POLICY BRIEF: Unlocking the potential of Nature-Based Solutions
On November 23, 2023, in São Paulo, the Institute for Climate and Society (“iCS”), in collaboration with the Ministry of Finance, organized the event “Unlocking the potential of Nature-Based Solutions” in order to promote dialogue between actors from different segments in relation to the challenges of financing for activities involving Nature-Based Solutions (“NbS”).

The event, which inaugurated a series of initiatives for sustainable finance being developed by iCS for the Brazilian presidency of the G20, brought together representatives from institutions with experience in NbS and/or financing, with different perspectives. A workshop format was adopted in order to facilitate discussion among the more than 60 participants at the event.

Among other agents, representatives from philanthropic institutions, civil society organizations, fund managers, commercial banks, public and development banks, insurance companies, small to large entrepreneurs, law firms, as well as from the Ministry of Finance and from the Ministry of Environment and Climate Change, attended the event.

This document proposes to present a summary of the main topics and conclusions of the debates and, in accordance with the flow of discussions, provide a list of recommendations that can be developed to strengthen the allocation of funds in NbS.

Through this initiative, iCS seeks to catalyze the knowledge and joint engagement of the public, private and third sector initiative in order to identify obstacles and to encourage the creation of initiatives that expand the potential of NbS in Brazil and promote business models that adhere to the climate agenda.

ACKNOWLEDGMENTS AND REPORT

iCS thanks all the participants for their presence, debate and contributions during the event. Although this document is prepared based on the debates and references of the event, iCS assumes full responsibility for the report and the summary of the excerpts included herein, taking into consideration that the discussions were held confidentially (Chatham House Rule), in order to encourage the participation and the presentation of the positioning of those present.

1 iCS also extends its thanks to Impacta Finance Sustentáveis, for its moderation and support in the preparation of this document.
About iCS

iCS is a philanthropic organization that supports projects and institutions that are dedicated to combating climate change in all the regions of Brazil. Much more than a financing intermediary, iCS promotes the dialogue between sectors, aggregates knowledge and establishes networks of information, intelligence and cooperation, in a combination of strategies designed to promote greater Brazilian ambition in the climate agenda.
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### TABLE 1: EXECUTIVE SUMMARY OF THE CHALLENGES AND RECOMMENDATIONS

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<th>Challenges</th>
<th>Recommendations</th>
<th>Time horizon and expected return</th>
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<tr>
<td><strong>Incompatibility of the financial conditions of traditional credit operations with the reality of the projects of Nature-Based Solutions and the need for the diversification of the sources of the funds</strong></td>
<td>Creation of guarantee structures with alternative assets.</td>
<td>Immediate action, short-term return</td>
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<tr>
<td></td>
<td>Encouragement to diversify financing sources with concessional funds.</td>
<td>Immediate action, short-term return</td>
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<tr>
<td></td>
<td>Development of protection instruments for the foreign exchange risk.</td>
<td>Immediate action, medium-term return</td>
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<tr>
<td></td>
<td>Expand the access to information about existing credit lines.</td>
<td>Immediate action, medium-term return</td>
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<td></td>
<td>Regulatory sandbox of Nature-Based Solutions.</td>
<td>Immediate action, medium-term return</td>
</tr>
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<td></td>
<td>Capacity-training of entrepreneurs to expand the access to credit.</td>
<td>Continuous action, medium-term return</td>
</tr>
<tr>
<td></td>
<td>Capacity-training of the market about the specificities of Nature-Based Solutions.</td>
<td>Continuous action, medium-term return</td>
</tr>
<tr>
<td><strong>Obstacles to the creation of a market of Nature-Based Solutions</strong></td>
<td>Development of ESG strategies that promote Nature-Based Solutions, especially by companies involved in agribusiness, and the sectors of cosmetics, pharmaceuticals and O&amp;G.</td>
<td>Immediate action, short-term return</td>
</tr>
<tr>
<td></td>
<td>Encouragement to produce data about the market of Nature-Based Solutions.</td>
<td>Continuous action, medium-term return</td>
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<tr>
<td></td>
<td>Promotion of good practices in management and impact measurement, in order to enhance Nature-Based Solutions.</td>
<td>Continuous action, medium-term return</td>
</tr>
<tr>
<td></td>
<td>Encouragement to create an environment for the sharing of experiences between entrepreneurs and financiers of Nature-Based Solutions.</td>
<td>Continuous action, medium-term return</td>
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<tr>
<td></td>
<td>Encouragement to prepare national case studies.</td>
<td>Continuous action, medium-term return</td>
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<tr>
<td></td>
<td>Encouragement to create new technologies for Nature-Based Solutions.</td>
<td>Continuous action, medium-term return</td>
</tr>
<tr>
<td><strong>Structural challenges that impede the advance of Nature-Based Solutions</strong></td>
<td>Government positioning to outline a clear strategy of public policies that promote the integrated development of Nature-Based Solutions;</td>
<td>Continuous action, medium-term return</td>
</tr>
<tr>
<td></td>
<td>Promotion of policies that guarantee the competitiveness and the opportunities of Nature-Based Solutions offered by Brazil on an international scale</td>
<td>Continuous action, medium-term return</td>
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<tr>
<td></td>
<td>Collect learnings from the development of other sectors and economic activities, such as renewable energy, in order to develop Nature-Based Solutions.</td>
<td>Continuous action, medium-term return</td>
</tr>
<tr>
<td></td>
<td>Regularization of the land ownership situation in the Legal Amazon in order to guarantee the legal security for certain projects of Nature-Based Solutions.</td>
<td>Continuous action, medium-term return</td>
</tr>
<tr>
<td></td>
<td>Budgetary strengthening of the supervisory bodies of public policies that guarantee the functioning of Nature-Based Solutions.</td>
<td>Continuous action, short-term return</td>
</tr>
</tbody>
</table>

