



Carbon Pricing

WBCSD policy paper 2019



- ① Introduction | 5**
- ② Why business thinks carbon pricing is vital to raise ambition | 7**
- ③ Global carbon market and opportunities for carbon pricing mechanisms | 11**
- ④ Key considerations for carbon pricing mechanisms | 13**
- ⑤ Carbon pricing and Natural Climate Solutions | 16**
- ⑥ Call to action for policymakers | 17**

Key messages

- Carbon pricing is one of the most effective and cost-efficient means of driving deep decarbonization pathways across economies.
- The development of a robust global carbon market has a huge opportunity to accelerate climate action at the global level.
- Businesses are using internal carbon pricing mechanisms to drive change within their operations and investment portfolios.
- 2019 is a crucial year to advance discussions on cooperative mechanisms under Article 6 of the Paris Agreement.
- For carbon pricing to drive ambitious action and meaningful emission reductions, considering issues relating to competitiveness, environmental integrity as well as economic and social impacts is critical.
- Businesses, governments and other actors can implement Natural Climate Solutions across the globe at massive scale to help bring the Paris Agreement objectives into reach.

① Introduction: Carbon pricing to herald an era of ambitious climate action



1 Introduction

The Intergovernmental Panel on Climate Change (IPCC) Special Report on Global Warming of 1.5°C sent a resounding message that the impacts of allowing 2°C global warming are far greater and more catastrophic than 1.5°C. The report states that, while achieving a 1.5°C world is still possible, it will require radical and urgent transformation of all systems at an unprecedented scale.

The World Business Council for Sustainable Development (WBCSD) and its member companies believe that carbon pricing mechanisms are critical to support the urgent efforts required to drive the transition towards a low carbon future and achieving the 1.5°C goal.

With countries looking to ramp up ambition in their respective Nationally Determined Contributions (NDCs) for submission in 2020, several analyses and scenarios show that carbon pricing needs to be a key part of all NDCs and long-term strategies in the coming years if we are to stand a chance of reaching the Paris goal.

We see the development of a robust global carbon market (comprised of links between emission trading systems and transfer of carbon units) underpinned by environmental integrity and aligned with the achievement of the Sustainable Development Goals (SDGs), as a huge opportunity to accelerate climate action at the global level. This echoes the view of the UN Secretary-General (and others) when they call for a tax on carbon, not people.

With Article 6 remaining the missing piece of the Paris Rulebook, 2019 will be a critical year for the advancement of the discussions surrounding cooperative mechanisms, and will become the focus for successful negotiations at COP25 in Madrid, Spain, under the Chilean presidency. This might be the last chance to put in place cooperative mechanisms that deliver meaningful emission reductions whilst considering issues relating to environmental, economic and social impacts.

Investments in the energy systems transformation, guided by a carbon price can help efforts to reach net-zero emission globally over the course of the century and support the near-term acceleration needed whilst supporting societies' development.



② Why business thinks carbon pricing is vital to raise ambition



2 Why business thinks carbon pricing is vital to raise ambition

Carbon pricing is one of the most effective and cost-efficient means of driving deep decarbonization pathways across economies.

WBCSD strongly believes that effective carbon pricing policies that ensure environmental integrity are a low-cost means to achieve deep emission reductions while maintaining competitiveness, creating jobs, encouraging innovation, enabling investment, creating value to solutions and minimizing social costs. These solutions do so by correcting the current issues in applying the polluter pays principle to address climate change, thus internalizing the costs of carbon pollution in prices. Combined with other direct policy interventions, carbon pricing can ensure a smooth transition to a low-carbon economy.

We believe that with the growing global consensus, the time for debating the need for carbon pricing has come to an end. It is time for the business community to strongly call for the need of carbon pricing regimes and advocate for long-term policies that place a direct cost on carbon emissions.

Internally, businesses know that carbon pricing can work and are using carbon pricing to drive change within their operations and investment portfolios. As of 2018, over 1,300 companies – including more than 100 Fortune Global 500 companies with a collective annual revenue of USD \$7 trillion – disclose that they use an internal carbon price or are planning to do so within the next two years.¹

For example, Royal DSM, a global science-based company active in Nutrition, Health and Sustainable Living, has been working with an Internal Carbon Price (ICP) since 2015 to help accelerate its efforts in

reducing greenhouse gas (GHG) emissions, but also to ensure the company stays future-proof and is prepared for future regulations.

