



THE LONDON SCHOOL
OF ECONOMICS AND
POLITICAL SCIENCE ■



Grantham
Research Institute
on Climate Change
and the Environment



JUST
TRANSITION
FINANCE LAB

Mobilising bonds for the just transition

An exploratory assessment methodology of thematic sovereign bonds

Antonina Scheer, Lily Burge, Judith Tyson,
Oleksandra Plyska, Zuzanna Charkowska
and Valeria Dagnino Contreras

April 2025

Climate Bonds INITIATIVE

The Just Transition Finance Lab was launched in 2024 with the goal of being a centre for experimentation and excellence in the financial solutions needed for a just transition. The Lab is grateful for the support of its Founding Funders: Antin Infrastructure Partners, Barclays, HSBC and Laudes Foundation.

www.justtransitionfinance.org

The Grantham Research Institute on Climate Change and the Environment hosts the Just Transition Finance Lab. The Institute was established in 2008 at the London School of Economics and Political Science. The Institute brings together international expertise on economics, as well as finance, geography, the environment, international development and political economy to establish a world-leading centre for policy-relevant research, teaching and training in climate change and the environment. It is funded by the Grantham Foundation for the Protection of the Environment, which also funds the Grantham Institute – Climate Change and the Environment at Imperial College London. www.lse.ac.uk/granthaminstitute

Climate Bonds Initiative is an international organisation working to mobilise global capital for climate action through the development of the Climate Bonds Standard and Certification Scheme, Policy Engagement and Market Intelligence work.

www.climatebonds.net

About the authors

Antonina Scheer, Judith Tyson, Oleksandra Plyska, Zuzanna Charkowska and Valeria Dagnino Contreras are currently or were formerly based at the Grantham Research Institute on Climate Change and the Environment. Lily Burge is based at Climate Bonds Initiative.

Acknowledgements

The authors would like to acknowledge feedback on this report from the following reviewers: Simon Bond (Impact Investing Institute), Carel Cronenberg (Council of Europe Bank), Felix Grote (Council of Europe Bank), Caroline Harrison (Climate Bonds Initiative), Carlotta Michetti (Climate Bonds Initiative), Clodagh Muldoon (Climate Bonds Initiative), Nick Robins (Just Transition Finance Lab), Sangeeth Selvaraju (Just Transition Finance Lab), Charles Smith (European Bank for Reconstruction and Development) and Magali Van Coppenolle (Climate Bonds Initiative).

As part of the development of the methodology described in this report, an online stakeholder roundtable was held in December 2025 with investors, sovereign issuers, multilateral development banks and international just transition and human rights experts. The authors are grateful to the participants in this roundtable for sharing their perspectives.

This report was edited by Georgina Kyriacou.

The views expressed in this report represent those of the authors and do not necessarily represent those of the host institutions or funders.

This report was first published in April 2025 by the Grantham Research Institute on Climate Change and the Environment.

© The authors, 2025

Licensed under [CC BY-NC 4.0](https://creativecommons.org/licenses/by-nc/4.0/). Commercial permissions requests should be directed to gri@lse.ac.uk.

Suggested citation: Scheer A, Burge L, Tyson J, Plyska O, Charkowska Z, Dagnino Contreras V (2025) *Mobilising bonds for the just transition. An exploratory assessment methodology of thematic sovereign bonds*. London: Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science.

Contents

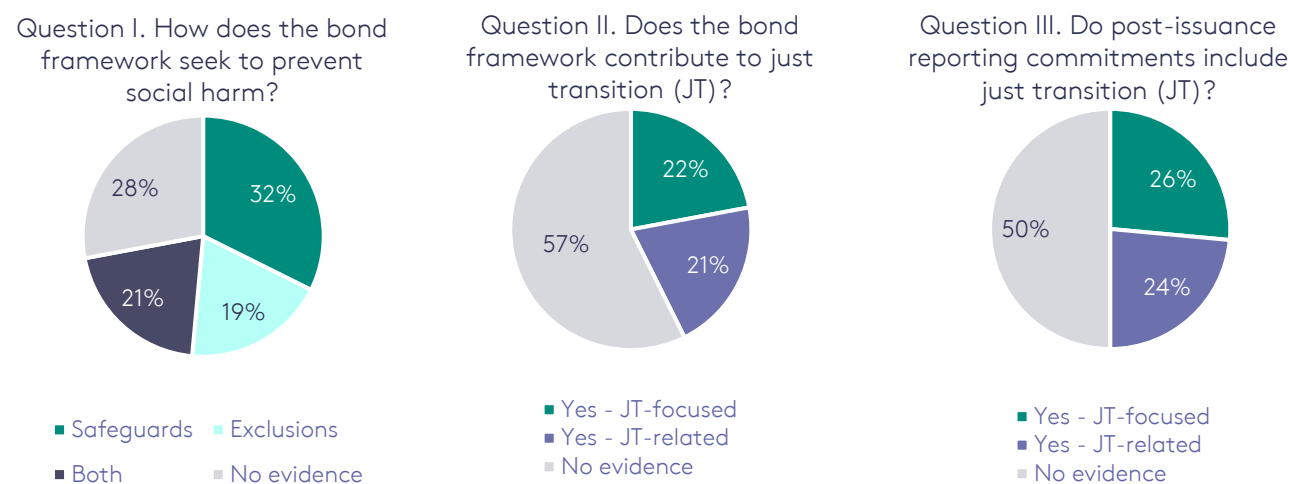
Summary	4
1. Introduction	6
2. Assessment methodology	9
Study sample and scope	9
I. How does the bond framework seek to prevent social harm?	11
II. Does the bond framework contribute to just transition?	13
III. Do post-issuance reporting commitments include just transition impacts?	16
3. Overview of assessment results	18
4. Discussion of further complementary analysis	20
5. Recommendations and next steps	23
Appendix 1. Sovereign bond framework assessment results	24
Appendix 2. ASCOR just transition assessment methodology	27
References	28

Summary

This report presents a novel methodology to assess the presence of just transition elements in green, social, sustainability and sustainability-linked (GSS+) bond frameworks. Taking an evidence-based approach, this methodology demonstrates how GSS+ bonds can be leveraged for the just transition, which can inform both issuers' bond design and investor decision-making. We classify certain GSS+ bond framework characteristics – eligible expenditures, performance targets and post-issuance reporting – as just transition-related where activities cover both climate change mitigation and one of the following social themes: education, employment or equality. Where there is a causal link between the mitigation and social activities in question, the expenditure, target or reporting is considered just transition-focused.

We use this methodology to assess nearly all existing sovereign GSS+ bond frameworks, amounting to 68 in total, finding moderate evidence that just transition elements are present (see Figure S1). The majority of sovereign frameworks (72%) have an approach to managing and preventing social harm through exclusions, social safeguards or both. A meaningful share (22%) have just transition-focused eligible expenditures through their inclusion of projects that directly address the social harm caused by the low-carbon transition or the opportunities it presents. Meanwhile, 26% of frameworks include at least one metric in post-issuance reporting commitments that we categorise as just transition-focused. Developing countries appear to be making greater strides forward than high-income countries on integrating just transition into their sovereign bond frameworks. However, developing countries tend to issue more sustainability bonds, which by definition promote the integration of green and social outcomes.

Figure S.1. Assessment results from the sample of 68 sovereign GSS+ bond frameworks



Although this methodology is a useful starting point, it should be complemented by an analysis of country context and post-issuance impact reporting. This can draw on existing entity-level evaluations of climate action, policymaking and alignment such as the Assessing Sovereign Climate-related Opportunities and Risks (ASCOR) tool. This tool provides transparent and comparable data, with a dedicated just transition area that assesses how countries are developing the institutional capacity to address the needs of workers and communities affected by decarbonisation. Alongside country context, further analysis of post-issuance reporting is key to identify potential gaps between a bond framework's intended expenditures and the actual allocation of proceeds. Impact reports may also reveal when projects funded by bond proceeds have failed to demonstrate intended just transition impacts.

Recommendations for bond issuers

1. Bond frameworks should include both robust social safeguards and clear exclusions to prevent harm. These should be developed such that they are additional relative to existing laws.
2. Where relevant, eligible expenditures should include just transition-focused projects that causally link climate change mitigation action with social benefits in terms of education, equality or employment.
3. Post-issuance impact reporting should include metrics on both the benefits and any harm from funded activities. Successful impact depends on effective theories of change and project design.
4. Meaningful engagement with affected stakeholders and vulnerable groups is a core element of just transition and should be incorporated into bond frameworks and post-issuance reporting.

A systematic identification of best practice is needed to support further integration of just transition into fixed income instruments. In the next steps of this project, we aim to develop research to synthesise best practice across issuer types. A key objective will be to explore and strengthen the inclusion of just transition in existing GSS+ bond standards. We also welcome collaboration with entities that would like to issue a 'trailblazer' bond to demonstrate just transition-focused expenditures or performance targets.

1. Introduction

This report presents a novel methodology to assess the presence of just transition elements in green, social, sustainability and sustainability-linked (GSS+) bond frameworks.

The opportunity for fixed income instruments to finance the just transition

The net zero transition requires an unprecedented mobilisation of private finance for the transformation of economies. For this transformation to be accompanied by economic, financial and social stability, such finance also needs to be integrated with and supportive of the just transition. This creates an imperative for addressing climate action and social welfare together. GSS+ bonds present an opportunity for this integration: such instruments have mobilised over US\$5.7 trillion (Climate Bonds Initiative, 2024b).¹ (See Box 1.1 for definitions of these bonds.)

