

The Natural Environment Framework for Wales:

Narrative 3

1.1 The Welsh Assembly Government Cabinet have agreed that Sustainable Development will be the central organising principle of everything that we do. As the Sustainable Development Charter points out, this means improving the long-term economic, social and environmental well-being of people and communities in Wales. To be truly sustainable it needs to be done in ways that promote social justice and equality of opportunity, enhance the natural and cultural environment, and respect environmental limits.

1.2 A key element of sustainability is biodiversity enhancement and protection. The UN World Summit on Sustainable Development in 2002 identified the critical role of biodiversity in sustaining well-being and combating poverty, warning that the ongoing loss of species is affecting well-being. The European Commission's Communication, *'Halting The Loss Of Biodiversity By 2010 — And Beyond: Sustaining Ecosystem Services For Human Well-Being'* explains the contribution biodiversity makes to our well-being:

'Over recent decades, humanity has benefited enormously from development, which has enriched our lives. However, much of this development has been associated with a decline in both the variety and extent of natural systems — of biodiversity. This loss of biodiversity, at the levels of ecosystems, species and genes, is of concern not just because of the important intrinsic value of nature, but also because it results in a decline in 'ecosystem services' which natural systems provide. These services include production of food, fuel, fibre and medicines, regulation of water, air and climate, maintenance of soil fertility, cycling of nutrients. In this context concern for biodiversity is integral to sustainable development and underpins competitiveness, growth and employment, and improved livelihoods.'

1.3 Yet, despite its importance, and despite some good progress, the latest evidence indicates that we will miss the 2010 international and national (ESW) biodiversity targets*. In response, the Minister for Environment, Sustainability and Housing issued a Statement on 19th January acknowledging that Wales' natural environment faced particular challenges, not least from climate change. She stated that our traditional focus on habitat sites and species protection would need to develop to look at the wider habitat as a whole and to create places resilient and able to adapt to climate change. She went on to say that a truly sustainable approach would address climate change and habitat management together, managing (and valuing) land and sea for the services it provides

* The Assembly Government has committed itself to two international and one national target for 2010: significantly to reduce the current rate of biodiversity loss by 2010 (CBD); to halt the loss of biodiversity by 2010 (EU); and that sites of international, national and local importance in Wales should be in favourable condition to support the species and habitats for which they have been identified with 95 per cent of international sites in favourable condition by 2010 (ESW).

(the ecosystem services of clean air, water, food and fuel) and that a new Natural Environment Framework would be developed, with a public consultation to be launched at the annual Wales Biodiversity Partnership conference in Bangor on 15th September 2010.

1.4 As part of the process of preparing the Framework the Assembly Government has established a small programme team and begun engaging with key stakeholders and partners to consider what might be Wales' response to this challenge. Wales is, after all, a small country with the culture, collaborative ability and brainpower to tackle these problems in innovative ways. But to do so we are having to be honest about the failures to date and the difficulties ahead, including recognising the reality of prospective financial constraints on government and other actors in the coming years. In such circumstances we need to ensure that we get the best possible, sustainable value for the public from the money that we spend, by collaborating in smarter ways: re-directing and reassessing our priorities.

1.5 It is certainly insufficient, simply to say that government must spend ever-increasing amounts on these issues, or that traditional approaches to sustainability and environmental management are able to address the challenge. A Welsh public under increasing social and economic pressures are most likely only to support – and engage in - action for sustainable development and environmental protection that can be seen to be in the wide public interest in terms of its – undoubted – benefits.

1.6 We in Wales are not alone in struggling with the challenge of biodiversity, but we are perhaps uniquely placed to succeed. Wales is a small country with a strong and vibrant culture with deep historical and cultural links to the natural environment – many words in the Welsh language - including 'bro', 'cynefin', 'milltir sgwar' and 'hiraeth' have connotations of the natural homeland of Wales and its wildlife, as well as family, friends and community. Wales is blessed with a diversity of people and businesses. Cardiff was one of the first cities in the UK to welcome migrant workers from around the world, and the diverse range of languages and cultures found in Wales today allows us to think in a multitude of ways. This diversity, like that in the natural environment, gives us the resilience and strength that we will need to cope with social, economic and now climate change. Traditional Welsh cultures often had strong links to nature - hollans and small mixed farms, for example. We need to find ways to use the best of new technologies and knowledge to create modern versions of those 'joined-up', locally-focussed, self-supportive and naturally-recycling systems to help us meet the challenges of this century.

WHAT ARE WE TRYING TO ACHIEVE? (1) ISSUES & CHALLENGES

2.1 To successfully rise to the challenges facing us in both our terrestrial and marine environments, we need to be clear what the challenges are, both natural and man-made, and about what we are attempting to achieve. This paper approaches these issues from 3 directions: what? how? and who?

a) WHAT?: examining the challenges to the environment so as to be clear what the 'mission' of a Natural Environment Framework ought to be;

b) HOW?: looking at the issues of policy, evidence & monitoring, and government interventions that need to come together to create the right framework for our goals;

c) WHO?: examining the challenges and problems for delivering our goals ‘on the ground’.

2.2 While the starting point and ‘spur’ to this process may be the failure to meet the 2010 biodiversity targets, in reality there are many good reasons to revisit our efforts in sustainability policy and environmental stewardship to ensure better delivery of benefits on the ground, and better use of the public’s money.