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2 Suggestion based on the empirical experience of the authors.
This document presents a summary of the discussions from the event “Unlocking the Potential of Nature-Based Solutions,” which was organized by iCS on November 23, 2023, in São Paulo.

The focus of the discussions had the objective to identify practical solutions for the challenges reported by the main actors involved in NbS activities, in order to enable the increase of the level of investments in NbS in Brazil.

For the purposes of this document, “Nature-Based Solutions” (NbS) is a term used to refer to actions that seek to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems, which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits.3

In general, the main impact areas of NbS encompass the following themes: recovery of degraded areas, green urban development, eradication of poverty, protection of biodiversity, food security, water supply and quality, reduction of inequality and unemployment, and climate change.4

The table below presents the main categories of NbS and examples of the products and initiatives resulting from these activities:

<table>
<thead>
<tr>
<th>Category</th>
<th>Subcategory</th>
<th>Examples of products/initiatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forests</td>
<td>Agroforestry systems (SAF)</td>
<td>Cocoa, coffee</td>
</tr>
<tr>
<td></td>
<td>Integrated Crop-Livestock-Forestry (ICLF)</td>
<td>Grains, milk, meat, forestry products</td>
</tr>
<tr>
<td></td>
<td>Non-timber forestry products</td>
<td>Açaí, cashew nuts, Brazil nuts</td>
</tr>
<tr>
<td></td>
<td>Timber forestry products</td>
<td>Timber, carbon</td>
</tr>
<tr>
<td>Fishing</td>
<td>Artisanal fishing</td>
<td>Pirarucu</td>
</tr>
<tr>
<td></td>
<td>Pisciculture</td>
<td>Tambaqui</td>
</tr>
<tr>
<td>Energy</td>
<td>Bioenergy and biomass</td>
<td>Sugar cane/ethanol, biogas</td>
</tr>
<tr>
<td>Services</td>
<td>Ecological services</td>
<td>Ecological tourism</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Green infrastructure</td>
<td>Macro-drainage, creation/protection of green areas</td>
</tr>
<tr>
<td></td>
<td>Blue infrastructure</td>
<td>Coastal protection, management of water resources</td>
</tr>
<tr>
<td>Management</td>
<td>Integrated monitoring of coastal areas, management of water resources and forestry cover</td>
<td>Monitoring system via satellite</td>
</tr>
</tbody>
</table>

Source: prepared with data from Mapeamento de Negócios da Bioeconomia na Amazônia (PNUD, 2023) and Soluciones Basadas en la Naturaleza en America Latina y Caribe (BID, 2021).

