

Climate Change Commission for Wales

First annual report

January 2012

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Climate change in Wales

Role of the Climate Change Commission

This is the first annual report of the Climate Change Commission for Wales. The Commission was established in 2007 as an important forum for developing and driving forward the Welsh programme of action to tackle the causes and effects of climate change. It brings together leaders and representatives from all sections of Welsh society, business, academia, the voluntary sector, environmental groups, political parties and local government.

The Commission seeks to **advise** Welsh Government on climate change, mobilise **action**, build **consensus** across sectors and **scrutinise and report** on progress. It has a working relationship with the UK Committee on Climate Change, the independent body established to advise the UK Government.

In undertaking these functions **the Climate Change Commission for Wales** recognises that:

- Climate science shows clearly that without immediate, radical and sustained reductions in global greenhouse gas emissions there will be severe consequences for human society as well as for the ecosystems and biodiversity that are essential to human livelihoods.
- Action on emission reduction now will substantially reduce long term costs, while early action on adapting to climate change will make us more resilient and less vulnerable to its impacts.
- As a nation Wales is living beyond its environmental limits, is over-reliant on fossil fuels and is emitting unsustainable levels of greenhouse gas emissions.
- Government has a key leadership responsibility, but concerted actions are needed from all parts of society. Only around one third of emission reductions are expected to come from policies solely under the control of Welsh Government.
- Welsh Government's Climate Change Strategy¹ and annual reduction targets are comparable with the more ambitious reduction plans globally. We need to ensure delivery while keeping the relevance of the targets under review.
- The Climate Change Strategy must be set in the context of our commitment to sustainable development, promoting social justice and recognising that those most vulnerable will be hardest hit.
- Wales is well placed to play a leadership role in a transition to a low carbon economy, which will have many benefits beyond tackling climate change – with secure long term energy supplies, better air quality, more comfortable homes and opportunities for business to thrive producing low carbon products and services.

The Commission played a key role in advising the Welsh Government on the development of the Climate Change Strategy for Wales, which was launched in October 2010. This also marked an important transition for the Commission, with the appointment of an independent chair and the new task of completing annual progress reviews of delivery of the strategy and its associated delivery plans.

Climate change context

The Commission report is set in the context of increasing global greenhouse gas emissions. These have grown markedly since pre-industrial times, with a 70% increase from 1970 to 2004 alone. Global carbon dioxide (CO₂) emissions grew by 5.9% in 2010², to reach a record atmospheric level, more than offsetting the recession-led emissions decrease of 1.4% in 2009. The impact of the 2008/09 global financial crisis on emissions has been short-lived, owing to strong emissions growth in emerging economies, a return to emissions growth in developed economies, and an increase in the fossil-fuel intensity of the world economy.

The UK is responsible for around 2% (580 million tonnes of carbon dioxide equivalent (Mt CO₂e)) of global greenhouse gas emissions, and Wales' share is around 8% of this – or around 0.16% of global emissions. On a per capita basis, Wales's emissions are greater than the UK average due to a relatively small population and the presence of energy intensive industries, harder-to-heat properties, rurality and high agricultural emissions. The Commission stresses the importance of a partnership with the high energy users to support their efforts to reduce emissions, improve efficiency and retain their critical role in the economy.

The latest available emissions data for Wales show that total emissions fell by 14% in Wales in 2009. There were reductions in all sectors but it was driven in particular by sharp falls in emissions from business, industry and electricity generation, due to the impact of the recession.

However, direct emissions from Welsh-based sources tell only part of the story. Emissions from goods and services consumed in Wales but imported from other parts of the world must also be considered. These consumption-based emissions provide a more complete measure of the Welsh contribution to global emissions, and show the true extent to which the way we live in Wales is helping to drive climate change.

The global context: spotlight on Wales for Africa

The effects of climate change will vary globally with the most vulnerable communities in the developing world hardest hit. The Commission commends the Welsh Government's continued commitment to the Wales for Africa programme and the associated work of civil society across Wales. The Wales Africa Community link programme now connects communities in Africa who are on the front line of climate change impacts with partner communities in Wales.

The Territorial Approach to Climate Change partnership with Mbale in Uganda was in part developed as a result of the Pontypridd – Mbale community link, which is one of over 100 community links between Wales and Sub-Saharan Africa that are supported by the Wales Africa Community Links programme. It was invited as one of ten delivery programmes worldwide to present to the UN Climate Change Conference in Durban in December 2011.

The Size of Wales represents a civil society movement to protect an area of tropical rain forest the size of Wales, as part of our national response to climate change.

The Commission recognises the importance of involvement in global networks such as the Network of Regions for Sustainable Development and the Climate Group, but would also wish to see more evidence of the transfer of successful practice emerging from these relationships.

Getting the ambition right

Recent advice to the Commission from researchers at the Tyndall Centre for Climate Change suggests the need for much stronger emission reduction targets in Wales, potentially as high as a 9% annual reduction in emissions for areas of devolved competency³.

It is certainly clear that the targets, and the strategies to meet them, should remain under close review if they are to link to the evidence about the scale of action that is required to keep below dangerous levels of global warming. However, the Commission suggests that action in Wales to meet the 3% target itself requires a redoubling of effort and that the primary focus of the Welsh Government and partners should be on finding emissions reductions and developing adaptive capacity wherever possible. To do so will require a strengthening of the ambitions of the delivery plans to ensure that they meet the existing targets, along with a very serious programme of engagement with key sectors and the wider public.

It is the Commission's view that Wales is on the right path towards tackling climate change, as recognised by the Committee on Climate Change⁴ in its recent review of progress in Wales. However, we agree with the Committee that there may be scope for the strategy to target additional emissions reductions in the residential, business, public, agriculture and power sectors. We hope that the recommendations in this report will contribute to delivering emission reduction in these and other areas.

The Commission is committed to ensuring that Wales takes early action to prepare for the impacts of climate change. The implications of projected temperature rises are significant. Work undertaken for the UK Climate Impact Programme (UKCIP)⁵ has indicated that temperatures in Wales will increase by at least a 2°C by 2050, that there will be more precipitation in winter and less in summer, and that the predicted impacts are likely to lead to more droughts, more flooding and more extreme weather events. Sea levels are also expected to rise, threatening coastal communities directly and through coastal erosion.

In summary, the Commission is clear that there is a need for proportionate and early action in both reducing greenhouse gas emissions and adapting to a changing climate. Both approaches are key to developing a strong, resilient Welsh environment, society and economy which are fit for the future. The Welsh Government has set a clear and strong direction of travel for climate change action in Wales and there are many exciting and inspirational examples of organisations, communities and individuals making changes. It is early days for the Welsh strategy and in many cases the strategic groundwork is still only just being established. The Welsh Government and its partners are now facing the hard work of developing and sustaining the political and organisational will to make climate change mitigation and adaptation a sustained priority for action.

The emission reduction targets in Wales:

The Climate Change Strategy for Wales included a headline commitment of **3% annual reductions in emissions** in areas of devolved competence from 2011 onwards, against a baseline of average emissions over 2006-2010¹.

This target covers around 70% of Wales' total greenhouse gas emissions, the main sources being the business, residential, transport and agriculture sectors. But it does not cover the power sector and the energy intensive industries which are covered by the European Union's Emissions Trading Scheme (EU ETS).

In addition, a second target has been set of **40% reduction in emissions by 2020**, against a 1990 baseline for all of the emissions in Wales. This is more ambitious than the UK-wide target, which, according to the Committee on Climate Change, equates to a 37% reduction by 2020 when based on the same methodology as that used for the Welsh target.

Assessing progress on climate change in Wales

How progress has been assessed

As already discussed, Wales has a set of targets in place, together with a strategy which sets out the direction of travel for three key categories of actors: the Welsh Government, the UK Government and other sectors in Wales, each with broadly one third of the responsibility for delivery. Three issues arise in understanding progress against this framework:

- The delivery plans themselves focus on the action of the Welsh and UK Governments and as yet leave the actions of wider sectors fairly undefined. Assessment against these delivery plans at this stage necessarily then focuses on the work of the Governments themselves.
- It is disappointing that the Welsh Government currently has no indicator set in place against which to measure progress against targets. This is in development and due to be published by the Welsh Government in March 2012, together with the Welsh Government's own progress report, but at this stage no quantitative measure of progress can be made.
- It is still very early days for the strategy and delivery plans and in many instances the strategic groundwork is still being put in place.

