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Environmental
Economic
Accounting

Update SEEA Central Framework

Draft Guidance Note

Issue C8: Incorporation of sustainable finance into an accounting framework

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Prepared by Carl Obst, Celestino Giron and Monica Rodriguez Zuniga.
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Executive Summary

To be developed

Questions for SEEA CF Technical Committee

1. Do you have any comments or questions about the general architecture for sustainable finance described in Section 3? For example do you have views on the use of the term financing in relation to securing resources for undertaking environmental activities?
2. Do you have comments on the use of the SEEA CF's definition of environmental activities to support the identification of green financial instruments? In particular:
 - a. Do you think that green finance should include financing of activities whose secondary purpose is environmental?
 - b. Should climate change mitigation financing be included, noting it is excluded in the SNA framing?
 - c. Should climate change adaptation financing be included, noting that it is commonly included in measurement of sustainable finance?
3. Do you agree with the development of accounts and tables related to sustainable finance? In particular:
 - a. Should reporting tables based on DGI1-R4 be developed perhaps extending to included reporting by CEP classes?
 - b. Should amendments be made to the integrated framework (GN C2) to support linking financing activity to environmental activities expenditures?
 - c. Should the SEEA CF table 4.5 on financing of environmental protection expenditure be retained and, if so, what changes would be appropriate?

GUIDANCE NOTE Issue C8: Sustainable finance

1 Introduction

1. The purpose of this Guidance Note (GN) is to provide guidance on the treatment of issue C8 “Incorporation of sustainable finance into an accounting framework” in the update of the SEEA 2012 Central Framework (SEEA CF). The short description of issue C8 from the set of issues endorsed by UNSC in March 2025 is:

“There is increased policy interest for recording sustainable finance. This is a new and complex topic, and the role of accounting frameworks for supporting the organization of relevant information could be considered as part of the updated SEEA CF.”

2. The scope for discussion for this update issue is broad. It recognises that while direct measurement of the level of sustainable finance is of specific interest (e.g. the value of green bonds issued), there is a wider potential for the accounts of the SEEA CF to provide additional information to support understanding this theme.
3. The short description of the update issue commences by recognising the policy interest in sustainable finance, in particularly following the 2015 Paris Agreement, which has driven a rapid increase in demand for related statistics. While this is a relatively new field of research and measurement, interest in sustainable finance already spans a broad range of needs, from understanding how financial flows contribute to the achievement of environmental objectives and support the green transition, to assessing climate and environment-related financial risks and the effectiveness of related adaptation and mitigation policies.
4. In response to growing policy, research and institutional demand, the IMF included Recommendation 4 on climate finance in the latest update of the G-20 Data Gaps Initiative (DGI-3)¹. Recommendation 4 aims to develop quarterly experimental data on the issuance and holdings of environmental securities, aligned as far as possible with existing statistical methodologies and complemented by specific guidance developed in the context of the recommendation. Work under Recommendation 4 has included the development of a set of reporting templates, with implementation envisaged by 2027.
5. One important driver for statistical involvement in this field is the desire to avoid or limit instances of “greenwashing”. Greenwashing can arise when there are no clear and commonly applied standard definitions or principles for identifying green finance, leading to measurement following alternative definitions and, consequently, to comparability problems. This situation creates scope for potentially inaccurate or self-serving claims, which has the effect of reducing confidence in the market and limiting the flow of funds into sustainable finance.
6. It is widely recognised that to provide the scale of investment required to meet environmental and sustainability challenges it will be necessary to build the confidence of investors and agencies regulating and supervising the financial system. Establishing internationally agreed standard definitions and frameworks is a powerful component of the response.

¹ Welcomed by the G-20 Finance Ministers and Central Bank Governors (FMCBGs) in October 2022.

(<https://www.imf.org/en/news/seminars/conferences/g20-data-gaps-initiative>)

7. The use of the SEEA CF to support the development of international measurement standards in this area reflects (a) the potential of an accounting approach to integrate data across different parts of the sustainable finance activity (from identifying investment requirements and opportunities to assessing return on investment); and (b) the rationale of the SEEA to organise information on the link between the environment and the economy. Overall, there are a number of ways in which information from a range of SEEA CF accounts could support a discussion on sustainable finance and complement the 2025 SNA proposals for recording sustainable finance by type of financial instrument.
8. The IMF Monetary and Finance Statistics Manual and Compilation Guide (MFSM) will also be updated over the coming two years. There may be research from that process that can complement the work in the context of the update of the SEEA CF. <<NB: An initial discussion with MFSM experts has been held but as yet there is no specific content that has been incorporated in this version of the GN. Further discussion is intended in the coming months.>>
9. It is noted that there is substantial private sector expertise on sustainable finance, although there are no definitive standards at this stage. At the same time, there is much research and other content that can be considered in providing a strong statistical response to the issues. For example the work by the International Capital Markets Association (ICMA) (<https://www.icmagroup.org/sustainable-finance/>).
10. This Guidance Note considers the following issues and topics.
 - The role of the SEEA CF in defining the scope of green financial instruments;
 - Linking data on green financial instruments to the financing of environmental activities
 - Using SEEA accounting data to assess environmental outcomes arising from additional investment.

2 Summary of the current discussion of sustainable finance in statistical standards

2.1 Treatment in the 2025 SNA

11. As a starting point for discussion, the recently adopted 2025 SNA describes sustainable finance as covering “the financing activities that are considered to be contributing to the achievement of more sustainable outcomes” (2025 SNA 35.120). The umbrella scope is termed ESG finance (Environmental, Social and Governance finance) and the component which is focused on the environment is termed green finance. Annex 1 provides the full text of the 2025 SNA on sustainable finance.
12. These two categories of sustainable finance are defined in the 2025 SNA as:

“ESG finance is finance for activities or projects that sustain or improve the condition of the environment or society or governance practices. Green finance is finance for activities or projects that sustain or improve the condition of the environment.” (2025 SNA 35.122)
13. These high level definitions are applied to different financial instruments in scope of the SNA, namely debt securities, loans, equity and investment fund shares/units. ESG and Green versions of

each financial instrument are defined including, in supporting documents, methods for determining the purpose of finance – i.e. whether the finance contributes to sustainability or not.

