Staff paper

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ISSB Meeting

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Project	**Research Project – Biodiversity, ecosystems and ecosystem services**
Topic	**Phase 2 research project plan and scope**
Contacts	Carol Wong (carol.wong@ifrs.org) Jeff Stehm (jstehm@ifrs.org)

Purpose

1. The purpose of this paper is to provide the International Sustainability Standards Board (ISSB) with the staff's proposed project plan and the anticipated scope for phase 2 of the research project on biodiversity, ecosystems and ecosystem services (BEES).

2. The staff will not ask the ISSB to make any decisions in this session.

Structure of the paper

3. The structure of the paper is as follows:

   (a) Background (paragraphs 4–8)

   (b) phase 2 project plan (paragraphs 9–12)

   (c) phase 2 project scope (paragraphs 13–22)

   (d) next steps (paragraphs 23–24)

   (e) Appendix A: Potential recommendations

(f) Appendix B: Key nature concepts and relationships in the scope of phase 2 research

Background

4. In April 2025, the staff provided the ISSB with an overview of the design and approach for the next phase (phase 2) of the research projects on risks and opportunities associated with BEES and human capital.

5. As stated in paragraph 12 of Agenda Paper 3A and 4A *Research design and approach—next phase* (April 2025), the objective of the next phase of research is to enable the ISSB to assess whether standard-setting is likely to result in improvements to BEES-related (hereafter referred to as nature-related) disclosure that will outweigh the costs.

6. The staff intends to achieve this objective by synthesising findings ('connecting the collected dots) from phase 1 of the research project to provide the ISSB with a more integrated understanding of the necessity and feasibility of potential standard-setting.

7. In phase 1, the staff developed findings in four key areas of research. The areas of research were:

   (a) evidence of investor interest[1];

   (b) evidence of effects on an entity's prospects[2];

   (c) assessment of other disclosure standards and frameworks[3]; and

[1] Agenda paper 3 *Evidence of Investor Interest in BEES-related risks and opportunities* (January 2025)

[2] Agenda paper 3A *Evidence of effects on an entity's prospects* (March 2025)

[3] Agenda paper 3A *Background on other BEES-related standards and frameworks* (February 2025) and Agenda paper 3B *Comparison of other BEES-related standards and frameworks to IFRS S1 and SASB Standards* (February 2025)

(d) assessment of the current state of disclosure[4].

8. In synthesising phase 1 findings, the staff will analyse:

(a) *necessity* by evaluating whether there is a clear demand for improved disclosure to investors on nature-related risks and opportunities that could reasonably be expected to influence an investor's decisions relating to providing resources to an entity (clear evidence of investor interest and effects on an entity's prospects as referenced in paragraph 7(a)–(b) above); and

(b) *feasibility* by evaluating whether there is likely to be a practical and efficient approach to developing disclosure requirements including whether other disclosure standards and frameworks exist that meet investors' information needs or companies currently disclose information that meets investors' needs (paragraph 7(c)–(d) above).

Phase 2 project plan

9. The following table presents the staff's proposed areas of focus for phase 2 of research:

Area of focus	What	Why
Scoping of phase 2 research (paragraphs 13-22 below)[5]	• Explore the various concepts associated with nature-related risks and opportunities, including the relationships	• To establish scope of phase 2 research and ensure common

[4] Agenda paper 3C *Current state of disclosure of BEES-related information* (March 2025). It should be noted that the current state of disclosure analysis was based on a reporter database comprised of available corporate disclosures published in fiscal year 2023. Since the Taskforce for Nature-related Financial Disclosures (TNFD) Recommendations were issued in September 2023, the database does not contain examples of disclosure using TNFD. In phase 2 of the research, the staff will consider the results of a TNFD preparer survey expected to be published in the third quarter of 2025.