Within this context the Commission's first annual report makes a qualitative assessment of the actions being put in place, drawing on the following sets of evidence:

Evidence for the judgements made in this report

- Evidence provided through the work of the Commission and its sub groups.
- The advice from the Committee on Climate Change in October 2011⁶.
- A desk review of delivery against the delivery plans using available web-based documentation, documentation provided by the Welsh Government and interviews with Welsh Government officials.
- An online survey of stakeholder views during November 2011. This survey elicited a small number of responses (35), although it should be noted that many of these were representative of networks or sectoral viewpoints.
- Interviews with 26 individuals in key sectors/themes of work.

These last 2 forms of evidence provide perception information which is a valuable part of the picture of delivery. This is reflected in the report in an overarching table, together with the inclusion of a range of quotes from the survey.

The Commission was supported by the CAG Consultants Consortium in undertaking the reviews and surveys that contributed to this report.

This first Commission annual report makes an early assessment of progress on climate change in Wales. This assessment is made on two levels:




Assessment undertaken within this first Commission annual report	Presentation of the assessment
<ul style="list-style-type: none"> An assessment of the current progress against the adaptation and emission reduction delivery plans for the Climate Change Strategy which focuses primarily on the actions of the Welsh and UK Governments. 	<p>Traffic light scoring based on a desk review of the actions currently underway and degree of progress made with these action.</p> <p>Overarching perceptions of stakeholders drawn from an online survey.</p>
<ul style="list-style-type: none"> A wider assessment of progress in Wales within specific sectors, which explores the Welsh and UK Governments roles as well as those of wider sector groups and explores action and makes recommendations which sit within the context of the Climate Change Strategy but which often go beyond the scope of the current delivery plans themselves. 	<p>This is drawn out in a series of sectoral chapters focusing on:</p> <ul style="list-style-type: none"> Strategic framework for adaptation Planning Built environment in the residential sector The public sector Transport Business Natural environment, agriculture and land use <p>These sections make recommendations within the Commission’s sphere of influence, primarily for the Welsh Government but also to support wider sectoral action in Wales. In addition, a final chapter outlines the work programme for the Commission itself.</p>



















A. An assessment of early progress against the delivery plans

Assessment of progress

It is important to note that the assessment of progress below is made *against the Delivery Plans* set by the Welsh Government in 2010. A wider assessment of progress within key sectors follows in the subsequent chapters.

This assessment of the extent of progress achieved is illustrated using a traffic light system as follows and based on the available evidence as outlined on page 6:

	Good progress made against the actions detailed in the delivery plans
	Moderate progress made against the actions detailed in the delivery plans
	Little or no progress made against the actions detailed in the delivery plans

Early progress in taking actions forward against the Delivery Plan for Emissions Reduction	WG	UK	Early progress in taking actions forward against the Adaptation Delivery Plan	WG	UK
Transport			Strategic actions		
Business			Natural environment		
Residential			Infrastructure		Minor role
Agriculture and land use		n/a	Communities		n/a
Resource efficiency and waste		n/a	Health		n/a
Public sector			Business and tourism		n/a

When asked in the online survey "**Overall, how do you rate the performance of the Welsh Government on action to address climate change to date?**" stakeholders responded as follows:

Perceived Performance	Good progress	Moderate progress	Poor progress
Emissions reduction	8%	60%	32%
Adaptation	0%	46%	54%
Communication and engagement on climate change	9%	58%	33%

N = Emission reduction 25, Adaptation 26, Communication and engagement on climate change 33

The Commission's comment on progress against the delivery plans

Overall there is some good progress on aspects of the delivery plan. Whilst having a small contribution to the overall target, the successes in the waste sector are valuable in demonstrating the scale of change that is possible. In the transport and residential sectors, progress has been fairly good at the small and pilot level but replication and increased ambition is now needed. **The Commission also finds that much more decisive action is needed by the Welsh Government, key sectors and individuals if Wales is to set itself on a solid low carbon and resilient path.**

When the Climate Change Strategy for Wales was first published, the Commission commented that it was a 'starting point on which to build' and the hard work certainly begins now. The greatest challenges lie ahead with five overarching and vital challenges:

- Ongoing delivery on difficult decisions is needed to ensure clear and sustained low carbon and adaptive prioritisation within current investment programmes and within the context of increasing resource constraints and competing priorities.
- Coordinated early action is required to develop a low carbon, resilient economy.
- Full engagement of wider sectors in the delivery of the climate change strategy is needed, with clearly defined objectives and scrutiny.
- Measurement processes need to be established to assess progress against the targets for the existing strategy commitments, as well as wider sectoral contributions.
- Delivery will require structural change within public and private sector organisations, technological development and behaviour change.

The Commission's recommendations to the Welsh Government

1. The Welsh Government must demonstrate real and consistent leadership, ensure that carbon impact is considered in all Welsh Government spending decisions, and support low carbon and resilience actions nationally, through action in key sectors and supporting local political leadership.
2. Whilst delivery is the real key, the Welsh Government should keep the effectiveness and strength of its climate change targets under review to ensure that they reflect the emerging scientific advice and engender meaningful and proportionate action.
3. The Welsh Government should work with the private and third sectors during 2012/13 to define the wider contributions which are needed to deliver the strategy.
4. In addition to the emission reduction dataset currently being developed, the Welsh Government should put in place a process for monitoring and measuring progress against the adaptation delivery plans (via the Sectoral Adaptation Programmes) and the wider sectoral contributions to emissions reductions.

B. Broader assessment of progress

The following chapters make a wider assessment of progress within specific sectors and themes, exploring the Welsh and UK Governments' roles, as well as those of wider sector groups. The assessment also explores action and makes recommendations which sit within the context of the Climate Change Strategy but which often go beyond the scope of the current delivery plans themselves.

B1. Behaviour change

The Climate Change Strategy recognises the key cross-cutting role of behaviour change and stresses that Government needs to connect "our activity much more directly and meaningfully with the efforts of people, communities and organisations across Wales".

In particular, this will require effective mechanisms for Government to enable action in communities and workplaces. The Commission recognises the importance of the research being undertaken through the Pathfinder project on community-led change and stresses the importance of maximising the learning from this two year programme of research to inform policy and practice. The Commission wishes to review the outcomes from the Pathfinder project in next year's annual review⁷.

Within this context the Welsh Government has developed a Climate Change Engagement Strategy, published in November 2011, to help catalyse action. The Strategy seeks to encourage action and change to reduce greenhouse gas emissions and to prepare for the impacts of climate change across Welsh Society. It aims to help people, communities and organisations to:

- relate to climate change and understand how it connects to the way they live and work;
- feel that climate change is an issue where they can make a positive difference; and
- change the way they live to adopt more climate-aware choices and habits.

The strategy roots the behaviour change in the Exemplify, Enable, Encourage, Engage model (4Es), outlined in the Sustainable Consumption Roundtable's report '*I will if you will*' – *Towards sustainable consumption*.

The Climate Change Strategy also identified the potential for action in workplaces across the sectors, such as the Eco Team programme in Carmarthenshire local authority and the Energy Guardians in InBev's Magor brewery. The Strategy refers to collaboration with business and trade unions on a workplace campaign and the Commission would like to see such a campaign developed in 2012/13.

Over the course of the last year the Commission received presentations from the Climate Change Champions who raised the issue of how climate change was being covered particularly within the secondary school curriculum. This concern has been further accentuated through the initial findings of a survey undertaken by Funky Dragon for the

Commission on the opinion of children and young people on the nature of their curriculum experience. This variability also extends into the Higher Education sector where the 2011 People and Planet league identified two Welsh institutions as being “first class”, while three were in the “fail” category.

It is clear that behaviour change models, especially social marketing interventions, are being incorporated into key climate change actions, for example the Supporting Sustainable Living Grants and pilot projects such as the Dref Werdd initiative in Blaenau Ffestiniog. These are part of a wider programme to pilot different behaviour change approaches. Monitoring and evaluation of these initiatives, with a view to rolling out a much more ambitious programme, is key. Evaluation here would need to focus on what type of communities and organisations are successfully using this approach, the support that is required to enable this and the reach and impact in the communities. This will ensure that a better understanding of the application of behaviour change methods is established and success is replicated.