14. The underlying principles for the identification of ESG and green instruments in the 2025 SNA draw on those developed by the International Capital Market Association (ICMA) for bonds², which have also informed G20 DGI-3 Recommendation 4. As a general rule, financial instruments fall within the sustainability perimeter when the associated proceeds are intended to finance sustainability objectives. That is, a “use of proceeds” approach is followed by default, and only departed from when the characteristics of the instrument do not allow such use to be identified ex ante. In the case of green instruments, the proceeds—or alternative measures where necessary—are considered to serve environmental purposes when they make a “positive contribution” to the environment, rather than merely satisfying the arguably less demanding criterion of “causing no significant harm” to it. These principles are described further in section 3.

2.2 Treatment in BPM7

15. Annex 10 of the Balance of Payments Manual (BPM7) gives a longer discussion on issues related to sustainable finance in a BoP context. The annex presents additional tables on sustainable finance; describes the links to reporting of international cooperation grants; introduces a number of other data that could be derived from the BOP/IIP framework (concerning direct investment, trade in low carbon products and traded emissions permits); describes some additional data that could inform the compilers in support of climate change related analysis and policy making; and finally notes areas relevant for future work including concerning insurance and financial derivatives. Annex 2 provides the full text of BPM7 Annex 10.

2.3 Treatment in 2012 SEEA CF

16. Although perhaps not envisaged as being within the umbrella of sustainable finance, the current text in SEEA CF para 4.86-91 concerning the financing of environmental protection is a useful point of entry. A difference here is that there is focus on the economic sectors providing the finance and not the financial instruments. Also the focus is on transactions/flows within an accounting period not on the balance sheet values.

3 Placing the components of a sustainable finance system in context

3.1 A general architecture for interpreting the financing of environmental activities

17. The discussion of sustainable finance often focuses on specific financial instruments such as green bonds. However, these instruments exist within a broader financial system. To support a more holistic understanding of the relevant parts of this system and how links to the SEEA might be made, this section provides a short introduction to the key components and the way in which they are proposed to be framed for the purposes of discussing sustainable finance in the updated SEEA CF.

² <https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/T>

18. The financial system operates to allow different economic units to source funds to undertake various production, consumption and investment activities. Some of these activities will have an environmental purpose and are thus the focus of the sustainable/green finance discussion. There are a range of economic units who may undertake environmental activities including governments, businesses and households and will require various resources. To cover the cost of these resources can either borrow from other economic units or source funds elsewhere. As introduced above and explained further below, examples of borrowing include:
- Borrowing from banks and similar financial institutions in the form of loans
 - Issuing bonds and other debt securities
 - Issuing equity by corporate businesses (shares) to allow investors to provide the resources
 - Gathering/pooling funding from investors to create a fund that in turn invests in businesses that undertake environmental activities
19. Other sources of funds include cash available in the economic unit from income earned; subsidies paid by government to support environmental activities; funds secured via environmental markets, including payments for ecosystem services, and donations and similar transfers (including volunteer contributions) from other economic units.
20. Given these various possibilities to resource and fund environmental activities a range of relevant components for measurement can be identified. First, there is the measurement of the environmental activities themselves and the associated economic units. The target here is, for example, recording which economic units are undertaking activities to reducing GHG emissions. The measurement of environmental activities is discussed elsewhere in the SEEA CF and update related GN and is not further discussed here.
21. Second, there is the measurement of the economic units providing the resources to those undertaking the activities. As listed above the resources may be provided in a number of ways. This “financing of environmental activities” is the focus of the 2012 SEEA CF as introduced above – i.e. recording which economic units are providing resources to the economic units undertaking environmental activities, irrespective of the means by which those resources are provided.
22. Third, there is the measurement of the different means by which the resources are provided. No separate recording of cash available from past income earned is discussed here. Also, the measurement of environmental subsidies and related transfers is already described in the SEEA CF and is not further discussed here. Resources provided via environmental markets is a relatively new mechanism and further discussion of the recording options in this area are discussed in GN A9.2. Resources provided via donations, for example via environmental NGOs, can be recorded in table recording the current SEEA CF Table 4.5 covering the financing of environmental activities. Finally, and the primary focus of this GN, is the provision of resources using financial instruments – bonds, loans, equity and investment funds.
23. Fourth, the last relevant component is the assessment of whether the environmental activity has achieved its environmental objectives which may need to be determined some time after the actual environmental activity takes place. The measurement of environmental outcomes may be undertaken using indicators drawn from various SEEA CF and SEEA EA accounts. This measurement is not further discussed here aside from noting that, ideally, it would be possible to associate specific environmental outcomes to specific environmental activities to the specific sources of
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funding (both means and economic unit). Conceptually, this type of project level financing assessment is possible in the SEEA framework but, in practice, it will be usual for each component to be separately measured. Nonetheless, when interpreting aggregate results, the logic of linking these elements should hold and should underpin the interpretation of the aggregate data.

24. From an accounting perspective, this variety of information can be linked together through a set of stock and flow accounts. Generally speaking, information on environmental activities will be recorded in flow accounts – e.g. how much expenditure on climate change mitigation activities took place in 2024. Information on flows between economic units, including environmental subsidies, donations, other transfers and lending will also be recorded in flow accounts along the lines of 2012 SEEA CF table 4.5 showing flows that occurred during an accounting period. However, information on financial instruments is generally collected and presented as well in balance sheets – i.e. the value of loans, debt securities, etc that are held by the finance sector and other economic units at the beginning or end of accounting period.
25. Making the link between the level of financing provided for environmental activities at a particular point in time and the amount of resources used in a given accounting period may be difficult. For example, it may be possible to identify that a government has issued \$500m of green bonds but making the connection between this flow and expenditure in a single accounting period on environmental activities may be difficult. Of course, this is a general challenge for integrated sets of economic accounts but may be more challenging in terms of identifying the relevant environmental flows. From an analytical perspective, both sets of information will be relevant but compilers and users will need to be careful on considering the appropriate interpretation and integration of the accounting information from different accounts.
26. << NB: Further discussion is planned to highlight other possible connections within this general architecture. Key points to cover:
 - Consider practical / applied examples – e.g. evaluating biodiversity expenditure (BIOFIN) or ODA related to the environment
 - Role of information from the SEEA (or at least definitions) in supporting sustainability linked loans and bonds
 - Recognise the difference between more macro-measurement focus of SEEA compared to instrument and transaction level focus in financial data
 - Reclassification of green instruments as non-green (in particular, for SLB and equity)

