



CIWEM's Future Prospects Group: 2050 Vision

A Fresh Start

Executive Summary

CIWEM's Vision for an integrated response to critical water and environmental issues up to 2050



Foreword

By Colin Challen MP, Chair of the All Party Parliamentary Group on Climate Change

The recent scientific climate change congress in Copenhagen, part of the Danish preparations for the United Nation's climate change meeting there later this year, has brought a sense of urgency to the need to tackle climate change. As if this task wasn't urgent enough before, it is now clear that the pace of change witnessed in our fragile biosphere is accelerating. The loss of ice in the Arctic ice cap has exceeded all the models; the acidification of the oceans is worse; and the potential for die-back in the rainforests is much greater than previously understood. These are not simply impacts of anthropogenic climate change but could become positive feedbacks in a system already overloaded. Far from being secure in the belief that we may be able to keep any temperature rise to two degrees or less, it is now more probable that this will be exceeded – four degrees and more is widely viewed as almost inevitable.

CIWEM's 2050 Vision is a powerful and important contribution to the climate change agenda. If politicians cannot move fast enough, and it seems we can't, then that is no license for others not to. CIWEM has taken a leading role, and shows through its work, at home and abroad, how much more could be done. I commend this document to all who have an interest in climate change – and that is all of us.

Introduction

This is a summary of the forward look at possible futures for water and the environment by CIWEM's Future Prospects Group*.

This strategic view demonstrates that a sustainable future can be achieved. However, if we take no action or if we delay taking action, the consequences for us all, and more importantly for future generations, are likely to be major. The possibility of significant loss of life, economic stability severely threatened and an increased risk of conflict are all potentially avoidable, but only through concerted and sustained global efforts.

At this time of economic recession, there is an opportunity to review our social, environmental and business approaches. It is CIWEM's contention that at this time of re-assessing our wealth expectations, there can be benefits to the environment as new efficiencies and savings need to be developed.

President Barack Obama has announced \$150bn investment to offer funding and skills development in green technology.

Lord Turner, chairing the the UK Government's committee on climate

change, asserts that over the next 15 years we need to replace our string of coal fired power stations with three low-carbon technologies – nuclear, renewable and carbon capture/storage. But society will need non-nuclear options for comparison. He contends that meeting the 2050 goal for 80 percent reduction in carbon emissions is achievable, and he includes five-year 'carbon budgets' for different industries, including transport, power generation and manufacturing. The anticipated cost could be one to two percent of GDP at 2050 (see "Building a Low-Carbon Economy" – The first report of the UK Committee on Climate Change, December 2008).

CIWEM's Future Prospects Group's: 2050 Vision aims to assist and inform long-term strategies and short to medium-term planning and policy evolution.

* CIWEM's Future Prospects Group

CIWEM's Future Prospects Group is a group -ing of the Past Presidents of CIWEM, and other invited contributors who come together to offer advice to the public, politicians and business leaders on addressing environmental challenges. Future Prospects works within the CIWEM Charter and is fully aligned to the "CIWEM Manifesto for the Environment – An Agenda for Change".



Summary

1 The climate is changing, the effects will be experienced worldwide and all countries can support the response.

While the extent of the adverse effects of greenhouse gas emissions, climate change and environmental effects will continue to be researched and debated, there is broad acceptance that an urgent and sustained response to the threat is essential.

Society is preparing to deal with the effects and legacy of a remarkable time in human development. For those countries yet to experience comprehensive industrialisation, this is nevertheless a time to consider whether observation, learning and changing some aspects of their own development, could be beneficial.

To expect that response and change can be without impact is wrong. There will be winners and losers and this will need sensitive management to maintain a consensus across the societies affected by climate change and societies affected by mitigation and adaptation activities.

2 Climate change and other environmental issues are adding to existing public health crises. A global response is required.

The timeline to 2050 has been selected to give the current generation, especially those in a leadership role, a view of the legacy they may leave and to inform strategic choices they may make. Climate change is happening alongside other environmental and public health crises. Over 2.5 billion people live without sanitation and one in eight lives without safe water.

A recent report claims that at current rates of progress in sub-Saharan Africa, the safe water target in the Millennium Development Goals will not be met until 2035 and the sanitation target will not be met until the 22nd century. Future Prospects supports the demand that world leaders agree a global framework for action.

