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-Conference Papers-

Climate Change Legislation

(This "non-technical summary" has been produced by the following members of the UKELA Climate Change Working Group: Simon Stuttaford, Simone Davidson, Clyde and Co LLP, Melanie Strickland, Wragge and Co LLP, and Stephen Hockman QC.)

International agreements

In 1992 the United Nations Framework Convention on Climate Change ("UNFCCC") was signed. Over 150 nations came together by signing this international treaty to start considering what could be done to mitigate the effects of global warming and it was an important phase in fighting climate change.

As greenhouse gas ("GHG") emissions continued to increase, however, it became apparent that a binding commitment by developed countries to reduce emissions was needed to send a strong message to encourage action to combat climate change. As a result, member countries of the UNFCCC started to negotiate a protocol; an international agreement linked to the existing treaty, but standing on its own[1].

After years of negotiations, the protocol was eventually adopted at the third Conference of the Parties ("CoP") to the UNFCCC in Kyoto, Japan on 11 December 1997. This is known as the Kyoto Protocol. While the UNFCCC was voluntary and encouraged its signatories to stabilise their GHG emissions, the Kyoto Protocol commits them to do so. Very detailed rules regarding the implementation of the Protocol were adopted at the seventh CoP in Marrakesh, Morocco, in 2001 and are known as the Marrakesh Accords[2].

It was agreed that the Kyoto Protocol would only come into force when countries emitting 55% of the world's carbon dioxide ratified it. The US were the world's biggest GHG emitter at the time but then withdrew from the ratification process under the Bush administration. This seriously threatened the future of the Kyoto Protocol but the 55% trigger was finally met when Russia agreed to ratify. The Kyoto Protocol came into force on 16 February 2005. It is considered to be the most wide reaching agreement on the environment and sustainable development ever taken up.

Australia ratified the Protocol in December 2007, leaving the US as the only developed nation not to have ratified the Protocol.

The Protocol targets and mechanisms

The Protocol requires developed countries to reduce their GHG emissions below levels specified for each of them in the treaty[3]. Overall, industrialised countries are committed to cutting their GHG emissions to 5% below 1990 levels by 2008 - 2012. The EU, however, entered into a "burden -sharing" agreement under the Protocol, whereby it agreed to a collective target of 8% below 1990 levels in the period 2008 - 2012. This collective target has been distributed between the relevant member states of the EU, with the UK's target being a 12.5% reduction of greenhouse gases below 1990 levels in the period 2008-2012.

The Kyoto Protocol places a heavier burden on developed nations because those countries can more easily pay the cost of cutting emissions and historically have contributed more to the problem of climate change, by emitting larger amounts of GHGs per person, than developing nations[4].

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[1] http://unfccc.int/kyoto_protocol/items/2830.php
[2] http://unfccc.int/kyoto_protocol/items/2830.php
[3] The greenhouse gases covered by the Protocol include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride
[4] http://unfccc.int/kyoto_protocol/items/2830.php

To enable compliance with the emissions reduction targets, the Kyoto Protocol established flexible market mechanisms to allow the countries committed to meet their targets. These mechanisms are: the Clean Development Mechanism (CDM); Joint Implementation (JI); and Emissions Trading.

The CDM is a mechanism that allows the Annex I parties to the Protocol to meet their emissions reduction targets by generating credits from emissions-reducing projects in non Annex 1 countries[5]. In order to be recognised in the CDM, projects have to adhere to strict criteria to demonstrate that they create emissions savings which are additional to what might have happened anyway.

The JI mechanism works in a similar way to the CDM, but the projects are set up in other Annex 1 countries and similarly have to adhere to strict criteria. These market-based mechanisms, therefore, allow countries to earn and trade emissions credits through projects implemented either in other developed or developing countries.

Emissions trading works by allowing countries to buy and sell their agreed allowances of greenhouse gas emissions. Those countries which emit high levels of GHGs can buy unused credits from those which are allowed to emit more than they actually do.

There was much early controversy surrounding the scientific basis of the Kyoto Protocol and the link between increases in GHG emissions and climate change. However, periodically, the Intergovernmental Panel on Climate Change (IPCC) has undertaken a survey of the latest science on climate change. The Fourth Assessment Report of the IPCC, launched in 2007, effectively put an end to the controversy reporting a virtual global consensus amongst the scientific community of both the fact of climate change and a contributory link to human activity. These were endorsed by many governments and were acknowledged by the members of the G8 + 5 at the June 2007 G8 Summit[6].

The 2007, G8 Summit conclusions were also interesting as they included agreement on the future of the Kyoto Protocol commitment period, which ends in 2012, and recognition that the UNFCCC was the appropriate forum for negotiating a future climate change agreement. Importantly, the parties also agreed to participate in these negotiations at the December 2007 UNFCCC conference, held in Bali.

The future of the Kyoto Protocol

The agreement reached at Bali, in December 2007, can be viewed as a split approach. One agreed focus is that negotiations will continue until 2009 on GHG emissions reductions to follow the Kyoto Protocol period in 2012; the other major agreement is that a "Bali Roadmap" will provide a broader framework for negotiations for long-term action.

This 2 track method was designed to help parties to proceed towards a binding post-2012 commitment, whilst also appealing to those developed countries, particularly the US, Canada and Japan, who will only contemplate being bound to cut emissions if major GHG emitting developing countries, such as India and China, are included[7].

At Bali, the agreement eventually signed committed the parties to work towards "deep cuts" in GHG emissions, without agreeing to specific targets. The conference ended with an agreement to hold further negotiations until the next major conference scheduled to take place in Copenhagen in 2009.

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[5] The 'Annex I Countries' are those that have taken on emission reduction or limitation targets under the Kyoto Protocol.

[6] The G8 is an international forum where the heads of state of the eight most industrialised nations meet to discuss global issues. The G8 members are the UK, the US, Russia, Japan, Germany, France, Italy and Canada. In addition to the G8 members, five other nations representing emerging economies (China, India, Brazil, Mexico and South Africa) were invited to join the 2007 discussions.

[7] http://environment.practicallaw.com/6-378-9563

As part of the "Bali Roadmap", some of these further negotiations were held in Bangkok, in April 2008, which concluded with limited progress on what form of climate change agreement will succeed the Kyoto Protocol. The parties did, however, agree that emissions trading, the CDM and the JI will continue to be used post-2012.

Further negotiation talks are scheduled for June 2008 in Bonn, Germany and December 2008 in Poznañ, Poland.

European Union Law

EU Climate Change law covers many sectors and the following is an overview of the key legislation, instruments and measures. It is far from an exhaustive list. For each topic, a footnote has been included with the EU Commission's site where further information can be found on the subject.

The EU Emissions Trading Scheme (EU ETS)[8]

The EU takes the issue of climate change very seriously and takes an active role in international negotiations on the subject. In 1998, the EU signed up to the Kyoto Protocol to the United Nations Framework Convention on Climate Change which deals with six greenhouse gases. The Kyoto Protocol paved the way for a system of emissions trading and the EU ETS[9] began on 1st January 2005 with its goal to enable the EU to meet its commitments under the Kyoto Protocol to reduce greenhouse gas emissions.

In brief, the scheme puts a price on carbon used by businesses by the allocation and trade of allowances[10] throughout the EU. The concept is to allow the market to regulate the trading of carbon and, hence, determine the price of carbon. To date, these allowances have been handed out freely, resulting in so-called `windfall profits` for the largest electricity producers. Each Member State draws up a national allocation plan (known as a NAP) indicating the allowances that they intend to allocate to relevant installations.[11] These NAPs are subject to approval from the EU Commission which has the right to reject a plan or impose conditions to be taken prior to full approval. An overall cap is set by each Member State on the total number of allowances issued to each installation based on their emissions reduction target. At the end of each year, installations are required to ensure that they have enough allowances to account for their actual emissions. Companies can emit in excess of their allowances by purchasing on the market from other companies with excess allowances. Alternatively, they can sell any surplus allowances. Any operator failing to surrender the appropriate quantity of allowances allowed for the previous year must pay an excess emissions penalty. Sanctions are imposed directly by the Member States and these can have an effect on a company's marketability and reputation.

The scheme is currently in phase II (2008 to 2012) which was designed to coincide with the first commitment period of the Kyoto Protocol. The EU Commission is keen to see the expansion of this scheme to include a wider range of activities, such as the aviation industry and carbon capture and storage technology, but also more fundamentally, to ensure the future

[8] Further information can be found at:
http://ec.europa.eu/environment/climat/emission.htm
[9] The scheme is based on Directive 2003/87/EC, which entered into force on 25 October 2003.
[10] An allowance is the right to emit a tonne of carbon dioxide, or an amount of any other greenhouse gas with an equivalent global warming potential, during a specified period.
[11] Installations covered by the scheme (in schedule 1) include energy activities (e.g. electricity generators, combined heat and power); production and processing of ferrous metals; mineral industries.

of the scheme post-2012 whatever the outcome of negotiations on the future of the Kyoto Protocol beyond this date. In this respect, the EU Commission`s proposals[12] for change include one EU-wide cap on the number of emission allowances, an increase in the number of allowances being auctioned and harmonized rules controlling the free allocation of allowances.

Energy Efficiency[13]

In October 2006, the EU Commission adopted an Action Plan for the period 2007 to 2012 with the aim of achieving a 20% reduction in energy consumption by 2020. The Action Plan consists of a series of measures to achieve this objective.

In relation to improving energy performance, the Action Plan provides for the adoption of eco-design minimum standards to boost the energy yield of 14 groups of products (such as boilers, televisions and light fittings) and the extension to other products in the long-term. In addition, the Commission hopes to strengthen the rules on labeling, in particular by regularly updating classifications and extending these rules to other equipment.

The main legislative instrument is Directive 2006/32/EC.[14] This Directive establishes indicative targets as well as the incentives and the institutional, financial and legal frameworks needed to eliminate market barriers and imperfections which prevent efficient end use of energy.

The Directive applies to the distribution and retail sale of energy as well as measures to improve end-use energy efficiency. It focuses on the retail, sale, supply and distribution of extensive grid-based energy carriers, such as electricity and natural gas as well as other types of energy such as district heating, heating oil, coal and lignite, forestry and agricultural energy products and transport fuels.

The Commission plans to build on this Directive by introducing draft guidelines, a code of conduct and a certification procedure applicable to all sectors.

In the transport sector, the Commission plans to set a binding target to reduce polluting car emissions to achieve the minimum standard for new vehicles of 120g of CO2/km by 2012, something that has not been achieved universally to date under voluntary initiatives from the automobile industry. It also intends to address the issue of car components, such as air conditioning and tyres, in particular by issuing a European standard for rolling resistance and by promoting tyre pressure monitoring. Moreover, strengthening the rules on vehicle labeling will help to promote the most energy-efficient vehicles, as will proper awareness-raising campaigns and public authorities purchasing clean vehicles.

Renewable Energy[15]

The EU's goal is to ensure that 20% of European energy consumption comes from renewable energy sources by 2020. To date, the primary instrument to achieve the EU renewable energy targets has been Directive 2001/77/EC. This Directive sets varying targets (known as indicative targets) for EU member states to achieve a certain percentage of their electricity production from renewable energy sources by 2010. The overall target for the EU was to secure 21% of total electricity consumption in the EU from renewable energy sources by

[12] Contained within the Commission's `Proposal for a Directive amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading system of the Community`-ref : http://ec.europa.eu/environment/climat/emission/pdf/com_2008_16_en.pdf

[13] http://europa.eu/scadplus/leg/en/lvb/l27064.htm

[14] Directive 2006/32/EC of the European Parliament and of the Council of 5 April 2006 on energy end-use efficiency and energy services and repealing Council Directive 93/76/EEC.

[15] More information, contained in the EU Commission's Renewable Energy Road Map, can be found at : http://europa.eu/scadplus/leg/en/lvb/l27065.htm

2010. Latest estimates from the EU Commission suggest that, although some Member States are on track to meet their target, the majority of countries are behind schedule and the EU is only likely to manage to produce 19% of its electricity from renewable sources by 2010. The Commission has, as a result, proposed significant changes to this Directive, including an overall binding target for Member States to ensure that 20 per cent of the energy consumed in the EU is renewable energy by 2020, and binding national targets for each Member State in line with the overall target.

Biomass[16][17]

The Biofuels Directive[18] sets a target on EU Member States to ensure a certain market share of biofuels within their fuel economies. Those targets were 2 % by 2005 and 5.75% by 2010. That first target was missed and, on the basis of different projections, the Commission considers it unlikely that Member States will achieve the 5.75% target. As a result, the Directive is to be amended by setting a mandatory target of 10% for 2010 for the EU as a whole and by promoting high-quality biofuels.

A further key measure is the Fuel Quality Directive[19] which aims to introduce new environmental specifications applicable to fuels, a ban on the marketing of leaded petrol and an obligation to make sulphur-free fuels available within the EU.

EU measures on the taxation of energy products[20]

Council Directive 2003/96 sets out the framework for the taxation of EU Energy products and electricity. In brief, energy products and electricity are only taxed when they are used as motor or heating fuel, and not when they are used as raw materials or for the purposes of chemical reduction or in electrolytic and metallurgical processes.

On the basis of this principle, the Directive sets minimum rates of taxation for motor fuel, motor fuel for industrial or commercial use, heating fuel and electricity. Member States cannot set levels of taxation below the minimum rates in the Directive so ensuring a level playing field for Member States.

The overall aim is to improve the operation of the internal market by reducing distortions of competition between mineral oils and other energy products. In line with the Community's objectives and the Kyoto Protocol, it encourages more efficient use of energy so as to reduce dependence on imported energy products and limit greenhouse gas emissions. In the interests of protecting the environment, Member States are authorized to grant tax advantages to businesses that take concrete measures to reduce their emissions.

Useful links:

EU Commission, Environment-Climate Change section: http://ec.europa.eu/environment/climat/home_en.htm

[16] Biomass covers all organic plant and animal products used to produce energy (or in agriculture).
[17] Further information can be found at the Biomass Action Plan at: http://europa.eu/scadplus/leg/en/lvb/l27014.htm
[18] Directive 2003/30/EC of the European Parliament and of the Council of 8 May 2003 on the promotion of the use of biofuels or other renewable fuels for transport.

[19] Directive 98/70/EC of the European Parliament and of the Council of 13 October 1998 relating to the quality of petrol and diesel fuels and amending Council Directive 93/12/EEC.
[20] Further information can be found at: http://europa.eu/scadplus/leg/en/lvb/l27019.htm

EU Summaries of Legislation, Tackling Climate Change: http://europa.eu/scadplus/leg/en/s15012.htm

UK Legislation

Climate change law covers many sectors and the following is merely an overview of the some of the key legislation, instruments and measures. It is far from an exhaustive list.

Climate Change Levy

This is a tax on the use of energy in industry, commerce, agriculture and the public sector. The revenue raised from the levy funds an historic cut in National Insurance contributions and is used to provide additional support for energy efficiency schemes and renewable sources of energy primarily through the Carbon Trust. Overall, it is not intended to increase the tax burden on industry.

The aim is to encourage users to improve energy efficiency or use energy from renewable sources, and reduce greenhouse gas emissions. The levy was implemented by the Finance Act 2000 s 30, Schedule 6 and Schedule 7, and came into effect on 1st April 2001.

Fuels used by the domestic or transport sector are not covered by the levy. Electricity generated from new renewable energy is also exempt.

Climate Change Agreements

These are negotiated targets on energy efficiency and carbon saving which apply to certain energy intensive industries. Businesses can qualify for an 80% discount from the Climate Change Levy if they agree to meet targets agreed with DEFRA.

Climate Change Programme

In its Climate Change Programme, the UK Government pledged to reduce carbon dioxide emissions by 20% by 2010 and by 60% by 2050, measured against 1990 levels.

