business solutions for a sustainable world

Beyond Business as Usual
COP 19, Warsaw, 12-22 November 2013
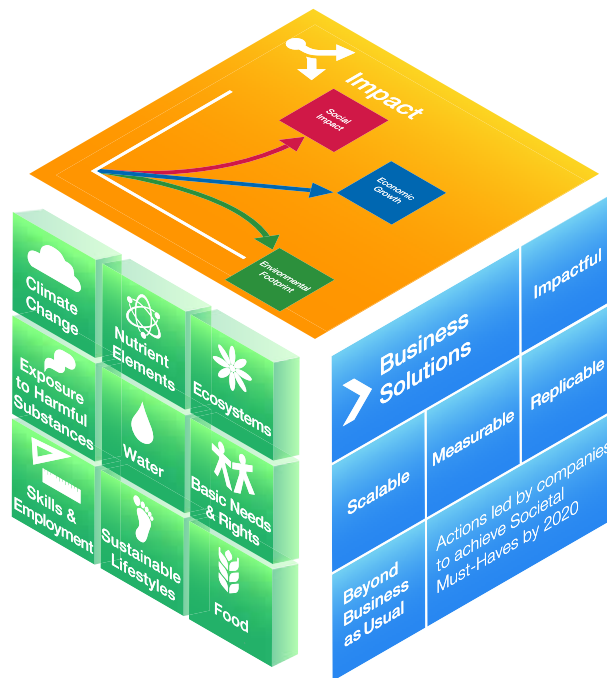
Action2020
led by the WBCSD

ACTION2020

Led by the World Business Council for Sustainable Development (WBCSD), its member companies and in partnership with the Stockholm Resilience Centre and the World Resources Institute, Action2020 is our **platform for action**. Based on science, it sets the agenda for business action on sustainable development until 2020, and beyond.

Central to Action2020 is a set of societal targets- 'Societal Must-Haves'- related to climate change and other critical environmental and social areas. These are the targets we need to meet if our planet's systems are to return to a sustainable track over the next decades. Global in nature, the Societal Must-Haves can only be met by business, government and society working together.

Action2020's Societal Must-Have for Climate Change states: "With the goal of limiting global temperature **rise to 2°C** above pre-industrial levels, the world must, by 2020, have energy, industry, agriculture and forestry systems that, simultaneously, are:

- Meeting societal **development needs;**

- implementing the necessary structural transformation to ensure that cumulative net emissions[1] do **not exceed one trillion tonnes of carbon**. Peaking global emissions by 2020 keeps this goal in a feasible range;

- and becoming **resilient** to expected changes in climate.

Action2020 Business Solutions – led by business for business *and society*

Over forty Action2020 members, all global companies who lead and shape in their sectors, are already collaborating on a set of **Business Solutions** that are **impactful** and will contribute to Action2020's Societal Must-Have for Climate Change. These Solutions targets are also measurable, scalable, replicable, and beyond business as usual. Companies can build and act on them but many will rely on governments and other stakeholders to enable them to reach their full potential.

The Action2020 Business Solution targeting Change Climate currently includes: Leveraging Forests as Carbon Sinks; Carbon Capture and Storage; Electrifying Cities

towards Zero Emissions; Low-carbon Electrification of Remote Locations; Resilience to Climate Change in Globally Interdependent Business, and Bringing more renewables to the energy mix.

Action2020's Solutions pipeline targets other priority areas, for example: Natural Infrastructure investments to protect assets and Ecosystems more effectively and more economically; Reducing Shared Water Risks through Supply Chains; Reducing Food Loss and Waste from "Field to Fork", etc. and more WBCSD member companies are engaging to develop these solutions in the months and years ahead.

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[1] Anthropogenic CO_2 emissions from preindustrial levels as outlined in the IPCC Working Group Fifth Assessment Report. One trillion tonnes carbon = 3.67 trillion tonnes CO_2.

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A snapshot of the Business Solutions under development

Leveraging Forests as Carbon Sinks

Forests are nature's carbon mitigation solution

Human activity increases greenhouse gas concentration in the atmosphere, resulting in higher average global temperatures and more extreme weather events. To limit further warming, no more than 1 trillion tonnes of carbon can be released by human activities by 2020.

Active and sustainable management of natural and planted forests can: avoid and reduce emissions, absorb and store carbon, reduce forest damage and help stop deforestation, create multiple co-benefits from biodiversity conservation to improving livelihoods and generate renewable raw material for a broad range of everyday applications.

Carbon Capture and Storage (CCS)

Carbon capture and storage is a viable mitigation strategy for current and future fossil fuel emissions.

By 2020, deliver improved understanding of the role of Carbon Capture and Storage (CCS), real change in the recognition of CCS in national and international policy and ideally, a Final Investment Decision (FID) on at least one major for-profit project.