3 Immediate action, and the acceptance and management of risk are needed.

Risk management has elements of timescale, chance and outcome, but a significant threat in the distant future does not resonate as much with the public as a

less damaging but more immediate threat. There are many people who will not respond to the threats of climate change that may affect future generations, their response only coming when climate change affects them directly.

The nature and scale of the response is a political matter, where the actions of emerging nations may affect other nations on a much wider global scale. Concerns about long-term risks can stall or even prevent action on immediate problems. Conversely, by being action-oriented to deal with immediate risks, long-term risks may not be considered and timely action may not be taken.

4 There are compounding pressures. Action is required across many functions and activities of human life.

The key environmental issues and challenges are set out and reviewed in Part 2 of CIWEM's 2050 Vision, summarised in a series of key policy sectors that must be addressed over the scenario period.

The food crisis and tackling hunger is critical for global long-term stability, but there are views that the economics of the richer countries and the migration that they attract may be the core of the matter. Consideration of the relationship between economic growth and consumption, migration, and population growth and distribution will inform a more open debate on this sensitive matter. Energy supply needs to be balanced with consumption and consumption itself is driven by population growth. Such compounding pressures underpin many environmental issues, with the potential for conflict over increasingly scarce water and food resources in some parts of the world.

5 Integrated long term planning is essential.

In Part 3 of CIWEM's 2050 Vision, consideration is given to possible responses for each of the issues and challenges highlighted in the preceding review for each water and environment sector.

The preparation of an integrated long-term overarching framework to guide, inform and coordinate policy in each sector is at the heart of CIWEM's 2050 Vision. This will require assessment of specific



sector issues; resource assessment and prioritisation; plan development; establishment of a Core Vision Framework to guide inform and integrate strategy in each sector; and ongoing review, updating and refinement.

6 The required response may need to change and evolve over time.

The uncertainty element in climate change predictions requires a flexible response. This suggests the value of a portfolio or mix of strategies that includes adaptation responses, mitigation strategies, technological development (to enhance both adaptation and mitigation), and research (on climate science, effects, adaptation and mitigation). Both adaptation and mitigation need to start in the short-term, even when benefits may only arise in the decades ahead.

7 Technologies can be developed to support the response to climate change and other environmental issues.

Some of the suggested scenarios will be modified by technological developments and innovations. Further scenario developments, including such technology shifts, will support risk assessments and investment responses to pull the developments and innovations forward.

8 The skills shortage in environmental management to address the matters raised here is critical.

The US Government under President Barack Obama declares that "science holds the key to our survival as a planet..." (see barackobama.com). The US Government proposes to commit \$15 billion per year over ten years to a programme with the objective to develop five million green collar jobs. CIWEM calls on the UK Government to target and commit proportionately in Britain to



develop an appropriate skills pool to underpin both environmental and economic sustainability.

9 Embed the environment in the development of citizenship.

The UK Government launched the Citizen Manifesto Project in 2006. The draft Manifesto is to support citizenship development in the school curriculum. CIWEM's Future Prospects Group encourages the inclusion of environment and climate change matters into the curriculum for citizenship development, so that generations are encouraged to commit to sustainable living, both in their work and their private lives.

10 The public, politicians, business leaders and environmental professionals should work together to raise awareness, promote actions and monitor the effectiveness of our collective response to these global threats.

The sharing of information, exchange of good practice and awareness-raising are crucial elements in the development of appropriate policy and specific responses under CIWEM's 2050 Vision; as is the dissemination of outcomes, monitoring of results and review of policy and strategy. Professional bodies can play a key role in supporting this process.



CIWEM's Future Prospects Group urges other professional bodies in partnership with CIWEM to be proactive in reviewing the issues and the way forward to assist and inform policy evolution, long-term strategies and short to medium-term planning.



CIWEM is an independent professional body and registered charity, advancing water and environmental management for a clean, green and sustainable world. CIWEM is a leading member of the European Water Association and the European Federation of Associations of Environmental Professionals, and together they represent 84,000 water management professionals throughout Europe.

Further information is available at www.ciwem.org, www.ewaonline.de and www.efaep.org.