[5] The scoping of phase 2 research does not imply or convey how subsequent disclosure requirements or standards might be structured but rather provides a construct to ensure phase 2 of research explores nature concepts and relationships relevant to investors.

	among those concepts (See Appendix B). • Consider definitions of key terms associated with nature-related risks and opportunities leveraging commonly used terms in other standards and frameworks when appropriate (See Appendix B).	understanding of key terms.
Synthesising phase 1 findings ('connecting the dots')	• Evaluate necessity—what are areas with clear evidence of investor interest and effects on an entity's prospects ('demand')? • Evaluate feasibility—are there standards or frameworks (including ISSB materials) or disclosure practices that meet those needs ('supply')? This will include considering the relevance of building upon the Taskforce on Nature-related Financial Disclosures (TNFD) Recommendations in meeting those needs.[6] • Determine areas where standard-setting is necessary and feasible and identify any remaining areas that might require additional research.	• To synthesise phase 1 findings. • To supplement phase 1 findings in specific areas as necessary to complete analysis. • To consider the anchoring principle of 'S1 plus' set out in paragraph 12(c) of Agenda Paper 2B *Research design and approach* (July 2024).

[6] As announced in April 2025, the IFRS Foundation and the TNFD have signed a Memorandum of Understanding (MoU) signalling both parties' commitment to building upon the TNFD Recommendations in the ISSB's ongoing work to enable nature-related financial disclosures for use by capital markets. See 'IFRS Foundation and TNFD formalise collaboration to provide capital markets with high-quality nature-related information'

Developing recommendations and identifying and prioritising any remaining areas for additional research	• Provide recommendations to the ISSB on standard-setting (or other course of action such as developing educational materials) to address investors' information needs. • Summarise and prioritise remaining areas for additional research.	To achieve objective of phase 2 (paragraph 5 above).

10. More specifically, through the proposed areas of focus, the staff expects to answer, at a minimum, the following questions:

    (a) What information do investors need about nature-related risks and opportunities to inform their decisions about providing resources to an entity and is there information about nature-related risks and opportunities for which there is clear evidence of investor interest and of effects on an entity's prospects?

    (b) Could IFRS S1 *General Requirements for Disclosure of Sustainability-related Financial Information*, IFRS S2 *Climate-related Disclosures*, the SASB Standards[7] (including consideration of the proposed amendments in the SASB Enhancements project[8]) or the Climate Disclosure Standards Board (CDSB) guidance[9] meet those needs?

[7] The SASB Standards are referenced in IFRS S1. An entity applying IFRS S1 is required to refer to and consider the applicability of the SASB Standards to identify sustainability-related risks and opportunities and associated disclosures. For more information on how to use the SASB Standards as a source of guidance for applying IFRS S1 *General Requirements for Disclosure of Sustainability-related Financial Information*, please refer to the related educational materials.

[8] See Agenda Paper 3A *Nature and the proposed SASB amendments* (July 2025) that summarises the amendments to the SASB Standards proposed in the SASB Exposure Draft published on 3 July 2025 that relate to nature—biodiversity, ecosystems and ecosystem services (BEES).

[9] CDSB Application guidance for biodiversity-related disclosures and CDSB Application guidance for water-related disclosures. The CDSB guidance is non-mandatory.

(c) Is standard-setting, additional guidance or educational material necessary and, if so, to address what types of information needs (for example, industry-agnostic, industry-specific, topics)?

(d) Could the work of other standard-setters and framework providers, particularly the TNFD Recommendations[10], be leveraged for the ISSB to provide a feasible standard-setting approach to meet those needs?[11]

11. Appendix A presents some potential recommendations that could result from the staff's assessments.

12. The phase 2 project plan may evolve as the staff begin synthesising findings, presenting analysis to the ISSB for discussion and receive further feedback from stakeholders.

Phase 2 project scope

13. Nature is a complex topic involving different scales, relationships, terminology and perspectives. As such, relevant information for assessing nature-related risks and opportunities could span a wide spectrum. As evidenced in our phase 1 research, for instance, some investors focus on entity risks and opportunities for discrete topics, such as water, pollution, waste, or deforestation, or focus on nature-related risks and opportunities that are specific for an entity's industry. A few investors attempt to assess an entity's risks and opportunities related to changes in the state of nature for the critical ecosystems that an entity operates in or obtains resources or ecosystem

[10] In answering this question, the staff will initially focus on the TNFD Recommendations due to their coverage of nature-related financial disclosures. In addition, a number of similarities between IFRS S1 and the TNFD Recommendations were identified in phase 1 of research including structure and investors as target users. For example, the TNFD Recommendations are organised by the same four areas of core content that give structure to IFRS S1—governance, strategy, risk management and metrics and targets. As a baseline, the TNFD Recommendations are intended to facilitate the disclosure of material information for users of general purpose financial reports, consistent with IFRS S1. The staff also will consider the nature-related disclosure requirements in other standards assessed in phase 1 of research including the Global Reporting Initiative (GRI) Standards and European Sustainability Reporting Standards (ESRS).

