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GREENING GROWTH

HOW LOCAL GOVERNMENT CAN BUILD THE GREEN ECONOMY

INDEPENDENT INTELLIGENT INFLUENTIAL

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'LOCAL AUTHORITIES NOW HAVE RESPONSIBILITIES FOR BOTH ECONOMIC DEVELOPMENT AND ENVIRONMENTAL SUSTAINABILITY.'

'DISCHARGING THESE NEW RESPONSIBILITIES MEANS THAT LOCAL AUTHORITIES MUST PURSUE SUSTAINABLE ECONOMIC DEVELOPMENT.'

1. Introduction: climate change has come home

This document is about what local agencies – in particular, local government – can do to engineer a transition to *sustainable economic development*. It is informed in no small part by examples of what local authorities are already doing. The analysis deals with the apparent conflict between economic growth and environmental sustainability by defining more precisely the somewhat elastic concept of sustainable development.

We hope to show through theory and example that economic growth and environmental sustainability need not cancel each other out. In large part, this is because the costs of securing environmental sustainability have been exaggerated by inadequate environmental accounting.

This document has been written partly in anticipation of an enlarged role for local government in economic development, as proposed by the Lyons Review and set out in more detail in the Sub-National Review of Economic Development and Regeneration (SNR). But there are other urgent tasks facing local government, not least that of tackling our most immediate environmental threat, climate change.

The Stern Report, published by HM Treasury in October 2006, signalled official acceptance of the imminent catastrophe of climate change. If climate change continues unabated, Stern predicted, the damage apparent now will accelerate. Higher temperatures will trigger abrupt and large-scale changes in regional weather patterns with consequences for flooding and water supply. Rising sea levels will eventually threaten land occupied by large cities in the developed world, including London, Tokyo and New York, but the impacts will be severest in the developing world where flooding, famines and droughts caused by climate change could prompt refugee migration on a massive scale.

Just as significant as the Stern Report's acceptance of the science of climate change was its focus on the economics of climate change. Abatement will not be costless (if it was, for reasons outlined below, most of the actions necessary to achieve it would already have happened) but prompt action on carbon emissions, Stern argues, will only entail some small slowing in global economic growth. On the other hand, delay or failure to act could mean an economic catastrophe at least as great as the last world war.

Stern's clear formulation of the present and future costs of environmental sustainability should inform the thinking of all local agencies involved in economic development. But the formulation is especially relevant to local government, which has the capacity to co-ordinate a range of functions in planning, transport, and housing which can potentially support sustainable economic development. More importantly, local government, because of the legitimacy derived through the democratic process, is best placed to assume leadership in engineering the transition to sustainability.

The realities of climate change are no longer confined to a small elite of scientists, academics, or environmental activists. A sequence of startling weather events occurring recently in the UK and across the world has enlarged the awareness that climate change is not some distant apocalypse but is happening now.

Because of recent visible and tangible climate events, many, perhaps most, people accept that changes are needed in the way we live our economic lives – in the ways we produce and consume. But it is likely that far fewer people are willing to accept that we should produce and consume less.

Local politicians are best placed to communicate the message that sustainability need not entail a drastic compromise in living standards. This message will be more convincing if care is taken to ensure that whatever costs are entailed do not fall on those least able to bear them.

Section 2 briefly outlines the meaning of sustainable economic development. Following this, the argument for getting the metrics of sustainable economic development right is set out, as is the case for embedding sustainability in strategy and project appraisal.

Next, the SNR and its implications for sustainable economic development are set out in more detail. It is argued that the framework currently proposed, together with other stances taken by the government on regional policy and regional investment could act to hinder rather than assist sustainable economic development. The final sections show what can be done locally to make sustainable economic development a reality.

Much of the necessary action on climate change can only take place at international and national levels. Governments need to agree on international protocols for carbon emissions. National governments need to design and agree appropriate fiscal and regulatory frameworks in order to get the incentives right for behaviour change. But international protocols and national frameworks could take years to agree and implement. Local authorities should not, and need not, wait for the completion of these negotiations.

2. What is sustainable development?

All governments have tended to accommodate, if not actively promote, an expectation of continually rising living standards. Positions and policies have developed around an unspoken assumption that permanent economic growth is the solution to poverty, deprivation, and social disruption. It is probably no exaggeration to say that the imperative of permanent growth is the key organising principle of all modern societies. The frustrating slowness of governments to act on climate change (warnings about it have been around for at least three decades) may be attributed to scientific uncertainty and to barriers in international co-ordination. But the perceived harm to our consumption patterns and to the overarching goal of economic growth have been at least as important reasons for inaction, if not more important.

The 'growth imperative' has only been seriously challenged by the environmentalist *Limits to Growth* movement¹. The basic idea of the Limits to Growth argument was that societies could have economic growth or environmental sustainability – but not both.

However, choices in the current view of sustainable development are not so stark. While economic growth and the environment may not be strictly complementary, environmental quality can be seen to support the economy in various ways, for example:

- improving the health of the workforce
- creating jobs in the environmental sector
- creating jobs in the pollution abatement sector
- enhancing places and property, and creating jobs in tourism.

This short, non-inclusive list of ways in which the environment and economy complement each other does not include the simple pleasure people derive from unspoiled landscapes or the preservation of endangered species – in themselves, a source of welfare, or *utility*. Environmental assets have a consumption (and, hence, economic) value.

