WORKING DRAFT REPORT

Innovative Regulatory Frameworks Promoting Green Economy for Sustainable Development and Poverty Eradication in Europe

A report commissioned by the United Nations Environment Programme (Forthcoming)

June 2013

Dr Markus Gehring & Avidan Kent[1]

Cambridge University Centre for European Legal Studies

University of Ottawa Jean Monnet Research Chair in Sustainable Development Law

Centre for International Sustainable Development Law (CISDL)

[1] The authors would like to thank Sophie Lemaitre and Laura Letourneau-Tremblay for their valuable research assistance.

Table of Contents

Table of Abbreviations

CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
EMAS	Eco-management and Audit Scheme
EIA	Environmental Impact Assessment
STECF	European Commission's Scientific, Technical and Economic Committee for Fisheries
CFP	EU's Common Fisheries Policy
ECJ	European Court of Justice
EEA	European Environment Agency
EFF	European Fisheries Fund
EU ETS	EU Emission Trading System
FIT	Feed-in Tariffs
FLEGT	Forest Law Enforcement, Governance and Trade initiative
RE	Renewable Energy
TEU	The Treaty on European Union
TFEU	The Treaty on the Functioning of the European Union
WEEE	Waste Electrical and Electronic Equipment

PART I: Introduction

Part I details the scope, background context, general issues, concepts and structure of the compendium. It introduces the functions and challenges of using law to promote the green economy, and explains emerging principles and approaches.

There is no one legal definition of a green economy. Heads of State and Government united in Rio, twenty years after the original Earth Summit, considered "green economy in the context of sustainable development and poverty eradication as one of the important tools available for achieving sustainable development" while noting that "it could provide options for policymaking but should not be a rigid set of rules."[2] As outlined in the 2012 Rio+20 Declaration 'The *Future We Want*', there are "different approaches, visions, models and tools available to each country."[3] It is the objective of this compendium and analysis to highlight the legal dimensions of the global green economy at the national level.

The political Rio+20 Declaration challenges lawyers and legal professionals around the world to think creatively about the legal preparedness for the green economy. To this end, this study focuses on highlighting the legal changes that are being adopted at national and regional levels to facilitate the transition to a greener economy. The purpose is thus to point out the challenges that domestic governments face in transitioning to a greener economy and to research the means by which these challenges can be met.[4] This compendium gathers recent practices in legal and institutional reform that exemplify promising methods of addressing green economy measures.

1.1 Europe and the Green Economy

The need to combine economic policies with environmental and social objectives is well-accepted in Europe. The transition into the green economy is therefore perceived today as a necessity, rather than a choice. The European Environment Agency (EEA) has recently commented in this respect:

> "*When we reflect on the demands that we are already imposing on our ecosystems, it's apparent that green growth isn't just a preferable approach to economic development. On the contrary, in the long term it's the only way to sustain economic growth. 'Brown growth' that destroys our natural systems can't be justified by the apparent gains it offers. Ultimately, it will diminish our prosperity in every sense. In contrast, the objectives of a green economy are to meet our needs — for food, transport, energy and so on — in a sustainable and equitable way.*"[5]

---

[2] United Nations General Assembly A/RES/66/288 of 11 September 2012 - The future we want, para. 56.

[3] United Nations General Assembly A/RES/66/288 of 11 September 2012 - The future we want, para. 56.

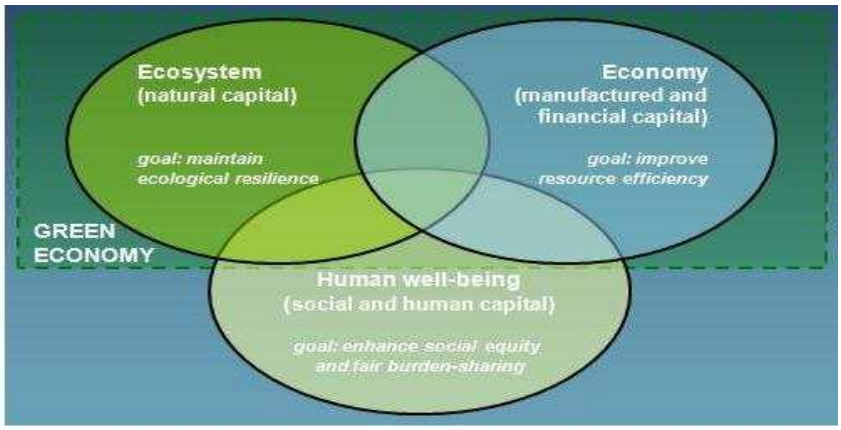
[4] See, as foundational surveys which provide initial reviews, for which this author and colleagues served as experts, IDLO-CISDL Compendium of Legal Best Practices Green Economy (Rome: IDLO/CISDL 2012). See also IDLO-CISDL Compendium of Legal Best Practices on Climate Change Policy (Rome: IDLO/CISDL 2011), p. 5. Available online: http://www.idlo.int/Publications/ClimateChangeCISLMay2011.pdf.

[5] European Environment Agency (EEA). Available online: http://www.eea.europa.eu/themes/economy/intro. [EEA. "Green Economy"]

As to the definition of the term 'green economy', the EEA noted that no consistent definition is currently available, and that this term is "still an emerging concept".[6] But while no one legal definition of this term can be found at the European level, there is a growing consensus on certain key elements surrounding the debate. The EEA emphasises in this respect the "twin challenge" of "finding ways to increase our prosperity without increasing resource use and environmental impacts."[7] A third element - human well-being – is also mentioned by the EEA,[8] albeit the weight granted to the first two elements by the EEA seems to be greater:[9]

> "*In balancing environmental, economic and social elements, the green economy concept evidently has much in common with the notion of sustainable development — albeit with a focus primarily on the environmental and economic aspects.*"

The following diagram was provided by the EEA in order to describe the green economy, in accordance with its vision:



Source: EEA[10]

[6] European Environment Agency, "Europe's environment: An Assessment of Assessment" (Luxembourg: EU, 2011) online: <http://www.eea.europa.eu/publications/europes-environment-aoa> at 93.

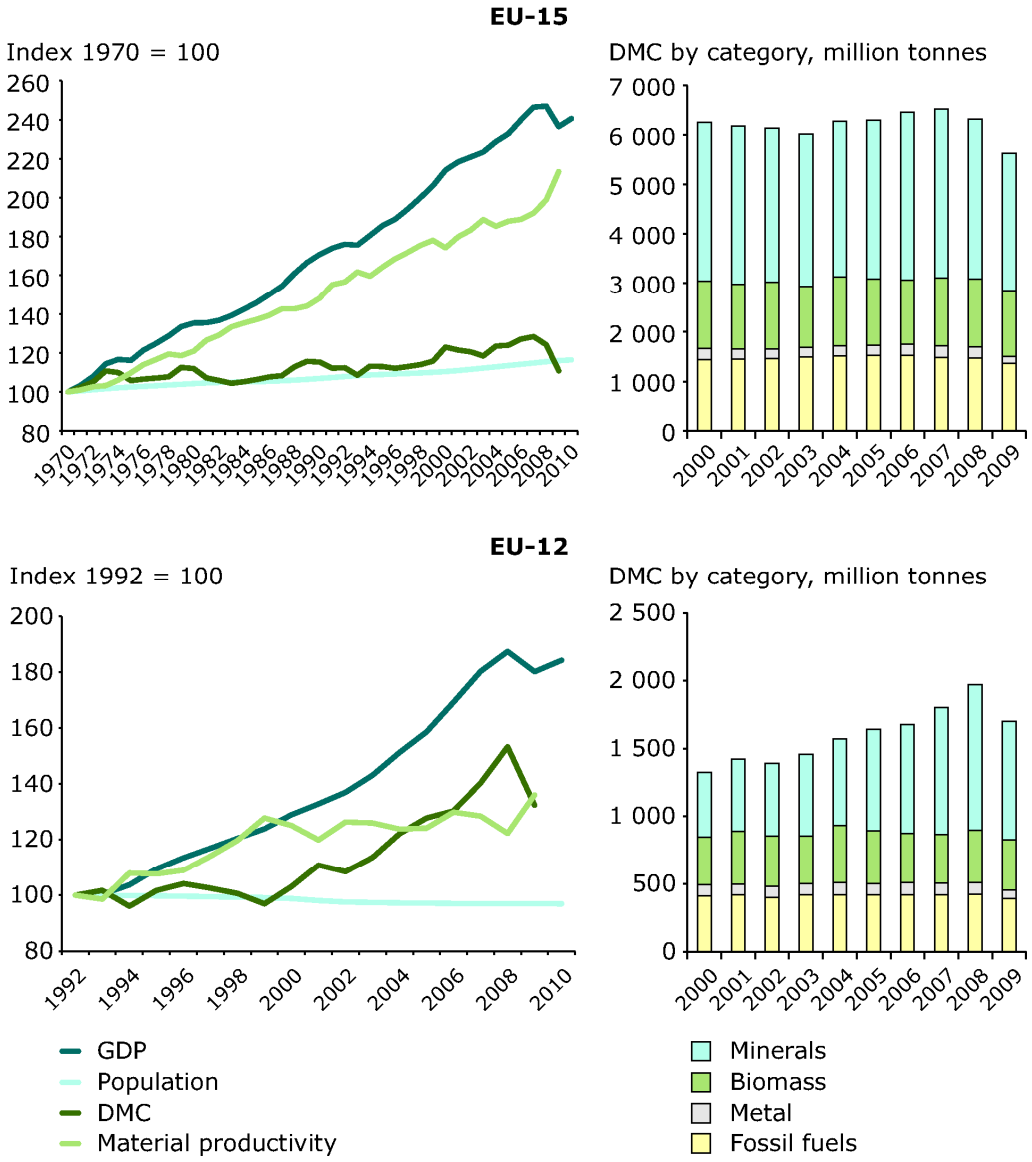
[7] EEA. "Green Economy", see also European Environment Agency, "The European Environment: State and outlook 2010",(Copenhagen: EEA, 2010) online: EEA <http://www.eea.europa.eu/soer/synthesis/synthesis> [EEA, "The European Environment: State and outlook 2010"].

[8] *Ibid.*

[9] EEA. "Green Economy", *supra* note 5.

[10] EEA. "Green Economy", *supra* note 5.

A great deal of further effort is required in Europe so as to complete the transition into a green economy. Indeed, as the following EEA Charts demonstrate, trends in the use of material resources in EU-15, 1970 to 2010, have increased exponentially, even during a strong policy demand for de-coupling economic development from environmental degradation.



Source: EEA[11]

To summarise, this study examines the transition to a greener economy, supporting economic development that is de-coupled from further depletion of natural resources and degradation of the environment more broadly, understanding that fundamentally, such economic development must focus on ending poverty in Europe and in the world.

[11] EEA. "Green Economy", *supra* note 5.

1.2 The structure and context of this study

As stressed above, this study highlights the legal instruments that are being adopted at national and regional levels to facilitate the transition to a greener economy. It presents a myriad of regulatory options from a variety of levels. Part II of this study commences with a review of constitutional provisions and framework laws adopted in European legal systems, through which the transition to green economy can be promoted. It continues with an overview of the trends in green economy instrument design and implementation. Among other trends, it reviews mandatory strategies, institutional arrangements, mechanisms for reducing environmental risks, economic and financial instruments, voluntary regulations, and information disclosure obligations. Part II ends with the identification of several examples of emerging principles and best practices in the European legal system: The principle of integration and interrelationship, the polluter pays principle, and duties related to the provision of information.

Following the review of the different trends presented in Part II of this study, Part III continues with a detailed sector-specific analyse of laws and institutions. In this section the authors examine such sectors as agriculture, forests, fisheries, tourism, construction, energy, transportation, waste management and mining.

In Part IV of this study the authors present recommendations concerning several examples of innovative, interesting and potentially transferrable legal instruments. In this part the use of constitutions, voluntary legal instruments, guiding legal principles and obligations related to transparency and information are emphasised.

