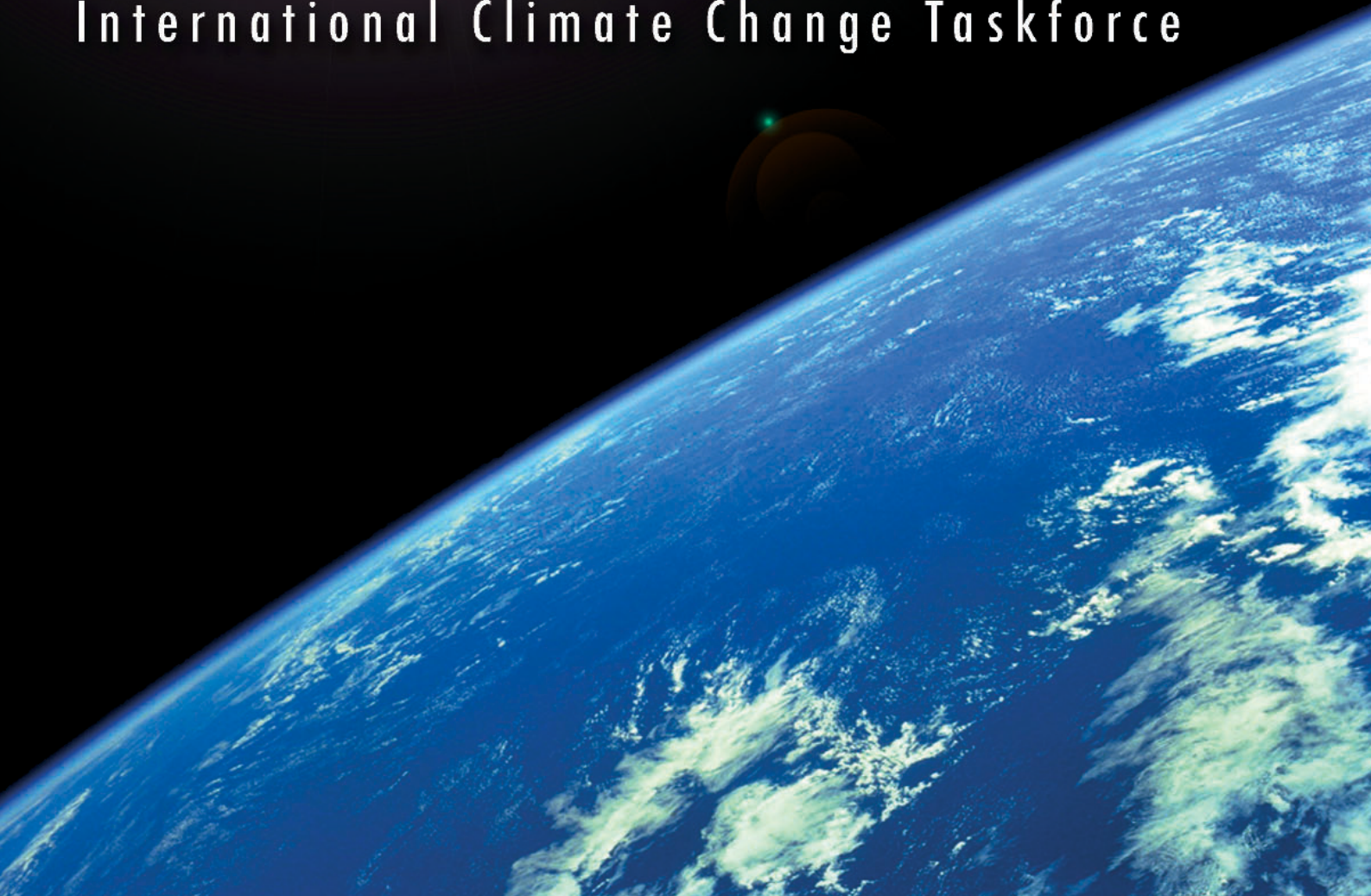


Meeting THE Climate Challenge

Recommendations of the
International Climate Change Taskforce



MEETING THE CLIMATE CHALLENGE

**RECOMMENDATIONS OF THE INTERNATIONAL CLIMATE
CHANGE TASKFORCE**

JANUARY 2005

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International Climate Change Taskforce

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Summary of main recommendations

- 1** A long-term objective be established to prevent global average temperature from rising more than 2°C (3.6°F) above the pre-industrial level, to limit the extent and magnitude of climate-change impacts.
- 2** A global framework be adopted that builds on the UNFCCC and the Kyoto Protocol, and enables all countries to be part of concerted action on climate change at the global level in the post-2012 period, on the basis of equity and common but differentiated responsibilities.
- 3** G8 governments establish national renewable portfolio standards to generate at least 25% of electricity from renewable energy sources by 2025, with higher targets needed for some G8 governments.
- 4** G8 governments increase their spending on research, development, and demonstration of advanced technologies for energy-efficient and low- and zero-carbon energy supply by two-fold or more by 2010, at the same time as adopting near-term strategies for the large-scale deployment of existing low- and no-carbon technologies.
- 5** The G8 and other major economies, including from the developing world, form a G8+ Climate Group, to pursue technology agreements and related initiatives that will lead to large emissions reductions.
- 6** The G8+ Climate Group agree to shift their agricultural subsidies from food crops to biofuels, especially those derived from cellulosic materials, while implementing appropriate safeguards to ensure sustainable farming methods are encouraged, culturally and ecologically sensitive land preserved, and biodiversity protected.
- 7** All developed countries introduce national mandatory cap-and-trade systems for carbon emissions, and construct them to allow for their future integration into a single global market.
- 8** Governments remove barriers to and increase investment in renewable energy and energy efficient technologies and practices through such measures as the phase-out of fossil fuel subsidies and requiring Export Credit Agencies and Multilateral Development Banks to adopt minimum efficiency or carbon intensity standards for projects they support.
- 9** Developed countries honour existing commitments to provide greater financial and technical assistance to help vulnerable countries adapt to climate change, including the commitments made at the seventh conference of the parties to the UNFCCC in 2001, and pursue the establishment of an international compensation fund to support disaster mitigation and preparedness.
- 10** Governments committed to action on climate change raise public awareness of the problem and build public support for climate policies by pledging to provide substantial long-term investment in effective climate communication activities.