Sustainable development enlarges a narrowly construed definition of economic growth based on real income to encompass environmental quality and other aspects of well-being – *development*, as opposed to *growth*, is the key distinction. In this context, the word development has positive connotations, referring to change or transformation that leads to

progress and improvement. The activities which make up what economic development practitioners actually do – skills training, support for entrepreneurs and small businesses, infrastructure investment, and physical regeneration – all manifest these positive connotations.

However, a society which is *growing* in terms of per capita income will not be *developing* if it fails to meet social goals (such as securing the needs of the most disadvantaged) or if its income growth is accompanied by severe environmental degradation. Nonetheless, a society is unlikely to be developing if it also fails to secure real income growth.

The term sustainable development can be broadened to include the pursuit of a range of normative goals, such as the independence and freedom of individuals, mutual respect, and a sense of community and belonging. Indeed, the term has become something of a catch-all, scooping up a range of 'good things' that various groups, at various times, have found desirable.

Some further qualifications help the term retain its meaning and make it, in principle, something that can be measured. The first of these is that it should always be attached to intergenerational equity – meaning that the consumption patterns of the current generation should not compromise those of the next generation. In turn, this means maintaining at least a constant level of capital (to produce the goods we want to consume) relative to population.

The second qualification, which follows on from the first, and which grounds sustainability firmly in environmental concerns, is that 'man-made' capital – buildings, factories, machines, and so on – cannot be easily substituted for 'natural' capital, or the environment. This is because there is a finite endowment of many natural resources (such as oil), and because damage to ecosystems could be irreversible. Hence sustainable development, however defined, must always include environmental conservation.

Emphasising the link between the economy and the environment gives the notion of sustainable development greater force. That the environment is not separate from the economy, and that the economy cannot be detached from the environment should be obvious, but much

economic management has operated as if the two were separate and distinct. The environment serves economic purposes both in the contribution it makes to human welfare as a consumption good, but also by the functions it fulfils as a waste and carbon sink, and, of course, for the materials that are used up in human production processes.

It remains to be explained why, if sustainable development is such a good thing, there isn't more of it. The reasons are fairly straightforward. As some originate in various forms of market failure, they point the way to the types of interventions local authorities and others should make to assist the transition to sustainability.

Part of the explanation lies in time preference and uncertainty. Individuals will always prefer to defer costs rather than pay now – they have a preference for present, rather than future, consumption. This time preference among individuals communicates itself into wider decision-making processes about the economy.

Scientific uncertainties about climate change have meant, in terms of policy formulation, that it might be better to defer costs until scientific understanding improves. There may be as yet an undiscovered 'technological fix' that could save us a lot of money. If we can't be certain about the future we may as carry on putting off the costs of living for today until tomorrow.

But time preference and uncertainty have both been overtaken by events and scientific evidence. The degree of consensus among scientists about climate change and its causes is such that the risks of environmental catastrophe are high enough to overcome whatever uncertainty remains. Put another way, if the scientific consensus is wrong, then all we have lost by acting precipitately is a small amount of (current) consumption. If the consensus is right, and we continue to do nothing, we risk a disaster from which we might never recover. It is a predicament known as Pascal's Wager².

As for the time preference of individuals, it is becoming increasingly apparent to many of them that climate change is impacting on their own lives. Climate change will not only damage the lives of future (unborn) generations but those of their own children.

However, at the level of the individual business, moving towards sustainability also means uncertainty. For some, it might mean investing in untried technology. An important public intervention, then, is in helping businesses overcome information constraints and uncertainty. Examples of local authorities working with businesses in this way are given in Section 6.

A major part of the difficulty is in co-ordinating actions over issues for which no market as yet exists. Part of the solution is in the creation of surrogate markets, such as carbon trading schemes. Although entailing a 'cap', or 'charge' on overall emission levels, carbon trading schemes allow market flexibilities in that enterprises for whom abatement is expensive can trade emission permits with enterprises for whom abatement costs are low. It is a far preferable alternative to 'command and control' solutions that simply impose a uniform ban. The market may also supply its own partial solution spontaneously, as consumers become more prepared to pay a bit more for environmentally-friendly products (although for this to work, consumers need to be fully informed about the products they are buying).

But because there are no markets for many types of environmental goods, there are no prices for environmental goods. Environmental goods do not benefit from the desirable feature of markets and the price mechanism of signalling to consumers the cost of producing a good and to producers the relative valuation placed on goods by consumers. Some theorists have argued that the solution lies in the allocation of property rights over environmental goods so that appropriate prices, and hence an efficient level of use, can be attached to them. (It is worth recalling the disastrous environmental record of the former Soviet bloc to illustrate that collective ownership does not necessarily lead to environmental sustainability.) However, for many types of environmental goods, property rights cannot be allocated – an admission fee cannot be charged for the ozone layer.

It is mainly because environmental goods do not have prices that we have an environmental problem – zero pricing means that the environment is over-used, or that is used *inefficiently*. Without prices there is no means of valuing the environment, and hence no way of knowing how much consumption we need to surrender for environmental sustainability. The problem of valuing the environment is dealt with in the next section.

