



WWF

REPORT

UK

2015

A composite image showing the London skyline with modern skyscrapers like The Shard and the Gherkin in the background, and a residential area with brick houses and trees in the foreground. The scene is set against a clear blue sky.

A GREENER BUDGET:

SUSTAINING OUR PROSPERITY IN A CHANGING WORLD



WWF is at the heart of global efforts to address the world's most important environmental challenges. We work with governments, businesses and communities to promote sustainable patterns of development so that both people and nature can thrive. Together, we're safeguarding the natural world, tackling climate change, and promoting prosperous and resilient economies.

Appropriate economic policy is crucial to the achievement of these goals, and the annual Budget is the focal point of economic policy-making in the UK. This report sets out a series of recommendations on what the Treasury could do in the 2015 Budget and beyond, to help drive the transition to a sustainable, resource efficient and low-carbon economy in the UK.

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WHY GREENING THE ECONOMY (AND THE BUDGET) IS IMPORTANT

Recent research by government agencies, businesses and non-government organisations reveals the current scale of the UK 'green economy' - and the substantial economic opportunities that still remain. Some key facts are presented below.

939,000

jobs in the UK's low-carbon and environmental goods and services (LCEGS) sector in 2011/12 (BIS, 2013)¹

£128 BILLION

Sales of UK LCEGS in 2011/12 (BIS, 2013)²

OVER 33%

of UK's economic growth in 2011/12 is likely to have come from green business (CBI, 2012)³

£1.573 TRILLION

estimate of the monetary value of selected components of the UK's natural capital in 2011 (ONS, 2014)⁴

£15.5 BILLION

potential annual health and environmental costs from industrial pollution in the UK that could be reduced by improving air quality (EEA, 2011)⁸

190,000

new jobs could be created by 2030 through measures to reduce UK carbon emissions in line with the first four carbon budgets (Cambridge Econometrics, 2014)⁵

500,000

new jobs could be created by 2030 if the UK were to make substantial progress in moving towards a resource efficient 'circular economy' (Green Alliance & WRAP, 2015)⁶

£1.4 BILLION

additional annual UK revenues that could be expected if UK fish stocks recovered to the average levels seen before the 1970s (NCC, 2014)¹¹

£1.2 BILLION

annual costs to the UK economy that could be reduced by avoiding soil degradation (Cranfield University, 2011)¹²

£2.1 BILLION

potential annual healthcare savings if every household in England had good access to quality green space (Natural England, 2009)¹⁰

£5.7 BILLION

potential annual increase in government revenues by 2030 as a result of measures to reduce UK carbon emissions in line with the first four carbon budgets (Cambridge Econometrics, 2014)⁹

£23 BILLION

potential cost savings to UK businesses (estimated for 2009) that could be gained from no-cost or low-cost resource efficiency measures within a year (Defra, 2011)⁷

PROGRESS TO DATE

FUTURE



FOREWORD

Environmental degradation, resource scarcity and climate change present a trinity of unprecedented risks to economies around the world. These risks are already fundamentally influencing global patterns of investment, production and trade. In response, a growing number of countries are shifting towards economic models that are resource-efficient, low-carbon and geared towards protecting and improving the natural assets on which they ultimately depend.

Despite a pervasive concern that this transition will impose unacceptable costs, the overwhelming consensus among government and business leaders is that economies that do embrace the transition will increasingly be rewarded. In a world where resources and carbon are constrained, failing to act is the more costly option.

Given our ever more globalised economy, the UK's future economic prosperity, too, will depend on how we adapt to these inevitable changes. Mounting evidence shows that actively driving this transition through decisive policy action will pay off – strengthening the UK economy through reduced risks and costs, increased resilience and competitiveness, and through the stimulation of innovation, investment and job creation.

As the main focal point of economic policy-making in the UK, the Budget must play a crucial role in driving this transition – taking better account of systemic risks, investing in the natural asset base on which the economy and businesses depend, and providing greater stimulus to new and emerging sectors that will be vital engines of clean, hi-tech, sustainable growth in the future.

Building a sustainable economy, far from being an expensive luxury, is now imperative for our future.



David Nussbaum, chief executive, WWF-UK

THIS REPORT

This report recommends a series of policy measures that, if included in the 2015 Budget (and beyond), would help to drive the transition towards the sustainable, resource efficient, low-carbon economy that the UK needs.

Policy measures are grouped under five priority areas of action:

- 1 Promoting the protection and improvement of natural capital
- 2 Driving innovation and investment in resource efficiency
- 3 Providing incentives for growth in low-carbon industries and encouraging energy efficiency
- 4 Ensuring government expenditure promotes sustainability
- 5 Promoting a more resilient and sustainable financial system

They are not radical policy changes – they are practical and judicious measures that have been identified based on engagement with experts from government, businesses, industry bodies, academic institutions and NGOs, among others.

Implementing these measures would help the Treasury to fulfil its dual roles of managing the finances of the Exchequer and securing economic prosperity. This requires consideration of the potential implications of global and national trends for the UK's economy and, especially in times of austerity, how to achieve societal goals in the most cost-effective way possible.

These measures would also demonstrate the government's awareness of the importance of changes in the global economic landscape, the threats and opportunities these pose to the UK economy, and commitment to responsible long-term economic policy-making that businesses and the public want to see.

While the measures are considered to be readily 'announceable' in the Budget, in some instances they would require the collaboration with other parts of government and, potentially, political and institutional barriers to be addressed. Many of the measures proposed would also apply to other areas of economic and fiscal policy-making, including Spending Reviews.

“ We do not face a choice between protecting our environment or protecting our economy; we face a choice between protecting our economy by protecting our environment – or allowing environmental havoc to create economic havoc ”

former US treasury secretary, Robert Rubin, 2014¹³

LOOMING CRISIS OR MOMENT OF OPPORTUNITY?

The global picture

All economic activity ultimately depends on natural capital – the stock of natural assets such as ecosystems, species, fresh water, land, minerals, the air and oceans that provide benefits to people. Yet these assets are being lost at an unprecedented rate due to overuse and degradation. Ten years ago, the Millennium Ecosystem Assessment reported that more than 60% of the vital services provided by nature (e.g. supply of food and raw materials, water and air purification, and protection from hazards) that they examined, were being degraded or used unsustainably¹⁵.

“Three of the top 10 risks in terms of impact over the next 10 years are environmental risks: water crises, at the top of the table, and failure of climate-change adaptation as well as biodiversity loss”

World Economic Forum, 2015¹⁴

With the majority of the world’s ecosystems in increasingly advanced states of stress or degradation, we’re living beyond the limits of one planet and impairing the ability of natural systems to regenerate, presenting growing costs to global economies¹⁶. For example, overfishing reduces global income from fishing by US\$50 billion every year compared with a more sustainable fishing scenario¹⁷. The global economic cost of the climate change impacts of deforestation will rise to around \$1 trillion a year by 2100 if unabated, with the total economic cost for the global economy estimated at US\$12 trillion in net present value terms¹⁸.

Climate change is exacerbating these risks. Without concerted action to cut carbon emissions, the planet is on a trajectory for 4°C warming by the end of the century. The risks of such warming are very large, including increased frequency and severity of heatwaves, droughts and floods; increased pressure on water resources; reduced agricultural yields; and further loss of ecosystems and species¹⁹.

The potential global economic implications of these risks are profound. With the global population projected to increase to around nine billion people by 2050, demand for food, energy, land and other resources will intensify, placing further pressure on natural and climatic systems. The nexus of food, water, energy and climate change has been identified as one of four overarching mega-trends that will shape the world in 2030²⁰. By 2030, global demand for water and energy is expected to increase by a further 40%, and demand for food by 50%²¹. The outlook is one of increased competition for resources, supply shocks, price volatility, conflict and reduced resilience²².

“The vast majority of [fossil fuel] reserves are unburnable if the world is to avoid catastrophic climate change”

Mark Carney, governor of the Bank of England, 2014

Consequences for the UK

The UK is not immune to these significant challenges. Based on analysis of the latest evidence, the UK’s Natural Capital Committee (NCC) warned that many of the services provided by our natural capital are at high or very high risk²³. This is already imposing significant costs to the UK economy and businesses (see Box 1). With the UK population set to grow by some eight million people over the next 25 years and a pipeline of £466 billion of UK infrastructure investment identified²⁴, pressure on natural systems will only increase.

The UK also depends on (and affects) stocks of natural capital elsewhere in the world, through international trade and supply chains. Indeed the UK trade deficit in food, feed and drink widened to £21.3 billion in 2013²⁵. The UK also depends on a stable climate and clean air, both of which it is influencing through its atmospheric emissions.

