Paper on Reporting, Enforcement and Liability with regard to the Adaptation to Climate Change

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"*Trust is good, control is better*" (**Vladimir Iljitsj Oeljanov**)

1. INTRODUCTION

This updated paper focuses on the role and different modalities of reporting and enforcement, including liability, against the background of current and future EU climate change adaptation policy and law. Reporting and enforcement are respectively found at the very outset (gathering useful information) and end (ensure that the goal is reached or can be reached again) of the policy cycle. They are inextricably linked, albeit often weak links in the policy chain.

Society can only increase its climate resilience if Member States properly implement the EU legislation they have signed up to. Implementation encompasses not only the full and timely transposition of EU directives into Member States' domestic law, but also the correct application of all the *acquis*, both in law and in fact. If this is not the case, some form of enforcement will be required to achieve the desired or prescribed result (Section 3). A special type of enforcement are liability rules, which –generally speaking- ensure that the costs of remediation and redress are borne by the one who is responsible (and by not the community at large) and help to prevent damages occurring in the first place (Section 4).

The next part of this contribution deals with the establishment and the operation of an effective Union system for the monitoring and reporting of information relevant for the adaptation to climate change (Section 2).

2. REPORTING ON CLIMATE CHANGE IMPACTS AND ADAPTATION

2.1. The current (international) reporting on adaptation

Accurate, up-to-date information is an essential basis for climate change policy.[1]This is currently not the case with regard to adaptation, where there is no, or insufficient data available at EU level to underpin effective EU policy design and implementation.

The current guidelines under the UNFCCC only contain a very generic requirement for Member States to provide in their National Communications every 4 years an outline of their adaptation actions, a vulnerability assessment and information on the expected impacts of climate change:[2]

Outline and General Structure of the NC5

(…)

VI. VULNERABILITY ASSESSMENT, CLIMATE CHANGE IMPACTS AND ADAPTATION MEASURES

A. Expected impacts of climate change

B. Vulnerability Assessment

C. Adaptation measures

In these National Communications, the information is reported in a rather incomplete and inconsistent way and cannot be aggregated.

Experience has indicated that the current reporting frequency may not be adequate to make informed policy decisions, in particular as it does not ensure that systems are put in place for

[1] SEC(2011) 1093 final, Commission Staff Working Paper: Situation in the Different Sectors *Accompanying the document* Report from the Commission 28th Annual Report on Monitoring the Application of EU Law (2010), Brussels, 29 September 2011, 159

[2] FCCC/CP/1999/7, 16 February 2000, UNFCCC guidelines on reporting and review

VII. VULNERABILITY ASSESSMENT, CLIMATE CHANGE IMPACTS AND ADAPTATION MEASURES

49. *A national communication shall include information on the expected impacts of climate change and an outline of the action taken to implement Article 4.1(b) and (e) with regard to adaptation. Parties are encouraged to use the Intergovernmental Panel on Climate Change (IPCC) Technical Guidelines for Assessing Climate Change Impacts and Adaptations and the United Nations Environment Programme (UNEP) Handbook on Methods for Climate Change Impacts Assessment and Adaptation Strategies. Parties may refer, inter alia, to integrated plans for coastal zone management, water resources and agriculture. Parties may also report onspecific results of scientific research in the field of vulnerability assessment and adaptation*.

See also the Annotated Outline for Fifth National Communications of Annex I Parties under the UNFCCC, including Reporting Elements under the Kyoto Protocol:
http://unfccc.int/files/national_reports/annex_i_natcom_/application/pdf/nc5outline.pdf

such information to be collected in a systematic manner ensuring quality, completeness and comparability.[3]

At this moment, reporting at EU level of information on climate action takes place under Decisions 280/2004/EC[4] and 2005/166/EC[5], commonly known as the Monitoring Mechanism Decision or 'MMD'. The MMD aims, inter alia, to ensure timely, accurate, complete, consistent, comparable and transparent ('TACCCT') reporting by the EU and its Member States to the UNFCCC Secretariat. Member States must submit every year by 15 January (the main elements of) their national greenhouse gas inventory report (NIR) to the Commission, which in turns draws up the EU's annual inventory report. Member States shall also report by 15 March every second year on their national (mitigation) policies and measures and their projections under different scenario's. Relevant for this paper is to note that this biennial report must also contain 'information on measures being taken or planned for the implementation of relevant Community legislation and policies, and information on legal and institutional steps to prepare to implement commitments under the Kyoto Protocol (check to what extent adaptation is also addressed under KP) and information on arrangements for, and national implementation of, compliance and enforcement procedures (Article 3(2)(c) MMD).