2.3 The problems in the Welsh economy bring issues around our environment into sharper relief. On the one hand, environmental protection can seem more restrictive of businesses and growth than before, and even seem like a ‘luxury we can no longer afford’. On the other hand, the Welsh environment is itself a major component of the Welsh economy - the ultimate source of much of our income and employment, and a potential key to future economic strength built on ‘green & blue technologies’ and the attractiveness of Wales as a place to live and work. Our environment is a keystone of our well-being, delivering not only the essentials of life such as food, fuel, clean air and water, but also less tangible things without which our lives - however rich we may be in material terms - are all the poorer, from the health benefits of enjoying the Welsh outdoors to the tranquillity and majesty of our superb scenery and the anchor our heritage and sense of place and identity our attachment to our local environment provides.

2.4 Climate change is a major issue which no Government, economic sector, or public can afford to ignore and which has direct and indirect consequences for the Welsh environment that makes it even more important to conserve robust and resilient ecosystems capable of continuing to provide valuable benefits to society while adapting to new climatic conditions. As well as food, water and the other services we already draw from Welsh ecosystems, their role in our response to climate change – as sinks for carbon, new sources of energy, and as living repositories of the genes we may need in future – makes it more important than ever that we manage them in ways that retain resilience while allowing adaptation, even migration.

2.5 If anything, climate change will worsen the prospects for species and habitats so that an agenda for conservation that strives to halt change is even more likely to fail now than in the recent past. Even as early as 1992, at Rio, one of the main arguments for conserving biodiversity was its central place as a measure of sustainable development, and the value it plays in sustaining ecosystems and the services they deliver. In the years since Rio this ‘ecosystems’ services’ agenda has come into sharper focus, with growing unease about such problems as flooding, drought, even food supply in the face of a growing population. We need to be able to harness the public’s desire for the services the environment provides within the programmes of action we undertake in order to conserve our ‘natural capital’, including the ‘keystones’ of ecosystems: biodiversity, soils, water etc.

2.6 To do this we need to bring forward a clear focus on conserving not only the intrinsic, but the added value public *benefits* the components of ecosystems offer by placing a new emphasis on the ecosystem as a whole, as much as its individual elements. This is a question of *how* we manage and conserve the environment, not whether to do so.

2.7 It is with these challenges, and some notable successes, in mind - as well as those we are all-too familiar with in terms of the competition for space and other resources - that the Assembly Government embarks on developing a Natural Environment Framework for Wales. Our aim is to embed sustainable development as an objective in all policy and policy delivery, so that people in Wales can continue to benefit from ecosystem services in the face of climate change and other challenges.

2.8 The purpose of the Natural Environment Framework is:

to secure a stronger focus on sustainable land and marine management by moving away from a specific focus on sites and species to stronger support and action on ecosystems and their services - thereby ensuring that Wales' natural capital is maintained and enhanced.

2.9 This requires that the key aspects of Wales's 'green infrastructure' are defined and that a more holistic, integrated approach to the stewardship of Wales' natural capital is adopted, one that acknowledges the intimate dependency of Man's relationship with nature and seeks to optimise the range of services and benefits that the nation's resources and landscapes provide. Its specific objectives are to:

- Move our focus away from processes and targets towards action and delivery on the ground – and long-term outcomes – through stronger support and action on ecosystem and their services at the landscape as well as local level and a clearer focus on risk and resilience;
- Adopt a new and stronger focus on ecosystems services in all evidence, policy and funding activities undertaken by WAG and its sponsored bodies, based on our sustainable development principles;
- Place the current Biodiversity Action Plan targets and actions for species and habitats in a new framework, moving to new actions and targets that reflect the need to secure resilience and ongoing security in the provision of services from Welsh ecosystems and the services they provide, on land and sea;
- Refocus the work of the main partners within and outside the Biodiversity Partnership to reflect an ecosystems base for action with a clear focus on risk and resilience in the context of climate change pressures.

2.10 The challenge for this Natural Environment Framework is therefore to translate into action some of the underlying principles of holistic ecosystem and whole-landscape stewardship contained in much of the existing international legislation - from the Convention on Biological Diversity to the Habitats Directive and the European Landscape Convention – into meaningful protocols for effective action.

2.11 To put this another way, the Welsh Environment is the bank in which our natural capital is held: we wish to restructure the way we deal with that bank to protect our capital for the future and secure a better level of dividend for the people of Wales.

WHAT ARE WE TRYING TO ACHIEVE ? - (2) THE EVIDENCE BASE

3.1 The Natural Environment Framework seeks to shift the focus of much of our environmental policy and effort onto conserving and securing Wales' 'Natural capital' and the 'Green and Blue infrastructure' of our country and its surrounding seas, on which so much else depends. To do so requires a new approach to the selection and application of priorities for environmental action, especially in nature conservation, natural resource protection and our approach to sustainable management of land and marine resources.

3.2 This new approach needs to recognise a number of dimensions, all of which are interconnected:

- that Wales natural capital provides a complex range of vital life support roles
- that strong connections and linkages between the functions need to be maintained to increase the ability of these resources to cope with and adapt to the changes likely to affect them in future
- that more sophisticated mechanisms are needed to deliver better stewardship of resources and the synergies between elements of our natural capital

3.3 One of the key questions is whether we know enough about Wales' ecosystems and their function, health and resilience. Whatever route is taken to better manage our ecosystems, one thing is clear: we need better information on Welsh ecosystems, their function, their relationships to services, their locations, and the social and economic forces affecting them and the values and benefits derived from them.

