



UCLouvain
SAINT-LOUIS BRUXELLES



European Environmental Law in a nutshell

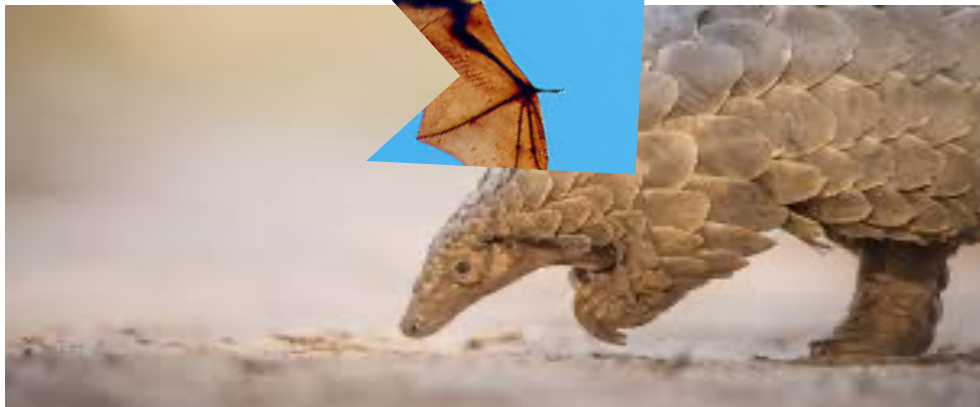
N. de Sadeleer, Full Professor, Jean Monnet Chair

1. Introduction: Why do we need European law?
2. Three concepts at play: European Environmental Law
3. Sources: primary, secondary, tertiary
4. Private law
5. Environmental Policy and Climate change
6. Trade v Environment
7. Conclusion: Achievements , Challenges, A paradigmatic shift

1. Why do we need European Law?

- + Cross-border impacts of polluting activities
- + Common playing field carved out through harmonisation (internal market)
- + Enhance competitiveness of European undertakings (Green Deal for Europe)
- + Protecting public goods in the economic sense
- + **Protecting human health** (air pollution caused more than 300 000 premature deaths in the EU-28 in 2018, EEA Air quality in Europe – 2020 report)

1. Why do we need European law?



SARS-Cov-2 is an Environmental Crisis Too

Human predation of wild fauna and the reduction in habitats have thus ended up creating new interfaces that favour the transmission of pathogens, mainly viruses, to humans.

Domesticated animals and wild fauna thus constitute a reservoir for almost 80% of emerging human diseases (SARS-Cov, MERS-CovV, Ebola, Nipa).

These diseases are all **zoonotic** in origin.

CITES

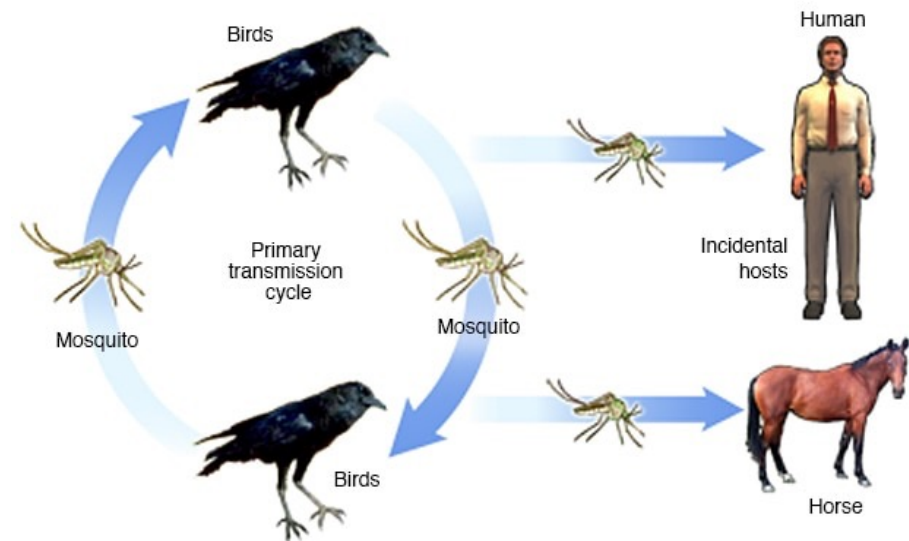
Council Regulation (EC) No 338/97 on the protection of species of wild fauna and flora by regulating trade therein





'Member States shall take the requisite measures to maintain the population of the species referred to in Article 1 at a level which corresponds in particular to ecological, scientific and cultural requirements ...'

