



Chartered Institute of
Environmental
Health

Sefydliad Siartredig
Iechyd yr
Amgylchedd

Climate change strategy - Programme of action consultation

Response to Welsh Assembly Government

September 2009

Sefydliad Siartredig Iechyd yr Amgylchedd

Fel **corff proffesiynol**, rydym yn gosod safonau ac yn achredu cyrsiau a chymwysterau ar gyfer addysg ein haelodau proffesiynol ac ymarferwyr iechyd yr amgylchedd eraill.

Fel **canolfan wybodaeth**, rydym yn darparu gwybodaeth, tystiolaeth a chyingor ar bolisiau i lywodraethau lleol a chenedlaethol, ymarferwyr iechyd yr amgylchedd ac iechyd y cyhoedd, diwydiant a rhanddeiliaid eraill. Rydym yn cyhoeddi llyfrau a chylchgronau, yn cynnal digwyddiadau addysgol ac yn comisiynu ymchwil.

Fel **corff dyfarnu**, rydym yn darparu cymwysterau, digwyddiadau a deunyddiau cefnogol i hyfforddwyr ac ymgeiswyr am bynciau sy'n berthnasol i iechyd, lles a diogelwch er mwyn datblygu arfer gorau a sgiliau yn y gweithle ar gyfer gwirfoddolwyr, gweithwyr, rheolwyr busnesau a pherchnogion busnesau.

Fel **mudiad ymgyrchu**, rydym yn gweithio i wthio iechyd yr amgylchedd yn uwch ar yr agenda cyhoeddus a hyrwyddo gwelliannau mewn polisi iechyd yr amgylchedd ac iechyd y cyhoedd.

Rydym yn **elusen gofrestredig** gyda dros 10,500 o aelodau ledled Cymru, Lloegr a Gogledd Iwerddon.

The Chartered Institute of Environmental Health

As a **professional body**, we set standards and accredit courses and qualifications for the education of our professional members and other environmental health practitioners.

As a **knowledge centre**, we provide information, evidence and policy advice to local and national government, environmental and public health practitioners, industry and other stakeholders. We publish books and magazines, run educational events and commission research.

As an **awarding body**, we provide qualifications, events, and trainer and candidate support materials on topics relevant to health, wellbeing and safety to develop workplace skills and best practice in volunteers, employees, business managers and business owners.

As a **campaigning organisation**, we work to push environmental health further up the public agenda and to promote improvements in environmental and public health policy.

We are a **registered charity** with over 10,500 members across England, Wales and Northern Ireland.

Dylid cyfeirio ymholiadau am yr ymateb hwn at:

Julie Barratt

Cyfarwyddwraig yng Nghymru
Sefydliad Siartredig Iechyd yr Amgylchedd

Ffôn symudol 07919 212664

E-bost .barratt@cieh.org

Tŷ Penfro Llwybr Tŷ Coch
Llantarnum Parkway Cwmbran NP44 3AU
Ffôn 01633 865533 **Ffacs** 01633 485193
www.cieh-cymruwales.org

Any enquiries about this response should be directed to:

Julie Barratt

Director of CIEH Wales
Chartered Institute of Environmental Health

Mobile 07919 212664

Email .barratt@cieh.org

Pembroke House
Ty Coch Lane
Llantarnum Park Way Cwmbran NP44 3AU
Telephone 01633 865533 **Fax** 01633 485 193
.cieh-cymruwales.org

Question 1: Do you agree with the broad focus of Assembly Government action as outlined above?

Yes. In the view of the Chartered Institute of Environmental Health it is essential that a multi-stranded is adopted to tackling this issue. The breadth and complexity of the factors that contribute to climate change mean that a response to the problem must be similarly wide and complex. Single point specific interventions that tackle only small elements of the problem will not work. A comprehensive approach is necessary.

Question 2: What do you recognise as your contribution to tackling the causes and consequences of climate change?

This question can be addressed in two ways.

Internally the Chartered Institute of Environmental Health will address the way in which it operates to ensure that, in so far as it can, the way in which it conducts its operations has minimal impact on climate change. To this end we have adopted sustainable office practices including the use of web technology for meetings and conferences, post and banking, have adopted a policy of using recycled materials and of recycling office waste and have adopted sustainable procurement policies.

