Inside COP15: The race to protect the natural world and its biodiversity



Primer on UNCBD COP15



NOVEMBER, 2022



Executive Summary

What is the UN CBD and why it matters for business The imperative to reverse nature loss by 2030 The UN CBD COP15 agenda Implications for business leaders BCG x Quantis expertise on Biodiversity

Executive Summary

CBD	The Convention on Biological Diversity is one of the 3 Rio Conventions (1992). It focuses on Biodiversity with 3 main pillars: the conservation of Biological diversity, the sustainable use of biological diversity components and the fair sharing of resulting benefits.					
Biodiversity loss, causes and consequences	Biodiversity (the term did not exist in 1992, hence the use of "biological diversity") encompasses all forms of life on Earth and is experiencing an alarming loss resulting in the 6th mass extinction of species, which represents one of the 9 "planetary boundaries" crossed by humanity. There is now a growing scientific, political & business consensus that the conservation of species & ecosystems is not sufficient to protect biodiversity and that the CBD should address key drivers of nature loss.					
	 Unlike previous extinction events caused by natural phenomena, the scientific community, through the IPBES (equivalent of IPCC for biodiversity), unquestionably demonstrates that the 6th mass extinction is driven by human activity through the changes in land and sea use; direct exploitation of organisms; climate change; pollution; and invasion of alien species. The global rate of species extinction is already at least 10-100x higher than it has averaged over the past 10 million years. 					
	Despite critical risks for human health and economy, the topic receives limited attention when compared to the climate agenda. Yet, climate mitigation and adaptation objectives cannot be met without Nature Based Solutions (NBS). In addition, climate change will become the major driver of biodiversity loss if not addressed. Synergies between climate and biodiversity generate co-benefits and are indispensable to make our societies & economies resilient to climate change.					
Zoom on COP15	5 COP15 is the 15th UNCBD COP , under the Presidency of China. Its goal is to provide a Global Biodiversity Framework (GBF) for action on biodiversity. It gathers the 196 countries that signed up in 1992 at the Earth Summit, with the notable exception of the US.					
	6 It was originally positioned by China as a major world summit showcasing Chinese environmental leadership, with the ambition to reach the "Paris Agreement of Nature". After being postponed due to Covid & relocated, it will take place on December 2022 in Montreal.					
	The previous GBF was adopted in Aichi in 2010, setting 20 targets to be achieved in 2020, however none of the targets were met . The objective of COP15 is to overcome this failure and set goals to guide global actions through 2050 to protect and restore nature by creating a new GBF including a flagship target, the "30% by 2030" target , and a set of 21 other targets on mainstreaming, sustainable use and benefit-sharing of the components of biodiversity, and financing, etc.					
	The ability to reach an agreement, and the level of ambition of that agreement, depend on the ability to reach a consensus between different regional coalitions , in the context of a global divide between North and South. More than 100 countries now support some of the objectives of the HAC (High Ambition Coalition for Nature and People, which pushes for strong GBF).					
Implications for Business leaders	Preserve a strong case to act now. Businesses should start adopting integrated strategies to contribute to a "nature positive" world. There is an ecosystem of organizations and coalitions that are structuring this space and shaping tomorrow's regulation, notably SBTN and TNFD, which are replicating the Climate initiatives SBTi and TCFD, and seeking to have a more holistic perspective.					
	10 There is an increasing realization that biodiversity is critical for businesses , just like climate, as 50% of global GDP depends directly on Nature's ecosystem services . However, Biodiversity is a complex issue requiring a full materiality assessment and deep transformation of the businesses. Leaders show that it is possible to measure impacts and dependencies and act on them. BCG & Quantis are at the heart of the ecosystem and are committed to support clients in their journey to contribute to a nature positive world.					