No more than 1 trillion tonnes of carbon can be released by human activities if we are to limit warming to 2°C, the current global goal. Significantly exceeding this amount of cumulative emissions introduces unacceptable risk into the climate system. Current cumulative emissions now stand at ~570 billion tonnes of carbon, and the expected future demand for fossil fuels will likely result in an overshoot. Energy-focused mitigation approaches seek to supplement the global energy system with clean energy or make energy use more efficient, both important objectives, but these actions do not address emissions from the existing and future fossil fuel base that will continue to meet core global energy demand for much of this century. This can only be done by capturing CO_2 at source and geologically storing it. Deployment of CCS – with an early focus on large-scale demonstration of the technology in carbon intense (emerging) economies – is game changing in the context of actually reducing global emissions. Yet in policy circles, CCS is often the "poor cousin" to other well-funded and popular initiatives. Its critical mitigation role is sometimes poorly understood or incorrectly communicated, to the extent that, at least in the important power generation sector, there is not a single large-scale project in operation today. Only a handful of projects are in development for industrial applications.

Although the technology is well understood and comprises a number of mature sub-technologies currently in operation in the oil and gas industry, integration, infrastructure and experience are lacking. For this reason, first implementation, while clearly possible from a technology and engineering standpoint, will be more expensive than later deployment.

3% annual rate of CO2 emissions growth

570 billion cumulative tonnes of carbon

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A snapshot of the Business Solutions under development

Electrifying Cities towards Zero Emissions

5 billion
urban populations by 2030

70% total GHG emissions
caused by cities by 2030

Electrifying cities will be critical to reducing future fossil energy demand and GHG emissions.

The success of limiting climate change caused by greenhouse gas (GHG) emissions will depend on the commitment of cities, because by 2030 5 billion people (70% of global population) will live in cities, causing 75% of total energy demand and 70% of global GHG emissions. By 2030 total electricity generation will increase by 60%, driven by population growth. Today 80% of the total energy supplied is based on fossil energy sources, causing the equivalent of 36-39 gigatonnes of CO_2 emissions in a business-as-usual scenario by 2030.

Potential GHG emissions from cities can be reduced by fully electrifying the consuming sectors in the city and implementing high-efficiency measures for mobility, buildings and industries. Energy supply and demand can be optimized and harmonized through ICT solutions, and electricity supply transformed to zero-carbon with maximum efficiency for energy transmission and distribution.

Low Carbon Electrification of Remote Locations

Universal access to electricity can be achieved through low carbon solutions.

No more than 1 trillion tonnes of carbon can be released by human activities if we are to limit warming to 2°C and therefore avoid the most dangerous climate impacts. At the same time, more than 1.2 billion people, 20% of the world's population, are still without access to electricity. Almost all of these people live in developing countries. The majority of existing, remote electricity supply is based on diesel. With Africa's population expected to double and world population to exceed 9 billion by 2050, continuing business-as-usual for remote electrification will cause an explosion in greenhouse gas emissions.

Much of the required technology for remote, low carbon electrification exists, but there are significant barriers to implementation of these solutions. The business solution accelerates remote electrification through the formulation of "solution packages" designed to meet needs ranging from providing light or charging electronic devices in single households (kW) to grid-equivalent electricity supply for sizable communities or production locations (MW). The solution provides recommendations on the policy and financing environment as well as on new business models and investment decision-making processes, to enable access to modern services and make a significant contribution to the goal of universal access to all.

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A snapshot of the Business Solutions under development

Resilience to Climate Change in Globally Interdependent Business

Businesses will be stronger and more resilient by adapting to climate change risks.

Climate change poses complex adaptation challenges for business not only because of uncertainty associated with the timing and magnitude of projected changes but also due to the interconnectedness between risks and impacts in the modern globalized economy.

Drawing on practical experience from forward-thinking WBCSD member companies as well as existing published literature on climate change, the solution aims to help companies understand climate risk and build resilience. By focusing initially on one or more supply chains to serve as case studies, it will be possible to consider linkages and interdependencies among companies, sectors and countries. This will provide the foundation for a holistic and cross-sectoral approach to building resilience in the global business community.

Bringing more renewables to the energy mix (work in progress)

The objective of this business solution is to accelerate the development of renewable energy to reach a 28% penetration in the electricity mix in 2020.

Renewable energies provide alternatives to carbon and can be scaled up now. Companies are investing in the renewable value chain - creating and manufacturing new technologies, installing renewable energy production and operating facilities - to bring zero-emission electricity to consumers. Investment in Research Development and Deployment is reducing costs, increasing efficiency and facilitating the integration of intermittent renewables to the grid.

Some renewable technologies have reached a sufficient technological development to contribute to mitigate GHG emissions immediately. However, to speed up penetration, its development will need to be backed by strong national commitments, expressed in their energy policies, with clear goals and long-term and predictable support systems to ensure legal certainty for investors and overcoming the barriers that still occur, and a carbon price that incorporate the environmental externalities.

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