

## Speech on Natural Capital

**Every society is defined by two things.  
By what it creates and by what it refuses to destroy.**

The only thing that sets us apart from our Natural Environment is our ability to reflect upon our own place within it. But for all our cleverness, we remain dependent upon the extraordinary bounty that nature provides: the food and water that sustain us, the air that we breathe, the raw materials that we use as fuel and clothing, or to construct our homes. These are just the most obvious of Nature's benefits. Equally important are the processes and services that purify our water and break down our waste, that pollinate our crops and provide us with recreation and aesthetic or spiritual fulfilment.

We have the right to use and enjoy the benefits of this Natural Capital. But this right gives us no license to prevent our children from exercising a similar and equal use and enjoyment in the future. It is one of the imperative responsibilities of government to be good stewards of the present and even better guardians of the future.

Yet the facts show how far we are from being good stewards. In Europe our native flora & fauna has been in decline for over 50 years. Agricultural intensification in the 1970s is often pointed to as a key turning point. But the truth is that for more than 200 years as we chopped down our forests and used coal to drive the world's 1st Industrial Revolution we moved from a pastoral agrarian society to an advanced city-based economy that has failed to value biodiversity. In that time hundreds of species of plant and animal have been lost from our continent. We need a radically different approach, not just to halt, but to reverse that decline.

One of the great advances in these two centuries is the progress we have made in classical economics. When Adam Smith wrote *The Wealth of Nations*, and even when Karl Marx wrote *Das Kapital* they understood capital to mean simply plant, machinery and money. But we have come to understand that there is such a thing as human, social and intellectual capital. We have come to realise that a well functioning judicial system and an excellent education system are as much a part of the wealth of a nation as its roads, ports and factories. The irony is that economists and economies have not yet caught up with the most important capital of all -- Natural Capital.

Virtually every other form of capital is derived in some way from Natural Capital. We can define it as the benefits that accrue to human society from the different species of life that inhabit the natural world. Let me give you an example:

In 2006, when I was Minister for Biodiversity in the UK, I put £6million in my budget submission for research into diseases in honey bees. When it came to agreeing my budget with the Finance Department they thought I was mad! They insisted that times were hard and that with my £6 million they could create a new community hospital for people's diseases instead of worrying about bee diseases. I of course told them that I would be happy to cut the £6million -- - but I asked them if they were aware that it would cost them £194million a year? Well if they thought I was mad before, they thought I was even madder now. So I explained that disease had reduced the honey bee population by about 30% in the UK and the result was a loss of the pollination of our farmers' crops. The total lost yield of arable crops had been calculated by the National Audit Office at £200million per year. The Finance Department gave me my £6million.

You see the thing about economists is this; they are simple beasts, they don't want to know

about the environment or ecosystem services, but show them a way to save money and they become entirely reasonable!

Classical economics values things in a very simple way. Take forests for example: they simply add the sale price of the timber that can be harvested, and the alternative use to which the land may be put and they say that this is the value of the forest. What utter nonsense! The true value of a forest lies in far more than that. Forests stop soil erosion, prevent flooding by absorbing moisture, and control climate, often regulating local as well as global weather patterns. They are a source of medicines and food, and they have recreational and aesthetic value. All that is before carbon sequestration has even been mentioned.

In the Millennium Ecosystem Assessment 1,360 of the world's top scientists showed that classical economics captured only one third of the actual value of the services that forests provide. The same is true for rivers, reefs, salt marshes, mangroves and all other natural ecosystems. We fail to factor in their actual economic value to our policies and decision making, but because most of the other services that they provide are not bought or sold in markets, they are normally not taken into account, so the forests, reefs and rivers are lost or degraded.

Another important consideration is that those wider benefits, although immensely valuable, do not accrue to an individual property owner. The benefits are experienced by a community at large.

They are regarded as free goods by the wider economy and the wider community, which would no more think of paying for flood protection provided by the local forest than of paying for the air they breathe, which is also provided in part by the local forest. In classical economics, such free goods are called externalities, but because they are not directly captured by the landowner they do not feature in their decisions on how or whether to dispose of them.