ECG × Quantis

Inside COP15: Agenda

Executive Summary

What is the UN CBD and why it matters for business
 The imperative to reverse nature loss by 2030
 The UN CBD COP15 agenda
 Implications for business leaders
 BCG x Quantis expertise on Biodiversity

UN CBD is one of the 3 Conventions seeking to form an integrated and worldwide governance framework for environmental challenges



The **3 Rio Conventions** were adopted at the **1992 Earth Summit**

Each instrument represents a way of contributing to the sustainable development goals of Agenda 21

The **3 conventions are intrinsically linked,** and address interdependent issues



Objectives: stabilize GHG concentrations at a level that would prevent dangerous human induced interference with the climate system

United Nations Framework Convention on Climate Change

Key Milestones:

- COP3 Kyoto Protocol, COP15 Copenhagen Accord, COP21 Paris Agreement, COP26 Glasgow Pact
- **COP27** to take place in Nov.22 in Egypt **Scientific body: IPCC**



... with CBD focusing on 3 main pillars to address Biodiversity loss



Why is biodiversity important for business resilience?



Aiming for leadership on climate and nature

Ensuring your company contributes to the imperative to reverse nature loss, in order to achieve climate goals and protect biodiversity



Managing risks in the value chain

50% of global GDP directly depends on ecosystem services¹, some key sectors even more heavily than others (e.g., agriculture, utilities, food & beverage, construction) Capturing new value creation opportunities

Investing in sustainable supply chains has been found to decrease operational costs of up to 16% and increase revenue by up to 20%²



Capturing first mover advantage

Being among the first to start this journey with the potential to lead your industry's nature-positive transition, while contributing to regenerating ecosystems and preserving resources



Anticipating regulation and societal pressures

COP15 political and social momentum around the world (e.g., New EU Biodiversity Strategy for 2030, increasing pressure from indigenous peoples and local communities, strong demand for financial flows to developing countries, etc.)

1. WEF 2. CBD, WEF Source: WEF, CBD, BCG analysis

Why is COP15 important to follow?

An ambition to reach the equivalent of the Paris agreement, a new Global Biodiversity Framework that will shape policies across the world for the next decade

Clear commitments expected from governments on national-level biodiversity strategies and protected areas, with clear business implications such as increased regulatory pressure on land use change

2

(3)

A set of specific and concrete targets on the main drivers of biodiversity loss (e.g., plastic pollution) which could accelerate the regulatory momentum and foster international standardization

A goal to align financial flows with a trajectory to reverse nature loss, which could shape regulation in finance in the coming decade



Executive Summary

What is the UN CBD and why it matters for business

The imperative to reverse nature loss by 2030

The UN CBD COP15 agenda

Implications for business leaders

BCG x Quantis expertise on Biodiversity

The 6th mass extinction of wildlife on Earth is accelerating

 Including elements and compounds serving as food or respiration source, plants, consumers (fish shellfish, frogs, etc.), and decomposers (worms, insects, etc.)
 Source: WWF Living Planet Report (2022) Species biodiversity is declining at an alarming rate, resulting in the freefall of wildlife across the globe:

Average decrease in population sizes of mammals, birds, -69% amphibians, reptiles and fish between 1970 and 2018 Animal and plant species now **threatened with extinction**, ~1M many within decades, more than ever before in human history Global decline in monitored **freshwater populations**¹ -83% since 1970, the largest decline of any species group



Biodiversity encompasses all forms of life on Earth, and is increasingly threatened by human activities

What is biodiversity?

Biodiversity, or "Biological diversity", is the variety of life on Earth, it includes **all living things** and the **ways they interact with each other and their environment** (i.e. Genetic diversity, Species diversity and Ecosystem diversity)



What is causing its loss?

Biodiversity, has been declining at an alarming rate in recent years, mainly due to **human activities, such as land use changes, pollution and climate change**

	Land/sea ¹ use change
\approx	Direct exploitation
	Climate change
	Pollution
Ť	Invasive alien species

Biodiversity loss is classified as a risk with high probability and high impact...



...and has risen in the World Economic Forum Global Risks Landscape ranking compared to other major global risks in the past years

- Biodiversity is crucial for securing the supply of goods & services, and enabling the inhabitability of the Earth
- Strong interlinkage of biodiversity loss to other environmental risks, such as climate change and infectious diseases

Source: World Economic Forum Global Risk Report 2020 (edited); BCG analysis

Failing to stop and reverse biodiversity loss may trigger global and irreversible consequences...

