



## EUROPEAN RESOURCE EFFICIENCY PLATFORM

### Working Group I Circular Economy / Greening the Economy First Report to Sherpas

#### 1. Introduction

At its first meeting of 10 July 2012, Working Group I ("Circular Economy / Greening the Economy") of the European Resource Efficiency Platform identified six topics for reflection:

- Communication;
- New business models;
- Industrial symbiosis;
- Ecodesign;
- Sustainable sourcing;
- Green technology and export.

For each topic, a working paper was produced by a coordinator with the help of some members of the Working Group (WG). At the meeting of 26 September 2012, the papers were reviewed and discussed. Due to evident overlaps, a topic (Broader incentives, consumers and green public procurement) was added to this report that had up to now been discussed in WG III ("Framework conditions for investments").

***This report was prepared by the Secretariat (European Commission, DG Environment) for the Sherpa meeting of 22 November 2012 in coordination with the Chair of the Working Group. It draws on the working papers and the discussions in the Working Group sessions, and sets out a synthesis, including a first set of ideas for consideration and areas that could be further explored with the group. While it aims to reflect the ideas put forward by the Working Group members in a balanced way, it has not been formally endorsed by the WG and cannot be seen as representing the members' views.***

The draft text has boxes containing case studies and illustrations because these were considered important by the WG and in order to make the topics more concrete and easier to understand. The suggested actions concern not just the EU and its Member States, but also companies, regions and cities.

#### 2. Resource Efficiency and the Circular Economy

We have seen that many industrialized countries, in particular in the EU, have experienced strong decoupling of economic growth from local pollution without the same success, yet, at global level, perhaps because corresponding problems have been passed on to developing countries. Many companies have already realised that resource efficiency is a business model. Nevertheless, whilst major strides have been made in improving particular aspects of resource efficiency, for example

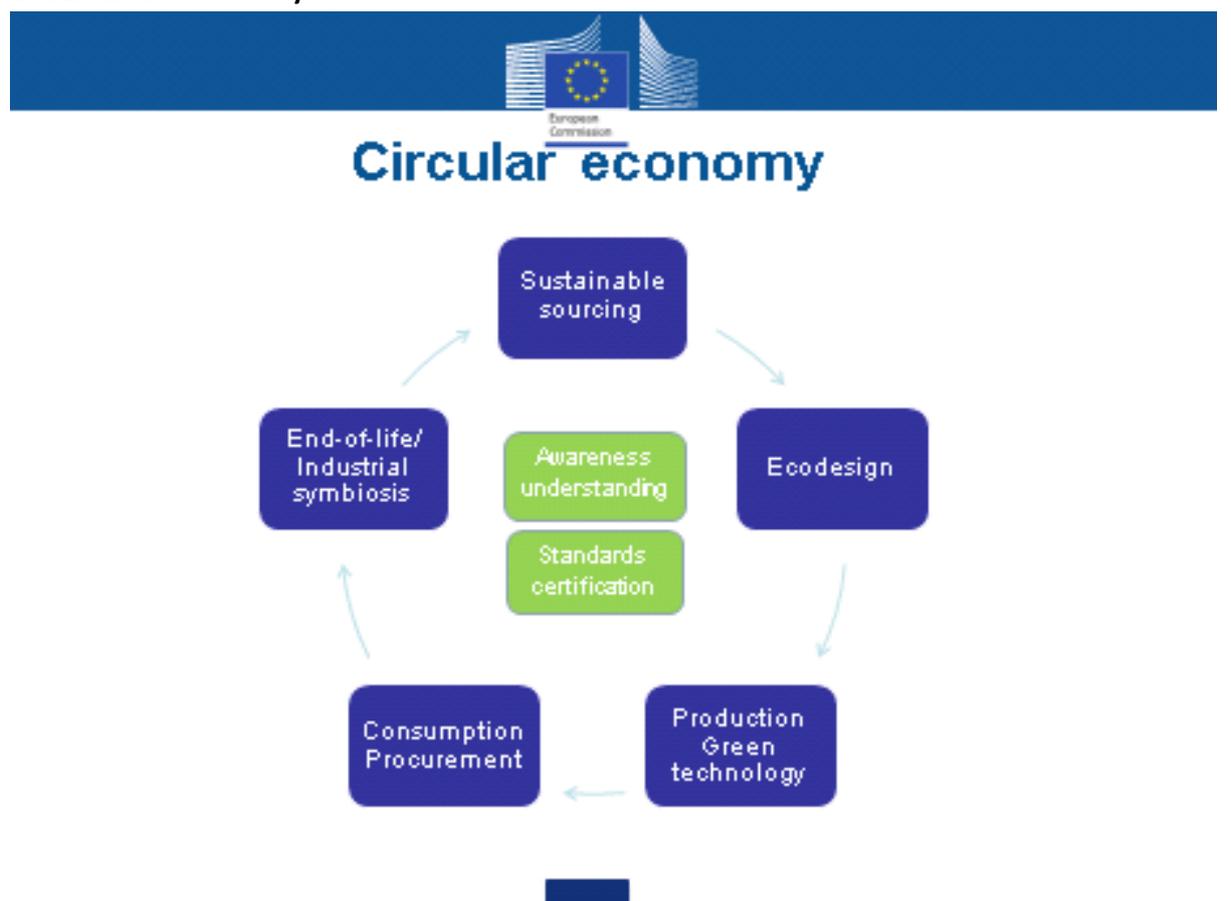
exploring new forms of energy and steps to make our energy use more efficient, less thought has been given to systemically designing out material leakage and disposal. The WG sees a need to take a **systemic approach** to resource efficiency, in the context of overall life cycle thinking, in areas where it is applicable.

