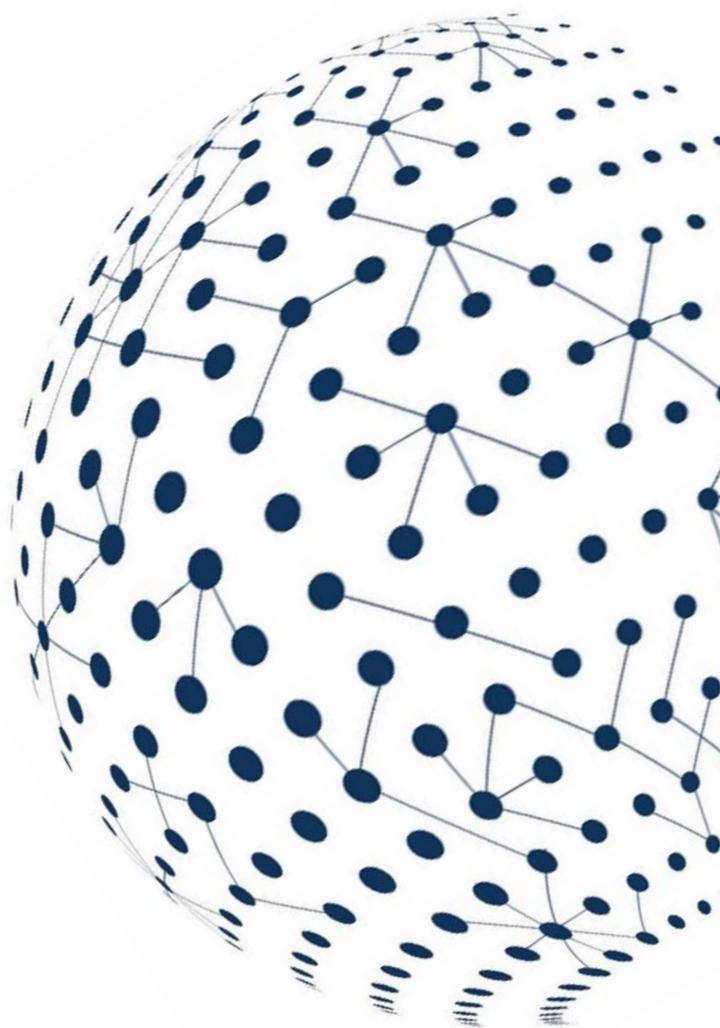


# FSB Roadmap for Addressing Climate-Related Financial Risks

7 July 2021



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## 1. Motivation and objective for the roadmap

There is a growing focus on potential risks to financial stability from climate change. A manifestation of physical risks as well as a disorderly transition to a low-carbon economy could have destabilising effects on the financial system, including through a rise in risk premia and falling asset prices in the relatively short term. Climate-related risks may be amplified by the financial system, across borders and across sectors.

Climate-related risks are far-reaching and differ from other risks to financial stability. They are global in nature, and will have effects across all entities, sectors and economies, but the effects will differ depending on their locations and activities. Climate-related risks may be highly non-linear, and their effects on the financial system subject to substantial uncertainty and tail-risk. But it is foreseeable that some combination of physical and transition effects will occur. The effects are spread over long time horizons, and actions today may determine the severity of risks in the years ahead. The breadth of climate-related risks – including their possible simultaneous crystallisation across multiple jurisdictions and sectors – also has implications for the resilience of the financial system. The actions needed are therefore both bottom-up and top-down, to address risks to individual entities and those to the system as a whole.

A large, and growing, number of international initiatives are underway on addressing financial risks from climate change. Ongoing work by official sector bodies, including the FSB, NGFS, BCBS, CPMI, IAIS, IOSCO, OECD, IMF and World Bank, and a variety of private sector bodies on climate issues have been added to recently by the IFRS Foundation proposal to establish an International Sustainability Standards Board (ISSB), initially focused on climate-related reporting. More generally, climate topics are being given an important place in both the G20 and G7 agendas for 2021, and preparations are underway for COP26.

The management of climate-related financial risks at the level of individual firms and at the level of the overall system are closely interrelated.

- Effective risk management at the level of individual companies and financial market participants is a precondition for a resilient financial system. The ability to manage risks depends on reliable data, from a variety of sources, including from scientific and official sector sources and also from corporate disclosures. High-quality corporate disclosures enable market participants to make better informed decisions, such as on pricing and allocation of capital, and they help financial authorities to better assess the resilience of financial institutions and the overall financial system to climate-related risks.
- By the same token, understanding the resilience of the financial system to these risks can support effective management by firms of climate-related risks through financial markets, the stable provision of sustainable finance, and an orderly transition to a low-carbon economy. Hence, micro-prudential, macro-prudential and economic objectives are closely intertwined. The measures taken with the direct objective of addressing climate-related financial risks will also put the financial system on a sound basis for meeting these wider objectives.

These interconnections between climate-related financial risks faced by different participants in the financial system reinforce the case for coordinated action. The FSB, with its diverse

membership -- including financial authorities from individual jurisdictions (ministries of finance, central banks, banking and insurance supervisors, securities market regulators), standard-setting bodies and international organisations -- and the NGFS as regular participant in FSB meetings, makes it well placed to coordinate the work to address climate-related financial risks.

This FSB *roadmap for addressing climate-related financial risks*, which has been prepared in consultation with standard-setting bodies (SSBs) and other relevant international bodies, supports international coordination in several ways.

- It promotes relevant initiatives at standard-setting bodies, the NGFS and other international organisations.
- By presenting relevant ongoing and planned international work in one place, it helps to identify gaps to be covered by further work, limit overlap and promote synergies.
- It sketches out how the FSB can serve as a forum for discussing cross-sectoral and systemic issues and agreeing a way forward.
- And it provides input into broader international policy considerations by facilitating communication with the G20, G7 and COP26.

All this supports the consistency of actions to be taken over the coming years, enhances authorities' ability to address financial stability risks and reduces the risk of harmful market fragmentation.

The FSB roadmap sets out for G20 endorsement the roadmap, as a comprehensive and coordinated plan for addressing climate-related financial risks, including steps and indicative timeframes needed to do so, and paves the way for implementation. It will be delivered to the G20 Finance Ministers and Central Bank Governors meeting in July 2021.