Finally, in Part V of this study selected ScoreCards of European legislative provisions on the Green Economy are presented.[12]

Before commencing the review of European legal instruments, two preliminary clarifications should be made so as to enable the reader to understand the choice of laws made by the authors, as well as the authors' position on these laws. First, due to the legal structure of the European Union ("EU"), its 27 Member States are obliged to follow EU Law and on many instances also to incorporate it into their domestic legal systems. In fact, in most of the areas reviewed in this study the EU is indeed the most competent regulatory authority. This situation somewhat reduces the "plurality" of the different regulatory instruments that might be expected from a review of an entire region such as Europe. This situation is also the reason the authors chose to focus much of their attention on EU Law; it seems redundant for instance to review the waste management laws of France, Germany and Sweden, when these states must in fact follow the same regulatory framework set out by the EU.

Second, this compendium does not aspire to present the best practices, nor it is intended to endorse the efficiency of all the legal examples presented in it. In fact much of the green economy regulation is fairly new, and as such its gains and shortcomings are still being evaluated. It seems premature

[12] The authors would like to thank Laura Letourneau-Tremblay and Sophie Lemaitre for the preparation of these scorecards.

to argue from the limited experience gained in the implementation of these laws that their positive contribution and efficiency is certain. The regulation presented however, reflects the most innovative attempts to regulate the green economy in Europe. It is constantly being re-shaped, evaluated and improved, and as such it is believed that there is much to be learned from the examples presented in this compendium.

PART II: European Regulatory Frameworks for the Green Economy

2.1 Regulatory Frameworks to Promote the Green Economy for Sustainable Development and Poverty Eradication in Europe

This section introduces Part II, briefly demonstrating that new regulatory instruments are being adopted to promote the green economy in Europe, including through provisions in recently adopted Constitutions and framework laws, and the judicial application of principles and regulations.

a. Constitutional Provisions relevant to the Green Economy in Europe:

There are several examples of European constitutional provisions in which issues related to the green economy are mentioned. Most notably, the European Union's ("EU") treaties provide useful norms as to how best to conduct economic and social policy-making, and the relation of such policies to environmental protection. These norms can be found in The Treaty on European Union ("TEU"),[13] The Treaty on the Functioning of the European Union ("TFEU")[14] as well as in the EU Charter of Fundamental Rights ("EU Charter").[15] While these EU treaties are not considered as 'constitutional' *per se,* the principle of supremacy[16] (according to which EU law takes priority over and thus trumps conflicting national law) grants these treaties a fundamentally higher normative status.

The TEU and the TFEU are fundamentally economic instruments, which were originally intended to create an economic union. In the past few decades the nature of this union has expanded beyond the economic sphere, and issues such as human rights, foreign policy and environmental protection are now strongly embedded in the EU's framework. Most relevant to this compendium, the EU Treaties now prescribe that values such as environmental protection and sustainable development should be considered and promoted as part of the EU economic activity. The Preamble to the TEU for example, states:

> *"[The EU is] DETERMINED to promote economic and social progress for their peoples, taking into account the principle of sustainable development and within the context of the accomplishment of the internal market and of reinforced cohesion and environmental protection, and to implement policies ensuring that advances in economic integration are accompanied by parallel progress in other fields"*

---

[13] *The Treaty on European Union*, 13 December 2007 (entered into force at 1 December 2009), O.J. C 326/01. See in the Preamble, Article 3 and Article 21.

[14] *The Treaty on the Functioning of the European Union*, 13 December 2007 (entered into force at 1 December 2009), O.J. C 326/01. See in Article 11.

[15] *Charter of Fundamental Rights of the European Union*, O.J. C 326/391. See in the Charter's Preamble and in , Article 37.

[16] *Costa v. ENEL*, (1964) Case 6/64. 1964. See for details R. Schütze, *European constitutional law*, (Cambridge, UK; Cambridge University Press, 2012) p. 347.

The importance of environmental protection and its relevance to the EU's economic activity is mentioned also in Article 3 of the TEU (the Union's objectives), and most notably in Article 11 of the TFEU, where it is stated:

> *"Environmental protection requirements must be integrated into the definition and implementation of the Union's policies and activities, in particular with a view to promoting sustainable development."*

The obligation to integrate environmental protection into the Union's policies is also expressed in the Article 37 of the EU Charter:

> *"A high level of environmental protection and the improvement of the quality of the environment must be integrated into the policies of the Union and ensured in accordance with the principle of sustainable development"*

This provision appears to highlight only one 'principle of sustainable development', but as is clear from the Commentary to the Charter, this provision drafters referred to all existing principles of EU law relating to the environment and sustainable development.[17] For the purposes of promoting the green economy, these include the polluter-pays principle, the precautionary principle, and the principle of integration of environmental considerations into development decision-making, among others.

Similar commitments can also be found in the Constitutions of European states. On many occasions the duty to protect the environment is mentioned in European Constitutions with no explicit connection to the state's economic policy (see for example the constitutions of Germany, Finland, Andorra, Croatia and the Netherlands).[18] In some cases however, the state is bound by an explicit constitutional obligation to include environmental consideration in its economic policies.

In France, Article 6 of the Charter for the Environment of 2004 (which is mentioned in the Preamble to the French Constitution and is of constitutional value) states that "public policies shall promote sustainable development. To this end they shall reconcile the protection and enhancement of the environment with economic development and social progress."

Article 110 of Norway's Constitution affirms an individual right to healthy and natural environment, and imposes a duty on the state to manage its natural resources in a sustainable

---

[17] EU Network of Independent Experts on Fundamental Rights, *Commentary of the Charter of Fundamental Rights of the European Union* , online: <http://ec.europa.eu/justice/fundamental-rights/files/networkcommentaryfinal_en.pdf>.

of the European Union (Commission 2005) p. 315; available online http://ec.europa.eu/justice/fundamental-rights/files/networkcommentaryfinal_en.pdf

[18] See for example Article 20a of the Basic Law for the Federal Republic of Germany; Article 21 of the Netherlands Constitution; Section 20 of Finland's Constitution; the preamble to Andorra's Constitution; Article 69 to Croatia's Constitution.

manner, with consideration for the interests of future generations. In support of these goals, this Article places an obligation on the state to provide access to information.[19]

In Belgium, Article 7 of Belgium's Constitution prescribes that: "In the exercise of their respective competences, the Federal State, the Communities and the Regions follow the objectives of lasting development in its social, economic and environmental aspects, taking into account the solidarity between the generations". Article 23 of Belgium's Constitution adds to this general obligation that the right to human dignity requires the state to guarantee economic, social and cultural rights, including among others "the right to the protection of a healthy environment" .

b. European Framework Laws of Relevance to the Green Economy

A number of innovative framework laws have been introduced into European legal systems in order to support the transition to a green economy.[20] These laws prescribe general guidelines and principles according to which European states are committed to act. At the EU level many examples of such framework laws can be found. The EU Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste ("Waste Framework Directive")[21] adopts measures in order to prevent and reduce the adverse environmental impacts of waste, and improve the efficiency of waste management. The Directive introduces the 'waste hierarchy' as a leading guideline for waste management, making the prevention of waste a priority. The waste hierarchy set by the Directive is:

- Prevention,
- Preparing for re-use,
- Recycling,
- Other recovery
- Disposal

The Waste Framework Directive instructs Member States to include in their waste management policies the principles of precaution and sustainability, to ensure that their plans are technically and economically feasible, and to safeguard the protection of resources and the overall environmental, health, economic and social impacts. In order to achieve the Directive's objectives, the polluter pays principle and the producer responsibility principle are adopted, under which producers of products may be obliged to accept returned products and waste remains, as well as being responsible

---

[19] "Every person has a right to an environment that is conducive to health and to a natural environment whose productivity and diversity are maintained. Natural resources should be managed on the basis of comprehensive long-term considerations whereby this right will be safeguarded for future generations as well. In order to safeguard their right in accordance with the foregoing paragraph, citizens are entitled to information on the state of the natural environment and on the effects of any encroachment on nature that is planned or carried out."

[20] We discuss EU legislation as framework laws (indeed Directives were supposed to be called EU Framework Laws under the EU Constitutional Treaty). While this description is not entirely correct and perhaps could be restricted to Framework Directives (such as in Waste), it is also not correct to term Directives laws, since they require Member State implementation.

[21] *Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives*, [2008] O.J. L 312/3.

for the subsequent management and the financial cost of these activities. The 'producer responsibility' principle may also include measures to encourage producers to reduce any detrimental environmental impact of their products through eco-design; measures to encourage producers to design products that are suitable for multiple use; measures to improve the products' technologically durability, and once becoming waste, also to ensure that such products are suitable for safe recovery and environmental disposal.[22]

Another example of framework regulation adopted on the EU level is the (voluntary) European Code of Conduct for Coastal Zones ("Code of Conduct").[23] The Code of Conduct provides practical guidelines for the conservation of nature and biodiversity in coastal areas. The Code covers sectors such as agriculture, energy, fisheries, tourism and more, and prescribes a number of key principles including principle of careful decision making; the principle of avoidance; the precautionary principle; the principle of translocation; the principle of ecological compensation; the principle of ecological integrity; the principle of restoration and (re)creation; the principles of best available technology and best environmental practice; the polluter pays principle, and the principle of public participation and public access to information.

Framework laws aimed at encouraging the transition to a green economy have also been introduced by European states. In France, Loi n°2009-967 du 3 août 2009 de programmation relative à la mise en œuvre du Grenelle de l'environnement (Loi Grenelle 1), and Loi n° 2010-788 du 12 juillet 2010 portant engagement national pour l'environnement (Loi Grenelle 2) were adopted in order to provide a general framework for policy making, including more specific guidelines for sensitive sectors. These laws set guiding principles and commitments for 13 sectors (building, planning, transport, energy, biodiversity, water, agriculture, research, risk/health and environment, waste, governance) to ensure sustainable growth without compromising the needs of future generations.

In Malta the Sustainable Development Act of 2012 was adopted in order to create a framework through which sustainable development is to be mainstreamed across the government's activity. In order to achieve this goal, every Ministry is obliged to have a Sustainable Development Coordinator. The law further prescribes that a Sustainable Development Network be established, with the aim of promoting sustainable development in Malta. This Network will be made up of the Coordinators, NGOs and experts, and be chaired by a Chairperson appointed by the Prime Minister. The Act also establishes the position of Guardian of Future Generations, a commission whose role is to safeguard inter-generational sustainable development in Malta (see more on the role of the Guardian of Future Generations below, in section 2.2(d)).

2.2 Recent Trends in Green Economy Instrument Design and Implementation across Diverse Legal Systems in Europe

This section surveys new trends in the adoption of laws, regulations and other instruments in Europe, across distinct legal systems. The section briefly explains how, in the different legal

[22] This principle is not mandatory, as Article 8 of the Directive prescribes that "Member States may take legislative or non-legislative measures".

[23] *European Code of Conduct for Coastal Zones*, [1999], online: <http://www.coastalguide.org/code/cc.pdf>

systems of Europe, a variety of regulatory instruments for the green economy may be utilized. This section reviews *inter alia,* constitutional provisions, framework laws, mandatory action plans, voluntary self-regulatory instruments, and more.

a. European Constitutions and Judicial interpretations of Constitutional provisions

Constitutional provisions were discussed in more detail above under section 2.1. On the EU level, the major constitutional provisions mentioned in this part were the TEU's Preamble, Article 3 and Article 21, the TFEU's Article 11 and the EU Charter's preamble and Article 37. On the state level, the constitutions of France, Belgium and Norway were mentioned as examples of constitutions in which the green economy's objectives are reflected. It was further mentioned that constitutions of states such as Germany, Andorra, Croatia and the Netherlands include obligations with respect to environmental protection, although no specific connection to the state's economic policies is provided.

