

National readiness for nature-related disclosures in emerging markets

Recommendations from 5
case studies for a successful
disclosure framework

UNDP, May 2022

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National readiness for nature-related disclosures in emerging markets

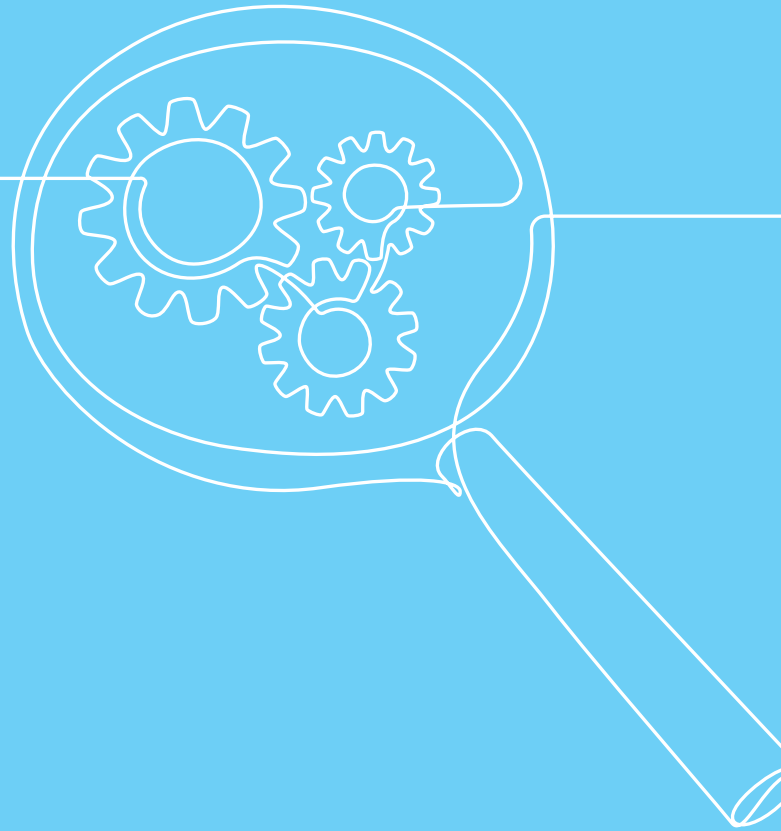


Acronyms

BCCR	Costa Rican Central Bank
BER	Biodiversity Expenditure Review
BIOFIN	The Biodiversity Finance Initiative
BRR	Business Responsibility Report
BRSR	Business Responsibility and Sustainability Reporting
BOZ	Bank of Zambia
CDP	Carbon Disclosure Project
CDSB	Climate Disclosure Standards Board
CNBV	National Securities and Banking Commission (Mexico)
CNSF	National Surety and Bonds Commission (Mexico)
CONABIO	Commission for the Knowledge and Use of Biodiversity (Mexico)
CONAFOR	National Forestry Commission (Mexico)
CONASSIF	National Council for the Supervision of the Financial System (Costa Rica)
CONDUSEF	National Commission for the Protection and Defense of Financial Services Users (Mexico)
CONSAR	National Retirement Savings System Commission (Mexico)
CSR	Corporate Social Responsibility
EIA	Environmental Impact Assessment
ENCORE	Exploring Natural Capital Opportunities, Risks and Exposure
ESG	Environmental, Social and Governance
E&S	Environmental and Social Risks
FIRA	Agriculture-Related Trust Funds (Mexico)
GDP	Gross Domestic Product
GIB	Great Indian Bustard
GIS	geographic information system
GIZ	German Corporation for International Cooperation GmbH
GRI	Global Reporting Initiative
IFC	International Finance Corporation
INEGI	National Institute of Statistics and Geography (Mexico)
IPAB	Institute for the Protection of Bank Savings (Mexico)
ISPO	Indonesian Sustainable Palm Oil
ISSB	International Sustainability Standards Board
IUCN	International Union for Conservation of Nature
IUCN STAR	Species Threat Abatement and Recovery Metric
NBT	National Biodiversity Target
NCAVES	Natural Capital Accounting and Valuation of Ecosystem Services
NGRBCs	National Guidelines on Responsible Business Conduct (NGRBCs)
NSS	National Statistical System (Zambia)

MoEF&CC	Ministry of Environment, Forest and Climate Change (India)
MoSPI	Ministry of Statistics and Programme Implementation (India)
NBA	National Biodiversity Authority
NGO	Non-Governmental Organization
OJK	Financial Services Authority (Indonesia)
RBI	Reserve Bank of India
PROPER	environmental performance rating program (Indonesia)
RSPO	Roundtable on Sustainable Palm Oil
SASB	Sustainability Accounting Standards Board
SDGs	Sustainable Development Goals
SEBI	Securities and Exchange Board of India
SEEA	United Nations System of Environmental-Economic Accounting
SEMARNAT	Ministry of Environment and Natural Resources (Mexico)
SHCP	Ministry of Finance and Public Credit (Mexico)
SUSREG	Sustainable Financial Regulations
TCFD	Task Force on Climate-Related Financial Disclosures
TNFD	Taskforce on Nature-related Financial Disclosures
UNDP	United Nations Development Programme
UNEP FI	United Nations Environment Programme Finance Initiative
WAVES	Wealth Accounting and Valuation of Ecosystem Services
WWF	World Wildlife Fund
ZamStats	Zambia Statistics Agency

Summary



From late 2021 to early 2022, UNDP, with funding from the Government of Italy, conducted a study of five emerging economies (Indonesia, India, Mexico, Zambia, and Costa Rica) with a view to assessing their readiness for nature-related disclosures. The studies were based on ten questions and data collected through interviews and questionnaires with regulators and supervisors, complemented by desk reviews. At the country level, the studies were led by UNDP-BIOFIN (Biodiversity Finance Initiative) country teams. Below is a brief overall summary of the results.

Findings and recommendations

- 1 Each country started to work on natural capital and ecosystem services accounting, however none has fully integrated it into the system of national economic accounts. More support, such as that provided through the Wealth Accounting and Valuation of Ecosystem Services (WAVES), Natural Capital Accounting and Valuation of Ecosystem Services (NCAVES), and capacity development is needed to implement the United Nations System of Environmental-Economic Accounting (SEEA) frameworks on all natural capital accounts.
- 2 Every country in the study is using different metrics in the function of what data is available, sufficiently recent, and of good quality. It is often complicated to find enough data on multiple years to allow for trend analyses. Countries would need support to build reliable and frequently updated metrics.
- 3 Primary platforms that countries have been relying upon for indicators and metrics are SEEA, Exploring Natural Capital Opportunities, Risks and Exposure (ENCORE), and IUCN Species Threat Abatement and Recovery Metric (STAR). Capacity needs to be built for using these platforms. Most countries recognize that there is a need for “business-friendly” disclosure metrics.

4

Every country presented a different hierarchy and structure of financial institutions. Any nature financial disclosure framework would need to be sufficiently flexible to allow for national implementation under different institutional frameworks.

5

Some governments point to being overwhelmed by the rising number of Environmental, Social, and Governance (ESG) reporting and disclosure instruments, noting they are in constant need of improving their understanding and ability to apply these instruments. Making disclosure mandatory in a country requires time, capacity, and willingness. It is complicated for governments to bring these three criteria each time a new type of reporting is introduced. A harmonization or international standard will allow better and faster implementation. Although flexibility in the implementation will need to be provided as previously stated to adapt to the national context.

6

Even though there is an increasing demand from investors, all countries recognize that reporting on “nature” within a broader ESG framework is nascent or altogether absent. Sustainability certifications might help increase the disclosure willingness; however, the critical change will happen once the metrics are easily accessible, user friendly, and internationally recognized.

7

While the International Finance Cooperation (IFC) standards and the Environmental Impact Assessments (EIA) reports are mandatory and used by financial institutions, they are limited in ensuring investments are not harmful to biodiversity. Financial institutions are looking for other solutions, such as the application of geographic information system (GIS) data, to apply to investment decisions. However, new capacity development is needed.

8

As of early 2022, several countries report public expenditure tagging is in place for climate, such as in Indonesia, but not yet for nature. All countries working with UNDP-BIOFIN develop biodiversity expenditures reviews and some countries institutionalised these reviews with dedicated staff.

9

The leading national financial supervisory authority has been deemed by respondents to be the most appropriate institutional entry points for regulating and supervising disclosures. For national-level policy settings, they are expected to work closely with central (national) banks, as well as ministries of finance.