3. Getting the metrics right

Given that sustainable economic development accepts that there must be some trade-off between economic growth (in the narrow sense) and environmental quality, society should be allowed to choose on the basis of a full understanding of the choice in question. Valuing and accounting for the environment is therefore not just a precondition for its efficient use, but also a desirable practice in a democratic society that claims to respect and value autonomy and choice.

It is widely accepted that the standard metrics of economic growth (Gross Domestic Product (GDP) at the national level and Gross Value Added (GVA) at the local and regional levels) fail to capture the full costs and benefits of development. They understate improvements in well-being that may not result in additional output, such as more leisure.

Of more relevance, these measures exaggerate productive capacity by not valuing environmental assets and the costs of tackling pollution. Perversely, output that results from activities meant to defend from, or mitigate, the effects of environmental damage (such as preparing for, or repairing, flood damage) can show up as an increase in GDP. If, during an freakishly hot summer, you ramp up the air conditioning, your inflated electricity bills will show up in the value added of energy industries as a positive item in the national accounts, although you probably won't feel that you're getting any richer.

Local and regional physical planning has already been 'greened' to some extent by EU directives on environmental assessments. There are Environmental Impact Assessment regulations. The EU's 2004 Strategic Environmental Assessment (SEA) regulations (which apply to all UK jurisdictions) require statutory plans and programmes that entail development be subject to an SEA prior to adoption. SEAs apply to land use and transport planning, waste and water management, and a range of other activities.

SEAs are required to set out a baseline environmental assessment, plus an assessment of the likely effects of a plan on flora, landscape and heritage, water, and a number of other categories. SEAs are meant to be open to public consultation, but, as national plans and policies are not subject to SEAs, their findings will be one among a set of considerations to be taken into account, including national policy, in the event of a

dispute. Similarly, the 2004 Planning and Compulsory Purchase Act requires planning authorities in England and Wales to undertake a sustainability appraisal of regional spatial strategies and local development frameworks, which is meant to take account of all relevant social, environmental, and economic considerations.

Because there is no requirement for an economic valuation to be taken of environmental impacts, it is not clear that any of these tools and procedures fully account for the costs and benefits of a proposed development. In part, full environmental accounting may not be a requirement because of its inherent difficulty. It has to be admitted that costing the environment is not easy.

However, there has been something of a boom in environmental valuation ever since scientists started warning about natural resource depletion and climate change. As environmental resources are not traded in markets, their monetary value has to be imputed from *shadow prices*, or the monetary value of what people are prepared to give up to conserve, enjoy, or repair the environment.

Techniques involve adding, in various combinations, clean-up costs, travel to natural amenities in terms of direct travel costs and foregone time, and direct surveys which ask people to say either how much they would be prepared to pay to conserve a natural amenity or endangered species or what compensation they would require for the loss of an environmental good.

Where environmental attributes attach to other goods like housing their value can be assessed using a technique called hedonic pricing. All of this might seem pretty flimsy at first, but repeated iterations move us closer to an accurate assessment of the economic value of natural resources. More importantly, the numerous studies carried out by economists for either academic or policy reasons point to positive valuations, on the part of consumers, of environmental goods. It is worth repeating at this point that environmental goods demonstrably have a positive consumption value to individuals.

To support sustainable economic development we need a system of accounting at national, local, and regional levels that integrates

environmental values with more conventional economic values like physical (non-natural) capital and output. Over the past three decades, there have been many experiments in compiling accounts of environmental assets and of imputing their economic value.

Perhaps the most comprehensive is the System of Integrated Environmental and Economic Accounting (SEEA), constructed by the United Nations. SEEA examines the use of natural resources and the impacts of national policies on the environment.

The SEEA records the flows of raw materials (water, energy, minerals, wood, etc) from the environment to the economy, the exchanges of these materials within the economy and the returns of wastes and pollutants to the environment. Also recorded are the prices and shadow prices for these materials, as are environment protection expenditures. *The Handbook of National Accounting: Integrated Environmental and Economic Accounting*³ can be downloaded from the United Nations statistics website: <http://unstats.un.org>.

The Handbook of National Accounting does not pretend that environmental accounting is anything but tough. But it does demonstrate that it is possible. It is undisputedly necessary to sustainable economic development and a precondition for project appraisal and assessment procedures which properly account for environmental costs. In integrating environmental concerns into project appraisal, the traditional cost-benefit formula can be augmented as follows:

$$\sum_{t=0}^{t=T} (B_t - C_t - E_t)(1+r)^{-t} > 0$$

Where B_t is the benefit in time, C_t is the cost in time, and E_t is the environmental cost (although $-E_t$ can become $+E_t$ if there is an environmental benefit) and r is the discount rate. The discount rate expresses the present value of future benefits (we earlier described how individuals have a time preference for the present, hence a discount rate needs to be applied to a current benefit to make it worth at least as much in the future as it is in the present – just like interest rates applied to savings and loans).

Therefore, if $B_t = \text{£}10,000$ and $C_t = \text{£}4,000$ but $E_t = \text{£}7,000$ the costs of the project would clearly outweigh the benefits. If, however, E_t was only $\text{£}5,000$, benefits would outweigh costs by $\text{£}1,000$. Applying the discount rate in the latter case (say, equivalent to the current rate of interest at about five per cent) over a period of 10 years ($\text{£}1,000/1.05^{10}$) would yield a net present value of $\text{£}613.91$, and the project should go ahead. If we devised a project (let's call it the Eden Project) with environmental benefits, the yield of benefits over time clearly would be much greater.