Introduction

Climate change represents one of the most serious and far-reaching challenges facing humankind in the twenty-first Century. The international consensus of scientific opinion, led by the Intergovernmental Panel on Climate Change, is agreed that global temperature is increasing and that the main cause is the accumulation of carbon dioxide and other greenhouse gases in the atmosphere as a result of human activities.¹ Scientific opinion is also agreed that the threat posed will become more severe over coming decades.²

The cost of failing to mobilise in the face of this threat is likely to be extremely high. The economic costs alone will be very large: as extreme weather events such as droughts and floods become more destructive and frequent; communities, cities, and island nations are damaged or inundated as sea level rises; and agricultural output is disrupted.³ The social and human costs are likely to be even greater, encompassing mass loss of life, the spread or exacerbation of diseases, dislocation of populations, geopolitical instability, and a pronounced decrease in the quality of life.⁴ Impacts on ecosystems and biodiversity are also likely to be devastating.⁵ Preventing dangerous climate change, therefore, must be seen as a precondition for prosperity and a public good, like national security and public health.

By contrast, the cost of taking smart, effective action to meet the challenge of climate change should be entirely manageable. Such action need not undermine standards of living.⁶ Furthermore, by taking action now and developing a long-term climate policy regime we can ensure that the benefits of climate protection are achieved at least cost.

Climate change, energy security, and the urgent need to increase access to modern energy services for the world's poor create an enormous need for more efficient low-carbon and no-carbon energy-supply options. We need a transformative technological revolution in the twenty-first century involving the development and rapid deployment of cleaner energy and transportation technologies. By reducing greenhouse emissions and deploying new climate-friendly technologies, companies can create jobs and launch a new era of economic prosperity.

The political and economic effort required is both large and achievable. Many of the technologies we need to reduce greenhouse gas emissions – technologies that use energy more efficiently and generate it from renewable sources – already exist. They are here, they are affordable, and their use could make an enormous contribution right now, while simultaneously promoting energy security and stimulating innovation. Other technologies require longer-term development, but for those nations and companies that choose to move quickly, there is a real opportunity to get ahead of the technological curve. Likewise, governments and companies that fail to realize these opportunities will soon fall far behind competitors already honing their strategies to compete in a carbon-constrained world.

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Governments have already begun to work together to address the threat of climate change under the 1992 United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol, which enters into legal force in February 2005. Yet the scale of international action taken or pledged to date represents only a beginning. The UK's goal of reducing greenhouse gas emissions by 60 per cent by 2050 is the leading example of governmental commitment and illustrates the scale of change that must be achieved.

To avoid foreclosing climate stabilisation options and to prevent dangerous climate change, vigorous action to reduce global emissions must start now. Securing adequate and equitable future commitments to act from all developed and developing countries is essential, on the basis of their common but differentiated responsibilities. And as developing countries are the least responsible for climate change to date and the most vulnerable to it, developed countries have a duty to assist them in action to address it.

To chart a way forward, an International Climate Change Taskforce, composed of leading scientists, public officials, and representatives of business and non-governmental organisations, was established at the invitation of three leading public policy institutes – the Institute for Public Policy Research, the Center for American Progress and The Australia Institute. The Taskforce's aim has been to develop proposals to consolidate and build on the gains achieved under the UNFCCC and the Kyoto Protocol to ensure that climate change is addressed effectively over the long term. In doing so, the Taskforce has met twice, in Windsor, United Kingdom and Sydney, Australia, where we reviewed and debated detailed research papers prepared by the Taskforce Secretariat, provided by the three founding organisations.

The Taskforce's recommendations are to all governments and policy-makers worldwide. However, particular emphasis is placed on providing independent advice to the governments of the Group of Eight (G8) and the European Union (EU) in the context of the UK's presidencies of both organisations in 2005, during which Prime Minister Tony Blair has pledged to make addressing climate change a priority. The recommendations are also made in the context of the start of international negotiations in 2005 on future collective action on climate change, and the need to engage the governments of those industrialised countries that have not ratified the Kyoto Protocol.

The Taskforce's recommendations are presented in the following pages.

1. A long-term climate objective

The UNFCCC remains the fundamental basis for international action to address climate change. Its ultimate objective, agreed to by 189 nations, including all major developed and developing countries, is to achieve “stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.”⁷ Yet ten years after the UNFCCC came into force, that objective remains undefined.

The Taskforce is agreed that establishing a long-term climate objective is necessary to ensure the adequacy of the next round of commitments under the UN global climate negotiations, as well as that of domestic climate policies and the decisions of businesses and institutional investors. Therefore, the Taskforce recommends that governments at the very least initiate a domestic process to reach agreement on a national long-term objective. They should also pledge to support the initiation of political negotiations on setting a global long-term objective, which would logically take place under the auspices of the UN process, once sufficient backing is achieved. In both cases, a vigorous and equitable program to attain the objective will be essential.

In the hope that such processes are undertaken, we have looked into which long-term climate objective would best fulfil the criterion set out by the UNFCCC. While no amount of climate change is safe and many communities, such as those in Arctic regions and low-lying island states, are already experiencing adverse impacts,⁸ scientific evidence suggests that there is a threshold of temperature increase above which the extent and magnitude of the impacts of climate change increase sharply.⁹ No one can say with certainty what that threshold is, but it is important that we make an educated judgment at this time based on the best available science.