Externally we work with stakeholder and partner organisations to promote best practice in reducing our joint and respective impact on climate change and in promoting sustainable activities and behaviours.

Question 3: How can the Assembly Government or others enable you to maximise your contribution to tackling the causes and consequences of climate change?

The contribution of the Chartered Institute of Environmental Health to tackling the causes and consequences of climate change is through the work it does with its partner organisations. The Assembly Government can assist us in maximising our contribution to this agenda by facilitating the development of networks and promoting best practice across Wales and beyond. We would however note that any assistance provided by the Welsh Assembly Government must be in the long term and must be sustainable, as short term intervention invariably raises expectations and does not necessarily deliver the maximum benefit that could be derived from engagement.

Question 4: Do you agree with our proposed approach to ensuring delivery of the climate change strategy that emerges from this consultation process? Are there ways in which the approach could be strengthened?

It is acknowledged that it is essential that the climate change strategy is delivered. It is also critical that the effectiveness of the delivery mechanism is monitored and that results achieved are quantified. We are concerned however that significant resource should not be invested in a performance management and measurement regime which will take on more importance than the intervention itself. It is a truism to say that ' what gets measured gets done' and we would not wish to see the development of a measurement regime which would have the effect of directing resource and targeting effort in particular disconnected areas and in doing so would detract from the wider whole.

In our view the approach could be strengthened by adopting the practice of Integrated Impact Assessment to ensure that interventions carried out in one area do not have a detrimental and conflicting impact on interventions being conducted in another. Climate

change can only be tackled effectively in a joined up and seamless manner and it is critical to ensure that maximum benefit flows from all interventions.

Question 5: Do you agree our proposed approach to developing a comprehensive approach to promote behaviour change or specific proposed activities?

The CIEH agrees with the proposed approach with developing behaviour change. Climate change is so important and so all encompassing that in our view it cannot be dealt with by specific regulations. It is essential that there is public buy into addressing climate change and this can only be achieved by engaging with the public and encouraging behaviour change through a positive policy. The role of the Assembly Government must be to promote behaviour change and encourage its continuance and further to support specific activities, communities and businesses in engaging with the agenda. We do not support the concept of regulations that require particular forms of behaviour change since they encourage individuals only to achieve enough to satisfy the regulation rather than to embrace activity which takes them over and above a prescribed line.

Question 6: What do you recognise as the contribution you could make to promoting behaviour change? What support or activities would enable you to maximise your contribution to promoting behaviour change?

We refer to our response to Question 4 above.

Question 7: Are there ways in which we can strengthen the quantification of proposals contained in this consultation? If so, how?

The CIEH agrees that it is important to measure the impact of new proposals and existing policies in order to ensure that we are achieving reductions in greenhouse gases. It is also important that Stakeholders and the public in Wales are aware of the existence of the targets and understand the imperative to adapt their behaviour such that the targets may be met. We are however concerned that reduction in greenhouse gases will only be made through promoting long term behaviour change. It is important that we do not engage in a number of short term policy initiatives designed to hit targets rather than to promote behaviour change, since behaviour change is critical if we are to achieve but more importantly maintain reductions. We would strongly advocate policies that may achieve change more slowly provided that change is maintainable in the long term.

We are also concerned that resources should not be diverted to measuring the outcome of initiatives which could more usefully be spent in implementing the initiatives themselves. As noted, we agree that the impact of initiatives must be measured however we would not wish to see the implementation of measurement regimes that are themselves expensive to run and burdensome on the Stakeholders.

Question 8: Do you agree with the proposals for action in transport? Are there any major barriers to delivery?

The CIEH is of the view that the proposals for action in transport generally address the correct areas. For policies such as Sustainable Travel Towns to succeed it is critical that the transport system is fully integrated, readily accessible to all groups within the community and regular and reliable. This is particularly critical where commuters are relying on public transport to take them to work where reliability of the service is essential. It is also the case that reducing private vehicle use on roads in cities such as Cardiff is likely to encourage

greater use of cycling and walking as air quality and volume of traffic on the roads decrease making both walking and cycling a healthier and potentially safer activity.