Constitutional provisions have been interpreted in the past by European courts, which contributed to the clarification and the evolution of these. The European Court of Justice ("ECJ") for example, has commented on the application of Article 11 TFEU:[24]

> *"In the light (…) of the wording of (…) Article [11 TFEU], which lays down that environmental protection requirements must be integrated into the definition and implementation of Community policies and activities, it must be concluded that Article 36(1)(a) of Directive 92/50 does not exclude the possibility for the contracting authority of using criteria relating to the preservation of the environment when assessing the economically most advantageous tender."*

Similarly, the ECJ has also commented in the *Laval* case with respect to the role of Article 3 TEU in balancing the different elements of sustainable development:[25]

> *"It should be added that, according to Article 3(1)(c) and (j) EC, the activities of the Community are to include not only an 'internal market characterised by the abolition, as between Member States, of obstacles to the free movement of goods, persons, services and capital', but also a policy in the social sphere'. Article 2 EC [Article 3 TEU] states that the Community is to have as its task, inter alia, the promotion of a harmonious, balanced and sustainable development of economic activities' and a high level of employment and of social protection."*

---

[24] *Concordia Bus Finland v. Helsingin kaupunki et al.* (Preliminary Ruling) [2002] C-513/99 at para 57. See a review of the application of provisions related to sustainable development by the ECJ in a presentation made by Professor Pallemaerts, "Sustainable Development Principles before the Court of Justice of the European Union", June 2011, at the International Development Law Organization. See presentation online: IDLO <http://www.idlo.int/DOCNews/SDEventJune2011/Marc%20Pallemaerts%20-%20EUSDECJ.pdf>

[25] *Laval un Partneri LTD. v. Svenska Byggnadsarbetareforbundet et al.* (Preliminary Ruling) [2007] C-341/05 at para 104.

The ECJ commented in this case also on the importance of the sustainable development principle of integration, as manifested by EU Law:[26]

> *"Since the Community has thus not only an economic but also a social purpose, the rights under the provisions of the EC Treaty on the free movement of goods, persons, services and capital must be balanced against the objectives pursued by social policy, which include, as is clear from the first paragraph of Article 136 EC, inter alia, improved living and working conditions, so as to make possible their harmonisation while improvement is being maintained, proper social protection and dialogue between management and labour."*

Another important example of the manner in which judicial decisions have influenced the application of constitutional provisions can be found in the decisions of the German Constitutional Court. The Constitutional Court has provided guiding interpretations for Art 20a of the Grundgesetz which defines the "protection of the natural foundations of life and animals" as an objective of the state.[27] The provision further states:

> "*Mindful also of its responsibility toward future generations, the state shall protect the natural foundations of life and animals by legislation and, in accordance with law and justice, by executive and judicial action, all within the framework of the constitutional order."*

Recent key decisions of the German Court have provided further content and clarification of this objective:

- In the case BVerfG, 1 BvR 1031/07 of 25.7.2007, the Court decided with respect to taxation of biofuels that the state has large margin of discretion as to how to protect the environment; and that economic disadvantages for the German biofuels industry are irrelevant for this provision.
- In the case BVerfG, 2 BvF 1/07 of 12.10.2010, the Court stated with respect to provisions on keeping laying hens unconstitutional: "Art. 20a requires the state to protect animals. Animal welfare is a concern of constitutional status which is to be taken into account in the decision on the weighing of interests. The legislative bodies must take account of animal welfare as an aim of state policy in appropriate provisions; in this connection, they have a broad drafting discretion."
- In the case BVerfG, 1 BvF 2/05 of 24.11.2010, the Court stated with respect to the Genetic Technology Act: "In its possibility of deliberately creating changes in genetic makeup, genetic engineering intervenes in the elementary structures of life. It is extremely difficult or impossible to reverse the consequences of such intervention. Once genetically modified material has been released into the environment, it is difficult or impossible to restrict its

[26] *Ibid.* at para 105.

[27] Basic Law for the Federal Republic of Germany in the revised version published in the Federal Law Gazette Part III, classification number 100-1, as last amended by the Act of 21 July 2010 (Federal Law Gazette I p. 944). See Translation by Professor Christian Tomuschat und Professor David P. Currie, available online: http://www.gesetze-im-internet.de/englisch_gg/englisch_gg.html#p0112

spread. The legislature has a particular duty of care in view of the fact that the state of scientific knowledge has not yet been finally established when assessing the long-term consequences of the use of genetic engineering. In making law, it must not only balance the constitutionally protected interests affected by the use of genetic engineering on the one hand and their regulation on the other hand, but must similarly comply with the duty contained in Article 20a GG to also protect natural resources with responsibility for future generations."[28]

In summary, the emerging conclusion from the German Court's decisions is that according to Article 20a of the German Constitution, the legislator has a duty to carefully balance economic interests and sustainable development.

b. European Framework laws and directives related to the green economy

Several examples of framework laws and directives related to the green economy were already discussed above, under section 2.1. There are number of other examples of noteworthy European framework laws. One such example is the EU Directive on waste electrical and electronic equipment ("The WEEE Directive").[29] The WEEE Directive sets general guidelines for the regulation of this field. For example, the prevention of WEEE is described in this Directive "a first priority" objective.[30] Other objectives mentioned by this Directive are the sustainable production, consumption, re-use, recycling and other forms of recovery of WEEE.

The WEEE Directive also sets ambitious targets for the collection, recovery and recycling of electronic waste in the EU's Member States. Starting from 2016, the minimum collection rate will be set at 45% of the total weight of waste electrical and electronic equipment ("WEEE"). This rate will be raised in 2019 to 65% of the EEE placed on the market, or 85% of the WEEE generated in the Member States' territory. In order to achieve these targets the WEEE Directive implements the 'producer responsibility' principle, by prescribing that producers of electronic goods are responsible for financing the collection of WEEE from collection facilities, as well as its treatment, recovery and disposal.

Lastly, the EU's 2010 Directive 2010/31/EU on the energy performance of buildings[31] aims to promote the energy efficiency of buildings in Europe. This Directive instructs the EU Member States to set minimum requirements for energy performance in buildings. Member States are permitted to adopt different rules for new and existing buildings, where requirements concerning new buildings apply starting from the very beginning of their construction. The objective of this

---

[28] For a complete overview over relevant jurisprudence see DeJure, available online: http://dejure.org/gesetze/GG/20a.html

[29] *Directive 2012/18/EU of the European Parliament and the Council of 4 July 2012 on the control of major accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC,* [2012] O.J. L 197/38.

[30] See paragraph 6 of the preamble to this Directive.

[31] *Directive 2010/31/EU of the European Parliament and of the Council on the energy performance of buildings,* [2010] O.J. L 153/13.

Directive with respect to new buildings is highly ambitious, and described as "nearly-zero consumption" by 2020. The Directive further instructs the Member States to adopt a system of certification of energy performance of buildings. According to this system energy performance certificates (which include information on energy consumption) must be presented to potential buyers, and energy indicators must be published alongside sale or rent advertisements.

c. Mandatory European Strategies / Action Plans Relevant to the Green Economy

One of the most important action plans for the transition to a green economy in Europe is EU's 20-20 by 2020 energy and climate policy targets. The 20-20 by 2020 targets were published *inter alia* in a "Communication from the Commission: 20 20 by 2020: Europe's climate change opportunity" (COM(2008) 13 final), and in a "Communication from the Commission – Energy Efficiency: Delivering the 20% target" (COM/2008/0772 final). The aim of this action plan is to reduce the Union's energy consumption by 20% in comparison to the projections for 2020 through the improvement of energy efficiency, and achieving a 20% share of renewable energies by 2020.

In order to achieve these goals, the EU has adopted the Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources ("Renewable Energy Directive").[32] This Directive provides a plan to achieve the goals of 20 % share of energy from renewable sources in the overall EU's energy consumption by 2020, and a mandatory 10 % minimum target to be achieved by all Member States by 2020 in the transport sector. This Directive sets mandatory national targets for the overall share of energy from renewable sources, as well as for the share of energy from renewable sources in transport. This EU Renewable Energy Directive prescribes that the EU's Member States shall prepare action plans in order to achieve the Directive's targets. The Directive also lays down guiding rules concerning issues such as cooperation between Member States (e.g. joint projects), guarantees of origin, administrative procedures, information and training, and access and operation of electricity grids. This Directive further establishes sustainability criteria for biofuels and bioliquids.

The EU Eco-Innovation Action Plan is another important green economy measure.[33] Though not a "mandatory" action plan and perhaps better described as a support plan, this plan focuses on innovation for achieving the green economy. As such the Introduction to this plan specifically highlights the transition to the green economy:[34]

> *"[t]he Eco-innovation Action Plan (EcoAP) also complements other Europe 2020 Flagship Initiatives. A major building block for the transition towards a green economy is the*

---

[32] *Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources*, [2009] O.J. L 140/16. This Directive is discussed in more detail below, under section 2.2(h), and under section 2.2(c)

[33] See European Commission, "About the Action Plan", online: European Commission <http://ec.europa.eu/environment/ecoap/about-action-plan/index_en.htm>.

[34] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - Innovation for a sustainable Future - The Eco-innovation Action Plan (Eco-AP) /* COM/2011/0899 final */ Available online: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52011DC0899:EN:NOT

"Resource Efficient Europe" Flagship and its roadmap, creating and reinforcing demand for eco-innovation and related investment."

In this plan the Commission is trying to accelerate the transition to green economy by way of fostering innovation and later marketing. This plan defines the challenge faced, as well as way forward in the following words:

> *"Eco-innovation needs to be accelerated in a way that boosts resource productivity, efficiency, competitiveness and helps to safeguard the environment. More and more severe environmental challenges and resource constraints have lead to growing worldwide demand for environmental technologies, products and services and have facilitated the emergence of green industries. Accelerated market uptake and dissemination of eco-innovation will lead to improved environmental performance and resilience across the economy being at the same time cost-effective and good for business and society as a whole."*[35]

An interesting aspect of EU law concerning mandatory action plans is the obligation imposed on Member States to adopt these on the state level. For example, Article 28 of the EU Waste Framework Directive imposes an obligation on the EU Member States to prepare action plans, in accordance with the Directive's general guidelines. A more specific guideline for the preparation of such plans was published by the EU Commission.[36] Also the EU Renewable Energy Directive prescribes that the EU's Member States shall prepare action plans in order to achieve the Directive's targets. According to Article 4 of this Directive, these action plans shall include *inter alia* the national targets for the share of energy from renewable sources consumed in several key sectors, as well as the measures to be taken in order to achieve these targets. In order to support the states' efforts to prepare such action plans, in June 2009 the EU Commission issued a template for national renewable energy plans.[37] According to Article 4 of this Directive, the Member States are obliged to follow this template.

d. European Institutional Arrangements for the Green Economy

In Europe there are many examples of institutional arrangements made in order to support different aspects of the transition to green economy. At the EU level, following Council Regulation (EC) No 1198/2006 of 27 July 2006 on the European Fisheries Fund,[38] the European Fisheries Fund was established. The main objective of this body is to support the realization of the EU's Common Fisheries Policy (CFP), through the financing of activities aimed at ensuring the conservation and sustainable use of marine resources. The Fund is instructed to take into account environmental,

---

[35] Ibid.

[36] EU Commission, "Preparing a waste management plan: A methodological guidance note" (2012), online: EU Commission <http://ec.europa.eu/environment/waste/plans/pdf/2012_guidance_note.pdf>.

[37] EU Commission, *Commission Decision of 30.6.2009, establishing a template for national renewable energy action plans under Directive 2009/28/EC*, Brussels, 30 June 2009 C(2009) 5174-1, online: EU Commission <http://ec.europa.eu/energy/renewables/doc/nreap__adoptedversion__30_june_en.pdf>.

[38] *Council Regulation (EC) No 1198/2006 of July 27 2006 on the European Fisheries Fund,* [2006] O.J. L 223/1.

economic and social aspects in a balanced manner. A more detailed discussion regarding the European Fisheries Fund is provided below, under section 2.2(h).