2.2. Reporting on national adaptation actions under the draft Monitoring Mechanism Regulation

In order to comply with recent international developments and the Climate and Energy Package, the MMD is currently under revision. On 24 November 2011, the Commission put forward a Proposal for a Regulation on a Mechanism for Monitoring and Reporting Greenhouse Gas Emissions and for Reporting Other Information at National and Union level relevant to Climate Change (hereafter ' the draft Monitoring Mechanism Regulation' or 'dMMR')[6], that is now subject to discussion in Council and European Parliament. Among

[3] SEC(2011)1407final, Commission Staff Working Document: Impact Assessment the document Proposal for a Regulation on a mechanism for monitoring and reporting greenhouse gas emissions and for reporting other information at national and Union level relevant to climate change, 10.

[4] Decision 280/2004/EC of the European Parliament and of the Council of 11 February 2004 concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the KyotoProtocol (OJ L 49, 19.2.2004, p. 1–8).

[5] Commission Decision 2005/166/EC of 10 February 2005 laying down rules implementing Decision No 280/2004/EC of the European Parliament and of the Councilconcerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol (OJ L 55, 1.3.2005, p. 57–91).

[6] http://ec.europa.eu/clima/policies/g-gas/docs/regulation_20111123_en.pdf

other objectives, the dMMR aims to provide a basis to facilitate the development of new Union climate change adaptation instruments to adapt to the inevitable consequences of climate change and to monitor and report on adaptation actions both a national and regional level (Article 1(g) and 2(i)).

According to Article 16 (Reporting on national adaptation actions) dMMR, Member States shall report to the Commission by 15 March each year, information on their implemented or planned actions to adapt to climate change, in particular, on national or regional adaptation strategies and on adaptation measures. This information shall include:

- the budget allocation by policy sector

  and, for each adaptation measure:
- the main objective,
- the type of instrument,
- the status of implementation and
- the climate-change impact category:
    - flooding,
    - sea level rise,
    - extreme temperatures,
    - droughts, and
    - extreme weather events.

Moreover, the Commission shall be empowered to adopt delegated acts to set out detailed reporting rules, including rules on the content, structure, format and submission process (Article 26 dMMR). The European Environment Agency (EEA) shall assist the Commission in its work with disseminating the information collected under this Regulation, including maintaining and updating a clearinghouse on impacts, vulnerabilities and adaptation to climate change (Article 25(j) dMMR).

Improved information from Member States is needed to monitor their progress and action in adapting to climate change. This information is needed to devise a comprehensive Union adaptation strategy following up and taking forward the White paper entitled ‘Adapting to climate change: Towards a European framework for action’. Reporting of information on

adaptation will enable Member States to exchange best practices and evaluate their needs and level of preparedness to deal with climate change (Consideration 15 dMMR). In other words, the revised Monitoring Mechanism will provide a platform to share best practices. The Explanatory Memorandum further clarifies: "As adaptation is a problem shared by all Member States, centralising the reporting of information will be beneficial to understanding adaptation needs, and to identifying best practices and gaps that could be addressed, either through action at Union level or though cooperation among the Member States".

Taking into account the environmental impacts, the administrative burden and consideration of compliance, the dMMR introduces a requirement for Member States to report on an annual basis on their implemented and planned national climate change adaptation actions. Based on criteria of effectiveness, efficiency and coherence, the Impact Assessment discards the 'no policy change option' and the 'comprehensive reporting option'.

The Copenhagen Accord and the Cancún Agreements recognized the importance of addressing adaptation with the same priority as mitigation. In that respect, the timeline (by 15 March) and the frequency (annually) are the same as for the reporting of the complete and up-to-date national inventory report (NIR, Article 7(2) dMMR) and the communication of 'policies and measures' (Article 14 dMMR) and 'projections' (Article 15 dMMR). The Commission shall also annually assess, in cooperation with the Member States, on the basis of the information on national adaptation actions, whether sufficient progress has been made with regard to the commitment in Article 4, para. 1, e) UNFCCC.[7] On the basis of this assessment, the Commission shall prepare a report to the EP and the Council by 31 October of every year.

On substance, however, the reporting on adaptation still has a lot of catching up to do. The single provision on adaptation is part of the chapter of reporting on 'other information'. Contrary to inventories and policies and measures and projections, no national system needs to be set up. Although one could argue that this is covered by the Aarhus Convention, there is

[7] *ARTICLE 4 COMMITMENTS*
1. All Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, shall:
e) Cooperate in preparing for adaptation to the impacts of climate change; develop and elaborate appropriate and integrated plans for coastal zone management, water resources and agriculture, and for the protection and rehabilitation of areas, particularly in Africa, affected by drought and desertification, as well as floods;

no explicit provision to make the reported information on adaptation actions publicly available.[8] There are no 'gap-filling procedures' (Article 9(2) dMMR) and it is questionable whether expert review teams will address adaptation issues (Article 20 dMMR). Strictly speaking, on the basis of the draft Monitoring Mechanism Regulation Member States and the Union don't need to cooperate… (Article 24 dMMR).