Recent internal analysis confirms that Internal Carbon Pricing (ICP) has been an instrumental tool for DSM to integrate GHG emissions into its long-term investment decisions, encouraging low-carbon solutions, and increasing awareness and ownership on actual GHG emissions at several levels in the organization. It also helps lay the ground for later policies for fully carbon neutral investments and prepares DSM for the financial impact of an external carbon price with further regulation anticipated to emerge in the regions where the company operates.

Business has also taken an active stance in support of the development of carbon pricing instruments and policies through its participation in the Carbon Pricing Leadership Coalition² hosted by the World Bank, as well as by making



commitments to implement the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).³

Based on company experiences and quest to incentivise low carbon innovation and investment towards achieving the 1.5°C goal, there are **five key reasons why the business community is calling on policymakers to adopt carbon pricing** as means to increase ambitious climate action in countries' upcoming NDCs and long-term climate strategies:

THE LOWEST-COST PATHWAY WHILST DELIVERING EMISSION REDUCTIONS

Carbon pricing policies drive the economy towards the lowest-cost pathway for reducing emissions and mobilize efforts to accelerate ambitious climate action. The business community is ideally placed to respond accordingly to market price signals that arise from carbon pricing mechanisms and will increasingly transition to lower carbon sources of production.

TECHNOLOGY NEUTRAL

A carbon price offers technology neutrality in the sense that, business and industry can select a path forward in response to a carbon pricing mechanism rather than being forced down a prescribed route or having market share removed by decree. Companies leveraging internal carbon pricing mechanisms can justify the prioritization of efficient low carbon technologies with useful decision-making information.

FLEXIBILITY

Placing a direct cost for GHG emissions, either through taxation or a cap-and-trade / emissions trading system, allows for broad compliance flexibility and provides the option for facilities to avoid the need for immediate capital investment while still complying with the requirement. Carbon pricing systems also supply additional flexibility for governments to tackle issues such as cross border competition and carbon leakage through for e.g. tax rebates or free allocation of allowances.

TRANSPARENCY

Direct costs for emissions are transparent and can be evenly distributed through the supply chain, either up to the resource holder or down to the end user in a way that ensures that all parties contribute to cover emission cost. A well implemented mechanism ensures even economic distribution of mitigation costs and benefits across the economy.

LONG-TERM SIGNALS ENCOURAGING DEVELOPMENT

A cost associated with GHG emissions sends a clear and long-term sign of commitment towards transitioning to a low carbon future. This commitment from governments and policymakers can provide encouragement and inspire confidence in the private sector to continue investing in decarbonizing business operations in a just manner.