### Box 1. Resource efficiency

A recent study for the European Commission suggests that every percentage point **reduction in resource use** could be worth around €23 billion to EU business and could lead to up to 100,000 to 200,000 new jobs in the EU. According to the study, we could realistically reduce the total material requirements of the EU economy by 17%, and this could boost GDP by up to 3.3% and create between 1.4 and 2.8 million jobs. (Source: Study for the European Commission)

Many companies have noticed that the current linear economic system, which is so resource inefficient, increases their exposure to risk, most notably from higher resource prices and supply disruptions. Our economies still often rely on a system where everything from production economics to contracts, from regulation to mind-sets, favours the linear (take-make-use-discard) model of production and consumption. But, already today, increasing efficiency can be profitable for companies.

### Box 2. Circular economy



The "circular economy" (take-make-use-remake) with its related new business models (e.g. leasing or sharing durable products) are not ends in themselves, nor are they alone sufficient to achieve

resource efficiency. However, if profitable, they are likely to be a common way forward towards greater resource efficiency. Nor should a focus on the circular economy conceal other crucial aspects of resource efficiency which may be useful, such as the necessity to move away from not just the "disposable" society, but also from the "accumulation" society (e.g. long lived goods: housing, cars, land sealing). After all, in the EU we use approximately 16 tonnes of materials per capita annually, of which 10 tonnes goes into stocks (infrastructure, houses, durable goods) and 6 tonnes leaves the economy as waste, of which 50% is carbon.

Most importantly **awareness and understanding** of the circular economy and new business models is lacking to varying degrees, especially in the field of consumer products. Therefore there is a need for communicating more positively and dynamically on the future resource efficient economy, e.g. by linking to the job potential of resource efficiency, and by prioritising the construction, mobility and food sectors that are relevant to all and central to resource efficiency.

Another theme necessary for many aspects of the circular economy was the need to develop methodologies and guidelines for Member States and companies for making resource efficiency visible and to integrate resource efficiency aspects into **standards and certification** in a practical and enforceable way. Such actions could remove some of the, often unintended, regulatory and institutional barriers to resource efficiency.

A series of ideas was raised regarding both these themes in a number of contexts, namely:

#### **Awareness**

- Case studies related to **job creation** was one of the priorities identified at the meeting. Considering the high rate of unemployment in the EU, linking resource efficiency with job creation is pivotal to generate support.
- **Case studies**, including best practices, analysing failures, looking at whether the legal framework is an obstacle and identifying where the market is not functioning properly.
- Inclusion of the concept of resource efficiency in **university/business school/training courses** for designers, architects, engineers and workers, as well as establishing an agency to promote knowledge transfer on resource efficiency. An exchange of experience of existing agencies in Member States should be promoted.
- **Marketing**, especially to ordinary citizens, of concepts in new business models, including the desirability of leasing and the ease of product sharing.
- Workers in **companies** should be informed through internal communications and their representatives should be directly involved in resource efficiency discussions at company level, notably through the worker's right to be consulted and informed.