“Successive ‘natural capital deficits’ have built up a large natural capital debt and this is proving costly to our wellbeing and the economy”

Natural Capital Committee, 2015

Box 1

Examples of the economic implications of nature’s decline



Flooding: land-use changes and development have reduced the capacity for UK river catchments and coastal margins to provide the protection from floods that they used to. This is creating increased risk to the economy, businesses and communities – risks that will increase under projected climate change scenarios. The value of the role that coastal wetlands play in mitigating flooding and storm damage alone has been evaluated at £1.5 billion per year²⁶. It would be much more costly to replace this service by other means (e.g. man-made structures).



Soil degradation: the total annual costs of soil degradation in England and Wales (through loss of organic matter, compaction, and wind and water erosion) have been estimated at £1.2 billion a year, including the costs of carbon emissions from degraded soils²⁷.



Overfishing: over-harvesting of many wild fish stocks has dramatically reduced yields, leading to lower economic returns to coastal communities. If UK fish stocks recovered to the average levels seen before the 1970s, it is estimated that additional annual UK revenues could be as high as £1.4 billion²⁸.



Air quality: the annual health, environmental and CO₂ costs of air pollution from UK industry alone has been estimated at £9.5-£15.5 billion²⁹.

“
The transition to a green economy will bring a range of advantages to our economy. It can help UK businesses to manage risks, such as those from increasing and fluctuating fossil fuel prices; increase resilience, such as to the impacts of climate change; and seize the opportunities from new and emerging markets

”
HM Government, 2011³³

Business leaders are sounding the alarm. Nearly a third of profit warnings issued by FTSE 350 companies in 2011 were attributed to rising resource prices³⁰. Investors are also increasingly concerned about the risk of stranded fossil fuel assets, and are putting pressure on asset managers to shelve capital spending in these industries, diversify portfolios and invest in cost-effective low carbon energy³¹. One in six properties in England is already at risk of flooding, and the annual cost of flood damage to properties in England and Wales is projected to rise from £1.2 billion (current average) to as much as £12 billion by the 2080s³². All of these risks are caused by environmental degradation and resource overexploitation, and need to be recognised and managed, starting now.

“
Renewable energy projects across the globe are now matching or outperforming fossil fuels, particularly when accounting for externalities like local pollution, environmental damage and ill health

”
Adnan Z Amin, director-general, International Renewable Energy Association, 2015³⁶

Eyes on the prize

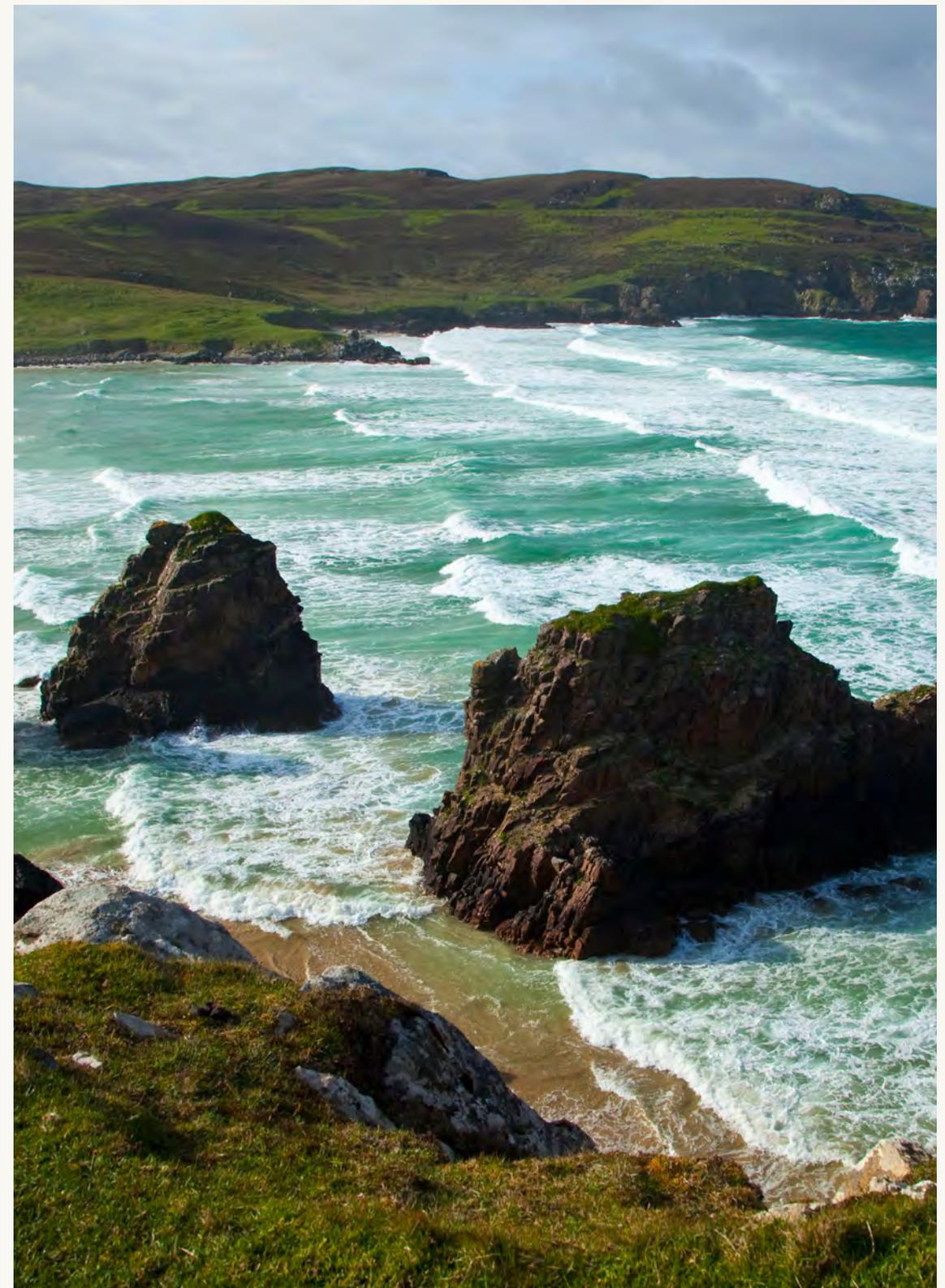
It is now widely accepted that making the transition to a sustainable, resource efficient, low-carbon economy will bring substantial economic benefits. The UK is already a world leader in many aspects. Research shows that over a third of the UK's economic growth in 2011/12 is likely to have come from green businesses, bucking wider national trends during difficult economic conditions³⁴. During the same period, the UK's low carbon and environmental goods and services (LCEGS) sector was worth £128 billion (up by 4.8% from the previous year) and supported some 939,000 jobs³⁵.

But there are many further benefits waiting to be seized. A recent report by Cambridge Econometrics showed that putting in place measures to reduce UK carbon emissions by 60% by 2030 (as recommended by the Committee on Climate Change) would generate a 1.1% increase in GDP and 190,000 new jobs over that time frame³⁷.

“
Significant improvements are possible with the right investments and these will open up a range of economic opportunities for enhancing quality of life for current and future generations

”
Natural Capital Committee, 2015

As described later in this report, numerous other opportunities exist across the economy to generate multi-billion pound returns and create hundreds of thousands of secure, long-term jobs. Some of these are immediate, quick-wins – such as cutting energy and resource use. Others will generate returns over longer-time frames – such as developing a thriving UK re-manufacturing industry and protecting and improving natural capital to help reduce flood risk and improve public health.



Seizing the opportunity

“ Make no mistake we are in a global race and the countries that succeed in that race, the economies in Europe that will prosper, are those that are the greenest and the most energy efficient ”

David Cameron,
UK Prime Minister, 2013

The UK government has already taken some positive steps to help drive the transition – for example, through the UK Climate Change Act, and the creation of the Green Investment Bank (GIB) and the NCC. But there is a growing concern that the pace of change is too slow – and that the risks and costs to the UK economy are multiplying every year as a result, and the UK is losing ground against its competitors.

Clear, credible, long-term policy signals are needed to stimulate the necessary long-term planning and investment in new and emerging sectors. Businesses and industry groups continue to voice concern that ongoing uncertainty regarding long-term UK climate and energy policy is undermining investor confidence and jeopardising growth, jobs and competitiveness. The NCC has warned that without a long-term plan (and targets and incentives) for protecting and improving natural capital, the required public and private investment will not materialise. This would lead to costly impacts, forgone economic opportunities and adverse impacts on people’s wellbeing.

“ The UK’s competitors are increasingly gearing up their response and reaping the rewards. Germany mobilised over US\$20 billion of new clean energy investment in 2012, almost three times more than the UK and the Japanese government plans to create a 50 trillion yen market for green goods and services by 2020³⁸. ”

Economies which fail to reduce carbon emissions will be left with inefficient capital equipment and processes and exposed to volatile fossil fuel prices. Those that seize the opportunities of the green economy will create sustainable jobs and companies and will deliver improved quality of life. The choice is as simple as that ”

Lord Adair Turner, Senior Fellow at the Institute for New Economic Thinking; former Chairman of the UK Financial Services Authority, and first Chairman of the Climate Change Committee, 2015

The UK urgently needs to step up the pace. As described in this report, government bodies, businesses, industry groups, NGOs and others have called for new policy and/or sector specific strategies and plans in a number of areas (e.g. natural capital, resource efficiency and green public procurement), to help drive new innovation and investment and provide the vital long-term policy certainty business needs.