10

In countries where climate metrics and disclosure are well documented there are opportunities to efficiently include nature metrics in the existing frameworks, platforms, and knowledge centres. This will allow simplified operationalization.

11

All five countries highlighted that opportunities exist with technology to improve nature disclosure but that funding and capacities would be needed to ensure it is deployed in an appropriate time frame.

12

Additional funding would be needed to create awareness and capacity within all relevant financial institutions, regulators, or supervisors to conduct scenario analyses and help estimate financial risks, costs, and impacts related to biodiversity. Finally, national knowledge-sharing platforms should be constructed to translate scientific and technical information into data inputs useful for the financial sector.

13

The first step in disclosure implementation would be presenting international experiences and best practices to financial authorities and negotiating a schedule to develop a regulatory framework and progressive implementation. A strong dialogue process, first with financial authorities and then with financial institutions, private sector chambers and associations, will be necessary.

14

Coordination of environmental NGO's, international organizations, UN bodies and foreign governments representatives should be enhanced to avoid duplication of efforts.

15

Specific country pilots should be funded and implemented in each country once the first framework is developed by TNFD. This would ensure increased awareness, capacity building, lessons learnt, business sector credibility, and initial institutionalization. The pilots would need to be implemented by institutions with teams on the ground as we have seen these activities will need capacity development, partnerships with local institutions and long advocacy campaigns.

16

A monitoring and evaluation programme would need to be developed after and during implementation of the TNFD Framework to ensure lessons learnt and adjustment of the framework to the reality on the ground.



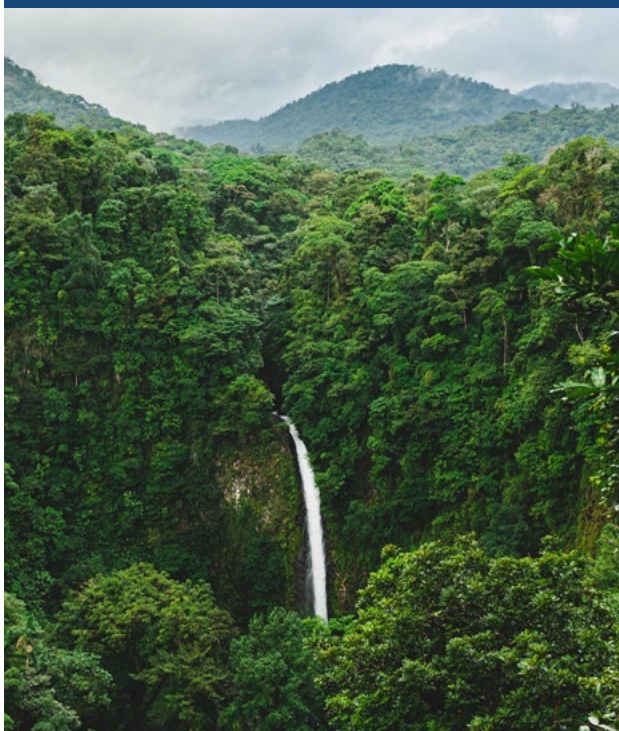
An important step to ensure biodiversity and natural capital are well monitored is to establish national environmental accounts. None of the five pilot countries have a regularly updatable system of natural capital or ecosystem service accounting fully integrated in its system of national economic accounts

in line with the System of Environmental Economic Accounting (SEEA) - the United Nations standards designed to monitor the state of nature and ecosystems and linkages between environmental and economic values. All countries are making progress to formulate such accounts.



Costa Rica

Costa Rica has established national accounts for water and forests, including monetary assessments of their stocks and changes in these stocks. Data is reported with a 3-year lag in the case of water (e.g., 2021 reported for 2017), which speaks to the complexity of such accounting. The development of environmental accounts by the Central Bank of Costa Rica was carried out with support of the World Bank through the WAVES (Wealth Accounting and Valuation of Ecosystem Services) initiative, among other resources.



Indonesia

Indonesia maintains four accounts aligned with SEEA, namely land, timber, minerals, and integrated environmental economic accounts. The analysis was limited to these four accounts due to the scarcity of available and reliable data. The data was used to estimate a Net Domestic Product which takes into consideration the value of depletion of natural resources.



Figure 1. Closing Stock of Physical Asset Account for Timber Resources of Indonesia (Million m³), 2016-2020

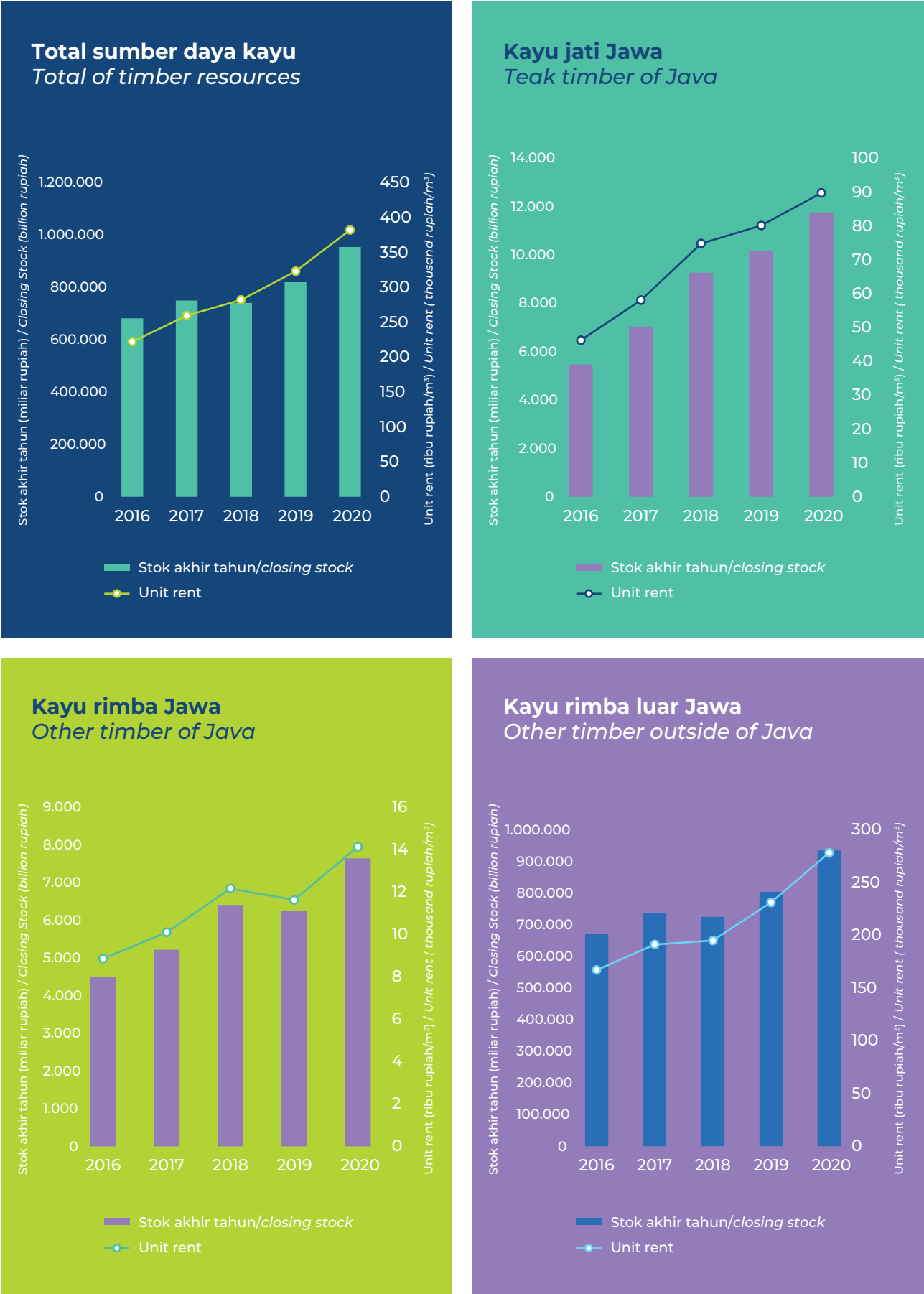


Table 1. Depreciation Value of National Assets in Indonesia, 2016-2020

Tahun Years	Nilai penyusutan (Miliar Rp) Depreciation value (Billion Rp)		Pertumbuhan (persen) Growth (percentage)	
	Konsumsi barang modal tetap Consumption of fixed capital	Depleksi aset lingkungan Depletion of environmental assets	Aset yang diproduksi Produced assets	Aset alam Non-produced assets
2016	2.035.689	193.580	-4,40	-24,49
2017	2.430.937	218.010	19,42	12,62
2018	2.800.030	245.697	15,18	12,70
2019*	3.168.101	315.500	13,15	28,41
2020**	2.943.805	278.011	-7,08	-11,88

* Preliminary figures

** Initial estimation



Zambia

Zambia maintains physical accounts of its forest, land, and water resources with support from WAVES. The other intervention is through the Zambia Statistics Agency (ZamStats) which is also housed under the Ministry of Finance and National Planning. ZamStats, in a recent study, highlighted the need for the country to strengthen the capacity of agency staff in understanding the needs of users of environmental statistics and to improve coordination inside the National Statistical System (NSS), which is key in measuring the performance of government activities related to climate change and the environment.





