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Special Issue: The Systemic and the Particular in European Law

Systemic Breaches of EU Environmental Law and Techniques of Judicial Engagement with Science: the Underused Potential of Infringement Proceedings

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Abstract

Environmental law has long been an area of concern in terms of correct implementation and enforcement. In this context, the Commission's enforcement focus has been on "systemic" breaches of environmental law (that is, breaches that form part of a pattern of individual breaches that, taken together, because of their repeated or widespread nature, have a significant effect on the environment). Proving the existence of such breaches in environmental law presents a number of peculiar features, because of the scientifically-loaded questions which underlie environmental legislation. The aim of this article is to relate the established approach of the CJEU towards scientific uncertainty to the specific situation in which the Commission asserts that a breach of EU environmental law has a systemic nature. It will show that, while the CJEU has been sensitive to the systemic nature of the claims brought forward by the Commission by using some of the procedural tools at its disposal, its general reticence to engage with the substantive claims at stake might have the potential to reduce the effectiveness of the infringement proceedings as a tool to adequately pursue systemic breaches of EU environmental legislation.

Keywords: Environmental Legislation; Environmental Law; Systemic Breach; Infringement Proceedings; European Union; Judicial Review; Scientific Complexity

A. Introduction

Environmental law has long been an area of concern in terms of correct implementation and enforcement. Several European Commission ("the Commission") reports have highlighted the deficiencies in the Member States' performances when it comes to environmental law.¹ As reported by the most recent Strategic Plan 2020–2024 prepared by DG Environment, President von der Leyen has stated that "any legislation is only as good as its implementation."² When it comes to the correct application of environmental law, the Commission is well aware that breaches

¹See Report from the Commission, Monitoring the Application of European Union Law 2021. Annual Report, COM (2022) 344 final (July 15, 2022) (discussing how environment is one of the policy areas in which most complaints have been received and infringement proceedings have been opened).

²See European Commission, *Strategic Plan 2020–2024, DG Environment*, at 21 (Sept. 18, 2020) https://commission.europa.eu/system/files/2020-10/env_sp_2020_2024_en.pdf.

of environmental rules do not often appear as one-off instances, but can very well be symptomatic of failures of a systemic nature. Without defining the concept, the Commission Strategic Plan 2020–2024 explicitly mentions the notion of “systemic breaches” and refers to systemic breaches of waste legislation,³ rules on drinking water,⁴ and legislation on impact assessment⁵ as enforcement priorities for the years to come. The Commission’s enforcement focus on systemic breaches of environmental law is a clear reflection of the general policy, announced by the Juncker Commission, of being “bigger and more ambitious on big things, and smaller and more modest on small things.”⁶

In the context of environmental law, “systemic breaches” should be taken to mean breaches that form part of a pattern of individual breaches that, taken together, because of their repeated or widespread nature, have a significant effect on the environment. As will be shown in the course of this article, the environmental policy field is therefore a prime example of “type 3” systemic breach identified by the editors of this Special Issue: it arises when a number of breaches are so repeated or widespread that they may be considered of being of a systemic nature. This idea of systemic breach was coined by CJEU in the so-called *Irish Waste* case, in which, for the first time, the CJEU recognized, in the context of infringement proceedings, that a breach of EU environmental law for the purposes of Article 258 TFEU could be constituted not only by individual failures to comply with EU law, but also by “general and persistent” deficiencies, of which the individual breaches “simply constitute examples.”⁷ Similarly, on the basis of a long-standing case law, the CJEU has admitted that infringement proceedings can also be directed against an “administrative practice” if the latter is of “consistent and general nature.”⁸ Finally, to refer to the same concept the Court has also used interchangeably⁹ with “general and persistent,” the terms “structural and general.”¹⁰ While the terminology seems by now relatively well settled, the concept itself “remains somewhat elusive.”¹¹

The notions of general and persistent breach of EU law,¹² or that of general and consistent practices in breach of EU law¹³ are not peculiar to the environmental law field; however, proving the existence of such breaches acquires a wholly different dimension in environmental law because of the scientifically-loaded questions which underlie environmental legislation. Claims in environmental litigation often involve the discussion of issues of facts and causation which require the recourse to extra-legal concepts—when is the effect of a project “significant” for the environment?; when is a mitigation measure “suitable” to reduce certain harmful effects?; when can a certain activity be considered to have “caused” environmental degradation?—and necessarily imply a degree of uncertainty in the assertions of the parties and the final determination by the courts.¹⁴ The virtually constant presence of scientific questions, bringing about a more or less important degree of uncertainty in the parties’ assertions and the consequent determinations by the

³See *id.* at 11.

⁴See *id.* at 18.

⁵See *id.* at 45.

⁶See Communication from the Commission, EU Law: Better Results Through Better Application, 2017 O.J. (C 18/02); see also Luca Prete in this Special Issue.

⁷See ECJ, Case C-494/01, *Comm’n v. Ireland*, ECLI:EU:C:2005:250 (Apr. 26, 2005), paras. 23, 27.

⁸See ECJ, Case C-342/05, *Comm’n v. Finland*, ECLI:EU:C:2007:341 (June 14, 2007), para. 33.

⁹See KOEN LENAERTS, IGNAZ MASELIS, & KATHLEEN GUTMAN, *EU PROCEDURAL LAW 167* (2015) (confirming the fact that there does not seem to be a conceptual distinction between the terms).

¹⁰See *Comm’n v. Ireland*, Case C-494/01, at para. 127.

¹¹See Luca Prete in this Special Issue.

¹²See, e.g., Pål Wennerås, *A New Dawn for Commission Enforcement Under Articles 226 and 228 EC: General and Persistent (GAP) Infringements, Lump Sums and Penalty Payments*, 43 COMMON MKT. L. REV. 1 (2006).

¹³This notion seems to be less studied. E.g., Alicja Sikora, *Administrative Practice as a Failure of a Member State to Fulfil Its Obligations under Community Law*, 2 REV. EUR. ADMIN. L. 1, 5 (2009).