Contrary to the Monitoring Mechanism Decision, which is only binding *to* the Member States to whom it is addressed, a regulation shall have general application and shall binding in its entirety and directly applicable *in* all Member States (Article 288(2) TFEU and Article 33 dMMR). The reporting requirements as regards (…) adaptation apply to national authority level reporting, and do not impose any obligations on companies[9] (regardless of whether they are ETS or not). With regard to the emissions of ETS companies, the competent inventory authorities shall have access to the data and methods reported under the ETS directive in order to perform consistency checks. It is imaginable that a comprehensive reporting system on adaptation would, on a voluntary basis, include other key stakeholders, such as local governments and industry. This would contribute to better information of the public in an area where the public can be strongly affected in the future.

At first sight, the scope of Article 16 of the draft Monitoring Mechanism Regulation is limited to reporting on implemented and planned climate change national adaptation *actions*. It seems that no overall plan and strategy of which these actions are part off should be developed. Can we say that 'actions' the same as 'policies and measures'? Are only 'national' measures envisaged? Nor is information on the institutional and legal framework required (which ministries and agencies are involved? Which national laws and/or regulatory measures are in place and what's their relation to EU legislation?). According to the Impact Assessment, only an indicative list of information to be reported would be provided (I doubt strongly this).[10] Apparently, the observed and projected impacts per sector[11], the key vulnerabilities per

[8] See Art. 4(3) (on Low-carbon development strategies); Art. 14(2) (on policies and measures); Art. 15(3)(on projections); Art. 18(4)(on the use of auctioning revenues and project credits) dMMR.
[9] MEMO 11/816, Q&A: Monitoring and reporting of greenhouse gas emissions and other climate action information, Brussels, 23 November 2011
[10] dMMR Impact Assessment, 18.
[11] Sectors mentioned are: water management, agriculture and forests, biodiversity/nature protection (terrestrial, freshwater), coastal areas, marine (biodiversity) and fisheries, health (human, animal, plant), infrastructure (transport, energy, other), financial instruments and insurance, disaster risk reduction) see Draft final report, Umweltbundesamt, Institute for European Studies, Öko-Institut, Review of Decision No 280/2004/EC (Monitoring Mechanism Decision) in view of the agreed Climate Change and Energy package, March 2011,

sector[12] and per region and the costs shouldn't be reported under option 3 'reporting on actions'. But Article 16 dMMR does mention that 'this information shall include' 'budget allocation by policy sector' and that 'for each adaptation measure' the climate-change impact category' must be communicated. On the other hand, one can wonder whether annual reporting on long term adaptation actions is useful and, in a spirit of simplification and avoiding dupli cation of efforts, how this information flow relates to the information that needs to be communicated internationally.

Maybe the work of the Malta Forum on Legal Issues on Adaptation to Climate Change can feed into the work of Commission on detailed reporting provisions, including a common reporting format (CRF) through a delegated act ?

3. ENFORCEMENT OF ADAPTATION POLICY AND ACTION

'Enforcement' is described as "the act of compelling observance of or compliance with a law, rule, or obligation"[13]. The enforcement of a judgment or a decision consists of securing compliance with it, if necessary by means of coercion as allowed by the law, including the intervention of the forces of law and order.

Hence, enforcement presumes a legal instrument containing one or more sufficiently cognizable obligations or prohibitions. Although enforcement is an often implicit accessory to a piece of legislation, it is vital for the effectiveness of the instrument. Even the strictest law has no impact if its impact cannot be controlled effectively. To address the challenge of implementation and the enforcement deficit, the focus in EU decision making has gradually shifted its strategic priority from making (new) law(s) to greater and refined implementation[14].

In the area of climate adaptation in the strict sense, only the draft Monitoring Mechanism Regulation[15] will impose a sufficiently clear obligation on Member States to report on their

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http://ec.europa.eu/clima/policies/g-gas/docs/monitoring_2011_en.pdf

[12] This part could include information on research programmes on vulnerability based on risk assessments.

[13] Oxford Dictionary of English.

[14] P. KOLLER & L. CASHMAN, "Implementing EC environmental law. Compliance promotion and enforcement by the European Commission", J.E.E.P.L. 2009, 1.

[15] Proposal for a Regulation of the REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on a mechanism for monitoring and reporting greenhouse gas emissions and for reporting other information at national and Union level relevant to climate change
see http://ec.europa.eu/clima/policies/g-gas/docs/regulation_20111123_en.pdf

adaptation actions. However, it is my firm conviction that a better application and hence stronger enforcement of all the EU *acquis*[16] directly or indirectly relevant to climate change impacts, such as environmental quality standards and initiatives in the area of transboundary biodiversity, energy and transport networks, will contribute greatly to the objective of a climate resilient Europe. If climate change considerations are in some way reflected, mainstreamed into, the legislation stemming from other policy domains, the full application of this legislation will, maybe only as a minor co-benefit, increase the climate resilience of the overall climate regime. Another matter that this paper attempts to address is whether the adaptation instrument under consideration by the Forum should include a specific provision on enforcement or whether the basic, rules derived from ECJ case law on 'proportionate, effective and dissuasive' enforcement measures would suffice.