A consensus definition of just transition for use in the design of financial instruments has yet to be developed. Perspectives on just transition differ widely across stakeholder types and country income groups. It is defined by the International Labour Organization (ILO) as “greening the economy in a way that is as fair and inclusive as possible to everyone concerned, creating decent work opportunities and leaving no one behind”. The concept of just transition aims to dovetail two themes: the low-carbon transition and its social impacts. In the context of this report, we suggest that the just transition is not only about layering climate and social goals, which is broadly the definition of sustainability, but more specifically about managing the social harm and benefits brought about by the transition itself. Defining this term in the context of fixed income instruments can allow issuers to develop a pipeline of appropriate projects and compatible bond frameworks, while also enabling investors to clearly communicate a preference for deals that support the just transition.

For investors, integrating just transition considerations is increasingly important. The just transition interacts with investment risks – not only climate-related risks but also financial, reputational and litigation risks. Current information gaps in bond frameworks prevent effective management of these risks by investors. Moreover, there is a need to prepare for emerging regulation in some jurisdictions, such as the European Banking Authority’s ESG risk management standards which recommend inclusion of social risks in reporting (EBA, 2025). In addition, social investments will be needed to support climate action, including in green employment programmes and affordable infrastructure such as housing.

For impact investors, just transition lies at the centre of their investment mandates, which focus on double materiality in terms of generating social and sustainability co-benefits alongside financial returns. This agenda is particularly important in the context of the work programme of the UN Framework Convention on Climate Change (UNFCCC) on just transition pathways, which will be progressed at the COP30 conference. When first adopted in 2023, the programme took a broad approach to just transition principles, moving away from a narrow focus on the workforce to bring in wider socioeconomic implications such as poverty eradication and extending to other marginalised groups, including women, youth and Indigenous Peoples, with a particular focus on developing countries. Financial actors need to be responsive and prepared. Given this context, there is a need for a deeper understanding of what the just transition means in the context of specific financial instruments.

Assessing bond frameworks’ inclusion of just transition

In presenting a novel exploratory methodology to assess just transition elements in bond frameworks, our goal through this report is twofold:

¹ This figure includes only the labelled deals considered to be in alignment with the Climate Bonds Initiative methodologies.

- First, the methodology can support bond issuers in integrating just transition elements into their GSS+ bond frameworks.
- Second, we provide an assessment framework that investors may use to evaluate whether an investment made via a bond has the potential to drive meaningful just transition impacts.

This methodology can contribute to a shared understanding of just transition between fixed income market participants. We complement the methodology description with a set of examples to illustrate the application of the methodology and in some cases also showcase emerging good practice. We approach the complex meanings of just transition by using two complementary terms: ‘just transition-related’ and ‘just transition-focused’.

The methodology described in this report was presented and discussed during a roundtable with experts in just transition and fixed income. Participants included investors, banks, sovereign issuers, multilateral development banks, standard setters, research institutes and just transition experts. Input received during the roundtable was used to iterate and improve the proposed methodology.

The assessment methodology was tested on an exhaustive sample of GSS+ bond frameworks developed by sovereign bond issuers. The sample was drawn from the Climate Bonds Initiative’s datasets, which include bonds aligned with its methodologies for [green](#), [social and sustainability bonds](#) and [sustainability-linked bonds \(SLBs\)](#). The bond frameworks in our sample were therefore evaluated for their credibility and, for green bonds, their alignment with the Paris Agreement.

Box 1.1. Defining thematic GSS+ bonds

Use of proceeds (UoP) bonds are bonds where proceeds will be exclusively used to finance or re-finance expenditures defined in the bond framework. There are three main types:

- 1) **Green bonds:** proceeds are applied to finance eligible climate and environmental projects or activities. Blue bonds are a subset of green bonds, focusing on water management and marine ecosystems. [Transition bonds](#) are sometimes categorised as a subset of green bonds too, where proceeds are focused on transition to lower-carbon activities (Sustainalytics, 2025). However, some self-identified transition bonds do not meet enough criteria to be categorised as ‘green’.
- 2) **Social bonds:** proceeds are applied to finance eligible social projects or activities. Gender bonds and pandemic bonds are types of social bond.
- 3) **Sustainability bonds:** proceeds are applied to finance a combination of green and social projects. Sustainable Development Goals (SDG) bonds are a type of sustainability bond.

Sustainability-linked bonds (SLBs), unlike UoP bonds, are general-purpose debt instruments, the financial characteristics of which vary depending on whether the issuer achieves pre-defined, time-bound sustainability performance targets. They involve coupon step-ups or step-downs linked to the achievement of these targets. Targets and associated consequences are clarified in the bond framework. When evaluating an SLB, investors can analyse entity-level sustainability performance to assess the additionality and credibility of the bond’s targets.

A **GSS+ bond framework** is a document created by the issuer that articulates the proposed use of proceeds or sustainability performance targets, depending on the type of bond. A robust framework typically includes sections on the processes for project evaluation and selection, management of proceeds and reporting ([Climate Bonds Initiative, 2024a](#)). Multiple bonds may be issued against the same bond framework.

Post-issuance impact reporting is a core component of GSS+ bond principles. It involves periodic disclosure, after the bond has been issued, on the environmental or social impacts achieved through the projects financed by UoP. Impact reporting is often made alongside allocation reporting. In the case of SLBs, post-issuance reporting provides KPI data related to the bond’s performance targets.

Structure of the report

Section 2 describes the methodology and showcases examples of assessed sovereign bonds. We explore how bond frameworks could be further developed to optimise GSS+ bonds' contribution to a just transition.

Section 3 presents an overview of the results from applying the methodology to a sample of nearly 70 sovereign GSS+ bond frameworks.

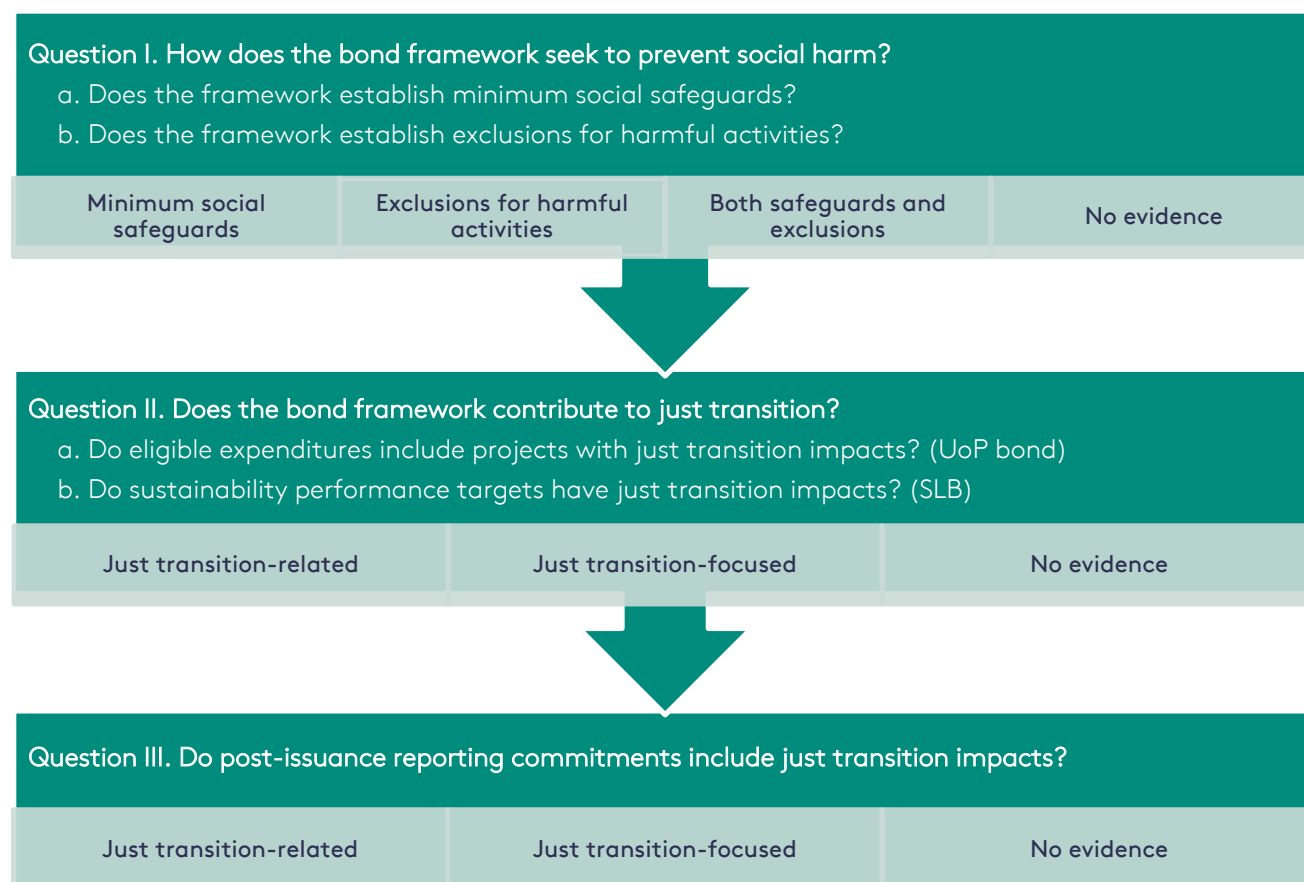
Section 4 discusses areas for further analysis to complement the assessment methodology.

Section 5 briefly presents our recommendations for bond issuers and discusses future research goals.