[11] The approach to meeting investor information needs might differ for different types of needs.

services from. As the phase 1 research revealed, in part, these differences in how investors approach nature-related risks and opportunities are driven by the complexity and nascency of nature as a risk and opportunity consideration.

14. Given the complexity of nature-related risks and opportunities, the staff believes that defining a research scope for phase 2 is necessary in order to: establish a clear focus and boundaries for the concepts, relationships and related information that will be considered in phase 2; provide an approach for understanding how those concepts and relationships link to nature-related risks and opportunities; assess investor information needs through the lens of these concepts and relationships; and determine both the necessity of standard-setting or other action by the ISSB and where standard-setting may be most appropriate. This is consistent with the objective laid out in paragraph A3(a) of Agenda Paper 3A and 4A *Research design and approach—next phase* (April 2025).

15. In determining the scope for phase 2 of the research, the staff also took the 'anchoring principles' for the research project discussed in paragraph 12 of Agenda paper 2B *Research design and approach* (July 2024) as a fundamental starting point. Finally, the staff will be implicitly using the qualitative characteristics of useful sustainability-related financial information from Appendix D of IFRS S1 to assess investor information needs within the scope of the research.

16. After considering the factors mentioned in paragraphs 14 and 15 above and investor comments in phase 1, the staff believes the scope of phase 2 research should encompass both the broader concepts of an entity's effects on ecosystems and ecosystem services as well as the more specific topic and industry perspective of an entity's risks and opportunities.[12]

17. The scope includes broader concepts such as:

    (a) An entity's dependencies on ecosystems and ecosystem services;

[12] For example, the SASB Standards provide an industry and topic perspective. See AP3A *Nature and the proposed SASB amendments* (July 2025).

(b) an entity's impacts on ecosystems and ecosystem services;

(c) external factors such as other actors' impacts on nature that affect the entity;

(d) changes in the state of nature (as measured by ecosystem extent and condition, and species extinction risk) and the provision of ecosystem services affecting the entity due to dependencies and impacts; and

(e) the transmission pathways that characterise an entity's causal chain from its nature-related dependencies and impacts to its risks and opportunities and any financial effects.[13]

18. These concepts and the relationships between them are discussed in further detail in Appendix B. In addition, the scope covers an entity's nature-related risks and opportunities that are specific to its industry, discrete nature topics pertaining to that industry or cutting across industries. This can include concepts and relationships regarding specific resources or ecosystem services that an entity impacts or depends on, such as water or freshwater ecosystems, the pressures that an entity exerts on nature, such as resource exploitation, pollution and land use change, and thematic issues such as biodiversity and response strategies, including for example, circular economy approaches. These more specific concepts and relationships can be building blocks to inform and supplement an overall and more integrated view of nature-related risks and opportunities at the broader levels.

19. The scope discussed in this paper and the concepts in Appendix B are consistent with how the TNFD contextualises its recommendations. The TNFD's approach encompasses an entity's dependencies and impacts on nature, with a focus on impact drivers and external factors, that inform identification and assessment of an entity's nature-related risks and opportunities which can be considered at a location-specific, driver-specific or industry level.

[13] Drawn from TNFD, University of Oxford Environmental Change Institute, Global Canopy (2025) Evidence review on the financial effects of nature-related risks.

20. The staff believes that an advantage of scoping the phase 2 research in this manner is that it provides for an integrated view of information needs on nature-related risks and opportunities as opposed to a more siloed topic-by-topic or industry-only view. By only considering a broader or narrower scope, the staff believes that the research runs the risk of missing important aspects of investor information needs.