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CONTEXT OF NbS IN THE WORLD:
Currently, approximately US$ 154 billion per year is invested worldwide in NbS. The private sector contributes US$ 26 billion of this amount, i.e., just 17%. The need for annual investment in NbS is approximately US$ 674 billion yearly up to 2050 in order to comply with the climate goals of the Paris Agreement, to limit the increase of the global average temperature to 1.5 °C above pre-industrial levels. 5

POTENTIAL FOR THE BRAZILIAN SCENARIO:
Brazil represents approximately 20% of the potential for the offer of carbon credits of global NbS, of which 63% are related to forest conservation solutions, 21% to reforestation and 14% to agricultural and livestock management. 6

In terms of the added value of the production of NbS, the economic potential of the forestry products in Brazil is highlighted in the table below:

PRODUCTS OR ACTIVITIES IN NUMBERS:

<table>
<thead>
<tr>
<th>Products or Activities</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-timber products</td>
<td>5,246</td>
<td>5,913</td>
<td>6,959</td>
</tr>
<tr>
<td>Timber products</td>
<td>1,045</td>
<td>1,328</td>
<td>1,442</td>
</tr>
<tr>
<td>Artisanal fishing</td>
<td>23,6</td>
<td>30</td>
<td>33,6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In addition to the abovementioned products, it is also important to consider the potential contribution of agroforestry crops (for example, coffee and cocoa) and of the carbon market to the consolidation of investments in NbS:

Total annual production: R$ 3.5 billion (37% growth since 2018). 7
Attractiveness of the crop in SAF: return on investment of 12%; generation of R$ 5,000 to R$ 8,000 of income per hectare. 8

Total annual production: R$ 51.8 billion (57% growth since 2018). 9
Attractiveness of the crop in SAF: increase in the added value of the product (up to 30%); productivity gains (up to 66%). 10

Potential to generate up to US$ 120 billion in revenue by 2030. 11

7 Cocoa production (IBGE, 2023).
8 Economic Viability of Production Systems with Cocoa (WCF, 2021).
9 Coffee production (IBGE, 2023).
10 Production of Special Coffees in an Agroforestry System (SEBRAE, 2022).
11 Opportunities for Brazil in Carbon Markets (ICC Brasil, 2022).
The event was structured in such a way as to promote interactions between all the participants, with two interactive panels: the first panel highlighted what has really progressed in recent years and what still impedes the advance of the agenda in innovative solutions for NbS. The second panel discussed the profile of more attractive projects for different segments of capital.

Additionally, two rounds of debate were held between the participants, divided into tables, with plenary sessions to consolidate the main points discussed regarding innovations to access credit for NbS solutions and the suitability of the investment instruments.

During the event, there was a reporting process to anonymously record the contributions of all the participants in the debate. The comments made throughout the discussions served as the basis for the formulation of this document.
Challenges and recommendations

There is a summary below of the challenges addressed by the actors from the different segments who were present during the discussions, as well as the recommendations and paths to overcome these obstacles and scale the financing for activities involving NbS.

1. **Incompatibility of the financial conditions of traditional credit operations with the reality of NbS projects and the need of diversification for the sources of funds:**

   In the view of the entrepreneurs present at the event, the rationale adopted by banks and investors to analyze the credit risk of financial operations in general is still incompatible with the characteristics of the activities involving NbS.\(^{12}\)

   In general, the NbS projects that are still at an initial stage, or in the process of approval of the business plan, have few assets to provide as collateral, or short-term off-take agreements that make cash flow unpredictable, and limited information to feed traditional risk management systems (vis-à-vis more traditional sectors, such as agribusiness). Therefore, domestic operations are generally structured with fees, a grace period and amortization and a requirement for guarantees that hinder the development of the project.\(^{13}\)