#### **Standards and certification**

- Develop **methodologies and guidelines** for Member States and companies for making resource efficiency visible, valued and integrated into monitoring processes.
- Integrating resource efficiency criteria into **EU and international technical standards and norms**, certification, benchmarks and monitoring in a full value chain approach, especially in selected high priority areas.

- **Mandatory or voluntary, dynamic standards and labels** in EU for the resource efficiency performance over their life cycle of products and systems in a Best Available Technology type process.

### 3. Phases of the circular economy

#### 3.1. Sustainable Sourcing

In the first phase of a circular economy, we need to start with a concept of global stewardship and sustainable sourcing for both renewable and non-renewable materials, although what exactly "sustainable" means in particular for the latter remains to be defined. There is much work still to be done, with the following ideas discussed in the WG:

- Compiling an **inventory** of existing system/standards/benchmarks on sustainable sourcing at a global level.
- Continuing to push for **international standards** and frameworks for global sustainable sourcing.
- Ensuring that sourcing favours **secondary material use** rather than virgin extraction.
- **Including externalities in prices**, if possible using simple, basic principles applying to all sectors, while taking into account impact on access to basic goods such as water and energy. This will require research to define externalities of resource use in an objective and reliable way.
- Applying **preferential tariffs** for imported, non-EU sustainably sourced raw materials, if possible considering the WTO implications and bearing in mind ongoing work on the Transparency Directive.
- Eliminating **environmentally harmful subsidies** in line with G20 and EU2020 strategy.

#### Box 3. Environmentally harmful subsidies

**Fishing subsidies** have led to the creation of global fishing capacity twice as large as current fish stock's ability to reproduce, resulting in lost global economic benefits of US\$50bn/year (around half the value of the global seafood trade). In the EU catches have declined since 1993 at an average rate of 2% per year. The EU's self-sufficiency for fish has declined by 12% compared to 2000. Restoring 43 European fish stocks to their optimal level could yield 83,000 jobs in the EU-27 alone. *(Source: Study for the European Commission and New Economics Foundation)*

#### 3.2. Ecodesign

At the start of the production process, ecodesign to reduce environmental impact over the whole life cycle and to enable the regeneration of products, components and materials is vital. Points raised were:

- Develop **common methodology** to integrate resource efficiency criteria in ecodesign directive and labels.
- Use **Green Public Procurement** to boost ecodesign.
- Again, the requirement for case studies and the like to support **awareness and learning**.
- The need for more **research into consumer attitudes** and consumption decisions.

- **Integration of resource efficiency** in quality standards, labels and technical norms, together with methodologies and guidelines that make resource efficiency visible and valued.
- Strengthen and extend the scope of the current **Ecodesign Directive** by increasing the number of product groups included and working to increase the market share of eco-labelled products sold within key product groups.

#### Box 4. Recycling

**Aquafil** Group have a strong heritage in effective resource management, in making rigid fabrics for use in carpet tiles. For over twenty years, the company have been working on re-processing BCF (carpet yarn). As Nylon 6 is already able to be de-polymerised and re-polymerised with no loss of quality, the challenge has been accessing a reliable feedstock for this process. To this end, Aquafil established the Econyl Reclaiming Programme, an essential tool that the company is putting in place to facilitate a reverse supply chain and ensure reliable materials inputs. The programme enables clients to return their end of use products, and sources a variety of products made entirely or partially of nylon 6, such as fishing nets, rigid fabrics, clothes at the end of their life cycle, or other plastic components.

Today, 70% of the waste used as a raw material at the ECONYL® plant in Ljubljana comes from industrial waste, while 30% comes from end-of-life products. Aquafil has set up and is continuing to build a structured international waste collection network, based on partnerships with institutions, public and private consortia, and customers. Particularly important is the partnership with Carpet America Recovery Effort (CARE), a US-based consortium which reclaimed 160,000 tons of used carpet in 2009. (*Source: EMF*)

Also discussed were **broadening producer responsibility** schemes as a tool to discourage planned obsolescence, promote ecodesign, dismantlability and recyclability, thus supporting the reuse and recycling sector. To achieve this, producer responsibility schemes should provide feedback loops into the design process and create incentives for businesses to reduce hazardousness of materials and facilitate reuse and recycling. However producer responsibility should also recognize the ultimate goal of product safety, environmental protection and maximizing material usage.