**We use nature because it is valuable,  
but we abuse nature because it is free.**

Politicians often say things that sound clever, but are actually very stupid! Well I want to say something that sounds very stupid but I think is actually quite clever! A country may experience economic growth while becoming poorer. Again an example may be helpful. A Government may sell a large timber concession to a logging company. They will achieve for that land only the classical measure of value for the logs or fuel wood, plus any alternative land use. The logging company may not even cut the logs into timber in the country itself. Instead, it may export them to another country where it has a production factory.

It is important to note that no one in this example has done anything wrong. The Government have increased their export sales by the value of the logs and have seen a corresponding rise in GDP. The logging company has paid the market price for its logging concession and made a rational business decision about where best to conduct its value added manufacturing processes. The neighbouring country happily welcomed the jobs and economic growth that comes from the re-export of those logs as much more valuable furniture, but the original country is poorer. The value of the ecosystem services that it has lost is far greater than the value of economic GDP growth that it has achieved.

So here is the challenge for us. How do we explain to those who are focused upon GDP growth that they would make better economic decisions if they properly accounted for the very real value of natural capital? Some of our political colleagues act as if they are still living in the 19th

Century: they believe that economic prosperity and environmental protection are destined to be in conflict with each other when in fact the opposite is true. In 2011 in my country the green economy made up just 6% of the economy, but it accounted for 30% of all growth in our economy.

The economic right fall into the trap of thinking that the environment is the enemy of growth. It is not. Their conclusion is that we must sacrifice the environment in order to achieve growth. But for those of us on the economic left there is an equivalent trap: some on the left actually seem to agree with the economic right. Their claim is simply put the other way round; that economic growth is the enemy of the environment. Their conclusion is that we must sacrifice growth to achieve environmental protection. Both are wrong of course and they are wrong because they are both locked into the same language of economic growth and environmental protection. They have failed to move into the new paradigm of economic wealth and environmental sustainability. There is a reason for this --- the new paradigm requires a proper understanding of the value of Natural Capital and not just an understanding of it, but a proper accounting of it.

Look -- imagine you are a business. What competent business would fail to carry out a proper inventory of its assets. Yet as a country this is precisely what we have done. We have not looked at the stocks and flows of Natural Capital and properly assessed them. In the UK we are beginning to introduce a fundamental change in environment policy. Instead of focussing on individual species or habitats we are pioneering an approach based upon whole ecosystems. We commissioned the UK's National Ecosystem Assessment which has established that 30% of the UK's ecosystems are in decline and many others only just holding their own against an increasingly hostile background of rising population, consumption and pollution.

Quantifying the problem is the beginning of a solution; and in the National Ecosystem Assessment we have begun to put a value on the contribution of ecosystem goods and services to human well-being. The market has long known how to exploit the benefits of nature, whether it is by dumping waste at sea or chopping down rain forests, with no thought for the wider damage it was doing. But now the most progressive businesses are beginning to understand the importance of sustainable supply chains. They are beginning to see the business imperative to reduce their own corporate risk profile and are now seeing genuine advantage in being net positive for the environment.

It is a fundamental principle that the polluter should pay. All too often though, the polluter has got away with it because nobody has been able to answer the question "how much?" In the UK after we have set up The Natural Capital Committee to ensure that both the market and the non-market values of the public goods nature provides are taken into account in all policy decision making. Our goal is to incorporate these values into the standard Treasury method of cost benefit analysis. Our purpose is to stop those who seek to exploit the goods and services nature provides by diminishing her continued ability to provide the essential ecosystem services and public goods that the rest of society needs.

**Let me say this loud and clear:  
Some things are beyond price.**

Some values cannot be monetised. It is not just that the aesthetic and spiritual values of a mountain are difficult to quantify. We should not even try. We must recognise that these values should not be traded in any market. They are not directly comparable and we must not attempt to compare them on a like for like basis in any cost benefit analysis that we undertake. But to

recognise this is not to accede to the demand from the fundamentalists of both right and left that we do not sensibly ascribe a value to the mountain for the tourism benefits that it generates, or for the watershed services that it provides. These are real economic values and we conduct our policy decision making in wilful and deliberate ignorance if we ignore them. This is not to commoditise nature. It is to ensure that the true value of nature is not ignored and treated as a free good by those who for decades have peddled a false theory of value that has allowed them to trash the environment with impunity.