On the basis of an extensive review of the relevant scientific literature, we propose a long-term objective of preventing average global surface temperature from rising by more than 2°C (3.6°F) above its pre-industrial level (taken as the level in 1750, when carbon dioxide (CO₂) concentrations first began to rise appreciably as a result of human activities).¹⁰

Beyond the 2°C level, the risks to human societies and ecosystems grow significantly. It is likely, for example, that average temperature increases larger than this will entail substantial agricultural losses, greatly increased numbers of people at risk of water shortages, and widespread adverse health impacts.¹¹ Exceeding a global average increase of more than 2°C could also imperil a very high proportion of the world’s coral reefs and cause irreversible damage to important terrestrial ecosystems, including the Amazon rainforest.¹²

Above the 2°C level, the risks of abrupt, accelerated, or runaway climate change also increase. The possibilities include reaching climatic tipping points leading, for example, to the loss of the West Antarctic and Greenland ice sheets (which, between them, could raise sea levels more than

We propose a long-term objective of preventing average global surface temperature from rising by more than 2°C above its pre-industrial level

ten meters over the space of a few centuries), the shutdown of the thermohaline ocean circulation (and, with it, the Gulf Stream), and the transformation of the planet's forests and soils from a net sink of carbon to a net source of carbon.¹³

Climate science is not yet able to specify the trajectory of atmospheric concentrations of greenhouse gases that corresponds precisely to any particular global temperature rise. Based on current knowledge, however, it appears that achieving a high probability of limiting global average temperature rise to 2°C will require that the increase in greenhouse-gas concentrations as well as all the other warming and cooling influences on global climate in the year 2100, as compared with 1750, should add up to a net warming no greater than what would be associated with a CO₂ concentration of about 400 parts per million (ppm).¹⁴

Concentrations of CO₂ alone (standing at 379ppm in March 2004 compared to the pre-industrial level of 280ppm)¹⁵ are likely to rise above 400ppm in coming decades and could rise far higher under a business-as-usual scenario. At the same time, atmospheric levels of reflecting and cloud-forming particles, which are partly offsetting greenhouse gas warming today, will continue to go down. Action is therefore required that includes immediate measures to reduce emissions of all greenhouse gases and soot (a heat-trapping form of particulate matter), as well as a commitment to protect and expand the capacity of forests and soils to draw down CO₂ from the atmosphere.

In the light of evolving scientific evidence, the Taskforce recommends that emissions reductions should aim to achieve greenhouse-gas concentration levels by the end of the century compatible with limiting global average temperature rise to 2°C, and to limit the period of time during which those concentrations are above levels compatible with that goal.

2. A global framework for post-2012 commitments

To achieve the long-term objective of limiting global average temperature rise to 2°C, the Taskforce recommends that all countries agree to processes leading to limits on their greenhouse gas emissions “on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities.”¹⁶

We recommend the development of a global framework for the post-2012 period that builds on the UNFCCC and Kyoto Protocol, and brings all countries into action on climate change at the international level over the coming decades. It would be developed as part of the ongoing UN climate negotiations. It is based on a multi-stage approach¹⁷ and draws from the South–North dialogue proposal.¹⁸

The proposed global framework for the post-2012 period would enable all countries to contribute to solving the problem of climate change in an equitable manner by allocating countries to stages that reflect their national circumstances. In the proposed global framework, developed countries remain in the two stages defined in the UNFCCC: those already industrialised (listed in Annex II of the UNFCCC) and economies in transition (listed in Annex I but not in Annex II). As a transitional arrangement, the US and Australia (assuming they do not change their positions on ratifying Kyoto) are placed on a parallel track with the aim of integrating them with the global framework as soon as possible after 2012. Developing countries progress through a three-stage process that initially aligns climate and development objectives and subsequently ensures limits on their greenhouse gas emissions, and they move from stage to stage at a rate reflecting changes in their national circumstances.

For the **United States and Australia**, integration with the global effort post-2012 would require making commitments to domestic action under binding domestic emissions caps and adopting domestic cap-and-trade schemes for emissions. These schemes would be harmonised with the EU or Kyoto trading system provided there is parity in the level of caps or a system of discounting for credits from schemes with substantially weaker caps. Trading between the systems could begin during or immediately after the Kyoto Protocol’s first commitment period. Such trading schemes are discussed in more detail in the section on technology and trading partnerships below.

In addition to meeting their domestic caps, the United States and Australia are urged to participate in UNFCCC and Kyoto mechanisms for assisting developing countries to limit their emissions and adapt to climate change. Cooperation with developing countries on technological and financial transfer, particularly through established mechanisms such as the Clean Development Mechanism (CDM), will be particularly important.

A global framework that builds on the UNFCCC and the Kyoto Protocol and enables all countries to be part of concerted action on climate change at the global level in the post-2012 period, on the basis of equity and common but differentiated responsibilities

With other parties, the United States and Australia would need to negotiate terms under which the transitional parallel track is integrated fully into the global framework, under the auspices of the UN global climate negotiations.

Under the global framework, **developed countries** take on deeper legally binding emission reduction commitments, that extend beyond 2012, and which would be periodically negotiated. They further participate by transferring greater technology and financial resources for mitigation and adaptation to developing countries through the mechanisms defined under the UNFCCC, the Kyoto Protocol and associated agreements. In each case, Annex II countries would take on more ambitious commitments.

The proposed global framework encompasses a three-stage process under which all **developing countries** are enabled to reduce progressively the carbon intensity of their economies while ensuring their right to economic development. The three stages are:

1. Initially, countries are encouraged and enabled to align development and climate goals through confidence building measures and incentives. They adopt policies and measures that decouple economic growth from emissions growth and, where necessary, are adequately supported by resources provided by developed countries.¹⁹
2. Subsequently, countries commit to reducing the carbon intensity of select sectors of their economies, particularly the energy and transport sectors, and move progressively towards carbon intensity targets.²⁰
3. Ultimately, countries take on binding emission targets, as is the case in Annex I countries now.

All developing countries would progress through the stages, and they would do so as their national circumstances permit. The consideration of national circumstances could be guided by several criteria, including capability to mitigate (for example GDP per capita) and potential to mitigate (for example degree of energy efficiency, emissions per unit GDP, emissions per capita). Some countries have already achieved a level of industrialisation that has moved them beyond the initial stage. Moreover, countries experiencing higher rates of industrialisation would make a more rapid transition through the stages.

The global framework would continue to develop in accordance with three further considerations:

- the need to meet the long-term climate objective, by ensuring that short-term targets are linked to and consistent with the long-term goal;
- the gradual transition over the long-term towards a system of equal per capita
- rights to use the absorptive capacity of the atmosphere; and developments in climate science and technological innovations.

3. Technology and trading partnerships

The objective of preventing average global temperature from rising by more than 2°C requires that constructive action be taken in the near-term to begin reducing emissions in key emitting countries, including those such as the United States and Australia, which have not ratified Kyoto, and large developing economies that are not required by Kyoto to reduce emissions. These actions would involve voluntary partnerships designed to find “win-win” solutions. The overall strategy should be focused on developing low-carbon or no-carbon energy sources, including renewable energy, and increasing energy efficiency. As part of that strategy, agreements at the sub-global level among significant emitters can address specific emissions and technology development challenges that complement existing climate change regimes.