3.1. Types of enforcement

For the sake of the development of future climate adaptation law and policy, enforcement here is interpreted very broadly. Next to the actual enforcement through infringement procedures in some cases accompanied by financial sanctions, it includes checks of the timeliness and the completeness and a variety of methods for the management of the application.

3.1.1. Public and private enforcement

A first, preliminary distinction that can be made is between public enforcement and private enforcement. Although scholars devote most of their attention to the enforcement by public authorities (judges, administrators), private enforcement through injunctive relief or a claim for compensation can be very effective too. The right to file a complaint, to start a petition or to request certain measures could also be seen as form of private enforcement (See below). In order to be eligible for insurance cover, the terms and conditions of the insurance policy ought to be complied with. The overall duty of care encompasses the need to anticipate and manage the effects of climate change. Next to these legal norms and means, public disclosure by civil society of the shortcomings or simple non-existence of a companies or government climate adaptation policy could affect shareholder value and its image. These purely private form of pressure (citizen vs. citizen, business to business, individuals/consumers/communities vs.

[16] In 2010 the EU acquis or secondary law consisted out of 8400 regulations and nearly 2000 directives.

business) can be as effective as government funded and hence political dependent public enforcement.

Regarding public enforcement, administrative sanctions can be distinguished from criminal sanctions. Sanctions can be remedial or punitive (a penalty) in nature, although they often are a combination of both.

3.1.2. Preventive and reactive enforcement

Another distinction relates to the preventive or reactive character of the enforcement policy. In that sense, inspections are an important preventive instrument to ensure the implementation and enforcement of EU legislation. Noteworthy is the Recommendation of 4 April 2001 providing for minimum criteria for environmental inspections in the Member States (the 'RMCEI')[17] which contains non-binding criteria for the planning, carrying out, following up and reporting on environmental inspections. Its objective is to strengthen compliance with Community environmental law and to contribute to its more consistent implementation and enforcement in all Member States. The 2001 Recommendation only applies to environmental inspections of industrial installations subject to authorisation, permit or licensing requirements under Community law. No mention is made other activities, e.g. infrastructure, agriculture, nor of climate change considerations. The recommendation is at this stage subject of active internal Commission reflection, though it seems unlikely that its scope will be enlarged or that the recommendation will be turned into a directive.

3.1.3. Pre-infringement compliance promotion and legal procedures

Before the actual legal enforcement, a wide range of softer instruments of compliance promotion are more and more used. Preventing breaches starts with the design and the drafting of new legislation, by using techniques and instruments, such as thematic strategies, consultation and impact assessments, which ensure coherence, effectiveness and efficiency. Once the legislation is adopted, options include the use of EU funds to meet the objectives, developing guidance documents or to provide for a structured dialogue with a network of

[17] OJ L 118, 27 April 2001, p. 41–46.

national authorities or experts.[18] An important network in the field of environment is IMPEL, or the EU network for the implementation and enforcement of environmental law.[19]The IT tool CHAP ('Complaints Handling Accueil Plaignants') ensures the registration dispatching and feedback on complaints and enquiries by European citizens on the application of EU law. The 2008 problem solving pilot scheme, EU-Pilot, aims a quicker resolution of complaints arising from the application of EU law by improving the communication and cooperation between the Commission services and the Member States authorities.

If other means fail to achieve that EU law is respected, the Commission may initiate an infringement procedure under Article 258 TFEU. The European Court of Justice has recognised that the Commission has discretionary powers in this area.[20]

Infringements generally fall into one of the three following categories:

1) *Non-communication* cases where the Member State concerned failed to fulfil its obligation to notify measures to transpose a directive (late transposition).

2) *Non-conformity* cases where shortcomings are identified in the transposition. This conformity checking can take place through correlation tables.

3) *Bad application* cases address the shortcomings in the application of the provisions.

Only a minority of all cases originate from the Commission's own initiative (ex-officio).

In addition, the Commission may, pending the judgement, ask the ECJ for interim measures in cases where there is a risk of irreversible damage (Article 279 TFEU). This may be relevant in cases of manifest mal-adaptation.

3.2 Loyal cooperation between Member States and European Commission

Implementation of EU climate legislation is to be ensured in the first place by the Member States. Article 192, paragraph 4 of the Treaty on the Functioning of the European Union (TFEU) states that: "*Without prejudice to certain measures adopted by the Union, the Member States shall finance and implement the environment policy*."