21. For example, scope that is only broad may miss information about important, discrete elements of an entity's nature-related risks and opportunities and removes the opportunity to consider whether some topics, in isolation, could or should be separately considered or given a different level of priority. By following a narrower, more siloed scope, the research may fail to capture or understand information needs about the interdependencies or interactions between topics and between topics and the broader effects on ecosystems and ecosystem services.[14] A narrower scope also may risk missing or misunderstanding evolving investor information needs or effects on entity prospects. The proposed scope, therefore, helps better identify, consider and understand a wider range of information needs about risks and opportunities, especially compounding, cascading or interacting risks and possible nature-related systemic risk (e.g., ecosystem collapse) that may potentially affect an entity and its prospects.

22. This scope should allow phase 1 findings and any additional phase 2 research on investor information needs to be treated in a holistic and logical manner. It also should ensure that the phase 2 research will not miss any important aspects of investor information needs including emerging nature-related information elements—such as transition plans and the use of biodiversity credits—provide better insights into whether and how to build upon existing standards and frameworks, and allow the research findings to be organised and communicated in a logical and clear manner.

[14] For example, water is affected by land use changes and climate change and in turn water availability and quality affects the functioning of local ecosystems; these interactions may affect not only the entity itself but also affect the larger business or social context in which an entity must operate (e.g., local regulation to control access to water).

23. The staff acknowledges that the phase 2 research will be driven not by an equal and uniform attention to all areas within the scope, but by those areas of clear evidence of investor information needs and evidence of effects on an entity's prospects based on the research. Furthermore, as noted earlier, this more integrated scope for the purposes of the BEES research project also does not imply or convey how subsequent disclosure requirements or standards might be structured.

Next steps

24. The staff expects to share its evaluation on the necessity and feasibility of standard-setting for consideration by the ISSB in the coming months, beginning with an assessment of investors' information needs about nature-related risks and opportunities for which clear evidence exists of investor interest and of effects on an entity's prospects.

25. The staff will then compare the particular investor information needs identified to the current set of ISSB materials (IFRS S1, IFRS S2, the SASB Standards and the CDSB Guidance) to determine the extent to which ISSB materials meet, partially meet or do not meet investor information needs on nature-related risks and opportunities. This analysis will inform the ISSB on how much of the current ISSB materials could meet investor information needs and where the remaining gaps are.

Questions for the ISSB
1. Do ISSB members have any questions or comments about the proposed areas of focus (paragraph 9) for the project plan for phase 2 of the research project on BEES? 2. Do ISSB members have any questions or comments about the anticipated scope for phase 2 of the research project on BEES (paragraphs 16-18)?

Appendix A: Potential recommendations

A1. Paragraph 17 of Agenda Paper 3A and 4A *Research design and approach—next phase* (April 2025) presents some potential recommendations that could result from the staff's assessment in phase 2 of the research. The list of potential recommendations below provides more details on these possibilities.

A2. This list of potential recommendations is not all inclusive. The staff may develop other recommendations as research progresses. The staff may also consider a combination of recommendations listed.

A3. Potential recommendations include:

(a) Consider educational materials where it is determined that investor needs can be met through ISSB standards and materials, but additional explanations are necessary or could be useful.

(b) Consider targeted amendments to IFRS S1 or IFRS S2, enhancements to the SASB Standards or amendments/additions to IFRS S1 application guidance (and CDSB application guidance) to add additional, specific nature-related requirements or provide additional (mandatory) application guidance or (non-mandatory) illustrative guidance.

(c) Consider building on or incorporating other (or portions of other) standards and frameworks by amending ISSB Standards or developing a new standard, standards or other materials.

(d) Perform additional research, monitor developments and consider standard setting at a later date.

Appendix B: Key nature concepts and relationships in the scope of phase 2 research

B1. Appendix B provides the key concepts, relationships and terms (collectively factors) to be covered in the scope of the phase 2 research.[15] These factors are key elements defining and characterising various investor information needs in assessing nature-related risks and opportunities and related evidence of effects on an entity's prospects, as expressed by investors in phase 1 of the ISSB's BEES research project and as used in other nature-related disclosure standards and frameworks. These concepts and relationships will help the ISSB to take a consistent and holistic approach in evaluating the necessity and feasibility of standard-setting in phase 2 based on consistent concepts, relationships and terms. These definitions, however, are not necessarily indicative of defined terms that may be included in any potential ISSB Standards.