Another important EU institutional arrangement is the European Commission's Scientific, Technical and Economic Committee for Fisheries ("STECF").[39] Established following Commission Decision 93/619/EC relating to the institution of a Scientific, Technical and Economic Committee for Fishers, the STECF provides scientific advice and data to the EU Commission, supporting proposals for the regulation of fisheries under the EU's common fisheries policy. The STECF also issues an annual report on fisheries, on the basis of which the EU's annual total allowable catches ("TAC") are determined. The members of the STECF are scientific experts.

In the UK, following the legislation of the Climate Act the Committee on Climate Change was established.[40] This committee is an independent, statutory body, comprised of a chairman and seven independent individuals. Its main role is to advise the UK government on emission targets, conduct independent scientific analysis, and report to the UK Parliament on the progress made with respect to climate change abatement efforts. According to its current strategic priorities, the Committee on Climate Change focusses on offering independent advice to the government on how to meet carbon budgets and prepare for climate change; on monitoring progress in the reduction of greenhouse gases emissions; on producing independent studies on climate change (including policy recommendation for authorities, or the review of specific sectors[41]), and on engagement with the civil society.

In Malta, the Guardian of Future Generations was established by Malta's Sustainable Development Act. The Guardian is in fact a high level committee, with the aim of safeguarding inter-generational and intra-generational sustainable development in Malta. This committee is composed of experts from fields such as environmental protection, economy, and social affairs. The Guardian's mandate is *inter alia,* to promote sustainable development advocacy, develop a scientific research network; develop audits of key sectors; propose goals and action to government entities, and work with the private sector.

In Finland, the Finish Act on Water Resources Management delegates the Regional Environmental Centre the responsibility to coordinate the participation of the different authorities and parties to the preparation of the water resources management plan and to ensure the participation of the communities and dissemination of information related to the programme of measures to the general public.

Another example for an institutional arrangement can be found in Italy. Act No. 10 on the Development of Urban Green Spaces instructs the Committee for the Development of Public Parks to, *inter alia*, monitor the activities of the municipalities and all applicable laws aiming at increasing

---

[39] For further detail see European Commission, "Scientific, Technical and Economic Committee for Fisheries (STECF)", online: European Commission <http://ec.europa.eu/fisheries/partners/stecf/>.

[40] See part 2 of the UK Climate Act.

[41] *Committee on Climate Change*, "publications", online <http://www.theccc.org.uk/publications/>.

public and private parks; to propose criteria and guidelines for the construction of green areas around the major conurbations and row of trees along the roads; to ensure the rehabilitation of buildings through the greening of walls and flat roof, and the creation of gardens.

Until 2012, Hungary benefited from the engagement of an independent Parliamentary Commissioner for Future Generations, with an Office that was able to review concerns, and provide studies, reports and findings with recommendations. The main tasks of the Commissioner were to deal with the constitutional rights of Hungarians with regard to environmental protection and healthy environment; to advise on legal drafts having environmental impacts; and to conduct research and studies on topics relevant for future generations, such as climate change.

e. European Green Economy Responsibilities for Public Sector, Private Sector and Citizens

The engagement of private firms and citizens in public policies aimed at promoting the green economy is a key element in European policies. Indeed many of the principles on which environmental policies are based (e.g. the polluter pays principle, the source principle, etc.) are relevant to commercial actors such as producers, traders and distributers. Moreover, the private sector's resources, initiative and aspiration to grow are also being utilized by European states' green economy policies. This is being done mainly through economic incentives for those actors who choose to pursue economic objectives that are compatible with the transition into a green economy. As described below, European states promote the transition into a green economy both through laws imposing obligations on private actors, as well as through incentives and support schemes.

Common examples of laws that include public responsibilities towards private actors are support schemes aimed at promoting the generation of electricity from renewable sources. An example of such a law is the German Renewable Energy Sources Act ("German RE Act"). The objectives of the German RE Act are to ensure the sustainable development of energy supply, with emphasis on environmental protection and climate change, to reduce the costs of energy, and to promote the development of renewable energy technologies. In order to achieve these objectives this Act sets ambitious goals for the share of renewable energy sources in electricity supply (35% by 2020, 50% by 2030, 65% by 2040 and 80% by 2050). In order to reach these goals, a feed-in tariff programme was adopted for a period of 20 years. The tariffs guaranteed by this plan are offered for energy generated from hydropower, landfill gas, sewage treatment plant gas and mine gas, biomass, geothermal energy, wind power and solar radiation.

In Luxembourg, Loi relative à la gestion des déchets imposes certain responsibilities on the waste producer and the waste holder: These actors are obliged to carry out the treatment of waste (either on their own or through a contractor which carries out waste treatment operations). Furthermore, this law also imposes obligations on municipalities, which are responsible for ensuring the management of household waste within their territory, including the management of bio-waste and taking suitable measures for waste prevention.

Similar examples can also be found at the EU level. The EU WEEE Directive requires that measures be adopted to enable consumers to participate in the collection of WEEE and to encourage the process of re-use, treatment and recovery. The collection of such WEEE, as well as the treatment, recovery and disposal of it, are to be financed by producers of WEEE, in accordance with the

polluter pays principle. The WEEE Directive is discussed in more detail in sections 2.2(b)(e)(f) and (k)

f. European Mechanisms for Reducing Environmental Risk

The most eminent mechanism adopted in Europe for reducing environmental risk is without a doubt the EU Directive 2011/92 on the assessment of the effects of certain public and private projects on the environment ("Impact Assessment Directive").[42] The EU Impact Assessment Directive imposes a legal obligation to conduct an environmental impact assessment ("EIA") prior to the approval of projects that are likely to have significant effects on the environment. According to this Directive the following factors are to be assessed: effects on human beings, fauna and flora, soil water, air, climate, landscape, material assets and cultural heritage. The Directive includes a specific list of projects the approval of which must be subjected to EIA (e.g. crude-oil refineries, thermal and nuclear power stations, chemical installations, etc.), and guideline criteria concerning the conducting of EIAs, including extensive public participation obligations.

Efforts to update the content and the scope of the EU Impact Assessment Directive are constantly taking place. In 2013, the European Commission issued guidelines on the integration of two issues that are not explicitly mentioned in the Directive: climate change and biodiversity.[43] In a current proposal for the amendment of the Directive[44] it is suggested, *inter alia*, that these two issues (as well as others such as disaster risks and the use of natural resources) will be added to the Directive. It is further suggested that measures such as mandatory scoping and post-EIA monitoring should be included in the assessment process in order to improve the quality of EIAs.

Another European mechanism that is aimed at reducing environmental impact is the EU Directive 2009/125/EC establishing a framework for the setting of eco-design requirement for energy-related products ("Eco-Design Directive").[45] The Eco-design Directive covers all energy-related products (i.e. products that the use of which affect energy consumption). As a condition for the placement of energy-related products on the EU market, producers are required to comply with the eco-design requirements. These measures (specific, technical measures are adopted under specific legislation[46]) are intended to generate product improvements (e.g. lower power consumption in standby mode of electric and electronic appliances). Furthermore, in order to maximise the

---

[42] *Directive 2011/92/EU of the European Parliament and the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment* , [2011] O.J. L 26/1.

[43] European Commission, "Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment" (2013), online: EU <http://ec.europa.eu/environment/eia/pdf/EIA%20Guidance.pdf>.

[44] "Proposal for a Directive of the European Union and the Council, amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment" Brussels, 26.10.2012, (COM(2012) 628 final).

[45] *Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products*, [2009] O.J. L 285/10.

[46] See a review of specific legislation concerning specific energy-related products such as tumble driers, water pumps, air-conditioners and more, in "Eco-design legislation: Implementing Regulations" 7 March 2013, online: EU Commission <http://ec.europa.eu/energy/efficiency/ecodesign/doc/overview_legislation_eco-design.pdf>

environmental benefits of improved design of products, adequate information on the environmental characteristics and performance of the products, as well as on how to use the products in an environmental friendly manner, is to be disseminated to consumers.

The Eco-design Directive adopts a preventive approach as it is intended to optimize the environmental performance of products while maintaining their functionality, safety and affordability. The Directive also prevents disparate national legislations on the environmental performance of the energy-related products from becoming obstacles to the intra-EU trade. By doing so the Directive benefits both businesses and consumers as it enhances product quality and environmental protection on the one hand, and facilitates the free movement of goods across the EU on the other.

Environmental risks can be reduced also through green procurement policies, under which the environmental impact of the purchased goods and services is considered. Such a method was incorporated in France's *Circulaire* on Timber public procurement (covering both paper and wood products). According to this regulation, service providers responding to invitations to public tenders must prove that their timber products comply with certain environmental requirements. Most notably, they have to demonstrate that their timber products comply with specifications related to the sustainable management of forests. They can do so by submitting a certificate issued by an independent third party that ensures that the timber logging was legal. For more details on the accreditation of sustainable timber (e.g, FLEGT), see below in part 3.3(a).

g. Environmental Auditing in Europe and its Contribution to the Green Economy

A key European auditing instrument is the EU Regulation 1221/2009 on the voluntary participation by organisations in a Community eco-management and audit scheme ("EMAS Regulation").[47] The EU EMAS Regulation is a voluntary EU scheme available to public and private organisations. The objective of the EMAS Regulation is to encourage organisations to reduce their environmental impacts and improve their environmental performance. The EMAS Regulation requires participant organisations to perform a review of their activities and the effects these may have on the environment; to implement environmental management systems (in accordance with section 4 of the EN ISO 1 4001:2004 standard); to perform an internal audit and management review; to issue an environmental statement, and to verify its environmental review, statement, and management system by an accredited EMAS verifier. As part of the implementation of the environmental management system, an internal audit procedure must be set up. The internal audit's objectives are *inter alia* to verify that the environmental management system is in compliance with the requirements of the EMAS Regulation, and that it is being properly, and effectively, implemented by the organisation.[48]

---

[47] *Regulaiton (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS)*, [2009] O.J. 342/1.

[48] For more detail, see *Commission Decision of 4 March 2013 establishing user's guide setting out the steps needed to participate in EMAS*, Decision 2013/131/EU O.J. L76/1, online: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:076:FULL:EN:PDF> ["EMAS user's guide"]

h. European Economic and Financial Instruments of Relevance to the Green Economy

Perhaps the most eminent European financial instrument of relevance to the green economy is the EU Directive 2009/29/EC, amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community ("ETS Directive").[49] The EU Emission Trading System ("EU ETS") is often regarded as the "cornerstone of the EU's climate change strategy".[50] The Directive's objective is to help Member States to achieve their commitments under the Kyoto Protocol by reducing their greenhouse gas emissions in a cost-effective and economically efficient manner. Under the EU ETS scheme, a "cap and trade" system is established, according to which a cap is set on the total amount of the Member States' emissions, and an emission trading system is established. The cap and trade system creates an incentive for investments in a low-carbon economy, and put in practice the polluter pays principle insofar as it creates a price for carbon allowances and incentivizes industries to take steps to reduce their emissions. The ETS Directive further provides rules for the use of the ETS' revenues (e.g. at least 50% of the revenues from auctioning should be invested in project related to climate change abatement).

A different type of financial instrument being used in EU legislation can be found in the EU Renewable Energy Directive. While the EU ETS encourages the private sector to invest in projects related to the green economy by setting a price on carbon emissions, the Renewable Energy Directive encourages such investment by creating (or significantly enlarging) the markets for environmentally-related goods and technologies. The targets set by this Directive[51] provide certainty for investors in renewable energies and encourage the continuous development of technologies which generate energy from all types of renewable sources. The setting of such targets is also important for supporting elements such as energy security, and for providing opportunities for employment and regional development, especially in rural and isolated area economic growth.