3.2 Financing environmental activities using financial instruments

27. The key focus of this GN is recording data about the use of financial instruments to provide resources to support economic units to undertake environmental activities – i.e. green finance. This Guidance Note proposes to follow the framework set out in the 2025 SNA with a focus on green instruments as a subset of sustainable finance instruments. As introduced above, the SNA 2025 considers four types of green financial instruments: debt securities, loans, equity, and investment fund shares. In principle, green instruments are defined as instruments whose proceeds are used to finance “activities or projects that sustain or improve the condition of the environment” (2025 SNA, 35.122).

28. Within green debt securities, the 2025 SNA—following the categorisation developed by ICMA and used in G20 DGI-3 Recommendation 4—distinguishes between (i) green bonds, (ii) sustainability bonds and (iii) sustainability-linked bonds (SLBs). For green bonds, the proceeds are used to finance environmental objectives, for example to fund climate change mitigation activity. For sustainability bonds, the proceeds are used to finance both environmental and social objectives. Unlike bonds, SLBs are structured, in particular with regard to coupon payments, in relation to the achievement of specified environmental and/or social objectives. For example, an SLB may make payments of coupons on a bond dependent on reducing GHG emissions to a target level.
29. As distinct from standard green or sustainability bonds which can be defined using the use of proceeds approach, the funds raised through SLBs are intended to be used for general purposes even though the issuer is accepting that their achievement of environmental and/or social objectives is relevant to the final cost of the funding. Put differently, the assessment of the achievement of objectives is assessed for the corporation issuing the bond rather than in relation to the use of the funds raised by the bond. Accordingly, the principle underlying their classification as green is not the “use of proceeds” approach but rather the “achievement of performance objectives” by the issuer³.
30. The use-of-proceeds approach is also difficult to apply to investment funds, as fund managers typically assess the green nature of a fund against stated investment objectives, such as investing in companies that contribute to emissions-reduction targets. The 2025 SNA therefore also recommends an “achievement of performance objectives” approach for defining green investment funds.
31. A separate case concerns corporate equity and loans. Financing is inherently fungible across all financial instruments, that is funds raised tend to enter a general pool of funding for use by the corporate. However, compared with sustainable debt securities, it is generally more difficult for equity or loans to overcome fungibility by linking individual financial instruments to specific uses through contractual arrangements or other mechanisms. Equity financing, for example, cannot normally be ring-fenced for particular purposes, nor have equity instruments emerged in the market that incorporate penalties linked to the non-achievement of environmental objectives. Similar limitations apply to corporate loans. In these cases, this Guidance Note, in line with the 2025 SNA, recommends following a “revenue approach”, whereby the assessment focuses on the overall activities of the corporation. As a preliminary quantitative criterion, in line with the 2025 SNA, equity and corporate loans are considered green when more than 50% of the issuer’s revenues are derived from activities that improve the condition of the environment.
32. <<NB: Further discussion is planned to build out further the discussion on the use of proceeds and revenue criteria/approaches for different green instruments providing examples of the connection between financial instruments and environmental activities; and to highlight the challenge of fungibility of finance.>>

³ An example is the sustainability-linked bond issued by Enel in 2019. The bond provided for a 25-basis-point increase in the annual coupon if the company failed to achieve a target of 55% renewable energy in its total power generation capacity. The funds raised were available for general corporate purposes, while the financial penalty was linked to the achievement of an environmental objective.

4 The role of the SEEA CF in defining the scope of green financial instruments

33. As noted above, the 2025 SNA provides a definition of green finance as covering “finance for activities or projects that sustain or improve the condition of the environment.” This section discusses the ways in which the SEEA CF can support implementation of this definition.
34. The starting point for discussion is the 2012 SEEA CF definition of environmental activities which is *“those economic activities whose primary purpose is to reduce or eliminate pressures on the environment or to make more efficient use of natural resources”* (2012 SEEA CF, 4.11). Through the SEEA CF update process substantial discussion has taken place concerning the scope and definition of environmental activities. Current proposals indicate that this definition will be retained but with two variations. First, the scope will be increased to include activities that have either a primary or secondary purpose which is environmental (see GN C4). Second, rather than applying this definition to encompass only environmental protection and resource management activities, it is proposed that the same definition can be interpreted to also include climate change mitigation and circular economy activities.
35. With this context in mind, it is proposed that the definition of green finance in the 2025 SNA is enriched by following the updated SEEA CF interpretation of the definition of environmental activities. This proposal has a number of implications:
 - i. Green finance would include finance for activities that have a secondary purpose that is environmental. This is not envisaged in other discussions on sustainable finance.
 - ii. Green finance would encompass finance for environmental protection, resource management, climate change mitigation and circular economy. Note that climate change mitigation financing is excluded in the 2025 SNA approach since transition bonds are excluded from the scope of sustainable finance.
 - iii. Green finance data could be classified following the Classification of Environmental Purposes (CEP).
 - iv. Green finance would exclude finance for some types of climate change adaptation activities where these did not relate to or provide environmental outcomes. Consequently, the scope of climate finance (covering both climate change mitigation and climate change adaptation) would not be nested within green finance. However it is noted that sustainable finance taxonomies will typically include climate change adaptation expenditures. (Note that there are some important overlaps between climate change mitigation and climate change adaptation activities that are considered in GN C5 which should be taken into consideration.)
 - v. Green finance would exclude finance for a range of other economic activities which may be considered related to the environment including financing for disaster resilience and sustainable tourism, except where this financing satisfied the definition of environmental activities.
 - vi. Green finance would exclude sustainability linked bonds since this borrowing does not have an environmental purpose.
36. Generally speaking, this approach to the use of the SEEA CF definition and scope of environmental activities aligns quite well to the intention in the definition of green finance in the 2025 SNA but provides additional detail and rigour as well as the connection to existing and emerging practice for

the measurement of environmental activities. In this respect, the proposed strengthening of advice to use technical lists to identify those economic activities, products and expenditures that are environmental, should be able to be translated into the identification of green finance.