③ Global carbon market and opportunities for carbon pricing mechanisms

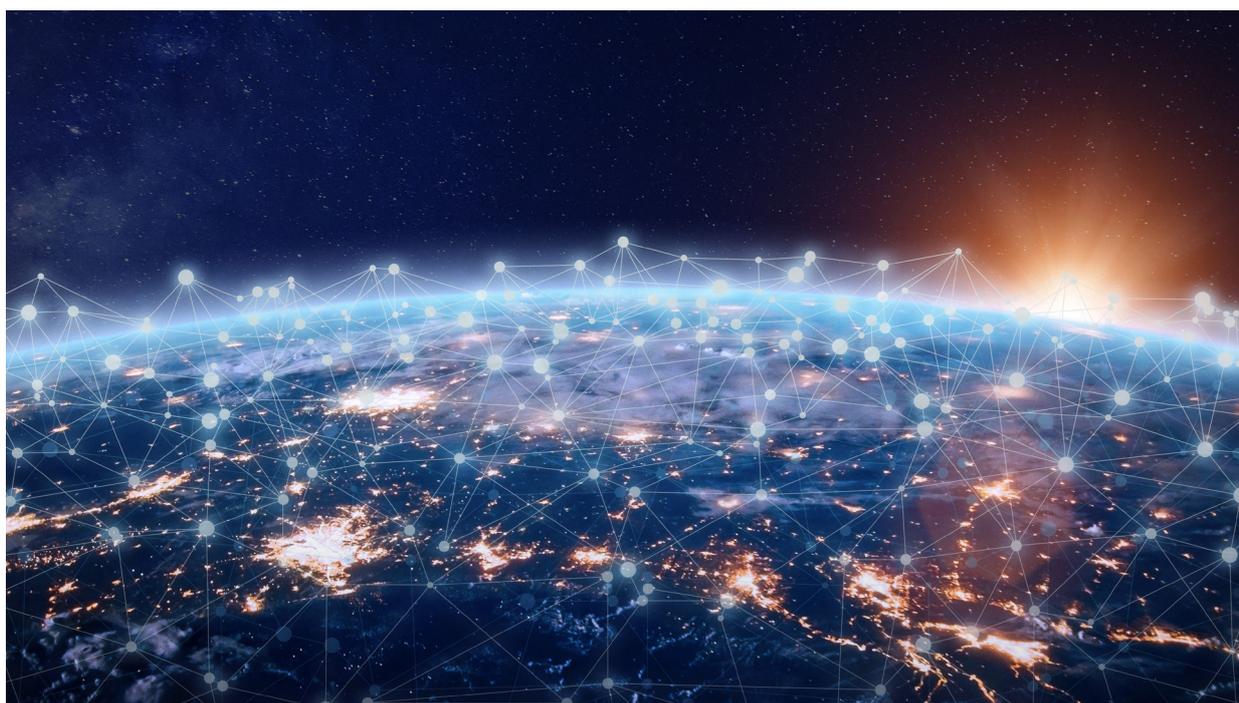


3 Global carbon market and opportunities for carbon pricing mechanisms

As of 1 August 2019, there have been 57 carbon pricing initiatives implemented or scheduled to be implemented in geographies across the world including the EU, Canada, New Zealand, Singapore, South Africa and many other jurisdictions. Approximately 46 national and 30 subnational jurisdictions are currently putting a price on carbon, covering about 11 gigatons of CO₂ equivalent and representing around 20% of global GHG emissions.⁴ There is scope for even greater adoption of carbon pricing in the next round of NDCs.

The total value of the world's carbon pricing initiatives, including both taxes and emissions trading schemes (ETS), USD \$82 billion in 2018.⁵

We see the development of a global carbon market (comprised of links between emission trading systems and transfer of carbon units) as a huge opportunity to accelerate climate action at the global level. Governments around the world were able to raise more than USD \$44 billion in carbon pricing revenues in 2018 from carbon taxes, auctioned allowances and including direct payments to meet compliance obligations. This represents a significant increase of nearly USD \$11 billion in comparison to the revenue generated in 2017.⁶



④ Key considerations for carbon pricing mechanisms



4 Key considerations for carbon pricing mechanisms

There are several key considerations that should be properly assessed and carefully managed in the design and development of carbon pricing mechanisms. WBCSD believes that effective carbon pricing policies should maintain competitiveness, create jobs, encourage innovation, deliver meaningful emissions reductions, ensure environmental integrity and minimize social costs:

ENVIRONMENTAL INTEGRITY

Carbon pricing can deliver real environmental benefits by setting an emissions cap or aligning with delivering emissions targets. To achieve effective overall reduction in greenhouse gas emissions, carbon pricing mechanisms should operate under clear accounting rules that ensure environmental integrity in a manner that supports true ambition to achieve the Paris Agreement goals. Carbon pricing mechanisms must ensure robust and coherent regulations across national and regional carbon markets and alignment between the various systems while taking local circumstances into account, with clear rules aimed at addressing possible competitiveness concerns.

COMPETITIVENESS

One major aspect that needs to be considered to ensure successful implementation of carbon pricing policies is ensuring competitiveness of industry, primarily to address perceived competitiveness risks for highly emissions-intensive and trade-exposed (EITE) sectors.

There is little evidence that carbon pricing has resulted in the relocation of the production of goods and services or investment in these products to other countries to date. However, countries and other jurisdictions looking to implement carbon pricing policies should define appropriate approaches and instruments which assess location-specific impacts, and where necessary, minimize the impact of the cost on carbon on domestic industrial competitiveness.

Competitiveness concerns should be considered in designing a suite of locally tailored and complementary measures that protect industry from unfair competition while spurring innovation and an equitable transition to a low-carbon economy.⁷

As more countries adopt climate policies and develop linkages between carbon markets, differences in carbon prices among countries and regions should become smaller, alleviating competitiveness concerns.⁸

SOCIAL IMPACTS

Carbon pricing instruments have the potential to generate significant revenue - how this revenue is used is a key policy consideration to be made in implementing a successful mechanism. Some mechanisms use revenues to support vulnerable parts of society, others to drive more ambitious climate action, and others to help transition energy-intensive industrial sectors and protect competitiveness.⁹ In order to alleviate the social impacts of carbon pricing, certain mechanisms allow for compensating measures for low income households to prevent economic disparity and ensure that the implementation of the mechanisms does not ultimately lead to a higher cost of living for citizens. For example, 60% of the revenue generated from California's Greenhouse Gas Reduction Fund (GGRF) is earmarked to support transportation, affordable housing and sustainable communities.