Another example of a financial instrument aimed at supporting the transition into a green economy are support schemes for the energy sector, aimed at incentivising the production of energy from clean, renewable sources. A notable example of such a scheme is the Germany RE Sources Act, under which a Feed-in Tariffs ("FIT") programme was established. The German FIT programme requires grid operators to pay specified, above market price, tariffs for energy generated from renewable sources. The FIT programme makes renewable electricity sources competitive with fossil fuel-based sources of electricity. FIT policies were recognized for their Transparency, Longevity and Certainty ("TLC") offering beneficial conditions for investors in renewable energy

---

[49] *Directive 2009/29/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the community* [2009] O.J. 140/63.

[50] http://ec.europa.eu/clima/policies/ets/index_en.htm.

[51] A 20 % share of energy shall be generated from renewable sources in overall Community energy consumption by 2020, and that a minimum of 10 % share of biofuels shall be used out of the total transport petrol and diesel consumption by 2020.

projects around the world.[52] The German FIT system was acknowledged as one of the most effective policy framework accelerating the deployment of renewable energy technologies.[53] This law is discussed in more detail in section 2.1 above.

Making payments to generators of renewable energies raised several legal questions with respect to competition law, subsidies and state aid. The German support scheme was indeed challenged in the past before the European Court of Justice ("ECJ").[54] The ECJ had to decide *inter alia* whether the payments transferred under the German scheme (which are considerably higher than the prices paid for energy generated from traditional sources) constitute 'State Aid'. The ECJ held that although the payments provided create a competitive advantage, the German law is not incompatible with EU Law as it does not involve the transfer of state resources.[55] The ECJ was further asked to decide whether the German support scheme breached the EC Treaty by hindering intra-EU trade. The ECJ rejected this claim as well, basing its decision *inter alia* on the importance of such support schemes for environmental protection policies, and on the EU's commitments to environmental protection under the UNFCCC and the EU Treaties.[56]

Another interesting example of the use of a financial instrument is the German Ecological tax reform. The objective of the German ecological tax reform is on the one hand, to address environmental protection, and particularly the need to reduce greenhouse gas emissions, and on the other hand, to increase employment by reducing labour costs. The ecological tax reform's strategy is to increase taxes on energy consumption, and use the revenues generated by this taxation to compensate for a reduction in employers/employees' contribution to the statutory pension scheme. Lower contributions to pension scheme leads to a reduction in the cost of labour, and therefore encourages employment.

Another important tool of financing the transition to green economy is the use of subsidies. This is done mostly in two scenarios. The first scenario involves cases in which states' policies aimed at encouraging activities that are not commercially viable, and therefore will not take place without such financial support. The second scenario involves cases in which the application of green economy policies is expected to result in severe social costs (e.g. increased unemployment), which public subsidization may prevent.

---

[52] Deutsche Bank Climate Change Advisors, "Global Climate Change Policy Tracker: An Investor's Assessment" (2009) online: Deutsche Bank <http://www.dbcca.com/dbcca/EN/_media/Global_Climate_Change_Policy_Tracker_Exec_Summary.pdf>

[53]Deutsche Bank Group, *The German Feed-in tariffs: Recent Policy Changes*, September 2012, online: <http://www.dbresearch.com/PROD/DBR _INTERNET_ EN-PROD/PROD0000000000294376/The+German+Feed-in+Tariff%3A+Recent+Policy+Changes.pdf>

[54] Case C-379/98, PreussenElektra AG v Schhleswag AG, (2001), ECJ, online: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:61998J0379:EN:HTML [PreussenElektra AG v Schhleswag]

[55] According to the German programme it is the private firms who are instructed to provide the specified tariffs, rather than the state.

[56] PreussenElektra AG v Schhleswag, at para 73-81.

An example of a financial instrument aimed at the alleviation of social costs resulting from the transition into a green economy is EU Council Decision 2010/787/EU on State aid to facilitate the closure of uncompetitive coal mines.[57] As the subsidization of uncompetitive coal mines is no longer compatible with the EU policies (including its environmental policy), it was decided that the financial aid for these mines[58] will be discontinued.[59] However, according to this Decision, in order to alleviate the social and regional consequences of the expected closure of the no-longer-supported uncompetitive coal mines, Member States are allowed to provide them with State Aid. This Decision further prescribes that such aid to the coal industry is to be considered compatible with the proper functioning of the internal market.

Another example of the use of subsidies at the EU level is EU Council Regulation on the European Fisheries Fund. The European Fisheries Fund's ("EFF") main objective is to contribute to the realization of the EU's Common Fisheries Policy (CFP). Its role is to provide funds for activities aimed at ensuring the conservation and sustainable use of marine resources, taking into account environmental, economic and social aspects in a balanced manner. More specifically, the EFF funds activity is aimed at ensuring the sustainable use of fisheries; reducing pressure on stocks; promoting inland fishing; supporting economically viable enterprises; fostering the protection of the environment; improving the quality of life in areas in which the fishing industry operates, and promoting gender equality in the fishing sector.

The EFF ensures that the CFP financing is focused on five priorities: measures to adapt the EU fishing fleet (including financial assistance for those adversely affected by the CFP environmental and health-related measures); measures related to aquaculture, inland fishing and processing and marketing; measures related to collective action (e.g. measures contributing the improving of fishing ports); measures contributing to the sustainable development of fishing areas, and the provision of technical assistance necessary for the implementation of the EFF Regulation. In order to benefit from the EFF's assistance, Member States must send the Commission a strategic plan and an operational programme. Member States must also appoint the following bodies: a managing authority; a certifying authority; an audit authority and a monitoring committee.

i. European Legislation Creating Green Jobs

The transition to a green economy, it is argued, results in a win-win outcome, i.e. the adoption of green economy policies are expected to support not only environmental protection but also social objectives such as the creation of new jobs, mostly in "green" sectors. It is estimated by some that the transition to a green economy may result with the creation of up to 60 million new jobs over the

[57] *Council Decision of 10 December on State Aid to facilitate the closure of uncompetitive coal mines,* (2010/787/EU), [2010] O.J. 336/24.

[58] See Regulation (EC) No 1407/2002 on State aid to the coal industry.

[59] See para 3 and 4 of the preamble to Council Decision 2010/787/EU

next two decades.[60] Indeed many of the laws discussed above include besides the objective of environmental protection, also objectives related to the creation of new "green" jobs. As these laws are described elsewhere in this study in more detail, only a brief review will be provided at this stage.

At the EU level, the EU Renewable Energy Directive specifically mentions the creation of new jobs as a desirable outcome of the targets set by this Directive. The Commission has estimated in its 20-20 by 2020 Communication that the setting of a 20% share target for renewable energies is expected to create almost one million jobs.[61] The EU's aspiration to encourage the creation of "green" jobs through green economy regulation is found also in other sectors besides energy. For example, the EU Council Regulation on the European Fisheries Fund instructs the Member States to adopt action plans that support the promotion of sustainable employment.

Germany's Ecological tax reform law represents another, more specific tool for the promotion of employment through green economy policies. As already discussed above, the German ecological tax reform aims to encourage employment by reducing the employers and employees' contribution to the mandatory pension scheme. The reduction in contribution is financed by an increase in taxation on the consumption of energy.

j. Voluntary Self-regulatory Frameworks

The use of voluntary self-regulation instruments is gaining some prominence in Europe. At the EU level, the Commission has established several self-regulating legal instruments which the private sector, as well as public authorities, could make use of. The EU Code of Conduct for Coastal Zones is one such example. The Code of Conduct is a non-mandatory guideline for public agencies, authorities and the private sector concerning the sustainable development of coastal zones. The Code of Conduct is intended to support the protection of nature and bio-diversity in light of the socio-economic development in coastal zones. The Code focusses specifically on 12 sectors, including tourism, agriculture, energy, fisheries, industry and transport.

Another example of a self-regulatory legal instrument developed at the EU level is the EU EMAS Regulation. The EU EMAS Regulation is a voluntary eco-management and audit scheme available for public and private organisations. The EMAS Regulation requires participant organisations to implement an environmental management system, while in return it is asserted that these organisations will enjoy benefits such as energy and resource savings, improved stakeholder relationships, productivity improvement, financial savings, and improved staff recruitment/retention.[62]

---

[60] ILO/UNEP, *Working towards sustainable development: Opportunities for decent work and social inclusion in a green economy* (ILO: 2012), online: <http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_181836.pdf>.

[61] COM/2008/0030 final, *infra* note 91.

[62] EMAS user's guide, *supra* note 48.

k. European Information Disclosure Requirements relevant to the Green Economy

Legal instruments that make use of information disclosure requirements in order to promote the transition into a green economy are especially abundant among European legal systems. Examples of such laws can be found both at the EU and at the states levels, in a diverse range of sectors, *inter alia* energy, forestation and waste management.

At the EU level, the aim of EU Directive 2010/30/EU on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products ("EU Energy labelling Directive")[63] is to provide citizens with information regarding the environmental performance of products. The obligation to provide such information incentivises the industry to develop further improved products and innovations, even beyond the minimum requirements for eco-design.

The Energy labelling Directive has been implemented by the EU Member States, where more specific, and sometimes more advance rules can be found. The UK Energy Information Regulations prescribes the imposition of measures related to end-user information, such as labelling and standard product information on the consumption of energy, and obligations on suppliers (e.g. a requirement to ensure that products are supplied with printed label and a product fiche) and dealers (e.g. the fiche must be available in the product brochure when sold to consumers).

An example of the obligation to provide information in order to support energy saving in buildings can be found in Denmark. The Danish act on the promotion of energy conservation in buildings (labels) is intended to achieve such goals as the promotion of energy savings and energy efficiency in buildings through an obligation to provide energy labelling that shows the building's energy status. The energy labelling must reveal the building's energy status (including energy used for heating, hot-tap water, cooling and lighting), and may also include information on water consumption. The energy labelling obligation consists also of the duty to provide an energy plan, which is a summary of recommended measures for the reduction of energy consumption, and further documentation on relevant information.

The duty to provide information is also a significant tool in forestry regulation in European legal systems. At the EU level, this type of obligations can be found in EU Regulation 995/2010 laying down the obligations of operators who place timber and timber products on the market ("The EU Timber Regulation", described in more detail below in section 3.3(a) below).[64] This Regulation contains a Due Diligence mechanism that includes three elements inherent to risk management: access to information, risk assessment and mitigation of the risk identified. The 'access to information' element includes an obligation to provide information *inter alia* concerning the description of the timber, in what country it was harvested, and additional information concerning operators and traders. This obligation is meant to ensure that information regarding the timber, from

---

[63] *Directive 2010/30 of the European Parliament and the Council of 19 May 2010 on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products* [2010] O.J. L 153/1.

[64] *Regulation (EU) No 995/2010 of the European Parliament and of the Council of 20 October 2010 laying down the obligations of operators who place timber and timber products on the market,* [2010] O.J. L 295/23.

the moment of harvesting until commercial supply in the EU is available, and thus it would be possible to determine whether the specific timber can be legally sold within the EU. Once on the market, the timber and timber products may be sold on and/or transformed before they reach the final consumer. To facilitate the traceability of timber products economic operators in this part of the supply chain have an obligation to keep records of their suppliers and customers.

In France, the *Circulaire* on Timber public procurement requires the provision of information on such issues as the legal origin of timber. This obligation can be fulfilled through the presentation of a certificate issued by an independent third party that ensures the legality of the timber logging. Similar obligations can be found also in the UK's Timber Procurement Policy, that prescribes that in order to demonstrate the legality of timber, traders must present a certificate issued under a scheme recognised by the UK Government, or alternative documentary evidence that provides assurance that the source is legal and sustainable.

Information disclosure obligations are being utilized also in other sectors, such as waste management. The EU WEEE Directive includes a wide information disclosure rule concerning the provision of information. In order to facilitate the preparation for re-use and the correct and environmentally sound treatment of WEEE, Member States are instructed to take the necessary measures to ensure that producers provide information, free of charge, concerning the preparation for re-use and the treatment of each type of new EEE placed for the first time on the Union market. The authorities responsible for implementing this Directive are instructed to cooperate with each other, and in particular to establish and maintain an adequate flow of information. Such cooperation shall include the granting of access to the relevant documents and information including the results of any inspections. Furthermore, producers may be required to show purchasers, at the time of sale of new products, the costs of collection, treatment and disposal of WEEE.