Biodiversity loss poses a systemic risk threatening ecosystem
 collapse with unpredictable consequences questioning the viability of the planet for our ways of life as humans

The mutual reinforcement of biodiversity loss and climate change threatens to accelerate global warming beyond control



Costs of inaction amount to at least \$5-25 trillion of annually lost ecosystem services, essential for society



... as our economy and society highly depend on natural assets and the ecosystem services that they provide, especially 4 key sectors

>50% of global GDP directly depends on ecosystem services...

... But not all sectors are equally dependent; those highly dependent generate ~15% of global GDP

Split of global GDP by sector and nature dependence (in % of global GDP)



Despite critical risks, the topic receives limited attention when compared to the climate agenda

UN conference on Climate change has much more visibility than Biodiversity ones

The first IPBES report came out in 2019 vs.1990 for IPCC; the limited visibility on Biodiversity is also linked to the ~30-year gap in scientific state of the art reports availability



~4000 attendees

~50 countries represented on site



+40.000 attendees

~200 countries represented on site (Including 120 countries leaders)

Biodiversity requires proportionally more funding than climate change, even if the overall funding need is lower

Estimated annual spending needs to tackle Biodiversity and Climate change, in \$B



Biodiversity

Climate change

Most biodiversity actions have mainly positive effects on climate and can be considered as co-benefits, the opposite is not always true

66

Climate actions do not always benefit to Biodiversity, despite it being a key tool in the effort to combat climate change

Numerous climate mitigation actions, particularly in the energy sector, raise concerns and risks for biodiversity preservation actions, which need to be anticipated and well-managed



nature-based Solutions are among most effective climate actions

"Restoring carbon- and species-rich ecosystems (...) is among the **cheapest and quickest nature-based climate mitigation** measures to implement^{"1}

"Increasing sustainable agricultural and forestry practices (...) is jointly estimated by the report to offer **annual climate change mitigation potential of 3-6 gigatons of carbon dioxide equivalent**"¹

NbS = nature-based Solutions IPBES Press Release issued in June 2021 Source: IPCC & IPBES report on Biodiversity and Climate Change, 2021



Executive Summary

What is the UN CBD and why it matters for business

The imperative to reverse nature loss by 2030

The UN CBD COP15 agenda

Implications for business leaders

BCG x Quantis expertise on Biodiversity

The challenge: the world did not meet any of the targets from the previous Global Biodiversity Framework adopted in Aichi in 2010

- The **10th meeting of the Conference of the Parties to the CBD**, held in 2010 in Nagoya, Japan, adopted a revised **Strategic Plan for Biodiversity 2011-2020**, including 20 Aichi Biodiversity Targets, related to 5 Strategic Goals
- The Aichi Biodiversity Targets were established in an effort to protect and conserve the biodiversity that underpins global food security, health and clean water. However, to this date, none of the targets were met (See details on next slide)

Mainstreaming	Reduce pressures	Safeguarding Biodiversity	Enhance benefits	Implementation through action	
Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society	Reduce the direct pressures on biodiversity and promote sustainable use	Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity	Enhance the benefits to all from biodiversity and ecosystem services	Enhance implementation through participatory planning, knowledge management and capacity building	
	a a a a a a a a a a a a a a a a a a a 		16		

The race to protect nature: how will the 3 CBD's pillars be addressed during COP15 in Montréal?



1

The conservation of biodiversity

Main theme of negotiations

Key discussion

points

Have all CBD signatories commit to the "**30 by 30**" goal

- Key target to protect 30% of lands and seas by 2030
- Discuss level of quality and financing for protected areas (vs. risks of "paper parks")

The sustainable use and benefit-sharing of the components of biodiversity

Validate set of **targets on sectors, and sustainable consumption** after failing to achieve Aichi Biodiversity targets and discuss the **fair and equitable sharing of the benefits arising out of the utilization of genetic resources**

- Esp. key targets on Agriculture, aquaculture and forestry first draft of the framework published in Sept. 2021 with no disclosed update since then
- Potential update to Nagoya's protocol on DSI¹ on genetic resources - Can be a blocking point for genetically-rich developing countries who are dependent on this source of financing