In the formula above, projects should go ahead where benefits minus costs minus environmental damage, divided by the discount rate, is greater than zero. The formula can be used to value and build into projects compensating actions where environmental damage is unavoidable. In the context of a consistent system of environmental accounts, the totality of economic development can be subject to the indispensable constraint of sustainable development – that of non-declining natural and man-made capital.

4. Will the SNR deliver sustainable economic development?

As part of the 2007 Comprehensive Spending Review, the Chancellor announced in Budget 2006 that the government would undertake a review of sub-national economic development and regeneration in England (SNR). The SNR was concerned with streamlining and rationalising current arrangements for economic development but also with allocating responsibilities and powers for economic development to the most appropriate tier of government. An important aspect of the review concerned accountability arrangements for regional government in the aftermath of the North East referendum.

It is acknowledged in the SNR that local authorities already have a broad power to promote the economic, social, and environmental well-being of local people. Nonetheless, in order to increase the focus on economic development, the government will consult on a statutory economic development duty which would require upper tier local authorities to carry out a local economic assessment (county councils would be required to undertake an assessment jointly with districts). The assessments would support regional economic strategies, local sustainable community strategies, and Local Area Agreements (LAAs).

Under the new performance management framework, LAAs will form the central delivery agreement between central government and local government and its partners. They will be outcome-focused agreements based on agreed targets. A 'duty to co-operate' will ensure that other public bodies work more effectively with local authorities. The new local government performance framework is directly linked to national Public Service Agreements and indicators and includes new indicators for economic development. The economic development and neighbourhood renewal objectives in LAAs will also need to reflect the local contribution to achieving regional economic strategies.

Following the publication of the SNR, the government published a consultation document on supplementary business rates which will bring new flexibilities and freedoms for upper-tier authorities to build constructive relationships with local businesses in funding economic development projects. City development companies will be encouraged, as will city-regions. The latter should allow local authorities to pursue strategies for planning, housing, transport, and economic development across sub-regional areas.

The government will expect the Regional Development Agencies (RDAs) to delegate responsibility for spending to local authorities or sub-regions wherever possible, unless there is a clear case for retaining spending at the regional level. However, it is stated that the “RDAs will need to be satisfied that the body receiving funding has the necessary capacity”.

The most important announcement made in the SNR was that of the government’s intention to abolish regional assemblies. RDAs will effectively assume responsibility for economic development, planning, and housing at regional levels. There is as yet a very unclear set of accountability arrangements accompanying this announcement. Regional strategies will be developed in consultation with local authorities, and local authorities will have a scrutiny role regarding the work of RDAs.

Of some concern, however, is the nature of the target to be imposed on RDAs. Each region will be set a regional growth objective aimed at increasing regional Gross Value Added (GVA). GVA, as we have seen, is a very poor measure of economic welfare. It does not include allowance for depreciation in man-made, let alone natural, capital, and therefore cannot measure one of the principal economic features of sustainable development, that of non-declining physical and natural capital. Although RDAs will have to have regard to “principles of sustainability” it is easy to see how national economic imperatives could come to be prioritised over all other issues.

A key recommendation should be, therefore, that RDAs adopt a comprehensive set of environmental and economic accounts and that their performance be measured, in part, on their ability to maintain the regional stock of environmental capital.

As for local authorities, the duty to produce an economic assessment should be widened to include an inventory of local environmental assets, valued in one of the ways suggested above. The proposed benefits, in monetary terms, of any development should be set against any environmental costs, also expressed in monetary terms.

Some further remarks about the relationships between national economic priorities, regional policy, and sustainable development will serve to conclude this section on the SNR. Regional policy, in various

Treasury pronouncements, is part of national economic policy in that all regions are to be encouraged to grow, although efforts should be made to close the huge economic divergences that exist between regions – effectively, a divide between ‘north’ and ‘south’. Lagging regions slow down national economic growth.

However, nothing can be allowed to detract from the phenomenal growth of London and its hinterland. If attempts were made to divert private investment away from London and the ‘south’, or to restrict private investment around London, the argument goes, it might not necessarily locate anywhere in the UK. Current investment policies – notably in housing and transport – are designed to accommodate this growth, propelled, apparently, by private sector location preferences.

In terms of the spatial balance of economic activity in the UK, this means that the demand for, and supply of, infrastructure in the south continually chase each other as further growth in the ‘south’ prompts further investment, which prompts further growth, and so on. Current policy reinforces this cycle. For example, the Eddington Review of Transport, published a year ago, indicates no modification of the Treasury stance that transport investment is meant primarily to relieve congestion – or to follow demand.

This means no substantial transport investment in lagging regions meant to stimulate private investment, and it probably means no more rural bus services to assist the rural disadvantaged or to reduce car use. Eddington explicitly ruled out investment in high speed rail links on the grounds that the UK is a relatively small country, even though evidence is growing that people would prefer, for environmental and security reasons, to travel by rail than fly between destinations like Edinburgh and London.

There is much in national policy, in other words, that seems to go against sustainability. But, in the light of the argument on environmental valuation developed earlier, it is worth asking whether, if the environmental losses in the ‘south’ were properly valued and set against whatever benefits might accrue from further development, the rational choice might have been to surrender a bit of national economic growth for more environmental amenity in the ‘south’, whilst increasing efforts to revive investment in the ‘north’.

