

Sustainable Industry: From Production to Consumption

A Scottish contribution to the sustainability package

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Introduction

On 16 July 2008, the European Commission launched a package of actions for sustainable consumption and production (SCP) and sustainable industry policy (SIP). Ahead of the launch of these proposals, Scotland Europa co-hosted a Brussels event with the Scottish Government and the Scottish Environment Protection Agency (SEPA) entitled *Sustainable Industry: From Production to Consumption - A Scottish contribution to the sustainability package*. With contributions from Martijn Quinn, Cabinet Member for the Commissioner for the Environment, and representatives from Scottish industry, the event, attended by over 50 individuals, ensured that a distinctly Scottish voice was added to the policy debate prior to the launch of Commission legislation. The points raised at this event held at Scotland House on 4 June 2008, during "Green Week" can be found in this report. They serve as a basis for further discussion in the development of a Scottish strategy on sustainable industry in the context of the recent Commission SCP-SIP Action Plan.

Sustainable consumption and production-the context

Speaking at the opening session of Green Week 2008, the Commissioner for the Environment, Stavros Dimas began with two observations **"The first is that European environmental policies have delivered immense benefits to Europe's citizens. Their air is cleaner, their beaches and rivers are cleaner and pollutants such as lead in petrol have been banned. In many ways, by allowing countries to work together and solve problems that**

cross national borders, our environment policy is one of the success stories of European integration.

The second observation is that, just as it is right to celebrate these success stories, sometimes we need to take a step back and look at just how far we still are from a model of development that is genuinely sustainable."

The Commission sees sustainable consumption and production as a vital but missing link in EU environment policy. Industry has a role to play in meeting the sustainability challenge; through more efficient use of new technologies, raw materials, energy and waste and via product marketing. The Commission's sustainability package seeks to improve the environmental performance of products throughout their life cycle, to promote and stimulate demand for better products and help consumers to make better choices. The proposal focuses on eco-efficiency and will see, for example, revision of the EU Directive on the eco-design of energy using products, the EU Ecolabel scheme and the eco-management and audit scheme EMAS, as well as a Communication on green public procurement.

At this stage the EU plans are to regulate with a "light touch" so product policy applies to the most damaging performers, taking the worst performing products off the market and setting best practice benchmarks as incentives for those that can do well. Policy will therefore focus on labelling, procurement and fiscal incentives for Member States. Eco-labels will be made clearer and extended to cover more products, EMAS will be revised and there will be enhanced corporate social responsibility via a newly established retailer forum.

Scotland is keen to develop a strong strategy in finding economic solutions to environmental challenges. From the contributions to this report it is clear that in Scotland we are looking at an even more integrated approach and would welcome sustainable industrial policy that brings together all of the processes in which industry is involved. It is hoped that in Scotland we can build on the foundations of the Commission proposal and identify those areas that need resolution. Moreover, the Scottish initiatives outlined in this report are already underway and can serve as good practice examples to the EU.

An Overview of Policy & Practice: The Scottish Government What is being done in Scotland?

The following speech was presented at the Scotland House event on 4 June 2008 by John Mason, Director Environmental Quality, Climate Change & Water Industry, on behalf of Michael Russell MSP, Minister for Environment.

Sustainable economic growth - The Scottish Government's purpose

The Scottish Government's focus is on creating a more successful country, with opportunities for all of Scotland to flourish, through increasing sustainable economic growth. By *sustainable economic growth*, we mean building a dynamic and growing economy that will provide prosperity and opportunities for all, while ensuring that future generations can enjoy a better quality of life too. It follows that *sustainable economic growth* is not just about how fast we grow the economy. It's also very much about how we do it. In particular it's about *fairness*.

Fairness between different parts of Scotland, between different groups in society, and between this generation and future generations. What we're calling *solidarity, cohesion* and *sustainability*.

Sustainability

As the title of this afternoon's event would suggest, I'm going to concentrate mainly on the third of these: sustainability.

Our economy and society depend on natural resources and the environment. For raw materials and energy, for food, air to breathe and water to drink. For soils, air, and water that absorb and transform our waste and pollution. For attractive and safe environments which support our health, well-being and quality of life.

By the same token, economy and society have a variety of impacts that shape the environmental capital available to future generations. Some of these impacts are local – to Scotland or elsewhere – such as the environmental consequences, for example, of the primary industries such as oil and gas, farming and fishing, quarrying, mining, and forestry that produce the raw materials that ultimately feed, clothe and house us. And some are global.

We have a responsibility to future generations and those less fortunate than ourselves for the legacy we leave them. That's why we have made reducing the local and global environmental impact of our consumption and production one of our fifteen high-level national outcomes and set ourselves the goal of reducing our ecological footprint.

Climate change

Probably the most pressing of our global environmental impacts is on climate change, through the carbon and other greenhouse gas emissions that are produced throughout the supply chain in processing, distributing and ultimately dealing with the goods we buy, use and throw away.

Scotland is committed to playing its part in a coordinated global response to the challenge of climate change and the Scottish Government is bringing forward legislation putting in place a statutory target to achieve an 80% reduction in Scotland's emissions by 2050.