37. At the same time, the inclusion of activities whose secondary purpose is environmental goes beyond what was envisaged in the 2025 SNA and may complicate the measurement of green finance, especially to the extent that only the additional cost associated with secondary purposes is recorded. One option would be to apply the SEEA CF definition of environmental activities but limit the financing to only primary environmental purposes. While this has some conceptual appeal, the disadvantage is that there are many activities that have a secondary environmental purpose and understanding the financing of these activities is likely of high relevance.
38. The measurement of green finance has not tended to apply a technical lists approach as proposed for the SEEA CF. <<Note: Further work is planned to document alternative approaches. The proposed approaches to be considered are the following. >>
 - Labelling for securities (use of proceeds and performance/objectives)
 - Taxonomies vs CEP
 - Green activities following ICMA
 - Use of other criteria (e.g. do no harm), thresholds, labelling and certification in delineating green financial instrument
39. In terms of considering this proposal to apply the 2025 SNA definition of green finance using the SEEA CF definition of environmental activities, two other points have been noted. First, it is clarified that in line with the SEEA CF, green finance would exclude finance for economic activities that might be related to the environment but which do not satisfy the definition of environmental activities. For example, finance for agriculture and forestry activities is certainly related to the environment given the production context for both of these industries. However, unless there is finance to these industries for specific activities (e.g. fencing riparian zones to limit the damage caused by livestock to rivers), any finance would not be considered green finance. This treatment would extend, for example, to financing of activities that may increase GHG emissions such as construction of coal fired power stations and which may fall under the heading of “brown” bonds.
40. Second, similar to the treatment of climate change adaptation activities, there are a range of economic activities that are undertaken “defensively” to limit the impact of the environment on economic assets and activity. While the financing of these defensive expenditures may be environmentally related, they generally do not have an environmental purpose and hence would be excluded from green finance. An exception would be finance for nature based solutions where the solution, such as planting mangroves, was aimed at reducing exposure to tidal surges but which also had a positive environmental outcome. In this case the extension to include secondary environmental purposes within scope of green finance may be of importance.

5 Proposed accounts and reporting tables for green finance

41. <<NB: Further work is planned to develop relevant accounts and tables. The following accounts and reporting tables could be described
 - Present reporting tables for green finance building on DGI3 – R4 proposals and considering extensions linked to CEP.

- Make proposals for refining (as needed) the integrated sequence of environmental activity accounts (GN C2) related to financing of activities.
- Make proposals for including and/or refining 2012 SEEA CF table 4.5 on financing of environmental activities – see below. Given the architecture discussion (section 3.1) and the fact that this table is currently in the SEEA CF then consideration is needed as to whether it is retained and, if so, whether it should change in some way.>>

6 Other possible topics <NB: Not developed further at this stage>>

42. The SEEA CF could also include a short discussion – 1-2 paragraphs - on the potential to use the SEEA's information set as the basis for analysis of where additional investment is required to respond to nature risks (e.g. locations with low ecosystem condition, high water scarcity, links to pressure accounts)
43. Links to private sector measurement / definitional approaches in the area of green finance
44. Discussion on the feasibility of collecting data. For green financial instruments the developments in the DGI3 – Recommendation 4 is instructive and will be built upon in the MFSM

Annex 1: 2025 SNA Text on sustainable finance

Supporting the measurement of sustainable finance

35.120 Another related but separate area of measurement concerns “sustainable” finance, which considers the financing activities that are considered to be contributing to the achievement of more sustainable outcomes. Thus, alongside the increasing range of activity and policy response to the challenges of sustainability, there is increasing level of financing of these activities. While the financial instruments (e.g., loans, debt securities, equity and investment fund shares/units) that are used to provide resources are the same as those used for other purposes, separate quantification of the level of financing for sustainability purposes, for example measures of the value of green bonds, is important for tracking investment in the green and climate/transition economy and informing decisions on monetary and fiscal incentives relating to it (see *Developing Sustainable Finance Definitions and Taxonomies*).

35.121 The measurement of sustainable finance requires determining which components of the different financial instruments should be considered sustainable. This is an active area of research and discussion in many fora across both the private and public sector. Nonetheless, recognising the policy relevance of the data, definitions have been determined in order to operationalise the concept of sustainable finance. These definitions should be reviewed in the light of further advances, especially in the context of changes in the regulatory and reporting requirements.

35.122 Two primary types of sustainable finance are defined: ESG (Environmental, Social, Governance) finance and green finance with green finance being a sub-set of ESG finance. ***ESG finance is finance for activities or projects that sustain or improve the condition of the environment or society or governance practices. Green finance is finance for activities or projects that sustain or improve the condition of the environment.*** The general principle for establishing greenness is positive contribution to the environment, rather than “do no harm”.

35.123 Countries are encouraged to compile supplementary measures of ESG finance and green finance as “of which” items for the following financial instruments: debt securities (AF3), loans (AF4), equity (AF51) and investment fund shares/units (AF52). The relevant breakdowns are shown in table 35.3 below. The definitions of each of instruments are slight adaptations of the general definitions above. Thus, for ESG debt securities the scope concerns those where the use of proceeds is restricted to financing or refinancing activities or projects that improve the condition of the environment or society or governance practices, or where the issuer agrees to achieve performance objectives that improve the condition of the environment or society or governance practices. For ESG loans the scope concerns those in which 50% or more of the debtor’s activities improve the condition of the environment or society or governance practices. In the case of business loans, the debtor’s activities would be reflected in the business’s revenue, while in the case of loans to households, they would depend on the use of the loan proceeds. For ESG equity the scope concerns those equity investments by investors in institutional units in which 50% or more of the institutional unit’s revenue comes from activities that improve the condition of the environment or society or governance practices. For ESG investment fund shares/units the scope concerns shares or units in investment funds investing in financial instruments, companies, projects or other funds that intend to achieve performance objectives that improve the condition of the environment or society or governance practices. The definitions concerning green instruments have the same measurement scope except that they are limited to improving the condition of the environment.