UK Emissions Trading Scheme

The UK emissions trading scheme ended in December 2006. It was the world's first economy-wide greenhouse gas emissions trading scheme. It continues in a reduced form only for the purpose of trading between energy intensive industries under their Climate Change Agreements.

Climate Change and Sustainable Energy Act 2006

The aim of the Climate Change and Sustainable Energy Act 2006 was to enhance the UK's contribution to tackling climate change, to relieve fuel poverty and to ensure greater security of energy supply.

The key provisions in the Act include:

- S 2 - Reporting on greenhouse gas emissions. The Government is committed to annual reporting to Parliament on the level of greenhouse gas emissions in the UK and the steps being taken to reduce that level. The first report was made to Parliament on 26 July 2007.

- S 15, 16 and the Schedule - Carbon emissions reduction obligation. This obliges gas and electricity suppliers to promote the efficient use of energy to consumers. Consumers are also to be encouraged to use electricity/heat from microgeneration and low emissions sources.

- S 4 - Microgeneration – the Government must set and meet national targets for the number of installed microgeneration systems.

- S 19 - Community energy – the Government must promote community energy projects.

- S 21 - Renewable heat – the Government must promote the use of heat from renewable sources. The definition of renewable excludes nuclear fuel.

Energy Performance Certificates (EPC's)

EPC's are required on all buildings by the Energy Performance of Buildings (Certificates and Inspections) (England and Wales) Regulations 2007, which implement aspects of the Energy Performance of Buildings Directive (Directive 2002/91/EC). By October 2008, all properties, domestic and commercial, will need to have an EPC when they are constructed, rented, bought or sold. EPC's demonstrate a building's energy efficiency on a scale of A – G and will need to be available to prospective purchasers and tenants. Public buildings must also display a display energy certificate (DEC) which, in addition to building potential, also reports an actual energy consumption.

Renewables Obligation

The Renewables Obligation is the main mechanism for supporting renewable electricity generation in the UK. It requires licensed electricity suppliers to source a specific and annually increasing percentage of the electricity they supply from renewable sources. The current level is 9.1% for 2008/09 rising to 15.4% by 2015 and continuing at that level until 2025.

This requirement is enforced through the following Orders which came into effect on 1 April 2006:

- The Renewables Obligation Order 2006
- The Renewables Obligation (Scotland) Order 2006
- The Renewables Obligation Order (Northern Ireland) 2006.

Renewable Transport Fuel Obligation (RTFO)

The RFTO, which came into force on 15 April 2008, places an obligation on fuel suppliers to ensure that a certain percentage of their aggregate fuel sales are made up of biofuels. The requirements are scaled up over time – 2.5% in 2008/09, 5% in 2010/11 and 10% by 2020. The aim is to help the UK meet its climate change objectives by using renewable fuels rather than fossil fuels.

There is much concern about biofuels in relation to food security, biodiversity, human rights and deforestation. As a result of this, the Government is currently considering an amendment to the legislation to require biofuels to be sustainably sourced.

The RTFO is enforced by the Renewable Transport Fuels Obligations Order 2007.

Carbon Reduction Commitment (CRC)

The CRC was announced in the Energy White Paper 2007. It is a compulsory emissions trading scheme covering large businesses and public sector organisations, such as universities, local authorities, banks and water companies. The scheme will begin in January 2010 with a three-year introductory phase. The aim is to encourage the organisations captured to take steps to improve energy efficiency and save money.

The CRC is designed to focus on emissions not covered by the EU ETS and climate change agreements. The Government is expected to exercise enabling powers in the Climate Change Bill to introduce the CRC by secondary legislation.

The Stern Report

Sir Nicholas Stern has highlighted the pressing economic and moral need for decisive action on climate change. To view a video clip of Stern giving a talk on the Economics of Climate Change, please follow this link:

http://www.21school.ox.ac.uk/video/200702_stern.cfm

The Climate Change Bill 2007

The Bill was introduced into the House of Lords on 14 November 2007. The expectation is that it will receive Royal assent in Spring 2009.

Targets

The Bill puts into statute ~~in~~ the UK's targets to reduce carbon dioxide through domestic and international action by at least 60 per cent by 2050 and 26-32 per cent by 2020, against a 1990 baseline.

This target will be reviewed, based on a report from the new independent Committee on Climate Change on whether it should be even stronger still, and the implications of including other greenhouse gases and emissions from international aviation and shipping, in the target.

Five-year carbon budgets, which will set binding limits on carbon dioxide emissions ensuring every year's emissions count. Three successive carbon budgets (representing 15 years) will always be in law – providing a balance between predictability and flexibility. These budgets will be backed by annual accountability and independent scrutiny.

Emission credits purchased overseas may be counted towards the UK's targets, consistent with the UK's international obligations. This ensures emission reductions can be achieved in the most cost-effective way, recognising the potential for investing in low carbon technologies abroad as well as action within the UK to reduce the UK's overall carbon footprint.

Committee on Climate Change

A Committee on Climate Change will be set up as an independent, expert body to advise the Government on the pathway to the 2050 target and to advise specifically on: the level of carbon budgets, reduction effort needed by sectors of the economy covered by trading schemes, and other sectors, and on the optimum balance between domestic action and international trading in carbon allowances.

It will take into account a range of factors including environmental, technological, economic, fiscal, social and international factors, as well as energy policy, when giving its advice.

Enabling Powers

The Bill contains enabling powers to introduce new trading schemes, such as the Carbon Reduction Committee, through secondary legislation. This increases the policy options which Government could use to stay within budgets and meet emissions targets, while maintaining the need for thorough analysis, consultation and scrutiny of proposals before a new scheme is introduced.

Reporting requirements

The Committee on Climate Change will have a specific role in reporting annually to Parliament on the UK's progress towards achieving its targets and budgets. The Government will be required to lay before Parliament a response to this annual progress report.

Every five years, the Committee's report will contain an explicit review of the UK's performance over the last budget period and the implications of this for keeping on track to meet future targets and budgets.

Adaptation to the impact of climate change

The Bill will require the Government, on a regular basis, to assess the risks to the UK from the impact of climate change and report to Parliament.

The Government will also be required to publish and regularly update a programme setting out how we will address these likely impacts, based on the principles of sustainable development to ensure that environmental, economic and social issues are all fully considered.

Other measures to reduce emissions

It is intended to use the Bill to enhance the operation of the Renewable Fuels Obligation (RTFO).

It is also intended to use the Bill to provide a power to pilot local authority incentive schemes for household waste minimisation and recycling – see the Waste Strategy for England 2007: incentives for recycling by households.

Forward Trends in Waste and Carbon Management-the Pitfalls and Opportunities Ahead for Local Authorities and Major Energy Users

Original - October 2006; Amended and updated – August 2008

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I Synopsis

The UK waste sector is responding to government and EU legislative trends by preparing to shift around 30 million tonnes of organic waste from landfill toward new resource efficient treatment technologies. Due to cheap landfill, we are around 5 years behind the rest of Europe in this trend but successive increases in landfill tax are now making non-landfill technologies more bankable.

In the energy market, the UK faces increased forward uncertainty in terms of both the cost and availability of energy due to structural shifts attendant on the replacement of extant nuclear and coal fired capacity, as the 70s generation of 2,000 megawatt stations approaches the end of its working life. As a result, there are identified potential opportunities in the market place to co-locate energy from waste power plants adjacent to large single point consumers of electricity in the engineering, food, industrial gases, logistics, and other sectors.

This paper is designed as a briefing document to explain the possible ways forward against the underpinning objectives to utilise Green Energy power generation technology skills.Landfill gas currently accounts for around 800 Mw renewable electricity or 30-35% of on line renewables.There is a need to deliver improved security of supply within an economically attractive commercial framework for large power users utilising local feedstock sourcing organic waste carbon from municipal, industrial, and commercial waste streams.This broader objective is outlined below in 3 simple dimensions …

- Technological factors
- Economic factors
- Socio-political and contractual factors

Considering each of these in turn …

II Technological Factors

In the UK Waste market each of the majors differs in their approach to this opportunity. Biffa (for example)has demonstrated a so-called 'mix and match' approach utilising a mixture of technologies of medium size (processing 50,000-100,000 tonnes per annum) comprising a blend of energy, recycling, and composting options. In this it differs from Veolia and Sita (Suez)), who prefer to build, own, and operate very large scale, thermal processing incineration plants, often in excess of 400,000 tonnes per annum.Pennon on the other hand operates in low and high end scales.

The key issues are….

- Whether smaller scale operations are more flexible and thereby subject to lower levels of risk.

- The extent to which appropriate technologies such as anaerobic digestion and gasification create lower levels of carbon dioxide emissions and reduce exposure to future CO_2 taxation under the European Union Emissions Trading Scheme (EU ETS) or similar traded pollution permit frameworks.

- Whether emissions from these newer technologies emissions levels are lower for other gases and particulates per tonne of waste processed (notably nitrous oxides –NOX- and sulphur dioxides-SOX.)

- If, as a result such technologies enjoy greater support from non-governmental organisations and the general public.

- Whether planning risk is potentially reduced.

- The extent to which smaller scale plants expand or ameliorate the "integration" risks with corresponding fuel preparation and logistics infrastructure.

Leicester City Council and Bedford are extant medium scale plants processing 50-100,000 tonnes of material annually. Biffa is about to commission a 40,000 tonne per annum gasifier/incineration process on the Isle of Wight to service a municipal contract. This process is well established in northern Germany, Denmark, and Sweden. Other potential suppliers for both these processes operate in an area where technological improvements are being achieved on an ongoing basis utilising sterilisation/gasification systems.

III Economic Factors

The opportunity comprises an all round reduction in risk of operation of such energy plants for all parties with income and earnings underpinned by the following factors:

(i) Gate fees for disposal of waste from municipal, commercial, and industrial sources. Waste operators have the logistics capacity and infrastructure to guarantee inputs from their industrial and commercial fleets which nationally comprise around 3550 vehicles carrying over 35 million tonnes of carbon based waste annually. These companies also negotiate collection contracts to local municipalities and, waste disposal contracts for a variety of municipal Waste Disposal Authorities around the UK. The latter contracts are conditioned around the current life expectancy of adjacent landfill facilities. By 2011 (April), annualised increases in landfill tax will make new technologies more bankable against the gate fee structures for landfill with tax levels of £50 plus £25 (average) gate fees at 2008 prices..

(ii) Sales of steam and electricity to industrial and commercial users are possible as CHP (combined heat and power).This in a climate of significant real price increases in Renewable Obligation Certificates (ROCs) given that the UK is at 4% from renewables when it should be nearer 8%.

(iii) Procurement of a one off tax credit available under government funding for green energy conversion programmes (see Appendix III circular from the Carbon Trust).

(iv) The granting of small generator status under EU rules which will permit the award of double ROCs (Renewable Obligation Certificates) to approved facilities.

(v) There is also the possibility of feed-in tariffs for heat above high de-minimus levels for heat after the current government consultation closes in September 08.

In ballpark terms, a 50,000 tonne capacity gasification plant will cost of the order of €60m. Such plants will be amortised over 20-30 years and energy supply contracts would ideally be developed on the basis of 5 year rolling contracts, subject to break clauses. Energy generated from such plants could be supplied into the Grid but it is more advantageous for them to operate as CHP (combined heat and power) plants – thereby improving their efficiency from around 28% to nearer 68%.The logical course is to co-locate such plants with large energy sinks in the public and private sectors.As a result each KwH of theoretical power is delivered at 70-80% efficiency rather than 20-25% appropriate to the centralised grid.

IV Socio-Political and Contractual Factors

The UK government places obligations on local government to move forward on the provision of 'green' policies. These comprise higher rates of recycling of municipal refuse, facilitating the introduction of renewable (non-fossil) carbon energy programmes, green consumption, and similar initiatives. Local authorities are also under targets to divert at least 50% of their biodegradable fraction from landfill by 2009/2010 – failure to achieve these targets will result in penalties via the operation of a Tradeable Permits regime whereby surpluses and deficits will be offset on an intra authority basis. Local authorities have the option to finance provision of such facilities via the Public Finance Initiative (PFI), Prudential borrowing, or encouragement of capacity via private sector investment on a freestanding basis.Additionally Local Government is signing up to Carbon reduction Commitment targets.

Traditionally, incineration (direct combustion) technologies arouse much public opposition around fears associated with emissions from such plants. It is for this reason that technologies being trialled are enclosed systems with no emissions other than vented steam and water vapour and lower levels of CO_2 per processed tonne of waste fuel floc or biomass. Levels of ash from the process are also substantially reduced compared to mass burn incineration (from around 30% to 3% by mass). This is due to the use of front-end material separation at point of collection. These technology options are also preferred by Greenpeace and Friends of the Earth – as is confirmed in their literature.
Contractual arrangements are as yet a 'blank page'.Following preliminary economic assessment companies needing renewable heat and power and partner waste companies could enter into contractual arrangements. Open book accounting approaches achieve a clean separation of risks balanced between the liabilities and obligations of both parties. Logically the waste operator might build, own, and operate the plant and the energy user (of electricity, steam or gas) would agree minimum consumption profiles. Other key aspects of the contractual relationship would cover:

- Contract duration,
- Force majeure,
- Escalation formulae,
- Disclosures, and
- Top-ups/de-canting into the Grid, etc.

A DEFRA/BERR working group is considering opportunities for the use of Distributed Energy and a report was produced in spring 2008. . With the publication of the Renewable Energy Consultation Government is now clearly taking a more robust approach in this area in relation to renewable energy, carbon sequestration, and the overall impact of the Strategy in

terms of carbon and global warming potential. This augurs well for policy frameworks in this area.

Suitable sites need to be identified adjacent to major energy users' premises that are capable of housing a waste/resources management facility, including an energy plant because transmission costs are otherwise prohibitive. Logically preference is for such sites to be constructed so as to permit other waste management activities (such as material separation, recycling, bulking up and baling of recoverable materials for long distance dispatch given that logistics costs are rising in real terms). Ideally they should be located adjacent to railway lines, motorways and/or navigable inland waterways.

V Other Considerations for Forward Energy Security

Large, single point energy users (of electricity, steam or gas) face forward supply uncertainties against the backdrop of a UK energy strategy. Hopefully, these will be crystallised in the debate on the Energy Bill and consultation. These uncertainties focus around the following factors:

(i) Absolute capacity of electricity supply from centralised generation units,
(ii) Trends in Traded Pollution Permits for energy,
(iii) Supply chain 'greening' and customer pressure on blue chips (particularly major 'brands'),
(iv) Carbon accounting and Corporate Social Responsibility (CSR) accounting systems,
(v) Pressures on centralised grid networks and costs of upgrade.

Dealing with each of these in turn:

(i) Absolute Capacity

For an analysis of UK electrical generation issues visit www.massbalance.org - electricity report or visit the BERR website for the latest energy stats.

(a) The capacity of the UK electrical supply is of the order of 75-80 gigawatts. Over the next 15 years the 15% of this represented by nuclear is scheduled to be withdrawn in stages. As of 2008, government has released no definite plans for replacement of this capacity (supply side capacity) other than indicate the private sector must underwrite all risks – including nuclear waste disposal).Informed estimates suggests none of this will appear and contribute until 2023 at the earliest.Commissioning problems in Finland point to further "bedding in" of the technical standards.

(b) In the immediate future there is capacity criticality relating to the LNG (liquefied natural gas) terminal evaporative gasifiers at harbours handling North African and other imports (supply side capacity).Whilst this is being addressed UK gas storage capacity is measured in days rather than weeks in mainland Europe due to the complacency of having the North Sea as a reserve.

(c) Much internationally sourced LNG is traded on the spot market and can migrate to a variety of global and European ports on the basis of bid prices if severe cold weather front systems settle during winter. This could impact on gas CHP generators operating on interruptible tariffs at critical times (security).