## 2. Areas of focus, goals and actions

The roadmap focuses on work to assess and address financial risks of climate change. Starting from the general premise that policymaking requires reliable information; appropriate diagnostics; and effective policy instruments, the roadmap covers four main, interrelated areas:

- **firm-level disclosures**, as the basis for the pricing and management of climate-related financial risks at the level of individual entities and market participants;
- **data**, using consistent metrics and disclosures, provide the raw material for the diagnosis of climate-related vulnerabilities;
- **vulnerabilities analysis**, which provides the basis for the design and application of regulatory and supervisory frameworks and tools;
- and **regulatory and supervisory practices and tools** that allow authorities to address identified climate-related risks to financial stability in an effective manner.

The roadmap's focus on financial risks from climate change distinguishes it from efforts to mobilise the financing of sustainable investments, or the financing of a transition to a low-carbon economy. The actions to be taken under the roadmap seek to embed the management of climate-related financial risks as an integral part of the overall management of financial risks. The goal is that all financial risk decisions appropriately take account of climate change. The roadmap consequently focuses on the information needs of, and actions by financial regulatory and supervisory authorities (both nationally and internationally) to promote financial resilience to climate-related financial risks. Actions to mobilise sustainable investments, however, need to involve a much wider set of policies and actors.

At the same time, it is important to recognise interrelations between work to address financial risks from climate change and the mobilisation of sustainable finance. Financial resilience is a general precondition for the stable provision of sustainable finance. By the same token, sustainable finance based on sound risk management contributes to financial resilience. Over time, progress in identifying and addressing climate-related financial risks will support a shift towards sustainable finance and create a positive feedback loop whereby the mobilisation of sustainable finance and a smooth transition to a low-carbon economy benefit financial stability. More specifically, the information, analytical tools and policy approaches developed as part of the FSB roadmap may be applicable to a wider range of users and use cases, including risk management and policy planning related to sustainable finance. So, this roadmap to address climate-related financial risks may also form a useful part of the G20's broader roadmap for sustainable finance being developed by the Sustainable Finance Working Group (SFWG), given the mutually reinforcing goals of the two roadmaps.

The following sections provide an overview of the strategic goal, main challenges for achieving it, and key milestones for each of the four areas in light of the progress made so far. The annex tables describe these four areas in more detail, including specific actions and their interrelations across the roadmap.

The steps set out in the roadmap are indicative and each step described to be taken is subject to the outcomes of necessary prior steps being satisfactorily achieved. Given this indicative status, they do not represent commitments either by jurisdictions or by international bodies to the individual actions or dates.

## 2.1. Disclosures

### 2.1.1. Goal

The goal of international initiatives in the area of financial disclosures is globally consistent, comparable, and decision-useful public disclosures by firms of their climate-related financial risks. To further this overall goal, establishing international standards is important, including accommodating interoperability between a global baseline of international standards and national and regional jurisdiction-specific requirements. Corporate disclosures on their climate-related financial risks form the basis for the pricing and management of such risks both internally at individual companies making the disclosures and at individual investors, lenders and others with financial exposures to those companies. International consistency in supervisory and regulatory disclosure requirements is important for oversight of cross-border risks by financial authorities.

### *2.1.2. Challenges and actions to address them*

A key challenge is to achieve consistency of disclosure standards and of the related reporting requirements by financial authorities. Consistency in the specific risk metrics used as part of these disclosures would facilitate comparison and aggregation, which is important not only for individual investors but also for the monitoring and assessment of financial stability risks related to climate change. For high-quality disclosures, it is also important to develop risk metrics that are aligned with financial risk measurement methodologies and to address related data gaps.

The recommendations by the Task Force on Climate-Related Financial Disclosures (TCFD) have become a widely supported basis for climate-related reporting, first through voluntary private-sector adoption and more recently through jurisdictional initiatives to make such disclosures mandatory or promote voluntary implementation.

Work on the development of IFRS global sustainability disclosure standards, starting with climate, is advancing rapidly, with important engagement from IOSCO. The IFRS Foundation is currently consulting publicly on the establishment of the ISSB, which is planned for November 2021, and intends to take forward the development of a common international standard for climate-related financial disclosure by mid-2022.

The FSB welcomes the IFRS's programme of work to develop a baseline global sustainability reporting standard under robust governance and public oversight, built from the TCFD framework and the work of an alliance of sustainability standard setters, involving them and a wider range of stakeholders closely, including national and regional authorities. The roadmap also supports the further development of reliable metrics that could provide the quantitative support for the baseline standard. Jurisdictions may choose to supplement this common baseline through additional ambition in the scope of sustainability disclosures. The ISSB standards will follow a building block approach, designed to accommodate interoperability with jurisdiction-specific disclosure requirements, including those that may extend beyond the baseline. When considering the interoperability of these baseline standards, the multi-stakeholder consultative committee under the ISSB should take into account existing national and regional requirements in terms of sustainability reporting, as well as ongoing national and regional efforts to develop such standards.

The FSB recognizes that some jurisdictions are already taking, or may wish to take, domestic steps in a more accelerated timeframe than the IFRS's work. The TCFD framework provides a basis for initiatives that jurisdictions may wish to take, based on domestic regulatory frameworks, while work towards a global baseline corporate reporting standard progresses. This would be an important step forward on the path towards a global baseline standard that is interoperable with jurisdiction-specific requirements in order to achieve comparability in disclosures.

To support the goal of globally aligned baseline climate disclosures, the roadmap sets out steps to promote consistency in national and regional initiatives, including in the period while the ISSB standards are still being developed:

- FSB and other bodies will promote consistent approaches among national and regional climate disclosure initiatives, using frameworks based on the TCFD Recommendations for climate-related financial disclosures, as work on the issuance of ISSB standards progresses.

- Once the ISSB standards (following public consultation) are issued:
  - IOSCO will consider whether to endorse the ISSB standards. If IOSCO issues an endorsement of ISSB standards, IOSCO would encourage IOSCO members and relevant authorities to consider the ISSB's standards for use for cross-border purposes and when setting sustainability-related disclosure requirements in their respective jurisdictions.
  - If IOSCO endorses the standards, sectoral standard-setting bodies would then be encouraged to review their own standards for supervisory and regulatory disclosure requirements for climate-related financial risks, consistent with the disclosure standards for publicly listed companies (while recognizing that there may be differing informational needs for public disclosure and supervisory and regulatory reporting requirements).
  - Jurisdictions will have their own legal frameworks for adopting, applying or otherwise making use of international standards.

## 2.2. Data

### 2.2.1. Goal

The goal of international initiatives in this area is to establish a basis of comprehensive, consistent and comparable data for monitoring climate-related financial risks globally. The availability of such data is a precondition for monitoring of financial stability risks and for vulnerabilities assessment. This includes data on physical and transition risk, appropriately granular data on the translation of physical and transition risks into financial risk and the exposure of financial institutions, information on the transfer of climate-related risks within the financial system and tools for data analysis that can be used to assess climate-related risks to the financial system as a whole, in particular scenario analysis.