The consultation on our proposals for a Bill has just concluded. It attracted over 20,000 responses from 145 countries – truly a global response!

Our proposals will establish a framework for action in Scotland on climate change for the next 40 years.

Sustainable industry

Sustainable industry will have a critical part to play: -

- Enabling us to create and sustain the economic opportunities we need for a wealthier and fairer future for Scotland's people.
- Doing so in ways which protect and enhance our environment for future generations.
- Capitalising on our natural assets and strengths, such the quality and beauty of our natural environment and historic cities and considerable potential in renewable energy sources and associated technologies.
- Adapting and responding to the changes in market conditions that climate change will inevitably bring.

I'm looking forward to hearing a bit later on from some businesses in Scotland who are doing just that.

Energy

How we produce and use energy is key to a greener, wealthier and fairer future, in the face of the imperative needs to tackle climate change and ensure security of supply against the background of rocketing demand in the newly industrialising economies such as China and India and uncertainties and risks on the supply side.

In Scotland, we are blessed with enormous supplies of renewables including wind, wave, tide and biomass – and long-established skills and capacity in the technologies such as offshore engineering needed to harness them.

We have made great strides in renewable energy over the last year. At a little under 3 GigaWatts, installed capacity now surpasses that of our nuclear generators.

We believe we can go much further and we welcome and support the role which Europe's own renewables targets are playing in driving ambitions in this area.

We have increased Scotland's own targets for renewable energy generation to 31% by 2011 and 50% by 2020. To meet these, we will need several more GigaWatts of capacity

. But success isn't just built by setting targets. We need to ensure Government plays its part in supporting the sector, and in providing the long term frameworks needed to enable investment.

We need to make sure that the planning and consents system is working well. We have set a clear framework for renewables development in the planning system, which will be reinforced by our proposals for a new National Planning Framework highlighting priorities in renewable energy and improvements to infrastructure.

The message is clear. We want more renewables. But not at any price. The best proposals will reconcile community and environmental concerns in advance.

A thriving renewables sector depends on a strong research foundation. Scotland has a high quality research infrastructure which is supporting the development of renewables and green energy more widely.

Our new *Energy Technology Partnership* will bring together the best energy research establishments in our universities, enabling them to pool and market their skills to a wide range of energy sector clients.

The Partnership is working closely with the Scottish Government and industry on setting up the *Scottish European Green Energy Centre* in Aberdeen, which aims to develop partnerships across Europe designed to promote the development and deployment of green energy.

Our renewable future is dependent on emerging technologies, especially wave and tidal power. We are leading the way in providing long term market support for this sector, through our Marine Supply Obligation, and we will continue to improve this so as to maintain our leading edge.

Early in April, our First Minister – Alex Salmond – announced a new initiative, the £10 million Saltire Prize, to support the development and deployment of renewable technologies. We are recruiting the panel of experts to establish the details of the prize, which will be announced later this year on St Andrew's Day. Of course, our ambitions are not confined to renewable electricity, which cannot be the whole answer. We are also looking to increase substantially renewable heat.

And to use technologies such as cleaner coal and carbon capture and sequestration to reduce the impacts of the fossil fuels which will continue to provide a significant element in Scotland's energy mix.

Diverse though that mix will be, I should just restate that – taking account of the costs and safety considerations – the Scottish Government sees no continuing role in it for nuclear power.

Finally on this heading, I have talked much about how we produce energy. But how we use it – energy efficiency - matters too.

That's why the Scottish Government is already helping businesses to cut emissions, to improve productivity and to increase its competitiveness.

Through *Loan Action Scotland*, we provide interest free loans of up to £100k to help SMEs invest in energy efficiency measures. Last year 84 Scottish SMEs received loans worth a total of £2m from the scheme –our best year ever. And we plan to expand the scheme in 2008 to make it even bigger and better

We also fund the *Carbon Trust* in Scotland to deliver consultancy advice through carbon management for large business energy users, and energy audits for others. Last year the Trust helped over 300 Scottish businesses implement measures which will save over 200,000 tonnes of CO2 and over £15m during their lifetime.

Our business adviser network, funded through the *Energy Saving Trust*, also helps smaller SMEs to reduce their energy bills. Last year over 600 Scottish businesses received energy audits through this support.

All this aimed at helping businesses cut inefficient energy consumption, which is environmentally damaging and economically costly.

Waste

Which leads me to another pressing issue of concern from the perspective of sustainable consumption and production: waste.

Waste is a problem - and an opportunity. Disposing of it properly – so that it does not damage the environment – takes energy, money and land.

Waste represents a misuse of resources that could be put to more valuable use.

That is why we announced early this year that we wanted to move Scotland towards a zero waste society, setting tough new targets to increase recycling and reduce landfill, and putting a stronger emphasis on reducing commercial and industrial waste, alongside our continuing efforts on household.

We and our counterparts across the UK are working through organisations such as WRAP (the *Waste & Resources Action Programme*), Envirowise and NISP (the

National Industrial Symbiosis Programme), to improve resource efficiency within the supply chain.