We further endorse to propose Action 3 Strategic Park and Ride but would add we also consider that consideration should be given to Park and Share Schemes where individuals who would all usually use separate private cars could leave cars at a safe and secure location sharing just one vehicle for a joint journey. This already happens in some locations, such as at the Llantrisant motorway junction and is achieved through ad hoc arrangements made by individuals. There is clearly a willingness to engage in this sort of behaviour and we suggest that we should capture this willingness by promoting and formalising such arrangements which would have the advantage of moving vehicles off the highway and also providing a degree of security for those leaving their vehicles at park and share facilities, in addition to the other benefits identified in proposed Action 3.

We support the suggestion that an Inter Modal Freight Consolidation Centre should be established close to the centre of towns and cities. We recognise that moving freight by rail has some significant environmental advantages to moving the same volume of freight by road however we note that there may be local environmental disadvantages around the Freight Consolidation Centre itself. The Centre will be serviced by vehicles which will move the freight delivered to the Consolidation Centre to local delivery points, and there will be local air quality issues arising from both the railway engines and the motor vehicle engines which will have to be addressed to ensure that the quality of life of nearby residents is not adversely affected.

Question 9: Are there other key actions that we should be taking in relation to transport? If so what, what would it cost and what level of greenhouse gas emission reduction savings would it generate?

None that are readily identifiable.

Question 10: What are you doing to help reduce emissions from transport? What would help you do more or enable you to start contributing to emission reduction from transport?

CIEH is mindful that it is short local journeys by private vehicles that have the greatest impact on air quality locally. Where possible therefore we do not travel to meetings but conduct them by telephone conferencing, reducing the need to travel locally and thereby reducing emissions. We further have a policy of using public transport wherever this is feasible. We also have a policy of only holding conferences and events at venues that are served by public transport and encourage delegates to use public transport where possible to attend at the events or in the alternative to car share where use of public transport is not practical.

Question 11: Have we identified the big challenges for emission reduction in transport?

We consider that the key challenges for emission reduction in relation to transport are reducing short haul journeys within towns reducing commuter travel into towns and taking as much freight traffic as possible off the roads. In order to address these challenges it is necessary that Wales has an appropriate Integrated Transport Strategy and that it is both practical and feasible for private motorists to change their pattern of travel to using sustainable public transport for at least part of their private journeys.

Question 12: How do you think these challenges in relation to transport could be addressed?

We think it is important to recognise that private car ownership is high in Wales and remains an aspiration for non car owners. We think it is unlikely that individuals will be willing to give up use of their private car entirely, however we do believe that a degree of modal shift can be achieved if there is an appropriate joining up of public transport systems, and those systems are clean safe and reliable and seen as a viable alternative to use of the private vehicle by those who would currently chose to make all of their journeys in a private car.

It is the case that omissions from vehicles are highest when the vehicle is stationary with the engine idling or when it is moving slowly. Whilst we may aspire to reduce the use of the private car and also to move volumes of freight traffic from the road to the rail network there will continue to be reliance on both private cars and on road freight haulage. In order to reduce the environmental impact caused by these it is necessary that traffic movement is maintained. Traffic pinch points, particularly those placed in densely populated areas or facilities such as schools should be identified and managed traffic solutions put in place to maintain the movement of traffic.

It is also necessary that public transport serves the actual, rather than perceived needs of users. The Assembly Government should work with public transport providers to ensure that services are provided to meet needs, such as train services from Cardiff to the valleys late at night, particularly on weekends and when events take place in Cardiff. We do not consider that facilitating better movement of taxis is beneficial, rather that public transport should be facilitated.

Question 13: Do you agree with the proposals for action in business? Are there any major barriers to delivery?