(d) 38% of supply profile originates from coal. Import capacity is not a constraint, however many of these 2 and 3 gigawatt complexes require renewal and rebuild as 'clean coal'/CO_2 capture systems over 2006-2020. This will be disruptive and have implications due to capacity constraints in the planning system (supply side capacity). Scheduled replacement of 'dirty' coal electrical capacity equates to 15% UK electrical supply by 2015.

(e) Global demand for next generation 'clean coal' power plants is exploding in China and India. Manufacturing, build, and commissioning capacity for such plants may become severely constrained globally creating delays in the UK. There could also be upward cost pressures on new build as a result (supply capacity and prices).

(f) Failure to convert to low CO_2 options could result in higher than expected exposure to European Union Emissions Trading Scheme certificates (EU ETS)/Kyoto targets (economics and prices).

(g) UK domestic energy demand profiles are becoming more volatile due to:

- population growth,
- increased levels of electrical equipment in homes,
- increased energy intensity of domestic appliances,
- expanding demand for domestic air conditioning systems (flattening the traditional summer trough, when maintenance is scheduled),
- internal migration of an ageing population to rural areas,
- exporting of energy intensive manufacturing activities often from regions adjacent to centralised electrical generation plants.

In consequence, the centralised distribution grid is expected to undergo refocus and change (capacity).

(h) Locally sourced waste based CHP systems eliminate distribution gird network losses(variously assessed at 10%-15%).

(i) Major energy users are often under supply chain pressure from their (retail) customers to demonstrate low or reduced carbon intensity as part of more holistic 'footprint' or life cycle analysis assessments being undertaken for CSR reporting purposes by high profile 'brands' – particularly in retail.

(j) Low carbon intensity is often becoming a surrogate for improved cost efficiency as fossil carbon prices show indications of long term real costs increases with coal at £100 per tonne and oil at $100 per barrel.

(ii) Trends in Traded Pollution Targets

Currently comprising Renewable Obligation Certificates (ROCs) and Producer Responsibility Notes for recyclate packaging (PRNs), future trends on prices is functional to the achievement of target compliance. In renewable energy the expectation is that the UK will find difficulty achieving 10% energy production by 2010 and the implied target of 20% by 2020, thus the expectation is for firming of ROC prices. This is underpinned by government agreement to 16% of all energy from renewables by 2020.

In packaging, PRN prices are conditional on meeting higher targets by increased yields from municipal waste. Currently (2008) that is occurring but at a cost to the quality of the recyclate. Much depends on DEFRA enforcement of standards and data tracking but the auguries are not good. As a result, it could be more attractive to route carbon based (organics) packaging down the energy rather than the recovery route if poor enforcement results in an excess of PRN releases which will then depress PRN prices.This is offset by emergent Global resource shortages and sharp rises in commodity prices.

Reform implicit in Phases II and III of the European Emissions Trading System (EU ETS) places greater pressure for transparency on centralised electrical producers.(now the subject of a possible Select Committee investigation)Given that the 4% renewables level is half the target the high value of ROCs is inducing large energy companies to enter the renewable energy market direct.

(iii) Supply Chain Greening

It is expected that monopsonistic retailers in food and non-food will demand ever greater transparency in establishing their 'carbon footprint' from suppliers. Thus supply chains will be under growing pressure to demonstrate reducing (fossil) carbon impacts and expanding (renewable) carbon usage in the form of offsets.

If the price/value of renewable carbon offsets/traded permits continue to harden in response to global factors, reinforced by government policy drivers, it is expected that these valuations will become more transparent in the value chain.9particularly in the food supply chain where the Courtauld and other Agreements are driving low carbon strategies).

(iv) Corporate Social Responsibility (CSR)

CSR forms a driver from the financial and stockholder markets. As the cost of fossil carbon hardens in real terms, or the value of renewable carbon offsets similarly rises in real terms over the coming decade, these bodies will demand increasing transparency on the balance sheet/profit and loss implications in terms of future liabilities.

(v) Pressures on Centalised Grid Networks

Ofgem faces significant cost pass throughs to consumers for £5-8bn of investment in extra pipe and wires and capacity. Some of that cost can be deferred or obviated by selective market led investment in distributed energy, large users, in areas of supply stress where single large users account for as much as 40% of local grid load.According to the BERR heat consultation the majority of the UK has no or little capacity to add supply inputs to an overstretched grid.

VI Conclusion

The c40 million tonnes of renewable carbon in the UK commercial, industrial, and domestic waste stream has – thus far – not been considered significant in relation to the 78 gigawatt supply capacity of the UK electricity network. This conclusion could be misleading, however, because the distributed nature of that renewable carbon means that its application in distributed, high consumption, single point locations as combined heat and power (CHP) via innovative CO_2 efficient gasification and thermal technologies could result in four significant benefits:

(a) A substantial increase in its coal equivalent thermal value via refinement as a fuel floc from mechanical treatment coupled to revision of logistics and collection systems.

(b) A further increase due to achieving 75% systems efficiency via CHP and elimination of distribution losses compared to 28% for centralised coal fired generation.

(c) The avoidance of incremental investment at far higher levels in the centralised grid to meet expanding demand in response to demographic and domestic energy intensity shifts (for instance in Cornwall and the South West) by introducing selective distributed energy supply to large, single point industrial users (consuming over 10 megawatts). These benefits apply to the gas as well as the electricity network.

(d) The opportunity to run factories 24/7 rather than be dependent on interruptible tariffs which oblige shut downs in the peak creates opportunities for improvements in return on capital employed.

Allowing for extant commercially viable recycling and composting continuing the remaining carbon based waste is unlikely to account for more than 6-7Gw of capacity however-based on 20-25 m tes annually. In short – investment in distributed waste fuelled energy systems offers better value for money and improved security of supply – for users, for government, for waste planners. Substantive effort is required to understand and map that contribution since it will vary Region by Region.

Rehabilitating the Definition of Waste: Is it Fully Recovered?

ROBERT G. LEE* & ELEN STOKES**

I. Introduction

In the words of Stephen Tromans, 'waste policy should be simple'.[21] Yet, questions surrounding the scope and implementation of the European waste regime rarely have straightforward answers. This is particularly evident in the interpretation of the Waste Framework Directive 2006/12/EC ('the Directive' hereafter).[22] The principal aim of the Directive in its original format in 1975[23] was to establish coherence amongst approaches to waste control across Member States. The need to achieve consistency continues to underpin waste policy, and the amendment and consolidation of the Directive has only confirmed the

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[21] S. Tromans, 'EC Waste Law – A Complete Mess?' (2001) 13(2) *Journal of Environmental Law* 133-156, 134.

[22] Council Dir. 2006/12/EC on Waste [2006] OJ L114/9.

[23] Council Dir. 75/442/EEC on Waste [1975] OJ L194/39.

importance of securing uniform understandings of 'waste' and waste management. Indeed, another of the key objectives of the Directive is to establish a common terminology and fix the meaning of 'waste'.[24] In Article 1, 'waste' is defined as 'any substance or object in the categories set out in Annex I which the holder discards or intends to discard'. The definition of waste is critical to the functioning of the Directive because it determines which materials fall within its remit and are to be subject to control. In many instances it will be clear what constitutes waste and what does not. However, there are a number of grey areas – particularly where a waste material is *re-used* for another purpose. The task of ascertaining the point at which waste ceases to be waste has proved extremely difficult. The boundary between waste and a secondary material of functional quality is poorly marked out.

Inevitably, this draws attention to the judicial interpretation of waste. This chapter considers a judgment recently handed down by the UK's Court of Appeal, *OSS Group* v. *Environment Agency*,[25] which reviews interpretations of waste deriving predominantly from European case law. In so doing it draws attention to the definitional problems under the Directive, exemplified by inconsistencies in the approach taken by the European Court of Justice (ECJ) to the meaning of 'waste'. This chapter argues that the judgment in *OSS Group v. Environment Agency* makes progress towards overcoming some of the practical difficulties embroiled in ECJ jurisprudence, particularly on the 'end-of-waste' question. A review of this case allows a consideration of when waste ceases to be waste and becomes a material so readily capable of re-use or other use that it should no longer be subject to waste controls. The argument is structured as follows.

Following this introduction, section II sets out the legal framework. Section III offers an exposition of case law dealing with definitional problems under the Directive. There is already an extensive body of case law in which the ECJ has ruled on when a material constitutes waste, and when it does not. Equally, the UK courts have on a number of occasions considered the meaning of 'waste', and as one might expect such cases broadly align with the EC judgments. This pattern of convergence only serves to emphasise the significance of the Court of Appeal's recent departure in *OSS Group v. Environment Agency* from the ECJ's interpretation.

Cases brought before the ECJ have been unequivocal in their finding that the courts, in interpreting of the notion of 'waste', are to have regard for the basic aims of the Directive and ensure that its effectiveness is not undermined.[26] In practice, this has had two, not unrelated, consequences. First, it has placed a premium on the protection of health and the environment, and as a consequence, there have been repeated calls from the ECJ to construe 'waste' in a broad rather than restrictive manner.[27] Second, the ECJ has given wide meaning, and in turn central status, to the notion of 'discarding' which is pivotal in the categorisation of materials as waste.

Adopting a highly inclusive definition of waste ensures that potentially hazardous materials remain tightly controlled throughout their lifecycle, which in turn reflects the protective function of the Directive. This broad brush approach, however, simultaneously serves to undermine the Directive's auxiliary aim of encouraging the re-use and recycling of waste. Re-incorporating waste into the economic cycle is recognised as an important element in resource management, and one which is consistent with the letter and spirit of the Directive.[28] Nonetheless, given the obligation to interpret the concept of waste widely, the courts have shown little inclination to interpret the re-use of waste as a point at which the material so used has *ceased* to be 'waste' for the purposes of the Directive. The economic costs of compliance

[24] Council Dir. on Waste, n. 2 above, Preamble para. 3.
[25] *R. (On the Application of OSS Group Limited)* v. *Environment Agency and Others (DEFRA, intervening)* [2007] 3 Common Market Law Reports 30.
[26] E.g. Joined Cases C-418/97 and C-419/97, *ARCO Chemie Nederland* v. *Minister van Volkshuisvesting* [2000] ECR I4474, paras. 73, 88 and 97; Case C-9/00, *Palin Granit Oy and Vehmassalon kansanterveystyön kuntayhtymän hallitus* [2002] ECR I-3533, para. 24.
[27] E.g. Joined Cases C-418/97 and C-419/97, n. 6 above.
[28] Communication from the Commission Towards a Thematic Strategy on the Prevention and Recycling of Waste COM(2003)301 final, 27 May 2003, 6.

with the Directive's requirements, together with the negative image created by the labelling of material as 'waste', weaken prospects of a competitive market in secondary materials.[29]

The decision in *OSS Group v. Environment Agency*, however, brings into sharp focus the limitations to the ECJ's approach. This is explored in Section IV. It highlights how strict adherence to broad interpretations of 'waste' can lead to the inappropriate application of the Directive to waste materials that are clearly destined for re-use. Recognising that the Directive might be applied in a manner which subverts the objectives of recovering, re-using and recycling waste materials, the Court of Appeal suggests a move towards defining waste in a manner which is more in line with these aims. This chapter is largely sympathetic to the Court of Appeal's handling of European jurisprudence in this area and the inconsistencies that arise there from. Whilst it does not entirely overcome the ambiguity embedded in the definition of 'waste', *OSS Group v. Environment Agency* nonetheless advances objectives of re-using and recycling waste previously undervalued by case law.

II. Legal framework

The *principal* aims of the Waste Framework Directive, which originally came into force in 1975,[30] and whose successive amendments were consolidated in 2006,[31] are twofold. First, its essential objective is to protect human health and the environment against harmful effects of the collection, transport, treatment, storage and tipping of waste.[32] Secondly, and more importantly for the purposes of this chapter, it seeks to establish a common terminology and definition of waste in order to improve the efficiency of waste management in the Community.[33] More recently, discussion has turned to other goals ostensibly served by the Directive, such as promoting the re-use and recycling of waste materials.[34] As this chapter illustrates, the re-use of waste begs questions about the definitional territory occupied by notions of 'waste' and 'non-waste'.

The distinction between 'waste' and 'non-waste' has proved difficult to ascertain and apply.[35] The central definition of 'waste' that governs the European waste regime is by no means clear cut. As the EC Commission noted in 1996:

> The discussion on the distinction between waste and goods has been going for almost twenty years now. No satisfactory definition has yet been found to determine when a material becomes waste and when waste becomes a good again.[36]

This sentiment was reiterated in 2005, when the Commission observed that the definition of waste fails to set clear boundaries to determine when waste has been adequately treated and should be regarded a product.[37] Yet waste definitions are crucial. The classification of a material as 'waste' renders it subject to intense regulatory control. For example, it is taxed on disposal to landfill.[38] Conversely, it makes no sense to levy tax, control movement or seek to govern contractual relationships in the passage of goods, or non-wastes. Indeed, in keeping with the principles of the European Single Market,[39] the safeguarding of the free and

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[29] *Ibid.* 22.
[30] Council Dir. 75/442/EEC, n. 3 above.
[31] Council Dir. 2006/12/EC, n. 2 above.
[32] *Ibid.* Preamble, para. 2.
[33] *Ibid.* para. 3.
[34] See, e.g., E. Scotford, 'Trash or Treasure: Policy Tensions in EC Waste Regulation' (2007) 19(3) *Journal of Environmental Law* 1-22.
[35] Commission Communication on the Interpretive Communication on Waste and By-Products COM(2007)59, 21 Feb. 2007, 3.
[36] Draft Council Resolution on Waste Policy COM(96) 399, 30 July 1996, para. 13.
[37] Commission Communication on Taking Sustainable Use of Resources Forward – A Thematic Strategy on the Prevention and Recycling of Waste COM(2005)666, 21 Dec. 2005, 13.
[38] Section 39 Finance Act 1996.
[39] Art. XX EC.

unrestricted movement of goods is imperative. The distinction upheld by the Council[40] and Commission[41] between 'goods' and waste' might reasonably be criticised for being too crude. In spite of the fact that it may be less optimal to categorise materials as 'wastes', wastes are still, broadly speaking, 'goods'. In light of their uncertain market value, however, wastes are *marginal* goods at best, for which effective markets may not develop. The possibility of market failure together with the social costs that might then result from the abandonment of these marginal goods makes the case for regulation.

The definition of waste, therefore, straddles two key Treaty objectives: environmental protection and the functioning of the internal market.[42] It follows that in one direction lies considerable freedom of operation and in the other tight control. Regulatory costs attach to this control and materials carrying the label 'waste' are likely to be perceived as having little or no value. It ought to come as no surprise, therefore, that the interpretation of waste is heavily contested, and its scope and meaning are frequently the focal points of litigation.

Article 1 of the Directive characterises 'waste' as 'any substance or object in the categories set out in Annex I which the holder discards or intends to discard'. There are two components to Article 1 that must be satisfied before a material can be deemed to be waste. First, the substance or object has to fall within the categories of waste in Annex I. These include, for example, production or consumption residues, residues of industrial processes, and products for which the holder has no further use. The last of the Annex's categories is especially broad, extending to *any* materials, substances or products which are not contained in the abovementioned categories.