   On the other hand, there is still little knowledge on the part of agents about the availability of international market funds from, for example, multilateral banks, international cooperation, climate funds and philanthropy. This gap in knowledge and access ends up by not directing sources of funds on a scale that are likely to enter in emerging sectors and can be decisive in unlocking new investments in NbS and serving as catalytic capital, in order to influence the entry of funds by more traditional agents.\(^{14}\)

   Additionally, there is little action by philanthropy in the grant of funds for NbS projects, largely due to tax interpretations that can cause legal insecurity for the allocation of philanthropic funds in financial structures, under penalty of loss of tax benefits.\(^{15}\) Consequently, the volume of philanthropic capital that could support the initial stages of business for NbS is still quite limited and is concentrated in a few actors, such as the Vale Fund\(^{16}\) and the JBS Fund for the Amazon,\(^{17}\) or in non-financial initiatives, such as in the support for technical assistance.

**RECOMMENDATIONS:**

- **Alternative guarantees to traditional assets:** creation of new types of real or personal guarantee, which may include: (i) assets on income from payment for environmental services, (ii) carbon credits, (iii) use of national public funds (e.g. constitutional funds); (iv) use of subnational...

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\(^{12}\) In addition to the notes from the participants of the workshop on this topic, it is recommended to read the 2022 WRI publication that deals with the challenges for green financing 5 Barriers That Hinder Green Financing.

\(^{13}\) High transaction costs and profiles of “traditional” investors with a low appetite to risk are obstacles already highlighted in the literature, such as in the publication by the WWF and Sitawi: Blended Finance for Zero Conversion.

\(^{14}\) According to Struwever et. al, “although catalytic capital can be used alone, it also plays an important role in the leverage of investments by other actors.

\(^{15}\) Institute for Climate and Society: Regulatory recommendations for the advance of the Blended Finance agenda in Brazil, November 2023.

\(^{16}\) History of initiatives (Vale Fund, 2023)

\(^{17}\) Areas and programs (JBS Fund for the Amazon, 2023)
funds (e.g. oil, gas and mining royalty funds)\(^{18}\); and (vi) innovative market instruments, such as the **Green Guarantee Company**, recently launched on the international market, which combines funds from international cooperation and institutional investors, to guarantee financial and capital market operations that allocate funds to climate projects; or the facilitation of access to funds from already existing guarantee funds, such as the Investment Guarantee Fund (FGI).\(^{19}\)

- **Encouragement to diversify financing sources with concessional funds**: align philanthropic and multilateral capital in order to ensure the financing of initiatives, especially during the initial phase (without income or assets as guarantees), which are unable to raise funds from private financial institutions – traditionally less prone to risk and, consequently, less willing to finance NbS initiatives that have not yet gained traction and/or scale. Additionally, it is necessary to link discussions about international climate financing with the development of country level platforms, in order to encourage the intermediation of international funds with NbS projects in Brazil.

- **Development of instruments to protect the exchange rate risk**: strengthening of public and private institutions and tools to protect against exchange rate variations, such as the exchange rate hedging instrument announced by the Federal Government for foreign investment, to encourage the directing of international climate funds to projects in Brazil.\(^{20}\)

- **Expand the access to information about existing credit lines**: encourage the broad disclosure among NbS entrepreneurs about the different types of existing credit that are compatible with NbS activities, including subsidized credits, public credit programs, private credit lines with special rates, and impact funds.

- **Regulatory sandbox of NbS**: creation of an experimental regulatory environment for the testing of tax mechanisms, guarantee instruments and financing for NbS, which encourages financial innovation and safeguards legal security. As an example, this environment could encourage the improvement of the norms applicable to CPR Verde and create prototypes of operations with the possibility of scaling in the domestic market, such as the securitization of carbon credits.

- **Capacity-building of entrepreneurs to expand the access to credit**: encourage capacity-building programs for NbS entrepreneurs to comply with the registration and credit contracting requirements, including governance, compliance and socioenvironmental conditions, through the strengthening of existing capacity-building programs, such as those offered by SEBRAE, and encourage the participation of federal public universities and their respective professional practice laboratories in this capacity-building agenda.