Art 2 Birds Directive

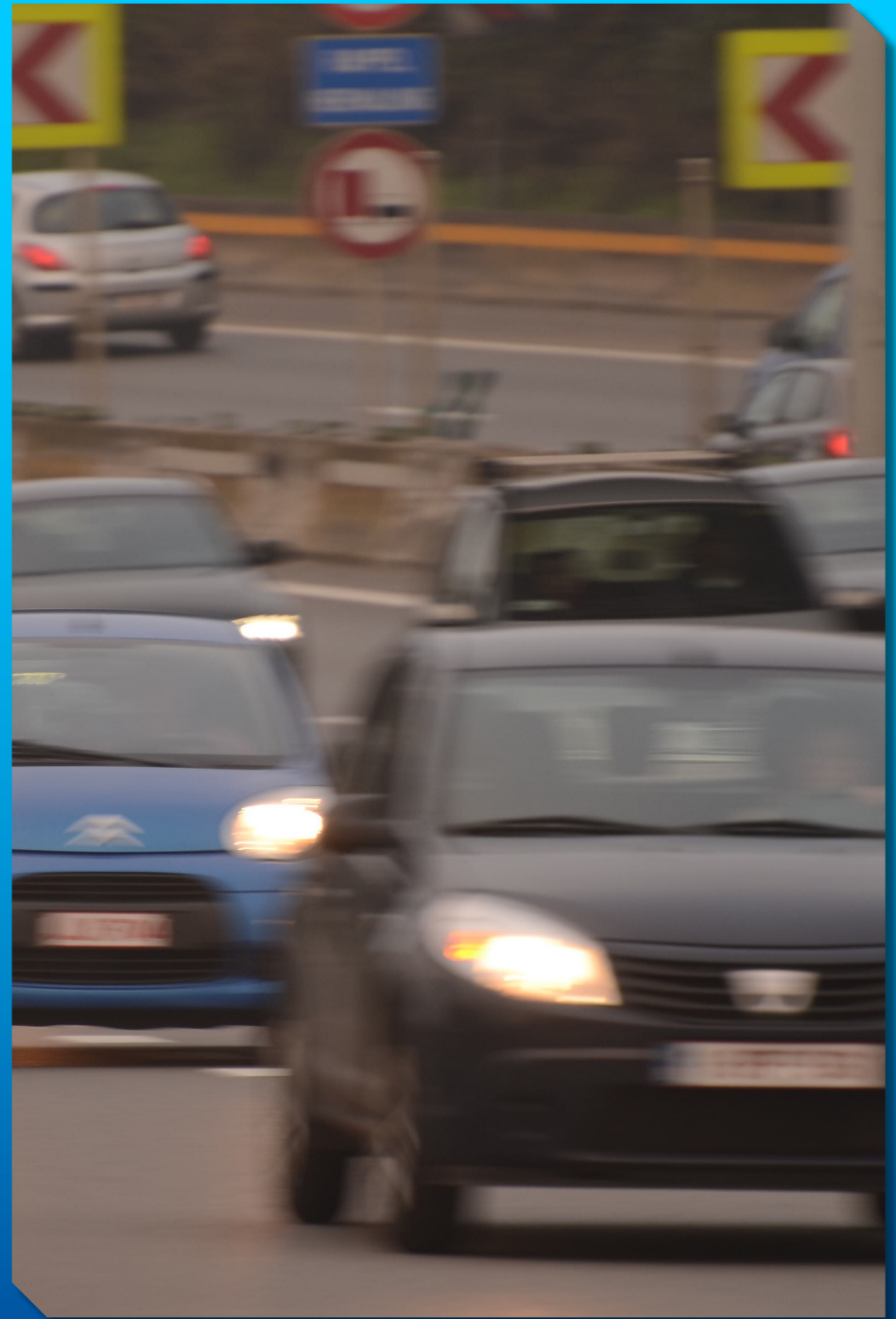


© MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH. ALL RIGHTS RESERVED.



2. Three concepts at play

- European
- Environmental
- Law



European: which boundaries?

COUNCIL OF EUROPE



CONSEIL DE L'EUROPE



HELCOM

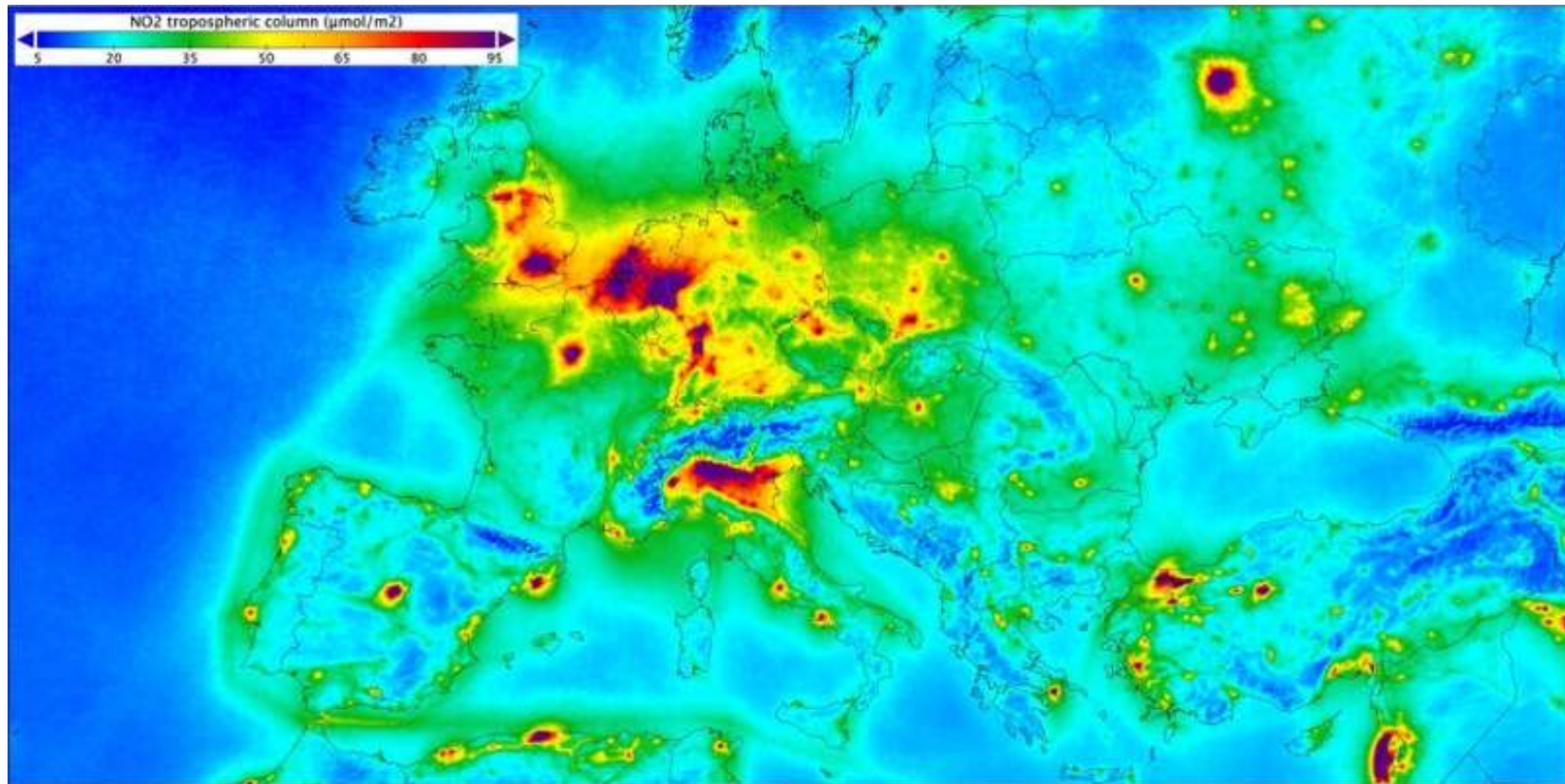


UNECE



Mediterranean Action Plan
Barcelona Convention

European: which boundaries?



Nitrogen dioxide concentrations above the annual limit value (2018) Copernicus Sentinel-5P



UNECE

SUSTAINABLE
DEVELOPMENT GOALS

- 1979 Convention on long-range transboundary air pollution
- Espoo Convention on EIA in a Transboundary Context
- Helsinki Convention on the Protection and Use of Transboundary Watercourses and International Lakes
- Convention on the Transboundary Effects of Industrial Accidents
- 1998 Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters



UNECE

Convention on Long-range
Transboundary Air Pollution



Council of Europe

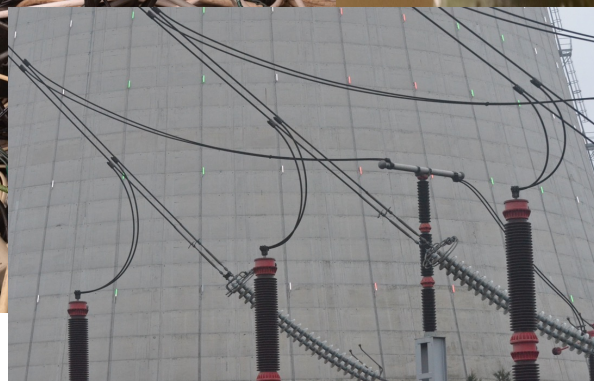


- + 1979 Convention on the Conservation of European Wildlife and Natural Habitats
- + 1998 Convention on the Protection of the Environment through Criminal Law
- + 1993 Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment

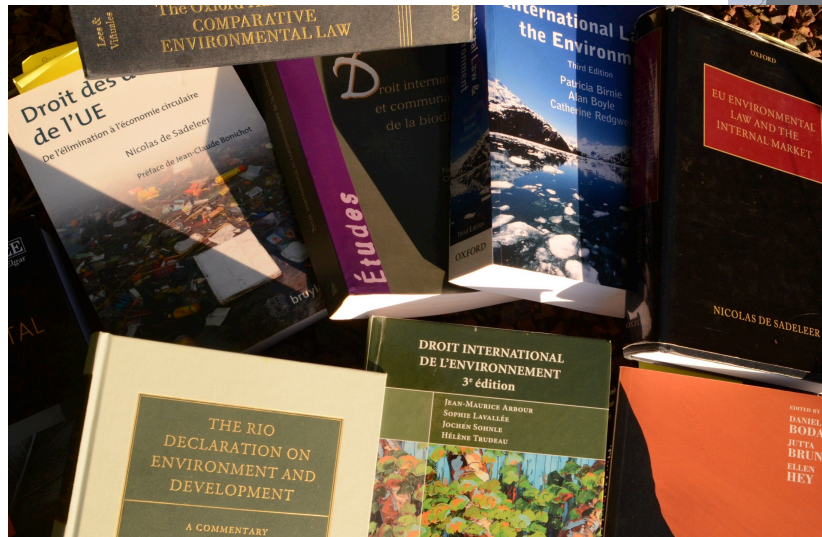
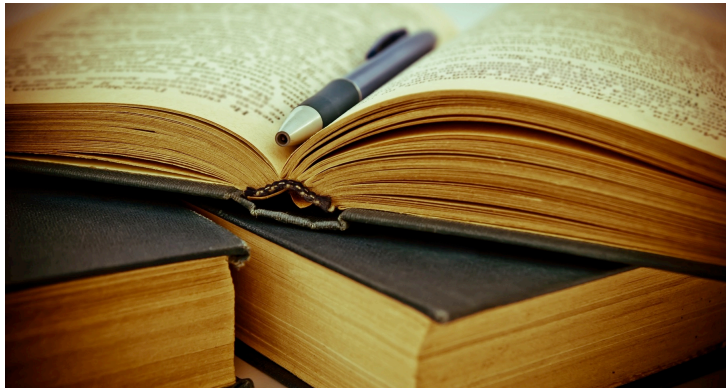




Environment?

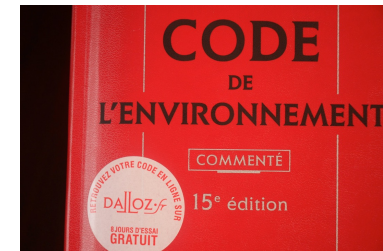


Law: from soft to hard?



Autonomy of the Legal System

- + **Law** operates as a system in the absence of human biases, politics, motivations, weaknesses and fallibility.
- + The **legal scholar** is expected to be an interpreter **within the legal system** but provide objectivity in interpreting the system.



- + The **scientist** is separate from the object under observation. He is expected to take the position of the **unbiased observer** and take observations of phenomenon unrelated to the observer.

Urgenda: Hoge Raad's openness towards science

5.4.3. Blijkens de rechtspraak van het EHRM dient bij de uitleg en toepassing van het EVRM voorts rekening te worden gehouden met **wetenschappelijke inzichten** en algemeen aanvaarde standdaarde.

7.2.7 Uit het voorgaande volgt dat in de internationale gemeenschap een grote ma**consensus bestaat over de in AR₄ genoemde noodzaak van een reductie van de uitstoot van broeikasgassen** te van door (in elk geval) de Annex I-landen, van 25% tot 40% in 2020, teneinde de opwarming van de aarde beperkt te houden tot de – ten tijde van AR₄ – maximaal verantwoord geachte 2 °C.

+ The **IPCC AR₄ report** from 2007 played a decisive role in establishing the substance of the requirement of **due diligence** stemming from Articles 2-8 ECHR.



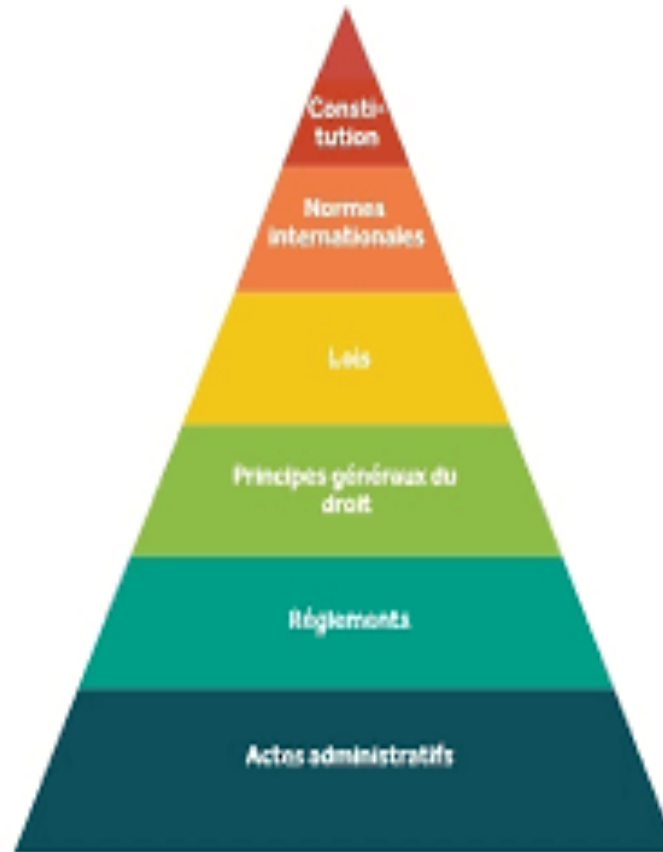
3. Sources

Primary, secondary, tertiary

3. Sources

Primary, secondary, tertiary

- + Primary
- + Secondary
- + Tertiary
- + Municipal



3.1. Primary Law: DNA



- + **Art. 2 TEU:** The Union is founded on the values of respect for human dignity, freedom, democracy, equality, the **rule of law** and respect for human rights, ...
- + **Art. 3, §3 TEU :** The Union shall establish an internal market. It shall work for the **sustainable development** of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment.
- + Article 3, §3 et 21, §2, d) TEU ; Articles 11, 191 à 193 TFEU ; Article 37 CDF

3.1. EU Environmental Objectives (191(1) TFEU)

Union policy on the environment shall contribute to pursuit of the following objectives:

- preserving, protecting and improving the **quality of the environment**,
- protecting **human health**,
- prudent and rational utilisation of **natural resources**,
- promoting measures at international level to deal with **regional or worldwide environmental problems**, and in particular combating **climate change**.