Secondly, the substance or object must be *discarded*. Given the span of individual categories referred to in Annex I (most notably the last category), the definition of waste turns on the notion of 'discarding'. A holder must discard or intend or be required to discard the substance or object in question. In the ordinary sense of the word, to 'discard' is to 'throw away, as not needed or not allowed'.[43] Its precise meaning under Article 1, however, is renowned for being difficult to isolate. The Directive alone does not provide any decisive criteria for determining whether discarding has taken place.[44]

This concern over definitional ambiguity is apparent in the UK. In English law, the definition of 'waste' is contained in section 75 of the Environmental Protection Act 1990. This definition was amended by the Waste Management Licensing Regulations 1994 which transposed the requirements of the Directive. 'Waste' under the Regulations reflects the definition in the Directive, meaning:

> any substance or object in the categories set out in Part II of Schedule 4 which the producer or the person in possession of it discards or intends to discard but with the exception of anything excluded from the scope of the Directive by Article 2 of the Directive. "Discard" has the same meaning as in the Directive.[45]

This apparently quick and simply incorporation of EC law was accompanied by 16 pages of detailed guidance from (what was then) the Department of the Environment in Circular 11/94.[46] Recognising the difficulties associated with definitional ambivalence, it seeks to answer the following questions: *what is waste?*; *when is a substance or object discarded?*; and *can waste cease to be waste?*[47] Since the Circular pre-dates much of the case law on these issues, its role as a guide to the interpretation of obligations arising from the Directive

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[40] n. 16 above.
[41] n. 17 above.
[42] COM(96)399, n. 16 above, 14.
[43] Chambers English Dictionary (Edinburgh: Chambers Publishers, 1990).
[44] Case C-9/00, n. 6 above, para. 25.
[45] Reg. 1(3).
[46] Department of the Environment, *Environmental Protection Act 1990: Part II Waste Management Licensing, The Framework Directive* (London: Her Majesty's Stationary Office, 1994) Annex 2.
[47] *Ibid.*, paras. 2.53-2.59.

and the 1994 Regulations is somewhat limited.[48] However, the Circular is a useful starting point not only because it provides a benchmark against which subsequent cases can be measured, but also because some of the most recent judgments analysing waste begin to resemble the Circular's appraisal.

Circular 11/94 explains that the purpose of the Directive is 'to supervise the collection, transport, storage, recovery and disposal of those substances or objects which fall out of the commercial cycle or out of the chain of utility'.[49] This is intended as an aid to decision making with regard to licensing activity. Throughout the Circular, references are made to the Directive and its implications, though notions of 'the commercial cycle' or 'chain of utility' do not emanate from the Directive at all. Moreover, no explanation of the meaning of either concept is offered. Nonetheless, the test for determining whether waste exists under the Directive and the ensuing Waste Management Licensing Regulations is said to work in the following way. A material is 'waste' if it meets the following cumulative conditions, that is, if:

i. it falls into one of the categories set out in Part II of Schedule 4 to the Regulations (which essentially reiterates Annex I of the Directive); *and*
ii. it is discarded (or intended or required to be discarded) by the holder; *and*
iii. on account of its being so discarded, it no longer forms part of the normal commercial cycle or chain of utility.[50]

The first two tests above accord with the provisions of the Directive. The third test, however, finds no textual basis in the Directive. Rather, it is an invention of the Department of the Environment. On the face of it, it looks to be suggesting that a substance or object falls out of the commercial cycle or chain of utility as soon as it is consigned to disposal or recovery under Annexes IIA and IIB, respectively, of the Directive. The Circular qualifies this slightly by introducing the notion of a 'specialised recovery operation'.[51] Again, this does not appear in the Directive, although the Department of the Environment claims that it is useful in determining whether a substance or object has indeed been discarded. It posits the following question in order to ascertain whether the act of discarding has taken place: 'Can the substance or object be used in its present form (albeit after repair) or in the same way as any other raw material *without* being subject to a specialised recovery operation?'[52] Accordingly, if this question can be answered in the affirmative (i.e. in that the substance or object is likely to be so used) then it is said to be a 'reasonable indication' that the substance or object has *not* been discarded and does *not* constitute waste. Equally, if the substance or object requires a specialised recovery operation, then this should present a reasonable indication that it *has* been discarded as waste.[53]

By retaining notions that waste may be evaluated according to whether the material in question remains in the commercial cycle or the chain of utility, the Circular appears to suggest that materials capable of immediate re-use do not constitute waste. However, the Circular should not be regarded as an authoritative commentary on the Directive, particularly because it is an elaboration of the Directive rather than a strict interpretation. Precise meaning must be gleaned from the Directive and over time from decisions of the ECJ. As the following section illustrates, uncertainties pertaining to the definition of waste have played out through detailed judicial analyses of the term 'discard'. At the level of the ECJ these have tended to depart from the approach of the Circular.

One of the greatest difficulties facing the courts has been to differentiate between materials that have been discarded which happen to be re-used at some later stage, and materials that

[48] Precedence must be given to ECJ rulings on the matter. See I. Cheyne and M. Purdue, 'Fitting Definition to Purpose: The Search for a Satisfactory Definition of Waste' (1995) 7(2) *Journal of Environmental Law*, 149-68, 160.
[49] Department of the Environment, n. 26 above, para. 2.14.
[50] *Ibid.*, paras. 2.53-2.56.
[51] *Ibid.*, paras. 2.27-2.31.
[52] *Ibid.*, para. 2.28.
[53] *Ibid.*, para. 2.47

are re-used rather than discarded.[54] Whereas the ECJ has rigorously adhered to the notion of waste being 'discarded', it has failed to pay equivalent attention to when it might be fruitfully re-utilised. Though the ECJ has attempted to fix criteria indicating exactly when a substance or object has been discarded, its efforts have been compounded by its simultaneous findings that the meaning of waste is to be 'determined in the light of all circumstances'[55] and on a 'case-by-case basis'.[56] Armed with these insights, it is not altogether surprising that the courts have been unsuccessful in generating a coherent definition.

III. Exposition of case law

A. The ECJ jurisprudence

In two cases in 1997, *Tombesi*[57] and *Inter-Environnement Wallonie*,[58] the ECJ was asked to giving preliminary rulings on issues relating to the meaning of 'waste' in Article 1 of the Directive. The Court was charged with determining whether a material could constitute waste *notwithstanding* the fact that it still had commercial value and formed part of industrial production process.[59] In spite of the fact that such circumstances could not easily be reconciled with the concept of 'discarding' in its ordinary sense,[60] the ECJ held that neither their value, nor their use in the commercial cycle, precluded the materials in question from falling within the definition of 'waste'. 'Waste' does not exclude substances or objects that are capable of economic re-utilisation.[61]

Advocate General Jacobs, however, was more radical in his approach. Sitting on both cases, he suggested that the term 'discard' ought to be understood by reference to notions of disposal and recovery under Articles IIA and IIB.[62] As such, the act of 'discarding' ought to be inferred from disposal or recovery operations in Annex II. On the facts of the *Tombesi* case, the Advocate General held that materials transferred from one person to another for immediate re-use in their present state did *not* constitute waste on the basis that they underwent neither disposal nor recovery operations.[63] This approach came to be known as the 'Tombesi by-pass'.[64] In effect, it was an attempt to circumvent elements of the definition of waste (notably the 'discarding' requirement) by reducing the critical factor in determining 'waste' to whether or not the substance or object fell within the remit of Annex II.[65]

This downplaying of the notion of 'discarding' was also evident before the UK courts in *Mayer Parry Recycling* v. *Environment Agency*.[66] Mayer Parry Recycling claimed before the High Court that various types of scrap metal that it had handled might fall outside the definition of waste because it had not been discarded. Carnwath J in giving judgment in the

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[54] Scotford, n. 14 above, 10.
[55] Joined Cases C-418/97 and C-419/97, n. 6 above, paras. 73, 88 and 97.
[56] Opinion of AG Alber of 8 June 1999 in Joined Cases C-418/97 and C-419/97, n. 6 above, para. 109.
[57] Joined Cases C-304/94, 330/94, 342/94 and 224/95 *Criminal Proceedings against Tombesi* [1997] ECR I-3561.
[58] Case C-129/96, *Inter-Environnement Wallonie ASBL* v. *Région Wallone* [1997] ECR I-7411.
[59] *Ibid.*, para 25.
[60] I. Cheyne, 'The Definition of Waste in EC Law' (2002) 14(1) *Journal of Environmental Law* 61-73, 65.
[61] Case C-129/96, n. 38 above, para. 31 (upholding cases Case C-359/88 *Zanetti and Others* [1990] ECR I-1509, paras. 12 and 13; Case C-422/92 *Commission* v. *Germany* [1995] ECR I-1097, paras. 22 and 23; and Joined Cases C-304/94, C-330/94, C-342/94 and C-224/95, n. 37 above, paras. 47-8
[62] Opinion of the AG Jacobs of 24 Oct. 1996 in Joined Cases C-304/94, 330/94, 342/94 and 224/95, n. 37 above, para. 50.
[63] *Ibid.*, para. 52.
[64] G. Van Calster, 'The EC Definition of Waste: The Euro Tombesi Bypass and Basel Relief Routes' [1997] *European Business Law Review* 137-43.
[65] Though as Tromans notes this approach might circumvent the question of when a material is discarded, it simply shifts the issue to the meaning of 'recovery', Tromans, n. 1 above, 142.
[66] [1999] 1 Common Market Law Reports 963.

case accepted that off-cuts of metal or other scrap not requiring any recovery operation need not be treated as waste.[67] However, where some element of recovery in line with Annex IIB was required, the metals would remain waste until the operation had been fully carried out.[68] This certainly emulates aspects of the guidance contained in Circular 11/94. Carnwath J's judgment goes close to saying that for a material (falling under Annex I) to be deemed to be waste it must have undergone an Annex II process. In the words of the judge:

> materials which are to be re-used but which do not require any recovery operation before being put to their new use are not treated as waste. Similarly, materials which are made ready for re-use by a recovery operation, cease to be waste when the recovery operation is complete.[69]

This contrasts sharply with more recent attempts by the ECJ to refine the notion of 'discard'. In fleshing out the definition of waste, the Court's judgment in the *ARCO Chemie Nederland*[70] case ('*ARCO*' hereafter) turned the 'Tombesi by-pass' on its head. In a reference for a preliminary ruling, the ECJ considered two separate actions brought by different companies – ARCO and Epon. Both companies re-used waste materials as fuel. ARCO was a chemical manufacturer that re-used 'LUWA bottoms' to produce fuel for cement kilns. LUWA bottoms were a by-product of a manufacturing process producing molybdenum, a metallic element used as a hardening agent in various alloys. Epon was an electricity generating company. It bought wood residues (in the form of wood chips) from the construction and demolition sectors to be transformed into wood powder and used as fuel to generate electricity. The ECJ in this case had to determine whether materials destined for combustion remained waste following their transformation into materials suitable for burning. The question facing the Court was essentially this: when does waste cease to be waste? Underpinning this inquiry by the ECJ was the meaning of 'discard'. Were the materials in question discarded at their point of transformation, or sometime before? Or, could they only have been discarded once burnt?

In his opinion, Advocate General Alber offered these insights:

> If a waste material is recovered or reprocessed so that a substance is obtained that no longer poses a danger typical of waste and, when used in a normal manufacturing process, does not pollute the environment any more than, but at most in the same way as, a raw material, that substance probably is no longer to be regarded as waste in the sense of being subject to control or authorisation for its further use.[71]

Broadly speaking, therefore, a complete recovery operation will result in a substance ceasing to be waste. This reflects the judgment in *Mayer Parry Recycling*. Further, it closely resembles the test proposed by Circular 11/94. There are two strands to the Advocate General's understanding of the distinction between waste and non-waste. The first of the 'Alber tests'[72] is the 'danger typical of waste' test. The second is the 'no more polluting' test. Provided a material does *not* pose a danger typical of waste such that supervision of the waste does *not* appear necessary, *and* that material poses no greater danger than a comparable raw material, it falls outside the definition of waste.[73]

The ECJ did not endorse Advocate General Alber's analysis. In fact, the Alber tests have since been criticised for being 'wholly unworkable' and likely to 'undermine and be inimical to the European waste regime, and the very careful control, particularly of incineration of

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[67] *Ibid.*, para. 56.
[68] Ibid., para. 51.
[69] *Ibid.*, para. 46.
[70] Joined Cases C-418/97 and C-419/97, n. 6 above.
[71] Opinion of AG Alber of 8 June 1999 in Joined Cases C-418/97 and C-419/97, n. 6 above, para. 109.
[72] So called by Burton J in joined cases *Solvent Resource Management* v. *Environment Agency*; *OSS Group* v. *Environment Agency* [2007] *Env. L.R.* 19, paras. 63-72.
[73] Opinion of AG Alber of 8 June 1999 in Joined Cases C-418/97 and C-419/97, n. 6 above, para 110.

waste, which governs this area'.[74] Whilst the ECJ in *ARCO* accepted that waste *ceases* to be waste when it has been subject to a complete recovery operation,[75] it went on to note that:

> even where waste has undergone a complete recovery operation which has the consequence that the substance in question has acquired the same properties and characteristics as a raw material, that substance may nonetheless be regarded as waste if, in accordance with the definition in Article 1(a) of the Directive, its holder discards it or intends or is required to discard it.[76]

Immediately, this gives the notion of 'discard' critical status in determining whether a substance remains a waste. It could not be inferred simply from the performance of a recovery process under Article IIB that a material constituted waste. The act of discarding would remain the dominant factor. In its rejection of approaches that narrowed the definition of waste to presumptions based on Annex II, the ECJ essentially closed the *Tombesi* by-pass in order to give 'waste' a broader meaning.

As stated earlier much of the UK case law has followed the lead of the ECJ and a similar line of reasoning was adopted by the English courts in *Castle Cement* v. *Environment Agency*.[77] The issue here was whether waste solvents, which had been blended for use as fuel to fire cement kilns, were no longer waste but a fuel. Stanley Burnton J held that the solvents continued to constitute waste, maintaining that the carrying out of a recovery operation did not necessarily result in the substance in question ceasing to be waste.[78] In his judgment, Stanley Burnton J was careful to draw a distinction between different recovery operations listed in Annex IIB. According to Stanley Burnton J, recovery operation R1, which deals principally with uses as fuel or other means of energy generation, ought to be regarded as referring to an 'end use' of waste. Recovery operations R2-R9, on the other hand, allude to operations conducted so as to *enable* waste to be used. Recovery operation R1 reflects the Article 3 objective to use waste as a source of energy. Recovery operations R2-R9 are directed towards achieving an alternative objective, which is also set out in Article 3, to recover waste by means of recycling, re-use or reclamation or any other means *with a view to extracting secondary raw materials*. In the judge's opinion, the categories in Annex IIB do not overlap, so it must be said that solvent wastes are not recovered under R1 until used as a fuel.[79] Other recovery processes (R2-R9) are intended to lead to some form of re-use and not simply incineration.

This follows the line towed by the ECJ in *ARCO*; that is to say, the scope of the definition of waste depends on more than the simple question of whether a material is analogous with a material in its raw form. Even if a material, deemed to be waste, is found to be identical to a raw material, it might still amount to waste under the Directive. The definition requires that there is also be a consideration of whether the material has in fact been *discarded*. Emphasis on the notion of 'discarding' is significant, and contrasts starkly with earlier cases in which simple conformity with Annex IIB to the Directive sufficed. In *ARCO* (and indeed in *Castle Cement* v. *Environment Agency*) the Court found that the fact that a substance is the result of a recovery process under Annex IIB is only *one* of the factors to be taken into account for the purposes of establishing whether that substance still constitutes waste.[80] It has become progressively evident in case law in the EU and the UK that the scope of the definition of 'waste' turns on the meaning of the term 'discard'. The ECJ has stipulated that the classification of a substance or object as waste is 'primarily to be inferred from the holder's actions, which depend on whether or not he intends to discard the substances in question'.[81] Two principal criticisms can be directed at this jurisprudential trend. The first is that factors

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[74] Joined cases *Solvent Resource Management* v. *Environment Agency*; *OSS Group* v. *Environment Agency*, n. 52 above, para. 65.
[75] Joined Cases C-418/97 and C-419/97, n. 6 above, para 93.
[76] *Ibid*., para. 94.
[77] [2001] 2 Common Market Law Reports 19.
[78] *Ibid*., para. 45.
[79] *Ibid*., para. 34.
[80] Joined Cases C-418/97 and C-419/97, n. 6 above, para. 97.
[81] Case C-9/00, n. 6 above, para 22.

indicating that material has indeed been discarded are eminently uncertain. This is well recognised in existing literature on the topic.[82] The second is that the centrality of 'discard' begins to make less sense in situations where waste materials are re-used. This second point is explored further below.

