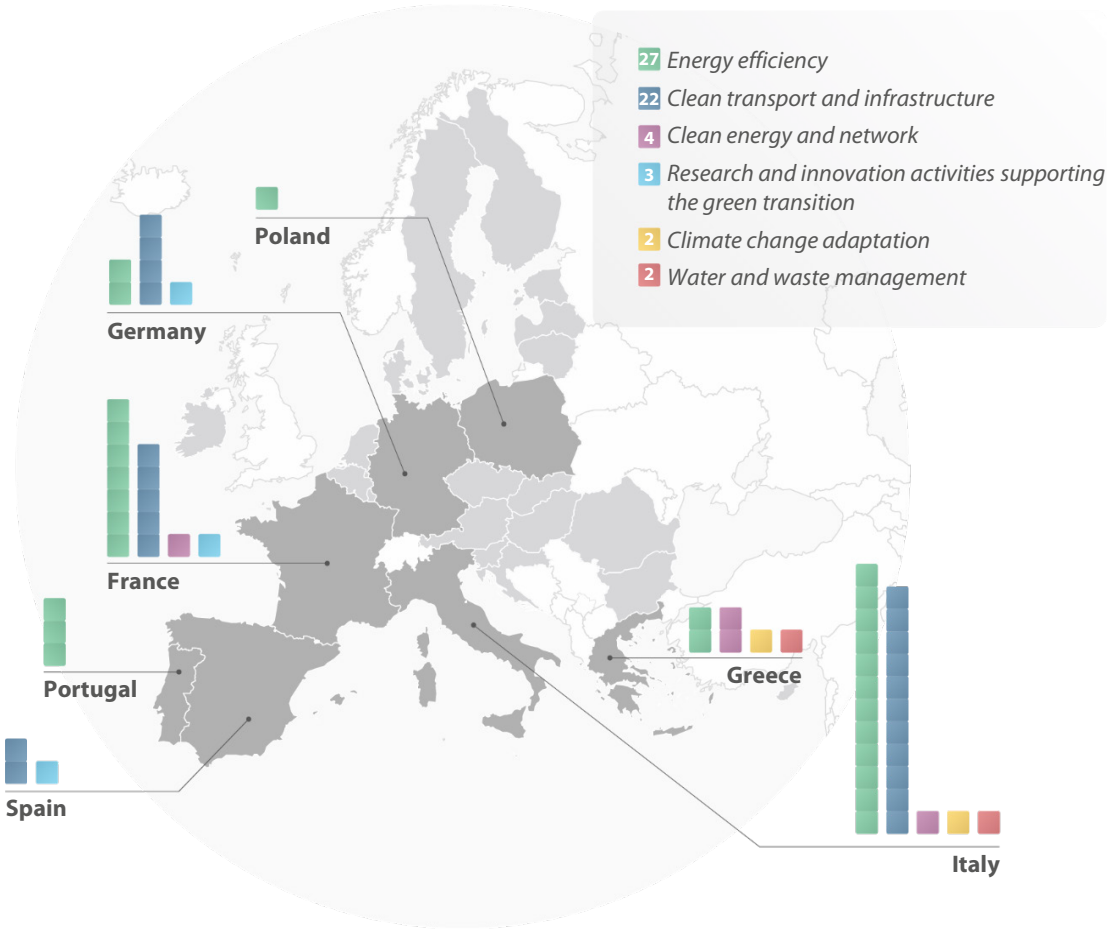
[3] ECA special report 16/2023, Figure 4, p. 12.

— We carried out documentary reviews of 38 measures and 60 projects selected in seven member states, see ***Figure 4***. Six member states (Germany, Greece, Spain, France, Italy, Portugal) were selected due to high materiality in their reported green expenditure, while Poland was selected due to the high level of planned green expenditure to be reported (***Annex V***). As at 1 August 2025, these seven member states accounted for 88 % of eligible green expenditure reported by all member states and 83 % of the pool of potential green expenditure planned in the RRPs. While this sample is not representative of the total green expenditure reported by all 27 member states, it enables us to draw conclusions on the reliability of expenditure reported by these seven member states. We used the monetary unit sampling method to select measures and then individual projects in these member states. Although the sampling is random, the number of selected measures and projects is proportionate to the amount of green expenditure reported.

