

Accounting for Climate Change: The Business and Economic Risks of a Warming Planet



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Chair's Letter

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Lord Peter Hain Managing Climate Risk is Key to Business Success



A unique selling point was always said to be a key symbol of business success. Today another is climate change. Otherwise businesses may stand out for the wrong reasons: as dinosaurs.

Just look at the trends. The world's largest asset manager, BlackRock, recently created a fund worth \$4.8bn for renewable energy projects alone and last year publicly opposed the re-appointment Volvo chair Carl-Henric Svanberg because it judged he wasn't climate-change sensitive enough.

In the past year in the UK there's been a doubling from £30bn to £60bn in the capital invested into zero carbon funds.

Globally there's been an exponential growth in green economy investment, with multi-billion dollar Green Bonds in search of large scale projects where they can get a greater return in an era of historically low interest rates.

According to the UK's Confederation of British Industry, reforming regulation to incentivise investment in sustainable growth could boost UK global trade by £20bn. And the CBI also estimates that winning the global race to net zero could capture for the UK £8bn in additional revenues from hydrogen electrolyser production alone.

Businesses both reflect consumer demand and influence consumer behaviour. The UK's biggest supermarket Tesco has set new sales targets for plant-based food alternatives, doubtless also to attract their future customers: the environmentally conscious youth. In other words, sustainability is all about the bottom line.

For Africa, climate change is not the future but the present, driving hotter and more extreme weather, threatening human health and safety, food and water security and the continent's economic development, according to a report from the World Meteorological Organization. Devastating floods, droughts, and invasions of desert locusts are already visible symptoms.

As temperatures rise, so too has the transmission of diseases such as dengue fever, malaria and yellow fever. Warmer temperatures and higher rainfall promote biting insects, and these are emerging in regions where they were not previously present: for instance warming in the East African highlands enables malaria-carrying mosquitoes to survive at higher altitudes.

And there's worse to come. Coastal degradation and erosion from rising sea levels and extreme storms is also a major challenge, especially in West Africa.

In 2019 extensive drought in Southern Africa contrasted with devastating floods and landslides after heavy rainfalls in the previously dry Greater Horn of Africa, and also flooding in the traditionally arid Sahel. Africa has become a "hot spot" for climate variability and change, threatening agriculture and provoking greater malnourishment and starvation.

The African Climate Policy Centre projects that, because of relatively hot climates, the Gross Domestic Product in the five African subregions will fall disproportionately sharply compared with global trends.

In Algeria, Angola and Nigeria – dependent almost





Left: A protestor covered in black paint takes part in an action called by global environmental movement Extinction Rebellion and Dutch climate activist group Code Rood, at a Shell gas station in The Hague

entirely on oil for their economies – the well-being of millions of people is tied to the transition that the oil majors operating there (BP, Total, Shell and Chevron) make – or are forced to make. Most of the oil giants have re-branded as “energy” companies and are muscling in on the renewables sector. A court in The Hague on 26 May found with climate campaigners and ordered Shell to dramatically reduce by 2030 – paving the way for other climate activists. The threat to Big Oil is existential and it will have consequences for the African countries in which it operates.

Just as the BlackRock has created a fund to invest in the green economy, so “big and dirty” companies and industries can no longer get financing for expansion or development. Africa’s thermal coal mines, and any new coal-fired energy projects will struggle to get development or private sector bank financing. Even non-thermal coal used for iron and steel production is facing a challenge. This week several European private equity funds invested in a hydrogen based ‘green steel’ project that, if successful, will see mining for coking coal end.

Yet Several African countries have taken the lead when it comes to the fight back against climate change.

Massive tree planting programmes stretch across the Maghreb and across East Africa. Egypt, Ghana, Kenya, Morocco, Namibia and Senegal are leading transition away from fossil fuels and attracting substantial private sector investment as they do so. Africa has a greater abundance than any other continent of renewable energy resources: sun, wind,

hydro and marine.