3.1. EU Environmental Principles (191(2) TFEU)

'Union policy on the environment shall aim at a **high level of protection** taking into account the diversity of situations in the various regions of the Union.

It shall be based on the **precautionary principle** and on the principles that **preventive action** should be taken, that environmental damage should as a priority be rectified at source and that the **polluter should pay**.'

3.1. EU Environmental External Action (191(4) TFEU)

‘Within their respective spheres of competence, the Union and the Member States shall cooperate with third countries and with the competent international organisations.

The arrangements for Union cooperation may be the subject of **agreements** between the Union and the third parties concerned.’

=> Conclusion of **Multilateral Environmental Agreements** (UNFCCC, CITES, Bern, etc.)

Environmental Policy: Shared Competence (Art. 4(2) e) TFEU)



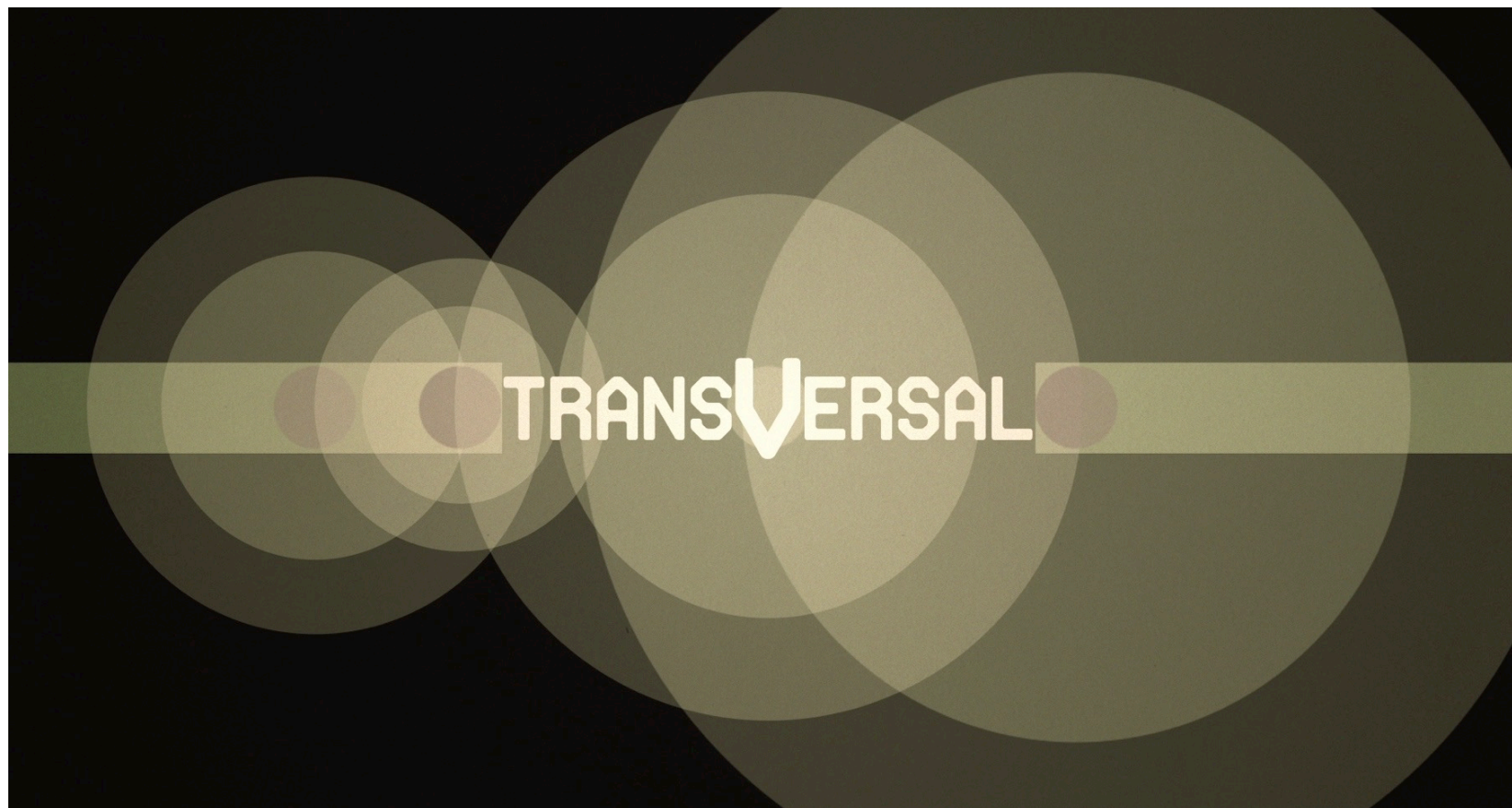
+ EU Decision-making process



**Member States
Environmental
Policies**

3.1. Integration Principle

(11 TFEU et 37 CFR)



3.1. Integration Principle (Art. 11 TFEU et 37 CFR)

‘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. ’

Different TFEU legal bases to protect the environment



Environmental Protection - Art. 192(1) TFEU



Establishment and functioning of the internal market - Art. 114(1) TFEU



Energy- Art. 194(1) and (2) TFEU



CAP and common fisheries policy rules - Art. 43(2) TFEU

3.1. Procedure to adopt environmental rules (Art. 192(1) TFEU)

'The European Parliament and the Council, acting in accordance with the **ordinary legislative procedure** and after consulting the Economic and Social Committee and the Committee of the Regions, shall decide what action is to be taken by the Union in order to achieve the objectives referred to in Article 191'.

3.1. Procedure to adopt internal market rules (Art. 114(1) TFEU)

‘The European Parliament and the Council shall, acting in accordance with the **ordinary legislative procedure** and after consulting the Economic and Social Committee, adopt the measures for the approximation of the provisions laid down by law, regulation or administrative action in Member States which have as their object the **establishment and functioning of the internal market**’.

3.1. Procedure to adopt energy rules (Art. 194(1) and (2) TFEU)

‘...the European Parliament and the Council, acting in accordance with the **ordinary legislative procedure**, shall establish the measures necessary to achieve’ the following objectives:

- + (a) ensure the functioning of the energy market;
- + (b) ensure security of energy supply in the Union;
- + (c) promote energy efficiency and energy saving and the development of new and **renewable forms of energy**; and
- + (d) promote the interconnection of energy networks.

3.1. Procedure to adopt CAP and common fisheries policy rules (Art. 43(2) TFEU)

‘The European Parliament and the Council, acting in accordance with the **ordinary legislative procedure** and after consulting the Economic and Social Committee, shall establish the common organisation of agricultural markets provided for in Article 40(1) and the other provisions necessary for the pursuit of the objectives of the common agricultural policy and the common fisheries policy’.