35.124 Focus should be placed on recording the stock values for these financial instruments (as “of which” items in the balance sheets), with transactions being recorded as a second order of priority (as “of which” items in the financial accounts). If possible, the estimates should be provided for all of the main sectors and subsectors. For debt securities, total ESG debt securities may be further broken down to identify the following “of which” items:

- social debt securities which concern debt securities where the use of proceeds is restricted to financing or refinancing activities or projects that improve the condition of society;
- green debt securities which concern debt securities where the use of proceeds is restricted to financing or refinancing activities or projects that improve the condition of the environment;
- sustainability debt securities which concern debt securities where the use of proceeds is restricted to financing or refinancing activities or projects that improve the condition of the environment and society;

- sustainability-linked debt securities which concern debt securities in which certain characteristics, such as the associated cash flows, are linked to achieving performance objectives that improve the condition of the environment and/or society; and
- other ESG debt securities which include all ESG debt securities other than social, green, sustainability and sustainability-linked debt securities.

35.125 There is a range of measurement challenges in implementing these recommendations that are addressed in associated guidance material. A principal challenge is effectively determining whether the purpose of a given financial instrument satisfies the definition of sustainable finance. This may be determined by the label placed on the financial instrument and the certification approach. The following approaches are acceptable: (i) self-labelling, where the issuing unit decides on the ESG or green classification; (ii) Second Party Opinion (SPO), where a trusted unit provides the ESG or green label; and (iii) certification, where, in the presence of standards (public or private), a specialised unit grants the ESG or green status. A combination of approaches, potentially country specific, will need to be adopted. To combat concerns about “greenwashing”, it is important to provide metadata indicating the levels of assurance provided (through labelling and certification) that the estimates are ESG or green.

35.126 To support assessments of the effectiveness of sustainable finance, it is relevant to present data on the levels of investment in ESG and green activities (as just defined) alongside data about the outcomes arising from that activity, accepting that precise links may be difficult to identify. A particular focus for green finance may be reporting on the extent and condition of the natural capital stocks which the investments aim to improve. For example, for green debt securities measures of changes in the extent and condition of mangroves that have been the focus for the use of the funds would be relevant as part of understanding whether the planned activities (and the associated finance) are making a contribution to environmental outcomes. At a macro and landscape scale, data on stocks of capital and changes over time will support the identification of locations where sustainable finance may be best targeted.

35.127 Consistent with these recommendations, *BPM7* also encourages countries to compile measures of ESG and green finance, for the international investment position (IP) (stocks) and balance of payments (BOP) (flows) as “of which” —

categories of debt securities, loans, equity and investment fund shares/units, as supplementary items outside the standard components. *BPM7* also suggests compilation of other environmental indicators including the physical location of investments, foreign direct investments in specific sectors as well as climate-related international cooperation grants to low-income countries (*BPM7*, Annex 10).

Annex 2: BPM Annex 10

Annex 10. Integrating Measures of Sustainable Finance and Climate Change into External Sector Statistics

A. INTRODUCTION

A10.1 During the past few decades, the increased awareness of macroeconomic and financial relevance of environmental and climate change-related risks has led to a surge in demand for data on the financial and economic implications of climate change and environmental risks, including funding activities which contribute to sustainable outcomes. The UN Intergovernmental Panel on Climate Change and other international platforms, including through the 2015 Paris agreement, has been placing increased emphasis on making more information available to better assess climate-related risks and opportunities and their financial impacts.⁴ In that context, the objective of this annex is to demonstrate how the BOP/IIP data can inform the current demands for data on environment and climate change, with a particular focus on the latter.

A10.2 Consistent with the *2025 SNA* (Chapter 35, Measuring the Sustainability of Wellbeing), this annex recommends compilation of supplementary BOP/IIP data in support of the analysis of financing activities that contribute to the achievement of more sustainable outcomes (sustainable finance). It also provides initial ideas on how external sector statistics could be used to better understand climate change. The annex does not, however, intend to introduce a framework for data compilation or rigorous conceptual guidance, as the expert work in macroeconomic implications of sustainable finance and climate change is still evolving.

A10.3 While there are a number of international, regional, and national initiatives to define climate change- and sustainable finance-related statistical concepts in the context of economic measurement, consistent and widely adopted definitions are yet to exist. The G20 Data Gaps Initiative 3 (DGI-3) is expected to mobilize progress in this area to develop methodological guidance and reporting templates to produce more comparable indicators of green financing via debt securities and equity instruments across the G20 economies. The *2025 SNA* also includes updates to its classification systems (including the classification of institutional sectors, transactions, other economic flows, and stocks), addressing the emerging issues related to sustainability, climate change, renewable energy, waste and recycling activities, environmental, social progress, governance, or environmental depletion. The measurement of sustainable finance requires determining which components of the different financial instruments should be considered sustainable. Paragraph A10.10 elaborates on the primary types of sustainable finance, namely, ESG (Environmental, Social, Governance) finance and green finance.

A10.4 Given the lack of consensus on taxonomies for climate change- or sustainable finance-related concepts, this annex does not recommend a single taxonomy but instead encourages national compilers and users to refer to the ongoing international work including through the DGI-3 as well as to support the development of official

⁴ The final report on Recommendations of the Task Force on Climate-Related Financial Disclosures, June 2017, also describes climate-related opportunities that can arise from efforts to mitigate and adapt to climate change, such as resource efficiency and cost savings, adoption of low-emission energy sources, the development of new products, and building supply chain resilience.

taxonomies nationally or regionally to support the availability of reliable, comparable, and consistent data on sustainable finance and climate-related risks.

A10.5 Going forward, the annex could be complemented with further guidance to reflect advances in methodology and data availability as well as the development of a broader framework to identify the cross-border aspects of sustainable finance as well as environment and climate change.

A10.6 Section B of this annex focuses on sustainable finance, for which supplementary tables are introduced, as well as international cooperation grants. Section C introduces a number of other data that could be derived from the BOP/IIP framework as well as some additional data that could inform the compilers in support of climate change related analysis and policy making. Section D presents additional climate change-related data that could be useful depending on national circumstances. Finally, Section E discuss future areas of work.