3.4 Research is under-way led at the UK level by DEFRA, to produce a National Ecosystem Assessment, (due to be published in late 2010) aiming to provide later this year a comprehensive assessment of the state and value of the UK's natural environment and the ecosystems services it provides. It will contain a chapter on Wales, and another on marine ecosystems around the UK, including Welsh seas. One of the key NEF Programme Work streams (work stream C) focuses on the evidence base to support a shift to an ecosystem-based approach.

3.5 However, the work in this area has already served to bring two issues into sharp relief across the public sector, academic institutions, and other relevant bodies of Wales,. One is the need to become more adept at sharing and collating the evidence we collectively hold, and developing the means – technological and administrative – to achieve such sharing. The Wales Environmental Hub based at Bangor University is clearly an important step in this direction. But the 'hub' is relatively small and in any case has a limited linkage and expertise to 'tap into' and handle the types of socio-economic information implied by the challenge above.

3.6 As part of NEF work stream C, SEED (formerly Technical services Division) of WAG, with a large input from CCW and FCW, are attempting to bring together the main information sources and sets held and operated by the main Welsh ‘players’. Work has started (workstream Ci) to compile a national GIS-based web resource to hold and share spatial (i.e. mapped) information about Welsh ecosystems, categorised in a consistent way with the DEFRA UK National Ecosystem Assessment. This is a major task and challenge, probably among the first such projects in the world, but one without which we cannot hope to move in the direction of a strong ecosystem focus to policy and delivery across Welsh public life. However, whilst hugely important, that is only part of the challenge.

3.7 Just as important is the second key issue here, namely the pressing need to become far more agile and sophisticated in agreeing a shared *agenda* for the more fundamental research and monitoring that is needed to underlie a shift to an ecosystem-led approach.

3.8 How the research and monitoring agendas of WAG’s divisions, the sponsored bodies and those in Welsh NGOs and academia is arrived at, prioritised, allocated and driven is a hugely important question. Not surprisingly, given the focus of biodiversity targets and environmental quality standards, much of the present ‘effort’ focuses on the questions surrounding species and habitats, their ecology and distribution, change affecting them, and the means of managing them. Monitoring efforts too, are driven heavily by statutory requirements to report the condition of species and habitats, rather than ecosystems, and with there being so many threatened and declining species in Wales, this effort consumes enormous amounts of time and energy.

3.9 One of the key challenges here is to determine what and how to *measure progress* towards more sustainable ecosystem outcomes. This is only partly a case of looking afresh at the existing data and monitoring systems to see what they are capable of telling us. It may also require us to identify new ways of measuring environmental change alongside social and economic outcomes.

- What new forms of information and evidence do we need to focus on ecosystems and their wider role in sustainable development in Wales? How should we begin to align and redirect the collective Welsh scientific and monitoring effort towards an approach focussed on ecosystems and their wider social and economic benefits? What might be the approach we adopt to measuring progress? What mechanisms need to be in place to bring about the necessary sharing of priorities, coordination of effort and sharing of evidence?

3.10 In the UK, following Rio and the signing of the Convention on Biological Diversity (CBD) a major step forward was taken by the adoption of an approach to conservation based on clarity about which species and habitats were at most risk, and what actions were needed to redress those risks (UKBAP). This was an innovative and sensible system of ‘triage’ that has clearly helped in the measure of success achieved to date. However, those sensible biodiversity priorities have not been the sole or even main

focus of attention, with such measures as the Wildlife and Countryside Acts, and the EU Habitats and Species Directive setting out other (if overlapping) priorities for attention. Since Rio (1992) the bulk of attention and resource in Welsh conservation has been devoted to the identifying, selecting, designating and monitoring of sites that contain concentrations of named species and habitats, and on measures at the ‘species level’ (such as licensing activities affecting certain statutorily protected species). It has not been directed towards the issues of habitat resilience, ecosystem approaches, or securing long-term sustainable management. It is not clear that the present large numbers of priority species and habitats meet these latter needs, if at all, and if this ecosystem approach is now to be the central concern it is vital that we ensure that the right conservation priorities are identified and acted on– whether they should be species at all? if so which species? Which habitats? At what scale: protected sites or more widely? etc.

3.11 Given that the targets for UKBAP and other species have driven much of this focus one of the questions we wish to explore is:

- **Should we now be expressing targets in terms of maintaining *ecosystems*, and (furthermore) the flow of *services* each ecosystem provides?**

3.12 Making ecosystems the centre of attention need not mean that the focus shifts entirely away from species and habitats: after all, habitat and the species they comprise are key components of ecosystems and often have crucial roles in ecosystem function. This is clearly not the same question as identifying *indicator* species, and it is probably not sufficient to equate ‘ecosystems’ with ‘habitats’ as has been done - partly from necessity and the paucity of other data - in the National Ecosystem Assessment due to be published in mid 2010. Giving species and habitats priority on the basis of their rarity and decline may be right to ensure their conservation – ultimately to avoid their extinction – but may not serve as a good way to prioritise species essential to ecosystem function.

