European Commission

Science for Environment Policy

THEMATIC ISSUE:

Global Environmental Impacts of EU Trade in Commodities

November 2013
Issue 44

Environment

Science for Environment Policy

Global Environmental Impacts of EU Trade in Commodities

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EDITORIAL

The impact of EU consumption and production on global issues: international trade's less visible environmental pressures

There is much to be said for the increased globalisation of trade markets. It has resulted in cheaper commodities, boosted economies worldwide and brought about greater efficiency in how resources are allocated through specialised production, increasing purchasing power for many countries.

However, the expansion of international trade can also have negative effects on the environment. The reasons for this are obvious. Commodities are produced and harvested in areas where the highest short-term returns on investment can be achieved, while environmental costs are frequently ignored. Many of the countries that are important net exporters of commodities have short-term economic interests coupled with weak institutional systems for preserving the environment. Consequently, production and harvesting methods generate a range of significant environmental pressures, including land and water use, polluted water, soil and air, degraded ecosystems and reduced biodiversity. The transport of traded commodities adds to these pressures, and the rise of global supply chains, with ever-growing exchanges of intermediate goods, increases the complexity of addressing trade's negative environmental effects.

When produced domestically, the environmental pressures linked to commodities are felt within our own borders. Economically well-developed societies have therefore recognised the challenges and taken regulatory steps to address the harmful effects of production methods. However, the increasing consumption of internationally traded goods in the EU and other major importing regions is driving the displacement of these pressures to other parts of the world. This Thematic Issue of Science for Environment Policy highlights research into international trade and related economic activities to help readers gain a better understanding of the environmental implications of the EU's import and consumption of commodities.

The first article in this issue, **'Environmental impacts driven by EU consumption but faced by other countries'**, presents a study which takes a close look at the displacement effects of trade, focusing on the concepts of carbon, land and water footprints. The researchers calculated these footprints for the EU as a whole, as well as for individual Member States. As an example, 42% of the EU's "blue" water footprint occurs in other regions, as the result of trade with non-EU countries. This study also draws attention to the important issue of displacement within the EU when trade takes place between Member States.

Research described in **'Affluence drives unsustainable consumption of land and sea'** adds to these findings. This study shows that the amount of land and ocean that a country uses in order to produce and trade food or other commodities increases by 35% for each doubling of national income, but this only becomes evident when international trade is taken into account. This effect is especially strong for trade in timber and seafood, with the demand for these products very dependent on income.

'Measuring environmental pressures of consumption in EU countries' presents some key findings of a recent European Environment Agency (EEA) report. It discusses suitable methods for analysing environmental pressures resulting from consumption and concludes that 'indirect pressures' arising during the production and distribution of consumed products (inside and outside the EU) are responsible for more than 75% of total pressures. There are still important improvements that need to be made to the currently available analytical tools; however, they already enable us to identify which goods are most responsible for environmental pressures. Among the report's considerations is the difficulty of assessing the full environmental pressures of goods that have been imported into Europe, which are often produced using less eco-efficient processes than those found here.

'International trade drives nearly a third of threats to species' summarises a pioneering study which explored the link between global trade and biodiversity loss. It clearly demonstrates that developing countries tend to be net exporters of commodities implicated in biodiversity loss and developed countries net importers.

Biofuels are one of the commodity groups which can be very detrimental to the environment and biodiversity, as pointed out in the article **'A global picture of Europe's demand for biofuels'**. Summarising some of the key findings of a report by the European Academies Science Advisory Council (EASAC), it highlights the fact that, already, 40% of biofuels used in EU road transport are imported and much more could be needed to reach the 10% renewable energy target set by the EU's Renewable Energy Directive[1]. The biofuels example in this article illustrates the concepts of displacement and indirect land use change particularly well.

The final article in this issue considers the specific phenomenon of illegal trade. According to the OECD report summarised in **'Tackling the illegal trade of environmentally-sensitive goods**', illicit trade in products including wildlife, timber and fish has economic as well as environmental impacts, and could be curbed through licensing schemes in countries with weak governance.

Research showcased in this Thematic Issue of Science for Environment Policy serves to illustrate the need for an integrated approach to assessing the sustainability of our current lifestyles. It indicates that, while international trade may trigger environmental pressures, production- and consumption-related policies, as well as associated regulatory and enforcement capacity, also need to be considered in parallel to any trade policy reforms.