### 2.2.2. Challenges and actions to address them

The NGFS's and the FSB's latest reports on the availability of climate data<sup>1</sup> are near-term steps to be built upon with actions to fill identified data gaps in order to, among other things, enable effective investor decision-making and support risk assessment and risk monitoring at the microprudential and macroprudential levels.

Challenges currently exist concerning the availability of granular and comparable data and the development of metrics that adequately translate climate outcomes into financial impacts. To some extent, these challenges reflect a lack of underlying data, for instance on the exposures of different sectors to climate risks. Establishing an international standard for corporate disclosures described above will be an important step in helping to provide this basis. But reliable corporate disclosures themselves depend on reliable underlying data on climate risks, and

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<sup>1</sup> References to be inserted once published.

financial institutions will need to complement corporate disclosure information with other important data on climate vulnerabilities and exposures. The work on data and disclosures is therefore closely intertwined. The lack of suitable data is also a reflection of difficulties in transforming existing data on the drivers of climate risk into reliable metrics of financial risks.

- Take steps to fill climate data gaps, with a special emphasis on ensuring cross-sectoral and international consistency. The work of various international bodies, such as the NGFS, FSB and IMF, on data gaps will need to be closely coordinated in order to efficiently fill the various gaps identified.
- Develop forward-looking metrics (with consistent terminologies) anchored in real-world climate targets - that can translate climate developments, the transition to a low-carbon economy, and other information into financial impacts. Initiatives on developing such metrics are underway or planned at NGFS, the IMF and the FSB, and are scheduled to be completed in 2022. These too will need to be closely coordinated.

## 2.3. Vulnerabilities analysis

### 2.3.1. *Goal*

The goal in this area is to more systematically assess and better understand climate-related financial vulnerabilities and potential financial stability impacts. Given the pervasiveness of climate risks, understanding and monitoring of risk transmission channels, including across financial sectors, across borders, and with the real economy, is important. Carrying out vulnerability assessments on a regular basis would, over time, not only support understanding of the evolution of such vulnerabilities over time, but also enable the refinement of analytical techniques and policy tools. Once the toolkit is developed, climate risks should be integrated into standard vulnerabilities assessment frameworks.

### 2.3.2. *Challenges and actions to address them*

The global, yet highly uncertain, nature of climate risks calls for further efforts to develop and refine the analytical tools to assess climate-related vulnerabilities. One important task is the systematic global monitoring of climate-related financial stability risks, and another is to put in place the basis for further developing climate scenario analyses. Further work on monitoring and on scenario analyses would also identify areas where there is a need for specific analytic deep dives. These strands of work will have to be closely aligned with the efforts to develop a data basis, as discussed above.

- Work to further enhance the understanding of the transmission and feedback loops of climate-related shocks through the global financial system would build on the reports by the FSB, the BCBS and (forthcoming) the IAIS and the NGFS, with a view to informing the identification of suitable financial risk metrics and developing indicators that can form part of a monitoring framework.
- The development of a framework for monitoring vulnerabilities would bring together work on metrics and indicators of climate risk, using also the analytical work on transmission channels.

- Given the importance of a long-term, forward-looking perspective, further deepening of scenario analysis, making use of NGFS scenarios, will be important.
- These steps will provide a solid basis for incorporation of regular monitoring and assessment of climate-related financial risks into overall risk financial risk monitoring. The FSB will integrate climate-related risks in its surveillance framework for global financial stability risks. The IMF and World Bank are integrating climate-related risks in their work; in the IMF's case in its multilateral and bilateral (national) surveillance and in the World Bank's case in its analytical and operational work.

## 2.4. Regulatory and supervisory practices and tools

### 2.4.1. Goal

The goal of international initiatives in this area is to establish effective and, where useful and appropriate, consistent supervisory and regulatory approaches and tools to address climate-related risks, both within individual sectors and at the system-wide level. Supervisory and regulatory approaches to climate-related risks should be fully integrated within the overall supervisory and regulatory approaches to address financial risks.

### 2.4.2. Challenges and actions to address them

Much work has already been done by sectoral standard-setters, international bodies and national authorities to develop regulatory and supervisory practices and tools within the various sectors of the financial system.<sup>2</sup> The FSB will support cross-sectoral consistency and macroprudential perspectives, and the international financial institutions can support effective national action where needed. This work covers a range of issues on reporting for supervisory purposes, and on regulatory and supervisory approaches, including common elements across sectors.

In addition, as authorities and the private sector advance their understanding of financial risks, consideration needs to be given to the question of whether microprudential approaches adequately cover system-wide vulnerabilities and therefore whether additional macroprudential perspectives or tools are needed.

- Develop effective regulatory and supervisory practices and tools.
- Enhance cross-sector and cross-jurisdiction comparability of approaches. The FSB will consider developing common principles and good practices to assist comparability, taking into account sectoral and jurisdictional specificities. The FSB would then monitor implementation and progress.
- Build regulatory and supervisory capacity. The IMF, World Bank, NGFS, OECD and sectoral standard setters will all be able to assist with sharing good practices (including

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<sup>2</sup> The forthcoming interim report by the FSB on regulatory and supervisory approaches to addressing climate risks to be published in October 2021 will include a stocktake of such international work.

through IMF and World Bank assessments of financial supervisory and regulatory frameworks) and capacity building.

## 2.5. Interconnections between the areas

The four roadmap areas are closely interrelated, in several ways. First, the actions in the different areas often *build on each other*, suggesting a certain sequencing of actions and initiatives. Second, there are *feedback and learning effects* across areas and progress in one area may lead to adjustments and refinements of work in others. Finally, over time, as work in the different areas progresses, there may be complementarities, but also potential gaps may emerge that should be filled.