The implementation and mainstreaming of Biodiversity targets and measures

Ensure the **integration of biodiversity into policies**, regulations and development processes and **increase the level of financial resources made available** from all sources

- Measures for business and financial institutions to assess and disclose impacts on nature and act to reduce impacts
- Increase of external funding for developing countries to help them implement their biodiversity strategies

COP15 will take place in Montreal, Canada from 5-19 December with both government and business-related entities



The COP15 UN Biodiversity Conference was supposed to take place in 2020, but began as virtual, online talks in **October last year**. Negotiations were meant to reconvene in Kunming, China in April but that was repeatedly postponed due to Covid and geopolitical reasons. Talks will now conclude in **Montreal between December 5-19, 2022**

The aim of the summit, which **China will still chair** despite the venue change, is to **approve the final version of the draft UN Convention on Biological Diversity (CBD**)

	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	07-12-22	08-12-22	09-12-22	10-12-22	11-12-22	12-12-22	13-12-22	14-12-22	15-12-22	16-12-22	17-12-22
Forums					Nature and Cu	Ilture Summit		Finance Day			
					Cities S	ummit					
i orunna					Science	Forum					
						Busines	s Forum				
Action Zone	Business Hub							Action	Days		
Ministerial	High L				gh Level Segme	nt					
	<u>Side events</u>						Side events				
Pavilions	CEPA Pavilion							Rio Convention Pavilion			
						China Pavilion					
NP Pavilion	Launch	Diversity of voices	30x30, restoration, sustainable management	Reimagining conservation & human rights	Partnerships & solidarity	Innovation & tech	Role of business	Finance	Climate change	Close	

Please click on "Side events" to access the full list of side events confirmed by the CBD.

The ability to reach an agreement, and the level of ambition, depend on the ability to reach a consensus between different regional coalitions



1. The group includes the African Group, and Argentina, Bolivia, Brazil, Cuba, Dominican Republic, Ecuador, Guatemala, India, Pakistan and Venezuela Source: CBD, European Parliament, National Geographic, World Bank, BCG analysis



Executive Summary

What is the UN CBD and why it matters for business

The imperative to reverse nature loss by 2030

The UN CBD COP15 agenda

Implications for business leaders

BCG x Quantis expertise on Biodiversity



Biodiversity: a complex issue with many approaches

123

Increasing realization that biodiversity is a critical topic for businesses

Forward-looking companies know that Biodiversity is the "next Climate"

- There are several approaches to biodiversity (5 human pressures, 9 planet boundaries, dozens of metrics and possible targets, etc.) and companies need a robust materiality assessment and a good understanding of the topic to pick the right approach
- There is a call for upstream (e.g., agricultural) and collective (e.g., regulatory) actions to drive impact at scale
- The mapping of economic value chain's major pressures reveals impact hotspots while the Climate lens puts the focus on Energy, the broader nature lens puts the focus on the Agricultural system, also including the Food & Beverage, Fashion, Pharma, Personal Care and Energy sectors



Metrics and coalitions emerging in the field

- There is an ecosystem of organizations and coalitions that are structuring this space and shaping tomorrow's regulation, even though it is still fragmented and complex to navigate
- The COP15 will contribute to shape and structure this ecosystem and will be a key opportunity for businesses to contribute to the nature agenda







Planetary Boundaries extend the concept of SBTs¹ beyond Climate



Biodiversity loss poses a systemic risk threatening ecosystem collapse and unpredictable, related consequences for our economy at large

The mutual reinforcement of biodiversity loss and climate change threatens to accelerate global warming beyond control

1. The Science Based Targets initiative was established in 2015 to help companies to set emission reduction targets in line with climate science and Paris Agreement goals. This initiative is a collaboration between the CDP (was Carbon Disclosure Project), the United Nations Global Compact, World Resources Institute (WRI) and the World Wide Fund for Nature (WWF) Source: Stockholm Resilience Institute