For example:

- WRAP and Envirowise are working together to tackle packaging and food wastes arising in the food supply chain. This supports the Scottish Food and Drink Federation's "*Five Fold Environmental Ambition*" action plan, which includes targets to
 - To reduce the amount of food and packaging waste arising at food manufacturer's premises by 20% by 2010, and
 - To send zero waste to landfill from 2015.
- WRAP is working with the DIY and home improvement sector to reduce product damage in the supply chain, through smarter packaging design and changes to logistics. Product damage in transit for the DIY industry is estimated to cost over £400 million a year and results in substantial volumes of unnecessarily land fill.
- Envirowise run a *DesignTrack* service – designed to reduce the environmental impact of a product over its lifecycle – and a very effective *measurement and benchmarking* service focused on educating businesses how to understand their resource use from raw materials to waste, including its implications for their carbon footprint.

Similarly, we are supporting a range of initiatives to encourage consumers to reduce, reuse and recycle more.

Waste Aware Scotland for example are doing research on product life-spans with a view to encouraging consumers to purchase products with a longer life where this makes sense.

Food waste is a big issue. It has major climate change implications - not just in its disposal but also in producing and transporting food that is eventually wasted. "*The Food We Waste*" report [by WRAP] showed that Scottish households buy but do not eat nearly £1 billion of food a year, equivalent to about 600,000 tonnes of wasted food. Over 60% of this could have been eaten if we had planned, stored and managed it better.

WRAP are working with the food industry to help consumers manage and consume the food they buy better rather than waste it. With Waste Aware Scotland, they are running the "*Love Food; Hate Waste*" campaign advising householders how to cut food waste (for example by better storage, avoiding over-buying and using left-overs).

There are also messages about re-using products, rather than just throwing them away. In Scotland, for example, the community recycling sector is active in collecting used furniture from households and distributing it to disadvantaged people, such as homeless people moving into accommodation. I know that other parts of the EU, such as Flanders, have measures in place to encourage the re-use of goods.

Consumers

In the end, businesses will produce and supply the goods and services that they believe customers will pay for. As well as advocating, supporting and driving businesses to become more efficient in how they use resources, including energy, we want to encourage consumers to demand greener products, and make it easier for businesses to meet that demand.

Actions already being taken by firms such as the big supermarkets and the winners of our annual VIBES awards for more sustainable businesses show a recognition that there is such a demand and that there are opportunities in responding to it.

One thing that government can do – and the Scottish Government is doing – is to work, in partnership with civil society, to influence the behaviours of and demands of present and future consumers. We do this for example through social marketing and campaigning approaches such as the *It's our future* campaign, which includes the *Ten Steps to a Greener Scotland* initiative encouraging people to sign up to ten environmental pledges to reduce their impact on or improve their environment.

Such as our Action Plan for the UN Decade of Education for Sustainable Development, which aims to build in environment and sustainable development concerns throughout the education system.

Such as our new Climate Challenge Fund, which my colleague Richard Lochhead launched in Glasgow yesterday. The Fund will provide over £18 million over the next three years to support community-led initiatives throughout Scotland to take action to cut carbon emissions, for example by using less energy, walking and cycling more or buying more seasonal, more sustainably-produced food.

Finally, I've talked a lot about what we ask of business and consumers, and how Government can help and encourage them.

But of course the public sector is a big business and a big consumer in its own right, and we are determined to embed more sustainable thinking into our *procurement* and how we run our estates and operations so that public spending is directed towards greener goods, services and infrastructure, demonstrating that we are prepared to walk the talk and providing practical support for greener business.

Conclusion

In conclusion, sustainable industry is key to the Scottish Government's purpose, with its focus on sustainable economic growth. I've given just a few examples of how the Scottish Government and its partners are working together to support and encourage businesses and consumers to be more sustainable.

The Scottish Environment Protection Agency Sustainable Industry - From Production to Consumption – A Regulator's Perspective

The following speech was presented by Dr Campbell Gemmell, Chief Executive of the Scottish Environment Protection Agency.

Introduction

SEPA is responsible for the implementation of a wide range of environmental regulation. We have a very necessary role in gathering data, monitoring environmental quality, and understanding the underlying science of the environment in all of its glorious complexity. We also have a strong influencing role across a wide range of stakeholders including industry and the wider public.

This gives us a unique perspective and role to play in emerging global resource management issues.

The rapid increase in global population, the ever developing process of globalisation and the increasing economic growth and prosperity this brings, poses a number of global challenges. The consequential increase in the consumption of resources, the need for equity in access to the benefits arising from the use of these resources and the complex geo-political pressures that arise from resource competition now requires an unprecedented level of global cooperation and response. The European Union is in my view providing global leadership in this vital area of economic, environmental and social well-being.

I want to look afresh at some of the key challenges we face and review what action we are taking or need to take to address these issues.