Mexico

Mexico participated as a pilot country in a multi-year project titled Natural Capital Accounting and Valuation of Ecosystem Services (NCAVES) implemented by the National Institute of Statistics and Geography (INEGI), in collaboration with the Ministry of Environment and Natural Resources (SEMARNAT). Mexico has carried detailed one-time studies, evaluating ecosystem extent, condition, quantification and, in some cases, monetization of certain ecosystem services (e.g. carbon storage, pollination and tourism values). INEGI worked for more than 25 years with the UNSD SEEA framework, developing the Environmental Protection Account. Currently, INEGI, with UNDP-BIOFIN's support, is working on developing the Environmental Goods and Services Account. This information allows for a broader picture of public and private activities and expenditures related with environmental protection, updated annually under the highest international standards of accounting.



India

India has deployed SEEA through a phased approach. It has developed a series of annual reports, starting from 2018, accounting for stocks, fluxes and in some cases ecosystem services delivered by forests, cropland and water bodies (including wetlands). India is advancing the theory and practice of environmental and ecosystem accounting through the multi-year project Natural Capital Accounting and Valuation of Ecosystem Services (NCAVES).

Box 1

WAVES in Zambia and Costa Rica

Both Zambia and Costa Rica participated in the World Bank initiative 'Wealth Accounting and the Valuation of Ecosystem Services' (WAVES).

WAVES studies in Zambia showed the country has already institutionalized natural capital accounting as a standard process and that natural resources are Zambia's greatest asset, accounting for 40 percent of the country's total wealth (particularly forests, water and land). The water account systematically tracks the water resources, and the information was used in policymaking such as water pricing and licensing, and it especially informed national policymakers about the high socio-economical value of water.

The study concludes that the results from natural capital accounting are already improving decision-makers' understanding of natural resource potentials and risks and helping them make better policy and investment decisions. The second wave of accounts for minerals, energy, and tourism is underway to support modelling of natural resource use and economic scenarios based on the accounts.

In Costa Rica, the Water Account provide quantitative and qualitative data by sector. The data can show who derives more benefits per cubic meter of water, but also monitoring inefficiencies in distribution. The Water Account shows:



The total extraction of water in 2017 was 33,342 hm³, 8.4% of that volume was extracted for consumption (3% less than in 2016), and the remaining 91.6% was extracted for non-consumption usage, associated with the generation of hydroelectric power.



The economic activities most dependent on water usage were: Agriculture, livestock, forestry and fishing (81%), Costa Rican households (8%), Manufacturing and construction (6%), Services activity (5%).

The Forest Accounts show growth in forest cover. There was an increase of some 97,600 hectares in cover between 2011 and 2013, equivalent to 244 million tons of carbon stored in forests. This information has contributed to the government's strategy on reducing emissions from deforestation and forest degradation (REDD+), a key component of its National Plan for Forest Development 2011–20. The forest accounts have supported the design of Costa Rica's Payment for Environmental Services program.

World Bank. 2020. Zambia's Natural Capital Accounts: Informing Key Policy Priorities. World Bank WAVES, Washington D.C.

World Bank, 2017. Natural Capital Accounting and Policy: Costa Rica. World Bank WAVES, Washington D.C. <https://www.wavespartnership.org/en/knowledge-center/natural-capital-accounting-and-policy-costa-rica>



Financial Systems

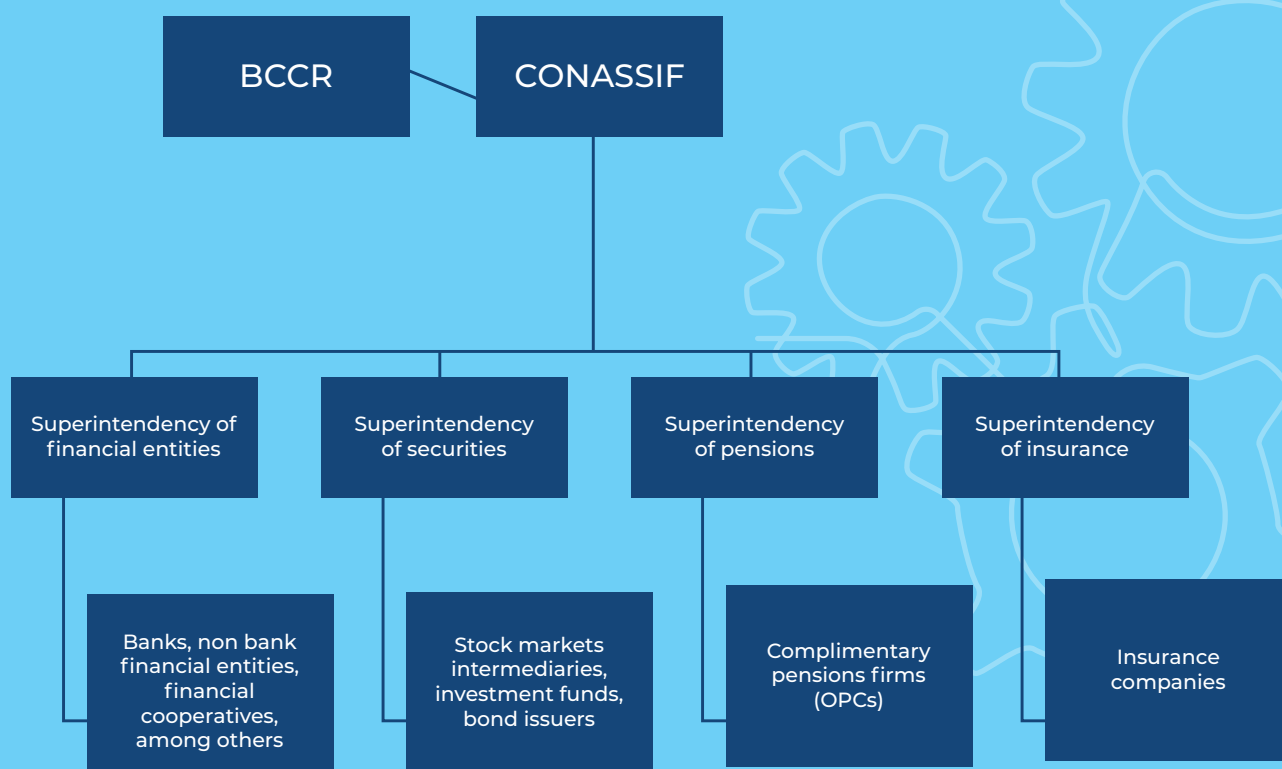
As demonstrated by environmental accounting, each country has different institutions leading its national development. One reason for this is that each country presents a different hierarchy between financial entities,

showing the importance of nature financial disclosure frameworks flexible enough to be adapted to the national context. The different contexts of Costa Rica and Mexico, India and Zambia are showcased in the following graphs.