**The proper valuation of our Natural Capital is a means to its better protection not a tariff sheet of charges for its destruction.**

So let me turn to the measures we are taking through the planning process. In the UK we want to establish a new hierarchy of priorities that will ensure that environmental impact assessments cease to be procedural afterthoughts tagged on to justify commercial development proposals with a set of tick boxes and we are piloting biodiversity offsets in a way that ensures a grant of planning approval brings net benefit to the environment.

When done properly, Biodiversity Offsetting is a way of recognising and quantifying the environmental impact of a proposed development and using that analysis to leverage extra investment into habitat creation that will buffer and connect existing protected areas. We have laid down a set of principles which will govern the way that offsetting must operate.

These are as follows:

- Offsetting cannot downgrade or amend the existing levels of protection that exist for biodiversity.
- Offsetting must deliver real benefits for biodiversity by expanding and restoring habitats, not just by protecting them. It must create bigger, better or better-connected areas for biodiversity. It must be additional to any existing conservation actions and it must set aside the habitat in perpetuity.
- Offsetting should be managed at a local level as far as possible, but must operate according to national priorities for managing the country's biodiversity and within a standard framework to provide consistency.
- Above all the process must be transparent and independent. There must be absolute clarity about how the offset calculations have been arrived at and how the offset resources are being used. They must use a standard national framework of calculation based upon best available peerreviewed scientific knowledge so that all parties and in particular the public can have absolute confidence in the process.

I want to emphasise three key elements.

There is a Mitigation Hierarchy when one considers the potential for environmental damage that may arise from a development. First one must seek to **avoid** that damage as far as is possible. If it cannot be avoided then it must be reduced or mitigated as far as possible. Where damage remains after this it should be compensated for as much as possible on site. (I will return to on-site compensation because this has often proved difficult and disastrous!) It is only after all this has been done that biodiversity offsetting can be considered to account for any remaining damage and to achieve net biodiversity gain.

The second element could be called **applicability**. What I want to emphasise is that there are areas where offsetting is just not appropriate. As a general rule offsetting should not be

considered where damage is proposed to a protected site. We have existing legislation to protect nationally and locally important areas and habitat for good reason. Biodiversity Offsetting should never be used as a way of getting round those protections. But not all ecologically important habitats enjoy protected status. So we must also insist that offsetting is not appropriate where habitats cannot be recreated such as ancient woodland.

The third element is **additionality**. Offsetting must deliver land management that would not have been done in any other way. This enforces the second element of where offsetting is not appropriate since many protected areas will already be eligible for assistance and it focuses biodiversity finance to buffer existing protected areas or provide stepping stones between them to make them ecologically more resilient. Equally it means that farmers and other land managers cannot receive double funding for conservation activities for which they are going to receive payment under another scheme such as under Pillar Two of the Common Agriculture Policy. If these three principles are enforced then Biodiversity offsetting has the capacity to deliver real net gain for the environment.

Perhaps the most common challenge to offsetting is the one that asks "*How do you calculate the ecological value that is being lost and how do you ensure that the offset metrics are applied consistently across the country?*" It is a fair challenge, but one that we must satisfy to show that there has been a level playing field for both buyers and sellers of conservation credits. Calculating the ecological value of a piece of land is not straightforward and neither is calculating the ecological value of a habitat creation scheme. To do this and make offsetting as transparent as possible the government has set out a national metric that is based upon an assessment of habitat type and condition.

Habitat is classified into three types: priority habitats as defined in our 2006 Act, seminatural habitats and managed habitats; defined respectively as high middle and low. Offsetting can only happen in like for like habitat or where a higher priority habitat is created to offset a lower one. For example you could not offset the loss of a high priority area of wetland by the creation of a lesser quality habitat. But one could trade up by compensating for the loss of a large area of low quality farmland by creating a (much smaller) area of high quality habitat. This is not only likely to be highly beneficial for wildlife and biodiversity, but also cost effective as well.

The ecological value of a habitat is a function of its type, its condition and its size and scores are assigned to all three variables, which are multiplied to produce a number of units that have been lost through the development. In order to offset this loss a developer must purchase the same or more credits calculated in the same way which must be used to deliver habitat creation or restoration at a receptor site. However the receptor site is also subject to a number of multipliers which account for any inherent flaws or risks of the receptor habitat. For example the further a site is away from the original development site where the biodiversity has been lost, the greater the multiplier will be. For example a site almost contiguous with the original development will approach parity of 1 for 1, but a site many miles from the original may apply a 2 credits for every 1 unit lost. Receptor sites that are difficult to implement and maintain or that may take many years to restore will have multipliers that can be as much as 90 times more than the original lost units.