¹⁴See Emma Lees & Tiina Paloniitty, *Science in Court—The Importance of Specificity, in EU ENVIRONMENTAL PRINCIPLES AND SCIENTIFIC UNCERTAINTY BEFORE NATIONAL COURTS: THE CASE OF THE HABITATS DIRECTIVE 9* (Mariolina Eliantonio, Emma Lees & Tiina Paloniitty eds., 2023) (discussing this point, and in general on scientific uncertainty in environmental litigation).

courts sets the environmental law field apart from other EU policy, such as migration law. As will be explained below, these issues become all the more complex in cases of breaches of systemic nature. This is because as questions of proof and causality acquire a different dimension when they relate to neither just one instance of environmental violation, nor several instances thereof, but to the need to establish an identifiable *pattern* of non-compliance.

The question of how scientific questions are dealt with before the European courts has been the object of some recent scholarly attention, especially in light of what has been perceived, at least in the context of actions for annulment, as a move on the part of the CJEU towards a somewhat more “intrusive” approach towards the scientific choices of the Commission than the traditional, process-oriented, hands-off review which the Court has upheld in a long-standing line of case law.¹⁵ The focus of the literature so far, however, has been a general one—that is, unrelated to the systemic nature of a breach of EU law—how do the European Courts discuss questions of fact?¹⁶ Do they distinguish, as is common in several national jurisdictions, between technical and political discretion?¹⁷ How often do they use the investigatory tools at their disposal?¹⁸ Furthermore, the CJEU’s approach towards scientific uncertainty and complexity has been studied through a sample of case law and an analytical framework based on various techniques in which courts may deal with and overcome uncertainty.¹⁹

The aim of this article is to take this discussion one step further and relate the established approach of the CJEU towards scientific uncertainty to the specific situation in which the applicant—invariably the Commission, as will be explained below—asserts that a breach of EU environmental law has a systemic nature. Do the European courts engage with the scientific questions underlying the assertion that a breach has a specific systemic nature? Do they approach these assertions differently than when an individual breach is instead at stake? What does this approach entail for the purposes of proving causalities and the systemic nature of a breach? Do the European courts use their evidentiary tools differently when a breach has allegedly a systemic nature?

To this end, in order to identify the relevant case law, the whole Curia database has been interrogated with the use of the following search terms, within the “subject-matter” “environment”:²⁰

Breach	Failure	Practice	
<ul style="list-style-type: none"> • General and persistent breach • Systemic breach • Persistent breach • Widespread breach 	<ul style="list-style-type: none"> • General and persistent failure • Systemic failure • Persistent failure • Widespread failure 	<ul style="list-style-type: none"> • Recurrent practice • Widespread practice • Administrative practice + consistent and general 	<ul style="list-style-type: none"> • Systemic • Systematic and consistent • Structural and general

¹⁵See Giulia Leonelli, *The Fine Line Between Procedural and Substantive Review in Cases Involving Complex Technical-Scientific Evaluations: Bilbaina*, 55 COMMON MKT. L. REV. 1217 (2018); Giulia Leonelli, *Acknowledging the Centrality of the Precautionary Principle in Judicial Review of EU Risk Regulation: Why it Matters*, 57 COMMON MKT. L. REV. 1773 (2020).

¹⁶See *id.*

¹⁷See Miro Prek & Silvère Lefèvre, “Administrative Discretion,” “Power of Appraisal” and “Margin of Appraisal” in *Judicial Review Proceedings Before the General Court*, 56 COMMON MKT. L. REV. 339 (2019); see also Opinion of Advocate General Emiliou in Case C-389/21 P, *ECB v. Crédit Lyonnais*, ECLI:EU:C:2022:844 (Oct. 27, 2022), paras. 41–74 (discussing more recently the distinction between administrative discretion and technical discretion and the consequences following there from as regards the Court’s power of review).

¹⁸See Erice Barbier de la Serre & Anee-Lise Sibony, *Expert Evidence Before the EC Courts*, 45 COMMON MKT. L. REV. 941 (2008).

¹⁹See Mariolina Eliantonio & Michal Krajewski, *Scientific Uncertainty before the Court of Justice and the General Court: Is the Judicial Toolbox Sufficient?*, in *EU ENVIRONMENTAL PRINCIPLES AND SCIENTIFIC UNCERTAINTY BEFORE NATIONAL COURTS: THE CASE OF THE HABITATS DIRECTIVE 327* (Mariolina Eliantonio, Emma Lees & Tiina Paloniitty eds., 2023). The sample in this case consisted of annulment and infringement cases relating to the protection of the environment and public health handed down by the EU Courts in the five years interval between 2014 and 2018.

²⁰The search has been closed on 31 December 2022.

The dataset obtained, which can be found in Annex 1, returned only infringement cases. Thus, even before embarking on a substantive analysis of the case law, one observation can already be offered as a preliminary conclusion: systemic breaches in the sense discussed above in the field of environment have only been brought to the attention of the Court by the Commission under Articles 258 and 260 TFEU. While worthy to be highlighted, this finding is perhaps not surprising: EU environmental law is overwhelmingly implemented at the national level, reducing drastically the importance of annulment proceedings under Article 263 TFEU. Furthermore, actions at national level—through which a preliminary question under Article 267 TFEU might be brought to the CJEU—might not readily be “procedurally geared” towards the identification of systemic breaches. I will return to this point in the concluding section.

From this point the article proceeds as follows. First, in Section 2, the debate surrounding scientific uncertainty before the European courts and the traditional approach towards judicial review of scientifically complex facts will be reviewed. This section will also present the techniques which can be identified in the CJEU’s case law to deal with uncertainty. In Section 3, the relevant case law on systemic breaches in the field of environmental policy will be examined and those various techniques will be discussed in the context of the relevant case law. Section 4 will conclude, noting that, while the CJEU has been sensitive to the systemic nature of the claims brought forward by the Commission by using some of the procedural tools at its disposal, its general reticence to engage with the substantive claims at stake might have the potential to reduce the effectiveness of the infringement proceedings as a tool—and the only one, at the moment—to adequately pursue systemic breaches of EU environmental legislation.