— We consulted with and received written input from an independent debt management expert as to whether the Commission achieved the expected additional advantages by issuing green bonds instead of conventional bonds, and whether it obtained a fair green premium.

— We analysed studies on green bonds, the green premium, and past ECA reports on the RRF and the Commission's debt management.

Figure 4 | Number of sampled projects per category of expenditure



Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the European Union.

Source: ECA.

Administrative boundaries: © EuroGeographics © OpenStreetMap
Cartography: Eurostat – IMAGE, 05/2026

Annex II – EU taxonomy

One of the European Commission's key initiatives in the field of sustainable finance came in 2018, with the publication of the Action plan on financing sustainable growth.
The creation of a unified EU classification system for sustainable finance – or taxonomy – was set as an objective, which a technical expert group on sustainable finance helped to develop. The EU Taxonomy Regulation was adopted in June 2020 to redirect capital flows towards green, environmentally sustainable investments. The EU taxonomy aimed to provide transparent, science-based criteria to establish which activities:

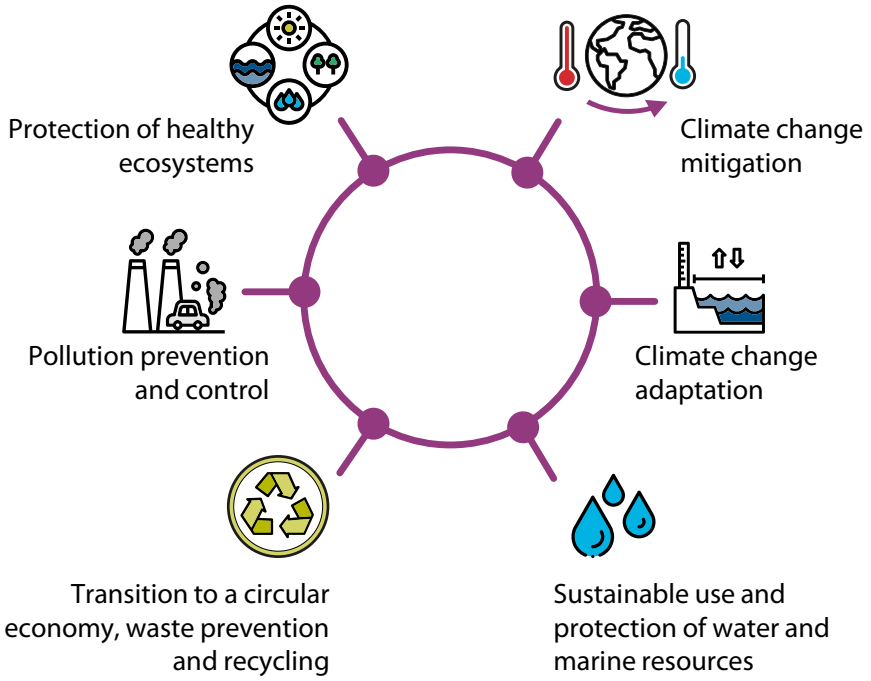
(1) contribute substantially to at least one of six environmental objectives (***Figure 1***);

(2) do no significant harm to any of the other environmental objectives – thresholds were set for each activity defining compliance with the "do no significant harm" principle;

(3) comply with minimum social safeguards in line with the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights; and

(4) comply with specific technical screening criteria – specific qualitative and quantitative requirements denoting what constitutes a significant contribution to an environmental objective.

Figure 1 | The six environmental objectives of the EU taxonomy



Source: ECA.

The EU taxonomy allows financial and non-financial companies to share a common definition of economic activities that can be considered environmentally sustainable. The specific activities and their requirements were published in Commission Delegated Regulation EU 2021/2139 on 9 December 2021. Therefore, it can play an important role in helping the EU scale up sustainable investment, by creating security for investors, protecting private investors from "greenwashing", helping companies become more climate-friendly, and mitigating market fragmentation caused by the creation of multiple standards.