I would also specifically propose that once all the type, quality, area, condition, proximity and risk factors are properly accounted for and the appropriate multipliers applied there should be one additional multiplier that is specifically to secure net biodiversity gain. **The level of this multiplier is quite simply a moral choice.** I would suggest a minimum of 1.5. I know that some will say that strictly speaking this is no longer biodiversity offsetting. My response is that

those who ask of society that they be allowed to generate private wealth from the depletion of a public good should be prepared to give a greater return to the stock of natural capital than they are depleting. This increases our public stock of natural capital.

Applying the national metrics requires ecological field skills and training. It must be done consistently and it must be done impartially. No developers will be allowed to assess the units of biodiversity loss that their scheme creates and on the other side no NGO will be allowed to determine the number of credits a receptor site must deliver. Independent and consistent assessment will be delivered by an independent and experienced broker who must be qualified and accredited to do the job impartially and transparently.

Some examples may be helpful at this stage to show how and where offsetting may be able to add real value. Currently it is common for agricultural land that is being intensively farmed or brown field land that has been derelict for many years to be the subject of a development proposal. When it is, the existing planning process usually regards it as having no ecological value. But even the most intensively managed land has some ecological value and by scoring it in accordance with the national offsetting metrics a value can then be generated that creates new and more valuable habitat elsewhere with a net biodiversity gain. Here I want to return to the issue of on-site versus off-site compensation. Intensively farmed land will often suffer from a history of high fertiliser or pesticide use and derelict brown field land may also suffer from industrial contamination. Both of these make such land particularly badly suited for on-site compensatory habitats which often will be difficult to create, expensive to maintain and yield poor biodiversity results. In such cases far greater biodiversity gain will result from creating a biodiversity offset at a more suitable semi-natural site.

Another example would be where under current planning law some obligations have been imposed upon a developer to mitigate against a perceived biodiversity loss. Because no standard metric has been applied the extent of the on-site loss has been underestimated and the extent of the imposed obligation's biodiversity value has been overestimated. Indeed under the current legislation the obligations may have been in the form of local infrastructure improvements or recreational facilities and entirely unrelated to biodiversity at all. In such cases there has been a net biodiversity loss that is never recaptured. Equally important, neither the community nor the developer can see that a fair and standard process has been applied and there is often a loss of transparency and a suspicion on both sides that the other party has "somehow got away with it".

Current obligations for on-site habitat creation are fraught with problems. Often developers will be told that ponds must be built and grasslands or woodland created as part of the planning requirement. The logic of this seems impeccable, but the practise is often anything but. Next to an industrial development may not be the most suitable place to locate a new woodland or pond so that even good management would be hard pressed to succeed in creating a successful wildlife habitat. But often there is no environmental management at all. The original developer is long gone, the new owner has no one with the appropriate management skills and the local planning authority, that insisted on these elements of the design in the first place, has not got the resources to monitor and enforce their long term maintenance. For the developer it has been a costly process to give up a percentage of their high value development land and yet the biodiversity outcome is poor.

The ponds fill up with rubbish, the woodland is left unmanaged and neither the local community nor the environment is any better off. If these resources were instead used to deliver long-term conservation management at an appropriate site, perhaps close to an existing

protected area or woodland, there would be a much improved biodiversity outcome as well as enabling the developer to maximise the use of the development land for social and economic benefit.

I have little doubt that some people want biodiversity offsetting because they think it will enable them to accelerate economic growth and buy off the environmentalists. They are right!! But not in the way they think. If biodiversity offsetting is done as I have suggested, working from the basis of a National Ecosystem Assessment, and a proper accounting for Natural Capital, and respecting the principles and mitigation hierarchy that I have set out, then the result will be a planning system that accelerates not just economic growth, but sustainable economic growth and which, far from buying off the environmentalists, works with us to improve sustain and create new habitat that increases our stock of Natural Capital and with it our national wealth.