In Kenya renewables now provide 86 percent of the country’s energy needs – slashing its dependence on imports of diesel fuel for thermal power dramatically. Hybrid and mini-grids supplying local communities have replaced traditional – and expensive – transmission lines. Kenya is now exporting this renewable energy know-how to Ethiopia and other countries in the region. A mix of geothermal, hydro and wind energy ensures that that power outages are rare and replacing costly diesel imports with free wind, water and ground heat, means that the cost of electricity to consumers reduces year on year. Cheap secure, emissions-free, electricity has become a business investment draw card.

Africa’s dominant financial centre, Johannesburg, recently announced a target of meeting a third of its energy needs from new renewable sources by 2030, replacing monopoly supplier, the state power utility Eskom almost all which has its power generated by burning coal.

In agriculture, which employs 60% of Africa’s population, using efficient and clean energy sources can reduce poverty. Efficient solar-powered micro-irrigation, for example, is increasing farm-level incomes by five to 10 times, improving yields by up to 300% and reducing water usage by up to 90% while at the same time offsetting carbon emissions by generating up to 250 kW of clean energy.

Some African governments have taken the lead in zero-carbon models for their utility companies and emergency responses to climate crisis Its time for business to follow suit. As government power projects have shown, the outcome is not just social responsibility – it actually reduces costs and improves business performance and the bottom line.

Lord Peter Hain is a former anti-apartheid leader and British Cabinet Minister. He is the Chair of IC Intelligence



Accounting for Climate Change: The Business and Economic Risks of a Warming Planet



By Dr Desné Masie

There can be no more denial that climate change is happening. Nor can there be any more doubt that climate change is the biggest existential threat to human survival.

The Existential Threat

Warming temperatures are destroying our health and environments through extreme weather events like heatwaves, fires, floods and cyclones. And it is going to get a lot worse, a lot quicker than you might think. If you are not yet incentivised to do something about the existential threat posed by climate change, I would strongly recommend reading David Wallace-Wells' uncompromising assessment of the trajectory of our current situation: *The Uninhabitable Earth*.

The current situation we are in would see a 2-3% rise by 2050 with horrendous consequences for people, planet and prosperity.

And, as Lord Hain has set out in his analysis, the consequences for Africa will be particularly severe. 2019 was among the three warmest years on record for the continent, and this trend is continuing. This is set out in research by the United Nations Framework Convention on Climate Change (UNFCCC).

In the *State of the Climate in Africa 2019* report, the UN Secretariat urges the impact of climate change data to be taken into account in development planning and investment. Rising sea levels seen in West Africa and extreme weather events such as Cyclone Idai in Mozambique have been of particular concern. The agricultural sector is particularly vulnerable to increasing drought and locust plagues. This, in turn, threatens food security.



Above: Celebrating the adoption of a historic global warming pact at the COP21 Climate Conference in Le Bourget, north of Paris in 2015

WHAT IS THE PARIS AGREEMENT?

The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties at COP 21 in Paris, on 12 December 2015 and entered into force on 4 November 2016. Its goal is to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels. To achieve this long-term temperature goal, countries aim to reach global peaking of greenhouse gas emissions as soon as possible to achieve a climate neutral world by 2050.

Read more at: <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>





The Economic Threat

Aside from the immediate existential threat to our livelihood, there is also increasingly consensus that climate change is also the most serious long-term economic risk should countries fail to achieve the targets set out in the Paris Agreement. Governments globally are therefore committing to move to net-zero carbon emissions by 2050 in order to mitigate a worst-case scenario.

As the shows on the recent Royal Dutch Shell ruling, it is not only countries that are responsible for

reaching net-zero. Companies with high emissions are increasingly also being held accountable for adhering to the Paris targets.

