

Converging Standards? Ecocide Laws & Proposals in Comparative Perspective

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By Xuchen Zhang and Kate Mackintosh

Introduction

Legal experts have engaged in a flurry of activity to define the crime of ecocide at national, regional and international levels in the last few years. The crime of ecocide has been introduced in a number of criminal legal systems, is pending in others, and features in the 2024 *EU Environmental Crime Directive* ("*EU Directive*"). This growing momentum at the national and regional level is partly inspired by international efforts, in particular the work of the International Expert Panel for the Legal Definition

of Ecocide (“IEP”), of which one author was a member, and the proposed definition of ecocide it issued in June 2021 as an amendment to the *Rome Statute* of the International Criminal Court. In September 2024, the states of Vanuatu, Fiji, and Samoa formally proposed the IEP definition as an amendment to the Rome Statute (the “International Proposal”), which would introduce a fifth crime of ecocide to the jurisdiction of the court. The Democratic Republic of the Congo formally endorsed this initiative in October 2024.

According to the IEP definition, now the International Proposal:

> “Ecocide means unlawful or wanton acts committed with knowledge that there is a substantial likelihood of severe and either widespread or long-term damage to the environment being caused by those acts.”

This definition of ecocide appears to have influenced the laws and proposals developed in the period after June 2021, in which a clear convergence can be observed, particularly around the elements of the crime. While the elements seem to have become standard, the way each element is dealt with does diverge between jurisdictions. In this article, we survey the new laws and legislative proposals in ten jurisdictions that came out after the IEP definition of ecocide and compare how each one approaches the key elements of the crime.

Recent Legislative Developments Around the Crime of Ecocide

Prior to the issuing of the IEP definition, the crime of ecocide was already recognized in ten former Soviet States and the Socialist Republic of Vietnam, as well as in the Mexican state of Chiapas. We do not consider these in this article. It is only in the period since June 2021 that we see a convergence of efforts around the IEP definition.

In 2021, France passed the *Climate & Resilience Act*, which at article L. 231-3 includes ecocide as a *délit* (minor offence) under national law and at article 296 requires the government to report back to parliament within one year on “its action in favour of the recognition of ecocide as a crime which can be tried by international criminal courts.” In 2022, the Mexican state of Jalisco also amended the *Penal Code of the State of Jalisco* (“*Jalisco Penal Code*”) to include ecocide as a crime at article 289, and most recently, in February 2024, Belgium included the crime of ecocide at article 94 of the *new Belgian Penal Code*. Several other jurisdictions put forward proposals to criminalize ecocide in 2023 and 2024, which are currently at various stages in their respective legislative processes (see table below).

At the regional level, the *EU Directive*, which came into force on 20 May 2024, introduces a qualified offence that includes cases “comparable to ecocide” (*EU Directive* preamble at para 21). The *EU Directive* provides an extensive list of conduct that must constitute a criminal offence where it is unlawful and intentional, and which should further constitute a qualified criminal offence if such

conduct causes:

(a) the destruction of, or widespread and substantial damage which is either irreversible or long-lasting to, an ecosystem of considerable size or environmental value or a habitat within a protected site, or

(b) widespread and substantial damage which is either irreversible or long-lasting to the quality of air, soil or water. (*EU Directive* at art 3(3))

The status of these laws and proposals is summarized in the table below. Other proposals, in the UK and Catalan parliaments, that were unsuccessful in this period are not included in the scope of this article.

Jurisdiction	Name of Law/Proposal	Status
LAWS		
European Union	2024 *EU Environmental Crime Directive* at article 3(2a)	Adopted by the EU Council in March 2024. EU Member States have two years to translate the directive into national law (*EU Directive* at art 28).
Belgium	*new Belgian Penal Code* at article 94	Passed by House of Representatives in 2024 and will enter into force two years after its publication in the Belgian Gazette (around 2026).
Jalisco (Mexico)	Amendment to the *Penal Code of the State of Jalisco* at article 289	Enacted in 2022.