2. Assessment methodology

This section presents a methodology to assess the presence of just transition elements in GSS+ bond frameworks. The methodology was developed through an exploration of the key characteristics of bond frameworks that can be leveraged to encourage just transitions in a range of contexts: it evaluates the three groups of questions shown in Figure 2.1. The methodology is exploratory and does not aim to establish authoritatively what is sufficient for a bond to be considered fully aligned with the just transition. Although it was developed and tested against a sample of sovereign bond frameworks, the approach can be adapted to analyse the presence of just transition in bonds issued by other entities, including municipalities, multilateral development banks and companies.

Figure 2.1. Assessment methodology questions



The concept of just transition involves both addressing the adverse social outcomes of the transition, which we assess in Question I, and ensuring that any benefits of the transition are fairly distributed, which we assess in Questions II and III. For the latter two questions, the methodology classifies bond framework characteristics – eligible expenditures, performance targets and post-issuance reporting – as:

- **Just transition-related** for bonds with a possible contribution to just transition due to the inclusion of both climate change mitigation and at least one of the following social outcomes: education, employment or equality (see Box 2.1). This approach draws on a previous report on this topic from the Grantham Research Institute and Climate Bonds Initiative (Robins et al., 2023). Although this definition is similar to the broader term of sustainability, it considers a narrower set of social activities, excluding categories such as health, to emphasise the activities most likely to involve just transition considerations.

- **Just transition-focused** for bonds with a more intensive just transition contribution where mitigation and education, employment or equality activities share a *demonstrated causal link*. This element of causality is distinctive to the just transition, given its focus on managing the positive and negative social impacts that *result from* the low-carbon transition.
- **No evidence** of just transition contribution for cases where neither threshold is met.

Study sample and scope

The assessment methodology was tested by using it to evaluate nearly all existing sovereign GSS+ bond frameworks. This sample was sourced from the Climate Bonds Initiative’s datasets, which means that it includes only bonds that have been assessed to be in alignment with the Climate Bonds Initiative methodologies for GSS+ bonds. Frameworks are included if bonds were issued against them by September 2024.²

Bond frameworks were used as the unit of analysis as this is the primary type of information at the time of issuance to inform investment decisions. We focus on sovereign bonds because of the inherent overlap of national government responsibilities for social development and welfare and national climate planning. This makes sovereign bonds an ideal initial focus for this research as just transition elements may be reasonably expected from this issuer type. The methodology focuses on the intersection of social impacts and climate change mitigation. Climate change adaptation is not included in the assessment due to the different interaction between resilience and social activities, which could be explored in further dedicated research.

The sample includes 68 thematic bond frameworks issued by 55 countries. Most bond frameworks in the sample are categorised as green or sustainability bonds. Bond frameworks are concentrated in Europe, the Asia Pacific region and Latin America and the Caribbean (LAC) (see Figure 2.2). More bond frameworks are published by high-income countries; these countries tend to prefer green bonds, in contrast to middle- and low-income countries, which more often favour sustainability bonds (see Figure 2.3). In terms of cumulative issued debt, green bonds dominate (see Figure 2.4).

Figure 2.2. Sample of bond frameworks by region



² For example, we exclude Kenya’s Green Bond Framework as it has not yet been used to issue any bonds. It is discussed as an example in Section 4 but is excluded from the results in Section 3. Thailand’s SLB framework was included, despite being issued against after this cut-off date, so that our sample could include an additional sovereign SLB.

Figure 2.3. Sample of bond frameworks by World Bank income classification

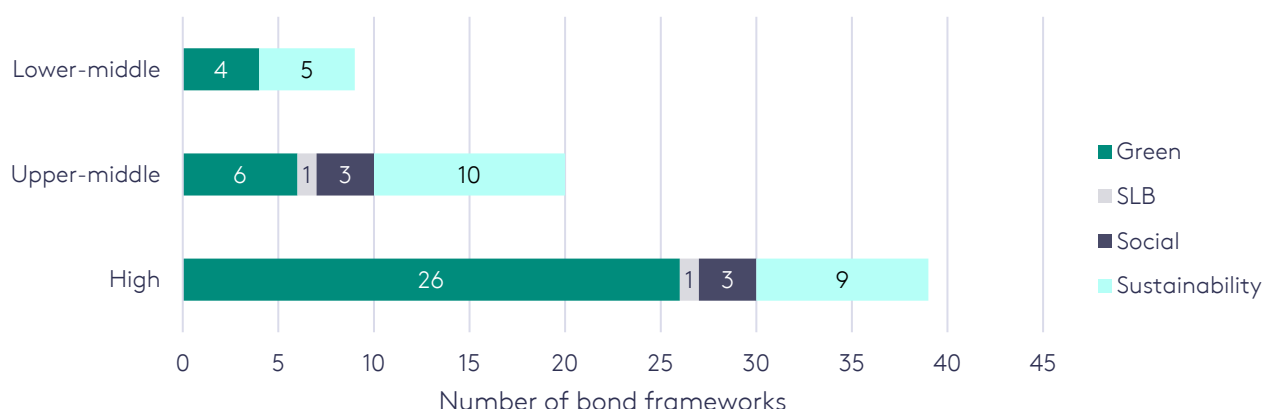
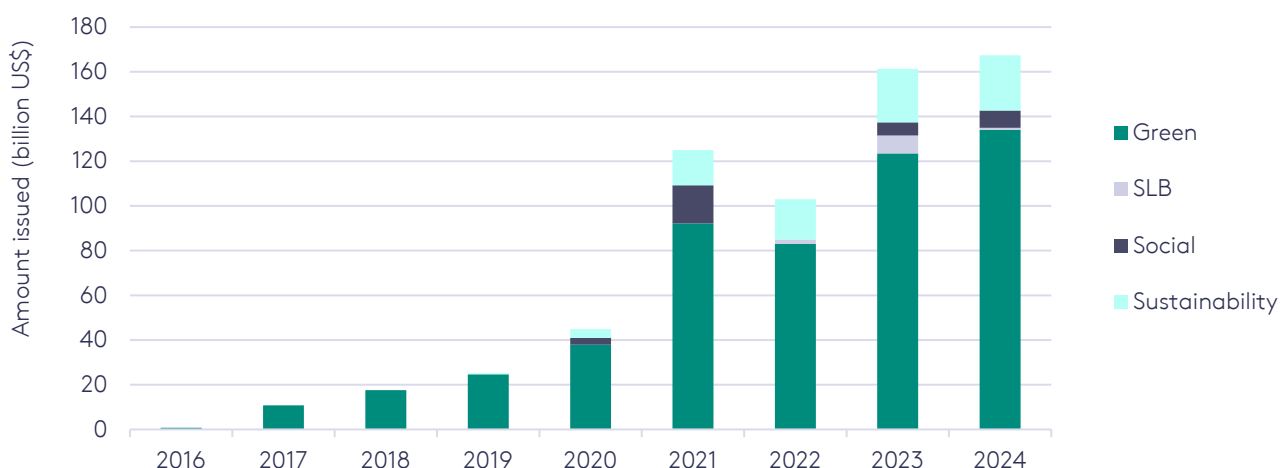


Figure 2.4. Volume of issuance of sovereign GSS+ bonds



Source: Climate Bonds Initiative Green and Social & Sustainability Bond Datasets

I. How does the bond framework seek to prevent social harm?

A core element of just transition is ensuring that decarbonisation efforts do not create or exacerbate social harm. This requires risk assessment and management, which is part of best practice for all thematic bonds regardless of whether they contain specific just transition intentions.

Efforts to prevent social harm can be split into two categories: social safeguards and exclusions of specified harmful activities. Safeguards aim to mitigate adverse impacts from investments made under the bond framework through active identification and management of risks. Meanwhile, exclusions aim to ensure expenditures are not allocated to any potentially harmful sector or type of activity. These can be complementary strategies for the prevention of social harm. However, harm prevention alone, be it through safeguarding or exclusions, is not enough to contribute to just transition aims.

a. Does the framework establish minimum social safeguards?

Minimum social safeguards identify, prevent, mitigate or remediate potential adverse impacts on society and vulnerable groups resulting from expenditures associated with a GSS+ bond. We define vulnerable groups as those at a higher risk of being disadvantaged by climate change or

decarbonisation or at a higher risk of being excluded from the benefits of decarbonisation. These groups should be defined using national criteria but would be expected to include women, local communities, Indigenous Peoples, low-income households (as defined by national thresholds) and groups where other disadvantages may be shaped by age, spatial, ethnic or physical disability characteristics.

Where possible, we recommend drawing on existing bond standards, many of which set out useful expectations regarding social safeguards. If the issuing entity is certified under the Climate Bonds Standard (Version 4 and above), this confirms that the issued bond has adequate social safeguards.

The [Climate Bonds Standard](#) for entity and sustainability-linked debt requires social safeguards disclosure to include the following:

- A summary assessment of the negative environmental or social externalities related to delivering the vision of the bond framework
- A summary description of the steps that the entity is taking, or planning to take, to mitigate those impacts
- A summary description of how, if at all, the low-carbon transition contributes to just transition in the region in which the activities are carried out
- Annual disclosure of an updated assessment of the negative externalities related to actions supporting the delivery strategy and the steps the entity is taking to mitigate those impacts.

The ASEAN Capital Markets Forum's Green, Social and Sustainability Bond Standards similarly require communication on social risk management (ACMF, 2019). The EU [Green Bond Standard](#) requires compliance with the minimum social safeguards set out in the EU Taxonomy Regulation. These safeguards are procedures implemented to ensure alignment with key international human rights and labour guidelines. The International Capital Market Association (ICMA) [Green Bond Principles](#) refer to social safeguard processes but are not prescriptive on their inclusion, encouraging issuers to communicate information on processes to manage perceived social risks and to have a process in place to identify mitigants to known material social or environmental risks (ICMA, 2021a).