B. SUSTAINABLE FINANCE AND INTERNATIONAL COOPERATION GRANTS

A10.7 Alongside the increasing range of activity and policy response to the challenges of sustainability, there is increasing level of financing of these activities. This financing can come from both public and private sources, and can include different types of activities, such as debt or equity issuance, financing from own funds as well as grants and subsidies.⁵ The external accounts framework would conceptually include cross-border flows of such financing.

1. CROSS-BORDER INVESTMENT IN FINANCIAL INSTRUMENTS INTENDED TO FINANCE SUSTAINABLE PROJECTS

A10.8 While the financial instruments (e.g., loans, bonds, and equities and investment fund shares/units) that are used to provide resources for sustainable development are the same as those used for other purposes, separate quantification of the level of financing for sustainability purposes, for example measures of the value of green bonds, is important for tracking investment in the green and climate/transition economy and informing decisions on monetary and fiscal incentives relating to it (OECD, *Developing Sustainable Finance Definitions and Taxonomies*, 2020). (See 2025 SNA Chapter 35).

A10.9 The measurement of sustainable finance requires determining which components of the different financial instruments should be considered sustainable. This is an active area of research and discussion in many fora across both the private and public sector. Nonetheless, recognizing the policy relevance of the data, definitions have been determined in order to operationalize the concept of sustainable finance. These definitions should be reviewed in the light of further advances, especially in the context of changes in the regulatory and reporting requirements.

A10.10 Two primary types of sustainable finance are defined:⁶ ESG finance and green finance, with green finance being a subset of ESG finance. *ESG finance is finance for activities or projects that sustain or improve the condition of the environment or society or governance practices. Green finance is finance for activities or projects that sustain or improve the condition of the environment.* The general principle for establishing greenness is positive contribution to the environment, rather than “do no harm.”

A10.11 Countries are encouraged to compile measures of ESG finance and green finance as supplementary “of which” items for the following financial instruments: equity and investment fund shares/units, debt securities, and

⁵ Note that climate finance, as defined by the United Nations Framework Convention on Climate Change, includes not only financing of climate action through debt (bond issuance or loan subscription) or equity issuance, but also financing from own funds as well as grants and subsidies (see IPCC Sixth Assessment Report, Chapter 15, Investment and Finance, Box 15.4). Financing from own funds and domestic financing are out of scope for external sector statistics.

⁶ The definitions would need benefit from further work in the area, including the further elaborations/updates in the SEEA.

loans—under the three relevant functional categories—direct investment, portfolio investment, and other investment. The relevant breakdowns are shown in Table A10.1.

A10.12 The definitions of each of the instruments are adaptations of the general definitions of ESG and green finance above.

- ESG debt securities: *Debt securities where the use of proceeds is restricted to financing or refinancing activities or projects that improve the condition of the environment or society or governance practices, or where the issuer agrees to achieve performance objectives that improve the condition of the environment or society or governance practices. These include green debt securities, social debt securities, sustainability debt securities, sustainability-linked debt securities, and other ESG debt securities.*
- ESG loans: *Loans in which 50 percent or more of the debtor's activities improve the condition of the environment or society or governance practices. In the case of business loans, the debtor's activities would be reflected in the business's revenue, while in the case of loans to households, they would depend on the use of the loan proceeds.*
- ESG equity: *Equity investments by investors in institutional units in which 50 percent or more of the institutional unit's revenue comes from activities that improve the condition of the environment or society or governance practices.*
- ESG investment fund shares/units: *Share or units in investment funds investing in financial instruments, companies, projects, or other funds that intend to achieve performance objectives that improve the condition of the environment or society or governance practices.*

The definitions concerning green instruments have the same measurement scope except that they are limited to improving the condition of the environment.

A10.13 Focus should be placed on recording the positions for these instruments, with transactions being recorded as a second order of priority. If possible, the estimates should be provided for all of the main sectors and subsectors. For debt securities, total ESG debt securities may be further broken down to identify the following “of which” items:

- Social debt securities: *Debt securities where the use of proceeds is restricted to financing or refinancing of activities or projects that improve the condition of society;*
- Green debt securities: *Debt securities where the use of proceeds is restricted to financing or refinancing of activities or projects that improve the condition of the environment;*
- Sustainability debt securities: *Debt securities where the use of proceeds is restricted to financing or refinancing of activities or projects that improve the condition of the environment and society;*

- Sustainability-linked debt securities: *Debt securities in which certain characteristics, such as the associated cash flows, are linked to achieving performance objectives that improve the condition of the environment and/or society; and*
- Other ESG debt securities: *All ESG debt securities other than social, green, sustainability, and sustainability-linked debt securities.*

No maturity breakdown would need to be introduced as in the main BOP/IIP tables.

A10.14 As the work in this area evolves, further guidance for addressing the range of measurement challenges in implementing the recommendations for sustainable finance related information in *BPM7* could be developed.

A10.15 There is a range of measurement challenges in implementing these recommendations. A principal challenge is effectively determining whether the purpose of a given financial instrument satisfies the definition of sustainable finance. This may be determined by the label placed on the financial instrument and the certification approach. The following approaches are acceptable: (i) self-labeling, where the issuing unit decides on the ESG or green classification; (ii) second party opinion, where a trusted unit provides the ESG or green label; and (iii) certification, where, in the presence of standards (public or private), a specialized unit grants the ESG or green status. A combination of approaches, potentially country specific, may need to be adopted. To combat concerns about “greenwashing,” it is important to provide metadata indicating the levels of assurance provided (through labelling and certification) that the estimates are ESG or green.

2. INTERNATIONAL COOPERATION GRANTS

A10.16 Additional data on international cooperation grants to low-income countries to finance climate change mitigation and adaptation could also be useful to monitor global progress towards meeting climate finance commitments. Climate-related grants could be in the form of current or capital transfers between governments or between international organizations and governments, used by recipient countries to mitigate and adapt to the adverse effects of climate change. Separately identifying these climate-related grants, both by the recipient and donor countries, could be considered depending on the magnitude, macroeconomic implications for recipient economies, and the feasibility of separately identifying them. Such data could be included in the BOP as an “of which” category of international cooperation grants.