- **Building on each other.** Given the relatively nascent stage of work on climate-related financial risks, many of the elements for regulatory and supervisory policies to manage and address these risks still need to be developed. For instance, identifying and addressing data gaps is a precondition for the implementation of a framework to monitor climate-related risks to financial stability and also for the ability of supervisory authorities to gauge individual financial institutions' exposures to climate risks effectively. Consistent, standardised corporate disclosures are a foundational step in closing data gaps and in the ability of the private sector and authorities to assess those climate-related financial risks.
- **Feedback and learning.** Work on climate-related financial risks is also subject to a high degree of uncertainty, due to still limited knowledge about the dynamics and financial impacts of climate change, but also because of the lack of experience with policies to address such risks. Feedback and learning across areas is therefore an integral part of developing effective policies to address climate risk. For instance, it is critical to feed back experiences with the analysis of climate-related vulnerabilities, including scenario analysis, into efforts to fill data gaps and data collection. The same applies to experiences with the regulation and supervision of climate-related risks and the design of scenario analysis.
- **Complementarities and potential gaps.** BCBS, IAIS and IOSCO have initiatives underway to develop regulatory and supervisory policies in banks, insurance firms and asset managers. This includes work to identify risk factors and transmission channels, close data gaps, and employ tools to assess vulnerabilities at the sectoral level. CPMI has also discussed this topic and will be scoping out potential work. These initiatives create important complementarities, and provide a strong basis for focused cross-sectoral efforts to support consistency of approaches where appropriate. Gaps might emerge in particular where climate-related risks depends on the interaction of sectors – including risk transfers or spillovers – or related to the potential development of a macroprudential orientation to address climate-related financial risks in future.

The roadmap takes account of these interconnections. It supports this process of building on each other's work through the sharing of information, and initiatives that may lead to the development of common approaches, principles or baseline standards. Information sharing, and regular discussion of work progress under the roadmap also supports feedback and learning. The regular review of work progress is also an important mechanism to identify emerging gaps

early on so that they can be addressed. Overall, the roadmap process gives individual jurisdictions the flexibility they need to reflect country-specific circumstances. It provides a common basis for addressing risks that are in many respects global in an effective manner. It also limits the risk of market fragmentation.

### 3. Taking forward the roadmap

The roadmap aims at providing a strategic orientation that builds upon the work currently underway and gives a sense of direction. The time horizon of the roadmap focuses most specifically on actions in the short and medium term (2021 – 2023), but also indicates the direction and goals of work beyond that time period. The roadmap will allow for flexibility, including across jurisdictions, as priorities will evolve over time.

The FSB will coordinate closely with the other bodies mentioned in the roadmap to ensure that the combined work is efficiently directed toward the common goal of addressing climate-related financial risks. As part of this process, the FSB Steering Committee will act as the coordinating body for the overall roadmap. The relevant FSB Standing Committees will conduct FSB work that falls within their respective areas and report to Steering Committee. For each block, this overall coordination will be complemented by conference calls among the chairs of the bodies responsible for actions within the respective block as necessary.

The FSB will also coordinate closely with the G20 Sustainable Finance Working Group (SFWG) as the SFWG develops the broader G20 Roadmap on Sustainable Finance. The FSB's roadmap will be more narrowly focused, covering the area of climate-related financial risks, compared with the broader remit of the SFWG. In this way, the FSB's roadmap will be complementary, and mutually reinforcing, to the SFWG's broader remit.

The FSB proposes to the G20 that the FSB roadmap could also cover the climate-related financial risk portion of the broader roadmap being developed by the SFWG for October 2021 (which may involve the FSB elements being spread across more than one focus area of the SFWG roadmap structure). In this way the two roadmaps would provide a coordinated vision and impetus to the ongoing work of the FSB, other standard-setting bodies and international organisations to amplify their actions and provide a strategic overview without duplicating or slowing down the important work that is already underway.

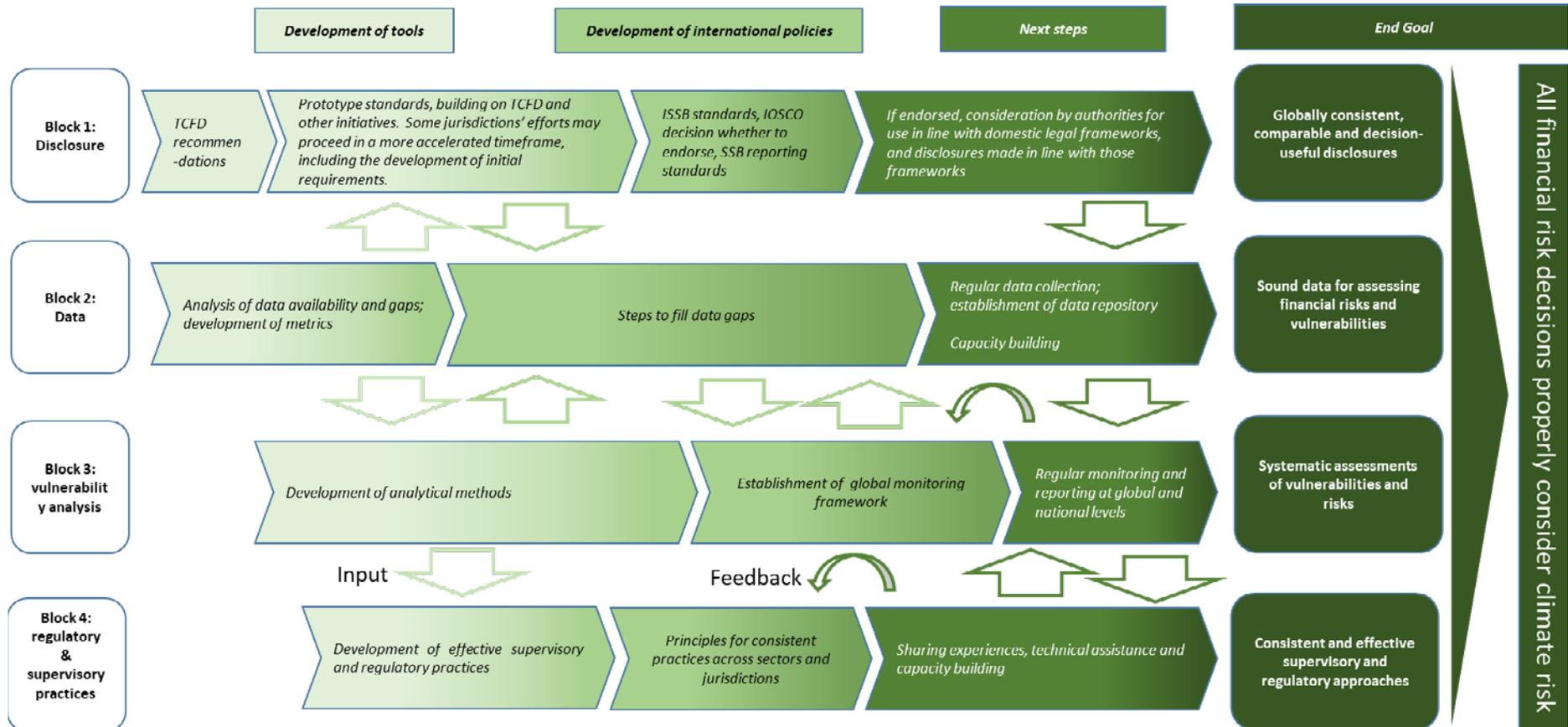
This FSB roadmap focuses on financial risks relevant to climate, because of the importance of this issue for the global financial system, the rapidly advancing understanding of risks, and the need to coordinate the many streams of work already underway. Nevertheless, this area of work is still new for financial authorities. The roadmap will need to stay flexible over time to be able to respond to the deepening understanding of climate-related financial risks and to undertake further work, adjust priorities and timelines, and take action where needed. Meanwhile, understanding is also deepening of the implications of other sustainability topics, such as loss of biodiversity, for the financial system, albeit from a currently much less advanced knowledge base. The FSB will consider whether to include a broader range of sustainability topics in its financial stability agenda in future years.