This methodology does not attempt to evaluate the strength of safeguards, which can be evaluated based on the efforts made to identify adverse impacts, through the use of grievance mechanisms or supply chain due diligence, alongside clearly disclosed approaches to mitigate these impacts. The ongoing nature of social safeguarding means that post-issuance reporting is crucial for a full evaluation of its effectiveness.

[b. Does the framework establish exclusions for harmful activities?](#)

Exclusion criteria offer assurance that bonds will not directly finance harmful activities. They are usually specified alongside the list of eligible expenditures in UoP frameworks to confirm proceeds will not be allocated to certain sectors or activities, as recommended in the ICMA Green Bond Principles (ICMA, 2021a). SLB proceeds are used for general purposes rather than defined categories. Therefore, exclusions of specified activities, such as fossil fuel extraction or military spending, would be especially important to specify in the case of SLBs relative to UoP bonds. The Climate Bonds Initiative's entity-level [certification](#) requires the parent group of the entity issuing the bond to exclude expansion of fossil fuel activities and conversions of high-carbon stock land.

The additionality of exclusions as a tool for preventing harm depends on whether they duplicate the role of the eligible expenditures list or any existing laws. For example, sector-level exclusions such as tobacco and armaments for a GSS+ bond will often be redundant since the eligible expenditures list would implicitly already exclude these sectors. However, cross-sectoral exclusions, such as those preventing harm to specified vulnerable groups, would be meaningful and additional as this would not already be implied by the expenditures list.

The national legal context of a country should also be analysed to determine existing laws and human and labour rights conventions that the country has ratified (OHCHR, n.d.; ILO, n.d.). These can help to set a baseline against which specific exclusions stated in a bond framework can be evaluated as being additional or redundant. For example, a bond framework that sets an exclusion for activities involving forced labour would be redundant and insufficient if forced labour is already illegal in the country under domestic law. Further research would be warranted if forced labour were illegal but inadequately enforced; in such cases, the exclusion could be considered additional in that country, but a higher degree of scrutiny would be needed on the enforcement of exclusions as well as any stated social safeguards.

Examples assessing bond frameworks' prevention of social harm	
Safeguards	Slovenia's Sustainability Bond Framework is an example of good practice for safeguards. It has a section on the identification and mitigation of environmental and social risks, stating that ministries are responsible for ensuring that their respective identified budget expenditures are aligned with all relevant and applicable national and international environmental and social standards and regulation. It also specifies that all relevant risks should be identified and managed when selecting eligible green and social projects. Projects must adhere to the UN Guiding Principles on Business and Human Rights and the OECD Guidelines for Multinational Enterprises.
Exclusions	Benin's SDG Bond Framework excludes projects that are likely to be prejudicial to Indigenous Peoples and any territorial rehabilitation or development projects that would result in the displacement of more than 100 people without prior consultation or financial indemnification. These exclusions are understood as additional in the country's legal context as Benin has not ratified the ILO's Indigenous and Tribal Peoples Convention (ILO, n.d.).
	The Emirate of Sharjah's (UAE) Sustainable Financing Framework sets an exclusion for projects that involve child or forced labour. Although the UAE has ratified the Forced Labour Convention (ILO, n.d.), in practice the country has a high prevalence of forced labour. As such, the bond framework's exclusion could be considered additional to this country's baseline. Robust evidence of the enforcement of this exclusion, through grievance mechanisms and regular inspections, would be especially important.
No evidence	Luxembourg's Sustainability Bond Framework has a section on social risk mitigation, but it only states that projects are to be regulated by government policies such as the labour code. As this approach to social safeguards aligns only with what is already legally required in the country, it does not bring an additional contribution in terms of harm prevention.

II. Does the bond framework contribute to just transition?

a. Do eligible expenditures include projects with just transition impacts? (UoP bonds)

Achieving a just transition requires action and investment in transformative green and social activities. This question aims to determine whether eligible expenditures include projects that have just transition impacts. Our analysis is limited to the list of eligible projects published in a bond framework, which sets out the *intentions* for financed projects. Information on the actual allocation of proceeds is found in post-issuance allocation reports, which are outside the scope of this assessment methodology but are discussed further in Section 4.

We approach the complex meanings of just transition by using two complementary definitions. We use the term '**just transition-related**' for any GSS+ bond framework with use of proceeds

earmarked for both climate mitigation and a specific set of social activities, namely those related to employment, education or equality (see Box 2.1).

Box 2.1. Social just transition-related use of proceeds categories

We rely on the Climate Bonds Initiative's [Social and Sustainability Bond Dataset](#) categories of social use of proceeds. An earlier report by the Grantham Research Institute and Climate Bonds Initiative identified employment, education and equality to be the categories that are most likely to have relevance for the just transition (Robins et al., 2023).

- **Employment** includes activities related to job retention and creation, vocational training, SME financing and microfinance for informal sector firms where target individuals are at risk of being disadvantaged by climate action or excluded from its benefits. This category is just transition-related because a core element of just transition is ensuring access to green jobs and addressing employment losses from the closure of high-carbon industries.
- **Education** is a cornerstone of enabling fair access to employment opportunities in the low-carbon transition as it can provide the population with the skills required to participate in the green economy.
- **Equality** includes gender, financial, social, economic and political inclusion. Gender equality is a key part of just transition, given that green employment opportunities tend to arise in male-dominated sectors such as energy. Inclusion efforts promote participation in democratic processes and wider decision-making, incorporating citizen voices into decision-making, which is a key just transition consideration for policymakers.

We use the term '**just transition-focused**' to refer to bond frameworks with UoP earmarked to projects that explicitly target both climate change mitigation and employment, education or equality, where there is a demonstrated *causal* link between the mitigation and social projects. The criterion of causality aims to more clearly distinguish just transition from the broader term of sustainability, which in bond financing connects environmental and social goals. Just transition efforts can be more narrowly understood to focus on managing the positive and negative social impacts that *result from* the low-carbon transition. Determining causality in the context of this methodology can involve assessing whether social expenditures, such as training programmes, directly reference climate change mitigation projects or vice-versa.

A bond might be also categorised as just transition-focused if mitigation projects are clearly directed in the bond framework to benefit a disadvantaged or vulnerable target population. In such cases, the benefits and opportunities brought about by the low-carbon transition, such as new green jobs or access to clean and affordable energy, are being captured and distributed to vulnerable social groups. Relevant target populations could include Indigenous Peoples, racialised communities, workers affected by decarbonisation efforts, lower-income households, disabled individuals, youth and women. This approach is aligned with the Climate Bonds Social and Sustainability Bond Dataset Methodology assessment of social and environmental contributions to target populations.

This assessment does not quantify the share of the eligible expenditures that are just transition-related or -focused; nor is it intended to be prescriptive on the level of just transition integration expected in eligible expenditures, but rather to indicate the presence of just transition elements. In addition, the full list of eligible expenditures are not necessarily financed by a bond's actual use of proceeds. Allocation reports show that often proceeds are allocated to only a subset of eligible expenditure categories (Almeida and Muldoon, 2025).

Examples assessing eligible expenditures	
Just transition-related	Indonesia's SDG Bond Framework has eligible green expenditures that involve climate mitigation, such as renewable energy and energy efficiency spending. It also has employment-related spending in an eligible expenditures category for employment generation, including through the potential effect of SME financing and microfinance. There is no clear causal link between these two expenditures.
Just transition-focused	Nigeria's Green Bond Framework includes eligible expenditures such as job creation and training in renewable energy, and gender-inclusive employment in transport and afforestation. Because the employment opportunities are in mitigation-related sectors, the eligible expenditures would be considered just transition-focused.
Just transition-focused	Peru's Sustainable Bond Framework includes training programmes to increase technical knowledge in vocational centres among the eligible expenditures included under renewable energy, energy efficiency and low-carbon transport projects. There is a causal relationship between the education programmes and these specified mitigation projects.
No evidence	Australia's Green Bond Framework has eligible green expenditures that involve climate change mitigation, such as low-carbon transport and green buildings. No social expenditures are included in the framework, so it does not have any identified relevance to just transition.

b. Do sustainability performance targets have just transition impacts? (SLB)

SLB structures incentivise the bond issuer to meet pre-defined sustainability performance targets. Key performance indicators (KPIs) are assessed against these targets to determine any required adjustments to the bond's coupon rate (see Box 1.1).

An SLB framework would be considered *just transition-related* if it includes both climate targets and social targets related to employment, education or equality, but where these targets lack a causal relationship. An SLB framework would be considered *just transition-focused* if there is a causal link between its climate and social targets. For example, a bond framework might include mitigation targets to phase out coal production and social targets to retrain a specified percentage of the coal sector workforce for renewable energy activities. An SLB could also integrate climate and social ambitions into a single just transition-focused target. For example, a target to increase the number of subsidised low-cost housing units retrofitted with energy efficiency measures would be considered just transition-focused.