The Challenges

Firstly, our understanding of the pressures on global resources, be they natural resources such as forestry, fish, water, natural habitats... or non-renewable resources such as oil, minerals and metals, needs to be improved. Secondly, we need to improve our ability at both a European and global level to work cooperatively towards national, regional and global solutions. We need to develop better ways of managing, sharing and accounting for the resources we use in the evolving human and economic systems going forward into the 21st Century. Finally we need to engage with the complexities of sustainable production and consumption at a global level.

There is now a vast body of work developing in this area. However I will stick to some of the main players and initiatives.

Initiatives underway

On the issue of understanding the pressure on resources, the OECD publishes a suite of key indicators on fresh water resources, fish, forestry and energy resources. Its latest report was published this year. This is good but the picture is still incomplete.

A development of significant promise to improve our understanding of global resource use and its impacts is the recent development of the 'The Global Resource Accounting Model' (GRAM) which developed out of the Productivity and Environmental Tax Reform in Europe (petrE) project. The GRAM model allows an analysis of domestic resource consumption including raw material extraction and the international trade in resources.

The model can identify aggregated indicators on resource consumption of countries and regions, such as the EU, which show the origin of resources and where the final products are consumed. This allows an analysis of net importers and exporters of both raw materials and products. Finally, the model can show which raw material or products have the highest material intensities across their product chains. Currently over 48 economic sectors and 25 product groups can be assessed in this way, covering 188 countries and providing resource extraction data for all abiotic and biotic resources. The model will shortly be able to address water use, land use and air emissions. This development is the most significant of its kind to date and is beginning to develop the raw data that is necessary for policy makers to address a complex and inter-related range of issues.

To date the model has been used to establish data for the year 2000. I thought it would be useful to highlight some of the key findings. It shows that the USA and China are the biggest consumers of raw materials in absolute terms. Germany ranks 9th and the UK 14th. The model also reveals that the group of OECD countries is a significant net-importer of material resources from other world regions with goods consumed in the OECD countries requiring around 2.5 billion tons more natural resources than those exported from the OECD to the rest of the world. This is an interesting example of the challenge ahead for us all in reducing the intensity of resource use in developed nations. The EU-25 countries (mostly members of the OECD) have net-imports of around 800 million tons. Again the USA leads the ranking of net-importers, followed by Japan and some western European countries (UK, Italy, Germany and France). The biggest net exporters are Russia, followed by Australia and the group of OPEC countries.

Now consider this: The recent EU consultation on the Non-energy Extractive Industry in the EU suggests that this sector in the EU 25 generated a turnover of about 40 billion€ in 2004 and provided employment to about 250,000 people but to achieve this the EU had net imports of some 203 billion tonnes of minerals with a trade deficit of 11 billion€. Metallic minerals accounted for 90% of this deficit. With the emerging economies of China and India using natural resources at an accelerating rate we could be facing a quadrupling of global resource use within 20 years unless traditional patterns of both production and consumption are changed. Competition for resources is increasing and will continue to do so. The recent analysis of the non-energy extractive industries indicated that the factors that need to be addressed to ensure the competitiveness of this sector – and these issues are likely to be similar in other resource uses sectors - include exploration, investment, research and innovation and skills. Research and innovation are going to be key to the future security of raw materials and the development of more sustainable production processes. It is also important that Europe improves its understanding of its own mineral resources and sets the benchmark for the sustainable reclamation, exploration, extraction and processing of the raw materials it cannot itself produce.

I believe that the Commission is currently preparing a Communication on the Non Energy Extractive Industries which will be finalised in the second half of 2008. This will set out a European strategy to address the issues I've just mentioned. A further significant issue of relevance to this sector is that of regulation and I will return to that theme shortly.

Biomass

A further issue of resource use with a strong local, national and international dimension is that of biomass.

I'll deal first with waste biomass. Used properly this material is a fundamental resource for maintaining soil fertility. It is also a unique source of low cost carbon neutral energy. SEPA has been at the forefront in Scotland of ensuring that energy from waste plants recover energy efficiently, largely via the use of district heating or combined heat and power. We also want to prioritise waste biomass for energy recovery and not mixed waste. In Scotland alone we produce nearly 10 million tones of biomass which is waste or the by-products of agricultural or forestry activities.

A report published by German consultancy Prognos last week shows how implementing high recycling targets across all EU waste streams and banning the land-filling of biomass with the use of much of this material for energy recovery could achieve a reduction in CO₂ emissions of between 145 and 235 Million

tonnes of carbon dioxide. That is between 16% to 27% of the European Kyoto climate reduction targets! This is surprising given that the early assessments of the direct contribution of wastes management to climate change were much lower. The benefits here arise from the displacement of biomass from landfill avoiding methane production and by converting this material to energy to displace fossil carbon as well as from the significant carbon savings from reusing raw material. A double benefit in effect. Of course, and pertinent to today's discussion, this is also conserving resources. Focusing on waste as a resource is without question one of the most important things we can do to address resource competition in the future and I have no doubt that the economic viability of recycling will improve to meet the challenge.