Art. 5 TEU: Principe of conferral of powers

Politiques	Objet des mesures		Bases juridiques	Procédures
PAC	Production et commercialisation des produits agricoles		Article 43 TFUE	PLO ou PLS
Transports	Navigation maritime et aérienne		Article 100 TFUE	PLO (article 294 TFUE)
Fiscalité	Harmonisation des impôts indirects		Article 113 TFUE	PLS
Marché intérieur	Etablissement et du fonctionnement du marché intérieur		Article 114 TFUE	PLO (article 294 TFUE)
PCC	Mesures internes ou conventionnelles		Article 207, par. 4, TFUE	PLO (294 TFUE)
Environnement	Mesures générales	Article 192, par. 1, TFUE	PLO (article 294 TFUE)	

3.1 How to draw the dividing line between the internal market (Art. 114) and the environment (Art. 192)?

Article 114

Regulation (EC)
No 1107/2009 of the
European Parliament
and of the Council of
21 October 2009
concerning the placing
of plant protection
products on the
market

Article 114

Regulation (EU)
No 528/2012 of the
European Parliament
and of the Council of
22 May 2012
concerning the making
available on the market
and use of biocidal
products

Article 192

Directive 2009/128/EC
of the European
Parliament and of the
Council of 21 October
2009 establishing a
framework for
Community action to
achieve the sustainable
use of pesticides

From product conception to waste management

(Article 114 TFEU)

Approach	Design	Legal Acts	Legal Base
Upstream	Eco-conception of products	Regulation (EU) 2024/1781 on ecodesign requirements for sustainable products	Article 114 TFEU; Ordinary legislative procedure
Upstream	Products safety	Directive 2011/65/EU on restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS)	Article 114 TFEU; Ordinary legislative procedure
Downstream	Waste	Forthcoming Regulation of EU legislation on Packaging and Packaging Waste	Article 114 TFEU; Ordinary legislative procedure

Command-and-Control and Market-based instruments

Command-and-Control instruments

- + Directives on ecosystems and wildlife
- + Directives/Regulations on waste
- + Regulations on products and substances

Market-based instruments

- + Directive on the Carbon market (ETS₁ and ETS₂)

3.2. Legal Approach in Secondary Law

- + Ban/Restrictions
- + Taxation
- + Market instruments

	Ban	Taxation	Cap-and-Trade
Legal acts	Fluorinate GHG Regulation 517/2014	Excise Duties Directive 2003/96	ETS Directive 2003/87
Legal basis and procedure	Article 192(1) TFEU (environment); Ordinary legislative procedure	Article 113 TFEU (taxation); Special legislative procedure	Article 192(1) TFEU (environment); Ordinary legislative procedure
Legal effects	Directly applicable	Transposition	Transposition
Harmonisation	Maximal de jure	Minimal rates	Maximal de facto
Personal scope	Economic operators placing on the market CFC	Consumers pay the excise duties	Economic operators (listed installations, aviation, maritime transport, fuel) have to purchase the allowances
Enforcement (control, criminal penalties)	Member States	Member States	Member States

INSTRUMENTS TRANSVERSAUX

Evaluation des incidences (plans et programmes, projets).
Accès à l'information – Participation – Accès à la justice

NUISANCES

MILIEUX RECEPTEURS

INSTALLATIONS CLASSEES

IPPC
SEVESO
Biotechnologie

AIR

Objectifs de qualité
Normes d'émission
Normes de produits (CFC, engins, véhicules,
énergie, ...)

DECHETS

Normes de produits (piles, emballages, PCB-
PCT, DEEE)
Normes de procédés (décharges, incinérateurs)
Traitement (recyclage)
Mouvements transfrontières

EAU

Objectifs de qualité
Normes d'émission
Programmation

SUBSTANCES A RISQUE

Substances chimiques
Pesticides/Biocides
Asbeste

SOLS

Objectifs de qualité
Normes d'émission

BRUIT

Normes de produits
Normes d'émission
Programmation

FAUNE & FLORE

Espèces sauvages
Habitats naturels
Evaluation et gestion des risques de la
dissémination des OGM

INSTRUMENTS ECONOMIQUES

Eco-label - Eco-audit
Accords volontaires
Marchés de pollution (changements climatiques)

3.2. Secondary law



- + 3.2.1. Transveral Approach
- + 3.2.2. Ecosystem Conservation
- + 3.2.3. Process Regulation
- + 3.2.4. Product Regulation
- + 3.2.5. Market-based Instruments

3.2.1. Transversal Approach (Art. 192(1) TFUE)



Directive 2001/42/EC of the EP and of the Council on the **assessment** of the effects of certain plans and programmes on the environment



Directive 2011/92/EU of the EP and of the Council on the **assessment** of the effects of certain public and private projects on the environment



Directive 2003/4/EC of the EP and of the Council of 28 January 2003 on public access to **environmental information**

3.2.1. Transversal Approach



CJUE, 29 juillet 2019, *Inter-Environnement Wallonie et Bond Beter Leefmilieu Vlaanderen*, C-411/17

CC, arrêt n°34/2020 du 5 mars 2020
Kerncentrale van Doel



3.2.1. Transversal Approach



'...the assessment under Article 6(3) of the Habitats Directive, should, in principle, be carried out as soon as the effects which the project in question is likely to have on a protected site are sufficiently identifiable.' (§ 143)

Kerncentrale van Doel

3.2.1. Transversal Approach (Art. 192(1) TFUE)

Directive 2004/35/CE of
21 April 2004 on
environmental liability with
regard to the prevention and
remedying of environmental
damage



NUISANCES

ECOSYSTEMS

LISTED INSTALLATIONS IED, SEVESO I, II, and III

AIR
Environmental quality standards (EQS)
Emission limit values (ELV)
Programmes
Product standards (CFC, fuels, vehicles, etc.)

WASTE
Product standards (batteries, packaging, WEEE)
Operating standards (land-fills, incinerators)
Waste management operations (sorting, recycling, etc.)
Transfrontier movements

WATER
EQS
ELV
Programmes

HAZARDOUS SUBSTANCES
Chemical substances,
Pesticides, Biocides, Asbestos

SOILS
EQS
ELV
Programmes

NOISE
Product standards
EQS
ELV
Programmes

WILDLIFE
Species and habitats protection
Deliberate release of GMOs

ECONOMIC INSTRUMENTS
Eco-label - Eco-audit
Voluntary agreements
Cap-and-trade schemes



3.2.2. Ecosystem Conservation (Art. 192(1) TFUE)

3.2.2. Nature protection (Habitats Directive)



Hallerbos en nabije boscomplexen met brongebieden en heiden

3.2.2. Nature protection protection (Birds Directive)



Rousserolle effarvate, *Acrocephalus scirpaceus*

Three main EU legal acts regarding nature protection (Art. 192(1) TFUE)



Birds Directive 2009/147/EC



Habitats Directive 92/43/EC



Nature Restoration Regulation 2024/1991

3.2.2. Surface and underground water



Water Framework Directive-cadre 2000/60

3.2.2. Marine Waters



Ionian Sea

Marine Strategy Framework Directive 2008/56/EC

Water framework Achievements

**Water Framework Directive-cadre
2000/60**

Good Water Status must be achieved in
EU marine waters by 2020.