The CIEH agrees with broad proposals 5 to 8 inclusive. Barriers to delivery of proposed action 5, 6 and 7 include funding. In order to develop skills, to promote a green jobs strategy and support SME there is a necessity for sustainable funding, to be sustained in the long term. Fundamental changes of the type proposed cannot be achieved in the short term and must be maintained in the long term. It is therefore necessary that sustainable funding is put in place to support initiatives driving forward these proposals. Although the summary descriptions seek to identify the cost of these interventions and in the case of proposed action 5 suggest that additional expenditure is not required we suggest that interventions of this type will need continuing support. We note that the costs in respect of proposed action 6 are quantified for the period 2009 – 2012, and that the proposed action 7 cost is subject to a European Funding Bid. It is essential that funding is identified and is sustained if these initiatives are to be successful. In respect of proposed action 8 whilst no direct costs to the Assembly Government are indicated clearly there will be costs to businesses, communities, local authorities and other public sector bodies in identifying and implementing practices and processes which will reuse waste heat and improve energy efficiency in the businesses. Whilst this is an admirable objective and would clearly help to reduce greenhouse gases, if the affected bodies pass on the costs of investigating and implementing such processes and practices to the consumer there may be an adverse impact in terms of social justice, particularly where those least able to pay are being asked to contribute to the costs of investigating and implementing such practices and processes.

Question 14: Are there other key actions that we should be taking in relation to business? If so what, what would it cost and what level of greenhouse gas emission reduction saving would it generate?

CIEH is not in a position to comment on this.

Question 15: What are you doing to help reduce emissions from business? What would help you do more or enable you to start contributing to emission reduction from business?

This is not part of the core role of CIEH. Therefore we make no comment in respect of this Question.

Question 16: Have we identified the big challenges for emission reduction in business?

CIEH believes that the key challenges have been identified. We also consider that the document has recognised the reasons for these being difficult to address. The fact that these issues are difficult to address however should not deter us in addressing them.

Question 17: How do you think these challenges in relation to business could be addressed?

Given the complex nature of these interventions it is unlikely that a single business or industry will wish to take on tackling emission reduction as it relates to them by itself. Where there are very significant cost implications we suggest that the Assembly Government should be encouraging collaborative working and supporting research to identify solutions that will have wide applicability across a range of industries. Because the costs of developing the necessary technology and due to the uncertainty of the results of implementation we do not feel that this is an area where introduction of regulation is the most appropriate mechanism for achieving results. Rather, we should be seeking out examples of best practice and adapting them to suit the needs of industry in Wales in a pragmatic and cost effective way. The Assembly Government can provide leadership in this respect.

Question 18: Do you agree with the proposals for action in the residential sector? Are there any major barriers to delivery?

CIEH agrees with the general thrust of the proposals for action in respect of the residential section. We particularly agree that the energy performance of new homes should be an imperative and that location and design of new homes to address climate change impact is important. We do however consider that it is important to target resource to existing homes, and particularly those older properties that are not currently energy efficient and that are difficult to adapt to improve their energy efficiency. A major barrier to delivery is public apathy. Pragmatically it must be recognised that the main driver for individuals changing their behaviour is cost saving to them. To that end any proposals for action in the residential sector must deliver benefit to individuals for them to embrace the action.

Question 19: Are there other key actions that we should be taking in relation to the residential sector? If so what, what would it cost and what level of greenhouse gas emission reduction savings would it generate?

None that we can identify.

Question 20: What are you doing to help reduce emissions from the residential sector? What would help you do more or enable you to start contributing to emission reduction from the residential sector?

This is not part of the core business of CIEH, therefore we make no comment.

Question 21: Have we identified the key challenges for emission reduction for the residential sector?

We consider that there has been insufficient acknowledgement of the key challenge of overcoming public apathy. Whilst the solutions proposed are practical and pragmatic they will not necessarily engage the public. It is clear that significant emission reductions can flow from individual property owners and occupiers making changes to their behaviour. To date these behaviour changes have been advanced on a piecemeal basis, for example distribution of energy efficient light bulbs by energy companies to householders and the offering of insulation at low or no cost to selected householders. Whilst we do not criticise these initiatives we do feel that they smack of 'tokenism'. Initiatives to engage residential property owners and occupiers should be inclusive and should deliver real benefits. At present there is no significant level of public buying into behaviour change to reduce greenhouse gas emission and it will require a concerted and joined up effort on the part of Welsh Assembly Government and other strategic partners to engage and excite the public about this agenda.

Question 22: How do you think these challenges in relation to the residential sector could be addressed?

See our response to Question 21 above.

Question 23: Do you agree with the proposals for action in the agriculture and land use sector? Are there any major barriers to delivery?