Aspects of nature

B2. **Nature:** Nature is defined as the natural world, with an emphasis on the diversity of living organisms (biodiversity) and their interactions among themselves and with their environment. In turn, the environment is the naturally occurring living and non-living components of the Earth, together constituting the biophysical environment.

B3. **Biodiversity**: The variability among living organisms from all sources, and this includes diversity within species, between species and of ecosystems. [Convention on Biological Diversity (1992) Article 2] The terms nature and biodiversity are often incorrectly used interchangeably. Biodiversity represents the diversity of living (biotic) aspects of nature, while the term nature includes both living (biotic) and non-living (abiotic) aspects and does not specifically relate to its diversity.

B4. **State of Nature**: The condition and extent of ecosystems, and species population size and extinction risk. Changes to the state of nature include positive or negative

[15] Most of the terms and definitions below are taken from the TNFD Glossary

changes. Entities can affect the state of nature through their dependencies and impacts. Depending on the significance of these changes in the state of nature, the natural capital and ecosystem services an entity depends on may be affected, resulting in risks and opportunities to the entity.[16]

B5. **Ecosystem**: A dynamic complex of plant, animal and microorganism communities and the non-living environment, interacting as a functional unit. Entities operate in and depend upon ecosystems for natural resources (see natural capital) and ecosystem services. The continued functioning of ecosystems is important for the longer-term sustainability of the stock of resources that an entity depends on.

B6. **Ecosystem Services:** The contributions of ecosystems to the benefits that are used in economic and other human activity.[17]

B7. **Natural Capital:** The stock of renewable and non-renewable natural resources (e.g., plants, animals, air, water, soils, minerals) that combine to yield a flow of benefits to people. Natural capital typically refers to the stock of resources used by an entity; in contrast, ecosystems refer to a dynamic complex of living and non-living elements interacting as a functional unit to produce natural capital resources and ecosystem services.

Interactions with and effects on nature

B8. **Nature-related dependencies:** Dependencies are aspects of natural capital and ecosystem services that a person or entity relies on to function. An entity's business

[16] In reporting on the state of nature and changes thereto, aggregate measures of ecosystem integrity may sometimes be used such as the Ecosystem Integrity Index, Species Habitat Index, Ecosystem Integrity Assessment, Biodiversity Indicator and Reporting System (BIRS) and the use of reference states. In this area, the Nature Positive Initiative (NPI) is leading a multi-organisational effort to establish consensus on a set of credible and practical metrics to measure the state of nature.
[17] Ecosystem services are categorised in three ways – *provisioning* (tangible products that ecosystems provide, such as food, water and raw materials), *maintenance/regulating* (regulation of ecosystem processes, including climate regulation, water regulation, air quality regulation, disease and pest regulation, erosion control, and pollination; and fundamental processes that maintain the conditions for life and enable all other ecosystem services such as nutrient cycling, soil formation, primary productivity and habitat provision), and *cultural* (non-material benefits that ecosystems provide, such as recreation and tourism, aesthetic and spiritual values, and educational and scientific value).

model, for example, may be dependent on the ecosystem services of water flow, water quality regulation and the regulation of hazards like fires and floods; provision of suitable habitat for pollinators, who in turn provide a service directly to economies; and carbon sequestration. Dependencies can be categorised as inputs for producing goods and services (e.g., timber, aggregates, minerals, water, cultural aspects), services that support an entity's production process (e.g., water for cooling servers) or services that mitigate impacts or protect an entity from disruptions (e.g., flood protection, water purification, soil retention).

B9. **Pressures on nature:** The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) identifies five pressures on nature – land or ocean use change, pollution, natural resource use & exploitation, invasive species and climate change. These pressures arise from an entity's activities, dependencies and impacts on nature and activities of other entities.

B10. **Nature-related impacts**: Changes in the state of nature (quality or quantity), which may result in changes to the capacity of nature to provide ecosystem services. Impacts can be positive or negative. They can be the result of an entity's or another party's actions and can be direct, indirect or cumulative.

Nature-related risks and opportunities

B11. **Nature-related risks:** nature-related risks are potential threats (effects of uncertainty) posed to an entity that arise from its and wider society's dependencies and impacts on nature. These risks can be categorised as nature-related physical risks and nature-related transition risks,[18] with nature-related systemic risks potentially affecting entity prospects through physical and/or transition risks.