The complexity of international trade links often makes it difficult to identify the root causes of related environmental impacts. In a globalised, densely interconnected trade system, these pressures can only be effectively dealt with through global cooperation, otherwise the effects of displacement will continue. Research plays an important role in helping us unravel these trade mechanisms and clarify the links between our consumption patterns and environmental impacts in other parts of the world.

Further research is needed to calculate the total environmental footprints of our consumption of commodities. This footprint analysis should not only cover carbon, land use and water use, but also biodiversity loss. To improve research itself, greater efforts toward data harmonisation appear crucial, which is likely to require intense institutional cooperation. Importantly, for any research to be meaningfully used for policymaking purposes, dialogue and interaction between researchers and policymakers are essential.

Finally, the EU and its Member States, as well as individual citizens must all recognise their responsibilities. While at the governmental level appropriate policy responses need to be considered, individual consumers must also reflect more on the consequences of the consumption choices they make. As the physical distance between production and consumption centres increases, it becomes easier to lose touch with the environmental impacts of our choices. We must inform ourselves and critically reflect on our consumption behaviour; after all, as long as consumer demand remains unchanged, detrimental effects of trade will persist.

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With the support of:
Linde Vertriest, ARCADIS, Belgium
Ingmar Von Homeyer, Guillermo Hernandez and Niall Lawlor, Milieu Ltd, Belgium

1. *http://ec.europa.eu/energy/renewables/index_en.htm*

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Theme(s): Land use, Climate change and energy, Sustainable consumption and production, Water

Environmental pressures driven by EU consumption but faced by other countries

Greenhouse gas (GHG) emissions, land and water use all exert pressures on the environment; however, complex international trade links can make it difficult to identify their root causes. New research has now shown to what extent consumption in the EU drives displacement of all three of these environmental pressures to other countries.

"31% of GHG emissions caused by consumption within the EU actually occurred in countries outside the EU. Through the effects of trade, 31% of land use required for consumption within the EU also occurred outside the EU."

Rising demand for the essential resources of land and water, as well as increasing emissions of CO_2, are often considered as separate issues. However, they are likely to be interconnected; actions taken to deal with one issue will also affect the others. Measuring these pressures is further complicated by international trade, which can 'displace' them, i.e. consumption of a product may occur in one country, but the environmental pressure derived from the production that product is felt in another country.

In this study conducted under the OPEN EU project[1], researchers calculated the carbon, land (including a small amount of 'ocean footprint' from seafood consumption) and 'blue' water (ground and surface water) footprints caused by consumption in the EU. Consumed products were classified into 57 groups, which included physical goods, such as wheat, oil and fibres, as well as services, including financial and recreational services. Researchers used a multiregional input-output model (MRIO) that allowed them to examine the effects of international trade on consumption's environmental pressures.

Carbon footprint was calculated as the amount of GHG emissions, measured in terms of the impact equivalent to tons of CO_2. Land footprint was measured in 'global hectares', that is, hectares of land (and ocean) with productivity equal to the global average. Finally, blue water footprint was defined as fresh ground and surface water requirements in m3, excluding rainwater use (i.e. the natural uptake of water by plants, including crops).

The results, calculated for the year 2004, suggest that the carbon footprint of the average EU citizen for that year was 13.3 tons of CO_2 equivalent, more than twice the global average of 5.7 tons. Each EU citizen required 2.5 global hectares of land, again, more than twice the global average of 1.2. Finally, blue water use was 179 m^3 per person in the EU; this was much closer to the global average of 163 m^3.

Individually, all EU countries had a carbon footprint above the global average, except for Romania. The displacement effects of trade were evident; 31% of GHG emissions caused by consumption within the EU actually occurred in countries outside the EU.

The land footprints of EU countries were all at least 35% higher than the global average, except for Malta, which was only just above the global average. Through the effects of trade, 31% of land use required for consumption within the EU actually occurred outside the EU.

Footprints varied widely between EU Member States, with the greatest differences seen amongst water footprints, which ranged from 438 m^3 per person in Spain, to 39 m^3 per person in Poland. Most countries in fact had water footprints lower than the global average of 163 m^3, however, Mediterranean countries, which rely on irrigation for agriculture, had especially large footprints. In total, 42% of water footprint of the EU was the result of trade with external countries.