In addition to any implementation and enforcement action taken at Member State level, the European Commission fulfils the role of "Guardian (or Watchdog) of the Treaty":

[18] P. KOLLER & L. CASHMAN, "Implementing EC environmental law. Compliance promotion and enforcement by the European Commission", J.E.E.P.L. 2009, 4.

[19] http://impel.eu/

[20] Case 50/76, Amsterdan Bulb v Produktschap voor Siergewassen, ECR 139.

"If the Commission considers that a Member State has failed to fulfil an obligation under the Treaties, it shall deliver a reasoned opinion on the matter after giving the State concerned the opportunity to submit its observations.
If the State concerned does not comply with the opinion within the period laid down by the Commission, the latter may bring the matter before the Court of Justice of the European Union."(Article 258 TFEU). Therefore, enforcement of European environmental and climate change law can be characterised as a shared responsibility[21]. Close cooperation between national authorities and the European Commission contributes to a better implementation.

Pursuant to the principle of sincere cooperation, Member States, both legislators and enforces, must facilitate the achievement of the Union's tasks and refrain from any measure which could jeopardise the attainment of the Union's objectives (Article 4(3) Treaty on the European Union, ex Article 10 EC Treaty).

But regardless of whether the EU rules are directly applicable (regulations) or require prior transposition into national law (directives), it's important to bear in mind that EU law forms an integral part of the legal order of Member States. The onus for the correct application of EU law is primarily on the Member States' administration and judiciary, which have to ensure that rights and obligations for citizens and businesses are properly enforced.

3.3. General Sanctioning Requirements of the Member States

In principle, it's up to the Member States to determine how the factual situation must be brought in line with the legally desired situation. Although Member States initially enjoyed very wide discretion in the sanctioning of EU law offences[22], the European Court of Justice (ECJ) gradually developed a set of criteria which delimited this autonomy.

Where EU legislation does not specifically provide any penalty for an infringement, (…) Member States must make the penalty effective, proportionate and dissuasive and provide for

[21] J. JANS & H. VEDDER, *European Environmental Law*, Europa Law Publishing, 3-rd edition, 2008, 150
[22]R. MEEUS, "Fill in the Gaps: EU Sanctioning Requirements to Improve Member State Enforcement of EU Environmental Law", J.E.E.P.L. 2010, 139; J. JANS & H. VEDDER, *European Environmental Law*, Europa Law Publishing, 3-rd edition, 2008, 150.

conditions, both procedural and substantive, which are analogous to those applicable to infringements of national law of a similar nature and importance[23].

Under the principle of proportionality, the content and form of Union action shall not exceed what is necessary to achieve the objectives of the Treaties (Article 5(4) TEU). The measure must be appropriate (likely to achieve the objective) and necessary (the least restrictive means capable to achieve the objective). Along the same vein, the measure must comply with fundamental rights (e.g. the Charter of Fundamental Rights) and principles of legal certainty and non-retroactivity. Nevertheless, the principle of proportionality also works upwards: too soft sanctions would be disproportionate too. The principle of deterrence requires sanctions where the severity is in relation to the importance of the violated provision and the scale of the violation. The introduction of sufficiently severe sanctions for EU law sanctions should entail both individual and general dissuasive effects. Closely related is the principle of effectiveness, which demands that the sanctions produce real effect and should not remain dead letter.

One could say that the requirement of proportionality expresses the concern of legal protection ('not too hard, but not too soft either'), while the requirements of effectiveness and deterrence guarantee the sufficiently pressing character of the Member States' sanctions ('hard enough'), and that non-discrimination requirement is somewhere in between ('not softer but neither harder than similar national law'). Overall, these general, not to say vague, principles offer little practical guidance and in many cases it will be up to a judge to determine ex post whether a Member State had or had not taken adequate enforcement measures.

3.4. Specific sanctioning requirements

Sometimes EU directives and regulations contain specific sanctioning provisions that envisage a specific violation and determine how to deal with this kind of violations. An example of a specific sanctioning requirement relevant to climate change adaptation, is the obligation of the competent authority under the Groundwater Directive[24] to withdraw the

[23] See Case 68/88, Commission vs Greece, ECR 2965 (the Greek maize case).
[24]Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2006 on the protection of groundwater against pollution and deterioration, OJ L 372, 27.12.2006, p. 19–31.

authorization, if necessary, should the conditions laid down in the permit not be complied with .

In EU (sectoral) environmental law, different types of specific sanctioning requirement can be distinguished:

- Measures aimed at the *remediation* of the situation (e.g. the obligation on the waste producer to take-back the illegally disposed waste[25])
- Measures that affect the offender in his *rights* (e.g. a withdrawal of a permit or a autorisation when the conditions are not complied with)
- *Monetary sanctions*, *e.g.* 16(3) Revised ETS Directive

  The excess emissions penalty shall be EUR 100 for each tonne of carbon dioxide equivalent emitted for which the operator or aircraft operator has not surrendered allowances.
- *Naming and shamin*g , e.g. Article 16(2) Revised ETS Directive:

  "Member States shall ensure publication of the names of operators and aircraft operators who are in breach of requirements to surrender sufficient allowances under this Directive."