Stakeholder comment on the Engagement Strategy: “Practical financial matters with an element of self interest, e.g. heating costs, poor housing, cost of motoring, job prospects etc, are real issues which link energy cost and availability to climate change. Most people want some reassurance that their standard of living will not fall”.

The Commission is keen to examine its role in and position on behaviour change over the coming year and has incorporated a review into its work programme for the coming year. In particular it is keen to examine how strong ties between the behaviour change programme and the range of sectoral work on climate change can be linked closely together. It will include an examination of community and organisational-led behaviour change. The linking of a consumption target to behaviour change work and to emission reduction work more generally is also an area that the Commission will explore this year.

The Commission’s recommendations to the Welsh Government

5. The Welsh Government must clearly demonstrate that the **One Wales: One Planet ecological footprint** consumption target helps to drive the work on climate change and behaviour change and place behaviour **change at the heart of delivery** on all sections of the adaptation and emission reduction delivery plans.
6. The Welsh Government should put in place strong **monitoring and evaluation frameworks** which allow learning on behaviour change to be developed. This learning should then be used to drive larger and more ambitious behaviour change programmes.

B2. Strategic framework for adaptation

Climate change is already having an effect on us in Wales and on communities elsewhere in the world. Even with successful global emission reductions on the scale promoted by the Commission, the impacts will increase in the future. The twin track approach of reducing emissions whilst also adapting and building resilience to a changing climate is therefore necessary. This section focuses on the strategic framework for adaptation in Wales, whilst other sectors highlight more specific adaptation action.

The delivery plan focuses on creating a strategic framework to integrate effective risk analysis and adaptive planning into the Welsh Government, all public bodies and wider sectors. There has been moderate progress towards this.

Stakeholder view: "Strategic intent is there – and seems genuine – but many partners are needed to translate into action."

Both the Welsh and UK Governments have been directly and consistently involved in the **Climate Change Risk Assessment (CCRA)** (published early 2012), although there is some concern about the slow delivery of the Economics of Climate Change Resilience report which will be examining the economic implications and policy responses. The Welsh Government should maximise the opportunity of the CCRA's launch to raise internal and external awareness of climate impacts.

The development of the Single Environmental Body by April 2013 provides an opportunity for the Welsh Government to develop and implement a plan to provide **independent adaptation research, information provision, advice role and communication role** in order to build adaptive capacity across Wales. This new working approach should be deliverable by the time the Single Environmental Body comes into place in April 2013.

The Welsh Government has taken a different approach to Defra in focusing on developing adaptation guidance to reporting authorities. It has emphasised the importance of a partnership approach and shared learning. Publication has therefore been staggered, with parts 1 and 2 of its **Statutory Guidance for reporting authorities**⁸ now published to positive feedback, and parts 3-5 due in 2012. In addition, the Environment Agency Wales, with Welsh Government support, has run a major awareness-raising campaign⁹. Three pilot projects which involved local authorities, emergency services and other bodies are good examples of institutional awareness and capacity raising.^{10 11}

However, the progress on development of the **Sectoral Adaptation Programmes (SAPs)** is mixed. The **Natural Environment Framework** has been developed with resilience at its core. The Single Environmental Body, to be in place by 2013, and an Environmental Green Paper describing the key mechanisms to implement the Framework, will be published for consultation early in 2012. The **health SAP** is being taken forward¹² and the Welsh Government has developed their **Heatwave Plan**¹³ and are providing health advice on **flooding**.¹⁴ However, progress on the **infrastructure, communities and business and tourism SAPs** is slower, reflected in

stakeholder disappointment, where 48% of survey respondents felt that there had been poor progress in this area.

National Strategy for **Flood and Coastal Erosion Risk Management, Local Flood Risk Management Strategies** and **Shoreline Management Plans** progress appears positive, although needs to be integrated more closely with strategic adaptation management within the Welsh Government. The development of **SuDSWales** is also to be welcomed.

The Welsh Government must provide effective and visible leadership on the SAPs, and engage effectively in the relevant sectors and communities through the Commission's Adaptation Sub Group and sectoral networks.

The **economic value of and business case for adaptation** must be clearly made through the SAP programmes. This is particularly important for infrastructure and spatial planning, including through the **Wales Strategic Infrastructure and Investment**

Plan (drawing on the Creating Sustainable Places Together guidance), where investment packages are being developed and where a focus on the long term is as important as on the short to medium term.

The **Commission's Adaptation Sub-group** has a pivotal role to play in providing the bridge between the Welsh Government as the lead body for each of the SAPs, and engaging with the wider sectors in Wales.

A close eye should be kept on developments in the EU and UK. The EU climate proofing tool will be published in early 2012. Defra has set out its intention to produce a co-created **UK National Adaptation Programme (NAP)** and the Welsh Government is well placed to pass on lessons learnt from their own experience as well as ensuring consistency between the NAP and the Welsh Government's revised delivery plan.

The Commission's recommendations to the Welsh Government

7. As a priority, the Welsh Government should develop and communicate a **coherent strategic approach to adaptation** early in 2012, in the light of the publication of the Climate Change Risk Assessment (CCRA). Clear leadership and clarity of purpose is needed to ensure that adaptation has the profile it requires.
8. The Welsh Government must take a **lead role** in 2012 on developing, mainstreaming, embedding and enabling action with a priority given to initiating the **communities, infrastructure and business and tourism** Sectoral Adaptation Programmes (SAPs) which should be in place by the end of 2012.
9. By 2013, the SAPs should be **engaging key disciplines across the Welsh Government and wider sectors** in taking action on adaptation.
10. By March 2013, the SAP leads within the Welsh Government should have identified a clear set of **performance indicators for each SAP** so as to ensure suitable strategic focus, leadership and accountability and to support future assessments of performance by the Welsh Government and others.

B3. Spatial Planning

Under a changing climate, the planning system will have two key roles:

- Delivering new development that enables low carbon living, and that is adapted to the effects of climate change.
- Enabling decarbonisation of our existing stock of developed land through the integration of renewable energy etc.

Stakeholder view:

“Planning is clearly the biggest obstacle standing in the way of Wales making any serious headway into renewable energy production and mitigating climate change.”

Issues around planning have been consistently raised as a barrier to progress in tackling climate change. While there is no doubt that progress has been made in planning policy, and with the devolution of building regulations, there is still concern that the current system is not fit for purpose and is restricting progress. The Commission welcomes the Planning Review and the associated research into the consenting process currently underway, but our progress review has also highlighted concerns over what appears to be a current vacuum related to the spatial plan and uncertainty as to how low carbon spatial planning is to be taken forward.

The Climate Change Strategy recognised the importance of **low carbon spatial planning work developed from** the Sustainable Development Commission’s report Low Carbon Wales¹⁵ where Low Carbon Work Groups were established in each region, with the South West Wales group producing “Towards a low carbon South West Wales: A routemap”¹⁶ in September 2010.

The low carbon Spatial Plan approach provides a vital route for negotiating effective carbon emission reductions in a way which is consistent with the social, environmental and economic aspects of sustainable development, bringing together key people and organisations in each region to harness the many other benefits this approach can provide, such as jobs, health and energy security¹⁷. This needs to be done under the auspices of the Spatial Plan or its successor as this legally binds the Local Development Plans to the process and must reflect future developments on regional planning.

The current review of planning in advance of the Planning Bill needs to build in climate change and in particular adaptation and give a view as to its practical delivery within the LDP and its regional dimension.

The lack of activity within the **Wales Spatial Plan Area Groups** limits the Welsh Government’s ability to mainstream adaptation into this crucial policy area and threatens much of the Welsh Government’s ambitions in this area (as well as the work of many local authorities).

The Commission’s recommendations to the Welsh Government

11. As a matter of priority, in 2012 the Welsh Government must demonstrate clear leadership on the work in the **low carbon spatial**

plan which helps build a resilient Wales, and ensure that it is taken forward into the programme for Government.

12. The reforms set out in the planning Bill should support the **delivery of low carbon projects** (renewables, transport infrastructure) and coherent regional planning around transport, housing, employment to maximise climate change outcomes. The current light touch review of the LDP process should do likewise.