The House of Commons Environmental Audit Committee (EAC) has also called for the development of a new national ‘green economy’ plan to set an overarching, strategic, long-term framework³⁹. The 2011 *Enabling the Transition* paper⁴⁰ merely sets out a list of existing policies, rather than a forward-looking, economy-wide vision that identifies policy gaps and new policy commitments.

The government needs to do more during the next parliament to keep the UK economy in the fast lane. As a recent report by a team of leading UK economists highlighted, the choice is clear: kick-start green innovation by sending clearer policy signals to investors, or dither and lock ourselves further into unsustainable development pathways that will incur spiralling costs down the line⁴¹.

Why the Budget needs to change

The UK’s annual Budget has a crucial role in driving the transition through, for example, its influence over patterns of growth and investment. Spending Reviews – in which expenditure limits are set for government departments – are also important.

“ The UK budgetary process does not include the sort of longer-term vision seen in other countries which could help inform strategic decision-making ”

National Audit Office, 2012

The Budget needs to do more to stimulate new and emerging green sectors that will increasingly become important engines of sustainable growth. It must also put in place the right incentives to ensure that public and private activity is geared towards improving the natural asset base. In times of continuing financial stress, it’s also ever more important that scarce public funds are spent where they deliver the best value for money.

To achieve this, the Budget must shift towards a longer-term planning and investment agenda. With the exception of major infrastructure projects, budgetary processes typically operate on short-term planning horizons (i.e. 3-4 years). This tends to stifle action and investment in tackling ‘big’ systemic issues where the benefits may only occur later and/or the costs of inaction are likely to be large (such as climate change and improving natural capital). According to the National Audit Office (NAO), the UK lags behind other countries in this regard (e.g. Australia, New Zealand and Norway)⁴².

“ A longer-term focus is more conducive to the development of spend-to-save initiatives, which require a willingness to accept short-term costs in return for later benefits ”

National Audit Office, 2012

Budgetary processes also need to be enhanced so that they are better able to address issues that don’t fall neatly into the remit of one department or that span different ‘service areas’⁴³. More focus is needed on outcomes as well as spend. For example, investment in urban green spaces and reducing air pollution would substantially improve health outcomes, but neither is adequately considered in an integrated, least-cost approach to improving public health.

The principles, frameworks and approaches currently used to inform budgetary decision-making also need to be better geared towards maximising overall long-term societal benefits and value for money. The ‘state’ of the economy is still analysed primarily based

on gross domestic product (GDP), with little attention given to the many complementary measures of wealth that have been proposed (e.g. through the ground-breaking work of the ONS and NCC). It's widely accepted that this is not conducive to setting policy that delivers the best long-term outcomes (see Box 2). The discount rates used in the evaluation of policy impacts also tend to systematically undervalue the long-term benefits of natural capital and climate policy (and costs of inaction).

Box 2

GDP: A misleading barometer of economic progress

As a measure of the flow of economic output (or income), GDP says little about the true wealth of a nation, including the stocks of assets that actually underpin economic activity and human wellbeing. So countries can achieve GDP growth in the short to medium term while actually running down their assets – such as the stock of natural capital. In China, high GDP growth rates masked enormous environmental and natural-resource degradation, costing the economy the equivalent of around 9% of the 2008 gross national income⁴⁴. Because a declining asset base can't sustain the same level of output, this is clearly not a sustainable model in the long term (economically, socially or environmentally). In recognition of these challenges, an increasing number of countries and organisations are developing other complementary indicators to help chart a more meaningful picture of economic wealth and progress, and to inform policy decision-making.



There is also a concern regarding the economic modelling approaches used to inform budget decision-making. For example, the Treasury uses HMRC's Computable General Equilibrium (CGE) model to analyse the potential impacts of taxes, but has also applied it to other policy areas, such as the UK's 4th Carbon Budget. Experts warn that, for complex issues such as climate policy, placing too much emphasis on the CGE model is risky, in this case because its design means it is not able to account for the wider benefits of decarbonisation (e.g. accelerated innovation, reduced risk to future growth from climate change impacts, reduced healthcare costs from better air quality, and lower transport congestion)⁴⁵.

Future budgets must be different

Future Budgets (and Spending Reviews) must evolve to help address today's challenges by, for example:

Recognising the links between a healthy economy and a healthy environment.

All economic activity ultimately depends on natural capital. Protecting and improving it must be a key objective of a sustainable long-term economic policy, and a core consideration in budgetary processes.

Taking an integrated, cross-governmental approach.

Breaking down departmental silos during the budgetary process is crucial for tackling complex, long-term issues at the lowest cost. There's a need to focus on outcomes as well as spend, and to make more use of modernised public service agreement approaches⁴⁶.

Putting greater emphasis on long-term planning and investment.

The NAO has highlighted how longer-term budgetary planning leads to better outcomes, reduced public spending and greater value for money⁴⁷. It creates the conditions for promoting 'spend to save' investment in, for example, preventative and restorative action, the benefits of which may only pay off over the long term.

Driving investment in maintaining and restoring natural capital assets.

Like all forms of capital, natural capital requires investment both to maintain and improve it. Targeted public investment would provide significant benefits to the economy, businesses and communities. The Budget also needs to mobilise private finance at a greater scale, to minimise the burden on the public purse.

Providing incentives for more sustainable development pathways.

The Budget needs to create a framework where departments, companies and consumers are rewarded for making sustainable, resource-efficient and low-carbon choices that will enable us to compete in a global economy where natural resources and carbon are increasingly constrained.

This implies some considerable adjustments to budgetary processes, and to the way that the Treasury delivers economic and fiscal policy. But there are immediate steps that the Treasury could take in the 2015 Budget that would move us in the right direction, as set out in this report.

“

Government departments, other than the core ministries of DECC and Defra, tend routinely to give a low priority to environmental objectives

”

National Audit Office, 2013⁴⁸

Where central government leadership can make a difference

Clearly not all of these issues can be addressed by the Treasury alone, and not all of these can be addressed via the recommendations in this report. Indeed, experience shows that the necessary effective, long-term policy decision-making won't be delivered unless political and institutional barriers across all areas of government are addressed. These significant systemic risks cannot be treated as the concern only of 'environment' departments, which usually lack power and status in intra-government discussions. It needs leadership from central government (including the Cabinet Office).

As recommended by the EAC⁴⁹, the creation of a new independent Office of Environmental Responsibility (OER) would also fill a critical governance gap. A new OER would advise the government on appropriate strategy, targets, policies and investments, and monitor and hold government to account on meeting commitments. Such a body would need to work closely with other government bodies, including the Office of Budgetary Responsibility (OBR), which would need to consider implications for public finances (such as investment requirements to protect/improve natural capital).

PRIORITY AREAS FOR ACTION IN THE BUDGET: A SUMMARY

1/ PROMOTING THE PROTECTION AND IMPROVEMENT OF NATURAL CAPITAL

- Announce a package of long-term support for the NCC's proposed 25-year plan for protecting and improving natural capital.
- Initiate a long-term programme of work to integrate natural capital into the national infrastructure plan.
- Improve risk assessment procedures, including via a new natural capital stress test to evaluate macro-economic risk exposure (mirroring the stress testing approach used in the UK banking system).
- Incorporate a new section on natural capital in the annual Budget report, including information on stocks, service/benefit provision, risks, liabilities, future outlook and investment requirements.
- Initiate a new national natural capital investment strategy, setting out the policy mechanisms and incentives required to secure funding.
- Establish capacity in the Green Investment Bank (GIB) to use new sources of funding for natural capital projects, including the new Natural Capital Financing Facility (established by the European Commission and European Investment Bank) and other additional public and/or private funds.
- Announce the development of a fund-pooling mechanism for public spending on natural capital, ready for launch in the next Spending Review.

2/ DRIVING INNOVATION AND INVESTMENT IN RESOURCE EFFICIENCY

- Implement a package of incentives to encourage resource efficiency, including increasing the lower rate of landfill tax and a tax on incineration, and measures to increase access to affordable finance.
- Commission a review of the risks and opportunities that resource insecurity poses to the UK economy, taking into account the exacerbating effects of climate change.
- Undertake and publish a review of policy options for promoting resource efficiency, considering the effectiveness of existing policies and incentives and how they interact, and the impacts and cost-effectiveness of options available.