- *Corrective action*, e.g. Article 7 Effort Sharing Decision
  "If the greenhouse gas emissions of a Member State exceed the annual emission allocation (…), the following measures shall apply:
  a) a deduction from the Member State's emission allocation from the following year equal to the amount (…) of those excess emissions, multiplied by an abatement factor of 1,08;
  b) the development of a corrective plan;
  c) the temporary suspension of the eligibility to transfer part of the Member State's emission allocation and JI/CDM rights to another Member State until the Member States is in compliance."

[25] Regulation (EC) No 1013/2006 of 14 June 2006 on shipments of waste (OJ L 190, 12.7.2006, p. 1)

3.5. Limited enforcement means for DG Climate Action?

It should be noted that the possible means of the Commission to ensure the application of EU law differ depending on the respective area of policy. Only in few areas (e.g. competition, customs, regional policy) is the Commission entitled to examine compliance with EU rules directly on the ground. EU Climate policy is based on the Environment Chapter of the TFEU.

In spite of an ever growing and more mature body of EU law, it has been widely recognized that some areas of EU law suffer from an 'enforcement deficit'. Environment is one of the most infringement-prone areas, with one fifth of all cases, the second highest number of new cases and attracting most of the petitions lodged with the European Parliament[26] . The legislation needs to be respected in a wide diversity of natural conditions, under very varied national and regional administrative arrangements in situations that often cross borders . Other factors include the complexity environmental legislation and the lack of resources of the Legal Unit. All these elements have brought the Commission to focus (too much) on pretty straightforward, document-based investigation of late transposition and non-conformity cases, instead of carrying actual fact-finding missions on site in cases of bad application. Bearing these experiences in mind, the EU reporting and enforcement of adaptation plans may risk to become a 'paper tiger'.[27]

4. THE CROSSOVER BETWEEN LIABILITY AND ADAPTATION TO CLIMATE CHANGE

This final section explores the relevance, possible application (of) and limitations (to) of general and specific liability (rules) to the impacts of climate change. The main focus is when, and to what extent, liabilities could come into play regarding 'climatic impacts' (adaptation) and not so much the issue of 'liability for climate change' (mitigation)[28]. Many different kinds

[26] COM(2011) 588 final, 29 September 2011, Report from the Commission 28th Report on Monitoring the Application of EU Law (2010), 5.
[27] S. TUSCH, "Enforcement of European environmental law – The European Parliament comments on the Commission's report", ELNI Review, 2008, 84.
[28] See M. HARITZ, *An inconvenient deliberation : the precautionary principle's contribution to the uncertainties surrounding climate change liability*, Kluwer Law International, 2011, 457 p. M. FAURE & A. NOLLKAEMPER, "International Liability as an Instrument to Prevent and Compensate for Climate Change", SELJ 2007, 123-179.

of liabilities (commercial, environmental, product, professional liability) may arise.[29] This contribution focuses on environmental liability in the EU.

The Directive 2004/35 of 21 April 2004 on Environmental Liability with regard to the Prevention and Remedying of Environmental Damage (hereafter referred to as the "Environmental Liability Directive", the "Directive" or simply the "ELD") [30] furthers the "polluter pays principle" by establishing a framework of environmental liability to prevent and remedy environmental damage (Article 1).

4.1. Environmental Damage aggravated by Climate Change?

The ELD defines 'damage' as 'a measurable, adverse change in a natural resource or a measurable impairment of a natural resource service which may occur directly or indirectly' (Art. 2.2. ELD). Severe climate change impacts, such as hurricanes and floods (direct) and heat waves causing bush fire (indirect), will most likely increase number of instances of damage.

According to the Environmental Liability Directive, the natural resources enclose protected species and natural habitats, water and land (Art. 2.12 ELD). It does not include the air or the atmosphere, although environmental damage can be caused *through* airborne elements (consideration 4).[31]

'Natural resource services' are defined as the functions performed by a natural resource for the benefit of another natural resource or the public (Art. 2.13. ELD). A coastal wetland or river basin, for instance, provides food and nesting habitat for birds and other species, clean water for fish populations and is important for biodiversity maintenance and for pollution assimilation. Examples of human benefits deriving from natural resources include boating,

[29] See C.ROSS, E. MILLS, S. HECHT, "Limiting Liability in the Greenhouse. Insurance Risk-Management Strategies in the Context of Global Climate Change", downloaded form http://ssrn.com/abstract=987942.
[30] Directive 2004/35/CE of the European Parliament and the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental, OJ L 143 of 30 April 2004, p. 56-75. One could prefer the term "Environmental Damage Directive", since the notion 'environmental liability' is quite deceptive.
[31] The Proposal for a Directive confirms that: "Damage to water, soil and habitats consecutive to the accidental or deliberate release of substances or materials or radiations, into the air should be included in the notion of damage since such airborne elements could cause environmental damage within the meaning of this Directive." (REF)

recreational fishing, beach use, wildlife viewing, hiking and subsistence hunting.[32] It is clear that these natural resource services can be affected by climate change too.