It is clear that the agriculture sector has a significant contribution to play in reducing emissions. We therefore consider it extremely important that the proposals for action should address the contribution played by this sector and broadly agree with the proposals outlined in the document. There are however in our view a number of major barriers to delivery. Whilst agriculture is referred to as an industry it is in fact extremely fractionallised, and there is a significant lack of cohesion between individual farming enterprises. There is a significant difference in behaviour and attitude in those running agri-industrial farm units when compared to those running 'hobby farm' type enterprises. It is overly simplistic to bracket these enterprises together and seek to address both in the same way.

We strongly endorse increasing woodland cover and would encourage its acceleration. The benefits of woodland cover as a carbon sink as well as a provider of renewable fuel and material for fossil fuel substitution cannot be underestimated, however if we are to see benefits from this in the short term it is important that increasing in planting should be accelerated.

Question 24: Are there other key actions that we should be taking in relation to the agriculture and land use? If so what, what would it cost and what level of greenhouse gas emission reduction savings would it generate?

We suggest that the Assembly Government should broaden the scope of this proposal and identify pockets of urban and semi rural land that are presently derelict and should promote planting of urban woodlands. This would benefit the quality of life of local inhabitants and also promote biodiversity, but would further contribute to reducing greenhouse gases in acting as a carbon sink. It would be relatively cheap to implement and would have incidental quality of life benefits.

Question 25: What are you doing to help reduce emissions from agriculture and land use? What would help you do more or enable you to start contributing to emission reduction from agriculture and land use?

This is not the core business of CIEH therefore we make no contribution in this regard.

Question 26: Have we identified the key challenges for emission reduction in agriculture and land use?

We consider that the key challenges of this sector have been identified.

Question 27: How do you think these challenges in relation to agriculture and land use could be addressed?

Any increase in woodland planting would have a consequent reduction effect on land available for agriculture and food production. It is therefore essential that research is carried out into improving the efficiency of agriculture and of meat production, to ensure that food production is not compromised by any programme of increased woodland development. It is also necessary that research into use of bio fuel and renewable energy generated from bio-sources is encouraged and where necessary resourced, but should not be pursued where the environmental impacts of producing energy through these mechanisms outweighs the likely benefits. We point to examples such as land stripping for palm oil production in Malaysia with consequently catastrophic effects on wildlife and land stability as examples of the damage that can be caused by failure to take account of all of the impacts of a policy before engaging in it. We would not wish to see such examples repeated in Wales. There are clear benefits to increasing woodland planting addressing climate change implications such as increased risk of flooding and further there are benefits to soil conservation.

Additionally there should be support for research into alternative fertilizers which are not based on chemicals and into more effective ways of manure use to reduce nitrous oxide and methane from both production and use.

In our opinion the significant challenge in relation to agriculture and land use is the fractionalisation of ownership of land and the diverse interests of the land owners. It will be extremely difficult to engage all of them in the same way and encouraging behaviour change in part of the sector will not have the same impact in other parts. There is a significant social marketing exercise to be undertaken which much be specifically targeted at like areas of practice to ensure maximum benefit.

Question 28: Do you agree with the proposal for action in waste, including those set out in the Waste Strategy consultation? Are there any major barriers to delivery?

Before commenting directly on the proposals for action in waste the CIEH wishes to underline our commitment to waste reduction. Whilst it is accepted that ultimately there is a requirement for disposal of waste the CIEH is of the view that there should be concerted

efforts to reduce generation of waste at source. The Welsh Assembly Government should take a leading role in promoting reduction of waste at source by promoting reduced packaging, and actively promoting reuse schemes that take material out of the waste stream and put them to positive use. There are a number of schemes operational in the community at present, Waste Savers, Track 2000 and similar schemes operate, however these have only local impact. The Welsh Assembly Government should promote and encourage such schemes and should take a leadership role in developing them across Wales. There is an urgent need to promote recycling of material that can be reused, in so far as it is possible, without the need to materially alter it.

CIEH also takes the point that 90% of products end up as waste within 6 months of purchase. The Assembly Government should promote and encourage research into manufacturing techniques that will allow products to be reused or to have a longer useful life. This would not only be good for the environment but would also be of benefit to individuals purchasing equipment which would be viable in the longer term.