3.13 Some focus on individual species will continue to be needed: first, some species are clearly vitally important as components of the function and resilience of ecosystems – the concept of keystone species. It is argued by some that the sheer complexity of natural systems, food webs etc, means that in scientific reality, the identification of such keystone species is near-impossible: all species within an ecosystem serve an ecologically important role and cannot be treated in isolation from its interactions with others. Nonetheless, it remains true that some species perform key roles in shaping defining ecosystems: the oak trees in a Welsh oakwood, as a rather obvious example.

3.14 The key point here is that a choice made repeatedly in government and conservation bodies as to what (which species, and habitats) to direct conservation effort towards, and secondly, which species to monitor, either to keep a watch on their status in their own right, or because they are believed to serve as useful indicators of some wider issue – habitat health or whatever. How we make these choices is important, and the new approach being proposed here is to move away from rarity and decline as the main guide. In the face of climate change, and other changes, knowing what to do for species under

threat is even more difficult. Even if we were to continue to focus on species and habitats they will face change, and for many they will face declines that may be beyond us to fully counter.

3.15 The prospect of extinctions, at least from Wales, of many species is a very real one, and may be unavoidable. Extinction threatens to breach one of the fundamental principles of sustainable development (the avoidance of irreversible change, especially loss). For governments to fail to make every effort to avoid contravenes one of the founding principles of the Biodiversity Convention (CBD). It also threatens one of the crucial services that biodiversity supplies: namely, the stock of genetic variability and diversity.

3.16 This genetic level diversity - the value of which to such potential uses as farming and pharmaceutical is enshrined in the CBD - is more recently becoming better understood as being hugely important in its own right, in supporting resilience to such factors as climatic change, and allowing adaptation. Indeed it may be that doing as much as possible to resist declining genetic diversity may be key to securing the resilience of the ecosystems including - along the way, as it were - their component biodiversity.

3.17 Further consideration and work is needed to explore these issues and CCW have been asked to lead a part of the NEF Programme (work stream Ciii) to provide guidance on species and habitats in the light of a new priority on ecosystems. The new approach sought here requires a focus in the science underlying conservation – one that emphasises the *role* played by the components of the ecosystems in the function and resilience of ecosystems and their ability to provide *benefits*, including the *limits to change* that can be accepted before those benefits are threatened or lost. This subgroup will consider the issues of keystone species and resilience and what is a healthy ecosystem? what has worked well to date? and what could be improved to make further progress? as well as the links between existing BAPs and the importance of genetic diversity.

3.18 Clearly the Welsh public and millions of visitors to Wales value our beautiful and varied natural environment for its own sake, both on land and - increasingly as knowledge about it grows - in our seas too. However, the services the environment provides are not merely about our *preferences* whether from material or moral grounds: they are essential to our lives, including our economy. Yet most targets and action plans for the natural environment focus on either the most obvious environmental services (such as standards for clean air and water) or on conserving components of the ecosystems – namely species and habitats, not the ecosystem, let alone its services.

3.19 Ecosystem services are not confined to those with marketable value – such as water or food: what might be called ‘environmental commodities’. They include the many other ways we can value, cherish, or simply need a service the environment provides, irrespective of whether the mechanisms exists to ‘purchase’ them. The intangible benefits our ecosystems and landscapes provide add an extra dimension to their character, their individuality and a distinctive sense of place. Some examples include:

- Resources for basic survival, such as clean air and water;
- A contribution to good physical and mental health, for example through access to green spaces, both urban and rural, and genetic resources for medicines;
- Protection from hazards, through the regulation of our climate and water cycle;
- Support for a strong and healthy economy, through raw materials for industry and agriculture, or through tourism and recreation; and
- social, cultural and educational benefits, and wellbeing and inspiration from interaction with nature.

3.20 Work stream Ci is attempting to identify and map these benefits, particularly the ten categories of ecosystem service identified in the DEFRA NEA plus two others – biodiversity of value in its own right (which might mean rare and threatened species, iconic species, genetically diverse resources, etc) and a 12th ‘layer’ utilising the extremely detailed and comprehensive coverage of Wales historic, cultural, and other landscapes contained in the CCW LANDMAP information system held by CCW and each local authority and National Park in Wales.

3.21 To gain a better understanding of these services and their social and economic values, another NEF workstream (Cii) is examining and bringing together the evidence demonstrating such values in Wales. This is less a matter of ‘putting a price on nature’ than of understanding the range of benefits and their value in all respects – not just financial, but such less ‘tangible’ values as contributions to health, diet etc and identifying economic tools that can be used to secure ecosystem outcomes.

THE REGULATORY FRAMEWORK: MECHANISMS AND LEGISLATION

4.1 In discussions to date one of the recurrent themes has been the success or otherwise of government - within Wales and beyond - in bringing forward a coherent and realistic approach to ‘mainstreaming’ sustainable development principles and processes in decision-making, and overcoming the somewhat ‘disjointed’ development of strategies and plans across different arms of government. If our failure to meet the 2010 Biodiversity targets tells us anything it is that we need a holistic view of the so-called Green Infrastructure on which life in Wales depends, and how it is treated. It requires a new approach to all Welsh Assembly Government policies and needs to be placed at the heart of all key areas of policy in Wales, not merely those of the most obvious parts of the Welsh public sector - CCW, the EA Wales, the Forestry Commission, and the Department of Environment and Sustainability.

