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global excellence in audit, tax & consulting

A dramatic sunset or sunrise over the ocean. The sky is filled with vibrant orange and yellow clouds, with a bright sun partially obscured by a dark cloud. The ocean below is calm with gentle ripples. A thick blue line, consisting of two parallel lines, runs diagonally from the bottom left towards the top right of the image.

Managing the Risks of Global Climate Change

The potential impacts of climate change

During recent years the world has seen many examples of extreme weather events. Severe heatwaves have occurred in countries including Australia and Brazil, causing deadly bushfires and power cuts, whilst others have seen dramatic decreases in temperatures causing unprecedented levels of snowfall. Floods have hit across the globe in countries including Spain, Bangladesh, Kenya and Mexico whilst record draughts were recorded in some Caribbean countries.

These examples illustrate the increasing frequency of extreme weather conditions and the need to focus our attention on the physical risks and potential costs of climate change. It is predicted that by the end of the 21st century, global temperatures could rise between 1.1 and 6.4 degrees from those recorded in 1980-1999. The exact increase is expected to be highly dependable on the levels of future greenhouse gas emissions. In addition, predictions also offer global sea level rises of between 18 to 59 cm.

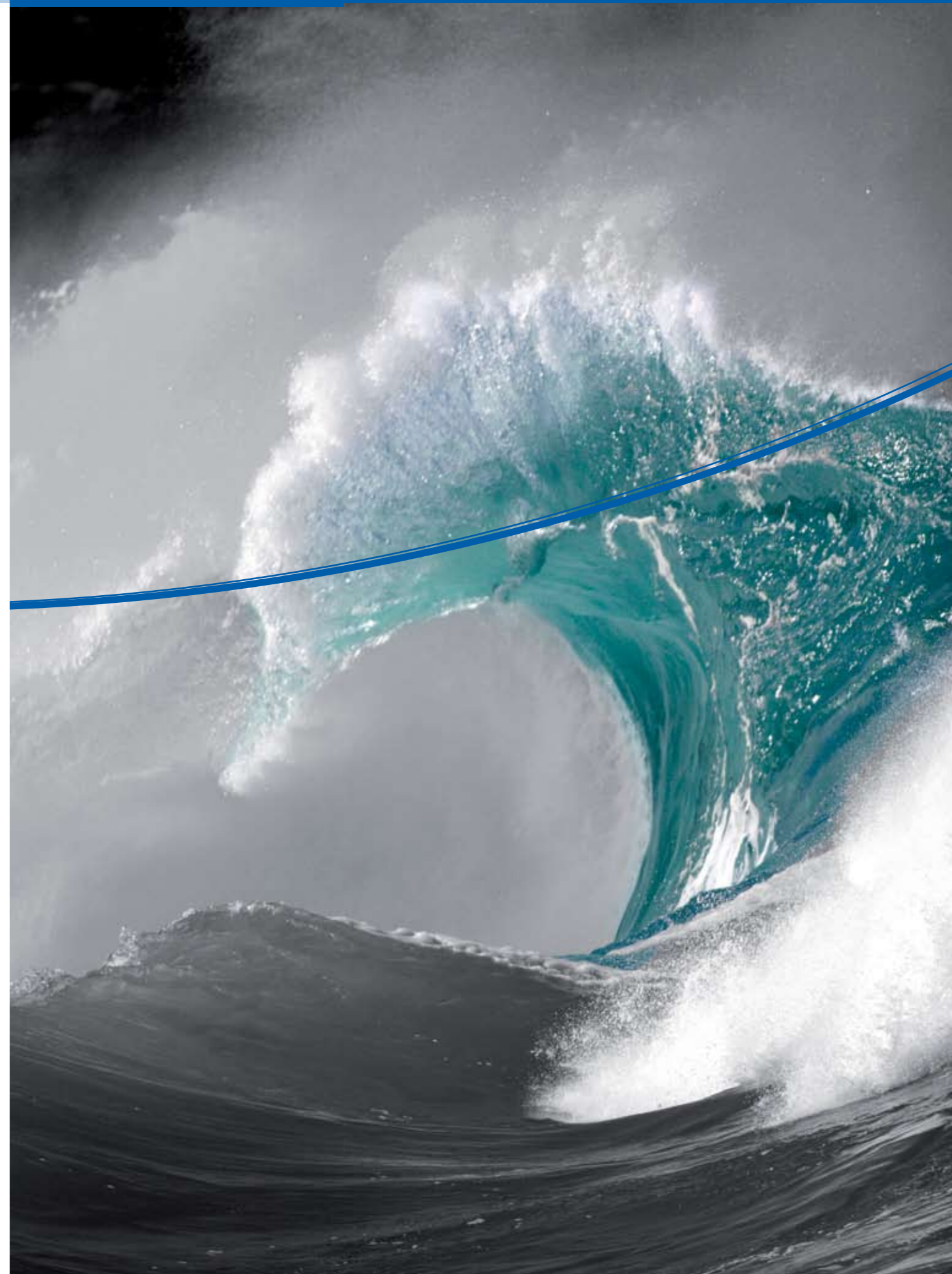
As well as the increased intensity and frequency of extreme weather events, there are other major impacts of climate change including:

- **Water:** rising sea levels threaten low-lying coastal areas including some major world cities; decrease in general of water availability; the disappearance of glaciers particularly affecting populations in Asia and South America.
- **Food:** agricultural yields in higher latitudes are likely to peak; modest increases in cereal yields in temperate regions; sharp decline of tropical crop yield; declining fish stocks due to ocean acidity.
- **Health:** increased exposure to diseases, such as malaria; severe malnutrition; reduction in winter mortality specifically in higher latitudes.
- **Environment:** increased species extinction; bleaching of coral reefs; loss of rainforests.
- **Abrupt and large scale impacts:** abrupt changes to atmospheric circulation and monsoonal patterns; Greenland ice sheet melting irreversibly accelerating the rise in sea levels and causing substantial shifts in ocean currents.

International climate change negotiations

Two of the key developments in international climate change negotiations are The United Nations Framework Convention on Climate Change (UNFCCC), an international treaty produced at the Earth Summit in Rio de Janeiro in 1992 and the Kyoto Protocol (1997).

Continuing negotiations are being held through the Conference of the Parties (COPs) to establish an ambitious global climate agreement, define emissions targets for the Kyoto Protocol's second commitment period of 2013-18, and determine whether developing nations, particularly the larger ones such as China and India, should have some form of emissions targets. In December 2009 the 14th COP Climate Change conference took place in Copenhagen, Denmark. The Secretary General Ban Ki-moon called the outcome an "essential beginning", with regards to the climate change agreements made by world leaders including to limit the rise in global temperatures to below 2 degrees.



Issues facing political leaders

The Bali Roadmap adopted in an earlier COP in December 2007 had four basic building blocks: mitigation, adaptation, technology and financing. The post-2012 global agreement is to be guided by a 'Shared Global Vision'. These form the key issues to be considered going forward and leaders will attempt to respond to the following:

- **Shared global vision:** What target will the world formally agree on to lead the fight against climate change?
- **Mitigation:** What approaches will individual countries adopt to cut their greenhouse gas (GHG) emissions, by how much and by when?
- **Adaptation:** Is a specific country developed sufficiently to have access to resources and scientific and technical capacity to adapt to climate change?
- **Technology:** What technology is available to reduce GHG emissions? Currently, carbon capture and sequestration technology is one method being used to reduce the build up of greenhouse gases. However, what mechanisms need to be in place for this technology to be transferred from developed to developing countries?
- **Finance:** How will adaptation and mitigation funds be provided by developed countries and managed by developing countries?

Other key issues to be considered include:

- **Forests:** How will developing countries with extensive forests be compensated to prevent further deforestation?
- **Carbon trading and offsets:** How will Kyoto Protocol systems such as the UN Clean Development Mechanism and the European Emissions Trading Scheme, be strengthened and expanded?

Summary of national stances on climate change

Country	% Global emissions (CO ₂)*	Metric Tons (CO ₂) per Capita	Action Taken or Planned
Western Europe**	8%	8.30	Europe plans to limit climate change to 2°C above pre-industrial levels. EU leaders want rich countries to aim to reduce emissions by 60-80% by 2050 from 1990 levels.
US	22%	20.37	President Obama favours cutting US emissions to 1990 levels by 2020 and by 80% below 1990 levels by 2050. US emissions were 14% above 1990 levels in 2006. Obama has said clean energy investments of US\$150bn over 10 years could create five million new jobs.
China	18%	3.83	A 2006-10 plan aims to reduce energy consumption per unit of GDP by 20%. There are also plans to quadruple GDP between 2001 and 2020 while only doubling energy use. Four trillion yuan (US\$586 billion) is pledged to boost demand, including investments in green sectors. There is also support for rich countries to pay 0.7% of GDP to poorer ones to help them adapt to the effects of global warming.
India	5%	1.20	New Delhi has said priority must go to economic growth to end poverty while shifting to clean energies led by solar power. A climate plan in June 2008 set no greenhouse caps, but said per capita emissions will never exceed those of rich nations.
Japan	5%	9.84	Tokyo plans to cut greenhouse gas emissions by 60-80% below 2005 levels by 2050. This implies a cut of about 14% by 2020 from 2005, putting emissions about 4% below 1990 levels by 2020.
Australia	1%	16.27	The government aims to cut emissions by 60% below 2000 levels by 2050. It recently announced targets to cut greenhouse gas emissions by between 5% and 15% by 2020, from 2000 levels.
Canada	2%	20.00	The government's "Turning the Corner" plan seeks to cut emissions by 20% below 2006 levels by 2020 and envisages cuts of 60-70% below 2006 levels by 2050. If applied to the usual Kyoto 1990 benchmark, a 20% cut from 2006 levels would put emissions 2.7% below 1990 levels by 2020.
Russia	6%	10.53	Russia has pledged to reduce greenhouse gas emissions by at least 25% below 1990 levels by 2020. However, due to the collapse of the Soviet Union and economic slump, climate change and the environment are not a current priority, especially since the decrease in output has caused levels to decrease to 34% below 1990 levels.
Rest of the World	31%		

* Millennium Development Goals indicators - The official UN site for the MDG indicators.