The Taskforce recommends that the G8 could play a vital role in pursuing technology and trading agreements, by establishing a G8+ Climate Group that includes other large developed and developing country economies.

Consistent with the objectives of such a G8+ Climate Group, G8 governments should take two important steps:

- Firstly, they should aim to increase their spending on research, development, and demonstration (RD&D) of advanced technologies for energy-end-use efficiency and low-carbon and no-carbon energy supply by two-fold or more by 2010. This should be done in conjunction with adopting strategies to ensure the near-term and large-scale deployment of existing low- and no-carbon technologies.
- Secondly, G8 countries should establish national renewable portfolio standards to generate at least 25 per cent of electricity from renewable energy sources by 2025, following models established by a growing number of developed and developing countries. Higher targets will be needed for some G8 countries.²¹

The Taskforce also recommends that the G8+ Climate Group adopt the initiatives presented below, which provide innovative examples of how to engage countries in confidence building mitigation strategies. They highlight immediate opportunities to reduce emissions in the transport and stationary energy sectors, focusing on areas where insufficient progress has been made, where opportunities for technology leapfrogging are available, and where countries are facing critical near-term investment decisions.

The G8 could play a vital role in pursuing technology and trading agreements, by establishing a G8+ Climate Group that includes other large developed and developing country economies

Highly efficient vehicles

The transport sector accounts for approximately one third of global greenhouse gas emissions.²² While increased investment in public transportation systems is one important strategy to reduce emissions in this sector, these emissions can also be greatly reduced through improvements in fuel efficiency. For example, hybrid gasoline/electric cars can cut fuel use by one-third.²³ The Taskforce recommends that a technology partnership be created in which the G8+ Climate Group agrees to promote accelerated market penetration of hybrids and other highly efficient vehicles (HEVs).

This should be achieved through enhanced fuel efficiency standards and/or tax incentives or grants for the purchase of HEVs, sustained over a substantial period. Governments could also commit to providing tax incentives for retooling manufacturing plants, and to replacing their own fleet vehicles with HEVs, thus boosting demand and reducing the costs of production and the price gap between HEVs and conventional vehicles. These measures are also relevant in rapidly industrialising countries such as China where car ownership is increasing quickly and the Government has already begun to set fuel economy standards for cars.

Biofuels

Transport-related emissions can also be reduced by switching away from fossil fuels and towards renewable energy sources such as biofuels, especially those derived from cellulosic materials, which can be blended with petroleum based fuels. The Taskforce recommends that the G8+ Climate Group agree to divert their agricultural subsidies to biofuels instead of food crops – subsidies that currently create artificially low food prices and accordingly undermine agriculture in developing countries. Governments should seek to promote production of traditional ethanol, such as that in Brazil, which derives one third of its transport fuel from ethanol produced from sugar cane,²⁴ and emerging cellulosic ethanol technologies, which hold even greater promise. G8+ Climate Group governments should support measures to increase the market penetration of biofuels in developing and developed countries. Appropriate safeguards would need to be adopted to ensure that increased subsidies for biofuels encourage sustainable farming methods, preserve culturally and ecologically sensitive land, and protect biodiversity.

Cleaner Coal

The Taskforce recommends that subsidies to fossil-fuel projects be reduced over time and priority given to support for renewable energy and energy efficiency, including through performance-based subsidies. But coal is expected to retain for some time a major role in the power sector in several important parts of the world. Prominent among these are China and India, which are planning to add large amounts of coal-fired power capacity over coming decades. For these countries, addressing climate change is unlikely to be possible without a strategy for dealing with emissions from coal, even as the primary long-term objective must be the transition to low or no-carbon sources of energy.

In practice, that means deploying the coal-fired electricity-generating technologies that offer the best prospects for capturing carbon in a cost-effective manner for sequestration away from the atmosphere in the event that such sequestration proves technologically feasible and economically viable on a significant scale.²⁵ Integrated Gasification Combined Cycle (IGCC) power plants are the best available technology in this respect.

In addition, although currently more expensive than conventional coal-fired plants, IGCC plants offer the possibility of improving their economics through 'polygeneration' – the production of chemicals (including liquid fuels and hydrogen) in parallel with electricity generation. IGCC plants also provide immediate health benefits by reducing emissions of toxic air pollutants that cause respiratory and cardiovascular illnesses, which are responsible for thousands of deaths each year in rapidly industrialising countries.²⁶

In the absence of measures that internalise the environmental damage caused by conventional coal-fired power plants, there is currently a cost gap between power produced by IGCC and conventional plants. Therefore, an incentive is needed to promote IGCC plants designed to accommodate carbon capture and storage as the technology of choice for coal-fuelled power plants being built in the years immediately ahead.

The G8+ Climate Group could agree to support the construction of such IGCC plants through loan guarantees from its industrialized members' export credit agencies (ECAs). Such a program of loan guarantees for IGCC construction in developing countries, including China and India, would help to make IGCC cost-competitive with conventional coal-fired power stations. Of course, this should not occur at the expense of providing additional support for renewables and energy efficiency projects.

Emissions trading

Domestic emissions trading programs in different parts of the world could be tailored to allow for their progressive integration into a common international emissions trading regime. The EU's emissions trading scheme is now operational, and there are current proposals for domestic emissions trading in the U.S. and Australia. Successful integration of these programmes will depend on parity in the levels of the caps, or instituting a system of discounting for credits from a programme with substantially weaker caps.

Integration offers several benefits:

- creating a deeper, unified market is likely to reduce price volatility;
- multinational firms operating in different markets can benefit by playing under the same set of rules;
- giving all firms a vested interest in multilateral climate policy engages them in the development of a new global framework; and
- creating an avenue for more active US and Australian participation with the rest of the developed world serves as a stepping stone to their full integration into the post-2012 global framework.

The Taskforce recommends that the G8+ Climate Group: (1) urge the adoption in all industrialised countries of national cap-and-trade programs, and (2) promote the development of common standards for measuring and reporting emissions reductions, as well as clear and compelling domestic compliance mechanisms, to facilitate the future integration of trading systems. Common standards should also be developed for project-based offsets, providing additional incentives for engaging developing countries.