- **Capacity-building of the market about NbS specificities**: promotion of capacity-building initiatives for economic and financial agents for a better understanding of the particularities and challenges of NbS, in order to encourage the creation of financial products that are compatible with the risks, returns and development deadlines of these projects, in addition to the appropriate valuation of the environmental, climate and positive social externalities of NbS.

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\(^{18}\) For example, according to the Sovereign Wealth Fund Forum, there are more than R$ 8 billion in subnational funds created to collect royalty revenues from O&G and mining.

\(^{19}\) About FGI.

\(^{20}\) Source: Valor Econômico, October 2023.
2. Obstacles in the creation of an NbS market:

The development of NbS depends, on the one hand, on the innovation capacity of the initiatives linked to the sector, both in terms of the diversity of the project and in the building of sustainable business models from a social, environmental and economic point of view. However, it is also directly related to the consumer market, which should encourage the commercialization of NbS products and services.

The challenges for the creation of a market vary according to the specific type of NbS. However, in general, they can be summarized as follows:

i. in logistical challenges, linked to the flow of products arising from NbS, notably those from the North and Northeast regions, to the large domestic and international consumer centers;

ii. in cultural challenges, linked to the lack of knowledge about the benefits of the products or services generated by NbS, which ends up favoring products from other regions or countries (such as is the case of an example cited in Arrabalde, a book by João Moreira Salles, in which a hotel in Pará offers imported chestnuts to its guests);

iii. in integrity challenges, linked to evidence that the product or service was produced legally, in observance with the land ownership and socioenvironmental regulations; and

iv. in cost challenges, which, as a result of the combination of the abovementioned challenges, produces an increase in the cost of production and commercialization of the products or services involving NbS.

RECOMMENDATIONS:

- ESG strategies that promote production chains of NbS: adoption, by large companies, notably in the agribusiness, cosmetics, pharmaceutical and O&G sectors, operating in the North and Northeast regions, of measures that encourage the strengthening of the market for products and services involving NbS, such as (i) the creation of capacity-building programs for bioeconomy producers, as well as support for the formalization of their activities (legal, accounting and financial support), to expand the sales network; (ii) the acquisition of NbS products or services under conditions that guarantee a predictable and long-term flow of receivables for the NbS, with take-or-pay clauses for the benefit of the producer or the generator of the carbon credit; and (iii) the sharing of transport and sales infrastructures, to facilitate the flow of the NbS products or services that come from difficult-to-access regions, to the main consumer centers, in order to stimulate the creation of a domestic NbS market.

- Encouragement to produce data about the NbS market: creation of market studies, such as an example of the study on the potential of the bioeconomy in the state of Pará, which map market opportunities and demands involving NbS and, as already mentioned, encourage the formatting of product acquisition contracts by large industries (for example, the Cocoa Plan and the Natura Amazonia Program), aiming to replace inputs not aligned with good socioenvironmental practices by inputs coming from socially and environmentally responsible production systems.

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21 CEBDS, June 2021.
22 According to a study carried out by The Nature Conservancy and the Inter-American Development Bank.
23 The Cocoa Plan, by Nestlé, has a goal to only use cocoa from sustainable chains in its production by 2025.
24 The Natura Amazonia Program “structures, improves and expands the sustainable production chains in the Amazon, with investments in capacity-building, production efficiency and technology input.”
25 We recommend that large companies read the publication organized by CEBDS to highlight the connection of NbS with business: Nature-Based Solutions for Business (2021).
26 As another example, CEBDS is proposing a platform to boost contracts between companies and product suppliers in NbS. Source: CEBDS, January 2023
• **Promotion of good practices in management and impact measurement**: establish reference impact indicators for NbS, with a focus on the competitiveness of the products and services (e.g., product productivity, opportunity cost and the structuring of value chains) and socioenvironmental impact (e.g., income gain, quality of life, hectares preserved and recovered, amount of carbon captured and the impact on biodiversity) to increase the comparability between NbS businesses and other activities.

• **Encouragement to create an environment for the sharing of experiences between entrepreneurs and financiers of NbS**: speed up the harmonization between the need for projects at different maturity scales and the appetite of investors, leveraging the potential for cooperation with other countries that work with the Forest and Climate agenda. 27

• **Encouragement to develop national case studies**: strengthen research groups and promote academic disclosure on a national and international level of success stories in NbS – businesses that have prospered by combining environmental preservation and income generation, guaranteeing a greater visibility for the Brazilian projects in the international market.