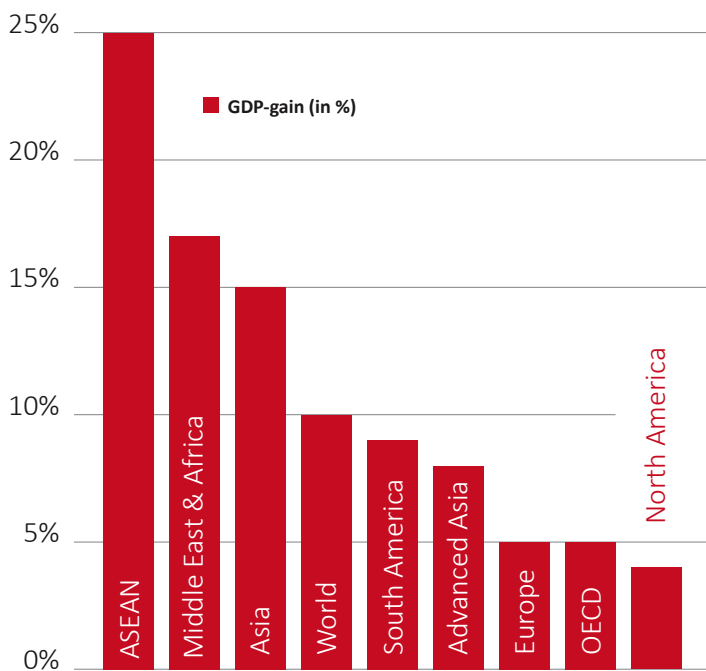
Modelling done in research by the Swiss Re Institute shows that rich and poor countries alike have much to gain economically from co-operating to mitigate climate change, and much to lose by not addressing climate risks immediately. Insurers and reinsurers are particularly exposed to climate risk, and as such, have contributed to the most groundbreaking research on the economic risks of climate change.

According to Swiss Re, the world stands to lose close to 10% of total economic value by mid-century if climate change stays on the currently-anticipated trajectory, and the Paris Agreement and 2050 net-zero emissions targets are not met. The potential impact of climate on economies is much larger than the risk presented by the pandemic. For low-income African countries, this is particularly so. The African Climate Policy Centre projected that the GDP in Africa would suffer significant decrease as a result of a global temperature increase. For scenarios ranging from a 1 °C to a 4 °C increase in global temperatures, the continent’s overall GDP is expected to decrease by 2.25% to 12.12%.

However, on the other hand, action today to get on track with mitigating the Paris temperature rise scenario would mean economies – particularly in emerging markets - could prevent around a quarter of the gross domestic product (GDP) loss by 2050 (see Figure 1).

Figure 1 – potential gains to GDP from climate-change risk mitigation

Achieving the Paris Agreement temperature target is the most-desirable outcome. Compared to 2.6°C warming, if the Paris Agreement target of well below 2°C warming is met, up to 10% of anticipated mid-century global GDP loss could be prevented. As the figure below shows, in more exposed regions, the benefit in terms of mitigated or prevented GDP-loss by mid century if the Paris Agreement target is met as opposed to a 2.6°C rise in temperatures, could be as much as 25%. Many emerging markets would benefit most, with Indonesia, Thailand and Saudi Arabia among relative winners.



Note. Here, we simulate for severe economic impacts/uncertainties from climate change. The figures shown represent the difference of the 2.6°C scenario and the Paris scenario, as % of GDP in a world without climate change.

Source: Swiss Re Institute

The Global Policy Opportunity

The scale of losses from the systemic risk posed by climate change depends on the speed at global policy action can be co-ordinated to implement measures such as carbon taxes, increased reporting and disclosure requirements on climate exposures, technological adoption, shifting long-term investment into renewables and other economic greening activity through a combination of private and public actions.

There has been particular leadership from the financial sector as the transition to a net-zero, carbon neutral world will require significant capital commitments.



A key turning point was clearly the work on quantifying climate exposures in the wider financial sector by Mark Carney and Michael Bloomberg and the establishment of the Task Force on Climate-related Financial Disclosure at the Financial Stability Board in 2016. The task force has also been a key protagonist in the development of the UN Principles for Responsible Investing initiative that all signatories to the compact must declare climate risks in their portfolio by 2020 and recent efforts by the EU to develop a sustainable taxonomy for investors.

These efforts also inspired the Network for Greening the Financial System (NGFS). The NGFS, launched at the Paris One Planet Summit on 12 December 2017, is a group of central banks and supervisors, which on a voluntary basis are willing to share best practices and contribute to the development of environment and climate risk management in the financial sector, and to mobilize mainstream finance to support the transition toward a sustainable economy. The NGFS brings together 91 central banks and supervisors and 14 observers. Together, they represent five continents and around 85% of global greenhouse gas emissions, and are responsible for the supervision of all of the global systemically important banks and two thirds of global systemically important insurers.