**Marine Strategy Framework Directive
2008/56/EC**

Good Environmental Status must be
achieved in EU marine waters by 2020.

Impacts of climate change on qualitative and quantitative aspects of surface waters

Climate change impacts	Long-term trends	Regulatory approach
Quantitative approach	<ul style="list-style-type: none"> • Droughts • Floodings 	2021 CAP supporting extensive farming practices
Qualitative approach	<ul style="list-style-type: none"> • Pollutant concentration increases when rainfall decreases • Hazardous materials being swept up by floodwaters 	<ul style="list-style-type: none"> • Industrial Process Policy • Hazardous Product Policy

3.2.2. Atmosphere: Directive 2008/50 on ambient air quality and cleaner air for Europe (Art. 192(1) TFUE)



Thresholds, limit values and target values are set for each pollutant covered by the directive:

- + Sulphur dioxide
- + Nitrogen dioxide
- + Particulate matter
- + Lead
- + Benzene
- + Carbon monoxide



3.2.3. Process Regulation (Art. 192(1) TFUE)



3.2.3. Process Regulation



Directive 2010/75/UE of 24 November 2010 on industrial emissions (Integrated Pollution Prevention and Control)

Process (listed installations) and products



Environmental quality standards (EOS), or quality targets, means 'the set of requirements which must be fulfilled at a given time by a given environment or particular part thereof'. These standards provide guarantees of the quality of environmental receptors (water, air, soil).



Emission limit values (ELV), or disposal standards, limiting the direct or indirect release of substances, vibrations, heat or noise and other pollutants from emitted by fixed polluting facilities (plants, facilities, industries) or diffuse sources into air, water or land.



Operating standards call for the improvement of industrial techniques, in particular through the use of new technologies. They are guided by the principle of the reduction of pollution at source.

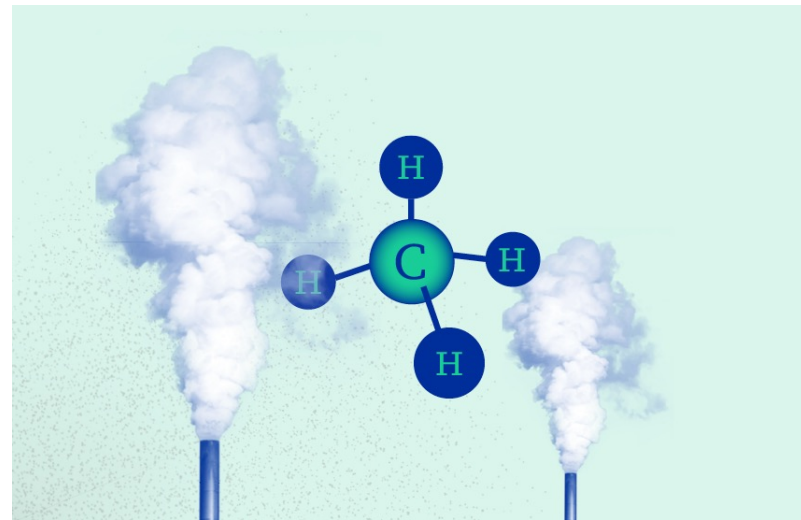


Product standards are those which set limits on pollution or nuisance levels and may not be exceeded both as regards the product's composition as well as its emissions.

2024 Regulation on tracking and reducing methane emissions in the energy sector

Requirements for the oil, gas and coal sectors to measure, report and verify methane emissions

mitigation measures to avoid such emissions, including detecting and repairing methane leaks and limiting venting and flaring.



3.2.4. Product Regulation (Art. 114 TFUE)



Substances	Acts	Regulatory approach
Existing and new substances	Regulation 1907/2006	Registration, evaluation, authorisation and restriction of chemicals (REACH)
Substances and mixtures	Regulation 1272/2008	Classification, labelling and packaging (CLP)
Pesticides	Regulation 1107/2009	Placing on the market
Pesticides	Directive 2009/128	Use
Biocides	Regulation 528/2012	Placing on the market
Cosmetics	Regulation 1223/2009	Product safety
Carcinogens	Directive 2004/37	Protection of workers from the risks related to exposure to carcinogens at work
Food	Regulation 178/2012	General principles of food law (GFL)

3.2.4. Chemical Substances (Art. 114 TFUE)



Regulation 1272/2008 on classification, labelling and packaging of substances and mixtures

Evaluation des risques

Identification des dangers :

identification des impacts d'un agent biologique, chimique ou physique sur la santé ou l'environnement

Caractérisation des dangers :

détermination de la sévérité des impacts au moyen d'une relation dose/réponse

Appréciation de l'exposition :

détermination de l'exposition des groupes à risque à la substance ou à l'agent

Caractérisation des risques :

probabilité de la fréquence et de la gravité des effets néfastes connus ou potentiels de l'agent ou de la substance

Gestion des risques

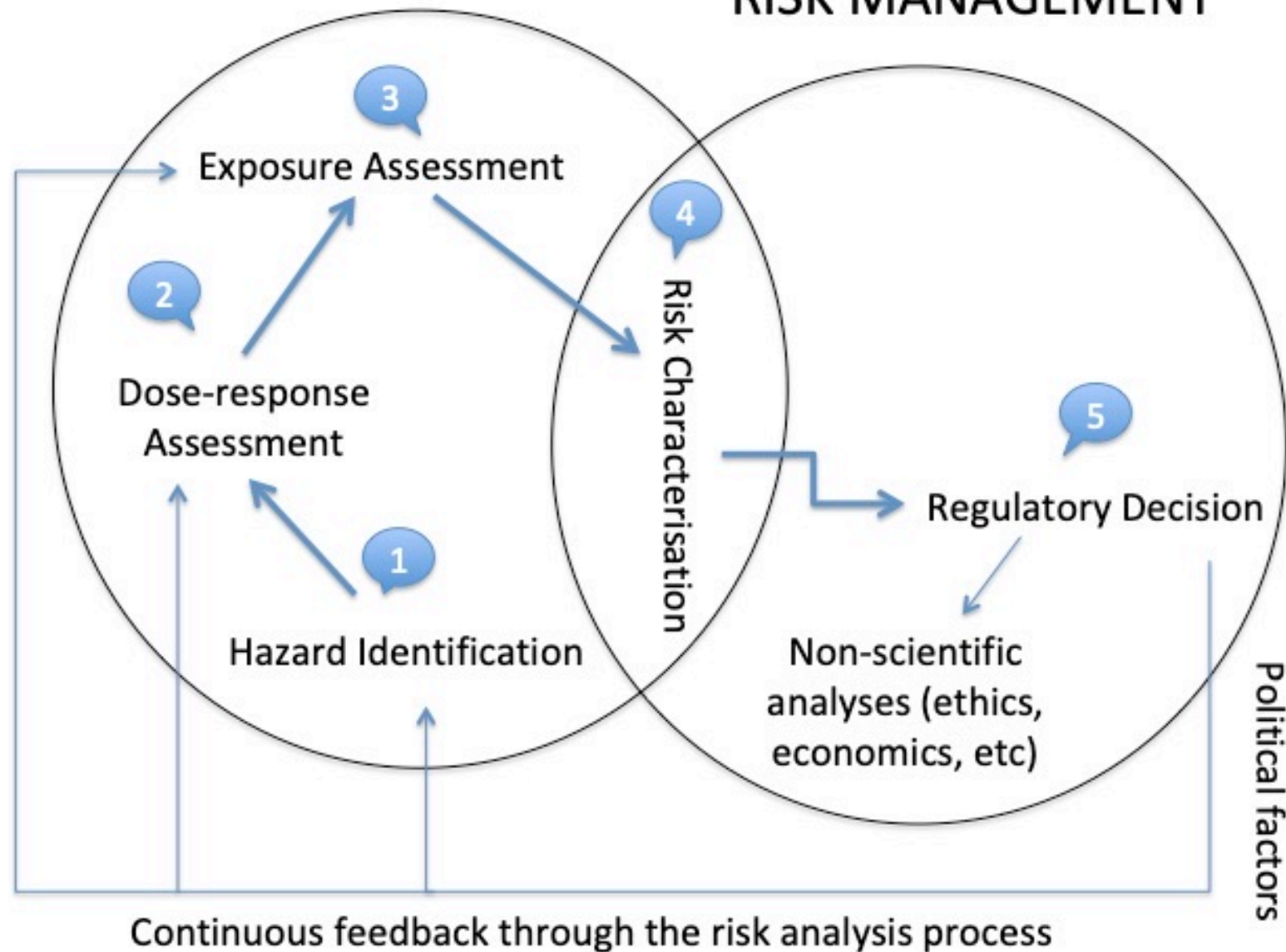
Sur la base des résultats de l'évaluation, détermination par l'autorité d'un niveau de risque acceptable