B12. **Nature-related physical risks:** Nature-related physical risks arise because of changes in the living (biotic) and non-living (abiotic) conditions that support healthy, functioning ecosystems. They are risks often resulting from the degradation of nature

[18] This is similar to the categorisation of climate risks as climate-related physical risks and climate-related transition risks, as noted in IFRS S2.

(such as changes in ecosystem equilibria, including soil quality and species composition) and consequential loss of ecosystem services that economic activity depends upon. Nature-related physical risks can arise from longer-term degradation of nature (*chronic* physical risk)—e.g. a gradual decline of species diversity of pollinators resulting in reduced crop yields, or water scarcity—or can be event-driven (*acute* physical risk)—e.g. natural disasters or oil spills. These risks are usually *location specific*.

B13. **Nature-related transition risks:** Nature-related transition risks are risks to an entity that stem from a misalignment of economic actors with actions aimed at protecting, restoring, and/or reducing negative impacts on nature. Transition risks can be prompted, for example, by changes in regulation and policy, legal precedent, technology, investor sentiment or consumer preferences (i.e. policy, legal, technological, market and reputational risks)[19]. They can also arise from activities aimed at restoring nature that no longer align with, for example, revised policies.

B14. **Nature-related systemic risks:**[20] Nature-related systemic risks are risks arising from the breakdown of the entire system, rather than the failure of individual parts. Nature-related systemic risks are characterised by modest tipping points combining indirectly to produce large failures and cascading interactions of *physical* and *transition* risks. Nature-related systemic risk covers more than only risk to a financial system (i.e. financial stability risk). It also covers the risks from the breakdown of natural systems (i.e. ecosystems). Nature-related systemic risk—whether to the stability of natural or financial systems—can potentially give rise to physical and/or transition risks that could reasonably be expected to affect an entity's prospects. For example, ecosystem stability risk could generate significant physical and transition risks for entities whose

[19] These types of transition risks are similar to the different types of climate-related transition risks, as noted in IFRS S2.

[20] Investors raised the topic of systemic risk in phase 1 of the ISSB's research project on BEES but were unclear on the type of information they needed. Information needs on systemic risk may differ depending on the type of investors. Information that might be relevant for an understanding of an entity's risks and opportunities and effects on entity prospects might include for example, how an entity considers various potential systemic events when identifying and assessing its risks and formulating its strategy and efforts at resilience to such risks.

business models rely on extensive value chains, while nature-related financial stability risk could generate significant transition risk for financial institutions through concentrated exposure to high-risk sectors or propagation within the financial system.

B15. **Nature-related opportunities:** Efforts to mitigate negative impacts on nature or adapt to changes in the state of nature can produce nature-related opportunities for an entity, resulting in potential positive effects for the entity. Nature-related opportunities are generated through impacts and dependencies on nature, and can occur when: entities avoid, reduce, or manage nature-related risks, for example, connected to the loss of natural capital and ecosystem services that the entity and society depend on; and through the strategic transformation of business models, products, services, markets and investments that actively work to reverse the loss of nature, including by restoration, regeneration of nature and implementation of nature-based solutions.

B16. **Effects on Entity Prospects:** Arise from nature-related risks and opportunities that could reasonably be expected to affect the entity's cash flows, its access to finance or cost of capital over the short, medium or long term.[21]

Key Relationships

B17. There are several key relationships among the concepts that might inform how investors assess an entity's risks and opportunities. For example, the relationship between an entity's dependencies and impacts on nature and its risks and opportunities. In turn, risks and opportunities are related to potential effects on an entity's prospects. Some key relationships that might be of interest to investors include:

B18. **Location Information**: Investors in phase 1 indicated that the location of an entity's activities and assets, an entity's dependencies and impacts in those locations, and the type(s) of ecosystems at those locations are relevant considerations in their assessment

[21] See paragraph 3, IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information (June 2023). Also see Agenda paper 3A *Evidence of effects on an entity's prospects* (March 2025).

of nature-related risks and opportunities.22 However, investors were not very specific as to what types of information and the level of granularity of information about location that they would find useful.