4.2 While government has gone a long way since the 1990s to embed the environment into policy, through the Environment Strategy for Wales for example, and into decision-making, through such procedural tools as EIA and, more recently Strategic Assessment, the concern remains that too often decisions seem weighted in favour of

economically, politically or even merely administratively-driven outcomes at the expense of the environment. Sometimes the economic and well-being benefits of the more environmental option seem to be ignored.

4.3 A number of related sector WAG strategies have been reviewed since the development of the Environment Strategy for Wales (ESW) in 2006 using an ecosystem services approach. One example is the Wales Woodland strategy, which is influencing the continuous development of sustainable forest management at a UK level through revisions to the UK Forestry Standard and associated guidelines.

4.4 The Welsh Assembly Government has its own SD and “Policy Gateway Tool” that all policy initiatives – including, incidentally, this one - must be fed through before being taken forward. However, the extent to which such tools have helped embed sustainable development into decisions remains uncertain, and in any case such tools rarely focus on biodiversity so much as other issues.

- Is the refinement of such policy tools a worthwhile area to explore as part of taking forwards the Natural Environment Framework? If so what might be the form of tool we need? Do other countries already have better tools at their disposal we could examine and adapt to Wales?

4.5 The National Environment Framework is so called in part because it seeks to create a real linkage between Wales many existing strategies, plans and policies that produces a synergistic, sustainable development benefit by their treatment and management of our Green and Blue Infrastructure. Those such as River Basin Management Plans, Glastir, and Local Development and National Park Management Plans, and several relevant TANs are already in place or soon to be so. Just as important will be the Rural Development Plan, the Wales Spatial Plan and forthcoming Marine Policy Statement and Marine Spatial Plan for Welsh waters, and the developing Networked Environment Regions initiative. Policies and strategies for Food and Farming, Transport, Economy, Regeneration, even Health and Education also have a vital role to play.

4.6 Some have suggested that what Wales needs is a new management tool to guide how we use our land, and our seas in line with our SD objectives. Others believe a natural resources management plan, such as seen in a number of countries around the world, might be more appropriate. Another suggestion is to consider carefully mapping Wales ecosystems and ‘green & blue infrastructure’ and setting priorities for the management of the major ‘zones’ identified.

- What might be the best way to plan to manage our green infrastructure better? Are the existing plans such as the RDP and WSP (including the networked environment region project) capable of forming the basis for such an approach?

The legislative framework and the role of protected areas

4.7 Most activity on the environment within the Welsh public sector is driven by legislation, with UK Acts dating from the early 20th century covering species protection, to the 1949 Act establishing National Parks, the precursors of the modern institutions and agencies, and the concept in the UK of statutorily protected areas, a concept developed further in the 1981 Wildlife & Countryside Act, developed again in the 1990s, and in the Countryside & Rights Of Way Act 2000. Perhaps more important have been the EU Habitats Directive following Rio, and the Regulations giving the Directive UK effect, though except at sea, where SSSIs are not operative, all Special Areas of Conservation (SACs) under the Directive and on land are ‘underpinned’ by UK SSSI to give the designation statutory effect and provide the powers of designation, intervention & access, and of management needed by the UK agencies charged with their protection: in Wales that being CCW. The Marine and Coastal Access Act 2009 creates the new Marine Conservation Zone, which in Wales are being developed as a designation to complement the existing marine SACs with, perhaps, a more tightly controlled ‘highly protected marine reserve’ concept at their heart.

4.8 Such protected areas as National Parks, Areas of Outstanding Natural Beauty, National Nature Reserves, SSSIs, and SACs have drawn significant attention and resource, but they have probably served Wales very well indeed, not least in terms of their contribution to local economies through attracting support monies, tourism etc, but most particularly in preventing the most damaging forms of development and in supporting appropriate forms of land management through compensatory forms of payments and grant aids. More evidence is needed but, as often in environment policy, the problem of ‘proving a negative’ means that it is almost impossible to state what might have been the outcome had there not been these statutorily protected areas.

4.9 Protecting special sites has been the central mechanism used to meet the biodiversity goals and feature as one of the main 2010 targets. Yet with designated areas only ever able to ‘cover’ parts of the ranges of most habitats and species this approach leaves much of the underlying resource exposed to the pressures and changes of normal life outside protected sites, and does little to help widespread but often declining species (such as many farmland birds, for example).

4.10 From the point of view of the way forward, the existence of these protected areas - all forms of them, whether originally directed to protecting biodiversity or not, as in the case of AsONB – needs to be seen as an asset. The structures, governance, powers, skills and knowledge that exists in these areas is a resource to be utilised. The question is towards what ends? The suggestion here, in the NEF, is that the purpose of *all* Wales’ protected areas need to become more unified around a common purpose, that is to become more focussed at the optimisation within those areas of ecosystem management for resilience and for the services those ecosystems provide.

4.11 A particular strength of such areas lies not in the public sector bodies ‘responsible’ for them so much as in the local people, particularly the landowners and managers, and in Wales especially, farmers and fishermen. Their knowledge and

familiarity is of course with their own land and sea, but also with the aims, intentions and systems of the protected area they work within. Thousands of farmers, smallholders, woodland owners and other landowners in Wales operate their businesses and live and work within protected areas, over 10,000 in SSSI alone; many more when National Parks and AsONB are considered. That means that they are in the ‘front line’ of managing some of the most important and best managed of Wales’ ecosystems.