NB: "Safe and Just" Planetary Boundaries are being developed by the Earth Commission as part of the Global Commons Alliance

Estimated share in pressures across value chain



Food and beverages including packaging

Infrastructure & mobility

infrastructure, and vehicles

including housing, public

Energy including fuels,

power, and other

commodities

All other, including pharma, cosmetics, and consumer electronics

Fashion and related FMCG

including luxury goods

~25%

~10%

<10%

5-10%

>50%

While the Climate lens puts the focus on Energy, the broader nature lens puts the focus on the Agricultural system

Note: Value chains defined by consumer end products; Source: BCG analysis



Agricultural system including the Food & Beverage, Fashion, Pharma, Personal Care and Energy sectors

Nature x Business: a very fragmented landscape providing tools and guidance to tackle the deteriorating 'State of Nature'



COP15 is a key opportunity for businesses to contribute to the nature agenda and a resilient and sustainable future









Engage to develop long term sustainabilityfocused strategy incorporating naturepositive objectives Contribute to creating a stable operating environment for business and nature Exposure and engagement opportunities with next generation of leading businesses supporting nature restoration Develop understanding of new and upcoming regulation and adapt quickly to emerging constraints



Executive Summary What is the UN CBD and why it matters for business The imperative to reverse nature loss by 2030 The UN CBD COP15 agenda Implications for business leaders

BCG x Quantis expertise on Biodiversity

ECG × Quantis

BCG and Quantis can help you navigate the complexity of the topic and the ecosystem



Nature is complex and there is no single metric to approach it



There is an ecosystem of organizations and coalitions that are shaping this space and shaping tomorrow's regulation



This ecosystem is highly fragmented, and hard to navigate, with competing / overlapping organizations and frameworks



We have the expertise to navigate this ecosystem, and help companies prioritize their efforts



BCG and Quantis are actively engaged with the key players in this space. Our approach covers TNFD and SBTN, the two leading frameworks

BCG and Quantis have established a cutting edge and extensive Sustainability experience



- We know your business agenda, and your industry's sustainability constraints
 - We are long-term strategic partners to our clients , and we continuously support them in harnessing climate innovation to accelerate the development of corporate action across all sectors.
- We are leaders in change management and transformation for sustainability
 - We have extensive industry knowledge and transformation capabilities, and we help our clients turn their challenges into action by seizing new opportunities to build competitive advantage.
- We have a dedicated "Climate & Sustainability" practice to support key players of the ecosystem
 - We have executed hundreds of nature projects over the past
 5 years with leading companies and organizations across all
 industries on sustainability and nature.
 - We are the exclusive consulting partner for COP27 and also have partnerships with leading organizations and nature coalitions including with the WEF, SBTi, CDP, SBTN, and WWF.



- We have a deep environmental expertise in sciencebased Nature impacts and strategies
 - We are SBTN partners and are working with 10+ companies of the corporate engagement programs.
 - We have helped the SBTN Technical Team and worked on the steps 1, 2 guidance, freshwater hubs pilots, land hub pilots.
- We have been contributing to bring biodiversity to the business agenda as a key topic for several years
 - We have a proven track record of implementing a science-based, systems-level approach to accelerate sustainable business transformation to operate within planetary boundaries.
 - We drive innovative solutions to critical and diverse environmental challenges, from climate change to biodiversity loss
- We work with leading organizations to implement strategies that contribute to a nature positive world
 - We have been working on more than 5000 projects related to environment over the past 15 years.

CG × Quantia

For more information, please reach out to our Nature & Biodiversity experts



Dimitri Caudrelier CEO Quantis



Guillaume Charlin Managing Director and Senior Partner Paris



Pierre Collet Global Climate Expertise lead



Lorenzo Fantini Managing Director and Partner Milan



Tatiana Fedotova Global Water Expertise lead



Michel Frédeau Managing Director and Senior Partner Paris



Jesper Nielsen Managing Director and Senior Partner London



Fabien Hassan Principal Paris



Laura Peano Global Plastics & Packaging Expertise lead



Torsten Kurt Managing Director and Senior Partner Berlin



Tetyana Pecherska Global Land & Ag. Expertise lead



Amanda Martin Global Client Transformation Lead



Adrien Portafaix Partner and Associate Director Paris



Edith Martin Global Biodiversity + Nature Expertise Lead



Shalini Unnikrishnan Managing Director and Partner Chicago

Appendix – details on nature impact assessment and targets

Unlike previous extinction events caused by natural phenomena, the 6th mass extinction is driven by human pressures