B19. **Dependency pathway**: A dependency pathway shows how a particular business activity depends upon specific features of natural capital. It identifies how observed or potential changes in natural capital affect the costs and/or benefits of doing business.

B20. **Impact pathway:** An impact pathway describes how, because of a specific business activity, a particular measurable quantity of a natural resource input or a measurable non-product output of a business activity (e.g., pollution or waste) results in observed or potential changes in natural capital, and how these changes in natural capital might feedback to affect the entity.

B21. **Relationship between dependencies and impacts**: The relationship between an entity's use of natural capital and various ecosystem services, the method of accessing or obtaining those services and resources and an entity's contributions to impacts on nature. In some cases, dependencies may lead directly to certain impacts (e.g., use of timber resources as inputs leading to deforestation) while in other cases impacts are a by-product of an entity's value chain (e.g., pollution and waste).

B22. **Relationships affecting risks and opportunities**: Central to investors' decisions are the relationships between an entity's nature-related dependencies and impacts and the potential nature-related risks and opportunities that might arise from those dependencies and impacts. These relationships, including relevance to an entity's value chain, are described in the context of all sustainability-related risks and opportunities in the application guidance for IFRS S1 *General Requirements for Disclosure of Sustainability-related Financial Information*, including a specific

[22] Not all entity locations are created equal. For example, locations in proximity to important areas such as threatened ecosystems, protected areas, conservation areas, endangered species or critical habitat may pose greater risks and opportunities. Understanding differences between location conditions such as a location affected by water stress can also aid in the assessment of risks. Finally, the same type of ecosystems in different locations may respond differently to an entity's activities and assets and similarly, different types of ecosystems in the same location may respond differently to an entity's activities and assets. Locations also differ as to the response of local communities and governments to an entity's impacts and dependencies.

example of water as a natural resource on which an entity's business model might depend.[23] The topic summaries for disclosure topics in the SASB Standards also identify the relationships between impacts and dependencies and risks and opportunities, including for nature-related risks and opportunities, in the context of particular industries.[24]

B23. **Relationships affecting effects on an entity's prospects:** Another relationship central to investors' decisions is the relationship between nature-related risks and opportunities and effects on an entity's prospects. AP3A Evidence of effects on an entity's prospects (March 2025) summarises the phase 1 evidence obtained through a literature review and supplemented by stakeholder engagements to provide an understanding of the effects of nature-related risks and opportunities on an entity's prospects. The paper found that the evidence of the effects of nature-related risks and opportunities on entity prospects ranges from macroeconomic conditions affecting an entity to effects on an entity's corporate financial performance (cashflows, income, assets and liabilities) and effects on market returns (stock, bond or other financial assets). However, the mechanisms by which nature-related risks and opportunities lead to effects on an entity's prospects is an area of ongoing academic research.

Determining the potential effects on an entity's prospects from its risks and opportunities is challenging. Ecosystems and ecosystem services are complex, dynamic systems where many areas of understanding and measurement are subject to uncertainty that tend to increase as the time horizon lengthens. In addition, the relationship of natural capital and ecosystem services to an entity's value chain is often ambiguous and highly dependent on the sector and the specific BEES-related issues.

The relationship between risks and opportunities and effects on an entity's prospects can be characterised as transmission pathways. Transmission pathways are pathways through which nature-related hazards (nature change resulting from both an entity's

[23] Paragraph 2 of IFRS S1 *General Requirements for Disclosure of Sustainability-related Financial Information* and paragraphs B1 to B5 of Appendix B for IFRS S1.

[24] See for example, AP3A *Nature and the proposed SASB amendments* (July 2025).

activities or external factors) translate into physical and transitions risks for entities and the economy and show how these risks can potentially materialise as financial effects via entity-level or economy-wide channels.[25] For example, nature-related risks can affect an entity either directly through its supply chain or its operations or indirectly through the macroeconomy, financial system or market competition. The effects on entity prospects can materialise through transmission pathways as financial losses/gains, changes in debt/equity valuation, access to finance, cost of capital and cost of insurance; or adjustments to strategic decisions, such as plans for increases in capital expenditure, divestments or asset retirements.

[25] See pages 17 to 19 in TNFD, University of Oxford, Global Canopy (2025), Evidence review on the financial effects of nature-related risks.