The model indicates that the UK displaced the most carbon-, land- and water-related pressures to other EU countries through trade, by importing products which require land, water or CO_2 emissions in the country of production. Also within the EU, Poland was the largest net exporter of embodied GHGs to other Member States. Spain and France were, respectively, the largest net exporters of embodied blue water and embodied land.

The study also identified displacement effects for individual product groups traded between EU countries. Trade between Member States in livestock, wood products, chemical and plastic products, fruit, vegetable and nuts, cereal grains and automotive products cause the biggest displacements of environmental pressures within the EU.

Source: Steen-Olsen, K., Weinzettel, J, Cranston, G., *et al.* (2012). Carbon, Land, and Water Footprint Accounts for the European Union: Consumption, Production, and Displacements through International Trade. *Environmental Science & Technology.* 46: 10883-10891. DOI: 10.1021/es301949t.

1. *One Planet Economy Network (OPEN: EU) was supported by the European Commission under the Seventh Framework Programme for Research. See: www.oneplaneteconomynetwork.orge*

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Theme(s): Land use, Resource efficiency, Sustainable development and policy assessment

Affluence drives unsustainable use of land and sea

The amount of land and ocean that a country uses in order to produce and trade food or other commodities increases by over a third for each doubling of income, research shows. Thus, as nations become richer, and lifestyles become more affluent, pressure on natural resources increases.

"The industrialised economies of Europe, Japan and South Korea required the largest amount of foreign land to sustain their consumption."

Global demand for natural resources is rising at an unprecedented rate, putting pressure on finite resources, ecosystems and biodiversity. To understand global patterns of consumption, the impacts of international trade must be carefully examined, since countries may 'displace' land and resource use through increased imports, i.e. they use land in other countries to help meet their own demand for food and materials.

In this study, partly conducted under the EU-funded OPEN: EU project[1], researchers modelled the use of land and oceans in 2004, tracing their consumption through international supply chains. UN databases were used to access information on the land use and production of agricultural and forestry products. Use of oceans was based on a global average of how much 'biomass' (e.g. weight of fish) a hectare of ocean could produce and human demand for fish biomass. The use of these primary products in other industries, such as food or furniture production, as well as trade between countries, was also considered.

The results suggest that the amount of land and ocean used by the EU for these purposes, its land and ocean 'footprint', was 2.5 hectares per person. This is compared to a global average of 1.2 hectares. This also far exceeds the estimated 'biocapacity' of Europe, that is, its ability to produce commodities, such as food and forestry products, within its own borders, which was estimated to be 1.8 hectares per person.

Land and ocean use for each country rose with increasing income, growing by 35% for each doubling of income, but this only became evident when international trade was taken into account. The total global footprint which was 'displaced' by trade amounted to 1.8 billion hectares of land and sea. Even smaller countries, but with higher average incomes, imported relatively more resources, while the industrialised economies of Europe, Japan and South Korea required the largest amount of foreign land to sustain their consumption.

The researchers conclude that the use of all natural products increases with affluence, and they found that this effect was especially strong for forestry and seafood, with the demand for these products very dependent on income.

The researchers also highlight the importance of displacement of land and ocean use. In other words, consumption by individuals in one country often takes up land or ocean use in another, as a result of international trade. This is particularly important for international policymaking, because high income countries may need to take some responsibility for the loss of biodiversity and natural resources in low income countries.

Looking to the future, the results indicate that if consumption continues to follow the same patterns, the global land and ocean footprint will increase by 70% by 2050, compared to 2004. This is a major sustainability challenge caused by a combination of population growth and increasing affluence.

The researchers suggest that 'sustainable intensification' may be needed to increase productivity to meet the rising demand. However, the researchers note that, for the sake of global biodiversity, our land and ocean footprints must stop growing, and may even need to decrease for some more affluent countries.

A version of this article first appeared in Issue 324 of Science for Environment Policy's News Alert.

Source: Weinzettel, J., Hertwich, E. G., Peters, G. P. (2013). Affluence drives the global displacement of land use. *Global Environmental Change.* DOI: 10.1016/j.gloenvcha.2012.12.010.