13. The Welsh Government should develop a **spatial approach** to reducing emissions from the transportation sector, which builds on the Low Carbon Regions work of the Sustainable Development Commission.

B4. The built environment in the residential sector

Stakeholders responding to the Commission review reflected on significant activity on emissions reduction within the built environment (and much less activity on adaptation). However, stakeholders identified progress as slow within the context of significant challenges, not least the high proportion of off-gas, and solid wall dwellings and high levels of fuel poverty within Wales. The **Low Zero Carbon Hub**¹⁸ operates as a sub group of the Commission and was seen to be crucial as a focal point for engendering real change within industry.

Stakeholder view: "Schemes like Arbed focus too much on registered social landlords and not on the wider private sector. They are still prototypes, when there should be substantial scaling up already visible to meet the targets."

The Low Zero Carbon Hub (LZCH) aims to 'act as a dissemination mechanism to stakeholders and a source of advice to Welsh Ministers over activities and actions needed to achieve the aspiration of zero carbon new build and the contribution to be made by buildings that will help to deliver the 3% annual target to cut greenhouse gas emission'.

Progress: Delivery against the published LZCH strategy, endorsed by Minister John Griffiths AM, has been the focus of recent activity of the LZCH. Progress included:

- Support to the Welsh Government (e.g. ongoing workshops addressing the devolved building regulations);
- Stakeholder engagement and building relationships with key organisations;
- Project delivery (e.g. a Welsh DEC, code for retrofit, collection of case studies and products such as green mortgages);
- events (e.g. RHI, FIT, Workstreams, Water Efficiency, Part L Building Regulations).

The challenge: The LZCH plans to help speed work on the vital areas of the **existing building stock** and **behaviour change** by:

- developing high level objectives that will have a significant impact on a macro scale to drive change;
- meeting the demands of industry and the supply chain in providing timely, succinct and useful advice and information;
- influencing policy and advising the Welsh Government on appropriateness to delivery with regard to initiatives such as Welsh Building Regulations, the Welsh Planning Bill, Welsh Sustainable Development Bill and the UK Green Deal;
- Questioning the validity of creating separate systems from the UK who are, by and large, on the same track. The focus should move more on how to deliver than how to legislate.

Progress against planned interventions in addressing **energy efficiency measures** in the residential sector is slow but welcome for example through the Arbed and NEST Schemes. However, these schemes represent a small overall improvement to the housing stock (having improved between 0.1% and 0.5% of the housing stock). Programmes with national reach are now needed as stated in the UK Climate Change Committee's 2011 review: "*acceleration in the pace at which measures are implemented is required both at UK and Welsh levels if full potential for emissions reduction is to be addressed.*"

The poorer progress at the UK level in relation to changes to the Carbon Reduction Commitment, Feed-In Tariff (FIT) and funding cuts will significantly undermine public trust and engagement. The Welsh Government must now ensure that Wales is ready for delivery of the Green Deal, the new Energy Company Obligation (ECO) and Green Investment Bank (GIB).

Against a UK backdrop of rising trends in fuel poverty, **NEST**, Wales's fuel poverty scheme, provided some practical help to improving the energy efficiency of households considered to be in fuel poverty. During its first quarter 1,200 whole house assessments were carried out and 200 packages were installed.

Opportunities to learn

It is estimated that the first phase of the **arbed scheme** will save around 6000 householders a total of £98m on their energy bills over the lifetime of the installed measures and reduce annual CO₂ emissions in Wales by around 12,000 tCO₂/yr.

Arbed phase II has been allocated £45m from the European Regional Development Fund and match funded by Welsh Government. It will principally target the private sector in the second phase.

The Welsh Government has provided £8m for community scale energy generation, with projects expected to receive between £100,000 and £300,000 to help install community generation systems which focus on wind, hydropower and biomass. However the effectiveness of this scheme has been significantly affected by the issue of state aid¹⁹. The Commission recognises the vital importance of community energy, both in terms of generation and efficiency and welcomes proposals for the development of Community Energy Wales to mirror successful practice in Scotland. The Commission also encourages the UK government to incorporate a community energy tariff in the FIT review.

Encouraging changes in attitude and behaviour towards the way energy is used and managed is core to delivering low carbon society. Monitoring and evaluation of these initiatives, with a view understanding drivers for change and to rolling out a much more ambitious programme, is key. Evaluation here would need to focus on reach and impact in particular, to ensure that success is replicated.

Planning for certainty and simplicity

Through control of both Planning and Building Control requirements in Wales, Welsh Government has the opportunity to deliver an efficient system that enables appropriate sustainable development and economic prosperity. To do so, the focus must be to provide simplicity and certainty. Addressing these two fundamentals will provide a greater understanding across the industry, faster processes, improved actual compliance, and will allow the risk-averse private sector to have confidence in their investments. This clarity will enable strong low-carbon standards to be put in place in return for risk reduction through the development processes.

The Commission's recommendations to the Welsh Government

14. The Welsh Government should speed up the transition from the successful, but relatively small scale, Arbed and NEST projects, to enable much more **ambitious, large-scale retrofit**.
15. During 2012 the Welsh Government should ensure that Wales is ready for the **Green Deal** by ensuring that appropriate funding mechanisms, support structures and communication is in place for homeowners and businesses.
16. The UK and Welsh Governments should seek to increase investment opportunities for **community scale energy** and support the establishment of Community Energy Wales.

B5. The public sector

The role of the public sector can be usefully viewed through the lens of the 4Es model described in the behaviour change section of this report. The delivery plans major especially on the **exemplify** role of the public sector through leading by example. Good progress has been made on the whole against these objectives. The Welsh Government has succeeded in reducing emissions from the Government's estate and in engaging with Local Authorities to do the same, a **Welsh Government-wide Carbon Reduction Strategy** has been adopted, and the Welsh Government has committed to the 10:10 campaign. This has meant reducing emissions from the administrative estate and business travel by 10% within a year. Emissions were reduced by 11% during the action year.²⁰ This was achieved through investment in

The published Carbon Reduction Credits league table aims to provide a strong reputational incentive for participants to reduce energy consumption and CO₂ emissions. The **Welsh Government performed well in the first CRC league table**, coming 320th out of 2,106 participants, important as it supports their claim of leadership. Further efforts will be required to maintain and improve on their position in the league table in subsequent

carbon reduction projects; rationalisation of the buildings used; a reduction in staff travel; and improvements in ICT efficiency.

Elsewhere the carbon footprint for the **NHS** was produced in December 2010 and the low carbon strategy is currently being finalised. The strategy will include a tool which will allow Local Health Boards and Trusts to report their progress on an annual basis.²¹

However the UK Committee on Climate Change review in 2011 points out that *“the Welsh Government should set a target for public sector emissions reductions and underpinning targets at the local level to ensure that these are achieved”*. Further savings could be found through continued improvements in consistent good housekeeping across the public sector, through Invest to Save Schemes, design and management and through renewable technologies.

Whilst progress is being made in relation to the public sector’s own emissions, greater ambition in the delivery of the public sector to **engage, enable and encourage others to take action** is required. The role of the Welsh Government in enabling wider contributions from others is very important given the significant mitigation potential expected to come from these sources in the Delivery Plan (0.89% of the overall 3% target). Whilst good progress has been made in engaging with local authorities, progress in engaging with the third sector and communities is less apparent. Considerable and sustained effort is required to leverage change at this level and to ensure that there is consistent cross departmental implementation across the Welsh Government of the climate change strategy especially in relation to procurement and grant-making requirements.

The role of local authorities

Many local authority and public sector partners at Local Service Board level, have committed to reduce their carbon footprint by up to 70% over the next ten years. This will be achieved through the implementation of energy efficiency projects, the development and implementation of long term renewable energy strategies and optimising the energy performance of the public sector estate. In relation to the 4Es model referred to in the behaviour change section of this report, local authorities play a role in **exemplifying** behaviour.

Stakeholder view: “Budget cuts considerations have pushed climate change issues down the agenda at Local Government

Over the past five years public sector organisations throughout Wales have implemented measures which, over their lifetime, will reduce carbon emissions by over 992,000 tonnes and achieve savings of over £94.3 million.