The FSB will report to the G20 each year on progress under this roadmap. This consolidated reporting will provide an opportunity to document progress, showcase work, and identify

potential areas for further work. These regular review points will also provide an opportunity for taking account of the interrelations in the four sections of the roadmap and adjusting the roadmap as needed. It will also provide an opportunity for continuing to coordinate with the broader G20 Roadmap on Sustainable Finance, given their complementary and mutually reinforcing goals.

Stylised overview of the FSB’s roadmap for addressing climate-related financial risks<sup>1</sup>

Figure 1



<sup>1</sup> The steps set out in this graphic are indicative and each step described to be taken is subject to outcomes of necessary prior steps being satisfactorily completed. Given this indicative status, they do not represent commitments either by jurisdictions or by international bodies to the individual actions or dates.

## Block 1 – Disclosures

### *Objective*

Establish a global minimum standard for disclosures on climate-related financial risks

- IFRS to develop, under robust governance and public oversight, consistent, comparable and reliable global baseline standards for sustainability-related financial disclosures, which include disclosure standards for climate-related financial risks built from the TCFD framework and the work of an alliance of sustainability standard setters, involving them and a wider range of stakeholders closely, including national and regional authorities, to foster global best practice and accelerate convergence. The standard to accommodate interoperability with jurisdiction-specific disclosure requirements, including those that may extend beyond the baseline. Towards that end, when considering the interoperability of these baseline standards, the multi-stakeholder consultative committee under the ISSB should take into account existing national and regional requirements in terms of sustainability reporting, as well as ongoing national and regional efforts to develop such standards. Some jurisdictions domestic efforts to adopt disclosure requirements may proceed in a more accelerated timeframe than the IFRS's work.
- Provided that official sector's expectations regarding the IFRS process and standards are satisfied, sectoral standard-setting bodies to build on the ISSB standards through their own supervisory reporting requirements.
- FSB and other bodies to promote consistent approaches among national and regional climate disclosure initiatives in the meantime, fostering coordination and collaboration among financial authorities across jurisdictions.

**The steps set out below in the roadmap are indicative and each step described to be taken is subject to the outcomes of necessary prior steps being satisfactorily achieved. Given this indicative status, they do not represent commitments either by jurisdictions or by international bodies to the individual actions or dates.**

Actions/deliverables	Indicative timeline	Interconnections within roadmap
1. IFRS to develop baseline global standards for climate from an enterprise value creation perspective		

Actions/deliverables	Indicative timeline	Interconnections within roadmap
(i) Establishment of the International Sustainability Standards Board (ISSB) under the IFRS Foundation, with an initial focus on climate-related reporting		
<ul style="list-style-type: none"> <li>○ <i>Public consultation on changes to the IFRS constitution to accommodate the potential formation of the new ISSB</i></li> </ul>	Consultation opens April 2021 and closes July 2021	
<ul style="list-style-type: none"> <li>○ <i>Establishment of ISSB (based on IFRS Constitution)</i></li> </ul>	ahead of COP26 held in November 2021	
<ul style="list-style-type: none"> <li>○ <i>Establishment of a multi-stakeholder expert consultative committee: (i) to provide input and strategic advice to the ISSB on potentially relevant sustainability topics from an enterprise value creation perspective and to (ii) to promote interoperability with jurisdiction-specific requirements</i></li> </ul>	Shortly after the formation of the ISSB, and in time to contribute to the ISSB’s standard-setting work	Input of other standard setters will be needed, given importance of public disclosures to financial regulatory reporting, supervision and financial institutions’ risk management
(ii) Developing IFRS sustainability reporting standards, with an initial focus on climate from an enterprise value creation perspective		IFRS Foundation to promote connectivity between financial reporting standards and ISSB sustainability reporting standards
<ul style="list-style-type: none"> <li>○ <i>IFRS establishment of the technical working group contributing to further developing the climate prototype standard<sup>3</sup>, with accompanying IOSCO Technical Expert Group to assess prototype.</i></li> </ul>	March 2021	
<ul style="list-style-type: none"> <li>○ <i>IFRS technical working group completion of climate prototype standard</i></li> </ul>	By November 2021	
<ul style="list-style-type: none"> <li>○ <i>IOSCO initial assessment of climate prototype standard for use as a basis to develop an ISSB</i></li> </ul>	Q4 2021	

<sup>3</sup> An initial version of the prototype climate-related financial disclosure standard was published in December 2020.

Actions/deliverables	Indicative timeline	Interconnections within roadmap
<i>standard, including whether it provides a sound basis for the development of an assurance framework</i>		
<ul style="list-style-type: none"> <li>○ <i>IFRS to publish public consultation on technical agenda for ISSB</i></li> </ul>	Q4 2021	
<ul style="list-style-type: none"> <li>○ <i>IFRS to publish conceptual guidelines for standard setting</i></li> </ul>	Q1/Q2 2022	
<ul style="list-style-type: none"> <li>○ <i>ISSB to publish Exposure Draft of new standard (focusing initially on climate)</i></li> </ul>	Q1/Q2 2022	
<ul style="list-style-type: none"> <li>○ <i>ISSB to publish final version of new standard (focusing initially on climate)</i></li> </ul>	Q3 2022	
<p>(iii) IOSCO to consider whether to endorse ISSB standard.</p> <ul style="list-style-type: none"> <li>○ <i>If standard is endorsed, IOSCO to encourage members to consider ISSB standards when setting sustainability reporting requirements for cross-border purpose and at the domestic level, taking account of their domestic legal frameworks</i></li> </ul>	<p>Following ISSB publication of its new standard</p> <p>Conditional upon IOSCO endorsement</p>	
<p>(iv) If endorsed, making use of the new ISSB standard</p>		<p>The steps described in this section (iv) are subject to the prior steps being satisfactorily achieved, to IOSCO endorsement of the ISSB standard and to jurisdictions' expectations regarding the IFRS process and standards being satisfied.</p> <p>If IOSCO issues an endorsement of ISSB standards, IOSCO would encourage IOSCO members and relevant authorities to consider the ISSB's standards for use for cross-border purposes and when setting sustainability-related disclosure requirements in their respective jurisdictions.</p>