Examples assessing sustainability performance targets	
Just transition-related	<p>Chile's Sustainability-Linked Bond Framework sets three sustainability targets:</p> <ol style="list-style-type: none"> 1. Limit emissions to 95 MtCO₂-equivalent by 2030 and a cumulative maximum of 1,100 MtCO₂-equivalent between 2020 and 2030. 2. Achieve 50% of electricity generation from renewable energy sources by 2028 and 60% by 2032. 3. Achieve 40% representation by women on the board of directors in companies under the scope of Chile's Financial Market Commission by 2031. <p>The framework includes two climate change mitigation targets and one social target related to gender equality in employment. These targets are not linked in a way that addresses the social impacts <i>caused by</i> the low-carbon transition. Therefore, these targets would together be considered 'just transition-related'.</p>

Just transition-focused	No sovereign SLB framework was identified as meeting the relevant criteria.
No evidence	<p>Thailand's Sustainability-Linked Bond Framework includes mitigation targets related to reducing emissions and increasing the number of zero emissions vehicles registered in the country. Because the bond framework lacks social targets, it does not have any identified relevance to just transition.</p> <p>Uruguay's Sustainability-Linked Bond Framework includes targets related to reducing emissions and maintaining native forests. Because the bond framework lacks social targets, it does not have any identified relevance to just transition.³</p>

III. Do post-issuance reporting commitments include just transition impacts?

Post-issuance reporting provides accountability and assurance that issued bonds are achieving intended positive impacts, either via aligned allocations for UoP bonds or by meeting targets for SLBs. This disclosure is required to meet most standards and frameworks, including the ICMA Green Bond Principles, so it is considered critical by many investors. Nearly 90% of UoP issuers assessed by Climate Bonds Initiative committed to impact reporting (Almeida and Muldoon, 2025). Impact reporting can be informative to investors both for UoP bonds and SLBs. This question evaluates whether impact reporting commitments described in the bond framework include just transition metrics. Section 4 of this report examines further complexities of post-issuance reporting and its relevance to just transition.

An impact reporting commitment would be categorised as just transition-*related* when both climate change mitigation (e.g. metric tonnes of emissions reduced) and social impacts (e.g. number of beneficiaries of educational programmes) of the bond are reported but do not share a causal link. This is common across sustainability bond frameworks, which frequently combine an extensive range of environmental and social impact metrics.

An impact reporting commitment would be considered just transition-*focused* when there is a clear causal link between green and social outcomes in the reported metric, demonstrating that the projects financed by the bond specifically address social impacts *caused by* the low-carbon transition. This may include metrics that capture the social dimensions of the transition, such as the number of low-income households that benefited from reduced electricity prices because of a new renewable energy project financed by the bond.

Examples assessing impact reporting	
Just transition-related	The Republic of Korea's Green and Sustainability Bond Framework includes impact reporting on environmental and social benefits separately. For example, impact metrics include greenhouse gas emissions avoided due to financed renewable energy projects and the number and age range of beneficiaries of delivered educational projects. As these metrics are not causally linked, the reporting would be just transition-related.
Just transition-focused	Peru's Sustainable Bond Framework includes impact reporting on the number of people benefiting from training programmes for renewable energy, energy efficiency and low-carbon transport. It also includes reporting on the number of households, people and micro, small and medium-sized enterprises (MSMEs) that have access to energy efficiency systems.

³ Uruguay's SLB is described here but it is not included in the Climate Bonds Initiative's dataset as it does not meet the Sustainability-Linked Bond Dataset Methodology alignment criteria. It is therefore excluded from the results in Section 3.

	Chile's Sustainable Bond Framework includes an impact metric on the number of people who benefited from training programmes related to renewable energy projects.
	Egypt's Sustainable Financing Framework includes an impact metric on the number of smallholder farmers trained in sustainable agricultural practices, particularly women.
	The Philippines' Sustainable Finance Framework includes an impact reporting metric on the number of people that are provided with access to clean and affordable energy.
	The United Kingdom's Green Financing Framework includes a commitment to report on the social co-benefits, primarily new employment opportunities, brought about by financed green projects. This is one of the few bonds not labelled as 'sustainable' that has just transition-focused impact reporting (Robins and Muller 2021).
No evidence	Austria's Green Bond Framework includes a commitment to report on a range of environmental impact metrics, but none cover relevant social impacts (employment, education or equity), so the impact reporting does not have any identified relevance to just transition.

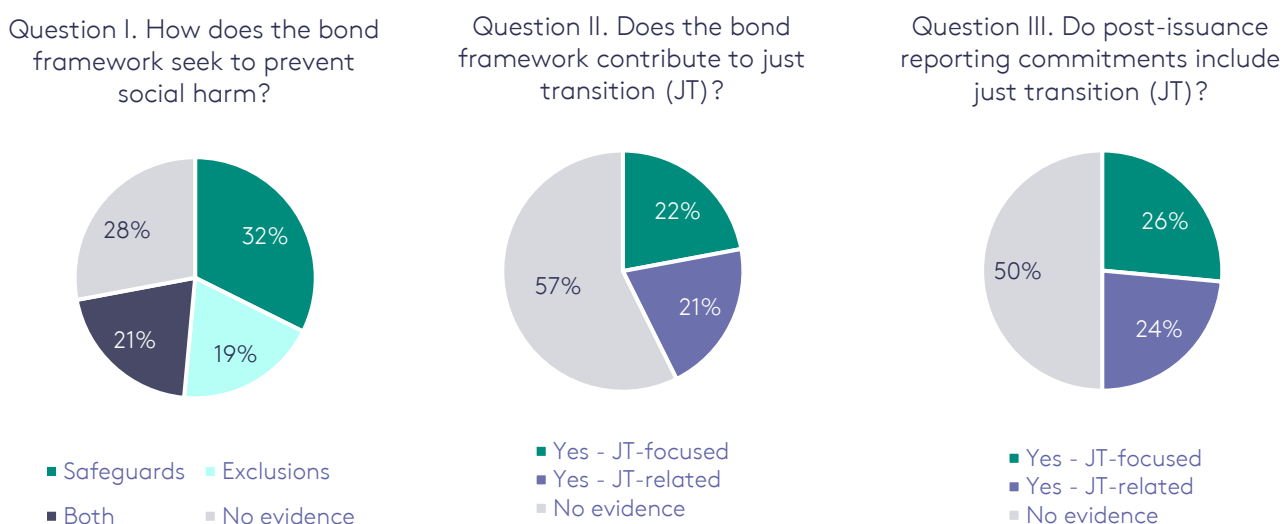
3. Overview of assessment results

Assessing a sample of nearly all existing sovereign GSS+ bond frameworks using the methodology above, we find some evidence of the incorporation of just transition (see Appendix 1 for full results by country). The majority of sovereign frameworks (72%) have an approach to managing and preventing social harm through social safeguards, exclusions or both. However, prevention of social harm is not sufficient on its own for a bond framework to be considered aligned with just transition.

A meaningful share (22%) of frameworks were found to have just transition-focused expenditures through their inclusion of financed projects that directly manage the social harm caused by and the opportunities of the low-carbon transition. A further 21% of frameworks fulfil the less stringent definition of being just transition-related: many of these are sustainability bonds. This is to be expected given the close overlap between the just transition-related definition and the sustainability label. It is important to note that these assessment results do not mean that all UoPs of a given bond are just transition-related or -focused, but that there is at least one eligible expenditure that is relevant to just transition goals.

Impact reporting was more frequently categorised as just transition-focused (26%) than the list of eligible expenditures. This is partly because impact reporting can include a wide range of topics, co-benefits and metrics with potential links to the just transition, compared with the relatively narrower scope of an eligible expenditures list. Impact reporting tends to be shaped by the UoP: just transition impact reporting assessed in Question III usually exists in bond frameworks that have just transition elements based on the UoP assessment in Question II. There are some exceptions: some green bonds include social impact reporting on co-benefits, such as the UK's green gilt.

Figure 3.1. Overview of assessment results across the sample of sovereign GSS+ bond frameworks

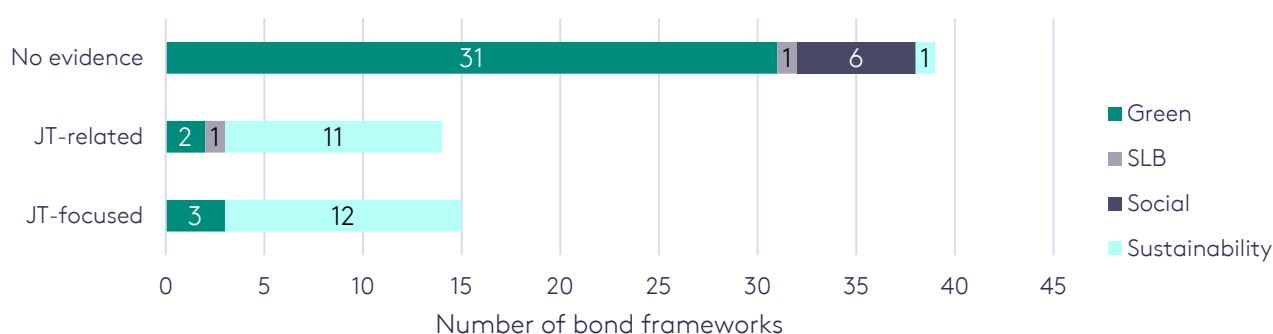


There is a relationship between bond labels and the presence of just transition elements. For bond frameworks categorised as just transition-related or -focused, there is a clear overlap with the sustainability bond label. Indeed, nearly all bond frameworks found to have just transition-related or -focused expenditures or targets are labelled in the Climate Bonds Initiative's dataset as a sustainability bond. Conversely, nearly all those found to have no relevance to the just transition are green or social bonds. This result is unsurprising and speaks to the fact that both sustainability bonds and the just transition seek to achieve a combination of environmental and social

outcomes. However, some green and social bonds were also identified as just transition-related or -focused. This can occur when overall expenditure categories are purely green or social, but within those defined categories there is a mix of social and green projects. For example, Nigeria’s green bond includes training programmes within its renewable energy category of expenditures.