Costa Rica

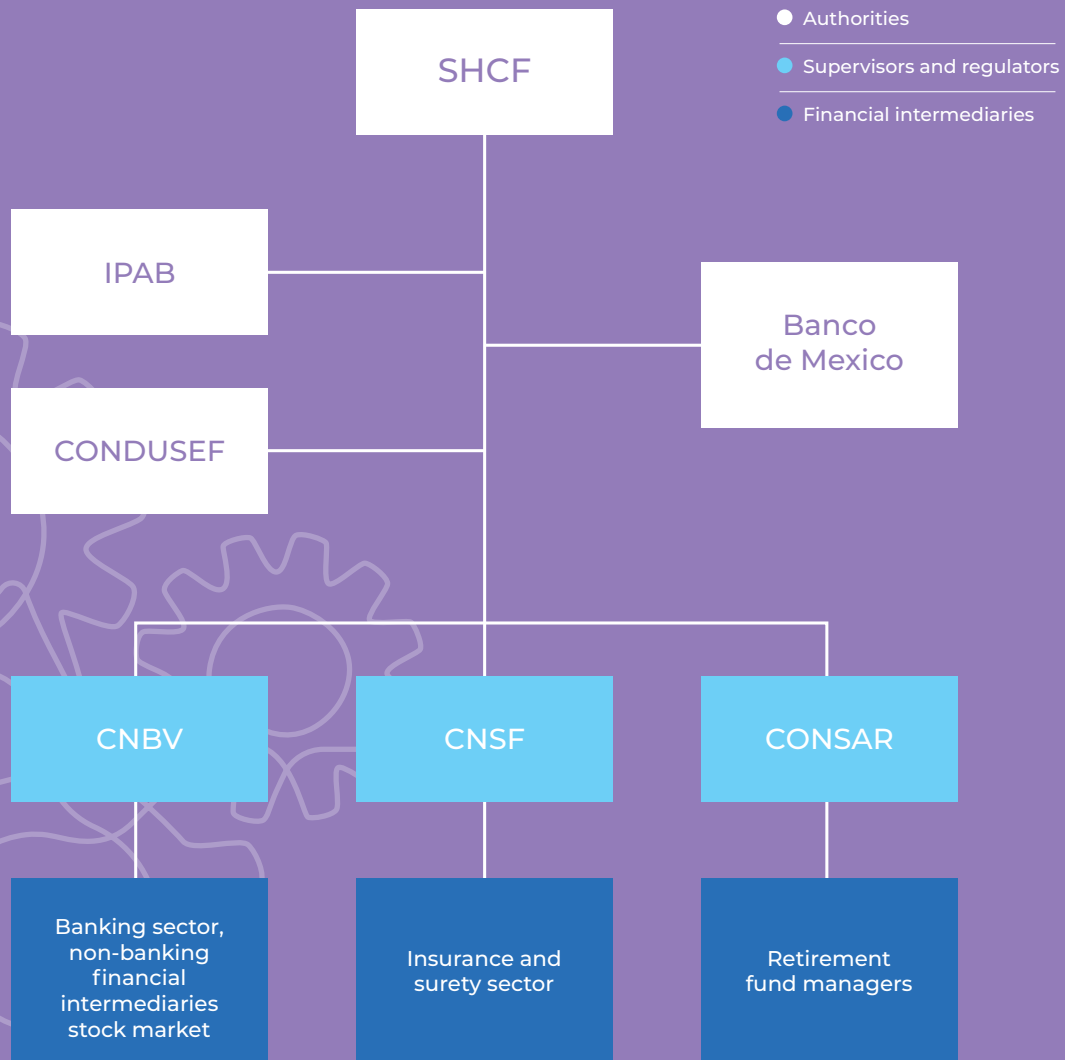
The Costa Rican financial system is integrated by the Costa Rican Central Bank (BCCR), the National Council for the Supervision of the Financial System (CONASSIF), the superintendencies in four different areas and several regulated financial entities. CONASSIF is at the top of the four financial superintendencies





Mexico

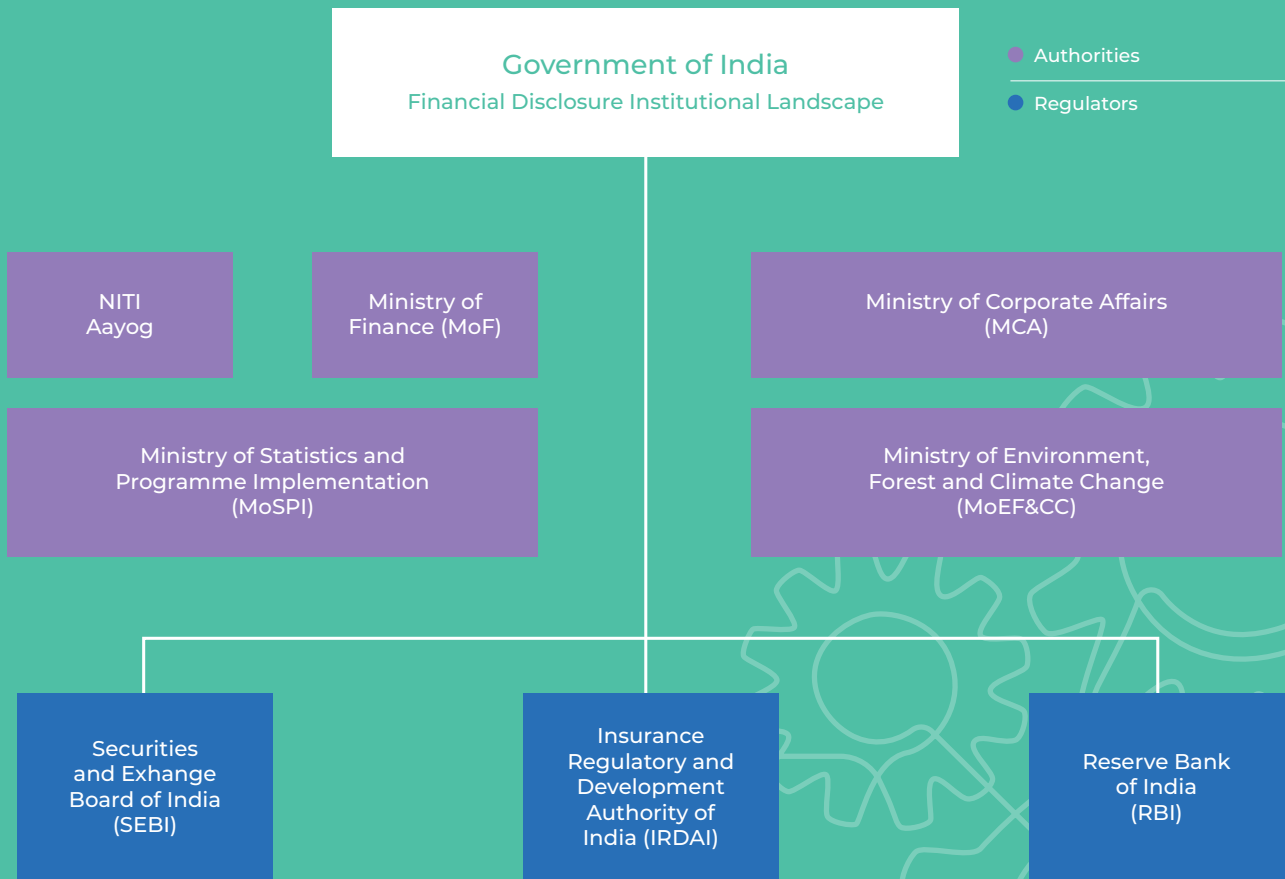
The Mexican financial system is integrated by several licensed or registered financial entities. Numerous competent authorities oversee its regulation and supervision.





India

The main institutions and regulators that define the financial disclosure landscape in India are as follows.





Financial sector in Zambia

SEC

Established through an Act of Parliament, the Securities Act no. 41 of 2016, SEC supervises and contributes to the development of the Zambian Capital Markets

- Brokerage firms
- Fund managers
- Custodian banks
- Listed companies

BoZ

BoZ draws its mandate from the Banking and Financial Services Act to achieve and maintain price and financial system stability to foster sustainable economic development

- Commercial Banks
- Leasing and finance companies
- Building Societies
- Micro-Finance Institutions
- Development Finance Institutions
- Savings and Credit Institutions
- Foreign Exchange Bureau
- Credit Reference Bureau

PIA

The Pensions and Insurance Authority (PIA) regulates and supervises pensions schemes, pensions and insurance service providers following the amendments to the Pension Scheme Regulation Act No. 28 of 1996

- Reinsurance companies and brokers
- General and Life Insurance Companies
- Life Insurance Companies
- Insurance Brokers
- Insurance Agents
- Motor Assessors
- Loss Adjusters
- Risk Surveyors





There is a great diversity of approaches across the five countries. For forest accounts in Costa Rica, a tailored metric called “economy of the forests” is applied, which assesses in monetary terms how much economic activities (of extractive, sustainable management as well as conservation of natural remnants) in forest ecosystems contribute to the GDP.

Indonesia assesses forests from the point of view of changes in forest cover, timber volumes, as well as changes in the monetary value of timber. In the water sector, Costa Rica measures water extraction (in quantitative and financial volumes) by key sectors, and water intensity in cubic meters / currency unit of GDP.