Damage to protected species and natural habitats arises when damage has significant adverse effects on reaching or maintaining the 'favourable conservation status'[33]. The significance of such effects is to be assessed by reference to the baseline condition, taking account of the criteria set out in Annex I such as the number of species, their capacity to recover naturally, the rarity of the species or the habitats, the natural fluctuations….

Water and water damage are defined by reference to the 2000 Water Framework Directive ("WFD").[34] Water encompasses surface water and ground water as well as the coastal waters[35] and inland waters. The general aim of the Water Framework Directive is to have a good water quality status by 2015. Under the WFD, Member States are required to designate protection areas in river basins in order to protect surface water and ground water and to conserve habitats and species directly depending on the waters. Water damage is any damage

[32] E. BRANS Estimating Damages under the 2004 EC Directive on Environmental Liability, in *Marine Resource Damage Assessment. Liability and Compensation for Environmental Damage*, F. MAES (ed.), Springer, Dordrecht, 2005, 15

[33] Art. 2.4. ELD : 'conservation status' means:
(a) in respect of a natural habitat, the sum of the influences acting on a natural habitat and its typical species that may affect its long-term natural distribution, structure and functions as well as the long-term survival of its typical species within, as the case may be, the European territory of the Member States to which the Treaty applies or the territory of a Member State or the natural range of that habitat;
The conservation status of a natural habitat will be taken as 'favourable' when:
— its natural range and areas it covers within that range are stable or increasing,
— the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
— the conservation status of its typical species is favourable, as defined in (b);
(b) in respect of a species, the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within, as the case may be, the European territory of the Member States to which the Treaty applies or the territory of a Member State or the natural range of that species;
The conservation status of a species will be taken as'favourable' when:
— population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats,
— the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
— there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis;

[34] Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy, Official Journal L 327, 22 December 2000, p. 1 as amended by Decision No. 2455/2001/EC (Official Journal L 331, 15 December 2001, p. 1.

[35] See in this respect the Proposal for a Directive of the European Parliament and of the Council of 24 October 2005 establishing a framework for Community action in the field of marine environmental policy (Marine Strategy Directive), COM(2005) 504 final.

that has significantly adverse affects on the ecological, chemical and / or quantitative status and / or the ecological potential of the waters concerned. These concepts are taken from the Water Framework Directive which in turn refers to other EU directives such as the Bathing Water en Drinking Water Directives. Again, the impacts of climate change, both the ones happening immediately (e.g. sewers spilling over in a river after heavy rainfall) as ones occurring gradually (e.g. acidification of lakes, disappearance of aquifiers) may make the objectives of the Water Framework more difficult to achieve.

Land damage finally, means any land contamination that creates a significant risk of human health being adversely affected as a result of the direct or indirect introduction in, on or under land, of substances, preparations, organisms and micro-organisms (Art. 2.1. c. ELD).

4.2. Is it covered by the ELD?

Environmental damage (or the imminent threat thereof) falls within the scope of the Directive as far as it was caused by any of the environmentally risky occupational activities listed in Annex III. The standard of liability is strict, in the sense that no fault has to be demonstrated.
In addition, the Directive shall apply to damage to protected species and natural habitats caused by any other occupational activity, whenever the operator has been at fault of negligent (Art. 3 ELD).

There are, however, a considerable number of exceptions to the rule. Maybe most important is that, in case of damage caused by pollution of a diffuse character, it should be possible to establish a causal link between the damage and the activities of individual operators.
It should be very clear that, given its administrative nature, the 'liability' scheme is with prejudice to the existing national rules covering personal injury, damage to private property or economic losses.

A very relevant exemption in the context for adaptation to climate change is the '*force majeure*' or 'natural phenomenon of an exceptional, inevitable and irresistible character'. This is a very common, almost standard exception in liability regimes that has to be interpreted very narrowly. The damage is the result of an event which is 'beyond control'. Nor does the ELD apply to activities of which the sole purpose is to protect from natural disasters (Art. 4.6.

ELD). Still, one may wonder whether these exemptions can be upheld when these types of events occur more frequently and become to a certain extent 'foreseeable'.

Marine oil pollution, insofar covered by international conventions, and nuclear damages are notable exceptions too.

4.3. The operational regime

4.3.1. Liable operator, competent authority

The potential liable person is the operator of certain occupational activities. The Directive considers as operator 'any natural or legal, private or public person, who operates or controls the occupational activity, or where this is provided for in national legislation, to whom decisive economic power over the technical functioning of such an activity has been delegated, including the holder of a permit or authorization or the person notifying or registering such an activity'.