Local authorities have a role to **engage** with partners and communities over the issues raised by climate change. Changes have been made to the permitted development rights within the planning system allowing a range of micro renewables to be installed without needing to go through the planning system but there is more that they can do to **enable** the right choices; whether by effective transport planning or giving people the right information to make informed choices.

Equally, local government has a role in **encouraging** behaviour change, for example in how they award grants, how they enforce environmental legislation or develop recycling schemes.

Town and Community Councils have a critical role in ensuring the development of resilient low carbon communities. Welsh Government and Local Authorities should ensure that they are encouraged and supported in this function.

Given the strategic importance of local government in this process the Commission will continue to monitor progress especially around initiatives such as sustainable procurement.

The **Changing Climate Changing Places project** funded by the Welsh Local Government Association has led to development of a Climate Change Adaptation Local Authority Guide.

Spotlight on Wrexham County Borough Council

Wrexham have reduced the local authority's carbon footprint by 20% since 2005/6 when the baseline figure was calculated.

The council has achieved this through a cross-organisation Climate Change and Carbon Reduction team, and a focus on carbon emissions and energy use reduction as one of the 3 council priorities for 2009/12.

Wrexham's approach has included:

1. a **communications campaign** which led to average monthly savings across all Council offices totalling £3250 on energy bills and 20% on carbon emissions.
2. The installation of **solar PV panels** on 3000 social housing properties and selected non-domestic properties across the County Borough.
3. **recycling and composting rates** were increased by 5.4% between 2009/10 and 2010/11 through education and awareness campaigns, the roll out of separate weekly kerbside food waste collection, and major investment and modernisation of recycling centres across the County Borough.

Commitments and approaches to climate change and adaptation **vary widely** between Local Authorities. The Welsh Government has concluded Outcome Agreements with each local authority and has ensured their priorities, including priorities surrounding emission reductions, align with Welsh Government priorities. Disappointingly not all agreements covered climate change as a priority. It is also unsatisfactory that the Simpson Review and the collaboration agenda across local government seems to neglect opportunities to prioritise carbon reduction and adaptation issues in service redesign. A key tension is the disconnect between the long term time span of some of the climate change work, and the shorter time scales of political cycles, strategies and financial planning. This was linked to changing legislation and organisational restructuring; both of which were seen by authorities to hinder the work.

Local authorities identified their greatest need was practical, applicable and replicable advice. The advice provided by the WLGA on climate change was seen as invaluable although clearly stretched. The Welsh

Government must ensure that there is adequate **support for local authorities** to ensure that they meet the challenges of emissions reduction and adaptation.

The Commission's recommendations to the Welsh Government

17. Given their leadership role, the Welsh Government should set a **target for reducing emissions from the public sector** and they should monitor and report progress in achieving it.
18. The Welsh Government should work with local government to develop a similar process for county-wide targets, **engaging the Local Service Boards** both in mitigation and adaptation responses.
19. Further progress should be made on the strategic role for local government in **energy efficiency and generation, building on the renewable energy assessments and Green Deal implementation.**
20. The Welsh Government should take a lead during 2012/13 in developing and promoting **clear, accessible and tailored guidance for assessing risks and developing adaptation action plans in the public sector.**

B6. Third sector

The third sector, encompassing both environmental groups such as the Wales Environment Link and traditional 'non-environmentally focused' groups and networks, has a multi-faceted role to play in the creation of a low carbon, resilient society through:

- **Engaging, enabling and encouraging** behaviour change by individuals, households, communities and third sector organisations.
- Helping to create a **socially just** low carbon and resilient society. The sector has a role in helping to ensure that measures to combat climate change do not hit people, who are already disadvantaged and vulnerable, the hardest, but rather support people to develop their capacity to respond to climate impacts.

Across Wales there are many vibrant examples of effective community-led action on climate change. The interest and uptake generated by the Climate Change and Climate Change Next Steps grant programme delivered by Environment Wales in 2009 indicates the readiness of third sector organisations to engage with this agenda.

The Welsh Government has a number of initiatives which provide specific support to enable contributions from the third sector and communities. For example, providing development worker support, tools and other resources to enable community action, and supporting the development of a leadership group of large third sector organisations that were not previously engaged on climate change.

Many of the initiatives identified within the Climate Change Strategy have been successfully achieved or are near completion (e.g. the Pathfinder programme) or are going through a period of transition (e.g. the practitioners network). There needs, therefore, to be a discussion about the scope and approach of the third sector and communities in tackling climate change, based on the successes and barriers to date, the changing landscape of support (e.g. due to the framework contract and contracting out of Welsh Government support), and the forthcoming BIG Lottery Sustainable Steps programme. Consideration needs to be given to how the Welsh Government can best support the work of third sector and communities in the future, including whether a grants scheme is needed to support communities and organisations taking initial actions on climate change.

Respondents to the Commission's review survey raised concerns that the behaviour change approach

Spotlight on third sector action

WCVA developed a programme to support the third sector to take action on climate change. This supports organisations, some of whom have not previously taken action on climate change, to reduce their carbon footprint and to raise awareness of the impacts of climate change on their beneficiaries and communities. The work to date has included increasing awareness through regularly news briefings, events and information sheets; developing case studies; facilitating grants scheme, including Climate Change Next Steps; and a round table discussion on the social justice impacts of climate change.

Stakeholder view: "There is currently no integrated staged pathway of support for the third sector to take action on climate change, from the non-engaged through to those undertaking more sophisticated activities. To achieve the scale of change required to address climate change a Wales wide tailored pathway is required which includes appropriate engagement

a

promoted through the Welsh Government's programme did not necessarily allow for community-led behaviour change models.

The Welsh Government should work with partners to prioritise funding, resources and training so that awareness and action are developed and encouraged within and by the third sector and that community and third sector-led approaches are supported.

The Commission will incorporate a review of the role and potential of the third sector into its workplan for the coming year.

The Commission's recommendations to the Welsh Government

21. The Welsh Government should explore and resource ways to engage effectively with and harness the significant reach of the **third sector** on behaviour change programmes.

22. The Welsh Government and third sector should work together to develop a progressive pathway for third sector action on climate change, within which behaviour change is just one of several modes of action, and ensure that this is supported via all the relevant agencies and resources.

B7. Transport

Overall, some progress has been made in the initial stages of decarbonising the transport sector in Wales. However, stakeholders identified transport as a key area for improvement and question whether carbon reduction and climate adaptation have been integrated into the recent review and reprioritisation of the Transport Strategy.

As a result the Commission will be placing a major focus on transport during this year. It has commissioned a think piece on transport which will explore the considerable challenges and potential for both behaviour change and technological advances, the key role of businesses and infrastructure planning to delivery and implementation issues. The review will build on the Sustainable Development Commission's Low Carbon Region report, including its sustainable transport hierarchy, as well as explore the particular challenges and opportunities presented by the Welsh context of rurality together with societal changes such as the roll out of broadband. Furthermore it will examine the role of carbon reduction and adaptation in the recent reprioritisation of the National Transport Plan and progress made on transport in the Adaptation Delivery Plan. The potential role of city regions in economic development has been recognised by Welsh Government with the setting up of a task and finish group to report in early 2012. There is no doubt that a city region approach can offer an effective framework for low carbon development.

Sustainable Travel Centres are one of the major policy initiatives that aim to contribute to emission reduction from this sector. Feedback from the Sustainable Transport Alliance has raised concerns that the initiative may not deliver long term change with a need for a better monitoring framework and that the evaluation of the equivalent policy in England identified that measures to 'lock in' traffic reduction were essential to achieve changes in the medium and long term.

However, overall, uncertain progress has been made in encouraging **behaviour change** towards eco-driving and smarter choices and slow progress has been made in developing **freight consolidation centres** in Wales. Furthermore, limited funding has been leveraged from private sector partners.

Limited progress has been made in the development of alternative fuel infrastructure, particularly in the failure to mandate a national recharging network for electric and plug in hybrid vehicles.

In terms of the 'avoid, shift, improve' framework, progress has been made in funding the **transition to more environmentally friendly modes of transport and in improving fuel**

Spotlight on G-volution's patented Optimiser system

G-volution is a Newport early stage company, established under the Carbon Trust Incubator programme.