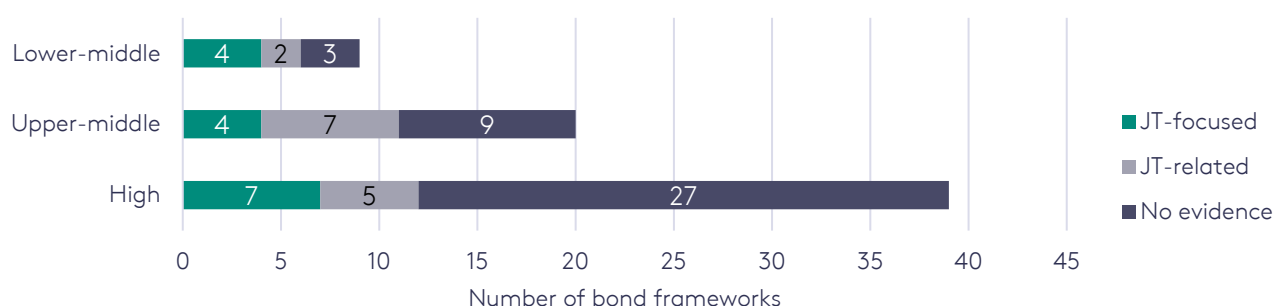
The small sample of only three sovereign SLB frameworks – issued by Chile, Thailand and Uruguay – limits potential conclusions on this instrument type. Chile’s SLB framework has just transition-related elements, through its combination of an emissions reduction target and a target around gender inclusion in employment. The sovereign SLB market is expected to grow, with potential issuances from [Brazil](#), [Vietnam](#) (Climate Bonds Initiative, 2024d), [South Africa](#), [Kenya](#) and [Rwanda](#) (Whiteacre, 2024): this could create opportunities for the inclusion of just transition performance targets in this instrument type.

Figure 3.2. Bond framework contribution to just transition (Question II) by bond framework label



The presence of just transition elements differs across sovereign issuers’ income levels. Upper and lower-middle-income countries tend to issue more sustainability bonds than green bonds relative to high-income countries (see Figure 2.3 above). Related to their tendency to issue green bonds, high-income countries’ bond frameworks appear to include just transition in eligible expenditures less (as a share of total frameworks developed) relative to middle-income countries (see Figure 3.3). This suggests that in countries where economic and societal development priorities are high, climate change mitigation efforts are already combining green and social considerations, which is one way to frame the concept of just transition. Developing countries therefore appear to be leading on integrating just transition into their sovereign bond frameworks, although this is difficult to separate from labelling tendencies.⁴

Figure 3.3. Bond framework contribution to just transition (Question II) by country income group



⁴ We note that our sample for lower-middle income countries includes only nine bond frameworks and no low-income countries are included. Income group categories are taken from the World Bank.

4. Discussion of further complementary analysis

The assessment methodology is designed to provide a structured set of key criteria to be met on a relatively binary basis by bond frameworks. Such a methodology can have significant value in supporting investor decision-making and issuers' bond design. However, key aspects of the just transition are not fully captured in such an approach. There are three dimensions that need to be considered in this regard: an analysis of country context, a deepened evaluation of just transition elements and an investigation of post-issuance impact.

First, the just transition is context-specific and this should be reflected in a holistic assessment of issuing entities as well as bond frameworks. The assessment methodology, which relies on bond frameworks in isolation, can be complemented by a contextual assessment of pertinent just transition issues in a country and reasonable expectations of the government's contributions to just transition goals. Further examination of additionality in relation to both finance and impact, the share of financing and refinancing, and the extent of the look-back period may also be warranted (BII, 2022; ICMA, 2021a) but was not incorporated in our methodology. Some material examples of context-based gaps are highlighted in the table below. Most commonly, the gap arises where the bond framework includes some just transition elements but, when placed into the broader country context, the contribution to the just transition appears not to be addressing the most pertinent issues in that context. For example, bond frameworks may limit targeted beneficiaries in ways that do not tackle material, context-specific social issues.

Country-specific context can be assessed as a complement to the bond framework using issuer-level evaluations such as the Assessing Sovereign Climate-related Opportunities and Risks (ASCOR) tool. This tool evaluates how countries are managing climate change and the social risks and opportunities of the low-carbon transition. It provides transparent and comparable data on how countries are developing the institutional capacity to address the needs of workers and communities affected by decarbonisation (the ASCOR just transition policy methodology is provided in Appendix 2). The ASCOR assessment of climate and just transition policies can be harnessed by investors to evaluate entity-level climate strategy when considering a sovereign GSS+ bond (Climate Bonds Initiative, 2024c).

Examples of context-adjusted assessments of bond frameworks	
Narrow set of beneficiaries	The United Arab Emirates' Sustainable Financing Framework has a category in its eligible expenditures that we classify as just transition-related. However, while the framework identifies low-income, disabled and marginalised groups as beneficiaries, this is limited to national citizens. Migrant workers are excluded, which is problematic given widespread reporting of modern slavery and abuse of this workforce (Garrett, 2023). While the UAE is working to improve employment standards for migrant workers, this context undermines the credibility of the bond framework's contribution to the just transition.
Narrow set of beneficiaries	Chile's Sustainability-Linked Bond Framework is classified as just transition-related because it sets both a climate change mitigation target and a social target to reach 40% women representation on corporate boards of directors. However, this target does not address Chile's substantial gender-related issues – many of which are most likely to affect vulnerable and low-income women – including gender pay gaps that favour men and workplace sexual harassment that particularly impacts women. Chile has a low overall gender equality score relative to its peers (World Bank, 2024). Although the gender inclusion SLB target is relevant in Chile's context, its focus on inclusion in corporate governance is fairly narrow.

Second, a deepened evaluation of identified just transition elements could go beyond a threshold-based analysis. This is of particular importance because the quality of just transition elements varies significantly across entities and frameworks, with some having higher standards than others. The table below provides examples of this spectrum of quality across bond frameworks, focusing on one key aspect of the just transition: engagement with vulnerable groups.

Examples of frameworks' varying levels of engagement with vulnerable groups	
Good practice	Canada's Green Bond Framework references its national climate policy, which recognises Indigenous Peoples' rights and requires their consultation in relation to infrastructure resilience, food security, clean energy and nature conservation. The allocation of proceeds and impact reporting are overseen by the Interdepartmental Green Bonds Committee, which includes Indigenous representatives. The ASCOR assessment of Canada contributes further evidence of participatory processes, finding that Canada has an inclusive and institutionalised approach to just transition.
Good practice	New Zealand Aotearoa's Green Bond Framework refers to the need to incorporate He Ara Waiora, typically translated as the Māori perspective on wellbeing and harmony with the natural world. The framework has provisions to ensure green energy, housing and transport access for low-income communities and includes community-level energy and housing projects. It also highlights social co-benefits, such as reduced electricity costs for remote communities.
Missing engagement	Kenya's Green Bond Framework does not set out engagement commitments with tribal groups, despite the fact that some of the eligible expenditures may be relevant to ethnic and regional inequality. For example, sustainable water management projects included in the bond would benefit from clear engagement commitments given the context of water access being a factor in regional conflict and disputes. The bond framework establishes that projects are the responsibility of the national government with no requirement to consult with the devolved county governments established under the 2010 Constitution.

Third, this assessment methodology for bond frameworks should be complemented with an ex-post analysis, drawing on post-issuance impact and allocation reports. This can identify material gaps between a UoP bond framework's intended scope and the actual post-issuance allocation of proceeds. Such gaps can undermine the expected just transition impact to which investors may have subscribed. Further, impact reports may reveal that the issuer has failed to demonstrate intended just transition impacts. This could be caused by weaknesses in the theories of change or poorly chosen KPIs that do not enable a comprehensive assessment of just transition impacts.

Examples of gaps in post-issuance impacts	
Proceeds not allocated to just transition	Peru's 2021 Sustainable Bond Framework includes renewable energy and energy efficiency training programmes among the eligible expenditures so it was categorised as just transition-focused. The framework also commits to impact reporting on the number of beneficiaries of these programmes. However, the impact reports published between 2021 and 2024 do not yet report any funds being spent on these training programmes.
Lack of impact delivery	Nigeria's Green Bond Framework seeks to ensure social safeguarding through an approach developed with support from the Nigerian Green Bond Market Development Programme (Climate Bonds Initiative et al., 2021). These include

	gender-balanced employment creation in agriculture and engagement with Indigenous Peoples. However, the most recent impact report noted low levels of community engagement and that the realised impact for women, youth and the community was 'very limited'.
Gaps in KPI design and impact reporting	Benin's SDG Bond Framework excludes projects that are likely to be prejudicial towards Indigenous Peoples. However, beneficiaries who are Indigenous are not disaggregated for most projects in the bond's 2023 impact report, which means that any prejudicial impacts on these groups cannot be clearly assessed. This is partly mitigated by some reporting that disaggregates Indigenous Peoples from other beneficiaries in terms of education and agricultural livelihoods.
Opportunity to elaborate theories of change	Indonesia's SDG Bond Framework has eligible employment-related projects including microfinance and training programmes, leading to it being categorised as just transition-related. Microfinance lending is not always robustly linked to inclusive economic growth and poverty reduction in middle-income countries, although it shows stronger impact on savings and household resilience in low-income countries without adequate social protection (ICAI, 2023). In Indonesia's case, this could mean that the allocation of proceeds to microfinance projects may not generate intended employment benefits. The bond framework could be improved by an explicit theory of change around the expectations of microfinance projects to mitigate these concerns.