In Switzerland two-thirds of the Swiss carbon levy revenues are returned to households and businesses, mainly through health insurance premiums and reduced social security payments respectively.¹⁰ Whilst the revenue generated from carbon pricing can be used to address social inequalities, it is also imperative to ensure that a portion of the revenue is used to support projects and solutions that drive further climate ambition and ensure

environmental sustainability. For example, from the EU-ETS revenues that go to the national administration, an average of 80% is earmarked to Member States' climate change-related projects. The California GGRF also has a legal mandate to invest at least 35% of generated revenue supports energy, natural resources, and waste diversion programs that reduce greenhouse gas emissions.¹¹

ENCOURAGE INNOVATION

Effective carbon pricing mechanisms can support government expenditure on R&D. Direct support to encourage nascent low-carbon technologies may require very significant funding, particularly for large-scale demonstration and scale-up of technologies. Technology development must be part of the policy approach required for the energy transition, and therefore, carbon pricing can deliver public funds to support energy technology research.

Under the EU-ETS, revenues from the sale of over 300 million allowances in the period 2013-2020 are being used to co-finance large-scale demonstration projects in two areas of low carbon technologies

such as carbon capture and storage (CCS), and innovative renewable energies in a funding programme known as NER300.¹² As a follow up to NER300, the EU has introduced The Innovation Fund, and is providing revenues from the auctioning of 450 million allowances from 2020 to 2030. The Innovation Fund will focus on the development of innovative low-carbon technologies and processes in energy intensive industries.¹³

INTERPLAY WITH OTHER POLICIES

The interplay of carbon pricing mechanisms with other low-carbon energy policies need to be coordinated to maximize environmental and socio-economic benefits and avoiding distortions, inefficiencies and adverse distributional impacts.

A well-integrated policy package can reduce the trade-offs and advance the synergies between energy, climate and other policy objectives. The costs of decarbonization to society over the short and long term can be reduced by implementing a package of policies including energy efficiency, renewable energy technology development and deployment, and support to overcome underlying infrastructure or financing barriers.

Such policy package needs to carefully assess the interaction of climate and energy policies that also reduce GHG emissions, such as policies to support low-carbon technologies (such as renewable energy) and energy efficiency programs.

5 Carbon pricing and Natural Climate Solutions

“Natural Climate Solutions”¹⁴ (NCS) are land and nature-based climate solutions which help nature do what it’s been doing for millions of years: sequester and store carbon, thereby contributing significantly to the climate mitigation challenge. Research shows that these solutions could deliver up to one third (11.3 billion tons CO₂e at less than USD \$100 per tCO₂e) of the GHG emissions reductions needed to limit global warming to 2°C up to 2030.¹⁵ A third of these natural climate solutions have a price of USD \$10 per tCO₂e – or even less.¹⁶ NCS can also protect ecosystems, contribute to climate resilience, restore land and transform agricultural, wetland and forestry practices. However, despite their massive potential, most estimates suggest NCS only attracts 2 to 3% of public climate finance globally.

Nature is a proven, scalable carbon removal technology that’s been endlessly refined over millennia.