In February 2025, the Commission adopted "a package of proposals to simplify EU rules and boost competitiveness, and unlock additional investment capacity", relating to corporate sustainability reporting and the EU taxonomy. According to the Commission, "the proposals will reduce complexity of EU requirements for all businesses, notably SMEs and small mid-caps (SMCs), focus our regulatory framework on the largest companies which are likely to have a bigger impact on the climate and the environment, while still enabling companies to access sustainable finance for their clean transition".

Annex III – NGEU green bond framework vs European green bond standard

Category	European green bond standard (EuGBS)	NextGenerationEU (NGEU) green bond framework
Source	Regulation (EU) 2023/2631 on European Green Bonds	NGEU green bond framework from September 2021
Basis	New stand-alone standard.	Based on the International Capital Market Association (ICMA) green bond principles, which are market-leading best practice recommendations.
Mandatory or voluntary	Voluntary – only mandatory if the issuer wants to label the bond as "European green bond".	Mandatory for NGEU green bonds.
Use of proceeds	Projects aligned with the EU taxonomy, contributing substantially to one or more of the six environmental objectives: (1) climate change mitigation; (2) climate change adaptation; (3) sustainable use and protection of water and marine resources; (4) transition to a circular economy; (5) pollution prevention and control; (6) protection and restoration of biodiversity and ecosystems + doing no significant harm to any of the other environmental objectives + complying with minimum safeguards + complying with the technical screening criteria.	The funds will be used for nine broad categories of expenditure: (1) research and innovation activities supporting the green transition; (2) digital technologies supporting the green transition; (3) energy efficiency; (4) clean energy and network; (5) climate change adaptation; (6) water and waste management; (7) clean transport and infrastructure; (8) nature protection, rehabilitation and biodiversity; and (9) other (largely contains enabling activities, which serve to support the green transition and activities indirectly reducing greenhouse gases emission. Air quality and noise reduction are included in addition).
Eligible projects	At least 85 % of the net proceeds raised by European green bonds must be invested in "environmentally sustainable" activities aligned with the EU taxonomy prior to maturity of the European green bonds (i.e. when the borrowing through the green bonds is repaid). Up to 15 % of the proceeds may be allocated to economic activities that comply with the taxonomy requirements, but not	The investments will be identified based on the 37 % climate expenditure rule for the recovery and resilience plans. These investments will be tracked using EU climate coefficients, with a score (0 %/40 %/100 %) based on their contribution to the climate and their relevance – which will determine the percentage of expenditure eligible for green bond financing.

Category	European green bond standard (EuGBS)	NextGenerationEU (NGEU) green bond framework
	the technical screening criteria, under certain conditions, e.g. economic activities where no technical screening criteria have entered into force when the green bonds were issued.	
Management of proceeds	Not specified.	The Commission will track the relevant spending and the net proceeds of all NGEU green bonds and use its standard accounting system to report on them regularly. Pending full allocation to member states or EU policies, green bond proceeds will be held in a general NGEU cash account.
Allocation of proceeds	Fully allocated before bond maturity or allocated from a portfolio of green bonds to a portfolio of eligible assets with a greater value than the remaining proceeds.	The proceeds are retrospectively allocated to eligible green expenditure under the Recovery and Resilience Facility (RRF).
Taxonomy alignment	Requires alignment with the EU taxonomy for environmentally sustainable economic activities.	The framework is aligned, as far as feasible, with the European green bond standard and EU taxonomy.
External review	Requires an external review (by an external reviewer registered with and supervised by the European Securities and Markets Authority (ESMA)) to verify compliance of each bond with the EuGBS.	The Commission will employ an independent external auditor to verify the Commission's analysis in the allocation report.
Reporting	Through standardised templates, requires annual allocation reporting until full allocation of the proceeds. Also requires publication of an impact report on the environmental effect of the European green bonds following full allocation of the proceeds.	The Commission will use two types of reporting to show how funds have been spent (allocation reporting) and what they have achieved (impact reporting).
Sanctions and penalties	Issuers (except sovereigns) are supervised by national competent authorities. A number of penalties and other administrative measures can be imposed for non-compliance with the EuGBS, including prohibiting an issuer from issuing European green bonds for up to a year. Under the Regulation	No sanctions or penalties.