4. Driving a low-carbon energy future worldwide

Helping countries to reduce the carbon intensity of their economies will enable them to adopt robust climate commitments at the international level in forthcoming negotiations. Reducing the carbon intensity of economies, and achieving sustainable levels of energy consumption, based on increased energy end-use efficiency and low- and zero-carbon energy-supply technologies, should become the driving force behind technological modernisation.

Governments should create a leadership coalition of developed and developing countries that are committed to action on climate change

Increasing the efficiency of energy end-use in homes, offices, vehicles, and industry offers the largest, fastest, cheapest, and easiest reductions in carbon intensity available, but cannot achieve as much reduction as is required. Large contributions will also be needed from greatly expanded use of low-carbon and no-carbon energy-supply options. Leading contenders for a large role in this lower-carbon energy supply mix include fuels derived from biomass materials that are renewably grown and electricity from wind and photovoltaics.²⁷

The process of reducing the carbon intensity of the energy system needs to involve the public and private sectors at all levels. In particular, the Taskforce recommends that governments accelerate the process by creating a leadership coalition of developed and developing countries that are committed to action on climate change. This coalition should take action beyond multilateral climate diplomacy by focusing on synergies between climate and development policies and fully integrating low- and no-carbon strategies with national programmes for sustainable development. In particular, the Taskforce recommends that leadership coalition governments undertake reforms to increase energy efficiency and reduce the carbon intensity of energy generation by removing barriers to and increasing investment in low- and no-carbon technologies and practices that are commercially viable or close to market.

Reforms at the national level would include:

- Levelling the playing field between renewables and fossil fuels, and internalising the latter's costs by phasing out fossil fuel subsidies and adopting cap and trade systems as well as encouraging ecological tax reform and performance based efficiency incentives.
- Use of innovative government-supported financial mechanisms, such as clean energy funds and government-guaranteed investment securities ('global development bonds') that would promote investment in sustainable low- or no-carbon technology deployment.
- Providing new support for low- or no-carbon technology transfer to developing countries in addition to existing bilateral and multilateral programmes, including by increasing the provision of concessional finance.

- Requiring individual Export Credit Agencies (ECAs) to adopt minimum efficiency standards for the projects they support, or portfolio-wide carbon intensity standards.
- Tying local economic development with decarbonisation by relaxing local content restrictions for ECA-backed projects to encourage the deployment of locally appropriate low-carbon technologies and the involvement of local partners.
- Ensuring the disclosure of climate change related risks by companies and that institutional investors take account of long-term risks in their investments as part of their fiduciary duty.

Reforms at the international level would include:

- Reviewing and significantly increasing the World Bank target to increase its investment in renewable energy, arising from the Extractive Industries Review.
- Reforming the OECD Arrangement for ECAs to improve the terms offered by ECAs for renewable energy and energy efficiency projects so that they are at least as favourable as those for fossil fuel and nuclear energy.
- Requiring multilateral banks to take the climate impact of their project financing into account by conducting energy audits on energy-intensive projects and financing energy-saving measures, following the lead of the European Bank for Reconstruction and Development, and to adopt minimum efficiency standards for the projects they support or portfolio-wide carbon intensity standards.

5. Facilitating adaptation to climate change

Developing countries are already experiencing adverse impacts from climate change and, given the inertia in the global climate system, some increased level of future impact is inevitable, regardless of action taken now to reduce emissions.²⁸ The Intergovernmental Panel on Climate Change has concluded that developing countries also stand to experience the most serious impacts from climate change and have the lowest capacity to adapt to them.²⁹ Climate change thus threatens to undermine many of the UN's Millennium Development Goals, including that of eradicating extreme hunger and poverty, with severe consequences for the world's poorest people, millions of whom may be forced off their land and become climate refugees.³⁰

Developed countries should accept greater responsibility for assisting developing countries to adapt to climate change, while ensuring climate policy directly contributes to poverty eradication

Developed countries should accept greater responsibility for assisting developing countries to adapt to climate change, while ensuring climate policy directly contributes to poverty eradication. To this end, developed countries need to achieve a step-change in their effort. The Taskforce therefore recommends that:

- Existing funding commitments on adaptation be honoured. The EU and other developed countries made a “political declaration” at the seventh conference of the parties to the UNFCCC in Marrakech in 2001, to provide \$450 million (US) a year, mostly for adaptation. To date only about \$20 million (US) has been provided.
- New and additional funding is provided to guarantee revenue for adaptation, with contributions linked, in part at least, to current and historical responsibility for emissions. This should be done using robust scientific methodology, such as that being developed under the modelling and assessment of contributions to climate change (MATCH) initiative. The long-term future of existing adaptation funding bodies also needs to be secured by leading industrialised countries making firm, regular and long-term commitments of funds to the already-established ‘Marrakech Funds’.
- Governments accept accountability for climate change impacts by initiating the development of an international compensation fund to support disaster mitigation and preparedness, disaster relief, and relocation in consultation with affected countries and communities.
- Adaptation issues are integrated into development assistance. Aid that is invested in infrastructure with relatively long life spans should be ‘climate proofed’ by taking projected impacts into account in design and construction.

- Policy makers in vulnerable countries become aware of the implications of climate change for their citizens and economies. They should apply vulnerability or impact assessments to all new policies, to exclude anything that puts vulnerable communities at greater risk, and integrate adaptation policies and measures into development strategies.
- Further research is carried out urgently into expected impacts for different regions so that the most vulnerable communities can be identified. Research is also needed into best-practice policies and technologies, as well as livelihood strategies to cope with expected climatic risks.
- Assistance is provided to build the capacity of national policy-makers from vulnerable countries so they can take part in international climate negotiations, undertake policy implementation domestically, and make appropriate judgements to avoid inappropriate, maladaptive policies.

6. Communicating climate change

There is a clear need for governments to build public support for climate policies that will enable the world to meet the objective of limiting global average temperature rise to 2°C above pre-industrial levels. Yet public awareness of climate change, and its solutions, is worryingly low.³¹

Consequently, in accordance with Article 6 of the UNFCCC, the Taskforce recommends that a leadership coalition of governments from developed and developing countries pledge to increase public awareness and build public support for action to mitigate climate change.