#### Box 5. Repair

**iFixit** is a global community of tinkerers dedicated to helping people fix things by publishing free online repair manuals. iFixit has helped tens of millions of consumers repair their products, and kick-started thousands of repair businesses throughout the EU and US.

The manuals iFixit provides are a critical resource for technicians. Manufacturers often fail to provide customers and independent service facilities with service documentation and parts, resulting in premature end of life. Electronic waste is a significant problem—millions of tons of toxic—yet valuable—electronics are discarded each year. This presents a significant economic opportunity to increase repair and reuse.

iFixit is increasing product lifespans by equipping a global network of service technicians with the knowledge they need to effectively repair products. The company is partnering with manufacturers to tighten the resource loop, reduce warranty costs, and increase brand loyalty by empowering customers to perform basic maintenance themselves.

iFixit's parts, tools, and software sales have grown alongside its community, landing it on the Inc. 5000 fastest growing company list the last four years running. By connecting people with their things, iFixit is empowering a new generation of people to move beyond a throw-away culture where we buy, use, and dispose of products. As the company has grown, it has increased its investment in the community, and has developed a repair curriculum currently in use at over a dozen leading engineering universities. (Source: iFixit)

Further work on **producer responsibility** is required to prepare detailed policy suggestions. Well-designed producer responsibility policies can avoid problems such as the development of low quality recycling, the failure of schemes due to the involvement of too many and/or mismanaged producer responsibility organizations, and the development of free-riding behaviour patterns due to poor enforcement. Particular ideas related to:

- The need for **detailed information** about the environmental impacts of a product throughout its life-cycle.
- Introduction of more individual (vs. collective) **responsibility** for manufacturers related to product characteristics (e.g. reusability of components, recyclability, avoidance of hazardous materials, etc).
- Linking economic responsibility to the **composition** of the product rather than volume sold, so that it would reflect costs of treating and recycling and promote the use of safer and easier-to-treat materials in line with the polluter pays principle.

#### **Box 6. Remanufacturing**

From a start in the suburban garage in 1898, **Renault** has grown into a leader first in automotive engineering and now in remanufacturing. Its Choisy plant (greater Paris) is specialized in the production of standard exchange powertrain products by stripping, sorting and reconditioning. As an integral part of Renault's industrial system, the plant delivers most of its output to the after-sales division. Reconditioning involves sorting and selecting parts which meet required standards; when parts are deemed sub-standard, the materials are sorted by metals and are directed to the appropriate recycling process. In addition to the obvious environmental benefits, this allows the plant to control its waste treatment costs.

Renault works with its distributor network to obtain used subassemblies, and supplements these with used parts purchased directly from end-of-life vehicle disassemblers as well as with new parts where necessary. Renault's ability to structure and run its reverse logistics chain and access a steady stream of cores, together with its deployment of highly skilled labour, has allowed the company to grow its remanufacturing operations into a 200 million euro business. (Source: EMF)

### **3.3. Green Technology and Export**

Green technology and eco-innovation is an important means when developing a circular economy and unfolding the potential of resource efficiency. The development and large scale application of green technology in production will put the EU on track for the next phase in the circular economy. The conversion of systems for instance for waste management, water, energy and air cleaning and the increase of resource efficiency, especially in industry and buildings, are challenging projects which require substantial investments. Green technology is an important area in which resource efficient companies may gain competitive advantage.

**Regulatory frameworks** should address all relevant barriers simultaneously to accelerate large scale deployment of green technology. It is to be noted that trade is the single most important driver for Europe's economic growth. The contribution of external demand to economic growth is likely to increase in future, as 90% of global economic growth by 2015 is expected to be generated outside Europe. An active green trade liberalisation agenda is necessary for Europe to tap into these growth markets. Views were expressed that:

- **EU subsidies** should be linked to resource efficiency criteria, without creating a new level of conditionality that could hamper access for the poorest regions. In particular, no more incinerators should be built with EU funding, especially cohesion funds.
- **Investment levers** are required, e.g. a Green Investment Bank, and using levers such as savings made from reduced resource bills being used to repay loans, as well as green public procurement.
- Effective **Intellectual Property Rights protection** is also essential to fully harness the potential of European added value and should have a prominent position in the European external trade policy.
- The EU should further **open markets** through multilateral and bilateral trade negotiations. These negotiations should include comprehensive tariff dismantling, increased access to procurement markets and the recognition of European standards.