B. The CJEU and Scientific Uncertainty

In the context of an inquiry into how international courts and adjudicators deal with scientific claims, Sulyok has identified four main techniques of “judicial engagement”: (i) framing; (ii) fact-finding; (iii) causal assessment; and (iv) modulation of standard of review. They refer, in turn, to the notion of courts (i) framing issues in such a way as to include or exclude the need to adjudicate on scientific arguments; (ii) using or not the available procedural techniques to engage experts in the adjudicatory process; (iii) engaging or not in causal enquiries in their decision-making; and (iv) displaying a more or less deferential attitude towards the decision-maker when adjudicating on discretionary choices made by the administration.²¹

She also argues that an overly cautious approach towards scientific claims may end up eroding the very legitimacy of the adjudicating institutions.²² This argument resonates with those on the EU level, where, in the face of challenging democratic and political accountability credentials of EU decision-makers, legal accountability might be regarded as a suitable substitute, including with regard to regulatory choices with an underlying scientific background.²³ Furthermore, with respect to Member States’ actions, which is the focus of this contribution given the dataset identified above, judicial engagement with scientific claims may be regarded as the go-to place to censor national violations of EU law, especially in light of the Commission’s limited powers and resources to build claims underpinned by solid scientific arguments.²⁴ From this perspective, judicial engagement with science in infringement proceedings might be seen as a way for the CJEU to “step in” and increase its own legitimacy assets in the face of a necessarily limited European Commission in its function as guardian of the Treaties.

²¹See KATALIN SULYOK, SCIENCE AND JUDICIAL REASONING—THE LEGITIMACY OF INTERNATIONAL ENVIRONMENTAL ADJUDICATION 11 (2020).

²²See *id.* at 9.

²³See Eliantonio & Krajewski, *supra* note 19, at 329.

²⁴See *id.* at 330.

Sulyok's analytical framework and the four judicial techniques mentioned above, in various shapes and forms, have also been identified in the case law of the CJEU. In particular, earlier research argued that the EU courts handle scientific uncertainty in essentially three ways: (i) apportioning the burden proof and the threshold of when a fact is considered to be proven; (ii) using their available investigatory tools; and (iii) engaging in a more or less profound procedural or substantive review of the scientific choices made by the authority.²⁵

As hinted at in the introduction, these general considerations acquire a somewhat different dimension in cases of systemic breaches. Especially with respect to questions of proof and causality, proving that one instance of non-compliance has occurred represents a much lower burden than proving (a) a set of occurrences of non-compliance and (b) that this series is part of a consistent and generalized pattern. As a consequence, what is required of the Commission by the CJEU, and when the CJEU will consider that one or more occurrences of non-compliance, and a pattern thereof, is proven, as well as how much and how often the CJEU will defer to the Commission as regards the plausibility or probability of certain causalities will inevitably influence the success of a systemic claim brought by the Commission and, ultimately, the Commission's very willingness to pursue systemic breaches of EU environmental law.

In the next section, the techniques employed by the CJEU to deal with scientific uncertainty and in general scientific claims will be reviewed in the context of systemic breaches of EU environmental legislation. It will be shown that, while the CJEU does seem to use the available techniques to the benefit of the Commission when a systemic breach is at stake, the manner in which other techniques play out in practice points instead to an underused potential on the part of the Court to pursue systemic violations of EU environmental legislation.

C. The CJEU's Engagement with Scientific Claims in Situations of Systemic Breaches of EU Environmental Law

I. The Apportionment of the Burden of Proof

It is settled in the case law that the burden of proving that a given conduct is in breach of the Treaties lies with the Commission. As the Court has consistently held, in infringement proceedings, it is incumbent upon the Commission to prove the alleged failure and to provide the Court with the information necessary for it to verify the existence of the infringement.²⁶ For this purpose, the Commission may not rely on any "presumptions or schematic causations."²⁷

However, when the CJEU is satisfied with the Commission having adduced "sufficient evidence" that a breach of EU law has occurred, it is for the Member State to rebut the Commission's allegations, by proving that it has complied with its duties under EU law or by challenging the veracity of the information presented or the inferences drawn by the Commission from that information.²⁸ Therefore, the thorny question is when the evidence would be considered "sufficient."²⁹ Sometimes, it is the legislation itself which will determine the probative value of certain facts, thereby allowing the CJEU's to get out of the conundrum of having to assess the reliability of certain scientific pieces of evidence. For example, in *Commission v. France*, the Commission argued that France was consistently breaching EU air quality legislation.³⁰ France's defense was based, *inter alia*, on the claim that the samples relied on by the Commission to

²⁵See *id.*

²⁶See *Comm'n v. Ireland*, Case C-494/01, at para. 41.

²⁷See, e.g., ECJ, Case C-443/18, *Comm'n v. Italy* [Bacteria *Xylella fastidiosa*], ECLI:EU:C:2019:676 (Sept. 5, 2019), para 80, <https://curia.europa.eu/juris/liste.jsf?num=C-443/18>.

²⁸See *Comm'n v. Ireland*, Case C-494/01, at para. 47.

²⁹See Annette Schrauwen, *Fishery, Waste Management and Persistent and General Failure to Fulfil Control Obligations: The Role of Lump Sums and Penalty Payments in Enforcement Actions Under Community Law*, 18 J. ENV. L. 291, 293 (2006).

³⁰See ECJ, Case C-636/18, *Comm'n v. France* (Exceedance of limit values for nitrogen dioxide), ECLI:EU:C:2019:900 (Oct. 24, 2019), <https://curia.europa.eu/juris/liste.jsf?num=C-636/18>.

measure air quality could not have been considered representative. Without the need to enter the scientific question of the representativeness of these samples, the CJEU could simply observe that the samples fully complied with the requirements derived from the applicable legislation and were therefore to be regarded as conclusive of France's non-compliance with its EU law obligations.