B. Implications for Secondary Material Resources

In an extremely thoughtful paper on the connotations of the ECJ's understanding of 'waste' and 'discard', Eloise Scotford argues that the courts have developed something of 'an unhealthy obsession with interpreting the concept of waste widely and upholding the regulatory "effectiveness" of the Directive'.[83] Moreover, the definition provided by the ECJ in *ARCO* 'fails to give sufficient flexibility to the concept of waste so that actions of industry in finding productive uses for by-products can be appropriately exempted'.[84] The problem is that the Court's insistence that decisions concerning the waste status of materials are made on a case-by-case basis is at odds with its continuing attempt to lay down principles that shape the interpretation of the Directive. Undoubtedly, the ECJ's yielding, albeit implicitly, to the Directive's overarching aim of definitional consistency has led to the formulation of a set of criteria underpinning the Court's decision making. For example, the ECJ has held that: the mere fact that a substance or object can have a positive value does not mean that it has not been discarded;[85] 'waste' can include substances discarded by their owners even if they have a commercial value and are collected on a commercial basis for recycling, reclamation or re-use;[86] 'waste' can also include substances that can be used in an environmentally responsible manner;[87] and furthermore, the harmlessness of the substance in question is not a decisive criterion for determining whether it constitutes waste.[88] What is clear is that, where materials are part of a 'commercial cycle' (i.e. where there is a lack of explicit evidence of discarding), the Court continues to rely solely on factors that might indicate that the holder's *intention* was indeed to discard. This speculative process is fraught with difficulty.[89] Consequently, the ECJ has tended to err on the side of caution by interpreting 'waste' and 'discard' as broadly as possible.

When the courts are faced with determining whether a material has *become* waste under Article 1, a wide definition of 'waste' helps to ensure that any harmful effects are minimised through the Directive's regulatory regime. When, however, they seek to determine whether a material has *ceased* to be waste, the protective function of the Directive becomes more complex. In this instance, a wide definition of 'waste' extends the reach of the Directive, bringing within its remit of control materials that could otherwise be put to beneficial uses as *products*. Inevitably, there is a danger that increasing the scope of the Directive, and thereby extending the sphere in which a 'regulatory burden'[90] is imposed, will have the effect of discouraging the re-use of waste substances or objects. In other words, adopting a highly inclusive definition of waste 'can reduce the attractiveness of materials that would otherwise be returned into the economy'.[91]

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[82] See, for example, J. Fluck 'The Term "Waste" in EU Law' (1994) *European Environmental Law Review* 79-84; Cheyne, n. 40 above.
[83] Scotford, n. 14 above, 19-20.
[84] *Ibid*., 16.
[85] Joined Cases C-206/88 and C-207/88, *Criminal Proceedings against Vessoso and Zanetti* [1990] ECR-I 1461; see also Case C-9/00, n. 6 above, para. 25.
[86] Joined Cases C-304/94, 330/94, 342/94 and 224/95, n. 37 above, 52.
[87] Joined Cases C-418/97 and C-419/97, n. 6 above, 73.
[88] Case C-9/00, n. 6 above, paras. 50-1.
[89] See *R. (On the Application of OSS Group Limited)* v. *Environment Agency and Others (DEFRA, intervening)*, n. 5 above, para. 59.
[90] Van Calster, n. 44 above.
[91] COM(2007)59, n. 15 above, 5.

If this is considered in the light of Article 3 of the Directive, a tension arises.[92] As well stipulating that Member States shall take appropriate measures to prevent or reduce waste production and its harmfulness, it requires that they encourage 'the recovery of waste by means of recycling, re-use or reclamation or any other processes with a view to extracting secondary raw materials'. Furthermore, if the ECJ's approach is placed in the context of European waste policy generally, it is immediately apparent that initiatives to encourage the re-use and recycling of waste materials are of central importance.[93] The Sixth Environmental Action Programme, for example, specifically earmarks this objective as a thematic strategy in itself.[94]

The ECJ, in the aftermath of the *ARCO* decision, has placed some restriction on the meaning of 'waste'.[95] For example, the Court in *Palin Granit Oy*[96] introduced the notion of 'secondary product' or 'by-product'. The ECJ explained that, according to its ordinary meaning, waste is 'what falls away when one processes a material or an object and is not the end-product which the manufacturing process directly seeks to produce'.[97] However, it went on to note that materials generated during the manufacturing of an end-product will not *always* constitute waste. There are circumstances in which those additional materials might amount to genuine products, rather than waste. The Court drew a distinction between a 'production residue', and a 'secondary product' or 'by-product'. A production residue is a product which is not in itself sought for its subsequent use. It is therefore tantamount to waste. A secondary product, or by-product, is intended to be exploited or marketed in a subsequent process and does not constitute waste. Its subsequent re-use, however, must be a certainty, not merely a possibility.[98] This position was upheld by the ECJ in *Commission* v. *Spain*,[99] where the Court observed that:

> There is … no reason to hold that the provisions of that directive … apply to goods, materials or raw materials which have an economic value as products regardless of any form of processing … provided that such reuse is not a mere possibility but a certainty, without any further processing prior to reuse, and as part of the continuing process of production.[100]

There are two points worth noting here. The first is that the ECJ's reference to the 'continuing process of production' bears something of a resemblance to the concepts of 'commercial cycle' and 'chain of utility' contained in the Department of the Environment's Circular 11/94. The second is that, in spite of the indications in the *Palin Granit Oy* judgment that the definition of 'waste' is not as wide as previous cases might have suggested, the concept of 'secondary product' is still only a relatively narrow exception – imposing requirements that there is *certainty* of re-use within an *ongoing* production process. Arguably, this requirement that the re-use of goods forms an integral part of the production process carries an assumption that the process of production is carried out by one person, failing to adequately address situations in which waste materials are intended to be transferred to *third parties* for recovery and re-use.[101] *Palin Granit Oy* therefore still reflects the position consistently adopted by the ECJ that 'waste' cannot be interpreted restrictively,[102] and that the scope of the Directive ultimately rests on an intention to discard.[103] More recently, Advocate General Colomer, commenting on the distinction between 'recovery' and 'disposal', has highlighted the difficulties with strict adherence to tests to discern an intention to discard

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[92] Scotford, n. 14 above, 12.
[93] COM(2003)301, n. 8 above; European Parliament and Council Dec. 1600/2002/EC Laying Down the Sixth Community Environment Action Programme [2002] OJ L242/1.
[94] European Parliament and Council Dec. 1600/2002/EC, *ibid*.
[95] Scotford, n. 14 above, 16.
[96] Case C-9/00, n. 6 above, para. 32.
[97] *Ibid*.
[98] *Ibid.* para. 36.
[99] Joined Cases C-416/02 and C-121/03, *Commission* v. *Spain* [2005] ECR I-07487.
[100] *Ibid*., para. 58.
[101] Scotford n. 14 above, 16-17.
[102] Case C-9/00, n. 6 above, para. 23; Scotford, n. 14 above, 21.
[103] Case C-9/00, *Ibid*., para. 22.

where waste is recovered and re-used.[104] Whereas 'disposal' indeed 'evoked the idea of "dispensing" with or "discarding" something in an orderly manner with no view to reclaiming it', the notion of 'recovery' is much more difficult to grapple with under with the basic waste test which rests on an intention to discard. Recognising these difficulties, the UK Court of Appeal recently put ECJ case law in this area under the spotlight. Not only did the Court of Appeal question the ECJ's approach to interpreting the Directive, but it harnessed an understanding of 'waste' which attempts to circumvent some of the problems encountered in defining the notion of 'discarding'.

IV. The Court of Appeal's Approach: *OSS Group* v. *Environment Agency*

The case at first instance involved not only OSS Group but also Solvent Resources Management (SRM) which recovers and recycles industrial waste materials, particularly waste solvent materials.[105] Essentially, SRM 'launder' solvents.[106] They collect used solvents from their customers, and are either recovered and refined to their customers' specification and returned, or are recovered and refined into product grade distillates and sold on the open market. Alongside SRM appeared OSS Group, 75% of whose turnover, and a substantially greater proportion of their profits, comes from selling a substance called 'recycled fuel oil'. This recycled fuel oil derives largely from waste lubricating oils, including used engine and gear/transmission oils, collected from some 15,000 waste oil producer locations, such as garages and workshops. OSS Group sells recycled fuel oil to their customers to be burnt as fuel.

The passage of the Waste Incineration Directive[107] (WID) had repercussions for this commercial enterprise. The WID now applies to all existing waste incineration installations (with effect from 28 December 2005). The Environment Agency, under the WID regime, issues Pollution Prevention and Control permits where waste is incinerated. Both SRM and OSS Group faced a situation in which their waste derived fuels would be treated as 'waste' falling subject to the WID requirements. OSS Group was concerned that if its recycled fuel oil was to be treated as waste, so that their customers would be required to be WID-compliant, they would lose substantial business to the natural oils industry which fell outside the scope of the WID. Anticipating the effects of the WID, OSS Group had spent £3 million allowing them to generate higher quality fuel oil, conforming to the British Standard for clean fuel oil.

SRM and OSS Group challenged the scope of the 'waste' interpretation because it triggered the operation of the WID. The Environment Agency argued before the High Court that a product, which was waste or derived from waste, may cease to be waste following certain successful processes allowing it to be sold or used for other purposes. Where it is to be burnt as fuel, however, it will not ordinarily cease to be waste until it is burnt and its energy is recovered. The Agency did allow one exception to this rule. Where the material was originally a fuel, or was used or available for the common (though not necessarily the only) purpose of being used as fuel, it can be considered as recovered as a fuel by an appropriate process and would cease to be waste *if* it is chemically and physically identical to the original material and requires no further processing.

The High Court upheld the Agency's position. SRM were in a position to at least attempt to take advantage of the Agency's exception. OSS Group were unable to do so because their recycled fuel oil derived from waste lubricating oil, and not a fuel. OSS Group appealed the decision. The question was simply: whether lubricating oil, not originally used as fuel, that became waste, could thereafter be burnt as anything other than waste.

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[104] Opinion of AG Colomer of 30 May 2006 in Case C-486/04 *Commission v. Italian Republic* [2006] ECR I-11025, para. 53.
[105] Joined cases *Solvent Resource Management* v. *Environment Agency*; *OSS Group* v. *Environment Agency*, n. 52 above.
[106] *Ibid.*, para. 7.
[107] European Parliament and Council Dir. 2000/76/EC on the Incineration of Waste [2000] OJ L332/91.

At first instance, the High Court referred to *ARCO* as authority for the proposition that a waste material is not exempt from control under the European waste regime merely because it has the same or a similar specification to an equivalent natural product.[108] The true guide as to whether a material constitutes waste was said to hinge on the requirement that the holder discards it or intends or is required to discard it.[109] As in *ARCO*, this leaves open the possibility that after certain types of recovery operation, a material may nevertheless be deemed to be waste if it is discarded. Burton J rejected Lord Reed's broad interpretation of 'recovery' in *Scottish Power Generation Ltd.* v. *Scottish Environment Protection Agency*.[110] In that case Lord Reed, pointing to Advocate General Alber's Opinion in *ARCO*,[111] had suggested a test of recovery based upon whether the material could be used in the same manner as a non-waste material without any increased risk to human health or the environment. The WID, Burton J explained, aimed to provide an overarching control until the point of incineration to ensure the absence of any harmful effects. There were far too many uncertainties in the operation of 'the Alber tests' based on the dangers posed by typical materials for them to be workable either as a replacement for, or as any exemption from, the controls imposed by the waste regime.[112]

Instead, the High Court drew support for its stance from the ECJ's decisions in *Palin Granit Oy*[113] and *Niselli*[114] in which it was held that the issue of whether a material posed any real risk to human health or the environment was not a determinative factor in assessing its 'waste' status. Although Burton J admitted to being attracted to the prospect of accepting as products (i.e. not as waste) fuels having no more of a polluting effect than natural gas oil,[115] he held that Article 3(2)(b) of the WID stood in the way of this interpretation. Article 3(2)(b) implies that waste fuels should still be classified as hazardous waste and incinerated in accordance with the WID *notwithstanding* the possibility that its emissions when incinerated would be equivalent to those of gas oil. Burton J concluded that, in light of the limited exemptions under the WID, recovered oils were subject to its controls even though the equivalent natural product would not be so covered.

On appeal, the Secretary of State for the Department of Environment, Food and Rural Affairs (DEFRA) appeared as an intervener proposing a less stringent line than the Environment Agency. The proceedings illustrate perfectly the implications of lacking consensus over the core definitions contained in the Directive – not only between different Member States but also between national authorities within the same Member State.[116] In response to the question posed on appeal (i.e. whether the waste lubricating oil could be burnt other than as waste) DEFRA and the Environment Agency adopted different positions. Unsurprisingly, OSS Group argued that the lubricating oil could be burnt other than as waste. DEFRA agreed providing that the oil was processed to a standard making it 'analogous to' or 'hardly distinguishable' from virgin oil. The Agency maintained its position in the hearing at first instance, submitting that the waste lubricating oil destined for combustion continued to be waste until it is burnt, *regardless* of the standard of any prior processing.

In giving judgment in the Court of Appeal, Lord Justice Carnwath was in equal measures puzzled by and critical of the jurisprudence emanating from the ECJ, stating that 'a search for

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[108] Joined cases *Solvent Resource Management* v. *Environment Agency*; *OSS Group* v. *Environment Agency*, n. 52 above, para. 63.
[109] *Ibid*., para. C1.
[110] [2005] *Env. L.R.* 38.
[111] Opinion of AG Alber of 8 June 1999 in Joined Cases C-418/97 and C-419/97, n. 6 above, para. 109.
[112] Joined cases *Solvent Resource Management* v. *Environment Agency*; *OSS Group* v. *Environment Agency*, n. 52 above, para. 71.
[113] Case C-9/00, n. 6 above.
[114] Case C-457/02, *Niselli* [2004] ECR I-10853.
[115] Joined cases *Solvent Resource Management* v. *Environment Agency*; *OSS Group* v. *Environment Agency*, n. 52 above, para. 72.
[116] For another instance in relation to packaging waste see *R.* v. *Environment Agency ex parte Mayer Parry (No 2)* [2001] *Env. L.R.* 45.

logical coherence in the Luxembourg case law is probably doomed to failure'.[117] The crux of the problem, according to his Lordship, was the pivotal role assigned to the intention of the holder of waste and strict adherence to the requirement that the holder discards it.[118] In particular, Carnwath LJ was of the opinion that European case law upheld 'discard' test even where it could be 'of no practical relevance'.[119] Reliance on the concept of 'discarding' stemming from cases such as *ARCO* made little sense when the original producer (of lubricating oil, in this instance) had long ago discarded it, and it was now in the hands of someone (OSS Group) who buys it to put it to some other valuable use.[120] Whilst the 'intention to discard' test might be useful in determining the status of a material in the hands of the original producer, it was difficult to apply in situations where waste materials had been sold to a third party for recycling or reprocessing, or put to another valuable use.[121] Moreover, Carnwath LJ held that, in such circumstances, the search for an 'intention to discard' led to an illogical outcome. In his Lordship's words: '[i]n no ordinary sense was such a person [OSS Group] discarding or getting rid of the material. His intention was precisely the opposite'.[122] Accordingly, picking up from Lord Reed in *Scottish Power*:

> It should be enough that the holder has converted the waste material into a distinct, marketable product which can be used in exactly the same way as an ordinary fuel, and with no worse environmental effects.[123]

In his Lordship's view, the subjective test of establishing an intention to discard was of little use in these latter stages of waste determination. Carnwath LJ explained that the ECJ's excessive reliance on the concept of 'discarding' in *ARCO* was unwarranted. The ECJ in *ARCO* held that a complete recovery operation 'does not necessarily deprive an object of it classification as waste'.[124] This is recognised as one of the key principles to emerge from the *ARCO* judgment. The ECJ, therefore, concedes that a complete recovery operation under Article IIB is at least possible. However, the ECJ went on to specify that the holder of a recovered material under Article IIB might still s*ubsequently* develop an intention to discard it. According to Carnwath LJ, the focus of the ECJ on post-recovery intention was misguided. Recourse to this extraneous test was meaningless. In *ARCO*, Epon wanted to *re-use* the wood chips to generate electricity, not discard them. Commenting on the circumstances of Epon's business, Carnwath LJ observed that the issue was not whether the original users of the wood chips possessed an intention to discard them.[125] No doubt the original users did indeed have such an intention. The issue was whether Epon intended to discard. Yet as Carnwath LJ pointed out, the question was not whether the wood chips were waste when they were transferred to Epon, but whether they had ceased to be waste.[126] The same, then, could be said of OSS Group's re-use of lubricating oil. OSS Group had no intention to discard. On the contrary, OSS Group displayed a clear intention to re-use the waste oil for different purpose.