Regulation 1907/2006 Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

RISK ASSESSMENT

RISK MANAGEMENT



3.2.4. GMOs



Directive 2001/18/EC of the European Parliament and of the Council of 12 March 2001 on the deliberate release into the environment of genetically modified

3.2.4. Waste and Circular Economy



Waste Framework Directive 2008/98/CE

3.2.4. Criminal Law (Article 191(2) TFEU)

- + 4th largest organised crime activity (€80-230 billion lost annually due to environmental crime)
- + Directive (EU) 2024/1203 of the European Parliament and of the Council of 11 April 2024 on the protection of the environment through criminal law
- + The Directive provides for common definitions of environmental criminal offences and the availability of effective, dissuasive and proportionate criminal penalties for serious offences

Conclusion: Process (listed installations), products and ecosystems

Products

Regulations on products based on Article 114 TFEU is more pervasive and intrusive

=> **Centralized approach**

Industries, ecosystems, natural resources

Directives on industries, ecosystems, natural resources based on Article 192(1) TFEU

=> **Decentralized approach**

II. REGULATING LISTED INSTALLATIONS AND PRODUCTS

LEGAL INSTRUMENTS	LISTED INSTALLATIONS	PRODUITS
Legal bases	Article 192 TFEU	Article 114 TFEU
Instruments	Framework directives	Regulations regulating the placing on the market or the use of hazardous products and substances
Integration	Decentralisation	Centralisation at EU level
Principles	Prevention, precaution, and rectification at source	Prevention, precaution, and substitution
Ex ante assessments	SEA and EIA	Substance risk assessments
Authorisation	Licensing autorisation No installation is operated without a permit	No product can be placed on the market without a prior authorisation
Restrictions	Process standards likely to be underpinned by EQS	Restrictions on the sale or the use of hazardous products and substances
Participation	Public enquiry Guidance documents on BAT	Public enquiry prior
Information for the public	Emergency plans (Seveso) Access to information Pollutants register	Informations regarding the environmental risks through labelling
Control	From cradle to grave	Life-cycle approach
State aids	Restricted to investments aiming at increasing the level of environmental protection	Prohibited, but R&D
Ex post measures	Site closure subject to specific remedial measures	End-of-life, by-products, and waste management requirements



3.2.5. Market-based Instruments

Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading within the EU

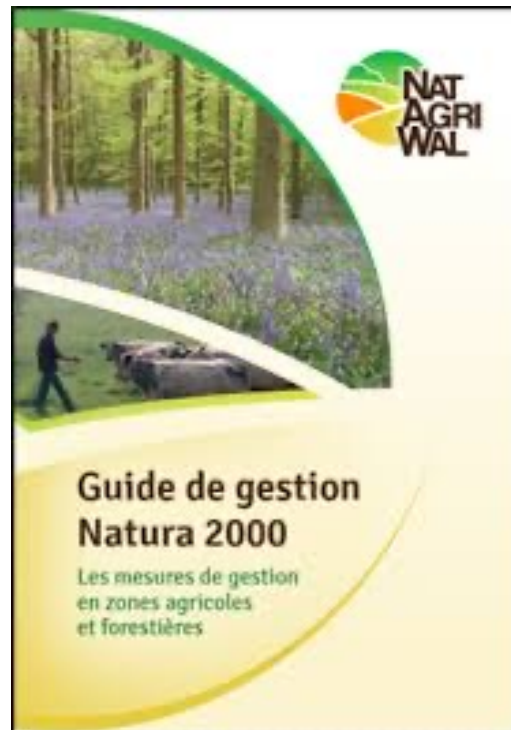
Secondary Law: Renewable Energy

Directive (EU) 2023/2413
of the European Parliament
and of the Council of
18 October 2023 (REDIII)
2030 target, at least 42.5%



Tertiary Law

- + Comitology
- + Guidelines
- + Guides



TYOLOGY OF ENVIRONNEMENTAL STANDARDS

	EQS	ELV	Process standards	Product standards
Objective	Set of requirements which must be fulfilled at a given time by a given environment (air, water, soils)	Standards expressed in terms of certain specific parameters, concentration and/or level of an emission, limiting the pollutants emitted by fixed polluting facilities with a view to protecting ecosystems and human health	Ensure that plant operations are conducted in a safe, effective, and professional manner, in accordance with safety requirements	Standards setting limits on pollution or nuisance levels
Addressees	Authorities	Plant operator	Plant operator	Producer and importer of the substance or the product
Level of stringency	Low	Inasmuch the operator does not exceed the ELVs, he is free to choose the technology	The operator is called on to apply BATs	Standards not to be exceeded both as regards the product's composition as well as its emissions
Sanctions	Administrative measures	Administrative and criminal sanctions	Administrative and criminal sanctions	Administrative and criminal sanctions

4.Private Law



4. Tort Law: *Rhinewater case*

‘Where the place of the happening of the event which may give rise to liability in tort, delict or quasi-delict (Alsace) and the place where that event results in damage (the Netherlands) are not identical, the expression ‘place where the harmful event occurred’ of the Convention of 27 September 1968 on jurisdiction and the enforcement of Judgments in Civil and Commercial Matters, must be understood as being intended to cover both **the place where the damage occurred** and **the place of the event giving rise to it.**’

Case 21/76, 30 Nov 1979, *Handelskwekerij G. J. Bier B.V. v Mines de Potasse d'Alsace S.A.*

4. Tort Law: *Rhinewater case*

- + Hence, Dutch courts did have jurisdiction over the matter
- + The French operator (*Mines de Potasse d'Alsace S.A.*) was held liable for a certain share of the damages

4. Tort Law: *Ministère Transition écologique*

The engagement of State liability by individuals requires, among other conditions, that the **rule of EU law infringed** must be intended **to confer rights** on them.