Beyond these occurrences, and in lack of specific legislative determination concerning the burden and level of proof, being satisfied with the provision of "sufficient" evidence on the part of the Commission, means that the CJEU is willing to accept evidence of a breach which is not entirely conclusive, and expect the Member State concerned to demonstrate compliance. This legal standard appears thus to be based upon "a test of the balance of probabilities."³¹ This seems to place the Commission at a somewhat "competitive advantage" over the Member State, especially when it comes to proving the existence of a systemic breach, which typically will not concern a problem of lack of or incorrect transposition, but an issue with the practical application of EU law. Indeed, while proving lack of or incorrect transposition is a "desk exercise" which the Commission carries out relatively easily through the information submitted by the Member States on the transposition measures adopted, when it comes to proving lack of correct application of EU law, the Commission is notoriously in a much more "tooth-less" position. This is because the Commission, as will be discussed in the next sub-section, must rely for the most part upon local sources of information in these cases. Thus, the CJEU's "help" in apportioning the burden of proof, and its willingness to accept also fragmentary evidence, might have a decisive influence in the success of a claim for a systemic breach of EU environmental law.³² Furthermore, it should not be forgotten that, whilst the evidentiary burden is on the Commission to prove its case, Member States are under a general legal duty—stemming from Article 4(3) of the Treaty on European Union—to co-operate with investigations and proceedings under Article 258 TFEU.³³

Despite this setup, which would point towards a somewhat "facilitated" role for the Commission vis-à-vis the defendant Member State, the case law shows that the Court does not get convinced overly easily by the Commission when the evidence produced is not regarded as sufficiently persuasive—especially—because of the systemic nature of the breach.³⁴ The "extra mile" which the Commission must go to when alleging a breach of systemic nature can take various shapes.

For example, in *Commission v. Ireland*, the Commission was seeking a declaration that Ireland had failed—in a systematic way—to comply with its obligation under EU rules on wastewater disposal.³⁵ The Court indicated that, while the Commission had reached the required level of proof with respect to Ireland's non-compliance with respect to one or more instances, it still fell short of proving the existence of a consistent and generalized administrative practice, because the instances of non-compliance were not sufficiently spread geographically to prove a pattern existing "throughout the Irish countryside."³⁶ This goes to show that the CJEU will expect the Commission to provide evidence of the existence of a pattern—in this case linked to the

³¹See MARTIN HEDEMANN-ROBINSON, ENFORCEMENT OF EUROPEAN UNION ENVIRONMENTAL LAW 73 (2015).

³²See, e.g., ECJ, Case C-365/97, *Comm'n v. Italy*, ECLI:EU:C:1999:544 (Nov. 9, 1999) (discussing a situation in which the CJEU effectively reversed the burden of proof in favor of the Commission).

³³Again, the *San Rocco Valley* case can be seen an exemplary. In this case the Court held:

[I]t is primarily for the national authorities to conduct the necessary on-the-spot investigations, in a spirit of genuine co-operation and mindful of each Member State's duty under . . . Article 10 EC to facilitate attainment of the general task of the Commission, which is to ensure that the provisions of the Treaty, as well as provisions adopted thereunder by the institutions, are applied. See *id.* at para. 85.

³⁴See also LENAERTS, MASELIS & GUTMAN, *supra* note 9, at 166 (agreeing on the fact that the threshold to prove that an administrative practice is in breach of EU law is generally high and providing several examples (outside the environmental field) grounding this observation).

³⁵See Case C-248/05, *Comm'n v. Ireland*, ECLI:EU:C:2007:629 (Oct. 25, 2007).

³⁶See *id.* at para. 115.

geographical spread of non-compliance—which goes beyond proving one or more individual occurrence(s) of non-compliance.

Similarly, in *Commission v. Finland*, the Court found that the Commission's request to declare that Finland was consistently breaching the Habitats Directive by allowing derogations from the prohibition of wolf hunting was not to be upheld.³⁷ In particular, the Court considered that the evidence produced by the Commission—for example the fact that the Finnish authorities had permitted in a limited number of occasions the hunting of a fixed number of wolves in a well-defined geographical area in breach of EU law—coupled with the evidence produced by Finland—that is the total number of wolves present on Finnish territory had risen—was not enough to establish an unlawful administrative practice.³⁸ In this case, the incapacity of the Commission to prove a pattern of non-compliance is linked to a numerical criterion of instances of non-compliance.

The fact that the CJEU places a relatively high burden on the Commission when it comes to proving the systemic nature of a breach is also very clearly exemplified by the *Xylella* case.³⁹ In that case, the Commission was seeking a declaration of Italy's persistent and general failure to comply with its obligation under EU law, because of its failure to remove plants infected by a harmful bacterium, and to monitor and prevent its spreading. Italy sought to defend itself by arguing that the spreading was not exclusively imputable to them, as it had been considered a natural phenomenon, which can only be controlled or slowed down.⁴⁰ The CJEU found that that Commission had not presented any specific evidence concerning imputability of the spreading exclusively to Italy, a fact that was required before the CJEU would be satisfied that a breach of EU law had occurred. Instead, the breach alleged was essentially based on a presumption, which fell below the level of proof required.⁴¹ Here, therefore, the lack of existence of a pattern was derived from the lack of a clear causal link between the actions of the Member State and the environmental deterioration.

II. The Use of the Available Investigatory Tools

There are no specific rules regarding the type and nature of evidence which can be produced before the Court. All types of evidence are, in principle, admissible except evidence obtained improperly, or internal documents of the Member States or of the EU institutions disclosed without authorization.⁴²

Furthermore, the European Courts have at their disposal a complete set of investigatory tools⁴³ which are however hardly used in general, and actually never used in infringement proceedings in particular. This means that it is for the Commission to prove an allegation of non-compliance, by placing before the Court all the information required to enable it to establish that the obligation has not been fulfilled.⁴⁴

³⁷See *Comm'n v. Finland*, C-342/05.

³⁸See *id.* at paras. 35–39.

³⁹See *Comm'n v. Italy [Bacteria Xylella fastidiosa]*, Case C-443/18.

⁴⁰See *id.* at para. 69.

⁴¹See *id.* at para. 80.