The obligation to provide information is utilized also in other manners, for example in order to raise awareness and to ensure public participation. For example, according to the EU Renewable Energy Directive, the Commission shall establish an online public transparency platform. The transparency platform shall serve to increase transparency, facilitate and promote cooperation between Member States. The Commission shall use this platform in order to publish information such as its Member States national renewable energy action plans; information on statistical transfers and joint projects; the Member States' national reports, and the Commission's own reports.[65] The Directive also indicates that awareness-raising and training programmes shall be developed so as to inform citizens on the benefits of energy from renewable sources.[66]

[65]European Parliament and the Council of the European Union, *Directive 2009/28/EC of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC*, Art.24, Online: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=Oj:L:2009: 140:0016:0062:en:PDF>

[66]European Parliament and the Council of the European Union, *Directive 2009/28/EC of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC*, Art.14 (6), Online: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=O j:L:2009: 140:0016:0062:en:PDF>

l. European Legislation focused on Poverty Eradication in relation to the Green Economy

Social goals, most notably poverty eradication, are a central component in any green economy policy. Indeed the main premise underlining the green economy is that more green industry will result with an increase in the creation of sustainable jobs, the reduction of costs (notably on energy consumption, and indirectly also health-related), and an increase in the quality of life. Most of the laws described in this compendium can therefore be considered as supporting goals such as poverty eradication.

It is important to remember however, that green economy policies must support not only the creation of green industry, but also ensure that the adverse impact of environmental regulatory measures on those involved in the "brown economy" is properly alleviated. The example of the EU Council Decision 2010/787/EU on State Aid to facilitate the closure of uncompetitive coal mines was already mentioned above in more detail (see under section 2.2(h)). According to this Decision, State Aid granted to undertakings closing their coal production units for the purpose of certain activities, shall not be considered as a violation of the internal market rules. *Inter alia*, State Aid may be permitted so as to assist those undertaking to cover costs related to the payment of social welfare benefits, and other expenditures on workers who have lost their jobs (including re-training costs, and assistance in finding new jobs[67]).

A unique example of how green economy policies can address social goals is "social farming". Social farming was defined as including:[68]

> *"all activities that use agricultural resources, both from plants and animals, in order to promote (or to generate) social services in rural areas. Examples of these services are rehabilitation, therapy, sheltered work, life-long education and other activities that contribute to social inclusion."*

Social farms integrate *inter alia* people with physical, mental and emotional disabilities, young offenders, people with learning difficulties, drug problems, and more.[69] Social farming can be found across Europe in countries such as Italy, Slovenia, Germany, France, Ireland, Belgium and the Netherlands.[70] The regulation of social farming varies across Europe, and relies both on specific social farming regulation (e.g. Belgium (Flanders)) and general social regulation (e.g. Germany), and in most cases include a strong component of State Aid.[71]

---

[67] For more details, see in the Annex to this Decision.

[68] Francesco Di Iacovo & Deidre O'connor, eds., *Supporting policies for Social Farming in Europe: Progressing Multifunctionality in Responsive Rural Areas* (Firenze: Arsia, 2009) online: EU <http://ec.europa.eu/research/agriculture/pdf/sofar_book.pdf> [Di Iacovo & Deidre O'connor] at 21.

[69] Di Iacovo & Deidre O'connor, *surpa* note 68 at 22.

[70] See review of these case-studies in Di Iacovo & Deidre O'connor, *surpa* note 68 at 44-130.

[71] See review in Di Iacovo & Deidre O'connor, *surpa* note 68 at 30-35.

m. Emerging Principles of European Law Related to the Green Economy, trends and best practices.

From the review provided above, several principles of law on sustainable development, the economy and the environment can be identified, as normative requirements that are gaining acceptance in Europe and can guide legal decision-making. These principles are briefly discussed below.

i. The Principle of Integration and Interrelationship:

A sustainable development principle of integration and interrelationship is gaining prominence in European legal systems**.** The principle of integration reflects the interdependence of aspects such as social well-being, economic development, environmental protection and human rights, and the necessity to integrate all these aspects in laws and policies. This principle is key to the promotion of the green economy, and can in fact be implied from this term's definition: The term 'green-economy' was defined by the UNEP as "one that results in "improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities"".[72] Elsewhere the 'green-economy' was described as an economy "that offers the promise of growth while protecting the earth's ecosystems and, in turn, contributing to poverty alleviation."[73] The integration of elements such as economic development, environmental protection and social equity it can be seen, is at the heart of this term.

The presence of the principle of integration and interrelationship can be identified on several levels. First, there is an increasing recognition of environmental and social rights as basic, constitutional rights, which states are generally obliged to consider and integrate within their economic policies. This can be explicitly found within primary EU Law in provisions such as the Preamble and Article 3 of the TEU, Article 11 of the TFEU, and Article 37 of the EU Charter of Fundamental Rights. While it is mostly the importance of environmental protection that is emphasised in these provisions, other elements such as social development and protection are not ignored. The Preamble to the TEU, as well as Article 37 of the EU Charter and Article 11 TFEU in fact mention the term "sustainable development", which includes also social well-being.

The principle of integration and interrelationship can be explicitly identified also within the constitutions of several European states, such as France, Norway and Belgium. The French Charter for the Environment of 2004 specifically states that public policies "shall reconcile the protection and enhancement of the environment with economic development and social progress." Similar

---

[72] UNEP, *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication* (UNEP, 2011) online: <http://www.unep.org/greeneconomy/greeneconomyreport/tabid/29846/default.aspx> [UNEP, "Green Economy Report"] at 16.

[73] UN-DESA, UNEP, UNCTAD, *The Transition to a Green Economy: Benefits, Challenges and Risks from a Sustainable Development Perspective: Report by a Panel Experts,* Online: UNCSD <http://www.uncsd2012.org/content/documents/Green%20Economy_full%20report%20final%20for%20posting%20clean.pdf> [UN-DESA *et al.*, "The transition to a green economy"] at 4.

references to the obligation to integrate economic policies with social and environmental policies can also be found in other European constitutions.[74]

The principle of integration and interrelationship can further be identified in other legal instruments. Most notably France's Loi Grenelle 1 and Malta's sustainable development act (reviewed above in more detail) in which a guiding obligation to integrate the economic, environmental and social spheres is imposed on the state. The application of the principle of integration and interrelationship in specific sectors is also evident in many of the laws discussed above. For example, the EU EMAS Regulation is aimed to support the private sector's improvement of its environmental performance, as it is asserted that this goal will also support its commercial performance. Other laws discussed above can also be seen as the specific application of the principle of integration and interrelationship, as they are intended to integrate environmental and social consideration within the commercial decision-making process of private actors. Examples of such laws are the EU ETS Directive, EU WEEE Directive, and the EU Timber Regulation.

ii. The Polluter Pays Principle:

The application of the polluter pays principle is intended to affect the commercial decision-making process of producers. This principle leads to the internalisation of the cost of pollution into the cost of production, thus encouraging producers to incorporate environmental considerations as a part of their commercial activity. In the context of the green economy, this principle is an effective tool to encourage the transition into more environmentally-friendly production.

The review presented above demonstrates that the polluter pays principle is well-integrated into European legal systems. On the EU level, several of the directives presented above represent the specific application of the polluter pays principle in several sectors. Examples of the application of the polluter pays principle in EU Law are Article 191(2) TFEU, the ETS Directive (climate change), the European Code of Conduct for Coastal Zones (development of coastal areas), and the more general Directive 2004/35/EC on environmentally liability with regard to the prevention and remedying of environmental damage.[75]

One sector in which the polluter pays principle seems to be increasingly dominant is the waste management sector. The EU Waste Management Directive imposes on waste producers and holders the obligation to manage the waste according to severe environmental and health standards. According to Article 14 of this Directive, the costs of the waste management are to be borne by the waste producer (see also Luxembourg's Loi relative à la gestion des déchets, discussed above). The polluter pays principle is also a central component of the EU WEEE Directive, in which the 'producer responsibility' principle is introduced. According to this principle producers of electronic goods are responsible for financing the collection of WEEE from collection facilities, as well as its treatment, recovery and disposal. By using the polluter pays principle, the WEEE Directive

[74] See the above mentioned constitutions of Belgium and Norway.

[75] *Directive 2004/35/EC of the European Parliament and the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage,* [2004] O.J. 143/56.

encourages producers of electronic goods to improve elements related to the re-use, recycling and upgrading of their products.

iii. Public Participation and the Duty to Provide/disclose Information:

The review provided above demonstrates an increasing, widespread demand to reveal information related to the environmental impact of goods sold on European markets. This trend directly affects the economic conditions in which the private sector operates. First, it provides consumers with the ability to assess the environmental impact of the product they are considering to purchase, and increase their awareness to the environmental impact of such products. Secondly, this trend also affects producers as in order to increase their competitiveness, they must now consider how to reduce the environmental impact of their products and adopt new strategies, most notably concerning eco-design.

Examples that are representative of this trend were discussed above in more detail (see section 2.2(k) above). These include the EU Energy labelling Directive the EU Regulation on Timber, the EU Renewable Energy Directive, the EU WEEE Directive, the UK Energy Information Regulations, Denmark's act on promotion of energy conservation in buildings (labels), and France's timber regulation.

PART III: Survey of Green Economy Provisions in Key Sectors in Europe

3.1 European Trends in Development of Innovative Regulatory Instruments and Institutions in Key Sectors for the Green Economy

This section introduces Part III, which focuses on the regulatory frameworks/instruments to promote the green economy in key sectors in Europe. This section provides a general overview of European and national regulation of key sectors in Europe related to the green economy, such as agriculture, forests and biodiversity, water, fisheries, coastal and marine environment, tourism, energy and climate change, transportation, buildings and construction, manufacturing, procurement, mining and minerals and waste. It briefly explains how these regulatory frameworks can serve to foster or frustrate the green economy.

a. Key European Regulatory and Institutional Trends for the Green Economy in Agriculture, Forests and Biodiversity

Several trends related to forests and biodiversity can be found among European legal systems. One notable example of such a trend relates to illegal harvesting of timber. Prior to the adoption of the EU timber regulation, European states such as the UK and France adopted laws concerning the public procurement of timber, in order to support sustainable, environmental and social forest management practices. This trend was expanded in 2013 by the above discussed EU Timber Regulation.

An example of an important institution in this respect is the EU's Forest Law Enforcement, Governance and Trade initiative ("FLEGT"). According to this initiative, Voluntary Partnership Agreements between the EU and producer-states are being signed. These agreements oblige timber importers to obtain a FLEGT license, which requires producers to follow a list of sustainability criteria. Alongside CITES permits, FLEGT licenses are now used in order to validate the legality of imported timber under EU Law. FLEGT licenses are also required according to national laws such as those adopted by the UK and Denmark concerning the purchase of timber.

Another trend that is aimed at encouraging the transition into a green economy in agriculture, forests and biodiversity is the use of habitat banking. Habitat banking is an economic instrument designed *inter alia* at the reduction of CO2 emissions and the protection of biodiversity and eco-systems. Habitat banking is intended to ensure the offset of environmental impact created by development, and to encourage land owners to restore degraded land. According to such schemes, when purchasing land for development developers are requested to purchase credits from established compensation schemes (i.e. habitat banks), in order to offset the potential degradation of the planned development project. Land owners may earn (and sell) credits through measures such as the restoration of degraded land. At the EU level, the EU Commission is currently evaluating the possibility of incorporating habitat banking into the union's environmental policy.[76] At the state level, habitat banking is currently being used in Germany (Germany's Impact Mitigation

[76] See online: EU Commission <http://ec.europa.eu/environment/enveco/biodiversity/>.