France	*Climate & Resilience Act* at article L. 231-3	Passed in 2021 with provisions of offences that could amount to ecocide. This law also requires the government to report back to parliament within one year on “its action in favour of the recognition of ecocide as a crime which can be tried by international criminal courts.”
PROPOSALS		
Brazil	Proposed Ecocide Bill	Introduced by the Partido Socialismo e Liberdade (PSOL) (Socialism and Liberty Party) in June 2023 and voted through by the Environment and Sustainable Development Committee in November 2023.
The Netherlands	Proposed Ecocide Penalisation Act	Proposed by MP Lammert van Raan of Partij voor de Dieren (Party for the Animals) in November 2023. In April 2024, MP Teunissen took the place of MP Van Raan in the defence of this bill, which is currently under review by the standing committee for Justice and Security.
Mexico (federal)	Proposed Federal Penal Code Amendment	Introduced in Mexican Congress in July 2023 and passed to the Justice, Environment and Natural Resources Committees for consultation.
Italy	Proposed Penal Code Amendment	Proposed by the Alleanza Verdi e Sinistra (Greens and Left Alliance) in July 2023.

Peru	Proposed Penal Code Amendment	In September 2024, the Peruvian Congress convened a technical committee to review a proposal to criminalize ecocide within the country's national penal code. The new legal text consolidates three bills recently submitted to Congress. On November 27th, the Justice and Human Rights Commission of the Congress of the Republic of Peru approved a motion to criminalize ecocide. The proposal is now pending plenary approval by Congress and presidential promulgation to become law.
Scotland	Proposed Ecocide (Prevention) (Scotland) Bill	Formally introduced into the Scottish parliament by Monica Lennon MSP on 12 November 2024. Public consultation for the bill went live in November 2023 and received thousands of supportive responses – a summary of the responses can be found here.

Key Elements of the Crime of Ecocide

In the following section, we examine how six key elements of the new and proposed crimes of ecocide in the recent laws and proposals are dealt with in each jurisdiction. Most of these elements appear in the IEP definition and International Proposal, but their transposition into domestic criminal law raises interesting legal issues which have been dealt with in varying ways. It also allows for additional elements, such as the liability of legal persons, to be addressed. This does not appear in the International Proposal as liability of legal persons is not provided for in the Rome Statute of the International Criminal Court.

The elements compared below are: (1) the threshold of harm and the definition of environment; (2) prohibition of acts vs prohibition of consequences; (3) the unlawfulness of the conduct; (4) the *mens rea* element; (5) creation of actual harm (infringement) or risk (endangerment); and (6) liability of legal entities, corporate workers, and public servants.

I. Threshold of Harm and the Definition of Environment

The criminalization of ecocide aims to punish conduct that causes the most serious kinds of environmental damage and thus requires the harm to reach a certain threshold.

The International Proposal describes the threshold of harm as "severe and either widespread or long-term damage" to the environment. These terms are further defined in the proposal as:

- "Severe": damage which involves very serious adverse changes, disruption or harm to any element of the environment, including grave impacts on human life or natural, cultural or economic resources;
- "Widespread": damage which extends beyond a limited geographic area, crosses state boundaries, or is suffered by an entire ecosystem or species or a large number of human beings;
- "Long-term": damage which is irreversible or which cannot be redressed through natural recovery within a reasonable period of time.

These terms appear in international humanitarian law protecting the environment in armed conflict (*1977 First Additional Protocol to the Geneva Conventions* ("*API*") at art 35); *1976 Convention on the Prohibition of Military of Any Other Hostile Use of Environmental Modification Techniques* ("*ENMOD Convention*")), as well as in the specific environmental war crime in the Rome Statute at article 8(2)(b)(iv). All of the new laws and current proposals incorporate a version of these three terms.

"Environment" is defined in the International Proposal as:
"the earth, its biosphere, cryosphere, lithosphere, hydrosphere and atmosphere, as well as outer space".

While there is no accepted definition of the environment in international law, the International Proposal follows the language of the ENMOD Convention. Of note, the International Committee of the Red Cross (ICRC) and International Law Commission (ILC) consider that the concept of the environment "represents a complex system of interconnections where the factors involved (such as humans and the natural environment) interact with each other in different ways that 'do not permit them to be treated as discrete.'"

Some of the new laws and proposals define the environment, while others delineate the protected elements exclusively in other parts of the definition. The International Proposal does both, specifying protected elements in its definitions of severe and widespread and further defining the environment.