SEPA has also been engaged in the wider work on what we would call primary biomass, such as Short Rotation Forestry and Coppicing and crops to make bio-fuels for road transport. In Scotland, due to land pressure, bio-energy is only likely to come in any significant quantity from the forestry industry and Mike Russell led a Forestry Wood Fuels group with the Forestry Commission Scotland, SEPA and others to develop a plan for biomass from the forestry sector for direct conversion to energy, largely in Combined Heat and Power plants. However, the growing controversy on bio-fuels for road transport fuels, mainly bio-ethanol and bio-diesel, is in my view set to continue. Whilst the current rise in food prices is not directly contributable to the displacement of agricultural land for bio-fuels, the potential for this displacement in future is significant. We cannot, from an ethical point of view, allow our energy needs to displace food for those who do not have sufficient food! Instead we need to innovate and one of the main ways we can do this is to focus on waste biomass. Currently across Europe we are pouring this material into landfill, ironically contributing to the very problem that renewable energy systems are trying to off-set.

Thematic strategies and SCP agenda

Two current areas of fundamental importance to the issue of global resource management are those of the Thematic Strategy on the Sustainable Use of Natural Resources and the emerging agenda on Sustainable Consumption and Production. This work will no doubt be well understood by people in the audience today. At this point I want to focus on what regulatory bodies can do to actively engage with and support the work in these and related areas.

The Sustainable Use of Natural Resources Thematic Strategy has, as its objective, the reduction of the negative environmental impacts generated by the use of natural resources by decoupling resources from economic growth. This is not as easy as it sounds. There is ample evidence to suggest that improved resource use efficiency reduces prices for products and in turn increases consumption.

Regulatory agencies are in a good position to support and advise industry in a transition to improved resource use by reducing the impacts from resource exploration and extraction. Furthermore we have an extensive national footprint for data collection and analysis. We can work with other national and international agencies to provide national level data to support the EU-wide analysis to contribute to the global understanding of how we balance the competing demands for global resources with those of the environment, the economy and society in general. Finally, regulatory bodies have an extensive scientific skills base which can be directed to support an improved understanding of the environmental costs and benefits across the range of policy instruments necessary to address the resource challenges we all face.

SEPA for example would welcome the opportunity to support the work of the UN led International Resource Panel launched in November last year as one of the key outcomes of the thematic strategy on resource use – the work of the Panel featured in one of the Commission’s Green Week sessions yesterday.

Our understanding of life cycle assessment, our data gathering skills and our ability to model and monitor the wider environment put us in a strong position to work in partnership with Government and economic development agencies in Scotland to ensure that the key sectors at the heart of the Scottish economy are at the forefront of the drive to secure the resources they need, to use these resources efficiently and develop new technological solutions for other parts of the global economy. Indeed the emerging technological challenges facing the global environment, including sustainable resource use, are an important opportunity for Scottish industry to market its technological and engineering expertise as the global environmental technology sector continues to develop into a multi multi billion euro global market place. One of the major roles of the International Resource Panel is to gather information on the use of renewable and non-renewable resources and related sustainability impacts. SEPA as an agency and in partnership with others is well placed to help deliver this in Scotland and we would welcome a concerted approach to the development of a resource plan for Scotland focusing on our key economic sectors as noted above. Our ability to manage our future resource needs has a fundamental role to play in supporting the Scottish Government’s objectives for sustainable economic growth and a wealthier, smarter and greener Scotland.

To turn briefly to Sustainable Consumption and Production...

This is a complex and potentially controversial area of work. It crystallises the inherent conflict between economic growth and its corollary - recession and the growing global pressure on resource availability and the impacts of resource use. SEPA’s work on the National Waste Strategy and in particular on waste prevention and minimisation provides an early starting point. Reducing waste is an essential issue in resource management today. It is a small step from reducing waste to addressing consumption patterns. Both involve individual consumers. Both involve education and behaviour change. An obvious example is food waste with some £800 million pounds per annum of food wasted in Scotland per annum at a time when food prices are rising and food security is coming onto the agenda. We have followed the progress of the Marakesh process on Sustainable Consumption and Production and we await with interest the EU SCP Action Plan. SEPA believes however, that the Sustainable Consumption and Production issue needs to be integrated and maintain forward momentum with existing work on resource efficiency, waste prevention and minimisation and should not become an entirely separate agenda if it is to make the progress it needs to make. We are already working with our colleagues in Scottish Government to prepare for what emerges.

The final thing I would like to say today relates solely to our role as a regulator.

Better Regulation

As Scotland’s principal environmental regulator, SEPA’s duties and legal powers are wide ranging. Our principal focus is on protecting and improving Scotland’s environment, as well as protecting human health.

Many of us here today will be well acquainted with the often complex and demanding system that is waste regulation. Many of our current legislative instruments and regulatory processes were never designed with the aims of

effective resource recovery and management in mind. Consequently they may often be viewed as actual or perceived barriers to progress. Clearly the emerging revisions to the EU Waste Framework Directive are intended to modernise our traditional prohibitive approach to waste regulation and develop a system that will facilitate and support action further up the waste hierarchy. However, SEPA believes that action on these issues is required now, both to provide immediate changes and to prepare for the challenges involved in enacting the changes that the new waste framework directive will bring.