• **Encouragement to create new technologies for NbS**: boost research and development incentive programs for technologies that promote productivity gains, efficiency in the use of funds and technological development (such as the research linked to biotechnology, for example) combined with environmental preservation and the promotion of the socio-bioeconomy, and also the application of non-timber products for market needs, which could be reinforced through research institutions, such as the National Institute for Amazonian Research (INPA). 28 As an example of public initiatives linked to academia, AmazonFace 29 can be cited, which is linked to INPA and Unicamp. Practical applications, in turn, can be reinforced through specialized institutions, such as WRI Brasil 30 and other actors.

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27 In this regard, it is interesting to take advantage of the opportunity of the Forest Fund, announced by the Federal Government at COP28, which has the objective to raise US$ 250 billion to finance initiatives for the preservation of tropical forests – potentially benefiting around 80 countries. Source: Ministry of the Environment, December 2023.

28 About the National Institute for Amazonian Research - INPA.

29 The research program AmazonFace was launched to understand the effects of the increase of CO2 concentrations in the Amazon.

30 In 2022, WRI Brasil launched an acceleration program for nature-based solutions for cities.
3. **Structural challenges that impede the advance of NbS:**

Among the structural challenges for the advance of NbS in Brazil, land ownership risks emerge as one of the most important – the insecurity over land ownership can compromise areas destined for NbS projects. Furthermore, the intense competition between illegal activities, such as predatory livestock farming, mining and timber trading, and the practices linked to the preservation of the socio-biodiversity is also an obstacle to the development of NbS.

To overcome these challenges, it is imperative to implement comprehensive strategies that address not only the economic aspects of the NbS activities, but also the social and environmental aspects. Effective measures must include clear and efficient land ownership policies to guarantee the territorial security of the NbS activities, investments in infrastructure and logistics to facilitate the distribution of the products, and the implementation of regulatory mechanisms that discourage and combat competing illegal practices. At the same time, it is essential to promote education in the communities involved with the initiatives, seeking to raise the level of schooling and to encourage formal and sustainable business practices.\(^{31}\)

**RECOMMENDATIONS:**

- **Institutional positioning:** delimitation of a clear governmental position and an action strategy by the Federal Government and subnational entities regarding the importance of NbS for Brazil, with the proposition of an integrated development strategy for NbS, covering initiatives of interest for the environmental and climate agendas, of public security and regional development.

- **Competitiveness and benefit of NbS on an international scale:** promote, through export agencies and diplomatic policy, the benefits and opportunities of NbS, in order to encourage the export of products and services linked to these activities, as well as a greater participation of international investors in the development of the market solutions to enhance this potential.

- **Learnings from other sector experiences:** the example of already developed public policy experiences, which resulted in the creation of new projects and an increase in the financing for a given sector, as in the case of the constant reforms and modernizations of the electricity sector, which encouraged the development of new renewable projects, is necessary to coordinate the efforts between public policy and private investment to consolidate NbS as an economic sector, in order to promote structural investments for the innovation, creation and development of new NbS projects.

- **Land ownership situation:** expansion of the support to the institutions that maintain the registration and verification of the CAR of the rural properties, to guarantee greater land ownership security and to increase the reliability of this instrument and the use of programs and technologies associated with the greater transparency of the land ownership records for the reduction of the land ownership risk and the better pricing of the assets in the credit operations.

- **Budgetary strengthening of supervisory bodies:** in addition to promoting the coordinated action of public policies of environmental protection, it is important to increase the funds made available to the supervisory bodies (such as IBAMA, the Brazilian Forest Service and the Federal Police) and the regulatory entities (such as the CVM and the Central Bank), to guarantee the maintenance of the already existing public policies for land ownership protection, combating deforestation, illegal exploitation of timber products and crimes and financial irregularities.