New Laws

The *EU Directive*'s qualified offence is defined as conduct which causes:
"the destruction of, or widespread and substantial damage, which is either irreversible or long-lasting, to an ecosystem of considerable size or environmental value, or to a habitat within a protected site", or

“the quality of air, soil, or water” (*EU Directive* at art 3(3)).
While “substantial” may be a lower threshold than “severe”, the cumulative test of the *EU Directive* appears to set a higher overall threshold than the International Proposal. While the International Proposal requires damage to be severe and either widespread or long-term, the *EU Directive* requires all three criteria. The damage must be widespread, substantial, and either irreversible or at least long-lasting. (There is a higher alternative, which is “destruction”). Long-lasting is not defined.
“Ecosystem” and “habitat within a protected site” are further defined in the *EU Directive* as follows:

- “Ecosystem”: “a dynamic complex of plant, animal, fungi and microorganism communities and their non-living environment, interacting as a functional unit, and includes habitat types, habitats of species and species populations” (*EU Directive* at art 2(2)(b));
- “A habitat within a protected site”: “any habitat of species for which an area is classified as a special protection area pursuant to Article 4(1) or (2) of Directive 2009/147/EC of the European Parliament and of the Council, or any natural habitat or habitat of species for which a site is designated as a special area of conservation in accordance with Article 4(4) of Council Directive 92/43/EEC or for which a site is listed as site of Community importance in accordance with Article 4(2) of Council Directive 92/43/EEC” (*EU Directive* at art 2(2)(c)).

These definitions are more detailed and specific than the definition of “environment” in the International Proposal, with more emphasis on the biosphere of the earth. Outer space would not appear to be included.

The French *Climate & Resilience Act* requires damage to be severe and long-term in order to constitute ecocide, with no reference to the term widespread. Long-term damage is that lasting at least seven years. This is a relatively short period of time in comparison to the interpretation of “long-term” as a period of decades in the *API* and significantly longer than the “several months or a season,” which the Committee on Disarmament indicated was the meaning of the closely related term “long-lasting” in article 1 of the *ENMOD Convention*. The International Proposal instead uses a formulation to include irreversible damage, or in the alternative, damage which cannot be redressed naturally within a reasonable period of time.

Two articles of the *Climate & Resilience Act* proscribe ecocide. Under the first, the damage must be done to health, flora, fauna or water quality (*Climate & Resilience Act* at arts L.231-1, L. 231-3). Under the second, which specifically concerns waste, the list of protected elements is expanded to include air and soil quality (*Climate & Resilience* Act at arts L. 231-2, L. 231-3).

In the *new Belgian Penal Code*, the threshold of harm for ecocide is severe, widespread and long-term (*new Belgian Penal Code* at art 94(1)). The definitions of these terms are almost the same as in the International Proposal, with the following variation in the definition of severe. The Belgian law adds human health and biodiversity to the elements protected by the crime in the definition of severe and also specifies impacts on “natural, cultural or economic resources for society” (emphasis added). As

for the definition of “environment”, the Belgian law reproduces the International Proposal’s definition.

The *Jalisco Penal Code* defines the threshold as the destruction or total loss of an ecosystem, the irreparable damage to an ecosystem that covers at least ten hectares, or damage to an ecosystem whose effects and impacts last at least four months (*Jalisco Penal Code* at art 289 *bis*). This threshold is similar to that in the International Proposal but has more specific (and perhaps lower) requirements on the area and duration of harm.

Legislative Proposals

All current proposals for a crime of ecocide use the same threshold of harm as the International Proposal, namely “severe and either widespread or long-term”. For further definitions of the three terms, the Scottish, Italian, Brazilian, and Mexican (federal) proposals use the same language as the International Proposal. The Mexican (federal) proposal also uses the International Proposal’s definition of the environment.

The Scottish proposal does not explicitly define the “Scottish environment” but states that “’Scotland’ has the same meaning as that in section 126 of the Scotland Act 1998 and “includes so much of the internal waters and territorial sea of the United Kingdom as are adjacent to Scotland”. The Italian proposal uses the terms “environment or ecosystem”.

The Dutch proposal defines “severe” and “long-term”, following the International Proposal. But the definition of “widespread” includes impact on “a significant part of an ecosystem” and “on a large number of a certain animal or plant species” rather than an entire ecosystem or species, as under the International Proposal. Damage is directed at “an ecosystem of considerable size or environmental value” or “a habitat within a protected site, or to the quality of air, soil or water.” “Ecosystem” is, in turn, defined as “a dynamic complex of plant-, animal-, fungal- and micro-organisms and their non-living environment, interacting as a functional unit. It includes habitat types, habitats of species and species populations”.