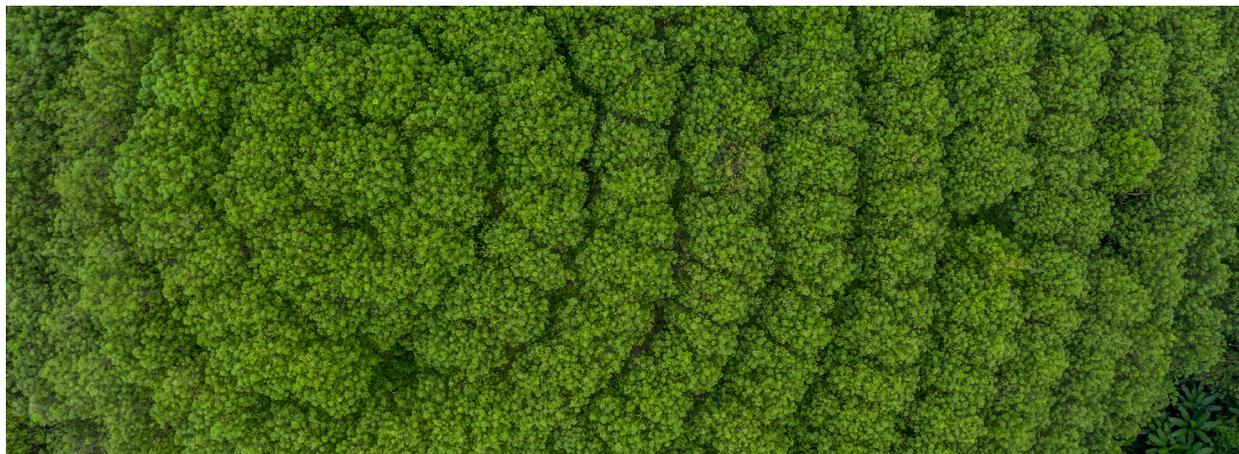
Businesses, governments and other actors can implement natural climate solutions across the globe at massive scale to reduce atmospheric CO₂ emissions. NCS store carbon and other greenhouse gases by enhancing, restoring or protecting natural sinks – like wetlands and peatlands – or by reducing emissions from land-use change. NCS are usually pursued through three main activities: conservation, restoration and improved land management across forests, grasslands, agricultural lands and wetlands.¹⁷ Additional research indicates that management practices such as modifying agricultural practices offers the potential for increasing carbon storage in soils.¹⁸

Since 2012, the number of implemented or scheduled carbon pricing policies have nearly doubled and a growing minority already encourage NCS carbon credits. Countries such as Colombia, China and New Zealand have implemented NCS use in their current carbon pricing mechanisms whilst countries like South Africa and Taiwan are

in the process of incorporating NCS into their carbon pricing schemes.¹⁹

While the voluntary use of natural climate solutions is growing and desirable, it is not currently sufficient to deliver the Paris goals. Given the scale of the climate challenge, regulatory carbon pricing mechanisms – which are typically measured in billions of dollars rather than millions – would likely have a much greater impact than voluntary action and could help scale NCS to meet its potential contribution to tackling climate change.

WBCSD is therefore committed to raising corporate, civil society and consumer awareness, accelerating voluntary action, while working in partnership with other key organizations to promote and scale carbon pricing policies that steer private capital to NCS. These instruments should include a robust design to tackle successfully all aspects related to accountability, transparency and environmental integrity.



6 Call to action for policymakers

WBCSD and its member companies call for governments to put on a price on carbon, and develop clear and consistent long-term carbon pricing policies as part of their NDCs that support the accelerated transition towards a decarbonized future and support the achievement of the SDGs.

1. We urge all Parties to **implement robust and Paris-aligned carbon pricing policies mechanisms** (such as carbon taxes, market-based mechanisms, standards or a combination of these and other appropriate mechanisms) as part of their renewed NDCs to **redirect investments towards solutions that will drive accelerated and deep decarbonization across all sectors of the global economy to meet the Paris goal.**
2. We urge governments to reach agreement this year on **strong rules to implement Article 6 of the Paris Agreement**, which support governments to take additional mitigation action and provide incentive to business to invest in cost-effective emission reductions. These rules should:
 - **prevent double counting of emissions reductions** and
 - **protect the environmental integrity**

of NDCs, enable the transfer of mitigation outcomes between Parties' NDCs in order to maximize cost efficiency and support additional mitigation action.

3. We encourage Parties to set carbon prices **consistent with the Carbon Pricing Leadership Coalition (CPLC)'s High Level Commission on Carbon Prices** and other similar analysis. Its report states that an explicit carbon-price level consistent with delivering the Paris Agreement is **between USD \$40–80/tCO₂ by 2020 and USD \$50–100/tCO₂ by 2030**,²⁰ provided a supportive policy environment is in place. This means carbon pricing needs to be put in place as soon as possible.
4. We emphasize the critical importance of **robust accounting rules** to ensure transparency and good governance. These rules should **prevent double counting of emission reductions**, offer new **confidence** in the use of emission sinks, and ensure that **environmental integrity** around the NDCs is maintained.
5. We emphasize the need to **consider the social impacts of climate policy and recognize the role that well-designed carbon pricing** can play to prevent inequality and economic disparity and

support the most vulnerable as well as supporting environmental sustainability

6. We call on Parties to **leverage policy tools** such as tax incentives for low carbon investments including production or investment tax credits, R&D tax credits, business support services and loans **to manage potential impacts of carbon pricing on competitiveness.** However, these tools should always be based on a location specific, data-driven evaluation of impacts, as the perceived competitiveness risks exist primarily for highly emissions-intensive and trade-exposed (EITE) sectors.