Regulation). Habitat banking is currently being tested in France,[77] as well as in several regional authorities in the UK.[78] A voluntary example of such a scheme can currently be found in Sweden.[79]

Another key regulatory framework related to forests and biodiversity is the EU's Natura 2000 project, legally based on Council Directive 92/43/EEC (the Habitat Directive) and Directive 2009/147/EC (the Birds Directive).[80] The Natura 2000 is comprised of a network of 26,000 nature reserves across Europe, spread over more than 750,000 km2 (18% of the EU's land area). The Natura 2000 protects a variety of species and habitats. Beyond bio-diversity, the Natura 2000 network supports also policy objectives including the creation of jobs and securing livelihood. The Natura 2000 supports economic activity such as tourism and recreation, estimated to create between 4.5-8 million jobs across Europe.[81] The wide-range of economic and social benefits of the Natura 2000 network are highly significant and were estimated by some as having a value of between 200 and 300 billion EURO per year (including benefits beyond mere creation of jobs, e.g. benefits arising from soil and water quality, air quality, etc.).[82]

Lastly, as part of the above discussed EMAS framework the EU Commission identified the agriculture sector as a priority area, for which a specific sectoral reference document is to be developed in the near future.

b. Key European Regulatory and Institutional Trends for the Green Economy in Fisheries Standards / Coastal and Marine Areas

The relevance of the fisheries sector to environmental, social and economic development is widely acknowledged in European legal systems. The trend, as reflected by existing legal frameworks, is towards the balancing of the necessity to protect the environment, with social and economic needs.

For example, much attention has been given to environmental problems such as overfishing, which requires careful planning, scientific knowledge, and a strong reliance of the precautionary principle. One of the main pieces of regulation at the EU level is EU Council Regulation (EC) No 847/96 of 6 May 1996 introducing additional conditions for year-to-year management of TACs and quotas.

---

[77] See Institute of European Environmental Policy, "The use of market-based instruments for biodiversity protection – the case of habitat banking – case study appendix" (2010) online: ieep <http://www.ieep.eu/publications/2010/02/the-use-of-market-based-instruments-for-biodiversity-protection-the-case-of-habitat-banking--909>.

[78] See online: The Environment Bank <http://www.environmentbank.com/example.html>.

[79] Institute of European Environmental Policy, "The use of market-based instruments for biodiversity protection – the case of habitat banking – case study appendix" (2010).

[80] *Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora,* [1992] O.J. L 206/7; *Directive 2009/147/EC of the European Parliament and the Council of 30 November 2009 on the conservation of wild birds,* [2009] O.J. L 20/7.

[81] See *The Economic Benefits of the Natura 2000 Network: A synthesis Report* (European Union, 2013) online: <http://ec.europa.eu/environment/nature/natura2000/financing/docs/ENV-12-018_LR_Final1.pdf> ["The Economic Benefits of the Natura 2000 Network"] at 30.

[82] The Economic Benefits of the Natura 2000 Network, *supra* note 81 at 50.

This regulation imposes a total allowable catch ("TAC") policy, i.e. a catch limit for most significant commercial fish stocks. The TAC is set annually, based on scientific advice provided by the European Commission's Scientific, Technical and Economic Committee for Fisheries ("STECS").

At the same time however, the need to balance not only environmental problems, but also social and economic interests is also reflected in European regulation. The need to balance these interests is reflected in the activity of institutions such as the European Fisheries Fund (discussed above in detail, see under section 2.2(d) and (h)), and voluntary regulatory frameworks such as the Code of Conduct for coastal zones which provides regulatory guidelines for the integration of environmental protection with the need to develop coastal zones for among others, industrial, touristic, or agricultural purposes (the Code of Conduct is discussed in more details under section 2.2(j), 3.3(d) and (g)).

c. Key European Regulatory and Institutional Trends for the Green Economy in Sustainable Tourism Regulations and Institutions

The tourism sector's impact on the environment is receiving increased attention in Europe. This is so especially in light of the delicate location of many touristic facilities (i.e. in coastal areas, mountains, in proximity to nature reserves, etc.), as well as the variety of activities that are related to this sector (transport, construction, waste management, etc.). Furthermore, there is always the danger that overdevelopment and environmental degradation will have a negative effect on tourism.[83] In order to address the delicate balance necessary for the sustainable development of tourism, the regulation of this sector in Europe is increasingly integrating environmental, social and economic goals.

This trend is noticeable on the EU level, where voluntary regulatory instruments are now available to states, as well as to the private sector. Such regulatory instruments include best practices for the balancing of the social and economic advantages of tourism, with the necessity to protect the environment. For example, under the EU code of conduct for coastal zones, touristic development should be carried out in such a way so as to ensure that the environmental, cultural, and social diversity of the area is protected and enhanced. Most notably, touristic development policies shall take into considerations the needs of the local host community without compromising the natural or cultural values which are attractive to tourists, or the economic viability of existing sustainable commercial activities. The Code provides states with guidelines for different aspects related to tourisms such as planning and water conservation, and even specific aspects of touristic development such as the construction of golf courses and water sports.

The EU EMAS Regulation is a voluntary eco-management and audit scheme available for public and private organisations. In accordance with Article 46 of the EMAS Regulation, the EU Commission is currently developing sectoral reference/guidance that will provide more practical implementation of the EMAS requirements. To date, four sector-specific guidance documents have

[83] *European Code of Conduct for Costal Zones*, at para 11.2.

been developed, including for the tourism sector.[84] The reference document for the tourism sector covers the full value chain for this sector, including elements related to transport, accommodation, waste management, food and drink services, and more.[85] This reference document includes a review of the environmental aspects and challenges of each sub-sector, and specific best practices and recommendations.

d. Key European Regulatory and Institutional Trends for the Green Economy in Energy and Climate Change

Since the adoption of the Kyoto Protocol, the EU and its Member States have adopted numerous laws and policies in order to meet the Protocol's targets. At the EU level, the Member States are obliged to adopt policies that will lead to a reduction in their energy consumption and will increase the share of renewable energies in the Union's overall energy consumption (see more detail discussions above in section 2.2(c)). As a block, the EU is committed to reduce its emissions level by 20% by the year 2020, and by 80-95% by the year 2050.[86] Among the laws and policies that were adopted by the EU and its Member States, an important regulatory trend that can be identified is the use of market-based instruments. These regulatory instruments are aimed to reduce emissions in a cost-effective manner, and incentivise the private sector to invest in clean technologies. The most notable example is the EU's ETS Directive that was already discussed in more detail in section 2.2(h) above.

A unique institution that was established in order to support the EU's climate policy is the Union's Registry. Established by the ETS Directive in 2009,[87] the Union' Registry administers the accurate accounting for allowances under the EU ETS. The Register *inter alia* records the holding of emission allowances, transaction of such (including free allowances, auctioning, trading, etc.), the opening, the management and the closure of accounts, the consistency of such actions with the EU ETS rules, and more.[88]

Another notable trend in this field in European regulation is the use of financial support in order to encourage the transition into a green energy sector. Policies adopted for this purpose include the implementation of specific rules on the subsidization of the closure of coal mines in order to

---

[84] "Best environmental management practice: The reference document for the Tourism sector", online: EU Commission <http://susproc.jrc.ec.europa.eu/activities/emas/documents/TOURISM_BP_REF_DOC_2012j.pdf > ["The EMAS reference document for the Tourism sector"].

[85] The EMAS reference document for the Tourism sector, *supra* note 84.

[86] EU Commission, "Communication from the Commission: A roadmap for moving to a competitive low carbon economy in 2050", Brussels, 8.3.2011 [COM/2011/0112 final].

[87] See also EU Commission, "Commission Regulation No. 389/2013 of 2 May 2013, establishing a Union Registry" 3.5.2013, O.J. L 122/1.

[88] *Ibid*.

alleviate the regional and social impact of such,[89] and the subsidization (or indirect subsidization) of the production of renewable energy through schemes such as FIT.[90]

An interesting example of the regulation of the energy sector at the states level can be found in Iceland's regulation of its geothermal sector. The utilisation of geothermal energy in this state is governed mainly by Iceland's Act on the Survey and Utilisation of Ground Resources, and the Electricity Act (see Article 10 of the Act on the Survey and Utilisation of Ground Resources). Issues related to the environmental impact that the use of geothermal energy may have are addressed through both of these laws. For example, on the declarative level, the Electricity Act states environmental protection as one of its objectives.

Matters related to environmental protection are also addressed through the operative conditions of these laws. According to these laws, the utilization of geothermal energy is subject to the issuing of licenses. As part of the conditions for the granting of such licences, the environmental impact of the surveying and the utilization of geothermal energy is to be considered (see Article 17 of the Act on the Survey and Utilisation of Ground Resources and Article 5 of the Electricity Act). Moreover, according to the Act on the Survey and Utilisation of Ground Resources, the opinion of the Ministry of the Environment must be obtained prior to the issuing of a license.

Furthermore, Iceland also incorporated the EU's Impact Assessment Directive into its domestic legal system. Therefore environmental impact assessments are required where geothermal projects are likely to have an impact on the environment. Iceland's regulation also imposes future-facing obligations on license holders, such as the duty to "take care not to cause pollution and damage to the biosphere" (Article 26 of the Act on the Survey and Utilisation of Ground Resources), and the duty to extract geothermal energy "so as to maximise the long-term efficiency […]" including "not extracting more geothermal […] than necessary […]" and that the "drilling shall be conducted in a manner that will cause the minimum possible inhibition of further utilisation later" (see Article 25 of the Act on the Survey and Utilisation of Ground Resources).

e. Key European Regulatory and Institutional Trends for the Green Economy in Sustainable Transportation

The issue of sustainable transportation is addressed in part under European energy and climate policies, which were already discussed above in detail. Indeed, improvements in the transportation sector were identified as central to the efforts to reduce emission levels. The transportation sector was specifically mentioned in the EU's 20-20 by 2020 policy, in which a target of 10% share of biofuels of the overall petrol and diesel consumption was set.[91] More recent attempts to include the

[89] See Council Decision of 10 December 2010 on State aid to facilitate the closure of uncompetitive coal mines.

[90] See for example the German Renewable Energy Sources Act, adopting a feed-in tariffs programme.

[91] EU Commission, "Communication from the Commission: 20 20 by 2020 – Europe's climate change opportunity" Brussels, 23.1.2008 [COM/2008/0030 final]; See also Directive 2009/28/EC, discussed above in detail.

transportation sector under the EU's climate policy are the planned inclusion of the aviation and shipping sectors in the EU ETS.[92]

A second regulatory tool adopted in European legal systems with respect to the transition into more sustainable transportation is the use of subsidies. At the EU level, financial support is offered in order to encourage the transportation sector to use more sustainable forms of transportation. This is being done *inter alia*, in accordance with the Marco Polo programme,[93] under which the EU is providing financial support for transport service operators who plan to shift their transport modes from roads to more environmental-friendly modes, such as rail or waterborne transport.

Attempts to encourage the transition of the transportation sector into a green economy through financial support can also be identified in European states. Following the adoption of the UK Climate Change Act, the UK government drew up a Carbon Plan,[94] where the transportation sector receives specific attention. The Carbon Plan includes *inter alia* the provision of 400 GBP million in support of the supply and use of ultra-low emission vehicles; an investment of 600 GBP million in transport projects aimed at the promotion of economic growth and the reduction of carbon emissions, and the purchasing of low carbon emission buses.

f. Key European Regulatory and Institutional Trends for the Green Economy in Buildings and Construction Rules favouring Green Buildings and Eco-manufacturing;

The importance of the construction and building sectors in environmental and social policies is noticeable in several European laws and policies. One key regulatory trend in Europe concerning building and construction is the requirement to label the energy efficiency of buildings. Energy labelling supports consumers' decision-making, and encourage constructors to improve their environmental performances. Energy labelling also indirectly supports social policies, such as poverty alleviation, as energy efficient buildings reduce the residents' expenses on energy. The issue of labelling building's energy consumption was already discussed above in more detail (see section 2.2(k) above).