#### **Box 7. Eco business**

For eco-industries, the EU-27 has a **strong export position** vis-à-vis nearly all of the world's largest economies, with about a third of the global market. This is good news as the global market for eco-industries is estimated at roughly 1.15 trillion Euros a year and may broadly double to 2 trillion Euros a year by 2020.

**Multiplier effects** for green investment are as good as those for most other forms of investment. The short-term multiplier effects (the ratio of the boost to GDP to the size of spending on the measures) from green investment ranged from around 0.6 to 1.1 at national level, and up to 1.5 at European level. However, green economy measures also have long lasting positive environmental effects.

The **global business opportunities** dependent on biodiversity and the ecosystem services it underpins, could have a value of between \$800-2,300 billion per year. (*Source: Study for the European Commission, WBCSD*)

**Developing and emerging countries** account for 70-85% of potential global resource productivity improvements. European technologies can deliver this global leap if resource efficiency policy is also regarded as export policy. This means that our ability to export must be guaranteed by increasingly open markets. (*Source: McKinsey's Resource Revolution*)

### **3.4. Consuming/using and Green Public Procurement**

Today's consumption patterns are largely unsustainable at all levels of society including household consumption. One factor in the functioning of the circular economy is that consumers would often benefit from more **information on the resource efficiency** of a product before they buy it. Consumers and indeed businesses are also often locked in to habits or insist on well-

known products. Having developed a habit, they are often not receptive to, or are not searching for information about alternatives. Further consideration of several ideas is required:

- The need for more **research** into consumer attitudes and behaviour.
- Both **financial and non-financial incentives** for environmentally more efficient products and services, including the consideration of 'end-of-life' resource efficiency (e.g. interest free loans; tax exemptions on repair; energy performance contracting; free public transport for tourists, pay-as-you-save schemes to reduce upfront costs).
- Extending the length of current **warranties** on products to incentivise manufacturing of products of higher quality and with longer life-times.
- **Consumer communication**: e.g. wastage savings presented in a tangible way – "price per unit" – where it makes sense. Clear product recycling labels and product labelling on resource efficiency using a life cycle approach should be harmonised and information campaigns provided to understand their meaning and prove their integrity. All of which should also help to prevent "greenwashing".
- Introduce a **"Green Purchaser Network"** for European companies, based on experiences in other countries (e.g. Nordic Countries).
- Introduce **life-cycle cost labelling** of consumer products.
- Since information is a key lever, an EU level **product passport** that would clarify which resources an end-consumer-product contains, how it could be repaired, dismantled, recycled and re-used, and what its environmental impact is. Tagging or labelling could be a first step to a fully-fledged product passport. It could initially be voluntarily introduced on a business to business level, and then used for public procurement before becoming a requirement for whole industries. Data acquired by product passports could be stored in a European Resource Database to enable easier recycling and re-use.
- Labelled **quality criteria** for re-used products, as well as warranties for repaired and upgraded products to increase awareness and build trust.

An area where further work is required is on **leasing** rather than buying a product. In a leasing economy, the producer focuses on rendering services instead of supplying goods and they have the economic interest to make their products more durable and easier to reuse and recycle. For many durable products, leasing has the advantage of giving companies more control over second hand markets. The Waste Framework Directive could include leasing targets. Additionally, leasing was identified as a market failure that needed to be addressed in Europe.

#### **Box 8. Leasing**

In the 1920s, **Michelin** pioneered leasing tyres under a pay-per-kilometre programme. As of 2011, Michelin Fleet Solutions had 290,000 vehicles under contract in 23 countries, offering tyre management (upgrades, maintenance and replacement) to optimise the performance of large truck fleets. In Europe, 50% of large truck fleets externalise their tyre management. With this new business model, the company has ventured into selling kilometres - instead of selling tyres. This decision moves the strongly product-driven firm into the new world of services and solutions.