The obligations not to exceed PM10 and NO2 limit values and to provide for appropriate measures to remedy those exceedances, inter alia by means of air quality plans lay down **sufficiently clear and precise obligations**.

However, those obligations pursue **a general objective of protecting human health and the environment**.

It cannot be inferred that they implicitly confer rights on individuals, the breach of which would be capable of giving rise to a Member State's liability for loss and damage caused to them.

Case C-61/21, 22 December 2022, *Ministère Transition écologique*

4. Contact Law: Extended Producer Responsibility (EPR)

National authorities have to reach recycling and recovery targets.

Producer's financial and/or operational responsibility for a product to include the management of the post-consumer stage.

Directive 94/62/EC on packaging and packaging waste to be abrogated by a new regulation



5. Environmental Policy and Climate change

Two sides of the
same coin



General EU Acts applying to GHG

- EU ETS Directive (2003/87/EU) ;
- Air quality Directive (2008/EC/50) ;
- EU on a mechanism for monitoring and reporting (MMR) regulation (525/2013/EU)

GHG	ANTHROPOGENIC SOURCES	SPECIFIC EU ACTS
Carbon Dioxide (CO₂)	By-product of burning fossil fuels, biomass, land use change, industrial process (e.g. cement)	LULUCF Regulation (2018/841); CO ₂ emission performance standards for vehicles (Regulations 2019/631 ; 2023/851); Regulation type-approval of motor vehicles (Euro 7)
Methane (CH₄)	Hydrocarbon fuels, animal husbandry, agriculture, landfills	LULUCF Regulation (2018/841); Landfill Directive (1999/31/EC); Regulation type-approval of motor vehicles (Euro 7) 2024 Methane Regulation
Nitrous Oxide (N₂O)	Agriculture (nitrogenous fertilizers), sewage, waste management, chemicals, processing of paper and wood, the energy sector	Industrial Emissions Directive (2010/75/EU)

GHG	ANTHROPOGENIC SOURCES	SPECIFIC EU ACTS
Hydrofluorocarbons (HFCs)	Solvents, refrigerants (household and industrial), air conditioning	Fluorinated greenhouse gases (F-gases) regulation (517/2014/EU) To be replaced
Perfluorocarbons (PFCs)	Processing of metals (primary aluminum)	(F-gases) regulation (517/2014/EU)
Sulfur hexafluoride (SF ₆)	Production of magnesium and aluminum	EU ban under the F-Gas Regulation, except where there are now suitable alternatives (electricity industry).
Nitrogen oxides (NO _x , NO ₂) –indirect GHG	Transport (exhaust) Pulp and paper industry, energy industries and the metal industry	UNCLRTAP Industrial Emissions Directive (2010/75/EU) National Emissions Ceilings Directive (2001/81/EC) Regulation type-approval of motor vehicles (Euro 7)

GHG	ANTHROPOGENIC SOURCES	SPECIFIC EU ACTS
Sulphur Dioxides (SO₂) –indirect GHG	Processing industry (e.g. pulp and paper and metal), Electric plants burning coal and heating of buildings	UN -CLRTAP Industrial Emissions Directive (2010/75/EU) National Emissions Ceilings Directive (2001/81/EC)
Ammonia (NH₃) –not a GHG	Production of fertilizers	National Emissions Ceilings Directive (2001/81/EC) Regulation type-approval of motor vehicles (Euro 7)
PM_{2,5} and PM₁₀ –not a GHG	Motor vehicle exhaust	National Emissions Ceilings Directive (2001/81/EC); Regulation type-approval of motor vehicles (Euro 7)

GHG	ANTHROPOGENIC SOURCES	SPECIFIC EU ACTS
Carbon monoxide (CO) –indirect GHG	Motor vehicle exhaust, industrial activities (metal industry), working machinery and heating of buildings	UN -CLRTAP Industrial Emissions Directive (2010/75/EU); Regulation type-approval of motor vehicles (Euro 7)
Ozone (O₃) –not a GHG	Photochemical reactions involving mainly NO _x and volatile organic compounds (VOCs)	Regulation (EC) 1005/2009 on substances that deplete the ozone layer
Non methane volatile organic compounds (NMVOCs) –indirect GHG	Combustion plants, solvent use	National Emissions Ceilings Directive (2001/81/EC)

6. How to reconcile trade and environnement ?

6. Free Movement of Goods and Domestic Environmental Measures

Article 34-35 TFUE Free Movement of Goods



Articles 36 TFUE Domestic restrictions

Prohibitions or restrictions on imports, exports or goods in transit may be justified on grounds of ‘protection of health and life of humans, animals or plants’

or in virtue of mandatory requirement related to the protection of the environment

7. Conclusion: Achievements

We may thank half a century of EU environmental law for

- + a steady increase of protected areas within the Natura 2000 network,
- + the world's biggest Carbon market,
- + a decrease of GHG in the atmosphere,
- + the improvement of air and water quality,
- + more energy efficiency,

7. Conclusion: Challenges

- + a greater proportion of renewables in the energy mix,
- + safer chemicals and pesticides,
- + increased recycling rates.

But the shift towards sustainability remains a distant goal!

The forces driving the environmental degradation are either undiminished or gaining strength.

7. Conclusion: A paradigmatic shift?

Slowing down the rate of environmental change: cropland expansion and forest loss, natural resource withdrawal, GHG emissions and temperature increase, etc.

The higher the rate of environmental change, the greater that thresholds in the Earth system will be exceeded, resulting in sudden, abrupt or accelerating change, which could be irreversible. UNEP, *GEO4*, 2007, 298

7. Conclusion: A paradigmatic shift?

How will the EU institutions, whose mission is to guarantee the proper functioning of the internal market and free competition, and whose compass remains GDP growth, be able to handle a genuine economic transition?





Further Reading

- + N de Sadeleer and J Godfroid, 'The Story Behind Covid-19: Animal Diseases at the Crossroads of Wildlife, Livestock and Human Health', in *European Journal of Risk Regulation*, 2020.
- + N de Sadeleer, *EU Environmental Law and the Internal Market*, Oxford, OUP, 2014, 499 p.
- + N de Sadeleer *Environmental Principles*, 2nd ed., Oxford, OUP, 2022, 540 p.