Endnotes

¹ CDP, Carbon Pricing: CDP Disclosure Best Practice, CDP Climate Change 2019.

² Carbon Pricing Leadership Coalition <https://www.carbonpricingleadership.org/>

³ Task Force on Climate-related Financial Disclosures: before the hyper-link <https://www.fsb-tcfd.org/>

⁴ World Bank Group, Carbon Pricing Dashboard, September 2019

⁵ World Bank Group, State and trends of carbon pricing, June 2018.

⁶ World Bank Group, State and trends of carbon pricing 2019. June 2019.

⁷ Report of the High-Level Commission on Carbon Pricing and Competitiveness, Carbon Pricing Leadership Coalition, September 2019.

⁸ Report of the High-Level Commission on Carbon Pricing and Competitiveness, Carbon Pricing Leadership Coalition, September 2019.

⁹ Report of the High-Level Commission on Carbon Pricing and Competitiveness, Carbon Pricing Leadership Coalition 2019.

¹⁰ World Bank, Partnership for Market Readiness, Using Carbon Revenues, 2019.

¹¹ World Bank, Partnership for Market Readiness, Using Carbon Revenues, 2019.

¹² The EU Emission Trading System (EU ETS) https://ec.europa.eu/clima/policies/ets_en

¹³ The European Commission/ Innovation Fund https://ec.europa.eu/clima/policies/innovation-fund_en

¹⁴ Natural Climate Solutions are an established way of capturing and storing carbon emissions through natural carbon sinks. NCS are usually pursued through three main activities: conservation, restoration and improved land management across forests, grasslands, agricultural lands and wetlands.

¹⁵ Griscom, B.W. et al., 2017, Natural Climate Solutions.

¹⁶ Griscom, B.W. et al., 2017, Natural Climate Solutions.

¹⁷ The Natural Climate Solutions (NCS) referred to in this paper are land- and coastal-based and do not include the potential role of oceans.

¹⁸ European Academies Science Advisory Council; Negative emission technologies: What role in meeting Paris Agreement Targets, February 2018.

¹⁹ The Nature Conservancy; What the Paris Agreement mean for carbon pricing and natural climate solutions, March 2019.

²⁰ Carbon Pricing Leadership Coalition, Report of High-Level Commission on Carbon Prices, May 2017.

ACKNOWLEDGEMENTS

This report is based on information from WBCSD, and its member companies, with input from members of the Climate Policy Working Group. Special thanks to Karl Vella, Michael Ofosehene-Wise.

ABOUT WBCSD

WBCSD is a global, CEO-led organization of over 200 leading businesses working together to accelerate the transition to a sustainable world. We help make our member companies more successful and sustainable by focusing on the maximum positive impact for shareholders, the environment and societies.

Our member companies come from all business sectors and all major economies, representing a combined revenue of more than USD \$8.5 trillion and 19 million employees. Our global network of almost 70 national business councils gives our members unparalleled reach across the globe. WBCSD is uniquely positioned to work with member companies along and across value chains to deliver impactful business solutions to the most challenging sustainability issues.

Together, we are the leading voice of business for sustainability: united by our vision of a world where more than 9 billion people are all living well and within the boundaries of our planet, by 2050.

Follow us on [Twitter](#) and [LinkedIn](#)

www.wbcd.org

DISCLAIMER

This report is released in the name of WBCSD. Like other reports, it is the result of collaborative efforts by WBCSD staff, experts and executives from member companies. Drafts were reviewed by a wide range of members, ensuring that the document broadly represents the majority view of WBCSD members. It does not mean, however, that every member company, or WBCSD agrees with every word.

Copyright

Copyright © WBCSD, November 2019.

**World Business Council
for Sustainable Development**

Maison de la Paix
Chemin Eugène-Rigot 2B
CP 2075, 1211 Geneva 1
Switzerland

www.wbcsd.org