4.12 In fact, the CBD and the EU Species & Habitats Directive (brought into force to give effect to the EC’s signature of the CBD) are couched in terms that can be seen to readily accommodate an ecosystems-based approach. The question is *how* to fulfil our obligations under (for example) the CBD and Habitats Directive, rather than whether to do so. After all, those instruments seek to halt biodiversity loss and protect species and habitats, (and the sustainable, equitable use and sharing of the benefits) not merely to protect some special sites or rare species from either use or inevitable change. The European Landscapes Convention, to which Wales is also a signatory, is explicit in its holistic concept of the entire landscape as being important.

4.13 Perhaps the issue is not that the legislation is intentionally directed away from such holistic, ecosystem-wide thinking so much as that the interpretation and implementation of the statutes has been too narrow and ‘selective’. For example, the time-consuming and costly efforts put into implementing Article 6 of the habitats Directive (designating SACs) hugely exceeds any attention given to Article 10 (dealing with the so-called ‘wider countryside’ beyond the SAC boundaries). An ecosystem-based approach would require that this balance is redressed, at least so that all areas of important ecosystems - not simply the best examples or most ‘representative’ areas - are considered priorities for attention. Perhaps therefore the present statutory framework ought to be retained but re-interpreted and (perhaps) consolidated? Or should some of it be repealed or replaced altogether? Work stream A will take forward these and related themes.

Biodiversity targets and the ecosystem approach

4.14 Returning to the more ‘traditional’ focus on biodiversity, there are a number of issues within the work done to conserve species and habitats that deserve further exploration. One is the question of targets themselves. While in no way wishing to ‘escape’ the direction provided by the existing targets, the question remains whether the direction they serve to drive us in is the direction we wish to go? A useful question to consider is this: if we had met the 2010 targets would we now be satisfied? The answer given in discussions to date has been mixed; meeting the biodiversity targets always implied fundamental change in the way society and economy are managed in their interaction with the environment at all levels from ‘governance’ to practical delivery ‘on the ground’.

4.15 While the existing targets clearly imply such major change, and hence such a major challenge to ‘business as usual’ policy and methods of working, it is also true that the sheer numbers and complexity of species and habitat targets (and action plans) makes

prioritising action difficult – some have felt overwhelmed by the scale of the task; they are hard to articulate to non-specialist audiences; and make little or no reference to the need to conserve the *benefits* to society of ecosystems, not merely the component species.

- Would it be better to re-express the biodiversity targets in terms of ecosystem targets? How might they be framed so as to be meaningful and measurable? Would they encompass or subsume the existing habitat and species targets? Should new target species become the main focus of species targets? – If we were to develop new ‘ecosystem’ targets, would they require ‘Ecosystem Action Plans’? And if so, how well would existing and developing action plans meet this need?

Achieving sustainable management on the land and in the sea

4.16 As already stated above, crucial to any new approach to ecosystems, and simply to the attainment of existing targets for biodiversity, will be the active support through their work on land and in the sea, of Wales farmers, woodland owners, fishermen and many other forms of business. Without their cooperation to date, Wales would be even further away from achieving a more sustainable future for our land and water-based economies, rural communities and – through the services they supply – our entire economy.

4.17 Society depends upon the land and sea and the outputs that they provide. Food, fibre, clean water and air, a sense of place and somewhere to live are amongst the outputs from the land that define us and make possible the society within which we live. At present some of those outputs (food, fibre) can be imported from elsewhere but only at a cost in economic, environmental and social terms. As resources become scarcer and populations increase, a larger focus upon the potential for the local provision of these outputs is inevitable.

4.18 This focus will lead to increased pressure upon a finite resource (land) and will inevitably engender a dialogue amongst actors involved in aspects of land use and land management. Beginning that dialogue at a time of crisis (or approaching crisis) will lead to the adoption of entrenched positions and a failure to resolve conflict. The NEF process will, if successful, help to reduce the likelihood of conflict by facilitating an early discussion of these issues leading to resolution, based on a mutual understanding of long term goals, before such a crisis arises.

4.19 Glastir has begun to address these issues by refocusing agri-environment actions at a ‘whole farmland’ level. By defining desirable outcomes and providing a set of options that will deliver some of the outcomes at a broad scale, along with some more targeted delivery, a process of cultural change has been set in train that encourages farmers to see public goods as an acceptable product from ‘traditional’ land management.

4.20 This change will continue to need to be underpinned by further policy development and delivery (including NEF) if it is to become embedded, not just amongst farmers but also amongst WAG, CCW, EA and other public sector staff who have a

policy or delivery function. There is also a wider audience such as the third sector and NGOs who, in their own way, need as much reorientation as farmers, other land managers and public sector groups. The ‘whole landscape’ approach to the delivery of ecosystems services outcomes will require a particular change of perspective away from campaigning on a single big issue towards a recognition of needs for the long term that such an approach requires from all actors. Glastir when it is introduced over the coming year, will be a major step in the direction of ecosystem management across huge swathes of Welsh countryside and will signal to all involved the serious intention to achieve truly sustainable land use in Wales.