⁴²See ECJ, Case C-457/18, *Slovenia v. Croatia*, ECLI:EU:C:2020:65 (Jan. 31, 2020), paras. 64–73, <https://curia.europa.eu/juris/liste.jsf?num=C-457/18>. But see ECJ, Case C-348/20 P, *Nord Stream 2 v. Parliament and Council*, ECLI:EU:C:2022:548 (July 12, 2022), paras. 128–149; Opinion of Advocate General Bobek, ECJ, Case C-348/20 P, ECLI:EU:C:2021:831 (Oct. 6, 2021), paras. 114–72.

⁴³See Rules of Procedure of the Court of Justice, 2012 O.J.(L-265/1), arts. 63–75.

⁴⁴See, e.g., ECJ, Case C-427/17, *Comm'n v. Ireland*, ECLI:EU:C:2019:269 (Mar. 28, 2019). It is worth noting that, in one instance (which did not concern an allegedly systemic breach), the Court even clearly rejected an application by the Commission for an expert report to be commissioned by the Court on the ground that, if this request were granted, the Commission itself would not be discharging its burden of proof. See Case C-141/87, *Comm'n v. Italy*, ECLI:EU:C:1989:165 (Apr. 25, 1989), para. 17.

However, as is well known, and the CJEU stated itself in its case law, the Commission's own investigatory resources are minimal and its investigatory prerogatives limited.⁴⁵ Apart from very specific situations, the Commission has no general power of inspection either through EU officials or through a mandate to national competent authorities. As a consequence, the data on which the Commission bases its claims in infringement proceedings are provided either by the Member States or by individual complainants, including non-governmental organizations.⁴⁶ For example, in *Commission v. Italy*, the Commission based itself on "various complaints, parliamentary questions and articles in the press, as well as the publication . . . of a report of the *Corpo forestale dello Stato* (National Forestry Authority)."⁴⁷ However, it also relied on the information submitted by the Member State—that is the region of Sicily's waste management plan—to build the "systemic part" of the claim against Italy.

As has been argued, "[T]he balance of power between prosecution and defence in relation to "garnering factual evidence lies heavily in the defendant member state's favour,"⁴⁸ and in cases involving scientific uncertainty, the question has been raised as to whether and how the Commission—and, in turn, the Court—verify the scientific information underpinning a complaint.⁴⁹ While there is no conclusive answer to this question, it can certainly be argued that the lack of use of the available procedural tools on the part of the CJEU is linked to its restrained approach towards the engagement with the scientific substance of the claim and a greater focus on procedural, and, in general, legal obligations which are not underpinned by scientific considerations. It is to these considerations that the analysis now turns.

III. The Extent of the Process-Oriented Review

In proceedings under Article 258, the Commission enjoys discretion in every step of the procedure and with respect to time limits set for the defendant Member States to deliver replies to letters of formal notice and reasoned opinions. However, it is settled case law that the time limits must be long enough for the Member States to be able to comply and that its right of defense should be protected.⁵⁰ This begs the question of whether an allegation of a systemic breach requires a longer time limit, because it might take longer for a Member State to collect and process all evidence to disprove the allegations of the Commission—which will inevitably concern several occurrences of non-compliance—or to repair the—again inevitably several—instances of non-compliance. There seems to be no evidence in the case law that, in cases of systemic breaches of EU environmental law, Member States have complained of too-short time limits imposed by the Commission. This goes to show that, when it comes to environmental violations, the systemic nature of the breach is not per se linked to the time needed to repair it or collect evidence of its status on the ground.

However, Member States have in the past complained that an excessive duration of the pre-litigation procedure has made it more difficult for them to refute the Commission's arguments and thus infringed their rights of defense. It is for Member States to provide proof of this.⁵¹ In an infringement action for an alleged violation of air quality legislation, Romania tried to argue that such an excessive duration of the pre-litigation procedure would go towards proving that the breach alleged was not persistent and continuous.⁵² The CJEU did not buy into this argument and did not link the duration of the pre-litigation procedure to the systemic nature of the breach,

⁴⁵See *Comm'n v. Ireland*, Case C-494/01, at para. 43.

⁴⁶See HEDEMANN-ROBINSON, *supra* note 31, at 60–61.

⁴⁷See ECJ, Case C-135/05, *Comm'n v. Italy*, ECLI:EU:C:2007:250 (Apr. 6, 2007).

⁴⁸See HEDEMANN-ROBINSON, *supra* note 31, at 61.

⁴⁹See *Eliantonio & Krajewski*, *supra* note 19, at 335.

⁵⁰See ECJ, Case C-473/93, *Comm'n v. Luxembourg*, ECLI:EU:C:1996:263 (July 2, 1996), at para. 19.

⁵¹See ECJ, Case C-33/04, *Comm'n v. Luxembourg*, ECLI:EU:C:2005:750 (Dec. 8, 2005), para. 76.

⁵²See ECJ, Case C-638/18, *Comm'n v. Romania*, ECLI:EU:C:2020:334 (Apr. 30, 2020).

keeping the argument strictly connected with potential limitation to the Member State's right of defense.⁵³

While the Commission enjoys discretion in moving along the various steps of the procedure, the steps themselves must be respected and are subject to certain procedural guarantees which traditionally the Court has strictly controlled. In particular, the Court has consistently held that the subject matter of the judicial proceedings must correspond to that defined during the administrative stage of the procedure. The Court stressed that an application must be based on the same grounds and pleas as the reasoned opinion: If a complaint is not included in the reasoned opinion, it is inadmissible at the stage of judicial proceedings.⁵⁴ Furthermore, the reasoned opinion must set out the complaints coherently and precisely in order for the Court to be able to appreciate exactly the extent of the alleged infringement of EU law.⁵⁵ In this respect, the extent of the process-oriented review of the Court vis-à-vis the actions of the Commission has traditionally been rather large. Prete and Smulders even note an "increased stringency" in the Court's approach in the latest case law.⁵⁶ For example, the Court has censured the Commission for failing to specify the years for which the relevant breach of EU obligations was alleged.⁵⁷