Throughout the 5-year period of introducing SEEA in **India** since 2018, metrics have become ever more sophisticated and, while staying within the general principles of SEEA, metrics from other providers were gradually introduced. For example, while the initial SEEA report was primarily using quantitative accounts for water, forests, and cropland, the 2019 report introduced metrics such as “soil nutrients’ budget” and the “monetary value of nature-based tourism”; the 2021 report introduces complex indices for measuring progress in the management of natural resources, including

the application of the Living Planet Index and the species richness index based on the IUCN Red List. Primary platforms that countries have been relying upon for indicators and metrics are SEEA, ENCORE, and IUCN STAR, often locally adapted. Most countries recognize that there is a need for “translation” of macro-level metrics (used by national regulators and supervisors) into “business-friendly” disclosure metrics to be used by businesses in reporting their risks and impacts. For example, in **Mexico**, the Commission for the Knowledge and Use of Biodiversity (CONABIO) develops the most reliable and accurate information related to the state and integrity of Mexico’s ecosystems. However, the data is not currently translated into indicators and data that could be used by the financial sector.

Countries seem to be looking for assistance in setting up a taxonomy and a system of indicators and metrics that would enable consistent tracking of national progress under the post-2020 Global Biodiversity Framework and SDG-15 on the one hand, but that would also be “useable” for their private sector on the other hand.

Box 2

Zambia Case for Proposed Indicators/Metrics

Some of the proposed indicators/metrics that could be used by national financial authorities at the macro-level when monitoring the state of natural capital and services and its impacts on economy in Zambia include:

- The quantity of the ecosystem asset type measured by volume or area.
- The condition of the ecosystem asset measured by an index of biodiversity.
- The net present value of the ecosystem asset type.
- The quantity of the commodity asset type measured by volume or area.
- The condition of the commodity asset type.
- The net present value of the commodity asset type.
- The biophysical flows of ecosystem services measured by volume, area or an index of biodiversity.
- The financial cost of deriving benefits from natural assets via ecosystem services measured by costs of cultivation, management and/or extraction of natural resources.
- The human capital required to derive benefits from natural assets via ecosystem services measured by employment in cultivation, management and/or extraction of natural resources.
- The financial benefits derived from natural capital via flows of ecosystem services. Economic benefits are measured by the gross value added in the National Accounts, land rents, avoided health costs, avoided costs from natural disasters, or value of markets in natural resources.
- The social benefits derived from natural capital via flows of ecosystem services. Social benefits are measured by access to natural resources, human impacts of natural disasters, or engagement with natural capital.
- The economic costs of waste and pollution produced through the process of deriving benefits from natural capital. Costs are measured by expenditure on waste disposal and pollution treatment and damages.
- The social impacts of residuals produced through the process of deriving benefits from natural capital. Impacts are measured by employment in related industries and health impacts of residuals.
- The quantity of residuals produced through the process of deriving benefits from natural capital. Impacts are measured by number of residuals produced, managed and emitted into the environment.

Source: (Fairbrass, Mace, Ekins, & Milligan, 2020)

Fairbrass, A., Mace, G., Ekins, P. and Milligan, B., 2020. The natural capital indicator framework (NCIF) for improved national natural capital reporting. Ecosystem Services, 46, <https://doi.org/10.1016/j.ecoser.2020.101198>.





3

Are real economy companies and financial institutions registered in the country currently required by law to disclose nature-related risks and/or impacts in their financial or non-financial statements?



India and **Indonesia** introduced mandatory reporting by businesses on nature-related risks and/or impacts.

Financial disclosures by financial institutions on the management of natural resources, sustainable land use, and biodiversity conservation has been mandatory in **Indonesia** since 2019. A sustainable finance action plan (1-5 year perspective) and an annual report covering the nature-related items listed above, is a mandatory requirement in **Indonesia**. There is evidence that the financial institutions in the country are increasingly complying with this disclosure requirement. For many **Indonesia**-based banks, their annual financial investment in nature-neutral or nature-positive projects has been growing.


In **India**, in 2012, the Securities and Exchange Board of India (SEBI) mandated the top 100 listed entities by market capitalization to file Business Responsibility Reports (BRR). The requirement for filing BRRs was progressively extended to the top 500 listed entities. In 2019, to keep pace with global developments and the UN Sustainable Development Goals (SDGs), the Ministry of Corporate Affairs constituted a Committee on Business Responsibility Reporting, of which SEBI was a member, for

finalising BRR formats for listed and unlisted companies, based on the framework of the National Guidelines on Responsible Business Conduct (NGRBCs). The Committee advised a name change to 'Business Responsibility and Sustainability Report' (BRSR), which will be replacing the existing Business Responsibility Report (BRR). The BRSR will be voluntary for the 2021-22 financial year and mandatory for 2022-23 for the top 1000 listed firms. The disclosures under the BRSR are segregated into essential (mandatory) and leadership (voluntary) indicators. The BRSR also provides for inter-operability of reporting i.e. the entities which prepare sustainability reports based on internationally accepted reporting frameworks can cross-reference the disclosures sought under the BRSR to the disclosures made under such frameworks. The list of metrics is dominated by those measuring carbon emissions, water extraction and hazardous waste. Two indicators, however, deal with biodiversity: one requests companies to report on their business at or in close proximity to "ecologically sensitive areas"; another indicator is requesting information on investment in biodiversity loss prevention or remediation activities. Such non-financial disclosure is encouraged for the whole value chain.



In other countries, disclosure of nature-specific risks or impacts has not been mandated, other than on a project-by-project basis when Environmental Impact Assessment applies. Although in **Mexico**, financial authorities have been analysing frameworks and standards that could eventually become regulation for the financial sector entities and companies. One important milestone for the country is the recent integration of the National Banking and Securities Commission (CNBV, for its acronym in Spanish), as well as the Bank of Mexico, to the TNFD Forum.

In **Zambia**, nature related disclosures are still done on a project-by-project basis when Environmental Impact Assessments are undertaken through the Zambia Environmental Management Agency (ZEMA). In the pensions and insurance sector, a large risk register is maintained for insurance risk that may be material. Insurance entities are required to report large risks as and when underwritten. Nature related risks usually fall under this category. Although reporting of nature-related risks in Zambia is still in its nascent stages, SEC, one of the key strategic partners of UNDP-BIOFIN Zambia, has also been instrumental in pushing the green finance agenda in Zambia and has since published and gazetted the

green bond guidelines which will provide a much-needed framework for the issuance of Zambia's maiden green bond. The guidelines provide a framework for continuing obligations and reporting requirements (including on the use of proceeds in funding eligible green projects) for bond issuers as prescribed in the Securities Act ([the guidelines can be accessed here](#) ). The ongoing work from UNDP-BIOFIN Zambia to develop a green finance policy and implementation plan for the financial sector, as well as a tagging system, will support the momentum created on nature disclosure work by the financial sector.

Some governments point to being overwhelmed by the rising number of ESG reporting and disclosure instruments recently, noting they are in constant need of improving their understanding and ability to deploy them. Some of the current standards that country registrants are reporting against include TCFD, GRI, CDP, and CDSB. Some countries noted they are closely following the emergence of ISSB, while anticipating it to become the key accounting standard in the nearest future.





4

Do registrants disclose
nature-related risks on a
voluntary basis?

Voluntary disclosure (financial and non-financial) is present in different degrees and formats in all of the countries, but information on its application is limited. All of the countries recognize that reporting on “nature” within a broader ESG framework, is nascent or altogether absent. Where commodities are involved, the main driver of disclosure is sustainability certification. Key voluntary reporting systems in use include SASB (by financial sector companies), GRI (primarily by real-sector corporates), CDP and TCFD (both for financial and real-sector companies focusing on climate metrics). Voluntary reporting does not seem to be omnipresent, though.

For example, in **India**, out of 498 listed companies only 74 were reporting on GRI in 2019 and 220 through CDP in 2020. In all countries, regulators are working with international organizations (UNDP-BIOFIN, GIZ, WAVES, development banks) and alliances (NGFS), on advancing regular nature-related voluntary disclosures. In **Mexico**, the Trusts Established in Relation to Agriculture “FIRA”

(Fideicomisos Instituidos con Relación a la Agricultura) include four public trusts that facilitate access to credit and guarantees to projects related to agriculture, livestock, poultry, agribusiness, fishing and other related activities that are carried out in the rural environment. FIRA issued in 2021 the publication of its first report under the Sustainability Accounting Standards Board (SASB). The report represents a milestone within development banking, since it reveals information regarding the financial, environmental, and social materiality of the entity, and where the importance of the impact of the financial system to mitigate risks is recognized and the sustainability of the rural, agricultural, livestock, forestry, and fishing sectors is promoted.¹ Through the green finance tagging work ongoing in **Zambia**, financial institutions will move towards voluntary or mandatory disclosure of nature related risks depending on the stakeholder engagements that will be undertaken in the course of 2022 as this work gains momentum in Zambia.