\(^{31}\) The experiences of the Vale Fund, as pointed out in its report, show that there is a significant gap in the financial education that deserves to be considered in the technical support offered to the entrepreneurs from the ecosystem of the agroforestry impact business.
The development of Nature-Based Solutions as a priority set of activities for the Brazilian economy involves coordination between the government, public, private and multilateral banks, academia, philanthropic institutions and the private sector. The recommendations listed in this document seek to provide the perspective of the discussions of a multidisciplinary group and have the objective to advance priority discussions for the development of NbS, taking into consideration the urgency in the light of the numerous global challenges connected with this agenda.

In summary, the advance of NbS in the context of the Brazilian economy requires a collaborative and coordinated approach from different actors. The overcoming of the challenges indicated herein will not only unlock crucial investments for the sector, but will also promote innovation, the diversification of financing sources and risk mitigation for the development of these activities.

Ultimately, the effective implementation of these recommendations seeks to contribute to the development of NbS and to create a path so that the climate commitments assumed internationally by the country are achieved and to promote Brazil as an exporter of NbS.

For the next steps to achieve tangible results, in order to generate more NbS projects by the time of COP 30, the Institute for Climate and Society recommends the creation of a multisectoral platform with strategic actors, composed of (i) formulators of public policies and regulators; (ii) financial institutions, development banks and institutional investors; (iii) impact investors; (iv) research centers and think tanks; (v) entrepreneurs and structurers of NbS projects; and (vi) financial consultants and law firms, which work with a specific mandate in order to:

- originate NbS projects, whether by the improvement of those already in existence or encouraging the creation of new initiatives, in a common effort on the part of the NbS entrepreneurs, financiers, academia and philanthropy.

- create financial operations that are standardized for each segment of the NbS, in order to facilitate the structuring of the operations and reduce the transactional costs, unlike what is happening today, when the operations generally need to be modeled on a case-by-case basis, adopting financing structures and diverse guarantees and, consequently, resulting in high transaction costs.

- promote the interaction between the providers of concessional funds, such as the development banks, multilateral banks, international cooperation and philanthropy, with traditional investors, for the creation of innovative financial instruments.

- promote dialogue between the formulators of public policies, regulators and the market to seek paths for solutions to the market and the structural challenges involving NbS.

- promote multidisciplinary studies about NbS, with the presence of experts in different subjects such as agronomy, finance, law and sociology, etc., also valuing the role of universities and research funders, especially those operating in the North and Northeast of Brazil.

- coordinate the existing initiatives that promote NbS, especially those that seek to address the challenges specified in this document, so that there is greater interaction and dialogue between the current efforts to develop NbS, in order to (i) avoid duplicate initiatives, which have the same objective, regional focus and target audience, in order to seek greater compatibility and efficiency in the allocation of funds to resolve the challenges of NbS; (ii) identify operational gaps among the several presented challenges; (iii) identify actors with the appropriate profile to resolve the various presented challenges; and (iv) promote the structuring of financing operations for the new NbS initiatives.
PRACTICAL CASES
Use of carbon credit in innovative financial structures.

The carbon credit can generate opportunities not only for carbon offsetting and storage transactions, but can also open up new possibilities such as the use of instruments of guarantee and accord and satisfaction. As an example, the Banco do Brasil has started to allow the use of carbon credits for the payment of rural properties acquired at auction, with the condition that the credits are generated in accordance with the standards and terms recognized by the regulated market or by the voluntary market.

PRACTICAL CASES
Tools for the mitigation of the land ownership risk

MapBiomas
The MapBiomas initiative presents data on land use and coverage in the Brazilian territory, for the period from 1985 to 2022, with products such as a map of pasture quality, annual maps of the history of deforestation in Brazil for the period from 1987 to 2020, and maps with an analysis of the pasture vigor condition, which is related to the types of handling, the applied forage plant and the stage of degradation of the area.

PrevisIA
PrevisIA has developed an algorithm of Artificial Intelligence (AI) that automatically detects and monitors illegal roads with satellite images, integrating the road mapping with AI into the deforestation prediction model. The roads opened in the forest are linked to timber extraction, mining and the occupation of undesignated public lands – land grabbing. The risk model works with updated data and statistics from different classes of territories under the higher probability of forest clearing based on the past data of deforestation for a forecast of up to 1 year. The predictions allow for the separation of the active influences from the frontiers of occupation of the territory from those that have already been consolidated, allowing a better control of the destruction of the biome.