The patented Optimiser system, which reduces fuel costs and carbon emissions, is estimated to save commercial vehicle operators between 10 and 15% in fuel costs and reduce carbon emissions by around 8%. Developed in collaboration with a team of former Lucas Electronics engineers and Cranfield University, the Optimiser is already proving popular with major commercial vehicle fleets.

efficiency, largely through the EU initiative to develop better vehicle emission standards for new cars. However, the Welsh Government has not developed a strategy for avoiding emissions through the integration of land use planning and transportation planning. The lack of a Low-Carbon Spatial Plan remains a significant barrier to this. While a promising start has been made, for example, through the proposals to electrify the Cardiff-London and South Wales Valleys lines, the levels of investment involved are relatively low and maintaining momentum will be challenging.

On adaptation, there appears to have been a failure to undertake an assessment of transport vulnerability to climate change as described in the Adaptation Delivery Plan. It is crucial to the long term viability and effectiveness of Wales' transport system that an assessment of the likely impacts of climate change is included within future transport infrastructure programmes and that the vulnerability of existing transport infrastructure is understood and addressed where appropriate.

The Commission's recommendations to the Welsh Government

23. The Welsh Government should take note of the recommendations in the **European Commission's White Paper (2011)²² on transport** and align Welsh Strategy with its road map.²³
24. The Welsh Government should set in place a **clear investment strategy** by March 2013 so as to increase the certainty and scale of funds available for promoting sustainable travel and behaviour change. The development of the investment strategy should involve an assessment of climate impacts and resilience.
25. The Welsh Government should **monitor and evaluate** programmes aimed at affecting behaviour change in the transport sector.
26. The Welsh Government should then take on board the 'lessons-learned', disseminate learning and further develop a **wider transport behaviour change programme**.
27. The Welsh Government should complete a **climate change vulnerability assessment of Wales' transport infrastructure**, either as a separate study or as part of the National Transport Plan.
28. The Welsh Government should ensure that the development of the **next generation of broadband across Wales** is undertaken in a way that makes the most of emission reduction opportunities.

B8. Business sector

There has been steady progress within this crucial sector. The focus of the strategy for working with the business sector has developed over the years from raising awareness to developing the business case and supporting the implementation of measures which will improve business and environmental performance.

The Welsh economy and employment structure is heavily dependent on a **small number of energy intensive companies** with a long history in Wales. Energy intensive companies already covered under the EU Emissions Trading Scheme are not included in the 3% target but are a priority for engagement and should be supported in their efforts to reduce emissions. The Commission supports the establishment of a Large Energy Users Group in partnership with the CBI, as recommended in the Climate Change Strategy.

Interest free loans are currently available to all **small and medium sized enterprises (SMEs)** within Wales to enable projects whilst having little impact on a business bottom line. A recent review of businesses in Wales by the Carbon Trust suggests that only 27% of businesses are currently investing in green products and services.

Mayday Network

www.maydaynetwork.com

The Business in the Community Wales Mayday Network's ongoing growth and success shows the vital importance of business leadership and collaboration in the formation of a sustainable economy for Wales. 76% of businesses in the Mayday Network now agree that climate change is as much a business opportunity as a threat.

"Being part of the Mayday Network has helped us look at ourselves more closely and to put our own house in order. We now measure our energy use and carbon footprint using the Carbon Trust calculator and report annually to the Mayday Network." Paul Frowen, Director at HLN Architects

A growing number of businesses are now reporting their carbon emissions, demonstrating not only a commitment to joining carbon reduction initiatives, but reporting on and monitoring their progress.

The level of penetration of support available to SMEs was perceived to be low by those interviewed as part of this study. There are many contributing factors to this perception, including the perceived reduction in overall Welsh Government support for smaller businesses. The Commission's review led by the Federation of Small Business questioned whether the existing programme is sufficient to encourage SME involvement in emission reduction activities²⁴. Engagement processes with businesses were seen to be valuable but a strong need was expressed for a much better coordinated and more ambitious programme of support, facilitated by the Welsh Government. In particular, interviewees reported some key challenges, including progressing action in the face of severe economic pressures and a lack of skills, knowledge or a 'road map' that is specific for the sector and sub sectors.

Innovation is a key area in the **development of technologies** which will move Wales towards the low carbon economy. The overriding objective of activities in this area is to help make low carbon technologies available significantly sooner, at lower cost and at a greater scale than would be

the case without intervention. There is a wealth of knowledge and experience within Welsh businesses and academic institutions. These need to be encouraged and enabled to work together to accelerate the development of low carbon technologies throughout Wales. The Commission was impressed by the investment and range of research and development on climate change underway in the Higher Education sector, notably through the Low Carbon Research Institute. However, the Commission expresses concern that there was a need for increased focus on ensuring links with the business sector in order to deliver practical solutions which will accelerate the transition to a low carbon economy and encourage the establishment of indigenous low-carbon supply chains.

As part of the National Assembly for Wales' Environment and Sustainability Committee inquiry into **energy planning in Wales**²⁵ it was stated that 5TWh of renewable electricity in Wales has either been consented, is under construction or is currently in the planning process. This represents good progress in meeting the Low Carbon Revolution ambitions of 'renewably generating up to twice as much electricity annually by 2025 as used today'. The decarbonising of large scale energy generation is a critical element in our efforts to tackle climate change. Wales is well placed to lead this "low carbon revolution", securing investment and attracting associated low carbon business. However, while there has been progress, evidence submitted to the National Assembly Sustainability Committee's Energy and Planning review highlights the concerns of the Commission over the confidence of the investment community, lack of community engagement, the interface between aspects with and without devolved responsibility, and the scale of change required. The Commission is pleased that the First Minister now has strategic responsibility for large scale energy development and welcomes the proposals of the Energy and Environment Sector group. However there is still need for a more strategic approach to the development of the Green Economy, as called for in the 2010 CBI's "Blueprint for a Green Economy report"²⁶.

Overall, mixed progress has also been made at the UK level. The Renewable Heat Incentive (RHI) and Carbon Reduction Commitment (CRC) have been developed but changes to the Feed in Tariff (FIT) have significantly reduced the financial incentives for smaller scale renewable electricity generation. The Welsh and UK Governments have a role in **simplifying the complex and overlapping energy and climate change legislation** so as to provide business with the long term policy certainty and consistency which will secure investment in low carbon technologies and energy efficiency.

The introduction of the RHI is a significant achievement and is likely to drive the uptake of renewable heat technologies (e.g. biomass, solar thermal and micro combined heat and power) across Wales. The impact of the RHI on the generation of renewable heat was not considered in the Delivery Plan but is likely to be beneficial.

On adaptation, Visit Wales (part of the Welsh Government) has undertaken a study of the impacts of climate change on the visitor economy, which identifies climate hazards and their potential impacts on the Welsh tourism industry. A wider engagement with business on adaptation has yet to begin in earnest in Wales.

There is scope for the Welsh Government to work more effectively with business to secure further investments in low carbon technologies and more sustainable processes,

products and services. The Department for Business should take the lead in further developing the business case for the transition to a low carbon economy. There is a clear expressed desire from within business to work with the Welsh Government and other sectors to stimulate low-carbon economic growth. The role of the anchor companies as partners with the Welsh Government will be critical in providing business sector leadership and the Commission welcomes the proposed development of a leadership group that can mirror the success of the 2020 group in Scotland²⁷.

The Commission's recommendations to the Welsh Government

29. The Welsh Government and Department for Business especially should strengthen its engagement with the **business sector** in making the case for a transition to a low carbon, resilient economy especially through the following routes: the leadership role of the anchor companies; regional support; supply chains; support to small and medium sized enterprises.
30. The Welsh Government should work with anchor companies, business support networks and organisations such as the Carbon Trust to develop **tailored advice packages** for specific sectors, aimed at raising the level of engagement on both emissions reduction and adaptation planning.
31. The Welsh Government should prioritise work with the **large energy users**, to maximise emission reduction whilst also supporting major employers within Wales.
32. The significant potential for change amongst Welsh **small and medium sized enterprises** must be nurtured. There is an ever widening gap in respect of the support to small business on climate change, which should be reversed by the Welsh Government.