Following the abolition of regional assemblies, it is to be hoped that the relationship between RDAs and local authorities will be one of mutual reciprocation. In smaller regions like the North East, it may well be, but in the South East, which has a large number of local authorities, in addition to immense development pressures, it is difficult to see how the relationship will work.

Combined with the imposition of a target for RDAs, and the creation of a Minister for each region, it is difficult to avoid the impression that regional policy will henceforth be directed, via RDAs, from Westminster and Whitehall. The new regional structures do not appear to give local people much opportunity to express their preferences for environmental amenity or development through the traditional means of local democratic government.

From all of the above, three recommendations follow for central government in the conduct of regional policy:

- close attention needs to be given to the accountability arrangements of RDAs, and the voice of local government in the regions must be safeguarded
- target setting for RDAs should seek a proper integration of economic with environmental goals, using tools such as those suggested above
- the investment criteria for vital infrastructure like transport should be widened to better accommodate environmental concerns and the aim of redressing regional economic imbalances.

Whatever the shape of the new arrangements for delivering economic development in the regions, local government will still have a critical role in delivering sustainable economic development. This is dealt with in the remaining sections.

5. Making the green economy work

The government has begun the task of developing a national framework for sustainability. Our most serious challenge, climate change, is addressed in the Climate Change Bill, currently before Parliament. The Bill will introduce a legally binding target for carbon reduction in the UK, overseen by an independent committee on climate change.

Local authorities have a range of powers and duties which mean they are already important players in securing sustainability. These include:

- statutory waste reduction targets, including recycling targets to divert waste from landfill
- a duty to have regard for biodiversity
- a duty to have regard to government recommendations for improving energy efficiency, increasing microgeneration, reducing greenhouse gas emissions and alleviating fuel poverty
- for authorities with housing responsibilities, a duty to report on energy saving measures in housing.

The requirement to carry out SEAs, which apply mainly to planning authorities, and sustainability appraisals have been noted. Local authorities are required to produce a Sustainable Community Plan in consultation with the local community, which addresses local economic, environmental, and social concerns.

There are new indicators in the proposed Comprehensive Area Assessment (CAA) for carbon reduction, air quality, resilience, and biodiversity, and these can be selected as targets in the Economic Development and the Environment block in the new LAAs, along with new indicators for economic development mentioned in Section 4.

The Transport Bill, currently before Parliament, will give local authorities powers to shape local bus services and freedoms and flexibilities to develop road pricing schemes. Further in the pipeline, are new powers to encourage waste minimisation and recycling, and the Carbon Reduction Commitment (CRC) a mandatory cap-and-trade scheme covering large

organisations including local government. The CRC is scheduled for implementation in 2010 but there is no need for local authorities to wait until then (see *The LGIU's Carbon Trading Scheme*).

Policy and regulation for climate change is in ongoing development, but there is much scope for local initiative outside the scope of statutory and performance frameworks, which can be undertaken by local government and its partners to encourage the transition to a sustainable economy. Many local authority initiatives, as indicated, anticipate national policy.

The Nottingham Declaration, for example, is a voluntary pledge to address climate change. In signing it, councils are committing to ensure that tackling climate change is an integral part of the council's strategy. The initiative encourages councils to seek ways of reducing their own carbon emissions in addition to those of their partners and other stakeholders and to explore adaptation and damage mitigation actions in their services and communities. By March 2007, about 195 local authorities had signed the declaration.

The Merton Rule requires the use of renewable energy onsite to reduce annual carbon dioxide emissions in the built environment. Merton became the first council to formalise government renewable energy targets in its development plan, using onsite renewable energy to reduce annual CO₂ emissions for all new major developments by 10 per cent. The first project to comply with this target – ten light industrial units – was completed in June 2005 using micro turbines and solar power to meet the requirement.

The LGIU's Carbon Trading Councils scheme

Carbon Trading Councils (CO_T) aims to provide a platform for local authorities and their partners to increase their investment in carbon reduction. By putting a price on carbon, a carbon budget and trading scheme can incentivise action to tackle climate change. CO_T aims to be an open and engaging scheme that will deliver innovative and efficient carbon savings at the local level.

The system works by creating a market of carbon permits. Each organisation is allocated a carbon budget that takes into account their current use of carbon, minus an agreed reduction. Each year the carbon budgets will decline, limiting supply in the market.

Councils will implement carbon reduction plans to make sure they meet their budgets. If a member of the scheme needs additional carbon permits to those budgeted for, they can buy them from another member of CO_T selling on the market.

A prospectus for CO_T was launched in July 2007. To ensure the scheme meets the ambition and potential of local organisations, LGIU invited councils to join a development group. Local authorities from across the UK are now involved in planning this voluntary carbon trading scheme, which will position local organisations as the pace setters on tackling climate change.

The group recognises the potential influence a trading scheme can have and are getting to grips with complex ideas around markets and trading, which will equip them for future mandatory carbon trading schemes.

The LGIU is keen for more councils to get involved in the scheme. For more information contact gemma.roberts@lgiu.org.uk

Economic development practitioners in particular will want to work with local businesses in improving energy efficiency and encouraging the development of environmentally-friendly products. **Manchester City Council** is supporting green business advice through the green business pledge. Increasing business innovation and development of environmental technologies and market opportunities is seen as a key area for the city, and is pursued through working with partners Manchester Knowledge Capital and local universities (see *Manchester: Knowledge Capital*). The city has declared its ambition of becoming England's greenest city, and in addition to working closely with business it is working on plans for congestion charging and the extension of the Metrolink light rail scheme.