To explore this SEPA and the Scottish Government launched a joint consultation on Better Waste Regulation in 2007. The launch of this initiative was met by a real enthusiasm amongst the industry both for the aims of this exercise and the approach taken by SEPA and the Scottish Government. Moreover, the dialogue developed through this exercise very quickly highlighted that many of the main areas of frustration in respect of current waste legislative systems were shared by both the regulator and the regulated industries. Therefore a shared agenda for change has emerged that will involve both 'quick' wins in terms of improved regulatory systems and more long term plans to challenge and amend national waste legislation. We are extremely pleased with what has been achieved to date though this process and the action plan that is due to be published shortly will provide an excellent foundation for building a modern and proportionate system of regulation that will support improved resource management. We believe that such a system of regulation, when combined with other non-regulatory approaches, will be crucial to supporting the integrated benefits of long term economic growth, social inclusion and environmental protection that are the essence of sustainable development.

Some of the things we are currently doing which will support the resource agenda include:

- further developing advice to businesses, for example through the NetRegs website;
- undertaking targeted research;
- seeking and responding to industry views on environmental regulation;
- agreeing changes to environmental legislation with the Scottish Government to deliver simpler and better approaches to the permitting process;
- developing 'end of waste' standards to facilitate the move of waste materials into the productive economy.

However, better regulation, including our Better Waste Regulation programme means more than just reducing the administrative burdens on industry. It is also about achieving high environmental standards through modern and risk-based approaches to regulation and seeking continual improvement across our policy, regulatory, advisory, science and support systems. Joint working and communication between SEPA, industry, government and other environmental organisations, is essential to putting in place legislation that works, as well as to considering alternative approaches.

Our involvement with Scottish industry and other regulators places us in a strong position to work in an integrated way, on a local and national level to address resource issues both through environmental permitting, good business advice and by supporting the development of a good evidence base for policy making.

The majority of the legislation we enforce comes from Europe. As a result, we are involved at a European level in engaging and influencing policy and legislative proposals alongside governments and stakeholders. We are a member

organisation of bodies such as Scotland Europa (our hosts for this afternoon), the Network of Heads of Environmental Protection Agencies Europe (EPA-Network) and the EU Network on Implementation and Enforcement of Environmental Law (IMPEL). These networks provide us with opportunities to engage with and influence representatives of the key institutions in Europe. They also provide opportunities to share good practice amongst the environment agencies of 34 European countries and help us contribute to current European debates.

As an agency SEPA stands ready and with the ability to contribute to Sustainable Economic Growth and the emerging global resources challenge to the benefit of our environment, our economies and our people both at home and in other parts of the world.

CONCLUSION

The Commission Action Plan on SCP-SIP is a much needed initiative, particularly within the context of its other proposals relating to waste reduction, pollution control and energy efficiency. While the Commission has been criticised for initiating narrower or weaker legislation than had been called for, this does not prevent Member States and countries like Scotland from taking further steps towards achieving truly sustainable industry. As the contributions to this report show, the appetite is already there. The transition will require support for those businesses who want to adapt. Sustainability will need to be integrated into all policy areas and this means better communication between stakeholders. Should we bring together these essential elements then we may very well meet the larger goal of a successful Scotland, forward looking and able to turn environmental problems into economic solutions.

August 2008

Annex 1: CASE STUDIES

The following industry perspectives were presented at the Scotland House event on 4 June 2008.

Hewlett Packard (HP) solutions mitigating Climate Change

Presented by Patricia Deswert, Environmental Affairs Manager, HP

HP believes addressing the growing challenge of climate change requires collaboration among governments, industries, organizations and individuals. We also believe that as the largest IT company in the world, we should lead by example. That is why HP pledged to reduce its annual energy consumption and associated Greenhouse gas emissions of its operations and products to 25 percent below 2005 levels by 2010.

ICT is responsible for 2% of CO₂ emissions, yet it can be a great enabler in reducing the CO₂ emissions of the other 98%, in particular in transport, utilities, and buildings. To explore this potential, HP and WWF embarked on a joint project in 2006 to identify ICT solutions that could reduce CO₂ emissions by 1 Billion Tonnes. The results will be published in June 2008 together with HP's energy efficient solutions portfolio. Below are some examples that highlight how ICT can really transform society the way we work, live and play and lower our environmental footprint.

- Product information: HP's Environmental Contact centre in Scotland handles an increasing amount of environmental questions from HP's European customers, in particular with regards to eco-labels, recycling, energy efficiency, and carbon footprint for PCs and printers. In response HP recently launched HP Eco Solutions that helps customers identify products and services designed with the environment in mind (<http://www.hp.com/hpinfo/globalcitizenship/environment/>).
- HALO telepresence: HP's Halo telepresence and videoconferencing solutions enable improved virtual collaboration and avoid significant impacts from international travel. This effort is expected to significantly reduce HP travel, saving around 20,000 international trips and at least 32,000 tonnes of carbon dioxide equivalent (CO₂e) per year. HP has 50 Halo rooms and will double that this year.
- Mobility of employees: HP has enabled its 50,000 employees in Europe with the technology so that they can work anywhere: at home (e.g. during traffic hours), at the customer, the office, anywhere. In Brussels we found that our offices were generally half empty as people worked at home or were at the customer site. HP moved to a new office in 2007 which is half the size, has half the parking places, reduced traffic, and increased the flexibility of our employees!
- Sustainability research: In support of our believe that ICT is a real solution to Climate Change HP opened an IT sustainability Lab in Bristol (UK) and Palo Alto (USA). The goal of this research group is to create technologies, IT infrastructure, and new business models for the low-carbon economy that save money and leave a lighter footprint on the environment.