4.21 Much of what is suggested above implies a balance is struck between regulatory interventions and incentive-based measures. We will need to identify synergistic solutions and be prepared to make difficult decisions in order to secure the benefits of Welsh ecosystems and the richness of our biodiversity. There has been a tendency, exemplified by both the designation of ‘special’ sites and the resistance of land managers to the notion that their land can produce both market and non-market goods, to separate the environment (whatever that means) and the productive functions of land management. Meanwhile the temperature continues to rise...

4.22 This has been particularly true in marine conservation. However, significant progress is now being made with both the Marine Act 2009 and the EUs Marine Strategy Framework Directive being explicitly ecosystem based in their approach. The Marine Spatial Plan for Welsh waters will also follow and spatialize ecosystem-based concepts.

4.23 Almost 70% of Welsh inshore waters are already designated SAC, leading to some difficult arguments about activity within that large area, and much misunderstanding of the intended outcome. Clearly, Welsh seas supply a range of ecosystem services, not least among which are the food products and the resulting jobs and incomes in the Welsh sea fishing industries. What is sought here is an approach that permits those industries to continue to function, indefinitely if possible, whilst retaining the other services and values embodied in our seas, not least their biodiversity, for which Welsh seas are being increasingly recognised as important.

4.24 Proper sustainable management of marine fisheries (for example) cannot simply divide the sea into tightly-controlled, even ‘no-go’ zones for some areas, with little or no control over the rest. That was never the intention of the designations of SAC. A far more sophisticated, whole-ecosystem, and sustainable approach is needed, as is envisaged in the approach being adopted to selected MCZs, and as indeed has been trialled recently (albeit in a more limited way than ultimately envisaged here) in the approach to scallop fishing in Welsh waters for 2010. By carefully assessing the sensitivity of SAC and other areas, it was possible to actually ‘open’ some areas of SAC to scallop fishing while at the same time *closing* some (possibly more) important *non-SAC* areas to protect important habitats outside the protected areas. This approach was much more in keeping with the whole ecosystem, Article 10 (wider areas) concept of the Habitats Directive that previously applied in Wales, and was a significant step forward in achieving the goal of a sustainable fishery.

Does Wales need a land use management tool ? or a natural resources plan to deliver the ecosystems approach advocated here? Is the approach to MCZ selection likely to achieve the ecosystem-based approach envisaged for it?

4.25 The issues above are being considered by another work stream A of the NEF programme led by the EA Wales. In particular they will be considering:

- a. What do we need to do differently to secure the desired shift in focus onto ecosystems management?
- b. Are the existing legal ‘drivers’ sufficient to secure this?
- c. Are new legal measures required? If so, what and how could they be pursued?
- d. What has already worked well in terms of regulatory/management approaches to deliver ecosystem benefits? How could these be best utilized further?
- e. What new or revised management would be desirable and how could they be implemented?
- f. How could we provide a simplified more effective approach to consents management and still be assured of tangible gains for habitats and species?
- g. How do we best maximize the synergies between the different measures – e.g. between measures to mitigate the effects of climate change and action on ecosystem management?
- h. What would be the main risks associated with moving to the ecosystems management approach and how could these risks be best managed?

ISSUES OF IMPLEMENTATION, DELIVERY and PARTNERSHIP

5.1 A recurrent theme of discussions to date has been the role played by government in delivery of biodiversity targets and work on ecosystems. Clearly government has a huge role in setting the leadership and direction, and in delivery through such schemes as Glastir. However, while the most directly concerned departments (the Department for Environment and Sustainability, and the Department for Rural Affairs are fully cognisant of their central role in these issues, it remains unclear how well the commitment to sustainable development “as the central principle of all we do” is properly shared around all WAG divisions, and what structures are in place to ensure that this happens.

5.2 Another issue is the part played by government in delivering the management of ecosystems (and biodiversity) on publicly-owned land and land the government controls. The Forestry Commission, Wales is the largest landowner/occupier in Wales, though the Crown Estates, through their ultimate freeholder role on land, but most especially, of the *seabed*, are also of key importance. Local Authorities and National Park Authorities are also significant land-holders.

- What role should central and local government in Wales play in delivering the ecosystem services we need, both through work on policies and on the land it

controls? Are the duties imposed on government through statutes and commitments in the Environment Strategy adequate to the challenge we face?

5.3. Among the wider sponsored bodies and agencies – CCW/EAW/FCW/CADW, the National Park Authorities – there needs to be better synergy and avoidance of duplication, and a commitment to work together to achieve this. The key, as stated above in respect of the scientific research agenda, is joint planning of priorities and the work that flows from them. CCW, EAW and FCW already work together under arrangements with DESH – the so-called Four-Way arrangements. Perhaps these arrangements need to be widened to include CADW and perhaps WLGA? In any case the process needs to become a joint planning process, identifying and sharing out priorities for action over ecosystems. The establishment of an evidence sub-group to the ‘high level’ 4-way arrangements is already going on: other sub-groups to look at ecosystem plans perhaps, and joint delivery initiatives might be worth adding.

5.4. One of the main effects of the post-Rio UKBAP process has been the establishment of national and local biodiversity partnerships. One of the main successes of recent years has been the revitalisation of the Wales Biodiversity Partnership (WBP). We acknowledge the work of ‘Wales plc’: stakeholders, government and the voluntary sector have worked together to achieve much success. In particular the biodiversity sector who have discovered new ways of working which form a firm foundation for moving forward a shared sustainable development agenda.