The Peruvian proposal uses the same definitions of “widespread” and “long-term” as the International Proposal while defining “severe” as damage “which causes very adverse changes, disturbances or notorious damage to the atmosphere, soil, subsoil, terrestrial, maritime or subterranean waters, including serious impacts on the atmosphere, soil, subsoil, terrestrial, maritime or subterranean waters, including serious impacts on the environment”. This differs from the International Proposal in that it explicitly lists the elements of the environment, thus excluding those not listed, including impacts on human life or cultural and economic resources. It further specifies that the harm must be directed at “the environment or its components, environmental quality or environmental health or the integrity of ecological processes”, with no further definitions of these terms.

II. Prohibition of Act vs Prohibition of Consequences

The International Proposal prohibits the creation of harm without detailing the criminal acts that create that harm. It focuses on the prohibited consequences of acts or omissions: severe and widespread or long-term damage to the environment, rather than on a list or description of prohibited acts.

Among the new ecocide laws, the *new Belgian Penal Code* and the *Jalisco Penal Code* also use this approach. All six jurisdictions with legal proposals (Brazil, the Netherlands, Mexico (federal), Italy, Peru, and Scotland) also adopt the "prohibited consequence" approach.

By contrast, the *EU Directive* not only specifies the threshold of harm but also lists the acts or omissions that are prohibited. The *Climate & Resilience Act* similarly provides a list of prohibited conduct in addition to proscribing the threshold of harm.

III. The Unlawfulness of the Conduct

The International Proposal requires the underlying act or omission to be either unlawful or wanton to constitute ecocide. For an act to be unlawful, it must breach other existing laws. "Wanton" is defined as "with reckless disregard for damage which would be clearly excessive in relation to the social and economic benefits anticipated".

New Laws

Under the *EU Directive* the underlying act or omission must be unlawful. This is defined as in violation of environmental laws and regulations, but includes conduct carried out with authorisation or permit "if such authorisation was obtained fraudulently or by corruption, extortion or coercion, or if such authorisation is in manifest breach of substantive legal requirements" (*EU Directive* at art 3(1)).

Belgium and France similarly require the act to be unlawful. The *new Belgian Penal Code* does not further define "unlawful" (*illégal*), while under the *Climate & Resilience Act*, this includes acts in violation of administrative limits or of a duty of care or safety provided for in laws or regulations. By contrast, the amendment to the *Jalisco Penal Code* does not have any requirements on the unlawfulness of the act or omission, thus creating a stand-alone crime.

Legislative Proposals

None of the current legislative proposals require the acts to be *a priori* unlawful. The Scottish, Italian, Brazilian, and Mexican (federal) proposals follow the International Proposal by requiring the act to be either unlawful or wanton. By contrast, the Dutch and Peruvian proposals do not require the act to be either unlawful or wanton. Concerns have been raised over the absence of the "unlawful or wanton" requirement challenging fundamental principles of legality and legal certainty in the Dutch context, for example, by the Dutch Board of Attorneys General (see also original version in Dutch).

IV. The *Mens Rea* Element

The *mens rea* in the various crimes and proposals can correspond to the conduct, the consequences, or both the conduct and the consequences. As discussed in Section II, above, the International Proposal focuses on prohibiting consequences, and the corresponding *mens rea* is knowledge of the substantial likelihood of the consequences – damage to the environment – coming to pass.

New Laws

Belgium requires the act or omission to be intentional ("deliberate") and requires knowledge that the act will cause harm. The *Jalisco Penal Code* does not explicitly define *mens rea* for the crime of ecocide. According to the *Jalisco Penal Code* at article 14, *mens rea* includes intent, reckless disregard, imprudence, and negligence.

The *EU Directive* at article 3(1) requires the unlawful act constituting a qualified offence to be committed intentionally. Preambular paragraph 26 states that "intention" also covers a situation where "the offender, despite not wanting to cause the death of a person, nevertheless accepts the likelihood of causing it, and acts, or refrains from acting, voluntarily and in violation of a particular obligation, thereby causing the death of a person." There is some ambiguity in the *EU Directive* about the required *mens rea* for specified consequences. Many provisions of the *EU Directive* prohibit acts which cause "or are likely to cause" death of persons, substantial damage to ecosystems, etc. (*EU Directive* at art 3(2)(a-f, i-m, s)), but whether the actor must be aware of such likelihood is not indicated. France requires the conduct to be committed intentionally.