3/ PROVIDING INCENTIVES FOR GROWTH IN LOW-CARBON INDUSTRIES AND ENCOURAGING ENERGY EFFICIENCY

- Support a long-term policy package that will give industry the confidence to invest in renewables and energy efficiency, and clarify what financial support is available to the UK's renewable energy industry beyond 2020. This will accelerate the reduction of costs in these technologies.
- Support a major programme of investment in energy efficiency as part of the government's long-term infrastructure plan, funded by recycling carbon tax revenues, including an ambitious plan to retrofit homes, and adjustments to stamp duty and council tax to encourage uptake of the Green Deal.
- Support the GIB in increasing and diversifying its investments. The GIB should be granted the powers to borrow from private capital markets.

4/ ENSURING GOVERNMENT EXPENDITURE PROMOTES SUSTAINABILITY

- Commit to ambitious targets for green public procurement (GPP) beyond 2015. These should apply to all publicly-funded bodies. They should build on and extend the Greening Government Commitments, which included GPP targets up to 2015.
- Commit to undertaking a full inventory and analysis of environmentally-harmful subsidies (EHS) in key sectors in the UK, and to developing a roadmap for phasing out EHS in priority sectors by 2020.

5/ PROMOTING A MORE RESILIENT AND SUSTAINABLE FINANCIAL SYSTEM

- Strengthen sustainability considerations within the mandate of financial regulatory bodies, by establishing a clear requirement for the Bank of England and the Financial Conduct Authority (FCA) to explicitly take sustainability issues into account in the regulatory frameworks that govern financial markets.
- Establish a national legislative framework requiring companies and financial institutions to produce an annual integrated sustainability report on a mandatory 'comply or explain' basis.
- Impose clear duties on investment companies to act responsibly in savers' long-term interests, and to guarantee savers' rights to scrutinise investment decisions made on their behalf (e.g. by bringing forward a Responsible Investment Bill).

1/

PROMOTING THE PROTECTION AND IMPROVEMENT OF NATURAL CAPITAL

Integrating natural capital into economic policy decision-making

Mounting evidence shows that natural capital is under increasing threat and that, as a consequence, many of the benefits it provides and which underpin the economy are at risk. Substantial economic gains could be realised through concerted action to protect and improve natural assets and from using them sustainably (see Box 3). The Natural Capital Committee (NCC) has emphasised that, to achieve this, natural capital must be properly accounted for in policy, planning and investment decision-making⁵⁰. This would substantially enhance the net benefits and value for money of public spending and, ultimately, help to secure sustainable economic growth.

“
The decline in natural capital seen over the last 60 years will continue into the future, and is likely to accelerate, unless there is some radical departure from the approaches of the past
”
Natural Capital Committee, 2015

Box 3

Benefits to UK economy from protecting and restoring natural capital

A more resilient economy, braced for resource shocks and disaster risks.

Protecting and improving natural capital, and using it sustainably, would secure the vital services and benefits it provides (e.g. access to raw materials, food, water and energy). This would reduce the potential risks to economic activity and supply chains from resource shortages, disasters and climate change.



More cost-effective delivery of public services.

Natural capital provides a range of vital services that have a strong public goods element (e.g. regulation of water supplies, waste assimilation, flood/erosion protection, carbon storage and sequestration, food supply, recreation, and improvement of health and wellbeing). Protection and improvement of natural capital is also often cheaper than man-made alternatives as a means of securing supply of these services.



Supporting achievement of statutory policy commitments.

For example, implementing natural capital projects would help the UK to reduce its overall carbon emissions more cost-effectively, by reducing the need for more carbon-intensive man-made alternatives (e.g. using natural flood defences instead of or in combination with concrete walls), and by storing and/or sequestering carbon (e.g. peatbogs, forests and other habitats are carbon stores/sinks).



Generating economic growth where it is needed.

Natural capital protection and improvement projects would generate economic benefits through new businesses and job creation in rural and coastal areas (e.g. in forestry, fisheries and land management); areas that often suffer from a lack of economic opportunities.

The NCC has set out a number of priority measures, many of which could be incorporated into the Budget. The NCC's overarching recommendation is the development of a statutory 25-year plan for protecting and improving natural capital, including clear targets, a way of prioritising actions to meet targets, and milestones against which to monitor progress⁵¹. Treasury should take a leadership role in developing and implementing the plan, which should apply to all areas of government policy. Given the UK's dependence (and influence) on natural capital in other parts of the world, there is also a strong case for the plan to consider the international dimension.

“
Successive 'natural capital deficits' have built up a large natural capital debt and this is proving costly to our wellbeing and the economy
”
Natural Capital Committee, 2015

As emphasised by the NCC, integrating natural capital into the national infrastructure plan (NIP) is another priority, a commitment to which should be included in the Budget⁵². All of the main infrastructure sectors (e.g. housing, transport, energy and water) should fully address impacts to natural capital according to the established mitigation hierarchy (avoid, minimise, restore, offset). Given the government's commitment to improving natural capital, the overall ambition for the NIP should be to secure a net gain for nature. The introduction of an independently regulated biodiversity offsets regime could help to achieve this, and could stimulate a market worth up to £1.2 billion per year⁵³.

“
If our natural capital is to continue to support development now and in the future, it is essential that it is properly taken into account in all decision-making and is invested in appropriately, such as through the government's national infrastructure plan
”
Natural Capital Committee, 2014⁵⁴

The second (and perhaps more transformational) dimension is to consider critical natural assets as an integral part of the NIP. Natural capital is part of the nation's infrastructure portfolio, sustaining economic growth and providing vital public services

(e.g. water supply, pollination and reducing flood risk). In many cases natural infrastructure is more cost effective, lower carbon and more climate resilient than man-made alternatives (see Box 4).

Box 4

Examples of cost-effective natural infrastructure in action



Coastal flood protection: In 2013 the Environment Agency completed the Medmerry managed realignment scheme as a cost-effective means of managing coastal flood risk and meeting EU obligations⁵⁵. Existing flood barriers were breached and new barriers built up to 2km inland, creating large areas of wildlife-rich wetland that are popular with visitors. The scheme costs £28m (far lower than the alternative of building bigger barriers in the existing location) and delivered direct benefits of over £90m, as well as many other socio-economic benefits. The scheme has already helped avoid significant damages to local infrastructure during the 2013/4 winter storms. Other similar schemes have been completed in Freston Shore (the Wash), Alkborough Flats (Humber estuary) and Plusterwine (tidal Severn).



Water purification: United Utilities (a water company) initiated the Sustainable Catchment Management Programme (SCaMP) project in order to secure supplies of cleaner water and reduce its treatment costs⁵⁶. The scheme involved restoring and re-wetting upland blanket bog, in order to reinstate its natural water purification services. Historical land drainage has dried out and eroded the peat bogs, causing them to release colour and sediment into waterways and millions of tonnes of CO₂ into the atmosphere. The scheme has significantly reduced UU's production and waste handling costs (due to less colour leaking in the water it sources), and generated wider socio-economic benefits. The scheme has delivered estimated net benefits of £6.27m over a 25-year period – far greater than would have been gained by investing in more costly treatment at UU's plant. Overall, the benefits from increased carbon sequestration, improvements in biodiversity and reductions in water treatment costs exceeded habitat restoration costs by a ratio of 3:1.

The NCC's 3rd report also emphasises that, while we needn't delay where priorities are clear, various 'building blocks' need to be put in place to ensure that long-term planning is effective and efficient. The NCC recommends that the government should urgently step up action to ensure that the ONS and Defra meet the target of incorporating natural capital into the national accounts by 2020, particularly by

fast-tracking the development of individual asset accounts. Further research is also needed to fill evidence gaps (e.g. on the condition of certain natural assets and critical thresholds, beyond which restoring assets/services becomes much more costly or impossible).

“
The choices that we make about infrastructure enable us to shape the type of economy and society that we want for the future”
HM Treasury, 2014⁵⁷

There is also an urgent need to incorporate measures of natural capital stocks within a comprehensive suite of national wealth indicators (to complement GDP). Progress is being made, such as through the ground-breaking work of the ONS and NCC. It is vital that the Treasury collaborates with the relevant agencies to accelerate this work and maximise its policy utility, and to help drive cross-government support for this agenda.

Annual budget reports, however, say little about this vital component of the nation's economic health, presenting a 'state of the economy' report based primarily on GDP. Future budget reports should provide information on natural capital stocks (and risks and liabilities), as a vital part of the UK's economic performance, and evidence base on which budget decisions need to be based.

“
Government should look for opportunities to speed up the integration of natural capital accounting into the national accounts where possible”
Natural Capital Committee, 2014⁵⁸

Weaknesses in the decision-making frameworks and procedures used by the Treasury also need to be addressed, particularly the Green Book. The NCC has set out recommendations on specific improvements, including a requirement to consider potential impacts on natural capital stocks during policy evaluation. The use of discount rates should also be reviewed, to ensure that the long-term consequences of natural capital protection and improvement are adequately weighted.

More explicit treatment of risk and uncertainty related to natural capital is also needed. The NCC's natural asset risk register provides a framework to help drive this forward, the development and application of which should be fast-tracked. Revision of the national risk register may be warranted for significant risks.