Actions/deliverables	Indicative timeline	Interconnections within roadmap
		<p>Some jurisdictions' domestic efforts to implement climate disclosure requirements may have proceeded in a more accelerated timeframe</p> <p>Each jurisdiction will have its own legal framework for adopting, applying or otherwise utilising international standards, reflecting each jurisdiction's circumstances. These may involve, for example:</p> <ul style="list-style-type: none"> <li>○ <i>Incorporation, utilisation or reference by securities regulators in developing offering/listing requirements and other ongoing and periodic reporting requirements.</i></li> <li>○ <i>National and regional accounting standard-setters' adoption or utilisation of ISSB standards at the local level as a minimum.</i></li> <li>○ <i>Other financial regulators' actions (including potentially covering companies that are not publicly listed).</i></li> <li>○ <i>Steps may include possible industry-specific requirements, for types of either financial institutions or nonfinancial companies.</i></li> </ul>
<ul style="list-style-type: none"> <li>○ <i>Effective dates of the new standard to be set out following consultation on ISSB climate-related standard</i></li> </ul>	Q2/Q3 2022	<p>IFRS standards typically are accompanied by dates from which they are effective.</p> <p>Early adoption would be an option.</p> <p>Timeline and types of actions will also depend on steps taken by individual jurisdictions and industry-</p>

Actions/deliverables	Indicative timeline	Interconnections within roadmap
		specific standard setters in line with domestic legal and regulatory frameworks.
<ul style="list-style-type: none"> <li>○ <i>Future work on ISSB sustainability reporting standards, including beyond climate, to be set out following consultation on IFRS agenda</i></li> </ul>	Q2 2022	
<ul style="list-style-type: none"> <li>○ <i>Future work on delivering an auditing and assurance framework for sustainability disclosures to underpin mandatory assurance, including refining/developing related standard setting, and taking account of the needs of jurisdictions.</i></li> </ul>	[IOSCO to describe milestones and dates, in consultation with the Monitoring Group and relevant standard setting bodies]	
(v) TCFD further work to promote take-up of, and provide guidance on, recommendations:		This work both helps prepare for rapid market take-up of the new ISSB standard and promotes fuller and more consistent disclosures in the meantime
<ul style="list-style-type: none"> <li>○ <i>Participation on the IFRS technical working group to develop prototype standard</i></li> </ul>	April 2021	
<ul style="list-style-type: none"> <li>○ <i>Guidance on metrics, targets, and transition planning consultation document</i></li> </ul>	June 2021	To be delivered to FSB and published
<ul style="list-style-type: none"> <li>○ <i>2021 Status Report on the implementation progress of TCFD Recommendations</i></li> </ul>	October 2021	To be delivered to FSB and published
<ul style="list-style-type: none"> <li>○ <i>TCFD-sponsored World Business Council for Sustainable Development consultation document on business reference scenarios for the energy system</i></li> </ul>	October 2021	To be delivered to FSB and published
<b>2. Promoting consistent approaches among national and regional climate disclosure initiatives during the development of a global standard</b>		
(i) FSB report to G20, with high-level recommendations on promoting consistent climate-related financial disclosures based on the TCFD Recommendations	July 2021	

Actions/deliverables	Indicative timeline	Interconnections within roadmap
(ii) FSB and other bodies will promote consistent approaches among national and regional climate disclosure initiatives, using frameworks based on the TCFD Recommendations for climate-related financial disclosures, in line with domestic legal and regulatory frameworks, as work on the issuance of ISSB standards progresses	Scope of further work in FSB is to be confirmed by FSB membership, possibly in September	
(iii) NGFS Progress Report on the implementation of the recommendations of its Guide for Supervisors will cover disclosure practices and include supervisors' expectations on disclosures by banks and insurers	September 2021	
(iv) NGFS How-to guide for central banks' climate-related financial disclosure to promote TCFD-aligned disclosure by central banks, allowing them to lead by example	December 2021	
<b>3. SSB work on sectoral standards for disclosure requirements</b>		Consistency between ISSB disclosures standards (if endorsed) and sectoral standards for disclosures will be important
(i) IOSCO report on sustainability-related disclosures for issuers	June 2021	
(ii) IOSCO report, with recommendations, on supervisory and regulatory practices for asset managers, and related disclosures, including greenwashing and other investor protection concerns	Consultation report in June 2021 and final report in November 2021	
(iii) BCBS development of proposals on the BCBS's role in global efforts related to climate disclosure	September 2021	
(iv) IAIS recommendations on public disclosure requirements, as part of the final version of Application Paper on the supervision of climate-related risks	May 2021	Part of the broader IAIS supervisory work on applying the Insurance Core Principles included in Block 4

Actions/deliverables	Indicative timeline	Interconnections within roadmap
(v) Further IAIS gap analysis of public disclosure requirements for insurers, as part of overall work on a gap analysis of the IAIS supervisory material	End-2021	
<b>4. Reporting on progress in disclosures</b>		
(i) FSB, coordinating with IFRS, IOSCO and others, to report annually to the G20 on progress in implementation by jurisdictions and firms of disclosures and reporting in line with international standards	2022 onwards (annually)	

## Block 2 – Data

### Objective

Establish a basis of comprehensive and robust international data for both the private sector and financial authorities to monitor and assess climate-related financial risks faced by individual entities and by the system as a whole.

- Assess the availability of data with which to monitor and assess climate-related financial risks, identify data gaps.
- Take steps to fill gaps, with a special emphasis on ensuring cross-sectoral and international consistency
- Develop forward-looking metrics - anchored in real-world climate targets - that can translate climate, and the transitions to low-carbon economies, and other information into financial impacts.