NFUScotland

Sustainable Industry: From Production to Consumption

A farming perspective

Presented by James Withers, Chief Executive, National Farmers Union Scotland.

Context

Sustainable development is at the heart of a farmer's philosophy. Successful farming is as much about managing the land for tomorrow as making the best of today. Ultimately, sustainable development initiatives can deliver benefits to farmers and well as the environment within which they work.

However, sustainable development is now taking on new meaning. For the last 20 years, there has been a political and public debate surrounding standards of food production. This was an inevitable consequence of an era of plenty. With food supplies relatively secure, the priority for the industry and governments was not to produce more, but to produce better. Therefore, there has been a drive towards quality, in animal welfare, food quality and, particularly, environmental terms.

So, at a time when food security concerns have returned to the fore, where does that leave the sustainable development agenda? Are food production standards now a secondary concern and are we needing to return to public policies which primarily secure food supply first and protect the environment, animal welfare and food quality second?

The answer is no. However the current sustainability agenda and the Commission's action plan must adapt to a world where food supplies are increasingly volatile and insecure. It must recognise that a balance must be struck between environmental protection and food production.

Scottish agriculture: the facts

- Over three quarters of Scotland's land mass is farmed
- 80% is 'Less Favoured Area'
- 1 job in every 16 in Scotland dependant on agricultural production
- The industry contributes £1.8 billion to the economy and is the foundation of a £7.3 billion food and drinks industry.

Sustainable development in Scotland: the principles

- Turn environmental problems into environmental solutions. Waste is costly in financial and environmental terms so exploiting opportunities to turn waste into green energy (biogas/biofuel) must be top of the priority list and Scotland has developed a number of projects in these areas.
- Secure a sustainable return for environmental efforts and forge a real partnership with retailers. Environmental integrity is part of the Scottish brand and helps farmers tap into consumer demand for 'green' food. Yet, the market, dominated by major supermarkets, does not reflect the environmental costs of production and, worse still, undermines the industry by importing lower standard products, often misleadingly labelled.
- Subject environmental regulation to 'the food production test'. In a world of food security concerns, we must avoid trying to secure environmental benefits which, in turn, reduce our food production capacity.
- Strike a balance between free trade and fair trade. We must caution against pursuing trade policies which threaten to undermine production standards and set back the drive towards sustainable development.

Scottish Enterprise

Food industry as a case study

Presented by Liz Bogie, Head of Equity, Scottish Enterprise.

Sustainable economic growth is at the heart of the new Scottish Government Economic Strategy. The Strategy and Scottish Enterprise focus on a number of key industries. Sustainability drivers vary by industry and can be grouped as compliance-based; supply chain pressures; business logic; opportunity-led and enlightenment/PR.

A food case study

Robert Wiseman Dairies are working on a zero waste to landfill approach to address costs, environmental impact, image and continuous improvement. They have distribution and production sites across the UK and process some 8 million litres of milk a week in Scotland and over 40 million litres across the UK. They are rolling out the zero waste approach through 2008 and have significantly increased recycling e.g. Bellshill facility from 17% recycling in first 6 months 2007 to 85% by Christmas 2008. Difficult wastes include, hairnets, earplugs, food waste from staff facilities. Waste is now seen as a resource with a new production and distribution site starting production at over 90% recycling.

Scotland in relation to EU policy

Scottish Enterprise believes that it is important to recognise that the strength of the various sustainability drivers vary by industry and so flexibility is an important aspect in EU policy and legislation. In addition, EU policy and regulation should:

- drive early action to reduce emissions thus addressing climate change and supporting economic growth as highlighted in the Stern Review "The Economics of Climate Change";
- support the development of an effective carbon price. While market forces will drive big changes they will not be sufficient in themselves as outlined in the CBI report "Climate change: Everyone's business" ;
- increase innovation and exploitation of low carbon technologies and solutions with public sector procurement playing an important demand role;
- facilitate the delivery of planning and regulatory systems that support the timely and efficient delivery of low carbon solutions by business;
- increase the focus on resource efficiency, especially in terms of energy, to address climate change and increase economic competitiveness.

Scottish & Southern Energy

Case study - Better plan

Presented by David Densley, Head of European Affairs, Scottish & Southern Energy plc

Scottish & Southern Energy (SSE) is an integrated Energy Company involved in generation, distribution and supply of electricity including renewable electricity as well as gas distribution and supply.

In terms of sustainable production and consumption, one of the key ways SSE can have an impact is through initiatives to reduce primary demand for energy.