B9. Natural environment, agriculture and land use

The Welsh Red Meat Roadmap, including an industry action plan, was published in 2011 and the Glastir agri-environment scheme will replace all existing schemes in 2012, with combating climate change among its key objectives. The Agricultural Carbon Reduction and Efficiency Scheme will also be launched in 2012 to incentivise more efficient on-farm use of energy, manure, fertilizer and water resources. Along with the Farming Connect advice service and the Dairy Roadmap, these measures are likely to deliver significant reductions in agricultural emissions in future, so long as uptake targets for the Glastir scheme are met.

The **'Woodland for Wales'** strategy aims to deliver the optimal management of the current forest resource in Wales. Guidance on avoiding clear felling is due to be published in 2012 and an initiative to plant a broadleaf tree for every child born or adopted in Wales has been launched.

In an effort to stimulate woodland planting the Welsh Government has introduced a woodland creation grant within Glastir. 393 applications for the grant have been

submitted, covering an area of 1,100 ha. Of these, 232 applications have been approved, covering an area of 687 ha. ²⁸ Given the potential of woodland creation to act as a carbon sink (rather than simply reduce emissions as in other sectors) the current levels of woodland planting are insufficient, being much less than the annual target of 3000 ha per annum set for Glastir and the aspirational target to plant 5000 ha per year suggested by the Land Use and Climate Change Group. It will be important to review uptake of the grant.

There is concern at the Welsh Government's delay in implementing the recommendations made in the Land Use and Climate Change Group report²⁹. While an implementation plan has been produced, progress has been limited and there is significant emission reduction potential associated with soil and livestock measures, anaerobic digestion of animal and food waste and slurry. This is not being capitalised on in a strategic way.

The decision to amalgamate the Forestry Commission Wales, Environment Agency Wales and the Countryside Council for Wales into a Single Environment Body by March 2013 is predicted to lead to significant financial savings. However, the implications on emission reductions is uncertain. It will be important that the new body is explicitly tasked with enabling emission reductions and adaptation to a changing climate.

To date there is a lack of an integrated landscape-scale approach for the sector which allows the delivery of both emission reduction and adaptation objectives along with other policy priorities for the natural environment such as biodiversity conservation and water resource management. Spatial planning has an important role to play in delivering such integration, including the recognition of the importance of green infrastructure, so the limited progress within the regional Low Carbon Region groups is a concern. The new Natural Environment Framework (NEF) aims to deliver natural resource planning that should allow spatial synergies and conflicts in delivery of multiple policy priorities to be addressed. It will be important that both adaptation and emission reduction objectives are explicitly included in the development of the NEF.

Stakeholder view: "On farm anaerobic digestion should ultimately be classed as permitted development, the same as slurry storage. The environmental benefits of AD far outweigh any potential restriction due to visual impact. The second biggest problem is the cost and time delay of getting an export connection to the National Grid. The Welsh Government should be helping to fund or at least standardise the cost of grid connection."

The Commission's recommendations to the Welsh Government

33. The Welsh Government should provide a clear lead on **land use and climate change**. As a priority the Welsh Government should act on the implementation plan produced in response to the Land Use and Climate Change Group report, continue to integrate this into current work plans and ensure that work on the issue across different departments is joined up.
34. In line with Committee on Climate Change (CCC) recommendations, the Welsh Government should seek to align the Glastir scheme's ambition to combat climate change with underlying **abatement potential**, setting clear targets for emission reduction.

35. The Welsh Government should **monitor the success** of Glastir and the woodland creation grant and should consider developing stronger levers and incentives if levels of uptake are not in line with targets.
36. The Welsh Government should ensure that both climate change adaptation and mitigation are included as core features in the **Natural Environment Framework (NEF)** consultation and the associated pilot studies. This should involve the incorporation of the Natural Environment and Land Use Sectoral Adaptation Plan into the NEF.
37. The Welsh Government should clarify the relationship between the **Wales Spatial Plans Area Groups (or their successors)** and the NEF, to ensure that green and hard infrastructure planning are integrated.

The role and effectiveness of the Commission

The Role of the Climate Change Commission

In addition to examining progress by the Welsh and UK Governments against the Climate Change Strategy and its delivery plans, our annual review engaged with stakeholders via on line survey and interviews about the role and effectiveness of the Commission itself. This section provides feedback from that review and sets out the priorities for the Commission over the next year.

Review of the Role of the Commission

A respected voice. 90% of those responding to the survey felt that the Commission had helped in ensuring delivery against the climate change strategy in Wales. 75% felt that the Commission provided useful advice, through the "*preparation of well-considered papers, to which the government responds*". There were some views that the Commission needed "*more clout*" and that it could do more to help "*lead a public debate on key matters such as renewables; acting as a conduit, bringing the latest scientific evidence to bear on government*".

The Commission's legitimacy lies to a large degree in its broad membership, drawing from business, academia, the third sector, agriculture, environmental groups, local government and the children and young people's assembly. It has cross-party support, which helps develop the value of its consolidated viewpoint and voice.

The Commission is in the process of transition from a body set up in 2007 by and chaired by the Welsh Government, to one which appointed an independent chair in February 2011 and will, from March 2012, have an independent secretariat. This will provide visible distance and afford additional weight and legitimacy to the Commission's advice and scrutiny roles.

Engagement with others. The Commission's remit to mobilise action across sectors, build consensus and seek to join up sectoral action was seen by 55% of survey respondents to be fairly effective. However, 41% felt that it was not very effective in this respect.

Several respondents felt that the Commission could strengthen and broaden the ways in which it engages, through publications, workshops, conferences, the website, subgroups and through the networks of its own members.

"We were privileged and delighted to host a visit of the Climate Change Commission at our factory in October. They took the opportunity to see our solar module production process and the various initiatives underway to mitigate our own environmental impacts. I was able to see for myself the sterling work being done by the Commission."
Bill Thomas. *Sharp Solar Panels.*

There were differences of opinion about how and whether the Commission should be engaging with members of the public. The debate centred on whether or not the Commission should engage directly or 'cascade' through the networks of its members. As one interviewee put it: *"While it may be the role of some of the members, the Commission itself is largely a nerve centre for collating and processing understanding of issues and actions to government and for disseminating information and action to members, who may in turn disseminate to the public"*. The Commission recognises the need to continue this discussion and decide on its approach to public engagement.

Providing scrutiny of delivery. The Commission's scrutiny role is in its infancy and will become more closely defined over the coming few years as the delivery against the strategy becomes more embedded and as an indicator set is established. This will allow the Commission to more effectively monitor and scrutinize progress.

The way the Commission works. The majority of respondents felt that the Commission had the right access to expertise and to membership, although there were some concerns expressed about the size of the Commission.

The Commission's subgroups are seen to be a vital route for developing more detailed viewpoints, providing advice to Government and also engaging with specific sectoral or stakeholder groups. As an example, the Adaptation Sub Group has the capacity to provide invaluable advice to the Welsh Government on the development of the Sectoral Action Plans, whilst also operating as one of the conduits for engagement with business, local authorities, the third sector and natural environment groups.

The Commission's forward work plan

The process of completing this first annual review has provided some key learning for inclusion in the work programme for 2012:

- As the secretariat role becomes independent, the Commission will seek to maintain its positive **relationship and legitimacy of voice across the Welsh Government**, stressing engagement with Ministers and departments beyond Environment and Sustainable Development. It will work to ensure that tackling and preparing for climate change is a central feature in:
 - Bills brought forward under the programme of Government, specifically those relating to Sustainable Development, Planning and the Natural Environment;
 - Budget planning and design of new spending programmes, specifically plans being submitted for the next round of EU structural funds;
 - Procurement practices across the public sector.
- The Commission will produce a series of **evidence-based position statements** related to key areas of the climate change delivery plan. These will be designed to provide advice and accelerate delivery of emissions reduction and adaptation plans, and to advise on proposed projects or matters which have potentially significant climate change impacts and which are of public debate. The position papers would either provide a Commission view point, or where unanimity is not

possible, explore the key issues. The first of these papers will focus on transport **and will be presented to Ministers in April.**