Increasing public awareness and building support will require these governments to make communicating information about climate change to the public a priority, and to take steps to increase the effectiveness of climate change communication activities. These activities should have sufficient funding and a consistent message, including the case for the 2°C objective, sustained over the long-term. Such activities should also be combined with supportive policy measures which enable the public to take action.

Endnotes

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¹³ Intergovernmental Panel on Climate Change (2001) *Climate Change 2001: The Scientific Basis*, Cambridge University Press: pp.419–20, 642; and, Cox P, Betts R, Jones C, Spall S and Totterdell I (2000) ‘Acceleration of global warming due to carbon-cycle feedbacks in a coupled climate model.’ *Nature* 408: pp.184–187.

¹⁴ Baer, Paul (2004) *Probabilistic analysis of climate stabilization targets and the implications for precautionary policy*. Paper presented at the American Geophysical Union Annual Meeting, 17 December 2004, San Francisco. The author’s analysis shows, taking into account current uncer-

tainties in the relevant parameters, that stabilising the net warming and cooling influences on climate in 2100 at a level corresponding to an increase in CO₂ concentration to 400ppm from its pre-industrial value of 280ppm yields an 80 per cent chance of limiting global average temperature rise to 2°C above pre-industrial levels. By contrast, he estimates that stabilising net warming and cooling influences at the equivalent of 550ppm CO₂ provides only a 10–20 per cent chance of limiting global average temperature rise to 2°C. Warming influences on climate, in addition to CO₂, include increases in the concentrations of non-CO₂ greenhouse gases (such as methane, nitrous oxides and halocarbons) and of atmospheric soot. Cooling influences include increases in the atmospheric concentrations of aerosols (i.e. reflecting and cloud-forming particles), as well as increases in Earth's surface reflectivity. See also Paul Baer and Tom Athanasiou, "Honesty About Dangerous Climate Change", 2004, at www.ecoequity.org/ceo/ceo_8_2.htm.

¹⁵ <http://news.bbc.co.uk/1/hi/sci/tech/3732274.stm>.

¹⁶ UN Framework Convention on Climate Change, Article 3.1.

¹⁷ See for example M den Elzen, M Berk, P Lucas, B Eickhout and D van Vuuren, (2003) *Exploring climate regimes for differentiation of commitments to achieve the EU climate target*. RIVM report 728001023/2003, Bilthoven, Netherlands www.rivm.nl/bibliotheek/rapporten/728001023.html; and, Climate Action Network (2003) *A viable global framework for preventing dangerous climate change*. CAN Discussion Paper: COP9, Milan, Italy. www.climatenetwork.org/docs/CAN-DP_Framework.pdf.

¹⁸ South–North dialogue on equity in the greenhouse (2004) *A proposal for an adequate and equitable global climate agreement*, Wuppertal Institute for Climate, Environment and Energy and the Energy Research Centre. Financed by the German Federal Ministry for Economic Cooperation and Development (BMZ) www.wupperinst.org/download/1085_proposal.pdf.

¹⁹ Sustainable development policies and measures (SD PAMs) allow policy-makers in developing countries to build climate change policy into sustainable development pathways. This is a relatively easy way for developing countries to take the first steps towards long-term action on climate change. For example climate change considerations could be built into national energy sector pathways, through a focus on delivering sustainable energy services. For more information on SD PAMs see, for example, H Winkler, R Spalding-Fecher, S Mwakasonda and O Davidson, 'Sustainable development policies and measures: Starting from development to tackle climate change' in Baumert, K *et al* (eds). (2002) *Building on the Kyoto Protocol – Options for protecting the climate*, WRI.

²⁰ An approach that may be particularly relevant in this stage is the sectoral CDM proposal, which applies the policies and measures approach to a particular sector (such as the energy sector) through the current avenue for developing country participation in the Kyoto Protocol, the Clean Development Mechanism. Sectoral CDM applies the CDM to sectors rather than just to projects. Reducing the carbon intensity of the energy and transport sectors could be delivered through a sectoral CDM approach, creating a strong focus on sustainable energy sector development and reform. For more information on sectoral CDM see, for example, J Samaniego and C Figueres, 'Evolving to a sector based Clean Development Mechanism.' In Baumert, K *et al*. (eds). (2002) *Building on the Kyoto Protocol – Options for protecting the climate*, WRI.

²¹ France and Italy are already committed to generating 21 per cent and 25 per cent respectively of their electricity from renewable sources by 2010. It may therefore be more appropriate for them to adopt higher targets for 2025 than the minimum 25 per cent target recommended for other G8 countries.

²² International Energy Agency Information Centre <http://www.iea.org>.

²³ Energy Saving Trust (2002) *Pathways to Future Vehicles: A 2020 Strategy*.

²⁴ Brazilian Government Environment Ministry <http://www.mct.gov.br/clima>.

²⁵ International Energy Agency Information Centre <http://www.iea.org>.

²⁶ *Ibid.*

²⁷ The Taskforce is agreed that renewable energy will have a major role to play and that advanced fossil-fuel technologies which can capture and sequester carbon dioxide may also be important. It has not taken a position on nuclear energy.

²⁸ Intergovernmental Panel on Climate Change (2001) *Climate Change 2001: Impacts, Adaptation and Vulnerability*, Cambridge University Press, pp. 5–7; and, International Federation of Red Cross and Red Crescent Societies (2002) *World Disasters Report*, Geneva: chapter 4.

²⁹ Intergovernmental Panel on Climate Change (2001) *Climate Change 2001: Impacts, Adaptation and Vulnerability*, Cambridge University Press: p.8.

³⁰ UN Millennium Development Goals <http://www.un.org/millenniumgoals/>. DFID (2004) Key sheet 1: Climate Change in Africa, in *Climate Change Deepens Poverty and Challenges Poverty Reduction Strategies*, Department for International Development; International Panel on Climate Change(2001) *Climate Change 2001: Impacts, Adaptation and Vulnerability*, Cambridge University Press, chapter 7.

³¹ GlobeScan International Environmental Monitor. www.globescan.com.