This could be seen as working counter to the possibilities of the Commission's successfully building a "systemic breach claim," as the claim will typically be based on a succession of instances which will be identified over a long period of time. However, the CJEU has been sensitive to the peculiarities of those claims, and has, since *Irish Waste*, argued that when the Commission seeks a declaration of a general and persistent breach on the part of a Member State, the subject-matter of infringement proceedings may extend to events which took place after the reasoned opinion, provided that they are of the same kind as the events to which the opinion referred and constitute the same conduct.⁵⁸ The Court has thus confirmed that the Commission does not breach the Member States' right of defense if, during the procedure, it merely provides new examples of the complained of conduct.⁵⁹ In this context, acknowledging the special features of a systemic breach—and the need for the Commission, as mentioned above, to prove not only the individual instances, but the existence of a pattern—the Court mentioned that this fresh evidence can be submitted "for the purpose of illustrating the failures of a general nature."⁶⁰

IV. Substantive Review

Judicial self-restraint—and its fluctuations towards a somewhat more invasive review—on the part of the European courts when it comes to adjudicating on claims with a scientific or technical side are well documented in literature, especially with respect to complex assessment made by the EU administration in the field of public health and risk regulation, as well as competition law.⁶¹

⁵³See *id.* at para. 60.

⁵⁴See, e.g., ECJ, Case C-368/10, *Comm'n v. Netherlands*, ECLI:EU:C:2012:284 (May 10, 2012), para. 78, <https://curia.europa.eu/juris/liste.jsf?num=C-368/10>.

⁵⁵See ECJ, Case C-199/04, *Comm'n v. United Kingdom*, ECLI:EU:C:2007:72 (Feb. 1, 2007), paras. 20, 21; Case C-365/10, *Commission v. Slovenia*, ECLI:EU:C:2011:183 (Mar. 24, 2011), para. 19.

⁵⁶See Luca Prete & Ben Smulders, *The Age of Maturity of Infringement Proceedings*, 58 COMMON MKT. L. REV. 285, 304 (2021).

⁵⁷See ECJ, Case C-34/11, *Comm'n v. Portugal*, ECLI:EU:C:2012:712 (Nov. 15, 2012), para. 47, <https://curia.europa.eu/juris/liste.jsf?num=C-34/11>.

⁵⁸See ECJ, Case C-488/15, *Comm'n v. Bulgaria*, ECLI:EU:C:2017:267 (Apr. 5, 2017), para. 43; Case C-336/16, *Comm'n v. Poland*, ECLI:EU:C:2018:94 (Feb. 22, 2018), para. 49.

⁵⁹See Case C-638/18, *Comm'n v. Romania*, ECLI:EU:C:2020:334 (Apr. 30, 2020), paras. 56–58.

⁶⁰See *Comm'n v. Ireland*, Case C-494/01, at para. 9.

⁶¹See generally Mariusz Baran, *The Scope of EU Courts' Jurisdiction and Review of Administrative Decisions—the Problem of Intensity Control of Legality*, in RESEARCH HANDBOOK ON EU ADMINISTRATIVE LAW 292 (Carol Harlow, Päivi Leino & Giacinto Della Cananea eds. 2017); Alexander Fritzsche, *Discretion, Scope of Judicial Review and Institutional Balance in European Law*, 47 COMMON MKT. L. REV. 361 (2010). See also Giulia Claudia Leonelli, *The Fine Line between Procedural and*

This is much less the case with respect to infringement proceedings, especially in the field of environmental law.⁶²

The case law collected in the data set relevant for this article confirms this conclusion and reveals that, in environmental infringement proceedings with a systemic side, the CJEU has shown a very clear pattern of wariness of entering into a substantive review of the Commission's claims and the Member States' responses. As has been highlighted in earlier research, one way in which the CJEU managed to circumvent the scientifically complex issues is by pointing out the logical inconsistencies or deficiencies in one of the parties' submissions, as well as shifting the focus to a related legal obligation.⁶³ In this way, the Court manages to remain at the boundaries of the scientific conundrum, but nevertheless peeks into the question which lies at the core of the dispute. This technique is definitely present in those cases where a breach of systemic nature is alleged, and serves the court to overcome the high evidentiary threshold needed to prove an identifiable pattern of non-compliance.

For example, in the *Xylella* case, the Commission had argued that there was specific period of the year to carry out inspections to ensure the identification of the presence of a harmful bacterium and take appropriate measures to prevent its spreading.⁶⁴ Italy had raised a counter-argument that inspections could instead be carried out throughout the whole year. Instead of entering into the scientific question of the adequacy of the time period for the inspections, the CJEU shifted the focus to a related obligation, that of prevent the spreading of the bacterium:

[E]ven assuming . . . that the bacterium *Xf* can be detected throughout the year . . . the fact remains that the annual survey . . . should be finished at a sufficiently early time of the year, before the beginning of spring, in order to allow, in accordance with the requirements laid down in [the applicable legislation], the timely removal of infected plants.⁶⁵

This shifting technique, not only as a support to avoid engagement with scientific questions, but also as a way to build a claim of systemic infringements of EU environmental law, has been used since the *Irish Waste* case. Having established that Ireland has generally and persistently failed to comply with the requirement, mandated by EU law, that waste operations take place under a permit, the CJEU had to consider an additional allegation by the Commission, namely the requirement that the recovery or disposal of waste be carried out without endangering human health and without using processes or methods which could harm the environment. While the first allegation hinged upon exclusively legal considerations—that is whether a permit system was in place—the second would have required the consideration of scientific arguments—that is when a waste disposal method is harmful for the environment. The Court managed to gloss over the scientific aspect of the question and shifted its attention to the legal obligation to operate waste disposal operations with a permit. It thus upheld the second allegation of the Commission “by reason of the infringement” related to the first allegation.⁶⁶

Substantive Review in Cases Involving Complex Technical-Scientific Evaluations: Bilbaina, 55 COMMON MKT. L. REV. 1217 (2018); Giulia Claudia Leonelli, *Acknowledging the Centrality of the Precautionary Principle in Judicial Review of EU Risk Regulation: Why it Matters*, 57 COMMON MKT. L. REV. 1773 (2020); C. Anderson, *Contrasting Models of EU Administration in Judicial Review of Risk Regulation*, 51 COMMON MKT. L. REV. 424 (2014) (on risk regulation and public health). See also Mathieu Schimmel & Rob Widdershoven, *Judicial Review after Tetra Laval: Some Observations from a European Administrative Law Point of View*, in NATIONAL COURTS AND THE STANDARD OF REVIEW IN COMPETITION LAW AND ECONOMIC REGULATION 51 (Oda Essens, Anna Gerbrandy & Saskia Lavrijssen eds., 2009) (discussing competition law).