Another noticeable regulatory development in Europe relating to building and construction is the availability of voluntary regulations, aimed to provide guidelines for those wishing to improve their environmental performance. The European code of conduct for coastal zones for example, includes guidelines on construction. Such guidelines can be found under the Code's review of issues such as urbanization, and the tourism development of coastal areas. More detailed guidelines can be

---

[92] With respect to aviation, see Directive 2008/101/EC amending Directive 2003/87/EC so as to include aviation activities in the scheme for greenhouse gas emission allowances trading within the Community" (2009) O.J. L 8/3.

[93] See *inter alia*, EU, "Regulation (EC) No 923/2009 establishing the second 'Marco Polo' programme for the granting of community financial assistance to improve the environmental performance of freight transport system" (2209) O.J. L 266/1. For more related legislation see EU Commission, "Marco Polo legislation", online: EU Commission <http://ec.europa.eu/transport/marcopolo/about/in-law/index_en.htm>.

[94] U.K. Government, "The Carbon Plan: Delivering our low carbon future" (2011), online: UK Government <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/47613/3702-the-carbon-plan-delivering-our-low-carbon-future.pdf>.

found under the EMAS Regulation, in which the construction sector was identified as a priority and a detailed sectoral reference document was issued.[95] This reference paper includes instructions on *inter alia* land planning, building design, construction, refurbishment and deconstruction.

An interesting approach through which the green economy is being promoted in the construction sector is Norway's Planning and Building Act. The approach adopted by this Act is focussed on the planning stage and the administrative process of building applications. This law instructs the planning authorities to adopt an holistic approach and consider in their decisions issues relating to environmental, social, economic and cultural aspects, including climate change and public health (see Part II of the Act). Furthermore, in this act the authorities are specifically instructed to take into consideration the interests of the future generations, *inter alia* by ensuring the conservation of outdoor recreation areas. The planning and building authorities are required in certain cases to conduct an impact assessment prior to the authorisation of projects, assessing the impact of building plans on the environment and on the society.

g. Key European Regulatory and Institutional Trends for the Green Economy in Mining and Minerals

Economic activity related to mining and minerals is covered in general regulatory frameworks such as the EU ETS Directive, the Waste Management Framework Directive, and the Impact Assessment Directive, all having been discussed above in detail.

A more specific example of a regulatory instrument aimed at the regulation of the mining and minerals sectors is EU Directive 2006/21/EC on the management of waste from extractive industries ("the Mining Waste Directive").[96] The main objective of the Mining Waste Directive is the reduction of the adverse effects of waste management from extractive industries. The Mining Waste Directive therefore imposes several obligations on operators in the mining sector, including a requirement to obtain an environmental permit. According to Article 7 of this Directive, the application for the permit must include a waste management plan, and an environmental impact assessment where required. The objectives of the waste management plan should be the prevention or the reduction of waste, the increased recycling and re-use of waste, and the long-term safety of waste disposal. The Member States are instructed by this Directive to inspect waste facilities on regular basis.

Beyond the imposition of environmental restrictions on the mining sector, the EU also attempts to deal with the social cost of such environmental regulation, which may result in the closure of production facilities and consequently unemployment and poverty. As the Union's policy for encouraging renewable energy sources does not justify support for uncompetitive coal mines, the EU's Council Decision on State aid to facilitate the closure of uncompetitive coal mines is aimed to enable Member States to alleviate the social and regional consequences of the closure of uncompetitive coal mines. This Decision is discussed in more detail section 2.2(h) and (l) above.

---

[95] "Reference document on best environmental management practices of the building and construction sector" (2012) online: EU Commission <http://susproc.jrc.ec.europa.eu/activities/emas/documents/ConstructionSector.pdf>.

[96] *Directive 2006/21/EC on the management of waste from extractive industries,* [2006] O.J. L102/15.

h. Key European Regulatory and Institutional Trends for the Green Economy in Waste Management / Waste-minimising Design.

The field of waste management and waste disposal is thoroughly regulated by the EU. The three main legal frameworks in this field are the Waste Framework Directive, the WEEE Directive and the Mining Waste Directive. All of these examples have already been discussed above in detail (for the Waste Framework Directive see section 2.1(b), for the WEEE Directive see section 2.2(b)(e)(f) and (k), for the Mining Waste Directive see section 3.3(h)). The regulation of this field at the states level is mostly being done in accordance with these Directives (see for example Luxembourg's Loi relative à la gestion des déchets, discussed in detail in section 2.2(e) of this study).

Several trends in the field of waste management can be identified in these Directives. First, there is a strong emphasis on such activities as prevention, re-use and the recycling of waste, while safe disposal is regarded as a last resort. This is clear from the 'waste hierarchy' set by the Waste Framework Directive, but can also be understood from the content of the other Directives. Second, the presence of the polluter pays principle (or its more concrete realization in this field as the 'producer responsibility' principle) is evident in these Directives (discussed in more detail in section 2.2(m) above).

i. European Trends Related to Resources Efficiency and Sustainable Consumption

There are numerous examples of European laws relating to resource efficiency and sustainable consumption. Such examples can be identified in a myriad of sectors, including forestry, waste management, construction and energy. Most of these examples were already discussed above, and will be only briefly reviewed.

A noticeable trend relating to sustainable consumption can be identified in the forestry sector, in which both the EU and the Member States have adopted laws regulating the sustainable consumption of timber. Examples of such laws include the EU Timber Regulation[97] and France's *Circulaire* on Timber public procurement and the UK Timber Procurement Policy;[98] all of which have been discussed above in more detail. In order to ensure the sustainable consumption of timber, these regulations prescribe that only timber that has been harvested in accordance with severe sustainability standards may be purchased. The definition of what is "sustainable" and "legal" may include the specific type of wood (see for example the FLEGT license conditions) or even such conditions as labour standards and the environmental and health-related impact of the harvesting (see for example the UK Timber Procurement Policy[99]).

A significant trend relating to resource efficiency can be identified in European states' regulation of buildings and construction. Both at the EU and state levels, a noticeable legal instrument in this respect is the obligation to provide information relating to energy and environmental performances of buildings. Examples of laws adopting this approach were already discussed above in more detail,

---

[97] See detailed discussion in section 2.2(k).

[98] See detailed discussion in section 2.2(f)

[99] UK Government, "Legality and Sustainability", online CPET <http://www.cpet.org.uk/uk-government-timber-procurement-policy/definitions/defining-legality-and-sustainability>.

and include the EU Directive 2010/31/EU on the energy performance of buildings, and Denmark's energy labelling law.

Regulatory instruments designed for the promotion of sustainable consumption often make use of independent institutions. For example, in order to enforce the standards set for sustainable timber harvesting, European states frequently rely on independent third parties ("monitoring organizations", see Article 8 of the EU Timber Regulation). At the EU level, a list of the approved monitoring organisations is currently being processed by the EU Commission and is not yet available. Examples of organizations approved by the UK Government for this purpose are the Forest Stewardship Council and the Programme for the Endorsement of Forest Certification.[100]

[100] See a leaflet issued by the UK Government with an overview of the UK Government policy "Do you comply with the UK Government's Timber Procurement Policy?" online: <http://www.cpet.org.uk/files/CPET_leaflet_A4_web_2.pdf>.

PART IV: Conclusions and Recommendations

In summary, over the past decade in Europe, there has been an exponential growth in policy, legal and institutional measures related to the green economy, including constitutional provisions, framework laws, strategies and action plans, and even guiding principles. The following part of this study will highlight some of the most interesting and potentially transferrable recent innovations.

a. The use of constitutional provisions

First of all, the value of constitutions and framework laws that instruct a state to adopt a holistic and interdisciplinary approach to economic regulation should be emphasised. Obligations such as the one prescribed by Article 11 of the TFEU (requiring that environmental protection be integrated into the Union's policies and activities) *de facto* modify the decision-making process of economic policies, forcing authorities to investigate the environmental impact of such policies, to hear environmental experts, and to the least consider these in the wider context of sustainable development. Such provisions are certainly transferable as they concentrate on the structure of the policy-making process, they are fairly simple to apply and do not require significant financial resources.

b. The use of voluntary legal instruments

Secondly, the development of voluntary tools for the promotion of the green economy is noteworthy. Voluntary regulation is a non-intrusive regulatory tool, which provides private and public entities with know-how relating to the inclusion of environmental and social considerations in their everyday activity and the ability to improve their sustainability performances in the future. Voluntary regulation may also be useful as a "pilot" for the future application of mandatory regulations. As such it provides both the regulators and the regulated actors with the necessary experience and allows them to learn and ready themselves for more ambitious forms of regulation.

Voluntary regulation is highly transferable. The EMAS scheme for example, is in fact open also for non-EU organisations, and therefore can be regarded as immediately 'transferrable' by nature. Furthermore, the transferability of voluntary regulation such as the EMAS regulation is also facilitated by the low cost involved in its application. Regulated industry for example, may choose to adopt such regulation only where the financial cost is considered as bearable, or even expected to result in gains. The burden placed on domestic industry as a result of these regulations therefore, is practically non-existent.

Furthermore, the principles already set by the EMAS regulation as well as the specific, highly detailed sector guidance documents prepared by the EU Commission, can be used almost immediately by non-European states. Naturally, adaptation for the exact circumstances for each sector and state are necessary, but the wide range of eco-systems and climates existing within Europe makes these reference documents a useful point of departure for a myriad of other states.

c. The use of guiding principles in regulation

Thirdly, the use that European legal systems are making of guiding legal principles in green economy regulation is noteworthy. As principles such as the polluter pays principle and the source principle are universal in nature, they can guide policy-makers all over the world and therefore should be regarded as highly transferable. Indeed as can be seen from the reviewed above, many of these principles are guiding European policy-makers in the enactment of laws in many varied of

sectors. The specific application of these principles in Europe can serve as an inspiration for policy-makers in other states, who would do well to rely on the European experience.

For example, the principles set by the EU's waste management Directives (i.e. the Waste Framework Directive, the WEEE Directive and the Mining Waste Directive) should be regarded as significant and transferable innovations. The application of principles such as the 'waste hierarchy' as well as the polluter pays and the source principles are all considered to be cost-effective, and could be used as guiding outlines for any state wishing to regulate its waste management sector. Furthermore, also the specific application of these principles can be useful. For instance, the polluter pays principle as reflected through the specific requirements of the three waste management Directives is certainly innovative and transferable. This is reflected through such obligations as the duty to bear the financial cost of waste collection (see under the WEEE Directive), which incentivize producers to produce more sustainable goods, and to allocate more resources for waste-prevention.

Moreover, the emphasis placed on the prevention of environmental and social adverse effects (which is in fact the application of the source principle) is also a noticeable guiding principle in European legal systems. Such obligations as the duty to prepare waste management plans and environmental impact assessment studies require both producers and authorities to engage in a thorough, well-informed decision-making process concerning the impact of waste on the environment and the society as a whole. An informed decision-making process allows authorities and producers to focus on long-term strategies for the prevention of waste, rather than consider "*post-facto*" (i.e. once the waste is created) less desirable options such as recycling, or even waste disposal. Other noteworthy legal instruments through which the focus on prevention of environmental or social impacts is emphasised in European legal systems, are regulations concerning eco-design, timber, construction and fisheries, all described above in detail.

d. The use of transparency and information

Another innovative, transferable legal technique which may support the transition into a green economy is the use of tools such as information disclosure obligations, education, and transparency. Such instruments can affect producers' preferences through the use of consumers' choice. Examples of such tools are labelling obligations, which may be applied in a myriad of sectors such as construction, timber, energy, fisheries, and more. An interesting aspect in this respect is the use made in Europe of independent, expert institutions, in order to enforce the application of the standards required by the legislator and provide a guarantee as to the content of the information disclosed to consumers. The use of independent institutions significantly reduces the costs of enforcing such regulations on the one hand, and increases the reliability of the information provided to the public. Examples of the use of independent institutions for such purposes can be found in the regulation of the timber sector (see in section 3.3(j)).