Earlier initiatives include the UK's Companies Act, making it compulsory in 2013 for all companies to report on their greenhouse gas emissions, which this week was consolidated by the Bank of England requiring banks and insurers to disclose their climate exposures. Moody's has also since 2016 been including climate risk as a factor in sovereign and local council analysis.

But it is not just the balance sheets of banks and companies that are vulnerable to exposures, their investors too are susceptible to the political and legal pressures leading to mass divestment from fossil fuels and other extractive industries such as mining. Such assets are fast becoming likely to be stranded.

In light of these investment risks, activist investors are beginning to be more vocal in holding

CASE STUDY : ROYAL DUTCH SHELL VS FRIENDS OF THE EARTH NETHERLANDS AND OTHERS

Law firm Herbert Smith Freehills explains the main issues in the recent ruling against Royal Dutch Shell.

On 26 May 2021, the Hague District Court handed down its judgment in the Milieudefensie et al. vs. Royal Dutch Shell (RDS) case regarding RDS's compliance with the objectives of the 2016 Paris Agreement.

The claim was brought by seven environmental associations and NGOs acting as co-claimants – led by Milieudefensie (Friends of the Earth Netherlands) alongside Greenpeace Netherlands, Fossielvrij NL, Waddenvereniging, Both Ends and Jongeren Milieu Actie – together with 17,319 individual co-claimants.

The key issues and ruling: The central question for the Court was whether or not RDS should be required make further changes to the Shell group's existing corporate policy to reduce the CO2 emissions of the entire Shell group's energy portfolio to achieve lower emission levels by the end of 2030, relative to 2019 levels.

The judgment is significant as it is the first time a national court has compelled a private company to reduce its emissions in line with the Paris Agreement, and builds on the earlier landmark Dutch decision in Urgenda imposing similar obligations on the Dutch government itself to augment its policies to ensure speedier emissions reductions in line with the Paris Agreement.

This ruling will likely have wider implications for the energy industry or other companies with significant CO2 emissions levels, in particular in circumstances where corporate policy decisions are alleged to have been taken by group entities registered in the Netherlands.

Read more at: <https://hsfnotes.com/energy/2021/05/27/dutch-court-orders-shell-to-reduce-co2-emissions-by-45-by-the-end-of-2030-relative-to-201/>



the boards of Big Oil to account to speed up transition as the recent events at Exxon, where hedge fund Engine No. 1 managed to get the majority of investors to back the appointment of a more progressive board.

Africa must lean in to the global debate

Despite the challenges, the UN Secretariat contends Africa has made great efforts in driving the global climate agenda. "This is demonstrated by the very high levels of ratification of the Paris Agreement – over 90%. Many African nations have committed to transitioning to green energy within a relatively short time frame. Clean energy and agriculture are, for example, prioritized in over 70% of African NDCs. This ambition needs to be an integral part of setting the economic development priorities of the continent" it says.

The UK will host the 26th UN Climate Change Conference of the Parties (COP26) in Glasgow on 1 – 12 November 2021. This is just a few months away, and it is important to ensure that all countries can participate equally given the disparities in emissions and effects on economies and societies between more developed and less developed countries. Especially so because the pandemic presents new inequalities in participation. The Swedish climate campaigner Greta Thunberg has said she will not attend the Cop26 climate summit in Glasgow in November, saying the uneven distribution of Covid-19 vaccines would mean countries could not participate on even terms. This is especially crucial for African countries as Minister White argues in the next article.

African countries and companies also should exercise their policy muscles as norm-makers in global policy collaboration as shown through successful insurance initiatives such as the African Risk Capacity sovereign insurance pool alongside continent wide investment programmes supported by the Africa Finance Corporation and African Development Bank into renewables and other sustainable investment programmes.