Category	European green bond standard (EuGBS)	NextGenerationEU (NGEU) green bond framework
	administrative fines of up to 0.5 % of an issuer's turnover can be issued. EU member states may choose to impose criminal sanctions for non-compliance.	
Geographical scope	Available to issuers based in the EU (public and private sectors), as well as non-EU issuers.	Applies to green bonds issued by the European Commission, on behalf of the EU, to finance NGEU-related expenditure.

Source: ECA, based on:

- Regulation (EU) 2023/2631.
- NGEU green bond framework.
- Will Europe's New Standard Help or Hinder Green Bond Market Growth?, Institute for Energy Economics and Financial Analysis, February 2024.
- ICMA Green Bond Principles and the EU Green Bond Regulation: a Comparison, Clifford Chance, November 2023.

Annex IV – Projects with material overstatements in reported green expenditure relative to project size

No	Description
1	One project in Spain, to support a factory producing batteries for electric vehicles was removed from RRF financing (€18.8 million) in October 2024 but still reported in FENIX database on 1 August 2025. This green expenditure was therefore overstated by 100 %.
2	One project in Greece, concerning the major renovation of a hotel, was part of a measure to which the Commission applied a 100 % green bond coefficient. However, the reviewed project did not have climate mitigation or environmental protection as a key objective. This resulted in green expenditure reported (€2.4 million) being overstated in the A&I report by 60 % (€1.44 million). This project was included in the amounts reported by Greece which were considered by the Commission eligible for NGEU green bonds in the 2025 A&I report. The Commission informed us that, in 2026, reported expenditure for all the RRF measures using financial instruments, including the measure financing this Greek project, is not being financed by NGEU green bonds until enhanced reporting on the implementation of the underlying projects becomes available (paragraph *28*).
3	One project in Greece concerned the redevelopment of an exhibition centre. This project was reported under a measure with a green bond eligibility coefficient of 100 %. However, we found that a green bond coefficient of 40 % would have been more appropriate for this project, given its nature. This means that the reported green expenditure (€14.2 million) was overstated in the A&I report by 60 % (€8.5 million).
4	One project in Greece concerned a house renovation to improve its energy efficiency. A gas boiler, which is not eligible for financing from NGEU green bonds, was installed at a cost of €2 016, meaning that the reported green expenditure (€8 563) was overstated by 24 %.
5	One project in France worth €0.4 million, concerning expenditure for healthcare facilities, was reported as energy efficiency renovation of public infrastructure, to which 40 % green coefficient was assigned. We found that most of the funding for this project was used to purchase assets and services with no clear link to climate action (mostly information technology and medical equipment). Moreover, some of the project costs were for the acquisition of oil- and gas-fuelled assets. In our opinion, none of the expenditure should have been reported as green.
6	One project in France concerning a complete renovation of a school building was reported under a measure with a green bond eligibility coefficient of 100 %. The evidence provided for this project showed that an unspecified amount of expenditure was linked to the purchase and installation of gas-fuelled assets. Moreover, the French authorities informed us that for this project they had reported €17 million of green expenditure in FENIX, while the RRF support transferred to the beneficiary amounted to €6.4 million (only 38 % of the green expenditure reported).

No	Description
7	For a project in France concerning the energy renovation of private housing the RRF subsidy of €800 was declared as the green expenditure for an installation of a new gas-fuelled heating system. This represents an overstatement of the green expenditure eligible for NGEU green bonds by 100 %.
8	For one project in France concerning the renovation of a railway tunnel on the TEN-T network, the green expenditure reported in FENIX was €22.1 million, while the evidence we received justified only €4.4 million of RRF expenditure disbursed (i.e. only 20 % of the green expenditure reported).