Appendix A: Terms of reference

The International Climate Change Taskforce has been established by the Institute for Public Policy Research, The Australia Institute and the Center for American Progress to develop and promote proposals aimed at consolidating and building on the gains achieved by the Kyoto Protocol at the international level, in order to help ensure that climate change is addressed effectively over the long term.

To this end the taskforce will review:

- Evidence on the economic costs of failing to reduce global emissions of green house gases and on the technical and economic feasibility of deep emissions reductions by developed countries, and limits on emissions from developing countries, in the long term.
- Actions necessary for consolidating and building on the gains made by the Kyoto Protocol, towards achieving the fundamental objective of the United Nations Framework Convention on Climate Change to stabilise the concentration of greenhouse gases in the atmosphere at a level that prevents dangerous anthropogenic interference with the climate system.
- Options for securing future commitments on greenhouse gases from all developed countries, as well as from developing ones.

The taskforce will prepare a final report to be published early in 2005 making recommendations to policy makers and governments in developed and developing nations. This report will be widely disseminated but particularly aimed at providing independent advice to the UK government about how to make progress on international climate change policy during its presidencies of the G8 nations and the European Union in 2005.

Appendix B: Taskforce members

Co-Chairs

Rt Hon. Stephen Byers MP (UK)

Stephen Byers is a Labour Member of Parliament for North Tyneside and a former Cabinet Minister in the Blair Government. In 1997 he was made Minister of State for School Standards. In July 1998 he entered the Cabinet as Chief Secretary to the Treasury and in December 1998 he was appointed as Secretary of State for Trade and Industry. He held this post until the 2001 General Election after which he was made Secretary of State for Transport, Local Government and the Regions. He resigned from the government in May 2002.

Senator Olympia J. Snowe (USA)

Olympia J. Snowe is a two-term Republican U.S. Senator from the state of Maine. Olympia chairs the Senate Small Business and Entrepreneurship Committee and is on the Senate Finance Committee; the Commerce, Science and Transportation Committee; and the Select Committee on Intelligence. She is an active cosponsor of the McCain-Leiberman Climate Stewardship Act for mandatory emissions reductions and a market cap and trade system, and a leader for abrupt climate change research. Olympia was a member of the U.S. House of Representatives from 1978 to 1994.

Taskforce Members

Hon. Bob Carr MP (Australia)

Bob Carr is the Premier of New South Wales. During his premiership he has introduced strict greenhouse emission benchmark laws in NSW and a new state Greenhouse Office. He has created 345 new national parks, receiving the 1998 World Conservation Union International Parks Merit Award.

Professor John P Holdren (USA)

Dr John Holdren is a Professor of Environmental Policy and Director of the Program on Science, Technology, and Public Policy in the John F. Kennedy School of Government. John also holds professorial chairs at Harvard University and the University of California. He received the 1999 Kaul Foundation Award in Science and Environmental Policy, the 2000 Tyler Prize for Environmental Achievement, and the 2001 Heinz Prize in Public Policy.

Martin Khor Kok-Peng (Malaysia)

Martin Khor is director of Third World Network. He has been a Member of the Board of the South Centre, and Vice Chairman of the Expert Group on the Right to Development of the UN Commission on Human Rights. He has conducted studies and written papers for the United Nations Conference on Trade and Development, United Nations Development Programme and United Nations Environment Programme, including *Intellectual Property, Biodiversity and Sustainable Development* (2002).

Nathalie Kosciusko-Morizet MP (France)

Nathalie Kosciusko-Morizet is a Member of the French National Assembly for the governing party, the Union pour un Mouvement Populaire (UMP). She is President of the Committee on health and environment for the UMP and Executive Secretary of the Council on sustainable development of the UMP. Her published books include: *Pourquoi une charte de l'environnement? Une charte pour quoi faire? La révolution tranquille de l'écologie* (2001).

Dr Claude Martin (Switzerland)

Dr Claude Martin is Director General of the World Wildlife Fund (WWF) International. As Director General of WWF International, Claude has initiated new approaches, including partnerships with the World Bank and business and industry groups. He is a member of the China Council for International Cooperation on Environment and Development (CCICED), a high level advisory body to the Chinese Government.

Professor Tony McMichael (Australia)

Tony McMichael is Director of the National Centre for Epidemiology and Population Health, at The Australian National University, Canberra. Previously he had been Professor of Epidemiology at the London School of Hygiene and Tropical Medicine. He has chaired the working-group assessment of health risks for the UN's Intergovernmental Panel on Climate Change, and is now undertaking the international Millennium Ecosystem Assessment project.

Jonathon Porritt (UK)

Jonathon Porritt is Programme Director and co-founder of Forum for the Future and Chairman of the UK Sustainable Development Commission. In addition he is Co-Director of The Prince of Wales's Business and Environment Programme, Trustee of WWF UK and Vice-President of the Socialist Environment Resources Association. He was formerly Director of Friends of the Earth. Jonathon received a CBE in January 2000 for services to environmental protection.

Adair Turner (UK)

Adair Turner is Vice Chairman of Merrill Lynch Europe. From 1995 to 1999 he was Director General of the Confederation of British Industry. He is currently a director of United Business Media plc, Chair of the UK Low Pay Commission and Chair of the UK Pensions Commission. He is also a Visiting Professor at the London School of Economics and a trustee of WWF UK.

Dr Ernst Ulrich von Weizsäcker (Germany)

Dr Ernst Ulrich von Weizsäcker is a member of the German Bundestag for the Social Democratic Party (SPD). Since 2002, he has been the Chair of the Parliamentary Committee on Environment, Nature Conservation and Nuclear Safety. He was Director of the Institute for European Environmental Policy in Bonn, London and Paris from 1984-1991, and President of the Wuppertal Institute for Climate, Environment, Energy from 1991-2000.

Professor Ni Weidou (China)

Professor Ni Weidou is Director of the Clean Energy Centre at Tsinghua University. As the member of the Consultant Group of State Fundamental Research and Planning and the Co-chairman of Energy Group of CCICED, he gives advice on state energy policies. He is in close cooperation with the University Committee of Environment of Harvard University and the Centre for Energy and Environment Studies of Princeton University.