5. Recommendations and next steps

Adopting an exploratory assessment methodology, we have found evidence that just transition has been embedded in some sovereign bond frameworks but there is an opportunity for further improvement. This conclusion is supported by related research findings: regulatory just transition actions have progressed but an inclusive just transition approach monitored by a government body is missing in most countries (Scheer, Cristancho-Duarte et al., 2024). Both at the sovereign entity level and within GSS+ bond frameworks, greater integration of just transition is needed.

We propose four recommendations for bond issuers including, but not limited to, sovereigns:

1. As a first step to addressing just transition, GSS+ bond frameworks should include both robust social safeguards and clear exclusions to prevent harm. These should be additional relative to existing laws.
2. Where relevant, eligible expenditures and performance targets should include just transition-focused projects that causally link climate action with social impact in education, equality or employment.
3. Post-issuance impact reporting should aim to clearly demonstrate just transition impacts, which rely on effective theories of change and project design.
4. Commitments to meaningful engagement with affected groups should be made in bond frameworks. Post-issuance reporting should integrate community voice in project monitoring through surveys with target populations on achieved impacts.

The methodology discussed in this report provides useful initial insight and can benefit from complementary analysis. Greater consideration of country context could be achieved with assessments of issuer-level just transition characteristics, drawing on the ASCOR tool, for example. A deepened qualitative assessment of bonds is also needed: this requires further definition of best practice. And a rigorous investigation of post-issuance impact is necessary, to understand whether intended just transition impacts were achieved.

Several themes, including adaptation and biodiversity, could be prioritised in potential extensions of the assessment methodology. Adaptation is of particular importance because of its intersection with just transition in many emerging markets and developing countries, where there is a nexus of physical climate risks and low institutional and financial capacity to manage a just and resilient transition. The overlap between resilience and social impact requires a distinct methodology to assess just transition relevance.

A systematic identification of best practice is needed to support the integration of just transition into fixed income instruments. This presents significant complexity across different contexts and dimensions of the just transition. We aim to address this through research to identify and synthesise examples of best practice across issuer types beyond sovereigns. For example, we may prioritise harnessing the methodology to assess GSS+ bond frameworks published by multilateral development banks given their deep institutional capacity in community engagement, and review multidimensional scoring systems used by asset managers. We intend to investigate differentiated approaches to just transition across sectors and country income groups.

A key pathway to improving the integration of just transition into bond frameworks would be to strengthen its inclusion in existing standards and certifications for GSS+ bonds. For example, the Climate Bond Standard and Certification Scheme, the ICMA Green, Social, Sustainability and Sustainability-Linked Bond Principles (ICMA, 2021a; 2021b; 2023; 2024), along with other national and supranational standards can be explored to deepen their consideration of the just transition.

The authors welcome collaboration with bond issuers that have the capabilities and appetite to issue a 'trailblazer' bond to demonstrate a set of just transition-focused UoP or performance targets. Such a deal could help to shape best practice for bond frameworks and impact reporting.

Appendix 1. Sovereign bond framework assessment results

Sovereign	Label	Region	World Bank income group	Year first issued against	Question I. How does the bond framework seek to prevent social harm?	Question II. Does the bond framework contribute to just transition?	Question III. Do post-issuance reporting commitments include just transition?
Andorra	Sustainability	Europe	High	2021	Safeguards	JT-related	JT-related
Argentina	Sustainability	LAC	Upper-middle	2023	Exclusions	JT-related	JT-related
Australia	Green	Asia-Pacific	High	2024	Safeguards	No evidence	No evidence
Austria	Green	Europe	High	2022	Safeguards	No evidence	No evidence
Belgium	Green	Europe	High	2018	No evidence	No evidence	No evidence
Benin	Sustainability	Africa	Lower-middle	2021	Both ¹	JT-related	JT-focused
Brazil	Sustainability	LAC	Upper-middle	2023	Both	JT-focused	JT-focused
Canada	Green	N America	High	2022	Safeguards	No evidence	JT-focused
Chile	Green	LAC	High	2019	Both	JT-focused	JT-focused
Chile	SLB	LAC	High	2022	No evidence	JT-related	JT-related
Chile	Social	LAC	High	2020	Both	No evidence	No evidence
Chile	Sustainability	LAC	High	2021	Both	JT-focused	JT-focused
China (Hong Kong)	Green	Asia-Pacific	High	2019	No evidence	No evidence	No evidence
Colombia	Green	LAC	Upper-middle	2021	No evidence	No evidence	No evidence
Colombia	Social	LAC	Upper-middle	2023	Exclusions	No evidence	JT-related
Cote d'Ivoire	Sustainability	Africa	Lower-middle	2024	No evidence	JT-focused	No evidence
Cyprus	Sustainability	Europe	High	2023	Both	JT-focused	JT-focused
Denmark	Green	Europe	High	2022	Safeguards	No evidence	No evidence
Dominican Republic	Green	LAC	Upper-middle	2024	Both	JT-related	JT-related
Ecuador	Social	LAC	Upper-middle	2020	Safeguards	No evidence	No evidence
Egypt	Green	Africa	Lower-middle	2020	No evidence	No evidence	No evidence
Egypt	Sustainability	Africa	Lower-middle	2023	Safeguards	JT-focused	JT-focused
Fiji	Green	Asia-Pacific	Upper-middle	2017	Safeguards	No evidence	No evidence
Fiji	Sustainability	Asia-Pacific	Upper-middle	2023	Both	JT-focused	JT-focused
France	Green	Europe	High	2017	No evidence	No evidence	No evidence
Germany	Green	Europe	High	2020	Both	No evidence	No evidence

Ghana	Green	Africa	Lower-middle	2020	Exclusions	No evidence	JT-focused
Guatemala	Sustainability	LAC	Upper-middle	2024	Exclusions	JT-related	JT-related
Hungary	Green	Europe	High	2020	Safeguards	JT-related	No evidence
Iceland	Green	Europe	High	2024	Safeguards	No evidence	No evidence
Iceland	Social	Europe	High	2024	Safeguards	No evidence	No evidence
India	Green	Asia-Pacific	Lower-middle	2023	No evidence	No evidence	JT-focused
Indonesia	Green	Asia-Pacific	Upper-middle	2018	No evidence	No evidence	No evidence
Indonesia	Sustainability	Asia-Pacific	Upper-middle	2021	Exclusions	JT-related	JT-related
Ireland	Green	Europe	High	2018	No evidence	No evidence	No evidence
Isle of Man	Sustainability	Europe	High	2021	No evidence	No evidence	JT-related
Israel	Green	Asia-Pacific	High	2023	Safeguards	No evidence	No evidence
Italy	Green	Europe	High	2021	Safeguards	No evidence	No evidence
Japan	Green	Asia-Pacific	High	2024	Both	No evidence	No evidence
Latvia	Sustainability	Europe	High	2021	No evidence	JT-focused	JT-focused
Lithuania	Green	Europe	High	2018	Safeguards	No evidence	No evidence
Luxembourg	Sustainability	Europe	High	2020	No evidence	JT-related	JT-related
Malaysia	Sustainability	Asia-Pacific	Upper-middle	2021	Exclusions	JT-related	JT-related
Mexico	Sustainability	LAC	Upper-middle	2020	Exclusions	JT-focused	JT-related
Netherlands	Green	Europe	High	2019	Safeguards	No evidence	No evidence
New Zealand	Green	Asia-Pacific	High	2022	Safeguards	JT-focused	No evidence
Nigeria	Green	Africa	Lower-middle	2017	Safeguards	JT-focused	JT-focused
Peru	Social	LAC	Upper-middle	2021	Both	No evidence	No evidence
Peru	Sustainability	LAC	Upper-middle	2021	Both	JT-focused	JT-focused
Philippines	Sustainability	Asia-Pacific	Lower-middle	2022	Exclusions	JT-related	JT-focused
Poland	Green	Europe	High	2016	No evidence	No evidence	No evidence
Romania	Green	Europe	High	2024	Safeguards	No evidence	JT-focused
Serbia	Green	Europe	Upper-middle	2021	No evidence	No evidence	No evidence
Serbia	Sustainability	Europe	Upper-middle	2024	No evidence	JT-related	JT-related
Singapore	Green	Asia-Pacific	High	2022	Exclusions	No evidence	JT-focused
Slovenia	Social	Europe	High	2024	Safeguards	No evidence	No evidence
Slovenia	Sustainability	Europe	High	2021	Safeguards	JT-focused	JT-related
South Korea	Green	Asia-Pacific	High	2021	Exclusions	No evidence	No evidence
South Korea	Sustainability	Asia-Pacific	High	2019	Exclusions	JT-focused	JT-related

Spain	Green	Europe	High	2021	Safeguards	No evidence	No evidence
Sweden	Green	Europe	High	2020	No evidence	No evidence	No evidence
Switzerland	Green	Europe	High	2022	Safeguards	No evidence	No evidence
Thailand	Sustainability	Asia-Pacific	Upper-middle	2020	Exclusions	JT-related	JT-related
Thailand	SLB	Asia-Pacific	Upper-middle	No date	No evidence	No evidence	No evidence
Turkey	Green	Asia-Pacific	Upper-middle	2023	Exclusions	No evidence	No evidence
UAE	Sustainability	Asia-Pacific	High	2023	Both	JT-related	JT-related
UK	Green	Europe	High	2021	No evidence	No evidence	JT-focused
Uzbekistan	Sustainability	Asia-Pacific	Lower-middle	2021	Both	JT-focused	JT-focused