By maintaining control over the tyres throughout their usage period, Michelin is able to collect them at end of the leases and extend their technical life (for instance by retreading) as well as to ensure proper reintegration into the material cascade at end of life. *(Source: EMF)*

Consumer research suggests that consumers are more likely to act when others lead by setting good examples. In itself **Green Public Procurement (GPP)** has great potential to drive a green transition. In this context, further work on GPP is needed, tailored so as not to penalise SMEs:

- There could be **mandatory targets** and the introduction of life cycle criteria;
- **Voluntary targets** for both private and public entities could be considered.
- Companies, such as those represented on EREP, might **voluntarily adopt GPP criteria** for their own purchasing was also supported provided that the GPP criteria are practical and broadly accepted at EU level.
- Also **EU funds** (regional, agriculture, cohesion, etc.) could promote green standards.

### 3.5. Optimizing material cycles and promoting industrial symbiosis

Moving from a linear towards a circular economy requires **closing the loop of industrial processes** and preventing the waste of valuable resources. Industrial symbiosis looks at the business opportunities derived from a more efficient use of resources by promoting linkages between industrial sectors and units, so that unused resources (generally labelled as waste) become raw materials for other processes or activities. Industrial symbiosis is thus a systemic view that looks at optimizing the material and energy flows of the industrial system as a whole. Industrial symbiosis comprises networks of companies operating in different sectors of activity that engage in mutually beneficial transactions of residues and by-products to find innovative ways to source inputs and optimize the value of the residues of their processes.

Promoting industrial symbiosis appears a **cost-effective** way to improve efficiency in the use of resources. Industrial symbiosis could not only contribute to reduce the volume of waste and CO<sub>2</sub> emissions but also reduce the pressure and dependence on virgin raw materials, translating into tangible economic benefits for the organisations involved. Moreover, industrial symbiosis has a proven track record of being an accelerator of innovation and creation of green jobs.

It was proposed to **encourage industrial symbiosis**, especially by way of the following suggestions:

- **Mapping material flows** focusing on 'waste' that could be a resource;
- Creation of **regional-national network coordination/facilitation nodes** that promote the identification and realization of industrial symbiosis opportunities;
- Creation of **end-of-waste** regulation and protocols for a number of material groups that ensure the traceability and security in the handling and use of by-products to avoid any potential risk to the humans or ecosystems.
- Including an **assessment of industrial symbiosis potential** in permitting for industrial facilities and land use and planning;
- Supporting **training** involving business and universities, as well as knowledge transfer to standardise the knowledge base.

Current market structures generally have weak incentives for collective management of resources; hence indirect support for industrial symbiosis is also required. **Scaling up industrial symbiosis networks** is something concrete that can be done in the short term. It would require a combination of indirect regulatory, institutional and technical measures and especially changes in waste management regulatory requirements.

Although progress has been made in the EU in terms of **waste management**, significant differences persists between countries and little tangible and measurable progress has occurred in terms of waste prevention and waste re-use. In this area, the WG showed support for:

- The introduction of **landfill and incineration taxes or bans** (especially of recyclable and bio-degradable waste) that are properly enforced.
- The general **stimulation of efficient resource use**, non-toxic material cycles and improvements of waste reduction without compromising safety, environment and health.
- Proper setting and monitoring of waste policy should rely on **robust and coherent waste statistics** throughout the EU, which is often not the case.
- Better **waste management**, together with proper application of producer responsibility schemes, improved ecodesign, longer product warranties (e.g. 10 years), clear incentives at citizen level (e.g. pay-as-you-throw schemes) and more ambitious recycling targets and the introduction of reuse targets would help incentivise and make profitable new business models in the circular economy.
- The introduction of **leasing targets** as a way to minimise waste was also supported by some members.

Although the share of recycled waste in Europe has increased, there still lie great unharnessed potentials in promoting recycling of specific waste streams through the use of a range of different policy instruments and initiatives, including regulation, target setting, economic instruments, quota systems as well as the development of demonstration projects. A concrete example could be recycling of used tyres (see box below), which can be facilitated through policy intervention, e.g. in the form of an EU quota system targeted towards gradually redirecting used tyres from incineration to recycling, in line with the waste hierarchy.