Manchester: Knowledge Capital

Manchester City Council is a founding member of Manchester: Knowledge Capital, intended to be a force for innovation and economic transformation, built around a highly competitive combination of knowledge assets across the Manchester city region. Through a partnership of all 10 Greater Manchester authorities, four universities, the strategic health authority, other key public agencies and leading businesses, Manchester: Knowledge Capital is working to secure substantial and sustainable growth which benefits all the people of Manchester and makes a major contribution to the North West, the North of England and the UK's future prosperity.

Among its programmes is *Manchester is my Planet* which aims to raise awareness and create the conditions to allow sustainable energy initiatives to be first among local authority, business and household choices, thus contributing to social and economic sustainability to move Greater Manchester along the path to a low-carbon future. The programme will add to Manchester: Knowledge Capital's aims in creating jobs for all in Manchester.

In **Durham County Council**, the sustainability team has worked in close partnership with the GlaxoSmithKline (GSK) site at Barnard Castle over several years to achieve a series of environmental improvements that have had direct economic benefits. GSK is the main employer in this rural area of County Durham.

Since 2001 the site has reduced its energy consumption by 20 per cent and has become the first GSK site worldwide to install two wind turbines which generate up to 500 kW (six per cent of the site's energy requirements). This is in addition to significant local community involvement and the planting of more than 2,000 trees and shrubs within the 69 acre site. As a result, this rural GSK site has been promoted worldwide by the parent company, has won new contracts, and has strengthened its chances of survival during a difficult time for GSK globally.

The sustainability team in County Durham is working with local employers to ensure a sustainable local tourism economy. This has been so successful that a County Durham youth hostel – Langdon Beck – has now become Britain's most sustainable youth hostel. Energy efficiency, local supply, reed bed sewage treatment, environmental awareness and education measures and many more projects have helped to secure this success, which in turn is leading to the creation and support of local employment.

London Remade (*see Closing the waste loop, overleaf*) works closely with the GLA and London boroughs to encourage better waste management practices. Although not a local government organisation, it none the less illustrates the range of local actions that can be taken to stimulate green business practices. Its *Enhance* programme helps develop businesses and social enterprises that reduce London's waste, reuse resources or work with recycled materials. The programme has helped grow more than 210 green enterprises in London and continues to create new businesses and jobs.

As a result, *Enhance* is improving the way London manages its waste and resources, developing supply chains for recycled materials and creating a more sustainable capital. London Remade's *Enviro Entrepreneur Summer School* has been developed to take entrepreneurial candidates

Closing the waste loop: London Remade

London Remade is not a local government organisation, but it works closely with the GLA and London boroughs to stimulate good practice in waste management and recycling. It is the kind of development agency that local authorities could create to carry out a specialised and strategic function.

However, it is included here because of an SRB project it carried out which aimed to increase the marketability of recyclates through the development of existing forms of industrial activity which re-use waste material, and through the promotion of new enterprises and technologies to recycle waste. The project perfectly illustrates the economics of sustainability.

The programme provided technical and marketing support to eco-industrial activities in the Thames Gateway area making organic refuse into compost and related products, glass cullet into construction materials, collecting and recycling construction and demolition waste, and processing paper and cardboard.

There was also a programme of business start-up assistance aimed at activities which involved recycling or the use of recycled materials, including activities which may have been started by social or community businesses. All of these industrial and business support projects were intended to create jobs directly.

The Local Economy Policy Unit at London South Bank University was asked to evaluate the programme in terms both of net indirect and direct jobs created by the programme.

London Remade's activities operated both on the supply of recyclables, through projects aimed at improving the quality and quantity of material available for re-processing, and on the demand for recyclables, that is, by attempting to improve the proportion of recyclables that could actually be sold, and the prices obtainable for them.

Promoting the Mayor's Green Procurement code was (and remains) a key element of the 'demand side' part of the equation. For the programme to generate a net increase in indirect and direct jobs, prices needed to rise to levels which made it economically feasible for waste collection and waste management authorities to make adequate investment in recycling systems at the collection and sorting stages of the waste stream. They then needed to remain at that level, rather than falling as progress towards recycling targets was made.

The evaluation concluded that the programme had made a significant improvement to waste management in London. For example, a glass eco-site had succeeded in converting waste glass into construction aggregate, reducing the need to transport waste glass out of London for recycling as new glass products and reducing the need to import aggregates.

Based on estimates of price per tonne of recyclates required to maintain a job at a given wage rate, the evaluation also concluded that the programme created a total of 343 jobs, net of negative effects such as displaced jobs from producers and suppliers of virgin materials or from traditional waste management operations.

through the process of starting and growing a business and provide them with the business skills that will help them to get off to a successful start. The case study above deals with London Remade's efforts to re-engineer the market for recycled products.

Some local authority programmes have tackled all three elements of sustainability – social, environmental, and economic – simultaneously. The Cornwall Sustainable Energy Partnership (CSEP) is an innovative sub-regional approach to addressing the social, environmental and economic issues of energy supply and demand.