Hon. Timothy E Wirth (USA)

Timothy Wirth is the President of the United Nations Foundation and Better World Fund. He has been a member of the US House of Representatives and US Senate where he focussed on environmental issues, especially global climate change and population stabilisation. He served in the US Department of State as the first Undersecretary for Global Affairs from 1993 to 1997.

Cathy Zoi (Australia)

Cathy Zoi is Group Executive Director of Bayard Capital, an environment and sustainable energy company. She co-chairs the New South Wales (NSW) Government's Sustainability Advisory Council. Previously, Cathy was Assistant Director General of the NSW Environmental Protection Agency, the founding CEO of the Sustainable Energy Development Authority, and Chief of Staff of Environmental Policy in the Clinton White House. She has been a company director for a number of start-up renewable energy enterprises.

Scientific Adviser to the Taskforce**Dr Rajendra K Pachauri (India)**

Dr R K Pachauri supported the taskforce in the capacity of Scientific Adviser.

Dr Pachauri is Director General of The Energy and Resources Institute, and chair of the UN's Intergovernmental Panel on Climate Change. His wide ranging expertise has resulted in his membership of various international and national committees and boards, including chairing the Committee on Developing Countries from 1989 to 1990. He has also authored 21 books and many papers and articles.

Appendix C: Taskforce secretariat

The Institute for Public Policy Research

www.ippr.org.uk

The Institute for Public Policy Research (ippr) is the UK's leading progressive think tank and was established in 1988. Its role is to bridge the political divide between social democratic and liberal traditions, the intellectual divide between academia and the policy making establishment, and the cultural divide between government and civil society. It is first and foremost a research institute aiming to provide innovative and credible policy solutions. Its work, the questions its research poses and the methods it uses are driven by the belief that a journey to a good society is one that places social justice, democratic participation and environmental sustainability at its core.

Nick Pearce

Nick Pearce is Director of ippr. He was previously Special Adviser to David Blunkett MP when he was Home Secretary and Secretary of State for Education & Employment. He has also been an adviser to the Prime Minister's Social Exclusion Unit.

Dr Tony Grayling

Tony Grayling is an Associate Director and head of the Sustainability Team at ippr. Tony has previously been a special adviser to the UK Minister for Transport, and the environmental policy officer for the Labour Party.

Simon Retallack

Simon Retallack is a Research Fellow at ippr, specialising in international climate change policy. Simon is also co-director of the Climate Initiatives Fund, a grant-making foundation, and was commissioning editor of *The Ecologist* magazine.

The Center for American Progress

www.americanprogress.org

The Center for American Progress (CAP) is a non-partisan research and educational institute dedicated to promoting a strong, just and free America that ensures opportunity for all Americans. It believes that Americans are bound together by a common commitment to these values and it aspires to ensure that national policies reflect these values. It works to find progressive and pragmatic solutions to significant domestic and international problems and develop policy proposals that foster a government that is "of all the people, by all the people, and for all the people."

John Podesta

John Podesta is the President and Chief Executive Officer of the Center for American Progress. He served as Chief of Staff to President Bill Clinton from October 1998 to January 2001 and previously was an Assistant to the President then Deputy Chief of Staff. Podesta is currently a Visiting Professor of Law on the faculty of the Georgetown University Law Center.

Todd Stern

Todd Stern is a Partner of Wilmer, Cutler and Pickering. He served in the Clinton Administration in various capacities, including Assistant to the President for Special Projects and Counselor to the Secretary of the Treasury. Between 1997 and 1999, he served as the senior White House negotiator at the Kyoto and Buenos Aires negotiations.

Dr Ana Unruh Cohen

Ana Unruh Cohen is the associate director for environmental policy at the Center for American Progress. Prior to joining American Progress, she was an aide to Congressman Edward J Markey (D-MA) for three years, handling energy and environmental issues pending before the Energy and Commerce Committee and the Resources Committee.

Ken Gude

Ken Gude is the Director of Research on the International Rights and Responsibilities Project at the Center for American Progress. Prior to joining American Progress, Gude was a Policy Analyst at the Center for National Security Studies. He previously worked at the Council on Foreign Relations.

The Australia Institute

www.tai.org.au

The Australia Institute is an independent public policy research centre funded by grants from philanthropic trusts, memberships and commissioned research. It was launched in 1994 to develop and conduct research and policy analysis and to participate forcefully in public debates. In addition, the Institute undertakes research and analysis commissioned and paid for by government, business, unions and community organisations. Unconstrained by ideologies of the past, the purpose of the Institute is to help create a vision of a more just, sustainable and peaceful Australian society and to develop and promote that vision in a pragmatic and effective way.

Dr Clive Hamilton

Dr Clive Hamilton is Executive Director of The Australia Institute. He has held visiting academic positions at the Universities of Cambridge, Sydney and the Australian National University. Previous positions include Head of Research at the Federal Government's Resource Assessment Commission. Dr Hamilton has published on climate change policy and environmental economics, including *Growth Fetish*.

Alan Tate

Alan Tate has been involved in national and international climate policy for more than a decade. He is the recipient of Australia's most prestigious journalism award – the Gold Walkey – when National Environment Correspondent to the Australian Broadcasting Corporation. Alan became a founding partner in Cambiar in 2001,

Justin Sherrard

Justin Sherrard co-founded Cambiar with Alan Tate, a Sydney-based strategy consultancy that works with progressive businesses and Governments on gaining competitive advantage and public support by focussing on Sustainability. He has 15 years of global experience of environmental issues and their solutions.

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In addition to those prepared by the secretariat, excellent working papers were prepared for the Taskforce by Kate Hampton (Green Globe Network, UK), Fanny Calder (Chatham House, UK), Saleemul Huq (IEED, UK and Bangladesh), Jonathan Pershing and Rob Bradley (World Resources Institute, USA) and Joseph Aldy (Harvard University, USA). Thanks also to David Griggs (Hadley Centre, UK) for presenting the Taskforce at Windsor.

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There can be few greater challenges in the twenty-first century than addressing the threat of climate change. Left unmitigated, the impacts are expected to be devastating. Urgent action is needed. As a global problem, it requires global solutions. In this report, a high level taskforce, brought together from across the globe by three of the world's leading think tanks, set out their conclusions on how to move forward. The recommendations of the International Climate Change Taskforce are a blueprint for action and offer a strong foundation for meeting the climate challenge.



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