In light of the shortcomings of the notion of 'discarding', Carnwath LJ was unyielding in his conclusion that a practical common sense approach was required.[127] Although the Court continued to pay lip-service to a test based on 'discarding',[128] his Lordship was of the view that it had been replaced by a number of objective indicators which were more consistent with the Directive's goals. In particular, dispensing with the 'intention to discard' constraint was in keeping with the objective of encouraging the recovery of waste materials for uses which

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[117] *R. (On the Application of OSS Group Limited)* v. *Environment Agency and Others (DEFRA, intervening)*, n. 5 above, para. 55.
[118] *Ibid.*
[119] *Ibid.*
[120] *Ibid.*, para. 40.
[121] *Ibid.*, para. 55.
[122] *Ibid.*.
[123] *Ibid.*, para. 63.
[124] Joined Cases C-418/97 and C-419/97, n. 6 above, para. 96.
[125] *R. (On the Application of OSS Group Limited)* v. *Environment Agency and Others (DEFRA, intervening)*, n. 5 above, para. 55.
[126] *Ibid.*, para. 56.
[127] *Ibid.*, para. 63.
[128] *Ibid.*, para. 59.

replace raw materials.[129] It was held that it could not be said that OSS Group 'discarded' the lubricating oil in any ordinary sense of the term, and furthermore, that there was 'nothing in the objectives of the Directive which requires any fictitious assumption to that effect'.[130] The simple fact that OSS Group has converted the oil into a distinct, marketable product that could be used in the same way as ordinary fuel without bringing about any worse environmental impact led the Court of Appeal to find in favour of OSS Group, and to conclude that the oil *could* be burnt otherwise than as waste.

Interestingly the Court of Appeal declined to make a reference to the ECJ and one is almost able to detect the frustration of Carnwath LJ when he says:

> I would have doubts about the appropriateness of a further reference in this area of the law. I would hesitate to describe the matter as "*acte clair*", in the traditional sense. But that is not because of lack of opportunity for the Court to provide clarification if it had wished to do so. *ARCO* itself, in which the Court had the assistance not only of the Advocate-General and the Commission, but of five intervening states, would have been an ideal opportunity. One must assume that the decision not to do so was deliberate. Any lack of clarity is inherent in the imprecision of the test which the court has declared.[131]

V. Concluding Remarks – Creating Markets in Secondary Materials

The impact of the Court of Appeal's decision in *OSS Group* v. *Environment Agency* is far reaching. It effectively rejects the excessively broad approach of the ECJ in favour of a more commonsensical treatment of notions of 'waste' and 'discarding', and in so doing exhibits greater coherence with aims of re-using and recycling waste materials for other purposes. By highlighting the implications of the ECJ's habitual focus on inferring from the holder an intention to discard, Carnwath LJ illustrates how widening the definition of waste to give effect to the protective function of the Directive can at the same time undermine Directive's capacity to motivate the re-incorporation of waste into the economic cycle. The failure of the definition of waste to set clear boundaries for when waste has been adequately treated and should be considered as a product has led to undue emphasis in ECJ case law on the notion of an 'intention to discard'.[132] Yet, this emphasis does not always promote best environmental practice.[133] *OSS Group* v. *Environment Agency* shifts this focus somewhat, and in so doing underlines the resounding capacity of the definition of waste to create markets in the re-use of waste materials – a capacity which has been largely untapped by ECJ jurisprudence. Contrary to patterns emerging from European case law, the Court of Appeal in *OSS Group* v. *Environment Agency* has demonstrated a willingness to adopt a more flexible approach in accord with wider waste strategy.

Three conclusions might be drawn from this case. First, the Court of Appeal's decision represents an attempt to construe waste in a manner which upholds the aim of Community waste policy to encourage the re-use and recycling of waste materials. Secondly, it strongly indicates that, if the Directive is to promote this goal (which is explicitly contained in Article 3), the ECJ needs to strive harder to overcome definitional weakness. This concern has been picked up by the Commission, and proposed revisions to the Directive seek to set out clearer and simplified definitions.[134] The Commission makes a clear case for a refinement of the

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[129] *Ibid*., para. 63.
[130] *Ibid.*
[131] *Ibid*., para. 69.
[132] COM(2005)666, n. 17 above, 13.
[133] *Ibid*., 14.
[134] Commission's Proposal for a Directive of the European Parliament and of the Council on Waste COM(2005) 667, 21 Dec. 2005; also see EP Doc. No. A6-0466/2006, Amendment 5, Recital 11: 'A definition of re-use should be added in order to clarify the ambit of this operation in general waste treatment and the role of the re-use of materials or products that are within the scope of the definition of waste.'

Directive in an attempt to resolve legal uncertainties, particularly in end of waste scenarios where the distinction between recovery and disposal has proven to be so difficult to ascertain.[135] Though the definition of waste contained in Directive 2006/12/EC is retained, the Commission proposes to introduce procedures to clarify when waste ceases to be waste for certain waste streams.[136] Most notably, the proposed Directive inserts Chapter III on 'End of Waste' focusing specifically on secondary products. Accordingly, in determining whether it is appropriate to reclassify waste as secondary products, materials or substances, the Commission is to assess whether the following conditions are met, namely: (i) reclassification would not lead to overall negative environmental impacts; and (ii) a market exists for such a secondary product, material or substance.[137] If nothing else, this shifts focus from the notion of 'discard', and represents something of a concession that the 'discarding' test has its limitations.

Arguably, the more the definitional problem is attacked in this way, the more likely it is that the Directive will be used as a vehicle for invigorating markets in the re-use of waste materials. This leads to the final conclusion that there is now unequivocally a need for greater guidance. At the end of his judgment Carnwath LJ expresses the hope for the UK that 'it may be possible for DEFRA and the Agency to join forces in providing practical guidance for those affected'.[138] Given that in spite of the abundance of case law the 1994 Circular has never been re-issued, one can sympathise with this statement, but while *OSS Group v. Environment Agency* provides an answer in relation to a particular waste stream and leads us in the broad direction of greater flexibility to recover materials, the appointed task is an onerous one indeed. This is particularly so because any such guidance would need to reflect EU law as enunciated by the ECJ and could not rest upon the aspirations of the Court of Appeal.

Ultimately it is to the European Community that we must turn for a lead in this definitional jungle. Recognising the ongoing difficulties with waste definitions, the Commission in 2007 issued an *Interpretative Communication on Waste and By-Products*[139] to clarify the distinction between waste and non-waste. Although a substantial portion of the Communication is spent simply recapping principles to be derived from European case law, its Annex sets out examples of wastes and non-wastes designed to illustrate the classification process. These include, for example, slag and dusts from iron and steel production, by-products from the food and drink industry, and off-cuts from primary production processes. This type of approach might suggest a way ahead. The European Waste Catalogue[140] codifies and offers descriptions of standard waste streams from industry sectors. Although with the help of materials science we are seeking to divert as many of these waste streams as possible to fruitful end use, as yet there are not endless applications for such substances. They are in their nature problematic to re-use, recycle or recover. If this were not the case there would be ready markets for them and they would not be classed as waste. Might it not be possible to produce reference notes on acceptable practice in treating the major waste streams to include when recovery can be regarded as complete? This is no small task, but more broad brush attempts at addressing this question appear to have failed. The *OSS Group* judgment is a clear indication that the UK courts feel this to be so. It may have done a great service if it directs attention to how wastes might be deployed to generate secondary material resources rather than placing regulatory obstacles along this path.

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[135] COM(2005) 667, *ibid.*, 2.
[136] *Ibid.*, 7, and para. 14 of the Preamble to the Proposal for a Directive of the European Parliament and of the Council on Waste.
[137] *Ibid.*, Article 11.
[138] *R. (On the Application of OSS Group Limited)* v. *Environment Agency and Others (DEFRA, intervening)*, n. 5 above, para. 68.
[139] COM(2007)59, n. 15 above.
[140] Commission Dec. replacing Decision 94/3/EC establishing a List of Wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on Waste and Council Decision 94/904/EC establishing a List of Hazardous Waste pursuant to Article 1(4) of Council Directive 91/689/EEC on Hazardous Waste [2000] OJ L226/3.

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New Legal Controls affecting Energy Policy Decisions in the Era of Climate Change: a UK Snapshot

Professor Mark Stallworthy, Law School, Swansea University,
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Introduction

Addressing climate change raises fundamental energy related policy questions for the UK as elsewhere. The dual task facing decision makers is to address climate change whilst closing the risks attendant on a perceived 'energy gap': within the UK, over the next decade, not only are older coal fired power stations to be phased out in accordance with the Large Combustion Plant Directive, but the four Magnox and five (of the seven) advanced gas-cooled reactor nuclear power stations will have been closed. Suggested shortfalls over the next 20 years have been estimated at around 20% of current capacity, although estimates are notoriously problematic in light of uncertainties as to possibilities for improving energy efficiency (particularly in relation to the households which it is estimated produce around 30% of net carbon emissions). Renewed commitments to nuclear power are contained within the new Energy Act, and debates rage as to not only its validity as a solution but also as to whether reliance on private investment is realistic. As for coal we remain in the very early stages of developing the technology for Carbon Capture and Storage, which innovation will require high levels of public subsidy. Meanwhile, gas remains a key part of current strategy, albeit that the UK, on account of declining reserves, is no longer a net exporter, and is increasingly reliant within Europe on the market, supported by LNG importing from further afield. Otherwise, most progress with respect to renewables has been in the contentious area of onshore wind farms, and the development of renewable technologies arguably requires

growth to account for over one third of the electricity generation sector if the 2020 renewables target (see below) is to be achieved.

Law's role is increasingly substantial, and it can be said that we are entering a new regulatory era, albeit one which is seeing the development of alternative forms of control. This is the case also in respect of incentivised economic mechanisms such as cap and trade in relation to carbon emissions. Indeed, the EU's most significant legislative contribution to date in the field of climate change is its Emissions Trading Scheme (Directive 2003/87/EC *establishing a Scheme for Greenhouse Gas Emissions Allowance Trading within the Community*, L275/32 (25 October 2003), which came into force in January 2005). Based on the meeting of EU targets under Kyoto, it covers around 11,500 major emitters, responsible for 50% of total EU carbon emissions. Problems relating to carbon pricing notwithstanding, trading schemes such as EUETS are regulated by law and can be seen, as in the allocation of tradable units, to adopt recognisable property-related legal mechanisms. It should be noted that trading mechanisms are likely to be extended both across (anticipated post-2012 under Kyoto II) and within jurisdictions. As an illustration of the latter, the UK is introducing a 'carbon reduction commitment' under its new climate change legislation with the effect of extending the principle of caps and allowances trading to numerous larger bodies currently outside EUETS (these include larger commercial – food retailers, hotel chains – and public sector – local authorities, hospitals, universities – organisations).

An increasingly prevalent feature in political attempts to shift the economy toward lower carbon trajectories is a trend towards the setting of mandatory targets and fixed timeframes for achieving policy objectives, for the reduction in carbon emissions and otherwise.

From a UK perspective this is territory previously charted mainly under EU policy and law making mechanisms. In the field of environmental and energy law, within an EU context – subject to the vagaries of reaching agreement in Council – Member States, for all that there are divergent constitutional foundations, are accustomed to the legislative imposition of obligations. An example is the binding target of 20% of the EU's generating capacity from renewable sources by 2020 (the UK is expected to attain a target of 15%). In this respect, problems are inevitable, for on current projections the scale of substitution for fossil fuels that would be required of the UK is far in excess of most projections for the development of renewable energy capacity. The UK's record is so far especially weak, with power sourced from renewables in 2007 representing around 3% of the total (against an EU present average of around 8.5%).

Nevertheless, the UK appears in other respects domestically to have embraced the notion of placing legislative duties upon the state. Questions arise as to the value and impact of such an approach. It is certainly surprising, in light of the traditional preference within UK public law for the statutory grant of extensive powers and discretions and limited duty requirements. The trend has a range of possible rationales, although the most likely, in a policy field increasingly dominated by concerns at the impacts of climate change, is an acknowledgement of continuing high levels of resistance, economy-wide, to any significant shifting towards reduced carbon intensity.

In this paper I intend briefly to consider certain aspects of the current Climate Change Bill (likely to be enacted finally this autumn), and to draw comparisons with other legislative illustrations, in particular in relation to the task of addressing fuel poverty. The central purpose therefore is to reflect on the implications of the choice of such duty-based mechanism.

Changing Legislative Philosophies?

A more standard paradigm for the state's general reluctance to assume extensive statutory obligations can be seen in relation to the Civil Contingencies Act 2004. This legislation has recently received an airing – during the Summer 2007 floods in England. The 2004 act contains mechanisms for civil protection and emergency planning, and the subsequent exercise of emergency powers. Explicit duties are placed on numerous public agencies: with

respect to such matters as assessment of risk, emergency response, operational continuity, and raising of public awareness. The Act reflects a modern risk-based approach, in which regulatory responsibilities for risk identification and response are constituted, and rendered transparent and accountable, in a process that has been described as 'administrative constitutionalism' (Fisher, E, *Risk Regulation and Administrative Constitutionalism*, Oxford: Hart, 2007). Yet in Parliamentary debate, for all its wide-ranging strategic roles under the measure, central Government insisted that there need be no duties placed upon it under this legislation. This was considered inappropriate for setting out in a legal instrument primarily on grounds that it was 'standard practice' to rely for this purpose on the doctrine of ministerial accountability to Parliament.

The above approach contrasts markedly with that adopted subsequently by the UK Government under the proposal for a Climate Change Act. This amounts to an umbrella provision under which a climate policy agenda is henceforth to be pursued. It contains a framework based on mandatory carbon emissions reduction targets over set timeframes, with fixed review points en route. Thus for instance clause 1(1) is presently framed as follows:

> 'It is the duty of the Secretary of State to ensure that the net carbon account for the year 2050 is at least 60 per cent lower than the 1990 baseline'.

In overview, the scheme requires the setting and meeting of 'carbon account' targets, with periodic carbon budgets, and production of climate change risk assessment reports and adaptation programmes, supported by a regime of consultation and reporting. A general statutory duty will further be placed on Government to prepare (mainly unspecified) proposals and policies to enable statutory carbon budget commitments to be met.