Dr Masie is Chief Strategist of IC Intelligence



Setting a Fair Price for Carbon is Critical for Africa's Future

By Minister Lee White,

Africa is the continent that has contributed least to climate change, emitting less than 5% of global emissions. Yet we will suffer the most severe consequences, partly because of the geography of the continent and partly because of economic and technological limitations on our capacity to adapt.

As early as 2009, the Africa Progress Panel predicted that in the future: "climate change currently affecting Africa will cause armed conflicts in 23 countries and political unrest in another 13". Speaking at the 'Climate and Resource Security Dialogue for the 21st Century', held in Lancaster House in 2012, President Ali Bongo Ondimba predicted that "The resources over which we fight in the future will not be oil, gold and diamonds: the wars of the future will be fought over water, food and land."

As deforestation rates increase in parts of the Congo Basin, a chain reaction is initiated. The Congo Basin stores the equivalent of about 10 years of global emissions in the vegetation of our rain forests and the extensive peat swamps of DRC and Congo. The Intergovernmental Panel on Climate Change (IPCC) tells us that we have just 10 years to turn the tide on climate change, so, if we lose the Congo Basin forests, we lose the battle. Furthermore, the rain forests of the Congo basin make an important contribution to



rainfall in both the Sahel and the Ethiopian Highlands, thereby filling the Blue Nile and supporting agriculture as far away as Egypt.

If we lose the Congo Basin Forests, we condemn Africa to a horrific future, with hundreds of millions of climate refugees, destabilizing the continent. This is not science fiction – it is one alternate reality. The other alternative is that the World comes together in Glasgow at COP26 to finalize the Paris agreement and raise our common ambition to fight climate change, and that we restrict global temperature rise to an average of 1.5oC.

One piece of good news, although it comes with a strong sting in the tail, is that science shows that the African rain forests are quite resilient to climate change – much more so than the Amazon. African rain forests are not just a carbon bank, they are giving a pretty good interest rate, by continuing to grow, thereby removing carbon dioxide from the atmosphere. For example, Gabon, with 88% forest cover, absorbs about 100 million tons net of carbon dioxide every year – almost a third of the UK's annual net emissions. The sting is that the Amazon forests are much more sensitive to drought and will soon become a net emitter of CO2.

Another piece of good news for the continent is that if we use the collective might of 54 unified voices effectively at COP26, perhaps supplemented by the 39 members of the alliance of small island states, who are slowly disappearing under the oceans, we have the capacity to influence the negotiations and to put pressure on the developed nations to shoulder their historic responsibility for causing climate change.

A successful outcome in Glasgow will put equal weight on adaptation and mitigation. It will ensure effective technology exchange to enable African countries to develop green economies. It will recognize the special circumstances of Africa and other vulnerable states. It will guarantee sufficient funds for adaptation and will set a fair price on carbon, which is sufficient to stabilize and reverse the deforestation in the Congo basin and to stimulate forest restoration across vast swathes of the African



Above: Logging trucks from the Congo basin of East Cameroon on its way to the port of Douala

continent, as a nature--based solution to mitigate climate change. Today a ton of pristine rainforest carbon in Gabon, supporting rich biodiversity and helping to maintain rainfall across the continent, is worth less than \$10/ on, compared to a ton of dirty coal fired carbon in the EU, which is now worth more than €60.

Dealing with climate change involves governments, civil society and industry in equal measure. It is the difference between a flourishing African economy and a ravaged continent. Governments will adopt policies, but if the private sector does not weigh in, to investing in green energy, climate resilient agriculture and sustainable forestry, attributing the true value to natural capital and ecosystem services, governments will fail. Unreliable handouts of Official Development Assistance (ODA) funds will never deal with the challenge at scale – we need responsible investment in a sustainable continent, spearheaded by governments and private sector alike.

Many of the developed economies were built on cheap natural resources ripped out of the African continent. It is time to make those resources work for Africa, creating jobs and livelihoods, thereby creating a billion strong constituency for the new, sustainable development model our continent and our planet so desperately need.

Minister Lee White, Minister of Water, Forests, Sea, the Environment charged with Climate Change and Land--use planning, Gabonese Republic.

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