Under the public law regime of the ELD, the competent authorities play a very important role. Most importantly, the competent authority should establish which operator has caused the damage, assess the significance of the damage to determine which remedial measures should be taken.

In cases the competent authority fails to fulfill these tasks, persons adversely affected by (the imminent threat of) environmental damage, are entitled to submit observations and to request the competent authority to take action (Art. 12.1 ELD).
This includes NGO's promoting environmental protection (which have a sufficient interest in decision making), but in any case the persons on whose land remedial measures would be carried out. The decision of the competent authority may be subject to a review.

4.3.2. Prevention

Where environmental damage has not yet occurred, but there is an imminent threat of such damage, the operator shall, without delay, take the necessary preventive measures (Art. 5

Preventive action). Preventive measures means any measures taken in response to an event, act or omission that has created an imminent threat of environmental damage, with a view to preventing or minimizing that damage (Art. 2.10. ELD). When there is a sufficient likelihood that environmental damage will occur in the near future, one can speak of an 'imminent threat' (Art. 2.9. ELD)

The Environmental Liability Directive places a direct obligation on the operator to immediately take the necessary preventives and to inform the competent authority of all relevant aspects of the situation.

4.3.2. Remediation

When environmental damage has occurred, the operator shall, without delay, inform the competent authority of all the relevant aspects of the situation and take the necessary remedial measures and all practical steps.

Regarding protected species and natural habitats and water[36], the damaged natural resources and/or services have to be brought back to 'baseline condition', which is the condition which would have existed had the environmental damage not occurred. This situation is estimated on the basis of the best information available.

This remediation is achieved by way of primary, complementary and compensatory remediation. 'Primary' remediation is any remedial measure which returns the damaged natural resources and /or impaired services, to, or towards, baseline condition.
If primary remediation does not bring the damaged biodiversity or water back to baseline condition (e.g. damage is irreversible, measures are too expensive, and restoration is technically not feasible…), complementary and compensatory remediation is needed.
Complementary remediation is any action to compensate for the fact that primary remediation does not fully restore the damaged waters and/ or biodiversity to baseline condition. It consists of actions taken on another site. Compensatory remediation compensates for the interim losses, the losses resulting from the fact that until primary and complementary remediation measures have taken full effect the damaged natural resources and services cannot perform their ecological functions and / or cannot provide services to other natural resources or the public.

[36] Concerning land damage, removal of the significant risk of adverse effect on human health is sufficient (Annex II, 2).

4.4.Financial Security

It is generally known, that without the availability of appropriate financial guarantees, liability rules often overshoot their mark. In this respect, article 14 ELD demands Members States to take measures in order to encourage the development of financial security instruments and markets by the appropriate financial and economic operators with the aim of enabling operators to use financial guarantees to cover their responsibilities under this Directive.

On 12 October 2010 the European Commission presented its progress report as required by Article 14, para. 2 ELD.[37] It states that a significant part of the ELD-derived liabilities can be covered under traditional General Third Party Liability (GTPL) or Environmental Impairment Liability (EIL) policies. Next to insurance products, a range of alternative types of financial security, such as bank guarantees and funds do exist and are developing. As a result of the delayed transition of the ELD, which was completed on 1 July 2010 instead of 1 May 2007, the Commission concludes that there is presently insufficient justification for introducing a harmonized system of mandatory financial security.

Overall, the no concrete conclusions can be drawn yet about the effectiveness of the Environmental Liability Directive in remedying environmental damage. Information exchange and awareness-raising about the ELD are to be promoted. Interpretation guidelines on the application of the ELD may be developed. Although estimates about the number of ELD-cases across the EU, may be around 50, Member States are advised to establish records or registers of ELD cases. **5. Conclusion** Consistent and targeted reporting of relevant information on vulnerabilities, impacts and policies and measures combined with a broad, effective enforcement policy are fundamental for the success of an EU adaptation regime.

However, building a climate resilient Europe will not simply happen by producing lengthy government reports, nor by enforcing the timely and complete transposition of the relevant acquis. The reporting mechanism should avoid overlap and unnecessary administrative burden. Enforcement requires clarity on the role and responsibility of governments and sufficient resources that allow controls and, if need be, an intervention on the ground.

A future EU legal instrument on adaptation measures should pay appropriate attention to the horizontal topics of reporting and enforcement, the latter having clear links to liability and insurance. With regard to reporting on adaptation, this could take the form of a

[37] COM(2010) 581 final.

reference in the main instrument to the provision in the Monitoring Mechanism Regulation. Further work may be considered when complementing this reporting mechanism by delegated act. On enforcement and liability, a standard clause and suiting language in the recitals could suffice.

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