To this end SSE has recently launched a new consumer product – better plan – which actively rewards customers for improving energy efficiency. Through this

scheme SSE offers customers access to energy saving advice and equipment and a £15 reward for a 10% reduction in energy use in any one year. Other benefits of better plan include cash rewards for buying energy efficient (A-rated) appliances, replacing old inefficient boilers and improving home insulation levels.

SSE's community benefit scheme associated with our 100MW wind farm development at Hadyard Hill successfully delivered demand reduction within a community of 750 households. A £300,000 fund was set up to provide energy efficiency improvements that resulted in an average improvement in household efficiency of 17% and average fuel bill savings of £150 per household.

SSE is currently conducting a large trial to test the impact of a variety of measures to encourage customers to reduce energy consumption through a real change in behaviour. The trial involves 28,000 customers and the measures included in the experiment are smart metering, real time displays, time of use tariffs, incentives to reduce consumption, energy saving advice and additional information on bills.

More info:

<http://www.hydro.co.uk/ForYourHome/EnergyProducts/betterplan.aspx>

Scotch Whisky Association Whisky – the sustainable industry

Presented by Morag Garden, Environment Manager, Scotch Whisky Association.

With a history stretching back over 500 years, Scotch Whisky is the original sustainable industry – economically, socially and environmentally. It is Scotland's leading indigenous industry supporting over 40,000 jobs and generating over £2.8bn exports a year, representing 25% of all UK food and drink exports. Growing international demand boosted exports by 14% in value in 2007. Over 100 Malt and Grain distilleries are in operation, the largest concentration of distilleries in the world. In addition, the sector also has over 40 warehouse, bottling and packaging sites, several dark grain plants for animal feed production, three cooperages and three maltings in its ownership.

A Sustainable Industry

Scotch Whisky is a natural product made only from cereals, water and yeast. Oak casks are required for maturation, glass and other packaging materials for the final products. Protecting the environment from which the raw materials are derived and promoting long-term sustainability are top industry priorities. Examples of good practice include:

- Diageo has invested around £100m to increase whisky production. This includes construction of a new Malt distillery at Roseisle in Speyside, at which distilling residues will be recycled to generate 60% of the site's total steam requirements. A new Bioenergy plant at Cameronbridge Grain distillery in Fife will fuel a new Combined Heat and Power (CHP) plant.
- North British Distillery Company are working in partnership with Edinburgh Council to supply excess energy from the distilling process to heat a local school. This will provide the equivalent of 1.5MW of energy and save around 900 tonnes of CO₂. Similar distillery schemes on Islay and in Caithness are a local swimming pool and heating residential housing.

- The Combination of Rothes plant – owned by six distillers – is investing £34m to build a CHP plant using distillery co-products as its fuel, generating up to 7.2MW of electricity, most for export to the national grid and saving over 46,000 tonnes of CO2 a year. The energy generated is roughly equivalent to providing electricity to power 9,000 homes.

Developing a Comprehensive Environmental Strategy

Distillers continue to work to minimise their environmental impacts and are developing a challenging industry-wide strategy. The aim is to set ambitious and stretching targets in areas such as Energy, Copper, Wood, Water, Packaging and Transport.

Our goal of significantly reducing reliance on fossil fuels will require a step change in our approach to energy. The industry is exploring innovative opportunities to utilise its co-products as an alternative renewable fuel. This has clear benefits to the environment and will assist Government in achieving its ambitious CO₂ reduction targets. To be successful, we will need to overcome technical, financial and regulatory barriers.

Annex 2: EVENT PROGRAMME

Sustainable Industry: From Production to Consumption A Scottish Contribution to the Sustainability Package

Scotland House, Rond Point Schuman 6

Wednesday 4th June

Seminar 4.30-6.30pm, Reception 6.30pm onwards

Background:

In June, the Commission will launch new EU proposals on sustainable industry and sustainable consumption and production. Industry has a role to play in meeting the sustainability challenge; through more efficient use of new technologies, raw materials, energy and waste and via product marketing. At this seminar the European Commission will present an overview of the sustainability package. We will learn more about how Scotland can meet the challenge at governmental level. Through case studies, we will find out how industry is already transforming environmental challenges into economic opportunities.

SEMINAR AGENDA

16.30 Introduction from the Chair

Ray Perman, Scotland Europa

16.35 Part One – an overview of policy and practice

Scottish Government – What is being done in Scotland?

John Mason, Director of Climate Change and Water Industry and Environmental Quality in the Scottish Government

European Commission – Commission policy, an overview

Martijn Quinn, Cabinet of Stavros Dimas, Environment and Industry

SEPA - A regulator's perspective

Dr Campbell Gemmill, Chief Executive, Scottish Environment Protection Agency

17.30 Case studies and questions from the floor

In between audience questions to the panel we will hear more about how sustainable industry works in practice at national level via case study examples from; Scottish & Southern Energy, the Scotch Whisky Association, NFU Scotland, Scottish Enterprise and Hewlett Packard.

Conclusions from the Chair