Returning to the specific question the CIEH supports the proposal for action in waste, including those set out in the waste strategy consultation. We support the two key milestones proposed being 2025: high recycling and landfill diversion and 2050: designing our waste as addressing two of the major issues in this area. We do however consider that promoting behaviour change will be a major barrier to delivery. The proposed 2025 recycling rate of at least 70% across all sectors will be extremely hard to achieve. Whilst there is presently enthusiasm for recycling it would be fair to say that those items being recycled are those which are readily recyclable. Only very limited changes to behaviour are necessary and the changes are relatively easy to make. Achieving 70% recycling however will require major changes in behaviour. We do not consider that regulation and enforcement will be an appropriate mechanism for taking forward the necessary changes in behaviour. It is necessary that individuals, businesses and corporate bodies must choose to make the necessary behaviour changes, and must be convinced of the need to do so. It is also necessary that the changes are relatively easy to make. We therefore suggest that the Welsh Assembly Government must engage in an 'hearts and minds' exercise to engage the population of Wales, and should also work with the Waste Industry to ensure that where individuals are engaged and do wish to make changes to their behaviour and in doing so reduce waste generation this can be achieved relatively easily and without additional costs to individuals or businesses which may deter them from changing their behaviour.

Question 29: Are there other key actions that we should be taking in relation to waste? If so what, what would it cost and what level of greenhouse gas emission reduction savings would it generate?

We refer to our comments in respect of Question 28 in respect of waste reduction at source and in respect of increasing recycling rates.

Question 30: What are you doing to help reduce emissions from waste? What would help you do more or enable you to start contributing to emission reduction from waste?

The CIEH Wales office runs on a paper free basis. Where paper waste is generated it is recycled through an office paper recycling scheme. Office consumables such as printer cartridges are recycled, and redundant computer equipment is donated to local charities. We also promote waste reduction with our stakeholder and partner organisations. We do not consider there is currently anything that would help us to do more to reduce our emissions from waste.

Question 31: Have we identified the key challenges for emission reduction from waste?

The CIEH considers that the main challenges have been identified. We further consider that promoting anaerobic digestion is entirely appropriate. It is however very clear that the costs of promoting anaerobic digestion will be significant and that there may be considerable public disquiet in respect of the siting of the plants. There will be a need for start up funding to be put in place to ensure that the anaerobic digestion plants are constructed and are operational in time to meet the 2012/13 EU Landfill Directive Target. We also suggest that it is necessary that the carbon savings are quantified so that the very significant financial input that will be required can be justified in carbon saving terms.

Question 32: How do you think these challenges in relation to waste could be addressed?

We have no further comment in respect of this issue and refer to our earlier answers Questions 28 – 31 inclusive.

Question 33: Do you agree with the proposal for action in the public sector? Are there any major barriers to delivery?

The CIEH agrees with the proposal for action in the public sector. We do however note that the contribution of the public sector to emissions is relatively small. The contribution of the private sector is significantly greater and is just as visible. It is likely that lack of finance will be a major barrier to delivery in the public sector. Many public sector buildings are old and will be difficult to cost effectively adapt and there are resource implications to making some of the changes suggested e.g. using more efficient lights and appliances and the use of micro regeneration technology. Unless there are very significant savings for the public sector in making these changes we consider that it is unlikely that they will be resourced.

Question 34: Are there other key actions that we should be taking in relation to the public sector? If so what, what would it cost and what level of greenhouse gas emission reduction savings would it generate?

None that we can readily identify.

Question 35: What are you doing to help reduce emissions from the public sector? What would help you do more or enable you to start contributing to emission reduction from the public sector?

This is not the core business of CIEH we therefore make no comment in respect of this question.

Question 36: Have we identified the key challenges for emission reduction in the public sector?