Annex V – Geographical distribution of NGEU green bond eligible expenditure reported by 1 August 2025

No	Country	Pool of expenditure eligible for NGEU green bond funding	Reported green expenditure	Share of pool expenditure reported	Number of sampled projects
1	Italy	73 063 020 602	24 969 512 000	34 %	26
2	France	17 468 829 083	12 455 860 000	71 %	14
3	Germany	12 083 133 693	6 666 467 000	55 %	7
4	Greece	12 702 718 559	6 208 162 331	49 %	6
5	Spain	68 340 336 413	3 125 014 000	5 %	3
6	Portugal	7 987 900 158	2 585 079 314	32 %	3
7	Czechia	3 331 640 191	2 005 663 649	60 %	0
8	Netherlands	3 518 087 550	1 239 832 000	35 %	0
9	Belgium	2 675 378 993	915 612 140	34 %	0
10	Poland	26 192 023 590	796 975 337	3 %	1
11	Sweden	1 630 419 748	760 711 955	47 %	0
12	Croatia	2 154 338 579	545 696 962	25 %	0
13	Slovakia	2 104 490 469	415 444 180	20 %	0
14	Bulgaria	3 145 521 543	404 305 774	13 %	0
15	Denmark	734 461 787	279 959 833	38 %	0
16	Estonia	546 280 000	235 460 000	43 %	0
17	Ireland	572 049 000	212 530 000	37 %	0
18	Slovenia	944 357 833	211 949 036	22 %	0
19	Austria	2 316 051 610	184 638 000	8 %	0
20	Latvia	818 250 378	149 450 000	18 %	0
21	Cyprus	539 450 765	144 204 000	27 %	0
22	Finland	842 948 000	135 550 000	16 %	0
23	Lithuania	1 428 745 275	91 000 000	6 %	0
24	Malta	225 677 223	64 226 000	28 %	0
25	Romania	12 715 943 850	54 780 056	0 %	0
26	Luxembourg	45 600 000	18 800 000	41 %	0
27	Hungary	4 641 113 217	0	0 %	0
Total		**262 768 768 109**	**64 876 883 567**	**25 %**	**60**

Source: ECA, including European Commission data.

Annex VI – Roles and responsibilities in the NGEU green bond framework

FRAMEWORK	PLANNING	IMPLEMENTATION	REPORTING
In February 2021, co-legislators adopted the RRF Regulation, requiring member states to allocate at least 37 % of their budgets to green measures.	Member states submit RRPs, including the green measures with green expenditure.	Member states implement the measures included in their RRPs.	Member states report on common indicators and progress in their RRPs.
In April 2021, the Commission announced plans to finance up to 30 % of NGEU through green bonds.	Before RRF measures are added to the NGEU green bond eligibility pool, they are subject to additional due diligence on top of checks of whether they contribute to RRF climate objectives.	The Commission issued the first NGEU green bonds in October 2021.	The Commission created a new tool, the FENIX portal, to gather data from member states on the RRF.
In August 2021, an external reviewer issued a positive opinion on the sustainability of the NGEU green bond framework.	The Commission monitors green expenditure submitted by member states and adjusts the planning of green bond issues accordingly.	Member states submit payment requests up to twice a year for milestones and targets achieved.	Member states report on expenditure related to their green measures via the FENIX database.
In September 2021, the Commission established the NGEU green bond framework for guidance purposes.			Since 2022, the Commission has published an Allocation report every year. Since 2023 the Allocation report has been accompanied by impact reporting.

 The Commission carries out taxonomy assessments by matching RRF intervention fields to taxonomy activities.			 Each A&I report is accompanied by a limited assurance report from an external auditor.