And its rate is already at least 10-100x higher than it has averaged over the past 10 million years²

Socio-economic drivers

- Changing consumption patterns including lifestyle harmonization & rising resource use
- Innovation in production patterns
- International trade &
- Demographic trends 🥟 incl. urbanization
- Governance



Agriculture is responsible for 80% of global deforestation and accounts for 70% of the planet's freshwater use¹



66% of the ocean area have been significantly altered by excessive exploitation²



2°C global temperature rise will result in a 99% loss of coral reefs globally (almost complete eradication)³



X10 Marine plastic pollution increase since 1980, affecting at least 267 species²



CO₂

Invasive alien species have increased by **40%** since 1980, associated with expanding trade and human population dynamics and trends²

Planetary boundaries have high impacts on the different biomes composing our ecosystems once they are crossed

9 planetary boundaries and their impact on earth ecosystem	Biomes impacted		
Land-system change: Human modification of land and oceans ecosystems impacting not only the absolute amount of available space, but also its functions, quality, and spatial distribution (e.g., draining of wetlands to build houses)			
Freshwater use: Industry freshwater consumption and environmental flow requirements to maintain the level of water needed for living species. It is essential to point out that regional variations occur regarding water availability and the freshwater cycle	~~~		
Biosphere integrity: Direct human impact such as hunting, fishing and picking, causing extinction of species due to overconsumption (E/MSY) and ecosystem disturbance due to the introduction/disappearance of new species and the occurrence of noise, visual or physical disturbances (BII) (e.g., car sound, streetlights or dams)	🚄 🕺 🐭		
Climate change: The production of greenhouse gases (measure in CO2 equivalent) causing global warming increasing the frequency of natural disasters such as hurricanes, floods,	\bigcirc		
Atmospheric aerosol loading: Aerosol play a critically important role in the hydrological cycle affecting cloud formation and atmospheric circulation, such as the monsoon systems in tropical regions. They also have a direct effect on climate, by changing how much solar radiation is reflected or absorbed in the atmosphere	\bigcirc		
Stratospheric ozone depletion: The emission of gases such as chlorine, bromine or fluorine reacts with and reduces the ozone layer, leading to a reduction in earth's UV protection, causing a higher incidence of skin cancer in humans as well as damage to terrestrial and marine biological systems			
Biogeochemical flows: The overconsumption of nitrogen and phosphorus for agricultural production leads to a massive influx of these nutrients into the oceans and freshwaters, which causes eutrophication of the water by the proliferation of algae, depletion of oxygen,			
Novel entities: Chemical pollution and release of heavy metals and physical entities .g., plastics have irreversible effects on living organisms and can cause reduced fertility and permanent genetic damage			
Ocean_acidification: The nitrogen, carbon and sulfur compounds emitted in the atmosphere are absorbed by the oceans by chemical reaction, causing a drop in water's pH and a depletion in carbonate ion. This induces a decrease in the development of the first links of the food chain (corals, plankton)			

S. Ocean

⇒ Freshwater

Atmosphere

Biomes

Legend

🚺 Land

The UN recognizes the failure of Aichi



Working groups to propose 22 targets focused on reducing threats, implementation & Mainstreaming and Sustainable use & Benefit-sharing

What are the key elements for the post-2020 framework for business ?



Mapping of economic value chain to major pressures reveals impact hotspots—five underlying economic activities analyzed in deep dives



Rough estimates based on IPBES data and equal weighting of biomes, not accounting for aggravation of climate change Note: Size of flame roughly reflects share in total pressures on biodiversity; activities with very small share in respective pressure disregarded, illegal activities disregar Source: IPBES (2019), BCG

ECG × Quantis

Thank you