The CIEH considers that the key challenges for emission reduction in the public sector have been identified in this section. We are however concerned that emphasis is placed on the public sector without any apparent regard to emissions from the private sector. We consider it will be extremely hard to convince members of the public that council tax should be expended on reducing emissions from e.g. a municipal civic office when no such apparent concern is shown in the private sector by e.g. a regional out of town shopping centre. It is imperative if we are to engage with all stakeholders that all stakeholders are required to

address the issue of emission reduction in the same way. Obliging those that can be compelled to make change to make changes that will contribute a relatively small amount should not take priority over encouraging those that cannot be obliged to make change but could make a significant contribution from doing so.

Question 37: How do you think these challenges in relation to the public sector could be addressed?

We refer to our foregoing answers.

Question 38: Do you agree with our approach to addressing vulnerability to climate change?

The CIEH agrees that the proposed approach to addressing vulnerabilities to climate change is appropriate. It is necessary that we have the evidence available to us to understand how our exposure to climate change impacts and the consequences of how that will be caused and further it is necessary that adaption is mainstreamed so that so due regard is paid at all stages to the need to built capacity and respond to the impact of climate change. We further agree that communication is essential as it is a prerequisite of adapting to climate change that all decision makers are aware of the impacts of climate change and have available to them the necessary information to make planning decisions that take due account of climate change and its impact. The suggested approach brings together those three work streams, and we consider that it is critical that it should do so.

Question 39: Are there any additional strategic actions that are necessary?

We cannot identify any additional strategic actions that are necessary however we consider that it is necessary for Welsh Assembly Government to monitor decision makers and the decisions that are made to ensure that due regard is paid to the necessity to adapt to the impact of climate change. Whilst the adaptation strategy is comprehensive it is based on organisations building adaption actions into the decision making processes. Clearly if this is not done by all organisations the beneficial impact of those organisations that do incorporate adaption into their decision making will be diluted by the adverse impact of those failing to do so. The strategy obligations imposed by the Climate Change Act 2008 are obligations upon the Government and not on individuals. The communication and engagement arm of the strategy will raise awareness of the impacts of climate change in Wales and should also promote engagement with the adaptation programme which will encourage organisations to adapt and to plan for adaptation however we consider it is necessary that there is a degree of monitoring to ensure that this is happening. Failure on the part of some organisations to engage with this agenda will have significant and adverse consequences for others affected by their operations as well as for the organisation itself, and we do not feel that it should be left to organisations to decide whether they will or will not become involved in the agenda.

Question 40: We wish to identify barriers to effective climate change adaptation. Are you aware of any rules, regulations or government action that pose a barrier to effectively adapting to climate change?

We are not aware of any rules, regulations, or Government action that pose a barrier to effectively adapting to climate change. We do however refer to our answer to Question 39 above and note that a lack of engagement on the part of individuals or organisations may be a barrier to climate change adaptation. In the event that this is the case this issue must be addressed.

Question 41: Are you aware of any process for evaluating adaption action? If so, please provide detail.

We are not aware of any effective process of evaluating adaptation action. We suggest that in order to demonstrate the commitment of Wales to adaptation and to supplement the evidence base that organisations taking adaptive action should be asked to provide details of the action taken and the reason for taking the action which should be collated centrally. Evaluation of these actions will necessary be speculative since UKCP09 UK Climate Projections is based on climate models and are not definitive. We do however feel that where suggestions that adaptations have made a contribution to reducing the impacts of climate change can be made and can be supported by evidence the information may promote a higher degree of public engagement and voluntary behaviour change.

Question 42: Do you agree with the proposals for action in relation to adaptation and society? Are there any major barriers to delivery?

Yes. It is quite clear that the poorest elements of society are least able to cope with but most likely to be affected by the effects of climate change. It is therefore essential in our view that the public sector should take a lead in increasing the resilience of local communities. This is something that must be lead by the public sector as individuals alone will not be in a position to make the adaptations that will be necessary to protect them from the impact of climate change. Lack of resources is likely to be a major barrier to delivery. It is essential where new functions or enhanced functions are passed to the public sector that finance follows function to ensure that the function is carried our effectively.

Question 43: Are there other key actions that we should be taking in relation to adaptation and society?

We suggest that where guidance is currently available such as planning policy guidance and supplementary planning guidance this should be reviewed and adapted where necessary in line with the precautionary principal to ensure that there is a presumption against new development where that development is likely to be impacted upon by e.g. increase flooding or will have an adverse affect on current infrastructure by adding additional loading.