#### **Box 9. Recycling of used tyres**

**The Danish model:** New technologies developed in the 1990s make it possible to convert used tyres into rubber powder or granulate which can be used in new products such as artificial turf for tennis and football courts, soft surfaces for playgrounds, etc. The latest technology allows for the use of rubber powder in new tyres as a substitute for natural rubber.

The Danish Statutory Order provides economic incentives for recycling of tyres based on the polluter pays principle. The producer or the importer pays between €1 and €30 per new tyre. This fee is used as a subsidy for the collection of tyres. The subsidy for scrap tyres is 0.2 EUR/kg, which is paid when the tyre is delivered to a recycling facility. The companies dealing with the collection and recycling of tyres need to get an authorization to do so.

**The EU potential:** The global amount of tyres ready for scrapping every year is estimated to 13.5 million tonnes. At EU-level the figure is approx. 2.6 million tonnes a year (2009 figure).

Landfilling of tyres was banned in the EU in 2006.

Today scrapped tyres are either incinerated or recycled in the EU. Due to new technologies and collection schemes the amount of recycled tyres has grown drastically in Denmark and the same could be true for the EU if the right incentives for recycling were developed at EU-level.

In addition, the need to have the right network of organisations in a country that are capable of being able to repair and/or upgrade products was also highlighted. Reuse and repair markets should be incentivised as a way to create jobs<sup>1</sup>, especially for long-term unemployed or the socially disadvantaged. Financial incentives should be used to promote these activities rather than incineration plants. These create fewer jobs than reuse and recycling and are less well paid<sup>2</sup>.

**Box 9. Industrial symbiosis and innovation: improving resource efficiency and businesses' triple bottom line**

Copper chromium arsenic (CCA) treatment of timber was developed in the 1950s to preserve timbers that needed to be highly resistant to insect and fungal attack, such as telegraph poles, motorway fencing, timber decking and cooling towers. At the end of its life, this CCA treated material was sent to landfill. Following changes to the regulations, this type of timber was classified as being a hazardous waste because of the high levels of residual arsenic and chromium it contained.

**Hamon UK**, one of the country's leading dismantlers and refurbishers of cooling towers, was faced with the difficult and costly task of what to do with the high volumes of CCA treated timber it was extracting from its various contracts. The regional coordination team of the UK National Industrial Symbiosis Programme (NISP) facilitated the linkage between Hamon UK and Native Island Ltd and their technical partners CSG Lanstar, who had developed a chemical remediation technology to detoxify CCA treated timber, rendering it safe and suitable for non-hazardous landfill.

The technology developed by CSG Lanstar, meets all Environment Agency requirements, and is

<sup>1</sup> Unido and Microsoft (2009) *Reuse and Recycle: Growing Green Business*  
[http://www.unido.org/fileadmin/user\\_media/Services/PSD/ICT/0\\_Green\\_busines.PDF](http://www.unido.org/fileadmin/user_media/Services/PSD/ICT/0_Green_busines.PDF) - Computer recycling created 296 jobs per every 10,000 tonnes of IT disposed per year.

Fitzpatrick, C, O'Connell, M, et al (2011) *Towards a new National Waste Policy – Discussion document*  
[http://www.reevaluate.ie/wp-content/uploads/Towards\\_a\\_new\\_national\\_waste\\_policy\\_30\\_Sept.pdf](http://www.reevaluate.ie/wp-content/uploads/Towards_a_new_national_waste_policy_30_Sept.pdf) - Business to business IT reuse generated 10 times more jobs than the equivalent tonne of recycled materials

<sup>2</sup> EEA (2011) *Earning, jobs and innovation: the role of recycling in the green economy*  
<http://www.eea.europa.eu/publications/earnings-jobs-and-innovation-the>

both more environmentally appropriate and cheaper than hazardous incineration, the only currently commercial alternative available.

Native Island's contractors are able to reprocess CCA treated timber from the project site at their facility in the North West of England. At present the cleaned timber is being sent to non-hazardous landfill, however, the process is being developed to allow recycling of the recovered wood that has the potential to generate additional sales for Hamon UK in the region of £5.5 million.

The Results include:

Hazardous waste saved: 600 tonnes

Cost savings: £300,000

Jobs created: 19

Jobs safeguarded: 20

Private investment: £250,000

*(Source: NISP)*