Legislative Proposals

The Scottish, Mexican (federal), Brazilian, and Italian proposals follow the International Proposal and require knowledge (or "awareness") of the substantial likelihood of damage. The Peruvian proposal also requires knowledge of a likelihood of damage but does not require the likelihood to be substantial (the language used is "cause or may cause"). The Dutch proposal requires the creation of harm or actual damage to have been intentional, which in the Dutch legal context includes *dolus eventualis*, aligning it with the interpretation of intent in the *EU Directive*.

V. Creation of Actual Harm (Infringement) or Risk (Endangerment)

Under the International Proposal, the crime consists of creating a substantial risk of the specified harm occurring, making it a crime of endangerment. In contrast, the *EU Directive* requires actual harm for qualified offences.

Among the new ecocide laws, France, Belgium, and the Mexican state of Jalisco also require that the harm must have materialized. However, as cited above, for Jalisco, if the harm is to the health of persons, it only needs to be a serious risk.

Among jurisdictions with legal proposals, Scotland, Italy, Mexico (federal), and Brazil require the

conduct to create a substantial likelihood of harm. The Dutch and Peruvian proposals require the conduct to either cause actual damage or create a risk of such damage.

VI. Liability of Legal Entities, Corporate Workers, and Public Servants

While the Rome Statute, and by extension the International Proposal, only addresses individual criminal responsibility, some of the new ecocide laws also create liability for legal persons. The *EU Directive,* the Belgian law, and the French law all have provisions on the responsibility of legal persons. However, the *EU Directive* at article 2(2)(a) excludes states or public bodies exercising state authority and public international organizations from such liability. Among proposed laws, the Scottish proposal also considers the responsibility of companies and would impose financial sanctions of up to 10% of worldwide turnover for companies over three years (Scottish proposal at p 24).

Some jurisdictions elaborate on the responsibility of individuals within legal entities. The *EU Directive* at article 6(3) specifies that the liability of legal persons should not exclude criminal proceedings against natural persons (including corporate board members) who are “perpetrators, inciters or accessories.” The Scottish proposal would hold individuals (e.g. directors of a company or other entity) accountable if they *directly* contributed to the crime, whereas the Italian proposal more generally provides that penalties shall apply to shareholders, partners, associates, managers, directors, administrators or legal representatives of a legal person. The Brazilian proposal also specifically states that “the crime of ecocide is directed against the high-level … financial and business leaders responsible for decisions that lead to the promotion, planning, financing, agency, contracting, management and execution of activities” regulated by the proposed law.

Some jurisdictions also explicitly provide for the responsibility of public servants or officials. Jalisco establishes sanctions for public servants who, by action or omission, allow the type of conduct prohibited by the law. Among jurisdictions with legal proposals, the Brazilian proposal explicitly notes the role of high-level political leaders who are similarly involved in the decision-making process of activities impacting the environment as that of financial and business leaders mentioned in the paragraph above. The Peruvian proposal provides that penalties also apply to “shareholders, partners, associates, managers, directors, administrators or legal representatives of a legal person who, by failing to comply with their duty of vigilance, commit this offence.”

Conclusion

There has been a clear convergence in the definition of ecocide since the introduction of the IEP definition in 2021. This convergence is around the elements or building blocks of the crime rather than exactly how each element appears in its regional, national or sub-national transposition. While proposals for ecocide laws replicate the International Proposal more closely, those that have been through the law-making process tend to diverge in a number of ways. This is to be expected and reflects the complexity and specificity of each jurisdiction. It remains to be seen whether a common definition of ecocide will emerge from the bottom up or be imposed at the international level, for

example, via an amendment to the *Rome Statute*.

It is hoped that this survey of the current state of the field will both contribute to deliberations and add to the momentum to criminalize the worst harm to our shared environment. In our view, recognizing ecocide as a crime is an essential part of the response to the ecological crisis. By providing a basis for accountability for large-scale and serious environmental harm, it can operate as a deterrent and guardrail, strengthening the global response to environmental crimes and bolstering efforts to protect the planet's ecological integrity.

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