1. *One Planet Economy Network (OPEN: EU) was supported by the European Commission under the Seventh Framework Programme. See: www.oneplaneteconomynetwork.org*

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Theme(s): Sustainable consumption and production, Sustainable development and policy assessment

Measuring environmental pressures of consumption in EU countries

A tool for analysing and comparing environmental pressures from production and consumption in Europe is presented in a recent report. Its results suggest that the consumed products that exert the most pressure on the environment include construction goods and food products. The report also highlights the difficulty of assessing the true environmental impact of imported goods, which are often produced using less eco-efficient processes than those found in Europe.

"The environmental pressures caused by goods imported from developing countries are often significantly underestimated, as they are typically produced using less eco-efficient processes than those in Europe."

The report, from the European Environment Agency (EEA), describes the tool in detail and illustrates how this kind of analysis can help policymakers engage with those parts of the economy that lead to highest global environmental pressures.

The tool combines two perspectives: production and consumption. The production perspective considers *direct* environmental pressures caused by European industries and services, for example, resource extraction by the mining and quarrying sector or fuel combustion in the transport services sector. The consumption perspective considers direct pressures that occur during the final use of a product, as well as *indirect* or embodied pressures accumulated during the product's global production and distribution, such as the materials required to make a product or emissions from lorries used to transport goods.

According to the study, these indirect or embodied pressures are responsible for over three-quarters of the total pressures caused by European consumption and are therefore crucial to the design of sustainable consumption and production (SCP) policies.

The report's authors collected economic and environmental data for the years 1995, 2000 and 2005 (from Eurostat and national statistics offices) in the form of 'Environmentally Extended Input-Output Tables' (EE-IOTs). EE-IOTs illustrate relationships between economic sectors (such as agriculture and energy production), environmental pressures and economic output, and allow 'hotspots' of environmental pressure to be identified.

Nine EU Member States with suitable EE-IOTs were included: Austria, the Czech Republic, Denmark, France, Germany, Italy, the Netherlands, Portugal and Sweden. The researchers focused on four types of environmental pressure: raw-material use, greenhouse-gas (GHG) emissions, acidifying air emissions, and air pollutants that lead to harmful ground-level ozone.

Of the 59 product groups analysed, four were disproportionately pressure-intensive. These were: construction, i.e. buildings and infrastructures; food products; agricultural, forestry and fishing products; and electricity, gas and water services. Despite only accounting for about 17% of consumption expenditure, they accounted for around 50% of acidifying emissions and nearly 40% of ground ozone precursors, for example, caused by consumption in the nine countries.

According to the authors, to significantly decouple consumption of such goods from environmental pressures, measures to encourage technological improvements, such as investments in innovation or increases in the price of materials, should be combined with behavioural change-oriented measures, such as information campaigns and economic incentives for consumers to redirect spending towards less pressure-intensive products.

One major difficulty with the method presented in this report lies in calculating the environmental pressures caused by production of goods imported from other countries. When using single region national EE-IOTs, as in this report, it is normally assumed that imports have the same environmental pressures as the same goods produced within the importing country. The environmental pressures caused by goods imported from developing countries are often significantly underestimated using this assumption, as they are typically produced using less eco-efficient processes than those in Europe.

The report briefly discusses methods for improving estimates of environmental pressures embodied in imports. The most accurate methods use so-called 'multi-regional input-output tables' that connect national EE-IOTs with one another, including all trade flows of goods and services. A number of such models have been developed in the EU through Commission-funded projects.

Source: European Environment Agency (EEA) (2013). *Environmental pressures from European consumption and production: A study in integrated environmental and economic analysis.* Copenhagen: EEA. DOI: 10.2800/70634. This report is free to view at: www.eea.europa.eu/publications/environmental-pressures-from-european-consumption

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Theme(s): Biodiversity, Sustainable development and policy assessment

International trade drives nearly a third of threats to species

A pioneering study has estimated that 30% of threats to species are driven by international trade. The researchers identified the products and supply chains which lead to biodiversity loss, and suggest that further loss can be reduced through regulation, supply chain certification and consumer labelling.

"Developed countries tend to be net importers of commodities implicated in biodiversity loss, perhaps the result of environmental policy that protects domestic species, causing these industries to locate elsewhere."

The world's biodiversity has declined at rates of 100 to 1000 times that of pre-human levels. Historically, this has been caused by local demands for food, space and fuel, but in today's globalised economy, international trade in products has caused habitat degradation and biodiversity loss in areas long distances from the place of consumption. Coffee-growing in Mexico, palm oil plantations in Malaysia and beef production in Brazil are just a few examples of industries with products that are in global demand and which have been linked to biodiversity loss.