¹ https://www.fira.gob.mx/Files/SASB_2020.pdf

Box 3

Indonesia and the Astra International Case

Astra International is a group of companies (conglomeration) in the fields of automotive, mining and heavy equipment, agribusiness, financial services, infrastructure and logistics, property, and information technology. Since 2002, Astra has been

publishing Astra Sustainability Report annually as part of the Annual Report. Astra published annual sustainability report consistently for 19 consecutive years. Below is an excerpt of nature related disclosure by the Company for 2020.

Intensitas Penggunaan Sumber Daya Alam dan Intensitas Emisi Limbah

Intensity of Natural Resources Consumption and Intensity of Waste Generation

[302-3, 305-4, 306-2]



Rata-rata penurunan intensitas pemakaian air per produk 2019-2020

Averages reduction of water consumption intensity per product 2019 - 2020



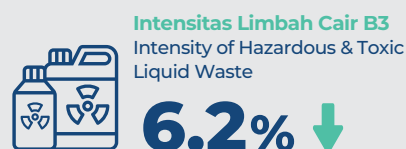
Rata-rata penurunan intensitas pemakaian pelumas per produk 2019-2020

Averages reduction of lubricant consumption intensity per product 2019 - 2020



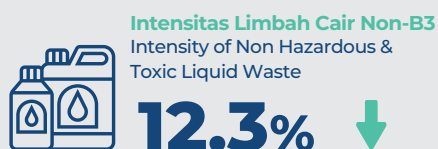
Rata-rata penurunan intensitas Konsumsi Energi 2019-2020

Average reduction of energy consumption intensity per product 2019 - 2020



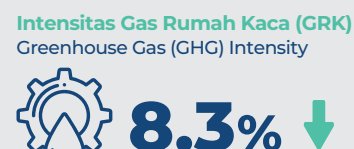
Rata-rata penurunan limbah cair B3 per produk 2019-2020

Average reduction of Hazardous & Toxic Liquid Waste per product 2019 - 2020



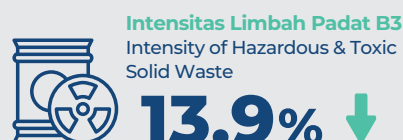
Rata-rata penurunan limbah cair non B3 per produk 2019-2020

Average reduction of Non-Hazardous & Toxic Liquid Waste per product 2019 - 2020



Rata-rata penurunan intensitas Gas Rumah Kaca per produk 2019-2020

Average reduction of Greenhouse Gas emission intensity per product 2019 - 2020



Rata-rata penurunan limbah padat B3 per produk 2019-2020

Average reduction of Hazardous & Toxic Solid Waste per product 2019 - 2020



Rata-rata penurunan limbah padat non B3 per produk 2019-2020

Average reduction of Non-Hazardous & Toxic Solid Waste per product 2019 - 2020





5

Do financial institutions
assess nature-related
risks as part of investment
proposal evaluation?

A country-tailored “environmental performance rating program” (PROPER) is used by financial institutions in Indonesia as one criterion to evaluate and assess nature-related risks of the loan proposal. In **Indonesia**, the system for collecting and collating nature-related disclosures from the PROPER programme provides a relatively good overall picture within its scope. Some banks in Indonesia put additional requirements on clients requesting credit for commodity business, requiring commitment for the Roundtable on Sustainable Palm Oil (RSPO) or the Indonesian Sustainable Palm Oil (ISPO) certification. In the other countries, in the absence of dedicated regulations, no patterns are discernible. There is sporadic evidence that some institutions do assess nature-related risks, such as the case of bank loans that require screening by the Technical Secretariat for Environment (SETENA) in **Costa Rica** (if the loan is related to an investment requiring an EIA) or the case of Banorte in **Mexico**. Banorte, the World Wildlife Fund, and Mexico's CONABIO are working on BANConnect, a GIS-based tool to identify environmental risks for Banorte and strengthen ecological connectivity and integrated landscape

management. BANConnect, if fully deployed, will support decision making by assessing potential environmental impacts derived from the authorization and subsequent designation of credits for infrastructure projects, housing, agriculture, etc. The tool will be spatially explicit and will help to decide whether the requested financing affects biodiversity and ecological connectivity and, in case of negative impact, deny the financing.

All countries engaging with IFC must adhere to IFC's Performance Standards safeguard, which includes Standard 6 related to biodiversity conservation. Countries report satisfaction with the application of the IFC approach.

India had the opportunity to consult Yes Bank on the subject (see Annex I for the full consultation). YES BANK has had an Environment and Social Policy in place since 2006, based on international best practices such as IFC Performance Standards and the Equator Principles, and biodiversity-related risks are also considered. This policy is integrated into the investment decision making of the bank and is used while determining project finance and project-related corporate loans. Environment



and social performance are checked at two levels. At the first level, there exists a list of prohibited activities that the bank has decided not to finance, irrespective of the credit-related outcomes. This 'Exclusion List' is confidential to the bank and applies to all transactions. The list is derived from the IFC Performance Standards, but the bank has made sure to contextualise it for India while also aligning it with the government mandates. The activities in the Exclusion List include those that have a negative impact on biodiversity. At the second level of check, the Environment and Social Policy is used for project finance transactions and project-related corporate loans. The bank does an initial assessment of the environmental and social implications of financing a project and the impact of said project/business on biodiversity is taken into due consideration. Therefore, at the second level, an Environmental and Social due diligence is conducted internally by YES BANK. Environment and Social Risk Specialists, housed within the larger risk management team, conduct the analysis.

In **Zambia**, although green bond guidelines have been developed by the SEC with UNDP-BIOFIN Zambia support, there is no such

framework for green loans. The Bank of Zambia is in the process of creating similar guidelines for green loans within the banking sector. It is envisaged that through the collective efforts of the Green Finance Mainstreaming Working Group, such a framework will be established soon for other subsectors of the financial sector such as the pensions and insurance sectors. However, in the past, efforts have been made to ensure that the financial sector players adopt environmentally friendly business practices. This includes the ILO-led Zambia Green Jobs Programme (ZGJJP), which was a collaborative effort between the International Trade Centre (ITC), and the Africa Guarantee Fund (AGF) to capacitate the Zambian financial sector to enhance the provision of green finance to local micro, small and medium-size enterprises (MSMEs). Other local green lending initiatives include a ZMW 1 billion (US\$ 58,5 million) "Green Outcomes Fund" that is in the process of being established by Zambia National Commercial Bank Plc, Kukula Capital, and the World-Wide Fund for Nature (WWF) Zambia, which is due for operationalization by June 2022, subject to regulatory approval (Mulenga, 2022).







6

Has the national government been putting in place nature taxonomies, or tagging public budget expenditure as nature positive, neutral or negative?



In general, recognition of economic activities as nature-negative has proved to be politically sensitive. However, countries are taking action to better understand their positive expenditure. A Green Taxonomy Guidance (yet to be mandated for use) has been released by Indonesia's OJK in January 2022, in which RSPO and ISPO (when it comes to commodities) are mentioned among the key criteria defining an activity as "green". As of early 2022, some countries report public expenditure tagging in place for climate, such as **Indonesia**, but not yet for nature. In the case of **Zambia**, a green bond taxonomy is scheduled to be developed as part of the UNDP-BIOFIN Zambia initiative in the course of 2022 as well as the tagging system for the financial sector.

All countries working with UNDP-BIOFIN, including these five countries, report on "biodiversity expenditures", which compile information on national institutions' annual spending on nature-positive activities and projects.