Actions/deliverables	Indicative timeline
<b>1. Assessing data availability and identifying data gaps, with respect to both publicly available data and supervisory data</b>	
(i) Report by FSB on the availability of data through which climate-related risks to financial stability can be monitored, as well as any data gaps	Delivered to G20 FMCBGs Meeting in July 2021.
(ii) Report by NGFS identifying the climate-related data needs - and gaps – of financial sector stakeholders (e.g. central banks and supervisors, banks, asset managers)	Progress report in May 2021 and final report in late 2021/early 2022.
<b>2. Filling data gaps</b>	
Further work to be included on steps to fill data gaps and establish consistent cross-jurisdiction and cross-sector data sets relating to climate-related financial risks. Steps here could include:	Work to fill data gaps will inform, and be informed by, the work in Block 1 to develop standardised disclosures

Actions/deliverables	Indicative timeline	
(i) FSB and NGFS to coordinate work by various bodies to fill data gaps identified by FSB and NGFS 2021 reports	[Milestones and dates to be set]	
(ii) IMF work on climate-related data availability and needs from a macroeconomic and financial policy analysis perspective (including further development of relevant information in its Climate Change Dashboard)	Ongoing	
(iii) Report by IAIS on assessing climate-related risks to the insurance sector, with a focus on investment exposures, making use of an IAIS data collection amongst Members	September 2021	
(iv) Follow-up work by IAIS on collecting and analysing data on climate-related risks in the global insurance sector as part of its Global Monitoring Exercise	Initial assessment by November 2022	
<b>3. Developing forward-looking metrics on the financial impacts of climate change and transition</b>		
(i) BCBS report on climate-related financial risks - measurement methodologies	April 2021	
(ii) FSB and NGFS to coordinate work on scenario analysis and the financial metrics needed for this analysis, both at the level of the firm and the overall system.	June 2022	Other bodies could be included, for instance, the World Bank on analysis concerning EMDEs' physical risks and disaster scenarios
(iii) FSB to coordinate work on consistent classification for financial risk assessment	October 2022	
(iv) FSB to develop consistent metrics for use in climate-related vulnerabilities monitoring (see Block 3) and identify data availability and gaps for metrics.	October 2022	The FSB will coordinate with the relevant SSBs to ensure consistency with any equivalent work they carry out.
(v) IOSCO report on ESG ratings and ESG data providers. <ul style="list-style-type: none"> <li>• Consultation Report</li> <li>• Final Report</li> </ul>	July 2021 December 2021	

Actions/deliverables	Indicative timeline	
(vi) [IOSCO to specify follow-up work on ESG ratings]	[IOSCO to propose date for milestone]	<i>[IOSCO notes that a decision on whether follow up work on these areas is needed has yet to be taken.]</i>
(vii) OECD report on the extent to which ESG metrics in disclosures and ratings align with climate transitions, and therefore can contribute to transition planning.	Discussion draft for June/July 2021 Final report October 2021	
(viii) OECD to develop ESG risk policy framework, including policy recommendations on climate transition definitions, metrics, and their use in climate risk due diligence for institutional investors	2022	
(ix) NGFS report on Market Transparency, including an assessment of current methodologies and practices to incorporate climate transition metrics into environmental pillar assessments of ESG	April 2022	
(x) NGFS work on Climate and Environmental Risk Analysis Methodologies and Metrics	2022	

## Block 3 – Vulnerabilities analysis

### Objective

Carry out systematic and regular assessments of climate-related financial vulnerabilities and financial stability impacts.

- Address open analytical issues in assessing climate-related financial risks
- Develop a monitoring framework for vulnerabilities, mitigants and the level of resilience
- Deepen scenario analysis
- Establish regular monitoring and assessment of climate-related financial risks and vulnerabilities

Actions/deliverables:	Indicative timeline	
<b>1. Analysing the nature of climate-related risks and vulnerabilities</b>		
(i) FSB report on the implications of climate change for financial stability	November 2020	Informs work on identifying and addressing data gaps
(ii) BCBS report on climate-related risk drivers and their transmission channels	April 2021	
(iii) IAIS report on assessing climate-related risks to the insurance sector, with a focus on investment exposures	September 2021	
(iv) NGFS report compiling case studies highlighting members' experiences with stress testing and scenario based risk assessment and presenting preliminary conclusions from these early experiences	Ahead of COP26 in November 2021	
(v) Multilateral surveillance work of the IMF (including several GFSR chapters on climate risks)	Ongoing	

Actions/deliverables:	Indicative timeline
<b>2. Developing a monitoring framework</b>	
(i) Building on steps to fill data gaps and establish metrics to gauge the financial impacts of climate risk, actions here should include:	The development of a monitoring framework would not only build on work to fill data gaps but would in turn inform further consideration of the data needed to assess risks
(i) Future work by the IAIS to incorporate data collection and (scenario) analysis into the Global Monitoring Exercise	Initial work by November 2022
(ii) Future work by IOSCO to develop guidance on assessing climate-related risks to asset management sector, and the data and techniques necessary to monitor such risks within such sectors	IOSCO to determine
(iii) Work by the FSB to identify specific issues related to climate-related vulnerabilities that warrant close monitoring at the cross-sectoral and macroprudential level, and to develop tools to carry out such monitoring	Mid-2022
(iv) FSB to develop a data-based methodology/framework for regular monitoring of climate-related financial vulnerabilities including channels through which climate risks can affect the financial system, amplifiers, mitigants and potential for transmission and feedback loops across borders and sectors. (through including climate-related risks in its Surveillance Framework)	Mid-2022
(v) IMF to incorporate climate-related risks in its assessments of global financial stability in the GFSR	Ongoing
(vi) OECD to develop a surveillance tool to monitor climate-related financial and transition risks and their potential impact on financial performance, natural capital, and sustainable growth	Established by mid-2022

Actions/deliverables:	Indicative timeline
<b>3. Deepening scenario analysis</b>	
(i) NGFS to publish second vintage of reference scenarios, with updated companion documents (detailed presentation, technical documentation).	June 2021
(ii) NGFS to update its scenario user's guide	Ahead of COP26 in November 2021
(iii) NGFS to follow up work on scenario design and regularly publish sets of reference scenarios	Summer 2022 [Milestones to be determined at September NGFS Steering Committee meeting]
<b>4. Establishing regular monitoring and assessment of risks and vulnerabilities</b>	
(i) FSB and NGFS jointly to publish a report synthesising outputs of analysis done by jurisdictions so far on the implications of possible future climate scenarios for the financial system	End-2022
(ii) FSB to regularly report on monitoring of climate-related financial vulnerabilities at the global level (including steps taken to mitigate these financial risks)	Annually, beginning end 2022
(iii) IAIS to examine how to incorporate climate-related risks in the global insurance sector within its Global Monitoring Exercise	Annually, possibly starting in November 2022
(iv) IMF to incorporate climate-related risks in its assessments of global financial stability in the GFSR	Ongoing