1. Note: In Question I, 'Both' means through both safeguards and exclusions.

Appendix 2. ASCOR just transition assessment methodology

Indicator a	Has the country ratified fundamental human, labour and Indigenous rights conventions?
	<p>A country is assessed as 'Yes' if the following are true:</p> <ol style="list-style-type: none"> 1. It has ratified at least half of the UN's 18 human rights instruments 2. It has ratified at least half of the International Labour Organization's 14 Fundamental and Governance Conventions 3. It has ratified the Indigenous and Tribal Peoples Convention No. 169 4. It has endorsed the Declaration on the Rights of Indigenous Peoples. <p>These international treaties and declarations form a universal and comparable foundation for climate-specific just transition policies. Countries without Indigenous peoples are exempt from criteria 3 and 4. Guidance on such exemptions is drawn from various sources including the International Work Group for Indigenous Affairs (IWGIA).</p>
Metric a.i	At what percentile is the country's Voice and Accountability estimate?
	<p>This metric is drawn from the World Bank's Worldwide Governance Indicators, of which the Voice and Accountability Indicator captures freedom of expression, freedom of association, free media and citizens' participation in elections. Similar to indicator a, this metric contributes contextual information on a universal and comparable foundation of freedom and democratic rights for just transition policies. For further information, see the Worldwide Governance Indicators methodology (Kaufmann et al., 2010).</p>
Indicator b	Does the country have an inclusive and institutionalised approach on the just transition?
	<p>A country is assessed as 'Yes' if it has a just transition strategy that:</p> <ul style="list-style-type: none"> • Involves social dialogue with workers • Involves engagement with at least three of the following stakeholder groups: Indigenous Peoples, rural communities, minorities, a citizens' assembly for climate, civil society, low-income households, women, young people, or another specified group • Establishes a just transition commission, defined by Heffron (2021) as a body that provides expert advice on just transition measures and policies and ensures the delivery of a just transition by monitoring the implications of existing legal and executive government frameworks.
Indicator c	Does the country have a green jobs strategy?
	<p>A country is assessed as 'Yes' if it has a green jobs strategy that identifies employment-related opportunities from the low-carbon transition and sets actions, measures or policies to harness these identified opportunities. Such measures may include creating decent green jobs, addressing job losses caused by the transition, and launching skill development programmes.</p>
Indicator d	Does the country integrate just transition into its carbon pricing?
	<p>A country is assessed as 'Yes' if its implementation of carbon pricing involves a clear acknowledgement or mechanism to address the potentially regressive distributional impacts on lower-income citizens. If the country has no carbon pricing, this indicator is assessed as 'Not applicable'.</p>

Source: [ASCOR methodology note Version 1.1](#) (Scheer, Honneth et al., 2024)

References

- Almeida M (2024) *Sustainability Linked Bonds: Building a High Quality Market*. Climate Bonds Initiative. https://www.climatebonds.net/files/reports/cbi_slb_report_2024_04d.pdf
- Almeida M and Muldoon C (2025) *Transparency & Reporting in the GSS Bond Market*. Climate Bonds Initiative. <https://www.climatebonds.net/resources/reports/transparency-reporting-gss-bond-market>
- British Investment International [BII] (2022) *Our approach to investor contribution 2022 – 26 Strategy Period*. <https://assets.bii.co.uk/wp-content/uploads/2022/05/19141040/Our-approach-to-investor-contribution.pdf>
- ASEAN Capital Markets Forum [ACMF] (2019) *ASEAN Green, Social and Sustainability Bond Standards*. <https://www.theacmf.org/sustainable-finance/publications>
- Climate Bonds Initiative, FSD Africa and FMDQ Group PLC (2021) *The Nigerian Green Bond Market Development Programme Impact Report (2018 - 2021)*. <https://www.fsdafrica.org/wp-content/uploads/2022/04/Green-Bond-Impact-report-2018-2021.pdf>
- Climate Bonds Initiative (2024a) *Climate Bonds Standard Version 4.2*. https://www.climatebonds.net/files/files/CBI_Standard_V4-2_02D.pdf
- Climate Bonds Initiative (2024b) *Global GSS+ market surges to USD 5.4 trillion in Q3*. Press release, 28 November. <https://www.climatebonds.net/resources/press-releases/2024/11/global-gss-market-surges-usd-54-trillion-q3>
- Climate Bonds Initiative (2024c) *Sustainability-linked Bonds: Building a High-Quality Market*. https://www.climatebonds.net/files/reports/cbi_slb_report_2024_04d.pdf
- Climate Bonds Initiative (2024d) *Sustainable Debt Market Summary Q1 2024*. https://www.climatebonds.net/files/reports/cbi_mr_q1_2024_01e_1.pdf
- European Banking Authority [EBA] (2025) *The EBA publishes its final Guidelines on the management of ESG risks*. Press release, 9 January. <https://www.eba.europa.eu/publications-and-media/press-releases/eba-publishes-its-final-guidelines-management-esg-risks>
- Garrett A (2023) *Modern-Day Slavery in the United Arab Emirates*. Blog post. Human Rights Research Center. <https://www.humanrightsresearch.org/post/modern-day-slavery-in-the-united-arab-emirates>
- Government of Canada (2023) *Green Bond Framework*. <https://www.canada.ca/content/dam/fin/publications/green-bond/Green%20Bond%20Framework%20Report%20EN%20v02.pdf>
- Heffron RJ (2021) 'The Advance of Just Transition Commissions'. In: *Achieving a Just Transition to a Low-Carbon Economy*. Palgrave Macmillan: 43–85.
- Independent Commission on Aid Impact [ICAI] (2023) *UK aid to India: literature review*. <https://icai.independent.gov.uk/html-version/uk-aid-to-india-literature-review/>
- International Capital Market Association [ICMA] (2024) *Sustainability-Linked Bond Principles*. <https://www.icmagroup.org/assets/documents/Sustainable-finance/2024-updates/Sustainability-Linked-Bond-Principles-June-2024.pdf>
- ICMA (2023) *Social Bond Principles*. <https://www.icmagroup.org/assets/documents/Sustainable-finance/2023-updates/Social-Bond-Principles-SBP-June-2023-220623.pdf>
- ICMA (2021a) *Green Bond Principles*. <https://www.icmagroup.org/assets/documents/Sustainable-finance/2022-updates/Green-Bond-Principles-June-2022-060623.pdf>
- ICMA (2021b) *Sustainability Bond Guidelines*. <https://www.icmagroup.org/assets/documents/Sustainable-finance/2021-updates/Sustainability-Bond-Guidelines-June-2021-140621.pdf>
- International Labour Organization [ILO] (n.d.) *Ratifications by country*. Web page. https://normlex.ilo.org/dyn/nrmlx_en/f?p=NORMLEXPUB:11001:0::NO::
- Kaufmann D, Kraay A and Mastruzzi M (2010) *The Worldwide Governance Indicators: Methodology and Analytical Issues*. World Bank Policy Research Working Paper No. 5430. <https://ssrn.com/abstract=1682130>

- Office of the United Nations High Commissioner for Human Rights [OHCHR] (n.d.) *Ratification of 18 International Human Rights Treaties*. Web page. <https://indicators.ohchr.org>
- Robins N and Muller S (2021) *The Green+ Bond: How EU Sovereign and Corporate Issuers could deliver Green Sovereign Bonds with Social Co-Benefits*. London: Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science and Impact Investing Institute. <https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2021/10/Impact-Investing-Institute-EU-Green-Bond-Proposal-October-2021-1.pdf>
- Robins N, Curran B, Plyska O, Burge L and Van Coppenolle M (2023) *Mobilising global debt markets for a just transition*. London: Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science. <https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2023/12/Mobilising-global-debt-markets-for-a-just-transition-policy-insight.pdf>
- Scheer A, Cristancho-Duarte C, Dietz S, Hizliok S, Honneth J, Lutz S et al. (2024) *State of transition in sovereigns 2024: tracking national climate action for investors*. London: Transition Pathway Initiative Centre, London School of Economics and Political Science. <https://transitionpathwayinitiative.org/publications/uploads/2024-state-of-transition-in-sovereigns-2024-tracking-national-climate-action-for-investors-report.pdf>
- Scheer A, Honneth J, Hizliok S, Dietz S and Nuzzo C (2024) *ASCOR framework: methodology note – Version 1.1*. London: Transition Pathway Initiative Centre, London School of Economics and Political Science. <https://transitionpathwayinitiative.org/publications/uploads/2024-ascor-framework-methodology-note-version-1-1.pdf>
- Sustainalytics (2025) *Second-Party Opinion on Transition Bonds*. Web page. <https://www.sustainalytics.com/corporate-solutions/sustainable-lending-and-finance/second-party-opinions/second-party-opinion-on-transition-bonds>
- United Nations (n.d.) *United Nations Declaration on the Rights of Indigenous Peoples*. Web page. <https://social.desa.un.org/issues/indigenous-peoples/united-nations-declaration-on-the-rights-of-indigenous-peoples>
- Whiteacre E (2024) *The rise of the Sovereign Sustainability-Linked Bond: What should investors be looking for?* Blog post, 28 August. Verisk Maplecroft. <https://www.maplecroft.com/products-and-solutions/sustainable-finance/insights/the-rise-of-the-sovereign-sustainability-linked-bond/>
- World Bank (2024) *Women, Business and the Law 2024*. Washington, DC: World Bank Group.