A new, forward-looking 'natural capital stress test' could also be developed to examine macroeconomic risks from natural capital degradation/loss. Stress testing is used in the UK banking sector to evaluate risk exposure and resilience under potentially adverse future economic scenarios⁵⁹. A similar approach could be adopted to help assess and manage risks associated with the loss of natural capital. The UK National Ecosystem Assessment Follow-on (UKNEAFO) also recommended improvement of the government's analytical capability around interactions between the macroeconomy and the environment⁶⁰.

Recommendations to the Treasury for the Budget:

Announce a package of long-term support for the NCC's proposed 25-year plan for protecting and improving natural capital.

The Treasury should commit to providing technical and financial support for the development of this plan, which will need to identify/prioritise a wide range of economic and fiscal measures to help drive the necessary changes in planning and investment. The plan should target natural capital investment to meet broader policy objectives cost-effectively (e.g. decarbonisation, health and flood protection) and transcend the specific priorities of any one government department or parliamentary term. Infrastructure UK (IUK) should be closely involved, in order to ensure alignment with the NIP. Ultimately the plan should be scaled-up to the UK level, and take into account the international dependencies and impacts on natural capital.

Initiate a long-term programme of work to integrate natural capital into the national infrastructure plan and pipeline.

The Treasury (and IUK) should work with relevant government agencies and stakeholders to identify ways to incorporate natural capital considerations fully into all key infrastructure sectors, and to prioritise and target natural capital projects to include in the NIP. This should promote, through learning from demonstration projects, a pipeline of priority bankable projects for which funding mechanisms can be identified (see the next section). Infrastructure planning principles/frameworks should ensure a 'level playing field' in which natural capital projects are evaluated and prioritised on the same basis as other types of infrastructure, irrespective of funding routes and mechanisms. Additional information should be incorporated into the existing infrastructure pipeline evidence base for all NIP projects (e.g. on potential implications for natural capital stocks/benefits and carbon emissions)⁶¹.

Improve risk assessment procedures, including via a new natural capital stress test to evaluate macro-economic risk exposure.

A natural capital stress test could identify the exposure of UK Plc and individual economic sectors to potential changes in stocks of natural capital and associated service/benefit provision, and inform decisions about what level of assets should be maintained to mitigate risk (and associated policy/investment requirements). The test could explore the potential economic (and budgetary) implications associated with a range of different scenarios, related for example to changes in specific UK and international natural assets (e.g. fish stocks, water and forests) and/or relevant drivers/pressures (e.g. extreme weather events, global warming and population growth). As the process is refined, interactions between scenarios, natural capital assets and/or economic sectors could be explored.

Incorporate a natural capital report in the annual Budget report.

This should include information on stocks, service/benefit provision, risks, liabilities and future outlook. The 2015 report should draw on existing evidence (e.g. from the NCC and UKNEAFO), with subsequent reports building a more complete picture as evidence gaps are filled and analytical capability improves. Discussion should also be provided on the implications for: the UK's economic outlook, public finances (including natural capital investment requirements/commitments, linking with the reports of the OBR) and potential impacts of other policies on natural capital stocks/risks (e.g. economic/fiscal measures, infrastructure development). Clarity should be provided on how the information was used to inform development of the Budget measures.



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Mobilising investment in natural capital

A review of evidence by the NCC shows that targeted investment in natural capital would generate substantial economic benefits, demonstrating benefit-cost ratios that are comparable to other forms of investment, such as road, rail and housing. The NCC emphasises that it's crucial to support the 25-year plan with a long-term programme of investment⁶². Yet investment is not flowing at the scale and pace required to halt, let alone reverse, declines in natural capital stocks.

“ We can already show that many natural capital investments generate attractive benefit-cost ratios and with further research to strengthen the evidence, the investment case for individual projects at specific sites is likely to grow

”
Natural Capital Committee, 2015

As the NCC stresses, financing arrangements are not the sole responsibility of the Treasury. The government must ensure the right incentives are in place (e.g. legislation, taxes and subsidies) and provide some proportion of the required funding, but the private sector and civil society also have a significant part to play, as we are all dependent on natural capital and share responsibility and an interest in its maintenance. With ongoing concern over public sector cuts and deficit reduction, it's more urgent than ever that efforts are scaled-up to attract other sources of finance.

Private sector interest in natural capital investments is growing, driven by increasing evidence of opportunities for financial return, higher standards in global best practice, and a growing interest in investments that generate wider public benefits. For example, the insurance industry is increasingly interested in natural capital investment as a means of reducing exposure to natural disaster risks (e.g. flooding/coastal erosion).

The NCC has identified a number of financing mechanisms that the Treasury could use to attract non-government investment, and which could be introduced via the Budget, including:

- Rents from non-renewable resources, via the establishment of a 'wealth fund' derived from the depletion of fossil fuel assets, part of which should be invested in natural capital.
- Greater use of economic instruments (e.g. taxes and charges), to disincentivise harmful activities and to raise revenue that could contribute towards protecting natural capital.
- Reforming (and eliminating) environmentally harmful subsidies, to ensure that public expenditure is directed towards where it delivers improved outcomes for natural capital.

The NCC also identifies other non-government finance sources that would benefit from Treasury support (including via the Budget).

These include:

- Capital maintenance payments from asset owners, in order to protect and improve natural capital that they own or manage (this would also apply to government owned natural assets).
- Payments from developers, to compensate for and/or offset unavoidable damages to natural capital.
- Potential new and innovative sources, such as a plastic bag charges (the scheme proposed for England in 2015 could raise £100m), payment for ecosystem services, crowd funding schemes etc.
- Taking advantage of match funding opportunities (e.g. the EU Life Programme).

Identifying and implementing a package of appropriate funding mechanisms (and supporting policy framework) is a key priority. Securing funding will hinge on overcoming a range of barriers. There is a still prevailing view that investment in natural capital is risky – for example, due to a lack of market experience, relatively long investment and project payback periods and uncertainties about target markets, revenue streams and profit margins. The small scale of many individual natural capital projects also reduces their attractiveness to investors.

The Treasury should support an urgent programme of work to identify a pipeline of bankable projects, and implement the policy framework to incentivise and secure investment (including measures to help boost investor confidence). There is much to learn here from experience in other sectors. The CBI has emphasised that the Treasury must ‘get out there’ to sell infrastructure projects to investors, improving the availability of critical information (e.g. on potential returns) as part of a more commercialised approach⁶³. The same will apply to natural capital.

The Green Investment Bank (GIB) could play a key role too. The GIB is actively exploring investment opportunities in natural capital projects, but has not yet been able to satisfy the required commercial rates of return. Establishing capacity within the GIB to use funding from other sources – such as the new Natural Capital Financing

“
There is a challenge on providing a financing model for natural capital projects but we continue to work with the market on projects which aim to protect or enhance biodiversity and the natural environment, including providing natural solutions on issues of climate change adaptation”

Gavin Templeton, head of sustainable finance, Green Investment Bank, 2015

Facility⁶⁴ (established by the European Commission and European Investment Bank) as well as other private/public investments – would enable it to support the development of a UK natural capital project pipeline and, over time, leverage additional investment from private investors.

There are other actions that the Treasury could take. As emphasised by the NCC, there is a need to improve processes for prioritising public investments generally. All public decision-making should be based on a ‘level playing field’ in which the services/benefits provided by natural capital (and their value) are explicitly recognised and considered over appropriate timescales (long term). For example, natural capital flood and coastal risk management (FCRM) solutions should be subject to the same evaluation/ investment criteria as others, irrespective of funding routes and mechanisms. This will maximise the overall long-term benefits of public spending and improve value for money.

The Treasury should also encourage collaboration across government departments, to identify where natural capital investments could deliver against multiple objectives, and promote cost-sharing (see Box 5). This could be encouraged via greater use of ‘fund pooling’ approaches, which have been used effectively in the past to improve value for money and outcome delivery.

Box 5

Fund-pooling: examples of opportunities for improving cross-government cooperation and cost-sharing

Improving the quantity, quality and use of green space could play an important role in reducing costs relating to mental and physical ill-health. Natural England estimated that if every household in England had access to good quality green space, annual savings of £2.1bn could be achieved in averted health costs⁶⁵. Funding of green space is primarily a Local Authority responsibility, yet much of the benefit is realised by other areas of government, including by the National Health Service, Public Health England and Department of Health, as well as the Department for Work & Pensions (through reduced work absence and benefits dependency) and the Department for Business, Innovation & Skills (through improved workforce productivity). Improved cooperation and joint-funding of natural capital projects across departments, as part of overall UK health care policy, could cut overall costs and improve value for money.





The annual cost of flood damage to properties in England and Wales is projected to rise from £1.2 billion (current average) to as much as £12 billion by the 2080's⁶⁶. Natural capital FCRM solutions can deliver on many government policy objectives, safeguarding businesses, homes and local economies, improving health and storing carbon. Potential beneficiaries include the Treasury, Department for Business, Innovation & Skills, National Health Service, Department of Health, Department for Transport, Department for Work & Pensions, Department for Communities & Local Government, Home Office and Ministry of Defence. Improved collaboration and co-funding would provide greater incentive for flood risks to be considered in departmental planning processes, spread the cost and improve value for money.