⁶²See Jan Darpö, *The Commission: A Sheep in Wolf's Clothing? On Infringement Proceedings as a Legal Device for the Enforcement of EU Law on the Environment, Using Swedish Wolf Management as an Example*, 13 J. EUR. ENV. & PLAN. L. 270 (2016).

⁶³See Eliantonio & Krajewski, *supra* note 19, at 341.

⁶⁴See *Comm'n v. Italy [Bacteria Xylella fastidiosa]*, Case C-443/18.

⁶⁵See *id.* at para. 61.

⁶⁶See *Comm'n v. Ireland*, Case C-494/01, at para. 174.

Finally, another set of cases in the field of air quality provide examples of situations in which the Court managed to avoid a discussion of a relevant scientific question, by shifting the focus to a related legal question. Several of these cases relate to the obligation, contained in Directive 2008/50, that national air quality plans keep exceedance periods of certain substances “as short as possible.”⁶⁷

In *Commission v. Poland*, the Commission argued that Poland had failed to set up “adequate” plans to reduce PM10 concentrations, to which Poland had replied that the plans were adequate in light of the country’s socio-economic situation.⁶⁸ Instead of entering a discussion of what an adequate air quality plan is, the CJEU noted that Poland’s adopted plans set the expiry of the periods prescribed for putting an end to the PM10 exceedances between 2020 and 2024, which made it possible for Poland to put an end to such exceedances only in 10 or even 14 years after the date on which those exceedances were recorded. This fact in itself constituted a violation of the requirement that Member State ensure that exceedance periods be as short as possible.

In *Commission v. Bulgaria*, the defendant Member State sought to defend itself by arguing, amongst others, that several measures had been adopted at the national level to improve the situation and that an actual improvement had already taken place.⁶⁹ Trying to avoid the question of when a plan is capable of keeping an exceedance “as short as possible,” the CJEU simply noted that the deadline for transposition of the relevant EU legislation was 2010, while in 2014 PM10 exceedances were still widespread, and the national legislation was amended only in December 2015 in order to speed up the process of improving ambient air quality. According to the Court:

[S]uch a situation proves of itself, without the need to examine in detail the content of the plans drawn up by the Republic of Bulgaria, that in the present case that Member State has not implemented appropriate and effective measures to keep the exceedance period for limit values for PM10 concentrations as ‘short as possible.’⁷⁰

In *Commission v. UK*, the CJEU went instead to shift the focus from an assessment of whether the relevant air quality plan ensured that exceedances of NO₂ would be kept as short as possible, to the—strictly legal—consideration that air quality plans must contain certain information prescribed by EU law.⁷¹ As the Court found the plans too vague and not sufficiently detailed, this consideration was itself enough to let the Court conclude that the UK air quality plans were in breach of the relevant legislation.

Finally, in *Commission v. Italy*, the defendant Member State sought to put forward the argument that exceedance of the limit values for PM10 could not be attributed solely to the Member State, because of the variety of sources of air pollution, some of which are natural and others determined by EU policies.⁷² Instead of engaging in a complex discussion on causality, the CJEU limited itself to noting that EU legislation provides for the possibility for a Member State to obtain recognition of certain natural sources as sources of pollution contributing to the exceedances of the limit values complained of, and the conditions under which, because of the specific situation of a zone or agglomeration in particular on account of certain characteristics or

⁶⁷See Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on Ambient Air Quality and Cleaner Air for Europe, 2008 O.J.(L-152/1), art. 23.

⁶⁸See ECJ, Case C-336/16, *Comm’n v. Poland*, ECLI:EU:C:2018:94 (Feb. 22, 2018), <https://curia.europa.eu/juris/liste.jsf?num=C-336/16>.

⁶⁹See ECJ, Case C-488/15, *Comm’n v. Bulgaria*, ECLI:EU:C:2017:267 (Apr. 5, 2017), <https://curia.europa.eu/juris/liste.jsf?num=C-488/15>.

⁷⁰See *id.* at para. 117. See also *Comm’n v. France (Exceedance of limit values for nitrogen dioxide)*, Case C-636/18, and Case C-638/18, *Comm’n v. Romania (Exceedance of the limit values for PM 10)*, ECLI:EU:C:2020:334 (Apr. 30, 2020).

⁷¹See ECJ, Case C-664/18, *Comm’n v. United Kingdom (Limit Values—Nitrogen Dioxide)*, ECLI:EU:C:2021:171 (Mar. 4, 2021).

⁷²See ECJ, Case C-644/18, *Comm’n v. Italy (Limit Values - PM 10)*, ECLI:EU:C:2020:895 (Nov. 10, 2020).

climatic conditions, temporary exemption from the obligation to comply with those values may be granted. Since those derogations had not been granted, the Court could avoid a substantive examination of the technical question.

D. Conclusions

The Court's willingness to admit specific claims for systemic breaches of EU environmental law has been heralded in the literature as a "new dawn" for infringement proceedings,⁷³ and as capable of putting significant pressure on the Member States to comply with their EU environmental obligations.⁷⁴ Indeed, in order to avoid follow-on actions under Article 260(2) TFEU, a Member State might need to show to have taken measures to ensure not only that individual instances of non-compliance are repaired, but also that the instances of non-compliance are no longer systemic, that is that the breaches are not of repeated or widespread nature.⁷⁵ Furthermore, a declaration of a systemic breach might have implications for the amount of the penalty payment set by the Court in an action under Article 260(2) TFEU.⁷⁶

Prete and Smulders have argued that the Commission's focus on systemic breaches in infringement proceedings is an "almost inevitable" consequence of both the enlargement of the Commission's toolkit to foster compliance by Member States, and the increasing complexity of EU rules.⁷⁷ Correctly, they also note that certain systemic environmental violations might not be able to be repaired by NGOs' claims at the national level.⁷⁸ This is because claims at the national level will inevitably be geared towards specific instances of non-compliance and are procedurally ill-suited to cater for the correction of systemic and widespread breaches.