The study provides a comprehensive examination of the role of international trade in biodiversity loss, considering whole supply chains. It linked 7000 threatened animal species on the International Union for the Conservation of Nature's Red List[1], to more than 15,000 commodities produced in 187 countries. For example, the *Ateles geoffroyi* (spider monkey) is endangered and threatened by habitat loss linked to coffee and cocoa plantations in Mexico and Central America that produce these commodities for the USA and the EU, amongst others.

The study demonstrates that developing countries tend to be net exporters of commodities implicated in biodiversity loss, and that Indonesia, Madagascar and Papua New Guinea have suffered the most damage, in terms of affected Red List species.

Developed countries tend to be net importers of commodities implicated in biodiversity loss, perhaps the result of environmental policy that protects domestic species, causing these industries to locate elsewhere. The USA, the EU and Japan are the main final destinations for these commodities.

Agriculture is a major cause of biodiversity loss. For example, 139 species are affected in Malaysia, which exports the agricultural products palm oil, rubber and cocoa. Fishing and forestry also cause biodiversity loss, both directly, through excessive and illegal use of resources, and indirectly, by harvesting rare species and depleting habitat.

Pollution caused by trade is another problem. Pollution is responsible for 304 threats to species in China, for example. The majority of species on the Red List are vulnerable to several threats, for example, the round whipray *(Himantura pastinacoides)* is threatened in Indonesia by chemical pollution and loss of mangrove habitat from shrimp farming, logging and coastal development.

The study provides clear evidence that global trade and economic activity are driving local threats to numerous species. Policy must be designed from a global perspective, taking into account local producers, traders at various steps of the supply chains and consumers around the world, it suggests. By identifying the impact of certain commodities, policy can reduce the volume of trade in products that harm biodiversity. Potential policies could include labelling products with biodiversity footprints to raise awareness, and an expansion of the UN Convention on International trade in Endangered Species[2] (CITES) so that it not only restricts trade in endangered species, but also trade in commodities whose production leads to threats to these species.

A version of this article first appeared in Issue 299 of Science for Environment Policy's News Alert.

Source: Lenzen, M., D. Moran,D., K. Kanemoto, K. *et al.* (2012) International trade drives biodiversity threats in developing nations. *Nature.* 486:109–112 Doi:10.1038/nature11145.

1. *See: www.iucnredlist.org*
2. *See: www.cites.org*

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Theme(s): Agriculture, Biodiversity, Climate change and energy

A global picture of Europe's demand for biofuels

A recent report calls for improved protection of biodiversity in the production of biofuels. It highlights Europe's current dependence on biofuels produced in other parts of the world, causing negative environmental impacts associated with biofuel crops to be transferred to other countries.

"Around 40% of the 10 million tonnes of oil equivalent (Mtoe) of biofuels used in EU road transport is imported, largely from the USA and Brazil. Just under half of the 7 million hectares of land needed to grow biofuel crops for the EU market is currently outside the EU."

The report analyses the environmental implications of the Renewable Energy Directive's[1] target of 10% renewable energy in the transport sector by 2020. It expects most of this demand to be met by 'first generation' biofuels, which are made mainly from edible plants, such as rapeseed and wheat, although a recent European Commission proposal plans to limit food crop-based biofuels to 5% of transport fuel[2].

Concerns about the environmental effects of international trade in biofuels are raised by the report, as well as how biofuels might affect trade in food and forestry products. Around 40% of the 10 million tonnes of oil equivalent (Mtoe) of biofuels used in EU road transport is imported, largely from the USA and Brazil, and around 30 Mtoe of renewable fuel would be needed to meet the 10% target, estimates the report. Just under half of the 7 million hectares of land needed to grow biofuel crops for the EU market is currently outside the EU.

At present, more than 30% of the biomass consumed in the EU is imported biomass products, such as food, fuel and fibres. Increased demand for biofuels adds to the ecological pressures of intensive agriculture already 'exported' to other countries by Europe through these products, the report warns. For instance, while palm oil from Indonesia only provides a small amount of the EU's biodiesel, it has particularly severe consequences for tropical biodiversity.