Recommendations to the Treasury for the Budget:

Initiate a new national Natural Capital Investment Strategy.

Building on the work of the NCC, the Treasury should initiate and support a long-term, cross-government initiative that would seek to identify priority natural capital investments, and to provide incentives and secure funding (to support the 25-year plan and natural capital projects incorporated into the NIP). It should develop an investment priority framework (as recommended by the NCC) and identify demonstration projects to help strengthen the 'proof of concept' that projects provide economic/financial returns. It should evaluate/identify the full range of financing options available and establish the enabling policy mechanisms (legislative, market-based or other). A strong focus on measures to help boost investor interest and confidence will be needed, such as options for aggregating projects/investments, targeted use of public funds to improve project investment ratings/reduce risks (e.g. first loss debt financing and guarantees), investor engagement and marketing.

Establish capacity in the GIB to use new sources of funding.

These could include NCCF and other additional public and/or private funds. One possibility would be the creation of a Green ISA, to be managed by the GIB and used to fund green infrastructure, which would create opportunities for the public to benefit from sustainable investments. In this way, the GIB could play a role in helping to finance natural capital demonstration projects and establishing 'proof of concept'. As projects mature and demonstrate returns, the GIB could provide finance at an increasing scale on standard commercial investment terms. Over time this will build confidence and interest among other private investors. The aim should be to develop a pipeline of natural capital investment projects, to identify (i) those that can meet the GIB investment criteria and/or attract other private investors within five years, and (ii) those that will remain unsuitable for the GIB, for which other investment approaches will be needed.

Announce the development of a fund-pooling mechanism for public spending on natural capital, ready for launch in the next Spending Review.

A review of opportunities and appropriate incentives should be undertaken across relevant government policy areas, and at relevant scales. Urban green infrastructure and FCRM appear to offer substantial potential. Fund pooling could be encouraged in a number of ways, including through 'pool it or lose it' approaches and providing additional funding for innovative use of pooled spend.

2/

DRIVING INNOVATION AND INVESTMENT IN RESOURCE EFFICIENCY

In a world where natural resources are becoming increasingly scarce, resource efficiency is a quick win. Nearly a third of profit warnings issued by FTSE 350 companies in 2011 were attributed to rising resource prices⁶⁸. Improving the ‘circularity’ of the economy (e.g. through reuse, recycling, remanufacturing and recovery) helps to insulate businesses against supply and price shocks, cuts waste and saves costs⁶⁹. Defra identified a range of no-cost or low-cost resource efficiency measures that could save UK business at least £23 billion within a year (as of 2009 £19 billion related to waste and water, and £4 billion related to energy)⁷⁰.

Developing a thriving UK resource recovery industry would also create new business opportunities and jobs. A recent study estimated that 500,000 new jobs could be created by 2030 if the UK were to make substantial progress in moving towards a resource efficient ‘circular economy’⁷¹. The All-Party Parliamentary Sustainable Resource Group estimated that the UK remanufacturing industry alone is already worth at least £2.4 billion⁷², with other estimates suggesting it has the potential to increase to £5.6 billion⁷³.

Many businesses are acting on their own initiative, seeing the commercial benefits of becoming more resource efficient⁷⁴. But they can’t do it alone and significant barriers remain, even for companies that are actively leading in this sector. Industry figures are increasingly calling on the government – particularly the Treasury – to do more to promote the shift towards circularity, particularly by improving policy incentives, access to affordable capital and government procurement rules⁷⁵, and by publishing a clear plan of action based on a strategic, whole-economy approach⁷⁶. Many of the UK’s competitors in Europe, Asia and the Americas have already made such commitments and are reaping the rewards.

Developing such a plan (and identifying specific, cost-effective policy mechanisms) will require a fuller understanding of how exposed UK Plc is to resource security risks. In 2012, chief economists of several UK government departments asked the Treasury’s chief economist to support such a ‘Stern for Resources’ review⁷⁷. But, despite widespread support from business, no action has yet been taken.

“Eighty per cent of senior manufacturing executives cite limited access to raw materials as a present business risk and threat to growth”
UK Manufacturers Association, 2012⁶⁷

“Becoming more resource efficient contributes to a business’s bottom line, increases profitability and their capacity to grow. In addition to improving competitiveness, businesses could reduce carbon emissions by 29 million tonnes a year; so it’s a win-win for business and the environment”
Caroline Spelman, environment secretary, 2011

“M&S’s Plan A initiative saved £50m a year through energy efficiency but, more than that, has enabled the company to innovate and take a leading market position in offering greener products”
Mike Barry, M&S

Recommendations to the Treasury for the Budget

“Breaking the link between primary resource use and economic growth is essential if we want to create a truly sustainable economic system that can cope with rising global demand and population growth”

Environmental Audit Committee, October 2014⁷⁸

Implement a package of incentives to encourage resource efficiency.

This should include increasing the lower rate of landfill tax and a tax on incineration. Steps should also be taken to increase access to finance for resource efficiency measures (particularly for SMEs), including targeted use of public funds to improve the investment profile of projects/reduce risk (e.g. first loss debt financing and guarantees).

Commission a review of resource insecurity risk and opportunity to the UK economy.

The review should examine the UK’s exposure to (national and global) resource risks (including natural and other resources), and the potential impacts on the UK economy and key business sectors, taking into account future climate change scenarios. Strong leadership from the Treasury for this will be vital, as will close coordination with the National Security Council (NSC), and input from other relevant agencies, committees and stakeholders.

Undertake and publish a review of policy options for promoting resource efficiency.

This should examine the effectiveness of existing policies and incentives and how they interact, and identify the impacts and cost-effectiveness of options available. A wide range of potential measures have been proposed, such as a primary resource tax, targeted product taxes, differential VAT rates (subject to EU rules), pay-as-you-throw policies, feebate schemes, and improvements to public procurement rules^{79 80}.

3/ PROVIDING INCENTIVES FOR LOW-CARBON INDUSTRIES AND ENERGY EFFICIENCY

The UK's low-carbon economy is already growing. Between 2010 and 2013, investments worth £29 billion were announced, with the potential to support 30,000 jobs⁸². But while the UK is on track to meet the first two carbon budgets, the longer-term picture is mixed. There's considerable uncertainty about the government's commitment to decarbonisation, including conflicting policy signals concerning support for renewables versus fossil fuels.

Mounting evidence suggests that decisive policy action – making decarbonisation and energy efficiency national priorities – makes clear economic sense and will provide substantial benefits to UK Plc. It will also boost UK competitiveness in a low-carbon global economy and reduce the UK's reliance on imported fossil fuels. Recent modelling by Cambridge Econometrics shows that measures to reduce the UK's carbon emissions by around 60% by 2030 (as recommended by the CCC) would increase GDP in net terms, create at least 190,000 additional jobs, increase average annual household incomes, and increase the government's revenues (by £5.7bn per year)⁸³.

Oil price volatility further strengthens the case for low-carbon investments. Renewables exhibit falling costs, lower price volatility, lower carbon emissions and superior security of supply⁸⁴. Rather than inject further subsidies into risky fossil fuel assets, the UK has the opportunity to catapult its low-carbon sector into maturity and reap the rewards.

Promoting energy efficiency

Reducing energy demand through efficiency measures is a particularly effective way of meeting decarbonisation targets, and would provide substantial economic benefits. Improving the energy efficiency of UK homes through a national domestic retrofit energy efficiency programme is a key priority.

Evidence suggests that this would increase GDP, generate 108,000 net jobs per year (over the period 2020-30), cut annual CO₂ emissions by 23.6 megatons by 2030, and cut healthcare costs

“With a third of all our growth accounted for by green business last year [2011], the UK could be a global front-runner in the shift to low-carbon

”
John Cridland, director general, Confederation of British Industry⁸¹

“The game has changed; the plummeting price of renewables is creating a historic opportunity to build a clean, sustainable energy system and avert catastrophic climate change in an affordable way

”
Adnan Z Amin, director-general, International Renewable Energy Association, 2015⁸⁵

(thanks to warmer and more comfortable homes, and improved air quality)⁸⁶. Reducing demand would also cut future costs of energy infrastructure, potentially by as much as £125 billion (between 2010 and 2025)⁸⁷.

Domestic energy efficiency measures would also reduce household energy bills, making it a potentially popular measure with the electorate. Total consumer savings could be as much as £8.61 billion a year nationally (an average of £400 for every home). That's enough to eliminate fuel poverty for 90% of the several million affected households in the UK⁸⁸.