However, the analysis carried out above shows that the infringement proceedings, which at the moment is the sole instrument in the EU legal system able to tackle systemic breaches of environmental legislation, leaves something to be desired when it comes to such systemic failures. Certainly the Court has adopted a relatively flexible approach to the admission of fresh evidence in cases involving systemic breaches, and this can be particularly beneficial in scientifically complex cases where the collection of evidence on the part of the Commission might be time consuming, and it has also been very open to the admission of various types of evidence by the Commission—including partisan ones, such as media reports, if corroborated by more official sources, such as reports by national environmental agencies. However, this approach serves to counterbalance a number of procedural shortcomings which might, in the long run, undermine the effectiveness of the infringement proceedings as a way to pursue systemic breaches of EU environmental legislation.

First, while the Court is satisfied with the production of only "sufficient" evidence of the alleged infringement on the part of the defendant Member State, the gathering of this evidence might be a more cumbersome process when it comes to systemic breaches and scientifically complex questions, as the *Xylella* case demonstrates. Second, and linked to the first point, while open to admitting new and diverse evidence, the Court is not willing to help out the Commission in the collection of evidence. Given the limited investigatory powers of the Commission, and its reliance on complaints and information submitted by Member States, this passive approach of the Court might also limit the likelihood of a possible finding of a systemic breach. Finally, as the case law above has shown, and as is the case in the context of other proceedings before the CJEU, the Court

⁷³See Wenneras, *supra* note 12, at 43.

⁷⁴See Hedemann-Robinson, *supra* note 31, at 106.

⁷⁵It should be noted, as further elaborated by Prete in this special issue, that it is as of now not entirely clear what the concrete obligations for Member States are after a declaration by the Court that the Member State concerned has failed to generally and consistently comply with certain EU law obligations.

⁷⁶See further Luca Prete in this Special Issue.

⁷⁷See Prete & Smulders, *supra* note 56, at 330–31.

⁷⁸See *id.* at 331.

will not readily review the substance of the claim when it involves scientific considerations and will rather try to find a way to shift the focus on legal points which it is feel comfortable addressing. While the case law above shows that the Court has been successful so far in “having the cake” of finding Member States in breach of EU law, and “eat it too” by avoiding an assessment of pertinent scientific questions, one might wonder what the Court’s approach would be when there is no germane legal obligation to which the Court could shift its focus. In turn, this might have also an influence on the types of infringement cases which the Commission is willing to bring to the attention of the CJEU.⁷⁹

With the Commission in a weaker position than the Member States to gather scientific data underpin its arguments, and the Court unwilling to use its procedural tools to support it and, as a non-specialist, to enter into a substantive examination of scientifically-loaded claims, it can legitimately be asked whether the infringement proceedings, as it looks today, may be regarded as a suitable tool to tackle systemic breaches of EU environmental law. In lack of a “systemic breach” mandate on the part of the national courts, it is certainly a missed opportunity that Member States opposed a reform of the Statute having the effect to move infringement proceedings to the jurisdiction of the General Court.⁸⁰ One might indeed imagine that the General Court, as a true court of law and fact, would have been more inclined that the Court of Justice to both use the procedural tools at its disposal and enter more into factual questions requiring expert knowledge.⁸¹ This limited engagement with fact-finding and scientific assertions might, in turn, affect the very legitimacy of the Court and the authority of its rulings.

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⁷⁹See Eliantonio & Krajewski, *supra* note 19, at 347.

⁸⁰See Council Document No. 13588/18 of 31 October 2018, and Council Document No. 7601/19 of 22 March 2019.

⁸¹See Alicja Sikora, *Infringement Actions Before the General Court: The Past, Present and Future of the Judicial Architecture of the Union*, in YEARBOOK ON PROCEDURAL LAW OF THE COURT OF JUSTICE OF THE EUROPEAN UNION 21 (Daniel Sarmiento, Héléne Ruiz Fabri, & Burkhard Hess eds., 2020 (2)):

[T]he transfer of jurisdiction to the General Court, which was created for the cases that require intensive fact-finding and has an array of procedural tools developed in direct actions, might give rise to the new administrative and judicial attitude, which could very well fit the purposes of EU environmental protection.

But see Chiara Amalfitano, *La Recente Proposta di Riforma dello Statuto della Corte di Giustizia dell’Unione Europea: Molti dubbi e Alcuni Possibili Emendamenti*, in FEDERALISMI, special issue No. 3-2018, available at https://www.federalismi.it/nv14/articolo_documento.cfm?Artid=36974&content=&content_author= (regarding the possible issues flowing from such a transfer of jurisdiction, and the manner in which it was conceived).

Annex 1: List of case law examined

Case number	Parties + case name (if applicable)
C-494/01	Commission v. Ireland (“Irish waste”)
C-135/05	Commission v. Italy
C-248/05	Commission v. Ireland
C-342/05	Commission v. Finland
C-34/11	Commission v. Portugal
C-68/11	Commission v. Italy
C-196/13	Commission v. Italy
C-488/15	Commission v. Bulgaria
C-336/16	Commission v. Poland
C-443/18	Commission v. Italy (Bacteria <i>Xylella fastidiosa</i>)
C-636/18	Commission v. France (Exceedance of limit values for nitrogen dioxide)
C-638/18	Commission v. Romania (Exceedance of the limit values for PM10)
C-644/18	Commission v. Italy (Limit Values—PM10)
C-664/18	Commission v. the United Kingdom (Limit Values – Nitrogen Dioxide)
C-661/20	Commission v. Slovak Republic (Protection du Grand tétras)

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