A10.17 Two international datasets that include climate-related international grants are from the United Nations Framework Convention on Climate Change (UNFCCC) and the OECD. The UNFCCC publishes climate finance data received officially from parties to the UNFCCC on an annual basis. Reporting countries provide the reasons for classifying the funds as grants or other forms (e.g., loans). The OECD’s Development Finance for Climate and Environment database includes climate grants data from donor and recipient economies. These datasets could, initially, be a useful source for recipient economies to track the climate-related grants provided to them by the reporting donor economies. However, data compilers in recipient economies are also encouraged to compile their own data on climate finance grants which could be cross-checked with the international databases that are typically based on data from donor countries. Furthermore, reporting is based on national definitions (with parties providing the underlying assumptions, definitions, and methodologies); as such, the data may not be comparable across countries.

C. USING EXTERNAL SECTOR STATISTICS TO UNDERSTAND CLIMATE CHANGE-RELATED RISKS AND OPPORTUNITIES

A10.18 Climate change is a global phenomenon affecting not only the natural environment but also posing increasingly significant risks to the financial system and the economy as a whole. These risks could emerge from exposure of the financial sector and their investments to physical risks from climate change-related events such as floods, droughts, etc., or exposure to transition risks, which refers to the implications associated with shifting to a low-carbon economy (e.g., sudden changes in policy that may result in stranded assets). For example, more stringent environmental legislation may result in increased credit risk or large changes in asset values. Higher environmental standards may have implications (though not necessarily negative) for the operational costs of doing business of nonfinancial corporations: on the one hand, energy prices may rise, potentially up to the point

where certain assets may become stranded (assets that are prematurely written down, devalued, or converted to liabilities). However, on the other hand, new opportunities may occur, or more efficient production methods can be used.

A10.19 Also, technological innovations or changes in consumer or investor preferences may impact the business of various economic actors as well as financial institutions. Such physical and transition risks are not limited to individual (financial) companies but may affect entire industries and geographical regions and countries. Hence, climate change may have important implications for financial and systemic stability which may be curbed by the actions of the policy makers. To that end, it is important to quantify risks related to climate change in support of policy making. In that context, there is increasing interest in measuring physical and transitional risks. Risks are inherently forward looking and as such may not fit in the international macroeconomic statistical standards, including external sector statistics; however, international macroeconomic statistical standards can provide useful information that can inform decisions taking into account climate change-related risks.

A10.20 Despite the global nature of the risks posed by climate change, the extent of their implications would differ across locations, sectors, and entities. Therefore, granular information on cross-border flows of investments and trade are becoming increasingly important to measure the potential effects of climate change-related risks on different economies, sectors, and entities. This section focuses on these cross-border aspects of climate change and identifies the types of data that can be important for understanding the relationship between climate change and the economy.

A10.21 This section presents some initial considerations on the types of data that could be compiled at the national level to support users in understanding climate change in the context of external sector statistics (other than those mentioned in Section B above). This includes useful information that could be made available by isolating certain BOP/IIP components or by introducing more granularity within a BOP/IIP component. In addition, other future areas of work are presented.

A10.22 The data items presented in this section should be considered as indicative items that could help further inspire national compilers in support of their respective data users. It is not intended to introduce a data framework for climate change-related data compilation or dissemination for external sector statistics, but rather to provide some initial considerations on the types of data that could be relevant for policy makers. In addition, these items could potentially be useful in combination with other information on environmental risk exposures (e.g., environmental risk exposures of economic activities or climate risk profiles of individual countries). While a wide range of indicators may be useful to explore risks from a cross-border perspective, the presented items are those initially considered by the external accounts community as the most feasible to compile in the short term as additional details and breakdowns of existing BOP and IIP items.

1. DIRECT INVESTMENT BY INDUSTRIAL SECTORS

A10.23 Breaking down direct investment by economic activity would be useful to assess the industrial sector specific climate change-related risks that resident nonfinancial corporations are directly exposed to through their direct investment in specific sectors. For example, direct investment in sectors such as agriculture or real estate would be more exposed to physical risks related to climate change while others in carbon-intensive sectors would be relatively more exposed to transition risks. Financial corporations would also be subject to abroad. Obviously, such information on the breakdown of direct investment by economic activity needs to be complemented with information on the exposures of sectors to environmental risks using tools such as ENCORE (Exploring Natural Capital Opportunities, Risks and Exposure).

A10.24 *BPM7* includes among the standard items, sectoral classification of direct investment data by institutional sectors similar to the rest of the functional categories (i.e., central bank, deposit-taking corporations except the central bank, general government, other financial corporations, nonfinancial corporations, and households and NPISHs). While this would be a useful start in the context of climate change-related risk, compilers could usefully aim for further granularity of sectors such as a more granular breakdown of nonfinancial corporations aligning with

other statistics (e.g., with the International Standard Industrial Classification (ISIC)).⁷ Compilers are also encouraged to go beyond the existing classifications to capture additional aspects of climate change considering the limitations of existing classifications.

2. PHYSICAL LOCATION OF INVESTMENTS (DIRECT INVESTMENT BY COUNTERPART ECONOMY)

A10.25 Direct investment in certain host economies may be more exposed to physical risks or transition risks related to climate change than in others, depending on the geographical location or policy developments. In addition, greater exposure to climate change-related physical and transition risks could affect the direct investment received. To that end, counterpart economy data for direct investment, in combination with information on the risk exposures of the location,⁸ would provide insights into risk exposures of both the direct investor and investee countries. While the ideal information would be direct investment by ultimate counterparty, immediate counterparty data would be more readily available and still useful. Data may be compiled and published both at a bilateral level but also, for example, as a weighted average across countries. National (and supra-national) level data would be particularly useful for transition risks, since policies supporting the transition are likely to be enacted at the national (supra-national) level.