Such a programme would require a range of incentives to encourage households to implement home improvements – for example via financial support to retrofit home insulation. The total public investment required for the scheme in the first parliamentary term would be in the region of £8.1bn, with the programme generating a return of £3.20 for every £1 invested in terms of GDP by 2035⁸⁹. This investment could be funded partly or fully by investing a proportion of the £60 billion in carbon tax revenues the Treasury will collect over the next 15 years⁹⁰.

Supporting growth in low-carbon industries

According to the EAC, the level of investment is currently running at less than half that needed to meet decarbonisation targets. It's a shortfall of £10-12 billion a year – a figure that's increasing each year that insufficient investment is made⁹¹. To retain the UK's position as a global leader in new renewable technologies, and to secure the substantial private sector investment that's required, the Treasury must put in place a clear long-term policy framework that will give industry confidence that demand for low-carbon energy will continue to rise and that such investments will provide a return.

The sector needs an urgent policy stimulus to promote demand for low-carbon solutions, enhance investor confidence and accelerate cost reductions in these technologies. Increased investor confidence means the costs of decarbonising our energy infrastructure will be paid for by an increasingly broad range of actors in the private sector (including institutional investors). It would also permit the development of a competitive UK supply chain for energy efficiency and renewable energy technologies, which would boost UK exports and lead to larger GDP gains⁹².

“To those who say we just can't afford to prioritise green energy right now, my view is we can't afford not to

”
David Cameron, 2013

“Offshore wind could cost as much as £140 per megawatt-hour in the absence of a 2030 target, but with one in place, that cost could fall to £100 per megawatt-hour

”
Committee on Climate Change⁹³

The GIB has a key role to play in supporting the transition to a low-carbon economy. Since its launch in 2012, it has directly committed £1.8bn and leveraged over £6bn worth of private investment in 41 projects in over 200 locations around the UK⁹⁴. However, it currently lacks borrowing powers, which hampers its ability to access finance and limits its range of investment options. The Treasury should remove this constraint and provide additional support to help the GIB develop its pipeline and track record going forward. To date, the GIB has invested primarily in projects in energy efficiency, offshore wind, waste and biomass, but there are many other investment opportunities, for example in the transport sector.

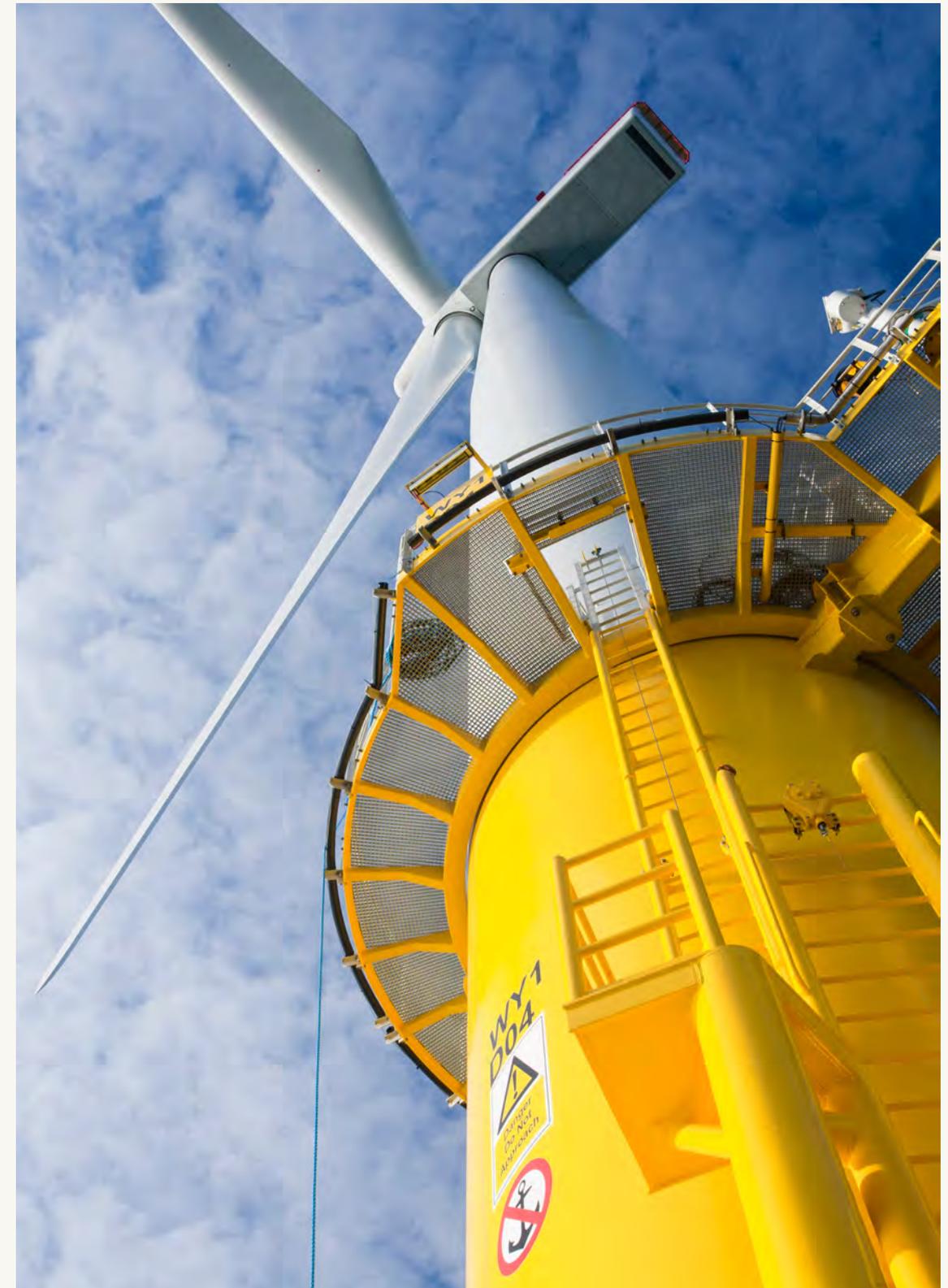
Recommendations to the Treasury for the Budget:

Signal the government's intention to continue moving the UK towards a low-carbon future, taking firm, positive action to decarbonise the economy.

This should include providing clarification of support for renewables after 2020 to give certainty to investors, improve competitiveness down the supply chain, reduce costs through economies of scale, and maximise returns to the economy. It should make energy efficiency a national infrastructure priority, introducing an ambitious retrofit programme to deliver this, funded through recycling of carbon tax revenues. It should also be supported with adjustments to stamp duty and council tax to encourage uptake of the Green Deal

Support the Green Investment Bank in increasing and diversifying its investments.

The Treasury should grant the GIB powers to borrow from private capital markets. This would substantially increase its positive impact by enabling it to expand its activities. The Treasury should also provide increased support to the GIB to help it diversify its investment portfolio.



4/

ENSURING GOVERNMENT EXPENDITURE PROMOTES SUSTAINABILITY

Increasing the proportion of sustainable (green) public procurement

In 2012/13, the public sector spent £230 billion on procurement of goods and services (including capital assets)⁹⁵. With this immense buying power, the government could secure significant economic gains by increasing the proportion of green public procurement (GPP). Increasing GPP would promote green investment by suppliers, reduce risk exposure for businesses and the UK economy (e.g. by reducing resource/energy use), and help the government meet its policy objectives (e.g. reducing carbon emissions and waste).

Boosting GPP would increase the UK's competitiveness in the growing global market for low-carbon and environmental goods and services (LCEGS), which was worth £3.4 trillion in 2011/12, creating potential for new export opportunities and jobs⁹⁶. Substantial new LCEGS opportunities exist in sectors such as construction, transport, energy, food/catering services, office machinery/computers and paper/printing.

GPP is also cheaper. The lifetime costs of green goods and services are typically lower, since any initial premium is more than offset by savings on operating, maintenance or disposal costs. One study showed that GPP reduced overall costs for UK public sector organisations by almost 6%⁹⁷.

The UK has taken some good steps towards GPP, but much more needs to be done to reap the full rewards. Defra's 2011 *Greening Government Commitments* include targets for GPP up to 2015⁹⁹. These commitments were a step in the right direction, but they have not been updated, and they fall short of the comprehensive set of long-term objectives required. Progress on GPP is also not comprehensively reported, which makes progress difficult to determine.

The Treasury should work closely with other government departments to drive a new ambitious GPP agenda – one that improves the sustainability across all publicly-funded bodies and encourages the development of new, more sustainable products and services across the entire government supply chain.

“GPP is an obvious win-win that EU member states cannot afford to miss”
Janez Potocnik, former European commissioner for environment⁹⁸

Removing environmentally-harmful subsidies

At a time of austerity, there's no room for environmentally-harmful subsidies (EHS) in the public budget. Continuing to provide such subsidies makes no economic sense, as they waste public money on activities that are not in society's interests, and their negative environmental impacts then need to be offset by other interventions that might cost additional money.