BB
Banco do Brasil has developed an application (GeoMapa Rural) to help rural producers capture geodetic coordinates, such as the latitude, longitude and altitude of the vertices and inflection points, in addition to the perimeter of the area to be subsidized. This system facilitates the sending of the measurement files via GPS to meet the requirement of the Central Bank for the geodetic coordinates of the financed areas.
PRACTICAL CASES

The view of the entrepreneur about the access to funds.

Tobasa

Tobasa offers inputs to the cosmetics industry and produces oils and flours for the food industry through sustainable extractive processes from babassu coconuts, in addition to supplying activated carbon for residential water filters. Operating for over 55 years in the Amazon region, it has become one of the examples of a successful business model in the bioeconomy. Its experience proves that it is possible to develop a business while bringing social and environmental benefits to its region of operation.

The company was also at the forefront of innovative cases of access to capital. Tobasa has the experience of raising funds with practically all types of financial instruments, whether public or private. For example, it went public in 1968, at a time when the capital market was in its infancy. In addition to sources of traditional market financing, the company has used, throughout its history, several sources of non-reimbursable capital for technological development. More recently, in 2022, it realized the first use of CRA for the bioeconomy, an issue that involved Ecoagro, JGP and other traditional investors.

Despite the background of operations and experience of the company, the credit conditions offered by the market make the development of projects difficult, due to the deadlines and rates that are not compatible with the return logic of a development project in the Legal Amazon, as highlighted by the CEO of the company, Edmond Baruque, in the discussions:

“The “via crucis” of the entrepreneur of the bioeconomy and what generally impedes projects from growing are: (a) the conventional interest rates, which significantly reduce cash flow; (b) the payment terms that are incompatible with the business cycle, making it unviable; and (c) the requirements of irreconcilable real guarantees, which do not allow the business to be created.”

PRACTICAL CASES

Structures of innovative financing to unlock funds for NbS.

VERT Capital

Vert Capital is a techfin that offers products and services to facilitate access to capital for entrepreneurs, with agribusiness as one of its specializations. It offers fund management services for funds (Vert Gestora), carries out securitization (Vert Securitizadora) and distributes securities (VERT DTVM). As instruments, it largely uses CRA. Part of the instruments is directed to the recovery of degraded areas and products from sustainable agriculture. Its website has a list of all the operations carried out for its clients.
PRACTICAL CASES
Philanthropic funds serving NbS businesses

Vale Fund

The Vale Fund was created in 2009 with the purpose of enhancing a fairer and more inclusive economy through socioenvironmental impact businesses focused on the conservation and recovery of biomes, especially in the Amazon. Currently, 90 conservation and sustainable use projects have already been promoted and more than R$ 210 million has been disbursed, mainly in non-reimbursable funds.

The institution designed and coordinates one of the largest initiatives of recovery for degraded areas currently underway in the country: recovering and protecting 500,000 hectares in Brazil by 2030. These and other socioenvironmental and climate objectives are achieved by promoting initiatives that support the impact ecosystem.32

Through its investments in new impact businesses, Fundo Vale realized that one of the major challenges for large-scale operations is unblocking structuring bottlenecks for the chain of NbS as a whole. To achieve this, it is necessary to support the development of technologies that provide answers to reducing costs and increasing efficiency in forestry operations and in the mitigation of climate change. To achieve this, it is necessary to expand its operation beyond promotion.

PRACTICAL CASES
The role of international funds as leverage in blended finance

INOCAS

The company INOCAS received a grant of US$ 1 million with its reimbursement contingent on the success of the project and a capital investment of US$ 3 million from IDB Lab. The latter was to finance the costs of capital of farmers and beneficiaries. The project also included bridge loans worth US$ 300,000 and capital investments by Althelia with an initial estimate of US$ 6 million for the expansion of a planted area and the processing of macaúba palm oil.

32 See the details of the initiatives in the Impact Report 2022 of the Vale Fund.