In response to concerns about biofuels' sustainability, the Renewable Energy Directive only allows fuels to count towards the target if they meet certain criteria, for example, they must not be produced on ecologically-important land, such as protected areas for nature.

However, indirect impacts of producing biofuels are not considered in these sustainability criteria. For example, if a European country uses more of its agricultural land to grow biofuels, this may displace food production to other countries – which could in turn cause land use change in exporting nations. This can not only affect CO_2 emissions, but also biodiversity and rural society.

Biofuel certification schemes are essential in assessing compliance with the Directive's sustainability criteria, however, the report recommends defining the criteria more clearly in order to better protect biodiversity. At present, many valuable wildlife habitats, such as scrubland, can still be interpreted as suitable land for growing biofuel crops.

It also argues that the Directive's sustainability criteria should be revised to reflect a broader range of environmental impacts, particularly the effects of indirect land use change which affect imports as well as domestic EU production. Presently, where biofuel crop production causes agricultural land to be relocated, the new areas of agriculture are not covered by the existing biodiversity criteria. The report calls for studies to assess biofuel production's actual impacts of on biodiversity, arising from indirect land use change.

Source: European Academies Science Advisory Council (EASAC) (2012). *The current status of biofuels in the European Union, their environmental impacts and future prospects.* Halle: EASAC. This report is free to view at: www.easac.eu/fileadmin/PDF_s/reports_statements/Easac_12_Biofuels_Complete.pdf

1. *See: http://ec.europa.eu/energy/renewables/index_en.htm*
2. *Commission proposal COM(2012) 595 of 17 October 2012 for a Directive of the European Parliament and of the Council amending Directive 98/70/EC relating to the quality of petrol and diesel fuels and amending Directive 2009/28/EC on the promotion of the use of energy from renewable sources: http://ec.europa.eu/clima/policies/transport/fuel/docs/com_2012_595_en.pdf*

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Theme(s): Sustainable development and policy assessment

Tackling the illegal trade of environmentally-sensitive goods

Policy measures need to address the key drivers behind illegal trade in environmentally-sensitive goods such as wildlife and timber. A recent report assesses both the drivers and impacts of five major types of environmentally-damaging illicit trade. It suggests that international licensing schemes and national policy regimes with economic tools could reduce illegal trade.

"Despite restrictions on trade in environmentally-sensitive goods, large incentives exist for individuals and companies to ignore these restrictions. Indeed, the estimated global value of this illicit trade is US$30-70 billion a year."

Illegal trade in environmentally-sensitive goods can have far-reaching negative consequences for human health, the environment and the economy as a whole. Despite international and national policies to impose restrictions on trade in environmentally-sensitive goods, large incentives exist for individuals and companies to ignore these restrictions. Indeed, the estimated global value of this illicit trade is US$30-70 billion a year.

The five major types of environmentally-damaging illicit trade highlighted by the report are: illegal trade in wildlife; illegal logging and timber trade; illegal, unreported and unregulated fishing; illegal trade in regulated chemicals (particularly those that deplete ozone) and illegal transboundary disposal of hazardous waste. Three major drivers of this illegal trade are identified by the report. The first is 'cost differentials'. In this case, this is where expected profits from illegal trade are higher than when trade is carried out within the law. For example, complying with regulations on reforestation after felling trees will incur costs that can be avoided with illegal logging activities.

The second driver is demand. Even if legal trade is not any less profitable, demand may exceed the supply of legal products, thus driving illegal trade. This often occurs with timber and wildlife crime, where the significant demand for exotic pets and flowers cannot be met through the legal channels.

The report also highlights an enabling environment as the third driver, i.e. where a lack of appropriate governance, regulation and enforcement capacity makes it easier for illegal activities to take place. This can be seen in the case of higher rates of ivory poaching in some countries where corruption among local officials leads to a lack of law enforcement.

Impacts of illegal trade vary both within and across countries. They also depend on the sector. For example, illegal trade in timber and fish tend to have the largest economic impacts, whereas poaching is a major threat to biodiversity.

The report reviews methods of tracking illegal trade. It suggests that, in principle, this could be done to some extent for some products by identifying discrepancies between import and export figures taken from customs and/or licensing data (in both exporting and importing countries). However, there are presently major shortcomings of such methods. Customs data are often imprecise and greater harmonisation of data between countries as well as improved taxonomic information in the area of biodiversity, which is being addressed by the Global Taxonomy Initiative[1], appear crucial in this regard.