The proposed legislative scheme, in placing a range of explicit statutory obligations upon Government, can be contrasted with measures being proposed elsewhere (for instance, no equivalent provisions appear under the current New Zealand *Climate Change (Emissions Trading and Renewable Preference) Bill*, or under the numerous proposals currently before the US congress (such as the most likely runner, *Climate Stewardship and Innovation Bill, S.280*, as proposed by Senators Lieberman-McCain).

A question arises as to what is the legal import of the range of duties envisaged by the Bill? Aside from the declaratory value of the chosen wording, no explicit enforcement or sanctioning scheme is provided for the event of failures to comply with the new statutory obligations. Government has justified this in what a lawyer might describe as broadly non-legalistic ways, especially in lacking any special arrangements for recourse to a judicial body. Justifications appear to be two-fold: first, that the formality underlying the approach amounts to an application of the rule of law; and, secondly, that the legal expression of duties provides 'a constitutional significance which will permeate down to every level of decision making. There is no other way of achieving an equivalent effect without using the law. The duty should be looked at in this broader constitutional sense, rather than just in terms of what happens in court' (Lord Rooker, *HL Second Reading Debate, Hansard, Col. 1209, 27 November 2007*).

It is somewhat ironic therefore that for the application of a recognisable principle of legality the measure will largely depend, as under the 2004 Act, on accountability to Parliament. Any judicial enforcement would be under the limited category of judicial review in accordance with ordinary principles. Here, given familiar questions of governance, competence and legitimacy, also within what is a vastly complex and polycentric policy area, marked by high levels of scientific and other forms of uncertainty, it is hard to see a realistic public law basis on which the courts would be willing to second guess executive decision making. This would surely include such substantive issues as energy choices, costings, and security. Injunctive relief would be especially problematic, given the range of variables that must be built in across the relevant statutory timeframes. Nevertheless the Government's position has remained somewhat inscrutable: for instance the head of the climate change team at the Bill's sponsoring department has stated that in light of this being 'a fairly new type of duty … the courts may indeed mandate particular action, although we could not predict that' (HC Environment, Food and Rural Affairs Committee, *The Draft Climate Change Bill*, 5th Report, Session 2006-07, HC 534, paras. 85-6).

Statutory Duties and Fuel Poverty

If the relevance of the previous illustration to energy policy is crucial, then the same can be said, even perhaps more explicitly, with regard to the imposition of statutory duties on Government in relation to the alleviation of fuel poverty. Indeed this issue provides an interesting juxtaposition with the above discussion, in part perhaps because the variables referred to above are less apparent in this instance. Problems relating to fuel poverty are an undeniable incident of trends to increasing fuel prices – whether on environmental grounds (as under the Renewables Obligation, designed to assist access to the grid to supplies renewably sourced) or simply market driven.

This illustration offers a further interesting comparison in that it is the subject of ongoing litigation. The background is that under the Warm Homes and Energy Conservation Act 2000 the Secretary of State was obliged to produce a strategy setting out 'policies for ensuring, by means including the taking of measures to ensure the efficient use of energy, that as far as reasonably practicable persons (in England and Wales) do not live in fuel poverty' (fuel poverty applies where in excess of 10% of a household's income is devoted to fuel bills). The strategy had to specify a target date for achieving the above objective, and the Fuel Poverty Strategy 2001 (http://www.berr.gov.uk/files/file16495.pdf) committed the Government 'to seek an end to the blight of fuel poverty for vulnerable households by 2010 (nb: these include households containing old people, children, those with disabilities, considered particularly vulnerable for a range of health and social reasons). Fuel poverty in other households will also be tackled once progress is made on the priority vulnerable groups' (for England this latter group was later included, under an objective that sought nil-fuel poverty by November 2016).

The UK Government was placed under a further duty to assess and report from time to time on progress toward 'achieving the objectives and meeting the target dates' and to 'make any revision of the strategy which the authority considers appropriate in consequence of the assessment'. A 5th Annual Progress Report 2007 (http://www.berr.gov.uk/files/file42720.pdf) stated that taking account of 'the impacts of energy price and income scenarios on the fuel poverty figures … projections show that around 1.6 million households in England will remain in fuel poverty in 2010, of which around 1.3 million are vulnerable'. These figures are broadly comparable with those contained in the original 2001 Strategy, and are in part a consequence of real increases in fuel prices during the intervening period, as pointed out by an influential Parliamentary committee (see for instance House of Commons Treasury Committee, *Budget Measures and Low–Income Households*, 13th Report, 2007–08, HC 326, June 2008, para 151).

Leading national charities, Friends of the Earth and Help the Aged, have been granted leave to apply for judicial review (June 2008), in proceedings that assert a breach of the above duty. Whilst the author is not privy to the case papers, arguments might fairly be address the question of progress towards such goals (especially, 2010). Questions might be expected to arise as to whether any revision has taken place at all, and if so the extent to which a revision of set targets would be authorised in any event. Additional arguments might further be led concerning the question of reasonable practicability, an area which would allow scope for consideration of the application of the principle of proportionality in this context. It must be expected that the proceedings are likely to question the adequacy of Government planning (and associated costings) for meeting targets as well as likely failure to meet targets themselves.

Conclusions

Much debate continues to revolve around the effectiveness of the energy markets with a view to meeting Government objectives of securing adequate and secure supplies into the future, alongside the importance of creating the conditions conducive to necessary levels of investment. Yet the onset of climate change demands efficiency led responses which thus far from a UK perspective are being honoured more in the breach than in the observance. Indeed

another House of Commons Select Committee, the Business and Enterprise Committee, has recently concluded that the commitment to eradicating fuel poverty demands that the Government 'must have in place policy instruments specifically designed to achieve this aim that do not rely on ongoing subsidy of fuel bills' (11th Report, 2007-08, HC 293, July 2008, para 123).

Issues of carbon efficiency are central to each of the illustrations discussed above: that is, securing mitigation of emissions under the Climate Change Bill and resolving problems of fuel poverty under the Warm Homes and Energy Conservation Act 2000. It has been noted that these measures share an explicit setting out of obligations placed on the state to achieve mandated ends. If these are to be used by decision makers as justifications for more radical action in the face of policy imperatives for addressing climate change, then success will to a large extent depend upon how markets respond, whether viewed from upstream (producer, supplier) or downstream (consumer) perspectives.

Human Rights and Environment : what International Law solutions? Applying International Law to indigenous people : Global warming and Human rights

Marta Torre-Schaub

This contribution aims to address the link between human rights and the environment in evaluating the role of environmental rights in the overall landscape of environmental protection and human rights. In particular, this paper focuses in some current affairs, analyzing emerging issues and solutions in International Law. The Inuit petition before the Inter American Human Rights commission is deeply discussed here as an example of climate change and human rights conflict in international law. This article underlines the use of domestic, international law and human rights principles as a solution in climate change litigation.

The first part focuses on the connection between human rights and environmental protection (I). The application of international or domestic law is then discussed in the second part (II). The relevance of the Inuit's petition is drown in the third part. It provides a background of the petition (III). The fourth part analyzes the precaution principle and it's role in global warming regulations (IV). An approach to the acts and omissions of States and International Human rights is considered in the fifth part. The question of domestic law remedies and International law application is of great interest in the sixth part (VI). This article concludes that the Inuit petition may be connected to the Massachusetts v EPA US Supreme Court 2007 case. This conclusive part, engages briefly the possibility of some future solutions to this conflicts (VII).

I. The relationship between Human rights and Environmental protection: a merry marriage?

The Stockholm UN Conference on the Human Environment declared "Man has the fundamental right to freedom, equality and adequate conditions of life in an environment of a quality that permits a life of dignity and well-being". The Rio Convention, twenty years later, asserts laconically "Human beings are entitled to a healthy and productive life in harmony with nature". Human environmental rights are more developed in the Final Report of the UN Sub-Commission on the Prevention of Discrimination and Protection of Minorities[141]. This Report undertakes human rights and the environment by offering a conception much closer to the Stockholm declaration, based on a survey of national and international human rights law and of international environmental law[142].

The right to a decent environment[143] is not yet unanimous in international law texts. It appears to be more frequent in domestic constitutions.

Still, other rights are frequently used in order to protect the environment on a human rights bases, as property rights, right to health, right to life, culture rights. It seems though some of those rights can improve environmental protection. This paper analyses the way environmental rights and other rights connected are mobilized in order to fight against particular acute environmental offenses and dangers as global warming.

Two main questions arise here: why environmental matters should be approached through human rights and how.

One might expect great co-operation between environmentalists and human rights activists and specialists though there is sometimes some tensions. There is an increasing

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[141] UN Doc. E/CN.4/Sub.2/1994/9 (6 July 1994). 74.

[142] Alan Boyle, « The Role of International Human Rights Law in the Protection of the Environment » in *Human Rights Approaches ton Environmental protection*, ed A. Boyle and M. Anderson, Clarendon, OUP, 2003, p. 43.

[143] Roderick (ed) Conference report : *Human rights Approaches to Environmental protection in the Commonwealth and beyond*, London, 1993

tendency for environmentalists and human rights specialists and activists to work together toward common goals, at international, regional and domestic levels. Both aim to restrain the exercise of unaccountable power by governments and private actors.

The creation of a reliable and effective system of environmental protection would help ensure the well-being of future generations as well as the survival of those persons, often including indigenous or economically marginalized groups, who depend upon natural resources for their livelihoods.

The legal protection of human rights is an effective means to achieving the ends of conservation and environmental conservation and environmental protection.

But how should a substantive environmental right be defined ? Which dimensions of the environment are to be protected and what degree of environmental change is permissible? Beyond the distinction between Human rights of first, second and third generation, in the existing constitutional and statutory provisions relating to environmental protection and quality, one finds a series of adjectives attached to the word environment as "decent", "healthy", "safe" etc. In the absence of a clear definition of an "environmental right" those adjectives may help to define it.

Towards a definition of environmental right?

The more frequent definition of Environmental Human rights is, broadly, the right, whether of individuals or a group, to a decent environment. More specifically, such rights as the right to be free to excessive pollution of the land, water or air or pollution from noise, the right to enjoy an unspoilt nature, and the right to enjoy biological diversity.

II. Legal application of environmental rights : National or International Law?

An important question concerning legal application of environmental rights relates to the appropriate jurisdiction, since an argument can be made for the recognition of environmental rights both domestic and international law. National and International right are very different entities since national rights are often capable of immediate enforcement in court, and are much likely to be caught up in the everyday business of environmental management, while international rights exist mainly as inspirations and instruments of general supervision[144]. National constitutions offer, often, environmental rights protection in a detailed way as they can express local particularities. While international instruments are drafted at levels of generality and abstraction required to secure multilateral agreement. Yet these differences create complementary rather than competing legal regimes, and the dialogue between the two is as necessary as beneficial. The interdependence of national and international rights is probably unavoidable. The coexistence of national and international norms may be an important advantage for an environmental and human rights protection.

Often, the mere existence of an environmental rights in a National Constitution does not provide effective remedy to some environmental problems as Global warming for instance. Also, the existence of human rights protection in National Constitutions does not protect indigenous populations against economic and environmental depredation and thus against the lose of their culture and live style. Though, it seems necessary sometimes, in order to create or consolidated rights in the domestic context, to assert them by international law instruments as some international human rights courts can do. International jurisdictions can create rights. They can also push national legal systems to create or affirm rights by domestic laws.

International law and enforcement : looking for solutions

The main problem in International law is surely the enforcement. It's also the greatest challenge for both human rights standards and environmental regulation. In part, this problems are matters for administrative organization, ideological choices and political culture. But from a legal point of view, our aim is to show that they are also bear directly upon the varieties of procedures and remedies which are available to parties.

The rapid pace of climate change in the Arctic poses serious challenges for the Inuit peoples living there. A petition filed with the Inter-American Commission on Human Rights in December 2005, on behalf of Inuit in the United States and Canada, claims that U.S.

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[144] Michael R. Anderson, « Human rights and environment, an overview » in *Human Rights approaches to environmental protection*, ed A. Boyle, Oxford University Press, 2003, p. 18

climate change policy violates their rights. This case will be presented here. The main question that arise is: in which extent an International Law mechanism can interfere with a National legal system in a positive and constructive way. In other words, how can an International Law instrument oblige a domestic government to regulate greenhouse emissions in order to protect minorities population from environmental degradation (global warming more precisely) and from Human Rights violations.

III. The Human Rights of indigenous people and climate change: the Inuit's petition

The human rights of indigenous people should be interpreted in the context of their culture and history, which requires protection of their land and environment.

In december 2005 a petition filed with the Inter-American Commission on Human Rights in December 2005, on behalf of Inuit in the United States and Canada, claims that U.S. climate change policy violates their rights. In November 2006 the Commission stated that the information provided was not enough to determine whether the alleged facts would tend to characterize a violation of the rights protected by the American Declaration. A new petition filled was presented. This time the Commission accepted to see the case, still pending today.

The petitioners

The Inuit petitioners have subnational, national, and supranational identities that include layered socio-political and legal connections. At a subnational level, they have strong ties to particular local communities, ties which form a part of the human rights claims they are making. Moreover, these communities sometimes form larger regional groupings

The Inter-American Commission on Human Rights, a regional human rights body established by the Organization of American States (OAS), is nevertheless considered as an International Law Institution based on the Inter-American Human Rights Declaration.

The Commission has since 1959 recognized and promoted respect for the rights of indigenous peoples of this Hemisphere. Since 1972, it has been the Commission's position that "because of moral and humanitarian principles ... protection for indigenous populations constitutes a sacred commitment of the states." This recognition, shared by the international community as a whole, is a norm of general or customary international law. "In acknowledging and giving effect to particular protections in the context of human rights of indigenous populations, the Commission has proceeded in tandem with developments in international human rights law more broadly."

Two main questions are to be analized here. The first related the relationship between, environmental protection/human rights (A). It involves the complexities of capturing cross-cutting problems through the available substantive categories. The second, involves the set of relationships between indigenous peoples/nation-states, local/national/supranational, and private/public. It confronts the evolving constraints of the international legal system (B).

A. Environmental protection, Global warming and Human rights

How the effects of Global warming violates rights of the Inuits

The changes caused by global warming can interfere with the realization of several human rights, such as the rights to life, physical integrity and security; the right to use and enjoy property without undue interference (including the right of indigenous people to use and enjoy the lands they have traditionally used and occupied); the right to the preservation of health; the right of peoples to their own means of subsistence; and the right to enjoy the benefits of culture.

Several Human rights, as being violated or in danger, have been presented in the petition: the right to life, the right to the benefits of culture, the right to a property, to right to a health. The American Declaration guarantees those Inuit's rights.

The Charter of the Organization of American States places cultural development and respect for culture in a position of supreme importance. The American Convention also recognizes the importance of cultural freedom to human dignity in its protection of freedom of association and progressive development.466 Cultural rights are also protected in other major human rights instruments including the Universal Declaration of Human Rights the ICCPR, and the International Covenant on Economic, Social and Cultural Rights (ICESCR).

The harm : the specific geographical difficulties on global warming

One of the main difficulties in global warming cases and particularly in this one is that the environmental rights claims intertwine science and law to represent a complex environmental process in human terms. The Inuit petition builds on the existing jurisprudence in the Inter-American Commission on Human Rights by presenting an environmental rights' harm that is separated in both time and location from the behavior causing it.

This case raises foundational questions about the appropriate role for supranational human rights petitions in the broader context of advocacy involving indigenous peoples. How problematic is it in this context that international human rights protections emerge out of international law and a legal system based on nation-states? What is the value of obtaining these judgments?