Box 4

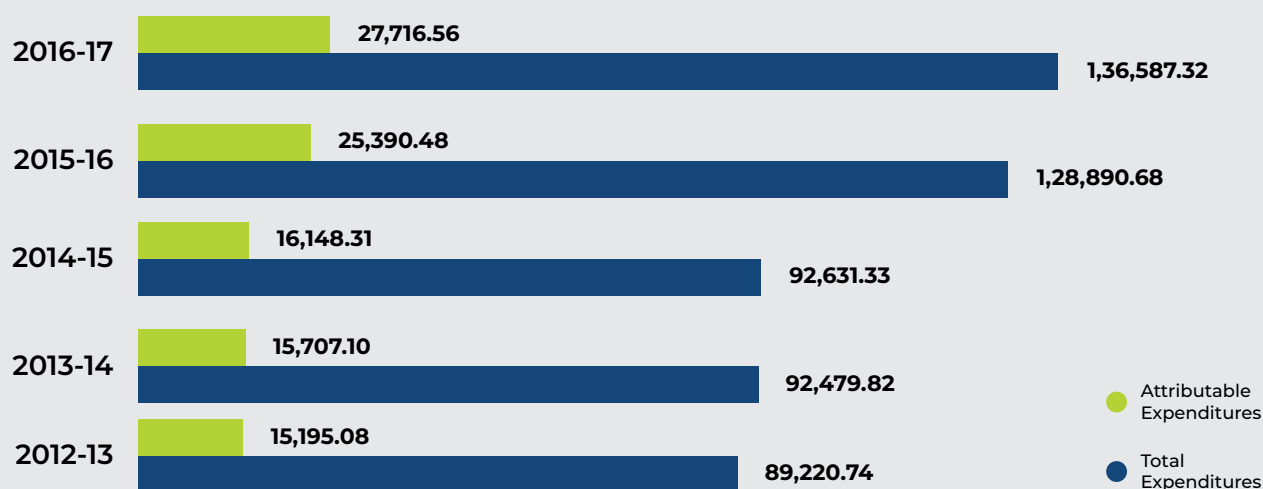
UNDP-BIOFIN Biodiversity Expenditure Review in India

Under the UNDP-BIOFIN programme in India, led by the Ministry of Environment, Forest and Climate Change and hosted by the National Biodiversity Authority (NBA), a Biodiversity Expenditure Review (BER) was conducted to review all types of expenditures contributing to sustainable biodiversity management.

The BER process identified 116 schemes from 24 central ministries which have varied degrees of relevance with biodiversity. The BER process developed a methodology that captures biodiversity expenditures as guided by existing international methodologies e.g. Rio markers, and modified according to the Indian context through consultations with national and sub-national government in India. Among the identified schemes, BER made two categories: Direct Schemes and Indirect Schemes. The total amount of all the Direct schemes is taken into consideration, and the Indirect Ones have been given different weights.

Direct schemes refer to schemes from Principal Institution working on biodiversity conservation such as the Ministry of Environment, Forest and Climate Change (MOEFCC). For example, Tiger conservation from MOEFCC. Indirect Schemes refer to the non-core schemes from MOEFCC and schemes from other ministries, such as the Ministry of Agriculture. To reflect the varied levels of contribution, the indirect expenditures have been further classified into 5 levels: “Indirect Very High”, “Indirect High”, “Indirect Medium”, “Indirect Low” and “Indirect Marginal”. Then, according to the classification, different percentages of the funding in these schemes were calculated into the attributable expenditure.

In the graph below, we can see that the government expenditure schemes that have relevance to biodiversity conservation had been increasing steadily, and the more accurate attributable amount follows the same trend. The attributable expenditures rose from to US\$2.5 billion in 2012-2013 to US\$ 4.6 billion in 2016-2017.





Most of the five countries have levies on natural resources (e.g., water “canon” in **Costa Rica**; coal levy in **India**) as well duty-free import of equipment for prevention of chemical pollution and improving waste treatment (**Indonesia**); furthermore, Indonesia has institutionalized carbon taxation. Most of the finance flow created by these mechanisms is used either for climate and green energy purposes or is deposited in the consolidated national accounts together with other tax revenues and is used for purposes other than environmental ones.

Mexico has three taxes related to natural resource management, oil products, and vehicle emissions, amounting to 0.1% of GDP. Most of these funds are not earmarked for activities directed to reversing climate change or nature degradation. Some exceptions exist as the tax for vehicles is imposed differently by each state. In some cases, such as Jalisco and Mexico City, these taxes are channelled to environmental funds that finance nature and climate-related activities. In Mexico, the National Forestry Commission (CONAFOR, for its acronym in Spanish) has subsidized forest communities to partially cover the cost of Forest Stewardship Council certification.

While there are few fiscal disincentives against nature destruction in place, the countries have intensified efforts to incentivize positive nature use, one of the most remarkable examples of which has been **Costa-Rica's** national Payment for Ecosystem Services scheme which is believed to have transformed the country's forest sector away from logging profiteering towards conservation-based income generation, along with a legal prohibition to change land use with forest cover since the '90s. Countries are working with UNDP-BIOFIN to develop instruments to incentivize nature-positive investment.


In **Zambia**, the government has recently passed a new bill to attract more local investment in nature-positive businesses across the country. In 2022 the government announced that the Parliament passed the ZDA Amendment Bill

which will see a reduction of the threshold of investments from \$500,000 to \$50,000 to receive fiscal and non-fiscal incentives. This change will allow projects of a biodiversity conservation nature to access fiscal and non-fiscal incentives.²

In **India**, in 2010, the government introduced a *cess on coal*, similar to a carbon tax to be levied as an excise duty on items listed in the Tenth Schedule to the Finance Act 2010. The tax is applied to coal, lignite, and peat. The tax started at Rs. 50 (US\$0.6) per tonne and gradually increased to Rs. 200 in 2015 and Rs. 400 per tonne of coal and lignite in March 2016. The purpose was to generate resources for financing and promoting clean energy initiatives, funding research in clean energy. The Government of India also offers 30% of the installation cost of rooftop solar panels as a subsidy to the institutional, residential, and social sectors in most states.³

India was one of the first countries to recognize the role of the private sector towards social and environmental causes when, in 2014, it became the first country in the world to legally mandate *Corporate Social Responsibility* (CSR). Under Section 135 of the Companies Act, companies with a net worth of Rs. 500 crore (US\$ 70 million) or more or with a turnover of Rs. 1000 crores or more are required to spend two per cent of their average net profits of three years on CSR projects, including health, education, poverty, environment and energy. The contribution of CSR in India towards biodiversity is not quite three per cent of total expenditures, providing great potential to enhance the contribution towards nature.

The Indian Government also has provisions of financial assistance to farmers through State Governments for adopting organic farming in the country under various central sector schemes such as the National Mission for Sustainable Agriculture (NMSA), Mission for Integrated Development of Horticulture (MIDH), National Food Security Mission (NFSM), and Rashtriya Krishi Vikas Yojana (RKVY).

² <https://www.biofin.org/index.php/news-and-media/zambia-reduces-minimum-investment-threshold-attract-incentives-local-green> 

³ https://www.rbi.org.in/scripts/BS_ViewBulletin.aspx?Id=20022#F11 



8

Which government unit is (or should ideally be) in charge of regulating, collecting and collating company disclosure of nature-related risks, and how such a system should be best arranged?

Several of the analysed countries have national sustainable finance initiatives, namely Mexico's National Sustainable Finance Committee; Indonesia's Sustainable Finance Roadmap; and Zambia's Green Finance Mainstreaming Working Group, working to define ESG risks, develop taxonomies, and regulate disclosures. The leading national financial supervisory authority (e.g., a banking and securities' commission/board, financial supervisory council, fiscal services authority, etc.), has been deemed by respondents to be the most appropriate institutional entry points for regulating and supervising disclosures (i.e. as part of the prudential returns submission process). For national-level policy setting, they are expected to work closely with central (national) banks, as well as ministries of finance and national planning. For actual uptake of disclosures by national registrants, cooperation with stock exchanges, banking associations, trade unions and real-sector associations are considered critical. Technical assistance will be needed to develop a system of collecting company disclosure of nature-related risks in a manner that would enable comparability.

All five of the countries acknowledge the need for defining detailed intra-institutional and inter-institutional protocols on who and how to collect and process data that might be requested from registrants on nature-related risks and impacts. In Indonesia, the existing system is effective in collecting disclosure information on climate from companies and for decision making in each government agency, in relation to their sectoral roles and responsibilities. However, developing an integrated platform will be critical to construct a way of consolidating this enterprise-specific data at a national level, to be able to monitor the contribution of companies to overall national development. The ongoing work on tagging in Zambia is bound to provide some initial baseline for the development of a system of collecting data on company disclosure of nature-related risks. The role of international organizations to build capacities was also noted.