If used in combination with other data sources, licensing schemes could help detect and regulate illegal trading flows. The report assesses six of these licensing agreements, including the EU's Forest Law Enforcement, Governance and Trade Voluntary Partnership Agreement (VPA) license (FLEGT)[2]. The report concludes that licensing schemes may be a pre-condition for regulating trade, and calls for more systematic analysis of licensing schemes, including both their successes and failures. It also suggests those responsible for licensing systems should share more information among each other and independent verification of the issuance of licenses.

At a national level, the report suggests that alongside environmental taxes and fines, there could be economic incentives to reduce pollution, protect biodiversity and promote sustainability of natural resources.

Owing to trade's global nature, any national actions should be co-ordinated with other countries to ensure effectiveness. Furthermore, efforts must be made to improve the regulatory capacity of 'supplier' countries. Incentives for communities to protect their local resources and clear land tenure could also prove effective in reducing illegal trade.

1. *See: www.cbd.int/gti*
2. *See: http://ec.europa.eu/environment/forests/flegt.htm*

Source: Organisation for Economic Co-operation and Development (2012) *Illegal Trade in Environmentally Sensitive Goods.* OECD Trade Policy Studies. Doi: 10.1787/9789264174238-en. This report is obtainable from: www.oecd-ilibrary.org/trade/illegal-trade-in-environmentally-sensitive-goods_9789264174238-en

Further Reading

You may also be interested in reading the following publications from Science for Environment Policy.

News Alert articles

Wood from illegal harvesting in EU markets estimated

Illegal timber imports into the EU were between 8 and 18 million m^3 in 2009, representing 6-13% of total imports, new research suggests. Although figures for illegal logging are associated with high uncertainties, the authors claim that these figures provide the best available estimates for policy and decision makers.
http://ec.europa.eu/environment/integration/research/newsalert/pdf/325na5.pdf

Environmentally-harmful fungal diseases on the rise

Scientists have called for tighter biosecurity measures to reduce the growing threat to biodiversity, food security and ecosystems from fungal infections. Their study reveals that fungal disease outbreaks are on the rise around the world, and will cause further damage unless urgent steps are taken to restrict their unintentional spread through international trade and transport.
http://ec.europa.eu/environment/integration/research/newsalert/pdf/298na1.pdf

Trading practices affect measure of a country's sustainability

'Genuine Savings' (GS) is one of indicators used to assess the sustainable development of a country. A recent study highlights that GS is an incomplete indicator as it does not account for the impact of sustainable, or unsustainable, practices in trading partners.
http://ec.europa.eu/environment/integration/research/newsalert/pdf/274na3.pdf

Effects of international wood trade on forests: wealthier countries benefit

International trade in wood and wood products affects forest stocks around the world. A recent study examines the relationship between changes in forest cover and international timber trade at global level. If finds that some wealthier nations with low population density can maintain forest areas while exporting wood; but other, usually poorer, nations, are losing forests through domestic and global demand for wood.
http://ec.europa.eu/environment/integration/research/newsalert/pdf/263na2.pdf

Hidden carbon emissions from trade offsets impacts of reforestation

Countries that appear to have reduced greenhouse gas (GHG) emissions through reforestation may have simply 'displaced' the emissions to another country, by increasing their imports of food, timber and wood. A new EU study highlights the need to recognise this 'loophole' in ongoing emission targets.
http://ec.europa.eu/environment/integration/research/newsalert/pdf/248na1.pdf

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Thematic Issues

Environmental Policy Targets

This Thematic Issue reports on research into policy targets for sustainability, and associated indicators, to tie in with the launch of the EU's 7th Environmental Action Programme.
http://ec.europa.eu/environment/integration/research/newsalert/pdf/34si.pdf

Trade and Environment

International trade policy is undergoing some remarkable and swift transformations. Environmental considerations were once considered simple 'add ons', on the periphery of trade policy. But now it can be seen that the environment is gradually migrating to the heart of trade policy, as part of an integrated, cross-cutting package. This special issue of Science for Environment Policy reflects on the changing picture of trade and environment and points to its future development.
http://ec.europa.eu/environment/integration/research/newsalert/pdf/27si.pdf

To view any of these in full, please visit: *http://ec.europa.eu/science-environment-policy*, and search according to publication date.