It maps and tackles fuel poverty, improves energy efficiency in both public and private housing sectors, and promotes the uptake of renewable energy (see *The Cornwall Sustainable Energy Partnership overleaf*).

The Cornwall Sustainable Energy Partnership

Cornwall County Council, Caradon District Council, Carrick District Council, Kerrier District Council, North Cornwall District Council, Penwith District Council, Restormel Borough Council and the Council of the Isles of Scilly have worked together since 2001 to create the Cornwall Sustainable Energy Partnership (CSEP). Partners include health trusts, social housing providers, community groups, education providers, technology experts and renewable energy installers.

CSEP is locally managed by Community Energy Plus, a registered charity that also manages the Cornwall Energy Efficiency Advice Centre and Envision (an environmental advice service for businesses). CSEP develops programmes that utilise the expertise in each of these teams.

CSEP has a broad remit, mainly focusing on the public sector, business, renewable energy and families. Key tasks include: mapping and tackling fuel poverty (households that spend more than 10 per cent of their income on heating) and improving energy efficiency in both public and private housing sectors; promoting the uptake of renewable energy; and developing sustainable communities.

The scheme has brought in more than £4 million of funding for homes in the county. Currently, over 5000 homes have been fitted with energy saving measures, in the most deprived parts of Cornwall, saving over 110,800 tonnes of carbon dioxide. There has been a 35 per cent increase in annual carbon savings reported by councils since the Home Health Scheme was launched in 2002.

Through CSEP's pioneering Energy Deprivation Local Public Service Agreement over 13,000 homes were made more energy efficient between 2003 and 2006, saving over 283,278 tonnes of CO₂. A landmark project involved retro fitting ground source heat pumps (GSHP) into 16 existing housing association properties at

Chy an Gweal, Ludgvan, West Cornwall, in what was a UK first. The strategy also covers large scale projects with CSEP taking a strong role in the development of major schemes including the Cornwall based Wave Hub project.

Local authorities can undertake a range of actions in partnership with business and other groups to steer the transition to sustainability.

New powers, such as that of levying a supplementary business rate, should allow local authorities to build closer, and more constructive, relationships with local businesses.

Local authority involvement in economic development should aim to stimulate more innovation in the 'green economy', including:

- encouraging the development of environmentally-friendly products.
- supporting training in business skills for 'green' entrepreneurs
- helping invest in renewable energy
- helping businesses cut fuel bills and reduce CO₂ emissions
- supporting corporate social responsibility through carbon offsetting.

An equally important contribution, however, is through community leadership – assuming responsibility for the stewardship of places or, as Lyons put it, in place-shaping. The role of local government in community leadership is dealt with in Section 6.

6. Mobilising support, raising awareness

Local authorities have a range of powers they can use to compel sustainable behaviour. For example, the London Borough of Richmond-upon-Thames has raised parking charges for drivers of high CO₂-emitting vehicles. This is consistent with the principle of progressive taxation, and few people would object to a tax on excessive carbon consumption. The London Borough of Barnet was the first local authority to impose penalties for households that won't recycle. Taxes and regulation, as we have pointed out, may be unavoidable in some circumstances, but offering incentives through re-engineering markets is always a preferable alternative. This is because of the high costs of securing compliance.

A story from California illustrates the point. The introduction of high occupancy vehicle lanes, where cars using these fast lanes had to have at least one passenger, only succeeded in pushing up car occupancy from 1.22 to 1.25. It was a 'command and control' measure that failed because it was extremely unpopular among drivers who found ingenious ways of cheating. One driver fooled the police for months by using a dummy passenger. A pregnant woman claimed that her unborn child should count as a passenger (although it's unlikely she became pregnant to evade the high occupancy rules). In the ensuing court cases, the dummy driver lost but the mother-to-be won⁴.

Assuming (reasonably) that British people are no less rampantly individualistic than Californians, it is likely that over reliance on the 'stick' in whatever carrot-and-stick package is used to change behaviour will similarly fail. Where market-based methods are inappropriate or slow to take effect, behaviour change is more likely on the basis of widespread community support. Even where sanctions are unavoidable, community support means that rules will be easier to enforce against recalcitrant individuals. Securing community support is a crucial role for local political leaders.

Local authorities have an abundance of resources at their disposal which can be used to raise awareness. Events, fairs and exhibitions can all be used to communicate the message. Local authorities can work closely with schools, libraries, museums, and art galleries to secure a higher level of understanding among local communities. But the message should not be a Cassandra-like warning of impending doom – the message should reinforce the main argument of this document, that

securing environmental sustainability offers new opportunities – in other words, it should promote the theory and practice of sustainable economic development. Persuasion is always preferable to compulsion. Appropriate incentives are always preferable to regulation.

Local authorities have at their disposal a range of neighbourhood structures that can act to support the transition to sustainability. Outside of London⁵, local authorities can enlist the support of their parish councils.

An example from **Ashton Hayes in Cheshire** illustrates community mobilisation at neighbourhood level. The example both illustrates the efficacy of community action at very local levels and indicates the growing groundswell of opinion about climate change.

Ashton Hayes goes Carbon Neutral

Ashton Hayes Parish Council voted to turn the small Cheshire village of Ashton Hayes (population approximately 1,000) into England's first carbon neutral community. The project secured considerable support from the local community, landowners, businesses, Chester City Council and Cheshire County Council, the University of Chester, and various national organisations, including Defra.