5.5 The issue now is to seek to harness the strengths and goodwill towards the WBP to make it a real force for delivery. Part of the challenge is to shift the focus of the partnership towards the ecosystem approach envisaged here, and to distinguish more clearly what the WBP can best focus on to secure delivery. The other is to develop a stronger ‘business model’ for the WBP, so that it is capable of identifying clear courses of action, allocating responsibilities, then ensuring delivery happens ‘on the ground’.

5.6 We welcome the work that Wales Biodiversity Partnership, Spatial Plan Groups and others have already carried out to link species benefits into wider habitat actions and a focus on habitat networks. So far such work has focussed mainly on the threatened, declining and designated parts of ecosystems. This is not the same as a truly ecosystem approach which would need to continue to enable specific local engagement alongside collaborative landscape-scale actions by government, business and others. The establishment of the nine new ecosystem groups and related support groups in WBP is a good start but the role of these groups will need to develop. We think that we need to help them to help us in three areas – legitimacy (what authority do the WBP have to demand action and set directions?); delivery (how is the WBP able to take action itself, either directly or through its partners?) and ‘traction’ (how influential can WBP be in driving other parts of Welsh government and the other sectors to achieve its goals?).

5.7 On **legitimacy**, the WBP are the official advisory body to the Welsh Assembly Government on biodiversity. As such they are uniquely placed to support an ecosystems approach. Their experience and knowledge of the component parts of ecosystems and

how they work will be crucial to developing a successful approach to ecosystems in Wales. The groups are mainly chaired by public sector staff whose work in leading such groups should be a core activity of their 'day job'.

5.8 On **delivery**, individuals in the ecosystem groups will need to determine future management of those zones in collaboration with local and national players who have the power to influence or enact direct action. We have seen a root and branch change in the way in which biodiversity action plans have been developed this time round - with earlier buy in and a greater range of participants - but we will need to create further opportunities for embedding ecosystem actions into the work of government. As a first stage in this development we will use our first stab at the evidence base to establish direct links between key ecosystem group chairs and relevant WAG policy officials with a view to all WAG Policy areas agreeing relevant ecosystem actions as core deliverables within their policy programmes. Actions agreed for 2011/12 will form a key element of each department's contribution to their NERC Act 2005 biodiversity duty.

5.9 On the issue of '**traction**' WBP members, and particularly ecosystem groups will need to become fully capable of engaging successfully with national policy officers and business leaders. Real influence can only be achieved by talking the language of the uninitiated, by putting across the seriousness of our situation, the importance of natural capital and the long term costs associated with its loss. Real influence can only be achieved by listening and enlisting others to act in truly well informed, long term, sustainable ways. This is not "about what we do with the extra bits of what we do, but how we do everything that we do". As a first stage in the development of these skills ecosystem groups chairs will be provided with the time, support and information needed to develop their engagement skills and those of their group members.

5.10 Aspects of these issues of 'traction' and delivery will be further informed and refined by the outcomes of the Partnership Delivery work stream of the NEF programme (workstream B) which is being led by the chair of CCW. Key issues for work stream to consider include:

- a. What role should WAG, its statutory agencies and local government play in delivering ecosystems management on land and at sea? What changes to existing partnerships might help facilitate that?
- b. What changes might be made to the Wales Biodiversity Partnership to help it have a stronger focus on ecosystems management with effective linkages to the farming and general business sectors (including marine)?
- c. How can the farming and general business sectors be appropriately engaged in delivery of NEF objectives?
- d. How can communities be best engaged on this agenda and how might existing partnerships be modified to help support this?
- e. How can we embed biodiversity and ecosystem outcomes across the Sustainable Development sector?

- f. How can we secure effective practical implementation of the Networked Environment Region approach in South East Wales (as a first step to rolling this out to the other Spatial Plan areas)?
- g. How can our approach to the existing sites system be developed to be more effective in the wider Welsh environment?

- What else needs to happen to the WBP to make it a core agent for delivering the ecosystems approach? How could WBP be linked more directly with the work of WAG departments and other key bodies?

- How could you/your organisation:

- **work with the programme team in the early stages, now commencing?**
- **help us to disseminate messages and engage people during the consultation in autumn 2010)?**
- **deliver or help deliver outcomes as part of the Natural Environment Framework from 2011 onwards?**

CONCLUSIONS and WHAT HAPPENS NEXT?

6.1 The work streams have already begun work, with the work on evidence (work stream C) already making rapid progress, as is needed in respect of the evidence underpinning the direction sought here. Already work has begun to collate existing information sets and develop better information sharing on Wales' environmental capital, and green infrastructure. More will need to be done, and quickly. An urgent priority is to seek to establish what will be the best ways of measuring and monitoring progress.

6.2 The Natural Environment Framework (NEF) is a consultative process, and will entail a major public consultation from mid September 2010. In the meantime, many bilateral discussions and workshops with stakeholders are taking place, some over several occasions, centred on the issues set out here. It is not only a challenging process, that seeks to challenge the way we address these issues, but is a very challenging timetable.

6.3 But the challenges are not new: they are as before, about recognising the essential value of the environment to our social and economic lives, placing its management at the heart of policy and action for Government, the economy and society. It is about engaging the support of people in making the changes necessary to achieve a new relationship with our world, one in which the people of Wales continue to benefit from the special place where we live, for our most fundamental daily needs and our highest aspirations.