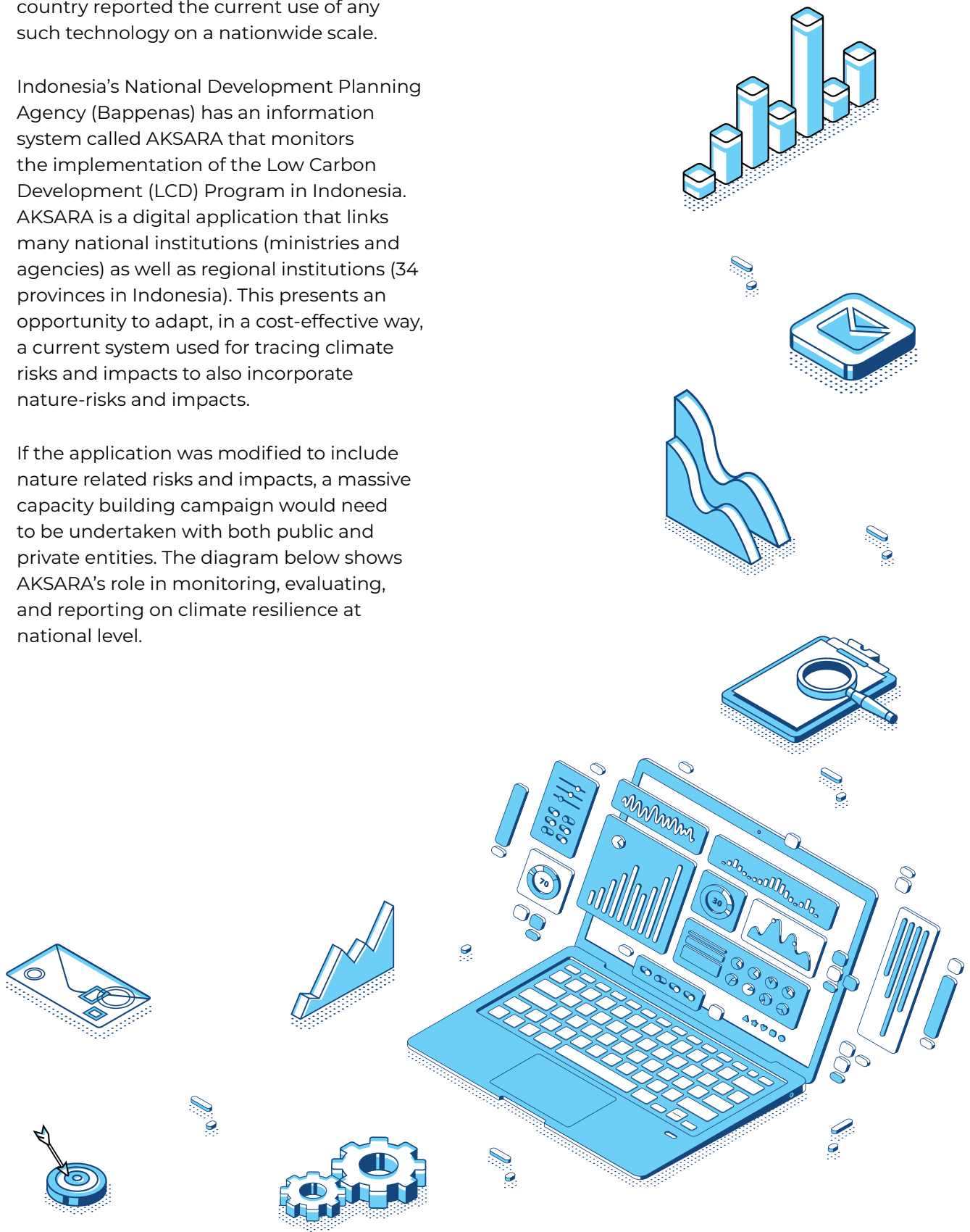
9

Would digital technologies
facilitate nature-related
disclosures?

All five of the countries acknowledged the value of geospatial technology as an important basis for reporting, but no country reported the current use of any such technology on a nationwide scale.


Indonesia's National Development Planning Agency (Bappenas) has an information system called AKSARA that monitors the implementation of the Low Carbon Development (LCD) Program in Indonesia. AKSARA is a digital application that links many national institutions (ministries and agencies) as well as regional institutions (34 provinces in Indonesia). This presents an opportunity to adapt, in a cost-effective way, a current system used for tracing climate risks and impacts to also incorporate nature-risks and impacts.

If the application was modified to include nature related risks and impacts, a massive capacity building campaign would need to be undertaken with both public and private entities. The diagram below shows AKSARA's role in monitoring, evaluating, and reporting on climate resilience at national level.



[illegible]





Mexico mentioned the need to focus on both risks and impacts so that a broader definition of materiality is used, beyond just a physical risk to a company. At the same time, several countries noted the need to define with maximum precision the levels and type of exposure of their economic sectors to nature risks in the country-tailored context, so that it becomes clear that nature risks are not part of “informational noise” but are real factors to be taken into account by financiers and investors.

Several countries mentioned the value of using the WWF SUSREG instrument, pointing to the fact that it produces comparable data enabling users to see how well regulators and supervisors in a particular country are working on the subject of nature-related disclosures relative to best-in-class benchmarks. Stakeholders from the countries voiced their concerns about understanding the hierarchy and complementarity between all the initiatives and standards developed on the subject.

All countries mentioned the need for developing capacities as new instruments are released, such as the emerging TNFD Framework. Countries listed the need for raising the capacities of regulators to be able to define risks in the national context; put in place institutional protocols for collecting, collating and publishing disclosures; understanding and adopting disclosure standards within the national context; as well as for working with business associations and intermediaries to help them start setting targets, design activities and put in place systems for tracking and disclosing nature-risks and impacts throughout value chains. The key sectors highlighted by the countries were agriculture, fishery, forest products, infrastructure and mining. It was also indicated that there are possible synergies and co-benefits between biodiversity and climate change disclosure works that should be integrated into the frameworks to avoid creating different processes for the regulators.



Consultation with Yes Bank

Date: December 16, 2021



If SEBI/RBI/other such financial regulators created a framework which could help Indian organizations highlight their work on biodiversity conservation – would you be willing to support it? Why/Why not? How would you suggest the framework be built? Any suggestions on what chapters to include, what to exclude, what to prioritise etc.?

YES BANK has always welcomed steps taken by regulators towards mainstreaming sustainability across businesses, and has been an early adopter of industry best practices when it comes to integrating environment and social concerns in its value creation model. The Bank would fervently support guidance from regulators on frameworks for biodiversity related disclosures.

Including a specific section on biodiversity and nature-related risks in the existing disclosure requirements such as Business Responsibility and Sustainability Reporting (BRSR) framework, could be a starting point for stimulating disclosures on biodiversity in regional context. It could begin with disclosures on key aspects and indicators related to biodiversity impact & dependencies, evolve to include more detailed disclosures on impacts and mitigation steps taken by organizations.



Do you use any of the existing reporting frameworks such as BRSR, the SEEA reports produced by MoSPI for your internal analysis and to keep in check your portfolios' footprint with projects in any vulnerable/stressed areas?

The Bank has used certain tools to understand and identify its portfolio's impact, based on

international best practices on a case-to-case basis. This includes use of UNEP FI's Portfolio Impact Analysis Tool, to identify significant impact of its portfolio on 22 impact categories derived from SDGs. In some of instances such as measurement of financed emissions, the Bank has also utilized disclosures made by its clients on various reporting frameworks, to gather certain data points such as reported emissions.



Do you currently assess nature-related risks as part of your investment proposal evaluation? If yes, what is the process and what do you specifically look for? If no, then why not and are there any plans to do so in the future?

YES BANK has always been cognizant about the critical role played by natural ecosystems in supporting businesses and societies. The Bank has integrated nature and biodiversity related considerations into its business and voluntarily instituted an Environment and Social Policy (ESP), to manage environmental and social (E&S) concerns in its lending activities. The policy is based on international frameworks such as the IFC Performance Standards, and integrates E&S risks related to nature, climate and biodiversity, into its overall credit risk assessment by establishing an overarching framework to identify, evaluate, monitor and manage these risks. The policy establishes a risk-based approach where transactions/clients that carry high E&S risks are subject to enhanced evaluation, due diligence and approval processes, through a specialised team of internal/ external E&S risk assessment experts.

The policy provides for a list of prohibited activities that the bank has decided not to

finance, irrespective of the credit-related outcomes. The list is derived from the IFC's exclusion list and includes sectors or activities that have highly negative impact on biodiversity such as trade in wildlife products, commercial logging operations for use in primary tropical moist forest, production or trade in wood or other forestry products other than from sustainably managed forests, and drift net fishing in the marine environments.



How do you think the government can help/ what can or should they do? Would you want a clear framework? Any training and capacity building needs? Any support required from any of the financial regulators (RBI, SEBI, SIDBI, NABARD etc.)

There is a need for the financial ecosystem to build capacities and awareness around identifying, measuring and reporting nature related risks and opportunities. Voluntary or mandatory disclosures on nature related impacts could help accelerate the mainstreaming of these aspects among financial institutions. Collaborative efforts from governments, regulators, financial institutions, and businesses would be crucial towards integrating of these aspects at various levels across the ecosystem.



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