Becoming carbon neutral involved assessing current emissions and then taking steps to reduce them through personal energy and lifestyle savings (technical support was offered by the University of Chester who were able to supply students to carry out the project's survey requirements). Where emissions cannot be prevented they are offset through local renewable energy schemes or forestry projects.

The project encouraged everyone in the community to think about how their way of life affected their impact on climate change and helped people understand how simple actions can make a big impact on CO₂ emissions. It attracted considerable media attention both from within the UK and internationally. An item on the BBC's

World Service inspired a community in Australia to try something similar.

A small number of highly motivated individuals played a key role in driving the project forward. Nonetheless, the project was community led, both in the initiation of the idea and in the high degree of community involvement it attracted. The participation of the local primary school, for example, ensured considerable interest among local children and also their parents and wider family members. The project generated a momentum that allowed the formation of a multi-agency partnership able to lever in more resources to drive the project forward.

www.goingcarbonneutral.co.uk

7. Conclusion and summary of recommendations

The argument set out above has shown that there is no inconsistency between economic growth and environmental sustainability. The argument is put to, and for, local government, because local authorities now have responsibilities for both economic development and environmental sustainability.

Discharging these new responsibilities means that local authorities must pursue sustainable economic development.

It is easier to define sustainable economic development than to practice it. The larger part of the difficulty is in its measurement. It has been shown that the standard systems of economic metrics do not properly account for the costs that the economy imposes on the environment.

The solution is in constructing a system of integrated environmental and economic accounts. It is not an easy solution, but the UN's System of Integrated Environmental and Economic Accounts shows that it is possible. It is perhaps unrealistic to expect national governments to start using a system of environmental accounting, at least in the near future, but there is no reason why regional and local agencies cannot commission their own, local systems. It may involve some cost (not least, in hiring the appropriate expertise) but it would be worth it.

Proper accounting means better project appraisal. It means that the costs of economic growth can be better communicated to, and understood by, local communities. It could act as an important counterweight to the headline GVA target to be imposed on RDAs, which threatens to crowd out environmental concerns by the overriding imperative of national economic growth measured in conventional terms.

A more rational method of valuation would make choices between growth and the environment more intelligible to local communities, and would support the case for re-balancing regional policy towards relieving congestion in the 'south' and supporting development in the 'north'. If a duty is to be imposed on local authorities to conduct a local economic assessment, it should be augmented to include an environmental assessment.

To this extent our recommendations can be summarised as follows:

For all agencies:

- 1 To support sustainable economic development we need a system of accounting at national, local, and regional levels that integrates environmental values with more conventional economic values like physical (non-natural) capital and output. We recommend the use of the System of Integrated Environmental and Economic Accounting, known as SEEA, constructed by the United Nations.



For central government:

- 2 Central government should allow as much flexibility to local government as possible in integrating functions like planning, transport, and housing that serve both environmental and economic purposes.
- 3 In the conduct of regional policy:
 - close attention needs to be given to the accountability arrangements of RDAs, and the voice of local government in the regions must be safeguarded
 - target setting for RDAs should seek a proper integration of economic with environmental goals, using tools such as those suggested above
 - the investment criteria for vital infrastructure like transport should be widened to better accommodate environmental concerns and the aim of redressing regional economic imbalances.

For Regional Development Agencies:

- 4 RDAs should adopt a comprehensive set of environmental and economic accounts and their performance should be measured,

in part, on their ability to (at least) maintain the regional stock of environmental capital.

For local authorities:

- 5** Local authorities could begin subjecting all their policies and plans to a sustainability appraisal.
- 6** The duty to produce an economic assessment should be widened to include an inventory of local environmental assets, valued in the way indicated above. The proposed benefits, in monetary terms, of any development should be set against any environmental costs, also expressed in monetary terms.
- 7** The environmental and economic development functions in local authorities should be brought closer together. For example, through integration of the environment and economic blocks in the LAA.
- 8** Local authority involvement in economic development should aim to stimulate more innovation in the 'green economy', including:
 - encouraging the development of environmentally-friendly products
 - supporting training in business skills for green entrepreneurs
 - helping invest in renewable energy
 - helping businesses cut fuel bills and reduce CO₂ emissions
 - supporting corporate social responsibility through carbon offsetting.
- 9** Most importantly, the message of sustainable economic development needs to be communicated to communities and businesses. Local political leadership in this respect is vital. In this context, it is useful to be reminded that:

- Events, fairs and exhibitions can all be used to communicate the message. Local authorities can work closely with schools, libraries, museums, and art galleries to secure a higher level of understanding among local communities.
- Neighbourhood arrangements can be enlisted in the transition to sustainability.
- In all cases, persuasion is preferable to compulsion.

Notes

- 1 Donella H. Meadows, D., Meadows, J., William, B., (1972) *The Limits to Growth*, New York: Universe Books.
- 2 There is no way of knowing that Hell exists, but if it does, we risk eternal damnation by not living good lives.
- 3 United Nations (2000) *Integrated Environmental and Economic Accounting: An Operational Manual*, New York, United Nations.
- 4 Reay, D. (2005) *Climate Change Begins at Home*, London, Macmillan.
- 5 New legislation has enabled the creation of parishes in London boroughs.

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Price: £8.00
ISBN 978 1 903731 87 1