The Petition

The violations detailed in the petition can be remedied. As such, the Petitioner respectfully requests that the Commission:

Prepare a report setting forth all the facts and applicable law, declaring that the United States of America is internationally responsible for violations of rights affirmed in the American Declaration of the Rights and Duties of Man and in other instruments of international law, and recommending that the United States:

a. Adopt mandatory measures to limit its emissions of greenhouse gases and cooperate in efforts of the community of nations – as expressed, for example, in activities relating to the United Nations Framework Convention on Climate Change – to limit such emissions at the global level.

b. Take into account the impacts of U.S. greenhouse gas emissions on the Arctic and affected Inuit in evaluating and before approving all major government actions.

c. Establish and implement, in coordination with Petitioner and the affected Inuit, a plan to protect Inuit culture and resources, including, *inter alia*, the land, water, snow, ice, and plant and animal species used or occupied by the named individuals whose rights have been violated and other affected Inuit; and mitigate any harm to these resources caused by US greenhouse gas emissions.

d. Establish and implement, in coordination with Petitioner and the affected Inuit communities, a plan to provide assistance to impacts of climate change that cannot be avoided.

The United States and International Law : what bridges, what responsibilities, what obligations?

Several principles of international law guide the application of the human rights issues in this case. Most directly, the United States is obligated by its membership in the Organization of American States and its acceptance of the American Declaration of the Rights and Duties of Man to protect the rights of the Inuit described above. Other international human rights instruments give meaning to the United States' obligations under the Declaration. For example, as a party to the International Convention on Civil and Political Rights ("ICCPR"), the United States is bound by the principles therein. As a signatory to the International Convention on Economic, Social, and Cultural Rights ("ICESCR"), the United States must act consistently with the principles of that agreement[145].

The United States also has international environmental law obligations that are relevant to this petition. For instance, the United States also has an obligation to ensure that activities within its territory do not cause transboundary harm or violate other treaties to which it is a party.

As a party to the UN Framework Convention on Climate Change, the United States has committed to developing and implementing policies aimed at returning its greenhouse gas emissions to 1990 levels. All of these international obligations are relevant to the application of the rights in the American Declaration because, in the words of the Inter-American Commission, the Declaration "should be interpreted and applied in context of developments in the field of international human rights law ... and with due regard to other relevant rules of international law applicable to [OAS] member states."

The impacts of climate change, caused by acts and omissions by the United States,

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[145] Ary Ofovsky, The Inuit petition as a bridge ? *American Indian Law Review*, 2006-2007, n° 31, p. 675

violate the Inuit's fundamental human rights protected by the American Declaration of the Rights and Duties of Man and other international instruments. These include their rights to the benefits of culture, to property, to the preservation of health, life, physical integrity, security, and a means of subsistence, and to residence, movement, and inviolability of the home.

Because Inuit culture is inseparable from the condition of their physical surroundings, the widespread environmental upheaval resulting from climate change violates the Inuit's right to practice and enjoy the benefits of their culture. The subsistence culture central to Inuit cultural identity has been damaged by climate change, and may cease to exist if action is not taken by the United States in concert with the community of nations.

The Inuit's fundamental right to enjoy their personal property is violated because climate change has reduced the value of the Inuit's personal effects, decreasing the quality of food and hides, and damaging snowmobiles, dog sleds and other tools. Their right to cultural intellectual property is also violated, because much of the Inuit's traditional knowledge, a formerly priceless asset, has become frequently unreliable or inaccurate as a result of climate change.

The Inuit's fundamental rights to health and life are violated as climate change exacerbates pressure on the Inuit to change their diet, which for millennia has consisted of wild meat and a few wild plants. Climate change is accelerating a transition by Inuit to a more western store-bought diet with all of its inherent health problems. Life-threatening accidents are increasing because of rapid changes to ice, snow, and land. Traditional food preservation methods are becoming difficult to practice safely. Natural sources of drinking water are disappearing and diminishing in quality. Increased risks of previously rare heat and sun related illnesses also implicate the right to health and life.

The Inuit's fundamental rights to residence and movement, and inviolability of the home are likewise violated as a result of the impacts of climate change because the physical integrity of Inuit homes is threatened. Most Inuit settlements are located in coastal areas, where storm surges, permafrost melt, and erosion are destroying certain coastal Inuit homes and communities.

The Inuit's fundamental right to their own means of subsistence has also been violated as a result of the impacts of climate change. The travel problems, lack of wildlife, and diminished quality of harvested game resulting from climate change have deprived the Inuit of the ability to rely on the harvest for year-round sustenance. Traditional Inuit knowledge, passed from Inuit elders in their role as keepers of the Inuit culture, is also becoming outdated because of the rapidly changing environment.

The United States of America, currently the largest contributor to greenhouse emissions in the world, has nevertheless repeatedly declined to take steps to regulate and reduce its emissions of the gases responsible for climate change. As a result of well-documented increases in atmospheric concentrations of greenhouse gases, it is beyond dispute that most of the observed change in global temperatures over the last 50 years is attributable to human actions. This conclusion is supported by a remarkable consensus in the scientific community, including every major US scientific body with expertise on the subject. Even the Government of the United States has accepted this conclusion.

However, and notwithstanding its ratification of the UN Framework Convention on Climate Change, United States has explicitly rejected international overtures and compromises, including the Kyoto Protocol to the U.N. Framework Convention on Climate Change, aimed at securing agreement to curtail destructive greenhouse gas emissions. With full knowledge that this course of action is radically transforming the arctic environment upon which the Inuit depend for their cultural survival, the United States has persisted in permitting the unregulated emission of greenhouse gases from within its jurisdiction into the atmosphere.

Protecting human rights is the most fundamental responsibility of civilized nations. Because climate change is threatening the lives, health, culture and livelihoods of the Inuit, it is the responsibility of the United States, as the largest source of greenhouse gases, to take immediate and effective action to protect the rights of the Inuit.

International law application

The American Declaration should be applied in the context of relevant international norms and principles. Because this petition raises violations of the American Declaration of

the Rights and Duties of Man by the United States of American, the Inter-American Commission on Human Rights has jurisdiction to receive and consider it. The petition is timely because the acts and omissions of the United States that form the basis for the petition are ongoing, and the human rights violations they are causing is increasing. As there are no domestic remedies suitable to address the violations, the requirement that domestic remedies be exhausted does not apply in this case.

In considering the United States' acts and omissions relating to climate change, therefore, the Commission should take into account not only the specific rights provisions in the American Declaration of the Rights and Duties of Man and the American Convention on Human Rights, but also other relevant obligations the United States has assumed under international treaties and customary international law. The United States' breach of these obligations reinforces the conclusion that the United States is violating rights protected by the American Declaration.

The United States is violating its obligations under the United Nations Framework Convention on Climate Change and the Kyoto Protocol. The United States is violating its obligation to avoid transboundary harm and to respect the principle of sustainable development

Customary international law requires the United States to prevent its territory from being used in a manner that causes harm outside of its jurisdiction. This obligation to avoid transboundary environmental harm is one of the most fundamental and widely recognized customary international law norms. It originates from the common law principle of *sic utere tuo ut alienum non laedus* (do not use your property in a manner that will harm others).

IV Precaution principle and it's role in Global warming

The obligation of States to act cautiously in the face of scientific uncertainty is a well-established principle of international law[146]. The Rio Declaration provides the most widely accepted articulation of this norm: "In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. When there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

The precautionary principle has been included in many of the major international environmental treaties, including agreements to address climate change, ozone, biodiversity, biosafety, and persistent organic pollutants.

Is the United States violating its obligation to act with precaution ?

The United States has accepted treaties endorsing a precautionary approach, such as the Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on Heavy Metals and the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks. Moreover, recent environmental agreements demonstrate an emerging international trend of strengthening the precautionary principle to embrace an active obligation to make decisions in a precautionary manner.

Most relevant here, the Framework Convention, to which the United States is a party, states that "[t]he Parties should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. "The Convention specifically addresses scientific uncertainty by noting that "lack of full scientific certainty should not be used as a reason for postponing [cost-effective] measures" in the face of "threats of serious or irreversible damage."

U.S. action and inaction in response to its acknowledged contributions to global climate change demonstrate a failure to take precautionary measures. The U.S. government has repeatedly alleged uncertainty in climate science, and continues to do so, to justify its refusal to take effective steps toward reducing carbon emissions. The precautionary principle articulated in the Framework Convention and other international instruments would require the United States to take precautionary measures to reduce emissions even if the uncertainty alleged by the United States actually existed. At this point, however, there is no longer scientific uncertainty over the threat that climate change poses or the contribution of

[146] Kiss and Shelton, *International Environmental Law* ; Kane, « Promoting Political rights to protect the environment », *Yale Law journal*, 1993, p. 389.

greenhouse gases to it. As detailed in Part II, the Intergovernmental Panel on Climate Change and the international and U.S. scientific communities agree that human-induced emissions of greenhouse gases are the principal cause of global warming. Moreover, the United States has acknowledged that it contributes almost 20% of the world's greenhouse gas emissions, and that it plans to increase its net contributions of greenhouse gases each year. The impacts of climate change on the Arctic and Inuit are both serious and irreversible.

The alterations in the ice and land are progressing rapidly, and causing long-term changes to the environment. Similarly, the loss of the Inuit's communities and traditional way of life cannot be easily corrected at a later date.

Although there remains some scientific uncertainty with respect to the nature and timing of sub-regional impacts, there is virtually no scientific uncertainty with respect to the issues relevant to this petition – the rapid and persistent warming of the Arctic as a result of the buildup of anthropogenic greenhouse gases in the atmosphere, and the highly adverse effect of this warming on the lives and culture of the Inuit. Were there some uncertainty concerning these issues, however, the U.S. approach to climate change would violate the precautionary principle.

V. Acts and Omissions of States and International Human rights and environmental protection

It seems by what has been exposed that by his acts and omissions, the U.S violates the human rights of the Inuit to a health environment.

U.S. Climate policy does not reduce greenhouse gas emissions. U.S. climate policy is not effective[147]. They are misleading and ineffective targets. Not only there is no mandatory controls but only indirect regulation. The United States has also failed to address major sources of emissions by other means. Power plants and vehicles are two of the main sources of U.S. greenhouse gas emissions, and both are subject to extensive government regulation. Yet the United States has repeatedly declined to extend such regulation to include greenhouse gases. State and local measures are not enough. The U.S government, as it's well known, has obscured climate science misleading both the public and industry as to the scale and urgency of the problem of Global warming. The United States has consistently denied, distorted, and suppressed scientific evidence of the causes, rate, and magnitude of global warming. Despite substantial evidence of human- induced climate change, including several assessments by the Intergovernmental Panel on Climate Change (IPCC) and recent reports by its own agencies confirming and expanding on the findings of the IPCC, the U.S. government continues to insist that the science does not yet justify a reduction in greenhouse gas emissions. It stresses and frequently exaggerates the uncertainties in climate science as an excuse for inaction.

Action Report (its third annual report to the UNFCCC), affirmed the mainstream scientific consensus that human greenhouse gas emissions are causing global warming. All of these assessments amply justify immediate action to address climate change. Rather than act, however, the U.S. government has attacked the evidence and obscured the ineffectiveness of its own climate policy.

The result is that the U.S has failed to cooperate with international efforts to reduce greenhouse gas emissions. This leads to try the International law solutions because all national law system remedies have been exhausted.

VI. Domestic law remedies and International law application

The U.S law does not provide adequate or effective protection against the Human rights violations. Article 31.1 of the Commission's rules of procedure specifies: "In order to decide on the admissibility of a matter, the Commission shall verify whether the remedies of the domestic legal system have been pursued and exhausted in accordance with the generally recognized principles of international law." These general principles of international law are further elaborated in article 31.2(a), which establishes that the exhaustion requirement "shall not apply when ... the domestic legislation of the State concerned does not afford due process of law for protection of the right or rights that have allegedly been violated." Because there are no remedies "suitable to address the infringement" of the rights Petitioner alleges to have been violated in this case, the requirement that domestic remedies be exhausted does not apply in this case. Thus, the petition is admissible under the rules of procedure of the Commission.

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[147] Marilyn Averill, « Climate change litigation : ethical implications and societal impacts », *Denver University Law Review* 2008, p. 899

The exception to exhaustion of domestic remedies

As said, U.S. law does not provide adequate or effective remedies for the harms that have caused the violations suffered by the Inuit.

a) U.S. Tort laws

Many of the injuries suffered by the Inuit as a result of climate change may be characterized as torts. However, U.S. tort law does not provide a remedy for these violations.

b) U.S. Environmental laws

This petition demonstrates that the Inuit have suffered human rights violations as a result of the United States' failure to take action to prevent harm caused by its greenhouse gas emissions. Although this is predominantly an environmental issue, the U.S. government itself has interpreted the leading U.S. air quality statute as providing no remedy for the violations alleged in this petition, and has suggested no other statute that could provide a remedy. U.S. federal courts have affirmatively ruled that no right to environmental protection exists under the U.S. Constitution. Further, although several U.S. statutes address the protection of natural resources, environmental quality, public health, and cultural heritage, none of these laws protects the rights at issue in this petition or prevents the harms that are the basis for the violations of the Inuit's human rights.

The most obvious potential source of a domestic remedy for harm resulting from U.S. greenhouse gas emissions is the U.S. Clean Air Act (CAA). The U.S. Environmental Protection Agency is responsible for implementing this law. However, the U.S. government has stated that "the CAA does not authorize EPA to regulate for global climate change purposes, and accordingly that CO2 and other [greenhouse gases] cannot be considered 'air pollutants' subject to the CAA's regulatory provisions for any contribution they may make to global climate change." The government has also determined that, even if it had the authority to regulate greenhouse gases, such authority would be discretionary and the government would not exercise such discretion. Finally, the government has formally taken the position that individuals like Petitioner or the individuals whose rights have been violated in this case cannot use U.S. courts to challenge its failure to regulate greenhouse gases. In light of the U.S. government's statements on the availability of environmental regulation and the absence of judicial remedies for the government's failure to regulate greenhouse gas emissions, the international legal principle of *non concedit venire contra factum proprium* – no one may set himself in opposition to his own previous conduct – prohibits the United States from arguing before this Commission that the petition is inadmissible because the Clean Air Act provides a remedy for the violations at issue.

VII. Temporary conclusions

In the Massachusetts case[148] twelve states and several cities of the United States brought suit against the United States Environmental Protection Agency (EPA) to force that federal agency to regulate carbon dioxide and other greenhouse gases as pollutant. The Supreme Court decided that the federal government and the EPA should in short legislate by regulating the CO2 emissions, establishing limits to those emissions causing Global warming and thus violating environmental rights for the American people as the right to enjoy outside activities etc. By this legal technique, Courts (Domestic or International) can oblige national law making in order to protect some environmental fundamental rights[149]. This case was failed into domestic jurisdiction, but, no doubt, it will affect the International arena.

In Massachusetts v EPA, the US Supreme Court entered this policy dialogue for the first time, calling upon the US Environmental Protection Agency to take climate change more seriously. This case reinforces a growing public awareness of climate change as a problem that demands a stronger policy response. As debates over the appropriate role of climate change litigation in regulatory governance become more intertwined with the ongoing fight over the future of international law, a systematic examination of how it fits into that discourse is critical. This article attempted to continue that conversation by examining the ways in which geographic assumptions about nation-states and human rights influence narratives about how this type of issue fits into an understanding of international law.

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[148] *Massachusetts v. Environmental Protection Agency*, 549 U.S. 497, april, 3, 2007

[149] Hari M. Osofsk, « Global Networks: The Environment and Trade, the geography of climate change litigation part II : narratives of MASSACHUSETTS V EPA, *Chicago Journal of International Law* Winter 2008, p. 573.

The Massachusetts case will reopen that debate and show a progress on the greenhouse domestic making law. It will be expected also that EPA future CO2 regulations will influence the Inter American Human Rights Commission in the Inuit petition. This will implicate significant changes in international climate change law.