- The Commission will continue to build on its engagement with the UK Committee on Climate Change, to inform its work, which is an **influence on UK Government policies relevant to delivery in Wales.**
- With an overarching focus on behaviour change, running through all aspects of the climate change strategy, the Commission will seek to strengthening its routes for and depth of **engagement within the key sectors.** This will involve:
 - establishing a business leadership sector group, promoting engagement through the **anchor companies** and their supply chains, to support key initiatives such as the May Day Network and to deliver effective engagement with **SMEs**;
 - building the role of the third sector leadership group established by WCVA and other partners, developing a focused approach to **engaging with the third sector**; and
 - improving connections between the Commission and **the education sector**, through links to the Climate Change Consortium of Wales (C3W) and the Education for Sustainable Development networks to ensure climate change is covered effectively in the curriculum.
- The key role of behaviour change suggests that there is significant value in strengthening the role of the Commission in **engaging with communities and the wider public** on matters of climate change and behaviour change. The Commission will seek to develop a range of routes for engaging with key audiences, including through events and meetings, and through the development of an engaging, independent website and use of social media. This will include work to define a '**Commission identity**'.
- The sub groups of the Commission have a key role to play in engaging wider expertise to provide detailed advice and capacity building. The Commission will continue to prioritise the work of:
 - the **adaptation sub group**, to ensure tackling the effects of climate change is incorporated in plans across national and local government;
 - the **Low Zero Carbon Hub**, facilitated through Constructing Excellence, focused on the built environment and the energy used within it, which is responsible for 60% of the 3% emissions reduction target in the Climate Change Strategy;
 - the **Agriculture and Land Use group**, which will be reconvened with new terms of reference, building on the report of the previous Land Use and Climate Change task group.
- Refine the **annual review process**; including streamlining information-gathering about Welsh Government delivery, the gathering of stakeholder views and the development of recommendations. The Commission will monitor and

report on **progress against the recommendations** made in this first annual review.

The programme of Commission meetings

The full Commission meets on a quarterly basis and all sessions are open to the public. Full details of meetings with papers, minutes and venues can be found at <http://wales.gov.uk/topics/environmentcountryside/climatechange/tacklingchange/strategy/commission/?lang=en>

The dates for full Commission meetings for 2012 are: Monday 12 March; Wednesday 27 June; Thursday 4 / Friday 5 October; Thursday 6 December.

For further information or feedback on this report please email climate-change@wales.gsi.gov.uk

Climate Change Commission for Wales Membership

Peter Davies (Chair) - Climate Change Commission for Wales

Russell George AM - Shadow Minister for Environment and Sustainable Development

Chris Mills (Director) - Environment Agency

Mike Evans - Environment Agency

Professor Gareth Wyn Jones - Land Use and Climate Change Group (LUCCG)

David Proctor - Confederation of British Industry (CBI Wales)

Dr Clive Walmsley - Countryside Council for Wales (CCW)

Peter Jones - Wales Environment Link (WEL)

Dr Peter Randerson - Liberal Democrats -

Gerry Metcalf - UK Climate Impacts Programme (UKCIP)

Dr Einir Young - Cynnal Cymru

Mike Batt - Carbon Trust

Janet Davies - Plaid Cymru

Paul Allen - Centre for Alternative Technology (CAT)

Dr Ruth Wood - The Tyndall Centre

Professor Kevin Anderson - The Tyndall Centre

Craig Mitchell - Welsh Local Government Association (WLGA)

Graham Benfield - Wales Council for Voluntary Action (WCVA)

Jessica McQuade - Wales Council for Voluntary Action (WCVA)

Dr Lorraine Whitmarsh - Transport Remit

Sally Sudworth - Low/Zero Carbon Hub

Helen Northmore - Energy Saving Trust

Professor Hywel Thomas - HE Sector

Simon Dean - CEO Velindre NHS Trust

Julie Cook - Trade Union Congress (TUC)

Chris Hartwell - Trade Union Congress (TUC)

Morgan Parry - Chair Countryside Council for Wales (CCW)

Non Rhys - Federation of Small Businesses (FSB)

Lewis Harding - Funky Dragon

Bethan Adshead - Funky Dragon

Specialist Advisors

Laura McNaught - UK Committee on Climate Change (UKCCC)

Support in producing this report

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Endnotes

¹ Welsh Government Climate Change Strategy for Wales and delivery plans <http://wales.gov.uk/topics/environmentcountryside/climatechange/tacklingchange/strategy/walesstrategy/?lang=en>

² Nature Climate Change: Rapid growth in CO2 emissions after the 2008-2009 global financial crisis, Macmillan 2011.

³ 3%, 6%, 9% Emission Reduction Scenarios for Wales; D Calverly, R Wood, S Mander, K Anderson; Tyndall Centre for Climate Change Research, November 2009.

⁴ UK CCC 2011 Welsh Progress Report <http://www.theccc.org.uk/reports/welsh-progress-report-2011>

⁵ UKCIP (2009) Maps If climate change impacts in Wales - <http://www.ukcip.org.uk/uk-impacts/wale/maps/>

⁶ Committee on Climate Change. Reducing emissions and preparing for climate change in Wales. 2011 Progress Report. October 2011. <http://hmccc.s3.amazonaws.com/CCC%20-%20Welsh%20Progress%20Report%2018%20Oct%202011.pdf>

⁷ http://www.swea.co.uk/proj_pathfinder.shtml

⁸ Available from: <http://wales.gov.uk/topics/environmentcountryside/climatechange/tacklingchange/strategy/gettingready/preparation/guidancepart1/?lang=en&ts=3&status=open>

⁹ <http://www.environment-agency.gov.uk/news/132897.aspx>

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<http://wales.gov.uk/topics/environmentcountryside/epq/waterflooding/flooding/planning/watermark/?lang=en>

¹¹ http://www.gwynedd.gov.uk/gwy_doc.asp?cat=4330&doc=25318&Language=1

¹² Tackling the Health impacts of Climate Change: <http://wales.gov.uk/topics/health/protection/environmental/publications/climate/?lang=en>

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<http://wales.gov.uk/topics/health/protection/environmental/publications/heatwave/?lang=en>

¹⁴ <http://wales.gov.uk/topics/health/protection/environmental/climate/flooding/?lang=en>

¹⁵ Sustainable Development Commission. Low Carbon Wales: Regional priorities for action. http://www.sd-commission.org.uk/data/files/publications/SDC_LowCarbonRegions_report_web.pdf

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- ¹⁶ Sustainable Development Commission. Towards a low carbon South West Wales: a routemap. [http://www.sd-commission.org.uk/data/files/publications/South West Wales Low Carbon Routemap v09_7_Sept.pdf](http://www.sd-commission.org.uk/data/files/publications/South_West_Wales_Low_Carbon_Routemap_v09_7_Sept.pdf)
- ¹⁷ <http://www.sd-commission.org.uk/news.php/407/wales/low-carbon-regions>
- ¹⁸ Low Zero Carbon Hub Strategy <http://www.cewales.org.uk/cew/wp-content/uploads/Strategy-Document-Updated-10.11.11.pdf>
- ¹⁹ HM Treasury (2011) Autumn Statement 2011. Available online: http://cdn.hm-treasury.gov.uk/autumn_statement.pdf
- ²⁰ Personal Communication from Welsh Government (2011)
- ²¹ Personal Communication from Welsh Government (2011)
- ²² EU White Paper/Roadmap on Transport to 2050 - http://ec.europa.eu/transport/strategies/2011_white_paper_en.htm
- ²³ European Commission (2011) White Paper: Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system. Available online: <http://eur-ex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0144:FIN:EN:PDF>
- ²⁴ Committee on Climate Change (2011) Reducing Emissions and preparing for climate change in Wales: 2011 Progress report. Available online: <http://www.theccc.org.uk/reports/welsh-progress-report-2011>
- ²⁵ National Assembly for Wales (2011) Inquiry into energy policy and planning in Wales. Available online: <http://senedd.assemblywales.org/mgIssueHistoryHome.aspx?Id=1336>
- ²⁶ CBI Greening the dragon: blueprint for a green economy <http://207.45.116.138/pdf/gwyrddio-ddraig.pdf>
- ²⁷ <http://www.2020climategroup.org.uk>
- ²⁸ Personal Communication with the Welsh Government
- ²⁹ Land Use and Climate Change report to the Welsh Assembly Government March 2010 <http://wales.gov.uk/docs/drah/publications/110214luccgreport%20finalv2.pdf>