Abbreviations

Abbreviation	Definition/Explanation
A&I report	Allocation and impact report
DNSH	Do no significant harm
EuGBS	European green bond standard
FTE	Full-time equivalent
GBP	Green Bond Principles
ICMA	International Capital Market Association
MUS	Monetary unit sampling
NGEU	NextGenerationEU
RRF	Recovery and Resilience Facility
RRP	Recovery and resilience plan

Glossary

Term	Definition/Explanation
Bond issuance	Process by which an issuer raises debt financing on the capital markets by selling bonds to investors.
Bond issue	Single offering of a fixed-income debt instrument to borrow money on the capital markets, sold to investors at the same time and with the same terms.
Climate change adaptation	Reducing the vulnerability of countries and communities to climate change by increasing their ability to absorb its impacts.
Climate change mitigation	Reducing or limiting the emission of greenhouse gases due to their effect on the climate.
European green bond	Environmentally sustainable fixed-income debt instrument that adheres to the European green bond standard.
EU taxonomy	EU classification system which identifies the extent to which economic activities are environmentally sustainable.
FENIX	Commission database used to manage the Recovery and Resilience Facility.
Financial instrument	Financial support from the EU budget in the form of equity or quasi-equity investments, loans or guarantees, or other risk-sharing instruments, implemented by an intermediary (e.g. bank, investment fund), which manages the funds or guarantees and allocates them to a final recipient.
Green bond	Fixed-income debt instrument used to finance activities with environmental or climate benefits.
Greenium (green premium)	Lower funding cost for green bonds compared with conventional bonds, reflecting investors' willingness to accept lower yields due to the recognised green label and the positive environmental and societal impact of sustainable investments.
Greenwashing	Presenting spending, products or policies as greener than they really are by making claims that are unclear, without proper justification or hard to verify.
Incurred green expenditure	Green-related spending that has already taken place and can be matched to the money raised from green bonds.
Intervention field	Category of activities financed by the Recovery and Resilience Facility, the European Regional Development Fund, the Cohesion Fund or the European Social Fund.
Monetary unit sampling	Statistical sampling method in which the chance of a particular transaction being selected is proportional to its size.
NextGenerationEU	Funding package to help EU member states recover from the economic and social impact of the COVID-19 pandemic.

Term	Definition/Explanation
NGEU green bond	Fixed-income debt instrument issued by the Commission to finance green spending under NextGenerationEU.
Recovery and Resilience Facility	The EU's financial support mechanism to mitigate the economic and social impact of the COVID-19 pandemic and stimulate recovery, and to meet the challenges of a greener and more digital future.
Recovery and resilience plan	Document setting out a member state's intended reforms and investments under the Recovery and Resilience Facility.
Rio marker	Indicator, defined by the OECD, of the extent to which an activity contributes to the objectives of the UN's three Rio conventions.
Supranational issuer	International organisation established by a number of sovereign states that can raise funds by issuing debt securities (e.g. bonds) on capital markets.
Sustainable investment	Incorporation of environmental, social and governance considerations into business and investment decisions.
Syndication	Sale of a fixed-income debt instrument by the issuer, arranged by a group of financial institutions which source interested investors.

Replies of the Commission

https://www.eca.europa.eu/en/publications/SR-2026-28

Timeline

https://www.eca.europa.eu/en/publications/SR-2026-28

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From left to right: Jindrich Dolezal, Jorge Ramírez Puerto, Tomasz Plebanowicz, Manuela Portale, Jorg Kristijan Petrovič, Martin Puc, Mirko Iaconisi, Miguel Ferrao.

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In 2020, the Commission announced its intention to raise 30 % of NextGenerationEU funds using green bonds. By the end of 2025, it had issued €78.5 billion of such bonds. It conducted due diligence to identify green measures suitable for financing with these bonds. However, its full reliance on member state reporting of green expenditure represents a weakness. We estimate that the eligible green expenditure reported by seven member states was overstated by around 10 %. Furthermore, the Commission has not reported the benefits and costs of NGEU green bonds. We recommend that the Commission revise its procedures to mitigate the risk of issuing excess NGEU green bonds and report on the costs and benefits of issuing such bonds.

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