** UK, Germany, France, Italy

Managing competing interests

Negotiations between numerous competing nations bring many challenges and a multitude of alternative positions. While there is apparent consensus on core principles, differing positions on the detail reveal a much greater level of complexity.

While all major nations may agree on the need to reduce global greenhouse gas emissions, they differ in terms of both what the global goal should be and disagree particularly on how this global cut should be shared between individual nations.

Developed countries recognise the need to take the lead by taking on economy-wide cuts, and developing countries should follow by constraining the growth of their emissions. However, there is less agreement on which countries should be classified as developed and the extent to which developing country actions should be contingent upon the provision of resources by the developed world.

This disagreement is driven by a myriad of factors and vested interests of individual countries. No country wants to be in a position of economic disadvantage and climate change is generally seen as being subservient to economic development.

Implications for business

From politics to business

Climate change has become a key global environmental sustainability issue. The advocacy activity generated by various global climate change forums pushes many governments to take steps to reduce GHG emissions. National policies, including the introduction of mandatory emissions trading programmes, voluntary programmes, carbon or energy taxes and regulations and standards on energy efficiency and emissions are at varying stages of development and implementation. Businesses will be affected by emerging climate change regulations and proactive implementation of effective carbon management makes good business sense.

Climate change is high on the agenda in corporate boardrooms due to its effect on the global economy. Many companies have already conducted exercises to understand how their activities produce GHG emissions and how they can reduce their carbon footprints, while enhancing operational performance and maintaining economic productivity.

How to win from climate change

Companies that stand to benefit from climate change include those that recognise its importance early on, anticipate the implications and work proactively to adapt their existing business models in response to changes in policy and the competitive landscape. The challenge for businesses is significant and will necessitate solutions driven through ingenuity and technological advancement.

What strategies should companies adopt to best manage the risks and take advantage of the opportunities offered by global climate change?

Boards should consider the following questions:

- What risks does the organisation run by ignoring climate change issues and agreements, mandatory trading schemes and GHG emissions regulations?
- Does the organisation have a carbon reduction strategy and a risk management system in place to identify, measure and assess GHG emissions?
- What implementation initiatives has the organisation put in place to manage GHG emissions?
- How can a carbon strategy help to protect shareholder value and strengthen our Corporate Social Responsibility?
- Has the organisation developed an understanding of GHG emissions generation and energy consumption and production in a carbon inventory?
- How does the carbon strategy link back to the executive decision making process, financial reporting and compliance processes?
- What are the implications of additional GHG emissions regulations for the accounting, assurance and reporting practices?
- Are the company's stakeholders including customers, lenders, investors etc. demanding more transparency on actions taken to reduce GHG?

How RSM International member firms can help

RSM member firms can provide services to companies to help them make better decisions in relation to climate change, emissions trading and reporting. They bring together the skills, knowledge and resources to assist companies with climate change strategies, emissions trading, assurance and performance measurement and reporting.

Climate change strategies

RSM member firms work with private and public sector entities to reduce, manage and offset their carbon and other GHG emissions. Services include:

- providing advisory services in relation to carbon footprint/GHG inventories
- developing commercial GHG emissions strategies based on detailed risk and opportunity analysis introducing risk management systems and processes to identify, measure and assess carbon footprint/GHG emissions
- developing management strategies and implementation plans to manage emissions and associated risks with climate change and emissions trading
- assessing climate change risks and opportunities arising from mergers and acquisitions

Assurance

RSM member firms offer independent assurance services covering greenhouse gas abatement activities and other climate change initiatives. Services include:

- reviewing data collection and reporting systems relating to carbon emissions
- reviewing company reports and trading certificates
- auditing greenhouse gas abatement projects and carbon offset schemes

Emissions trading and carbon markets

RSM member firms' strategies are based on a thorough understanding of how climate change and emissions trading affect a business. Services include:

- performing relevant market analysis
- identifying hedging opportunities and techniques
- advising governments and public sector entities on options analysis
- designing market structures for emissions trading



Performance measurement and reporting

RSM member firms can provide services to help companies to accurately measure the results of their climate change activities and report these in a meaningful way. Services include:

- monitoring emissions, including data collection and reporting systems
- providing tools including monitoring and reporting software systems to assist with control reporting and monitoring
- advising on accounting treatments and disclosures
- preparing annual greenhouse gas emissions benchmark statements
- developing tax implications of cap and trade schemes, environmental tax compliance and indirect tax matters
- formulating reporting strategies to meet stakeholder requirements in conjunction with legislative requirements

Exceptional service. Exceptional results.

RSM member firms' services are based on a detailed knowledge of the latest developments concerning climate change. We have professionals who understand the accounting, taxation, financial and risk management implications of climate change.

RSM member firms approach climate change issues from a real-world business perspective. They know that if climate change initiatives are to be taken seriously, they have to be aligned with an organisation's financial and commercial objectives.

RSM member firms offer practical business-focused advice, drawing from their experience in the energy and resources industries as well as the conduct of numerous climate change projects around the world.

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