The removal of EHS is increasingly acknowledged to be a key pillar of any sustainable and responsible fiscal and economic policy package. There's a growing body of evidence that tackling EHS in their many forms (see Box 6) – will improve value for money, benefit the environment, and help to meet wider economic and social goals.^{100 101 102 103}

Box 6

Types of environmentally-harmful subsidies based on IEEP research¹⁰⁴

- Direct transfers of funds (e.g. coal mining subsidies)
- Potential direct transfers (e.g. limited liability for oil spills)
- Provision of goods or services (e.g. 'free' litter cleaning services at large events)
- Provision of general infrastructure (e.g. a highway, free parking)
- Income or price support (e.g. price premiums for electricity from waste incineration)
- Forgone government revenues (e.g. preferential tax treatments such as reduced excise duty for diesel used in agriculture, favourable taxation of company cars)
- Preferential treatment (e.g. market access for certain groups, exemptions from standards)
- Lack of full cost pricing (e.g. incomplete coverage of drinking water costs)
- Absence of resource pricing (e.g. free access to fish stocks and raw materials)



But in the UK, there's a lack of transparency on EHS and the scale of the risks and costs they pose to the economy and the environment. In fact, there's still some controversy about what types of support should be included in this categorisation. In its 2010 *Energy Subsidies* inquiry report, the EAC called on the government to

provide a clear and comprehensive analysis of these subsidies in the UK¹⁰⁵. A number of other countries produce reports that identify EHS in key sectors (e.g. in Germany¹⁰⁶, the Netherlands¹⁰⁷, France¹⁰⁸¹⁰⁹, Sweden¹¹⁰ and Finland¹¹¹), and the EU has undertaken a number of reports in recent years.^{112 113 114}

The Treasury should identify and report publicly on EHS. It should open up that analysis to independent review and implement reform in key priority areas.

Recommendations to the Treasury for the Budget:

Commit to ambitious GPP targets beyond 2015.

The Budget should announce plans to update and extend the existing 2015 commitments, including the establishment of clear GPP targets for the next five years. These should apply to all publicly-funded bodies, including local government and delivery bodies (e.g. prisons and hospitals). Information should be published on performance against targets, and financial penalties should be applied where targets aren't met.

Undertake a full and transparent inventory and analysis of EHS in key sectors in the UK.

Key sectors include energy, transport, agriculture, water and fisheries. The inventory and analysis should be independently reviewed by the OBR. This needs to consider EHS in their broadest sense, including for example other 'support mechanisms' and 'insurance policies'. This should then provide the basis for regular and transparent annual reporting on EHS.

Commit to developing a roadmap for phasing out EHS in key priority sectors by 2020.

Initial efforts should focus on areas recognised as having a significant harmful impact and for which data/methodology for assessment is available, including fossil fuel subsidies, company car taxation, and incentives that adversely affect biodiversity.

5/

PROMOTING A MORE RESILIENT AND SUSTAINABLE FINANCIAL SYSTEM

Financial markets currently support patterns of investment that are undermining future economic prosperity by perpetuating unsustainable patterns of resource use and carbon emissions. Key drivers are 'short-termism' and mispricing of environmental assets, among other well-documented market failures¹¹⁵. This in turn undermines the sustainability and competitiveness of UK businesses, and presents risks to UK investors.

The current regulatory framework and reporting requirements result in over-emphasis on short-term financial returns rather than long-term performance. This exacerbates financial instability and the risks of financial crises. It also fails to ensure that important elements of non-financial performance are disclosed and monitored (e.g. relating to environmental, social and governance issues).

As a result, the cost of capital isn't significantly influenced by the sustainability of a company, which means that companies don't have adequate incentives to take these important 'externalities' into account. This is bad news for the economy and society. One study focusing on primary production and processing sectors estimated that they generated unpriced natural capital costs totalling US\$7.3 trillion, which equated to 13% of global economic output in 2009¹¹⁶.

Another related and growing concern is around investor risk from 'stranded assets', such as fossil fuel reserves, which are likely to significantly fall in value as we move towards a low-carbon global economy. Yet five of the top 10 FTSE 100 companies are almost exclusively high-carbon and alone account for 25% of the index's entire market capitalisation¹¹⁷.

The governor of the Bank of England spoke recently of a "tragedy of horizons" – whereby some investors, companies and governments aren't properly taking account of problems, such as climate change, that will grow in future¹¹⁸. A recent report from the Law Commission highlighted that pension fund trustees should consider material non-financial factors such as sustainability in their investment policies¹¹⁹.

“You can no longer just turn a blind eye to the fact that [natural] resources are dwindling and you don't have an unlimited supply of these things to use for business free of charge

”
Evan Harvey, director of corporate responsibility, Nasdaq

“There is a systemic failure of valuation, an overvaluation of the fossil-related and extractive industries

”
Michael Liebreich, chief executive, Bloomberg New Energy Finance, 2013

“
With the right information
[for example, on how a
company’s business interacts
with environmental needs],
all groups can express their
view, and influence the
allocation of capital and
credit today

”
Mark Carney, governor of
the Bank of England¹²²

Yet financial markets could be an engine of sustainable economic development. There are growing calls for reform of the regulatory frameworks that govern financial markets, such as from forward-thinking financial institutions such as Aviva, and from the United Nations Environment Programme (UNEP). Aviva has set out a roadmap for achieving sustainable capital markets¹²⁰ including the adoption of integrated reporting on a mandatory comply or explain basis, the creation of a chain of transparency and accountability along the capital market supply chain, and the establishment of a Sustainable Capital Markets Union in the EU. UNEP has called on policymakers to ensure prudential regulatory frameworks require greater transparency. It’s also called for disclosure from institutional investors on the integration of environmental, social and governance issues into their investment decision-making processes, as well as from companies on their performance on these issues¹²¹.

Without implementing the necessary changes, the sustainability and competitiveness of UK businesses will be undermined, and risks to both UK investors and wider society will be exacerbated. The UK needs bold action in the Budget to provide incentives for a more sustainable and resilient financial system. The UK is a leading financial centre, and the government could demonstrate true global leadership and drive the systemic shift in financial markets that’s necessary. It could do this by setting the standard for sustainable capital market regulation internationally.

Recommendations to the Treasury for the Budget:

Strengthen sustainability considerations within the mandate of financial regulatory bodies.

There should be a clear requirement for the Bank of England and Financial Conduct Authority (FCA) to take sustainability risks into account explicitly in the regulatory frameworks that govern financial markets. As recommended by the EAC, regulatory bodies should be required to consult relevant government committees and other advisory bodies (e.g. the Committee on Climate Change) to help identify risks and shape the regulatory response.

Establish a national legislative framework requiring companies and institutions to be producing an integrated sustainability report to society on a mandatory comply or explain basis.

This means that alongside standard financial reporting, companies would report on both their environmental and social impacts caused by their investments and operations to date, and anticipated future risks and impacts. A law was introduced in 2013 that requires all quoted companies to report on carbon emissions, which is a step in the right direction. But this should be broadened to include other aspects including, for example, risks and impacts associated with natural capital. This will enhance company accountability to investors, as well as to wider society, and will help to ensure that a company’s cost of capital properly reflects its sustainability. This would bring sustainability considerations into the heart of operational decision-making by businesses.

Impose clear duties on investment companies, for example by bringing forward a Responsible Investment Bill.

As proposed by ShareAction¹²³, such a bill would help to ensure that companies act responsibly in savers’ long-term interests, and would guarantee savers’ rights to scrutinise investment decisions made on their behalf. The FCA should work with industry and consumer groups to develop a simple method of showing savers how their money is being used. As the retirement incomes of the UK’s working population will depend on the future return on these investments, it’s crucial that capital markets are equipped to deliver sustainable returns over many decades.



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We'd like to thank the following for their generous advice and input during the drafting of this report:

Jenny Banks, Mike Barrett, Nick Barter,
Ian Bateman, Sarah Brunwin, Ben Caldecott,
Dean Cambridge, Sue Charman, Dan Corry,
Phil Cryle, Ian Dickie, Jacqueline Dragon,
Alastair Driver, Adam Dutton, Aniol Esteban,
Jonathan Fisher, Trevor Hutchings, Guy Jowett,
Nick Mabey, Andrea Marandino, Fergus Moffatt,
Nick Molho, Julian Morgan, Matt Rayment,
Jan Serafini, Dermot Smith, Ben Stafford,
Tim Sunderland, Gavin Templeton, Niall Watson,
Steve Waygood, Peter Young and Dimitri Zenghelis.

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A GREENER BUDGET

OVER 33%

of UK's economic growth in 2011/12 is likely to have come from green business

£23 BILLION

potential cost savings to UK businesses (estimated for 2009) that could be gained from no-cost or low-cost resource efficiency measures within a year



£15.5 BILLION

potential annual health and environmental costs from industrial pollution in the UK that could be reduced by improving air quality

500,000

new jobs could be created by 2030 if the UK were to make substantial progress in moving towards a resource efficient 'circular economy'



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