Actions/deliverables:	Indicative timeline	
(v) IMF and World Bank to incorporate climate-related risks in their assessments of financial systems in the context of the FSAP	Ongoing	
(vi) World Bank to conduct Country Climate and Development Reports (CCDRs) in EMDEs	Ongoing (country assessments to be launched in July 2021)	<p data-bbox="1393 368 2033 438">As background, CCDRs will be launched in FY 22 (starting July 1, 2021) and cover:</p> <ul data-bbox="1456 446 2033 1077" style="list-style-type: none"> <li data-bbox="1456 446 2033 590">• The opportunities and risks that climate change (physical risks) and policies (transition risks) create for the country's development path;</li> <li data-bbox="1456 598 2033 742">• The existing climate commitments, policies and institutional arrangements in the country to improve resilience and promote decarbonisation;</li> <li data-bbox="1456 750 2033 893">• The macroeconomic implications of climate change and policies in terms of growth, poverty reduction, fiscal sustainability, and stability of the financial system;</li> <li data-bbox="1456 901 2033 1077">• The prioritisation of sectoral and macro-fiscal policies to address climate change in the context of development objectives, and identification of operational recommendations.</li> </ul>

## Block 4 – Supervisory and regulatory practices

### Objective

To promote consistent and effective supervisory and regulatory approaches and tools to address climate-related risks, both within individual sectors and at the system-wide level.

- Develop effective regulatory and supervisory practices and tools
- Achieve cross-sector and cross-jurisdiction consistency of approaches
- Build regulatory and supervisory capacity

Actions/deliverables	Indicative timeline	
<b>1. Developing effective regulatory and supervisory practices and tools</b>		
Steps to develop consistent and effective supervisory and regulatory practices. Elements could include:		
(i) NGFS Further Study on Financial Risk Differentials between Green and Other Assets (reviewing financial institutions' and credit rating agencies' practices, to provide input to risk management as well as supervisory and regulatory practices)	December 2021	
(ii) BCBS to consider how to ensure that climate-related financial risks are appropriately incorporated in the Basel Framework, through: <ul style="list-style-type: none"> <li>○ <i>a report on effective supervisory practices</i></li> <li>○ <i>a gap analysis of Basel Framework and exploration of regulatory proposals/options to address any identified gaps</i></li> </ul>	December 2021	Drawing on the NGFS's Guides

Actions/deliverables	Indicative timeline
(iii) IAIS work on approaches and good practices on the supervision of climate-related risks in the insurance sector	
○ <i>Final version of the Application paper on the supervision of climate-related risks</i>	May 2021
○ <i>Gap analysis of IAIS supervisory material, including the Insurance Core Principles, aimed at identifying possible further work in terms of standard setting and/or providing further guidance on supervisory practices</i>	End-2021
(iv) IOSCO work on sustainability-related supervisory and regulatory practices and related disclosures in the asset management industry, including recommendations	
○ <i>Consultation paper</i>	June 2021
○ <i>Final report</i>	November 2021
(v) OECD to update its principles and frameworks on Corporate Governance, Due Diligence, and Effective and Efficient Financial Regulation.	2022/23
<b>2. Achieving cross-sector and cross-jurisdiction consistency of approaches</b>	
<i>Cross-jurisdictional consistency within sectors</i>	
(i) NGFS Progress Report on the implementation of the recommendations of its Guide for Supervisors, involving a stock-take of NGFS members' progress in integrating climate and environmental risks within their supervisory frameworks, and identify best practices.	September 2021

Actions/deliverables	Indicative timeline
(ii) IAIS work on providing guidance on supervisory practices for stress testing and scenario analysis	Work expected to start in September 2021, possible first deliverables in 2022
<i>Cross-sectoral consistency and interactions between sectors</i>	
<p>(iii) FSB report promoting consistent regulatory and supervisory approaches to addressing climate-related risks at financial institutions and supporting efforts to incorporate the interactions between sectors in regulatory and supervisory approaches, potentially including principles or recommendations</p> <ul style="list-style-type: none"> <li>○ <i>Interim Report for public consultation</i></li> <li>○ <i>Final Report</i></li> <li>○ <i>FSB to consider conducting a peer review of regulatory and supervisory practices against the FSB guidance that is developed (which may include principles or recommendations) on supervision and regulation of climate risks.</i></li> </ul>	<p>This work took place in coordination with SSBs and international organisations, using their existing work as a basis</p> <p>Differing starting points and levels of technical capacity can be accommodated by a 'building block' approach to recommendations, as well as the technical assistance mentioned below</p> <p>October 2021</p> <p>March 2022</p> <p>October 2023</p>
(iv) FSB update of its guidance, principles or recommendations, including based on the findings of its peer review	October 2024
(v) IMF and World Bank to incorporate climate-related risks in their assessments of financial supervisory and regulatory frameworks in the context of the FSAP	Ongoing
<b>3. Macroprudential tools</b>	
(i) Macro prudential tools. Development of supervisory tools (if any are needed), either for individual sectors or at the cross-sectoral jurisdiction-wide level. This would complement the forward-looking scenario analysis, using NGFS scenarios,	<p>June 2024</p> <p>To be updated based on the discussions at the FSB meeting in September.</p>

Actions/deliverables	Indicative timeline
coordinated by the FSB under block 3. Ongoing consideration of the need for additional macro prudential tools to address additional issues impacting financial stability that may be identified.	
<b>4. Capacity building</b>	
(i) IMF and World Bank work to assist with capacity building on incorporating climate-related risks in the prudential framework and on supervisory practices and development challenges	Ongoing
(ii) NGFS capacity building initiative involving a multi-year roadmap, starting with a modular-based training programme for supervisors	Q4 2021
(iii) IAIS joint work with several partners (UN Sustainable Insurance Forum, Access to Insurance Initiative and FSI) to develop training materials based on the Application Paper on the supervision of climate-related risks in the insurance sector	Various initiatives, from June through October 2021, and ongoing thereafter
(iv) IOSCO capacity building and outreach programs on sustainable finance	Various initiatives starting from April 2021
(v) OECD capacity-building regarding ESG and climate transition practices (due diligence, metrics and methodologies, alignment of objectives and tools) for central banks and regulatory bodies.	Beginning September 2021
(vi) BIS, NGFS, SIF, and IAIS to enhance training opportunities for central banks and supervisors under the 'Climate Training Alliance', coordinated under COP26	Launched at COP26, November 2021