A10.26 A refinement of data by counterpart economy on the exact (near) physical location of direct investment would shed more light into, particularly, physical risks to which a country's cross-border investments would be exposed. Such calculations are ideally made at a more detailed geographical level in combination with other statistics on investments at various levels of aggregation (such as city or postal code area) due to regional variation in climate change risks within countries. Nevertheless, national data would still be relevant, as the macro stability implications may still extend to the national level, as mentioned above. Importantly, data sources on physical risks by such detailed geographical area are readily available for use,⁹ and their use in combination with existing data collections on investments at various levels of aggregation (country, city) are being explored to develop indicators of physical risks. Having said that, explicit data on physical structures (e.g., buildings, structures) and how these are financed may not be readily available and would require some sophisticated modeling. Efforts at the national level to develop detailed geographical data for direct investment (e.g., at a city level) by utilizing existing data collection frameworks together with other statistics would be encouraged.¹⁰

3. TRADE IN GOODS RELATED TO THE TRANSITION TO A LOW-CARBON ECONOMY

A10.27 Trade statistics could provide important insights into the analysis of movement of environmental risks across the supply chain and into the supply chains associated with products aimed at greening production systems or at mitigating risks. To that end, information on trade in “environmental goods” or more specifically trade in “low carbon technology (LCT) products” could be useful. Environmental goods is a broader concept which includes products related to environmental protection and resource management. The System of Environmental Economic Accounting Central Framework (SEEA CF) provides guidance on the accounting for environmental expenditures and goods and services under its environmental activity accounts, and relevant trade statistics should seek alignment with the SEEA CF, including any further improvements to it.

A10.28 Compiling consistent data on trade in environmental goods or LCTs would help users, including policy makers. These data may be estimated top-down using models, but ideally, compilers could use a bottom-up

⁷ ISIC classification has some limitations for its use for climate change purposes (e.g., the energy sector does not differentiate between electricity generated from renewable resources and from coal).

⁸ The Intergovernmental Panel on Climate Change, the Climate Risk Institute, and the World Bank's country profiles could be useful resources for information on regional/national climate change risk profiles.

⁹ Examples include the data published by the World Resources Institute or the EU Risk Data Hub.

¹⁰ Compilers may want to look into the potential for investments in nature-based solutions as these could support the climate change mitigation and adaptation efforts.

approach to produce more detailed results from granular, economy-level information, which over time may become increasingly comparable across countries as methodologies and data sources converge. To measure trade in LCT products, a list of commodities to be included needs to be identified. There is no internationally agreed-upon list for environmental goods or LCTs, though several lists have been developed to meet different policy needs, including by the IMF.¹¹ Further work is needed to avoid complications in the interpretation of analytical results based on different lists of LCT products.

A10.29 National compilers could subsequently derive additional analytical indicators by using the data in trade in environmental or LCT products and combining them with other trade related data. These include import and exports of LCT or environmental products, trade balance in LCT or environmental products, total trade in LCT or environmental products, and comparative advantage in LCT or environmental products, including by partner economy.

4. TRADE IN SERVICES RELATED TO THE ENVIRONMENT AND CLIMATE CHANGE

A10.30 Another example of useful information that could support users of climate change data could be the services component environmental, agricultural, and mining services. Environmental services consist of waste treatment and depollution services, including materials recovery (recycling) services, sewerage, sewage treatment and septic tank cleaning services, waste collection and disposal, remediation, sanitation, and other environmental protection services (see paragraph 11.122). They also include treatment of air pollution, carbon capture, and storage services that are not classified under any other specific category. The SEEA CF also provides guidance on the treatment of waste under environmental accounts which needs to be taken into consideration when compiling granular data on waste treatment and depollution services. Compiling granular data on these relevant subcomponents of environmental services could be useful for the users of climate change data.

5. TRANSACTIONS IN EMISSIONS PERMITS

A10.31 Separate reporting of cross-border transactions in emissions permits could also inform data users. Emissions permits are recorded as other accounts receivable/payable under financial assets and liabilities (see paragraph 5.84). For countries where cross-border transactions of emissions permits are significant, compilers could consider compiling information on transactions in emissions permits separately. Emissions permits are identified as a separate “of which” item in Annex 14.

6. TRANSACTIONS RELATED TO CLIMATE-INDUCED NATURAL DISASTERS

A10.32 Disaggregated data on transfers and direct investment in response to specific climate-induced disasters (e.g., reconstruction after a hurricane, or remittances to climate induced migrants) may be feasible to compile and would be useful to assess how direct investment and transfers are contributing to financing the climate change adaptation. Such information would help with the assessment of transition risks.

D. FUTURE WORK

¹¹ The IMF defines LCT products as those that produce less pollution—especially of carbon dioxide and other greenhouse gases—over their lifetime than their traditional counterparts and will play a vital role in the transition to a low-carbon economy. Rapid diffusion of LCTs is considered to be critical for accelerating climate change mitigation (IMF, *Data for a Greener World*), while trade is a key transmission channel in the development, production, and adoption of low-carbon technologies (Cirera and Maloney, 2017). See IMF Book, *Data for a Greener World: A Guide for Practitioners and Policymakers*, Chapter 9, for a discussion on LCT products and environmental goods.

A10.33 As the policy work on environmental change is evolving rapidly, compilers are encouraged to also consider how external sector statistics could support emerging areas of interest. Such future work could include:

A10.34 Information on the lenders: Exposure of the sources of financing (e.g., energy exporting jurisdictions, flood prone jurisdictions) to climate change-related physical or transition risks may affect the funding levels of financial and nonfinancial institutions.

A10.35 Financial derivatives: Financial derivatives are an important tool for managing risks. Therefore, institutions' holding of financial derivatives related to sustainable investments or climate change-related risks, including across borders, would help to inform how they hedge against such risks. Weather-related financial derivatives are being developed to deal with weather-related events. Derivatives tied to specific commodities, such as oil, specific agricultural commodities, or tons of CO2 emissions, could also be of interest.

A10.36 Information on total insurance claims (including reinsurance which is used as a risk transfer mechanism), including those resulting from climate change-related natural hazards, could also be compiled. Nonlife insurance claims are normally classified as current transfers (see paragraph 14.34). For exceptionally large claims, such as those following a major catastrophe or disaster at national level, some part of the claims may be recorded as capital transfers rather than as normal current transfers. Compilation of data on the insurance claims resulting from climate change-related natural hazards could be useful for the users of climate change data.

A10.37 More generally, looking at further disaggregating some of the external accounts data from a climate change perspective has been put on the joint post-2025 *SNA/BPM7* research agenda (see Annex 15).