We further suggest that local authorities should be actively encouraged to use Section 106 Agreements arising under the Town and Country Planning Act 1990 when approving new development, those agreements seeking contributions to the costs of works or adaptations to take account of the impact of climate change and any exacerbation of impact that will be caused by the proposed development. It is in our view imperative that new development should not be allowed to proceed where is there potential for it to either contribute to or be impacted upon by adverse affects of climate change.

Question 44: What are you doing to in relation to adaptation and society? What would help you do more or enable you to start contributing more?

The CIEH is working with its local government partners and through Environmental Health Practitioners practicing in local government to raise the issue of the impact of climate change and to promote adaptations that will reduce that impact. This includes responding to planning consultations and to making responses to planning applications highlighting the potential impact of climate change on the proposed development. We have also contributed to the consultation on the Heat Wave Plan for Wales and worked with our partners in the

local Health Boards and National Public Health Services for Wales in considering the potential impact of adverse weather conditions on health. We are also commissioning and participating in research on the subject to increase the evidence base. This is ongoing work and continues to be one of the CIEH main priorities.

Question 45: Do you agree with the proposals for action in relation to adaptation and the economy? Are there any major barriers to delivery?

It is clearly the case that it will be necessary to have an evidence base so that we understand how climate change will affect the economic infrastructure of Wales. There will be detrimental effects to some elements of Welsh society and benefits to others such as tourism. It is essential that we have a full understanding of the likely impact in order that we may minimise the detrimental impacts while maximising the benefits that will flow from positive impacts. It is necessary that we have a sound evidence base in order to support the sectors involved in planning and supporting the economic infrastructure of Wales and ensuring the decisions made are made on sound evidence and follow best practice. We therefore support proposed action 21.

It is also necessary that decision makers have all of the information necessary to make sound decisions. We very much support the suggestion that skills must be developed and toolkits must be provided to build capacity and inform decision making. We do however note that it is imperative that this work is done quickly and that the results of the work are disseminated to all interested parties so that decision making can be informed by the evidence and can follow best practice as soon as possible. Whilst not a barrier to delivery we consider that this work is time critical. Decisions are currently being made that could be informed by the evidence that is yet to be gathered. In order to ensure that all decisions and the implementation of the actions proposed are resilient to the impact of climate change the information must be gathered and promulgated as soon as possible.

Question 46: Are there other key actions that we should be taking in relation to adaptation and the economy?

We suggest that the public sector and large private sector organisations are likely to be planning for the impact of climate change on their business. It is less certain that small businesses are taking the same action. We therefore suggest that it would be appropriate to produce guidance for small and medium sized businesses highlighting the impact that the effects of climate change might have on their business and suggesting ways in which this may be ameliorated. Given the very large number of small and medium enterprises in Wales this would be a valuable service in a sector that may not currently be addressing the issue of climate change.

Question 47: What are you doing to in relation to adaptation and the economy? What would help you do more or enable you to start contributing more?

This is not the core business of the CIEH therefore we are taking no action in this regard.

Question 48: Do you agree with the proposals for action in relation to adaptation and the natural environment? Are there any major barriers to delivery?

It is absolutely necessary that we have a full understanding of the pressures that climate and climate change will have on the natural environment. It is also critical and important that we identify those areas most under pressure and the species in them that are most at risk. It is

also essential that we identify those native species in Wales that will come under pressure and attempt to predict how that pressure will manifest itself and the impact it will have upon the species. Whilst we recognise that natural species have always been required to adapt to climate change we must also recognise that potential habitat loss will have a severe affect on wildlife in Wales. We therefore support the proposals for action in relation to adaptation and the natural environment. We consider that it is essential that groups such as CCW support exemplar projects to demonstrate implementation of adaption principals on conservation sites in Wales and that at risk species are monitored so that pre-emptive action can be taken if a species comes under particular threat in consequence of climate change or its impact.

Question 49: Are there other key actions that we should be taking in relation to adaptation and the natural environment?

None that we can readily identify.

Question 50: What are you doing to in relation to adaptation and the natural environment? What would help you do more or enable you to start contributing more?

This is not the core business of CIEH therefore we make no comment in this regard.