



Scoping a Domestic Legal Framework for Ecocide in Scotland

Dr Rachel Killean, University of Sydney Law School, and
Prof Damien Short, School of Advanced Study, University of London

Report for the Environmental Rights Centre for Scotland (ERCS)

March 2024

The Environmental Rights Centre for Scotland (ERCS)

Who we are

ERCS was established in 2020 to provide free legal expertise in public interest environmental law.

Our vision is of a Scotland where every person's right to a healthy environment is respected, protected, and fulfilled.

Our mission is to assist everyone, especially people who face the biggest barriers, to exercise their rights in environmental law and to protect the environment.

We do this through:

- **Awareness-raising of legal rights and remedies** and supporting equitable participation in environmental decision-making
- **Advice, assistance and representation** to increase access to justice and holding public authorities and polluters to account on the environment
- **Advocacy in policy and law reform** to improve environmental law
- **Strategic public interest litigation** to tackle systemic environmental problems.

ERCS understands environmental law to include law relating to land-use planning, climate change, pollution control, environmental health, the conservation of biodiversity, and any other field (e.g. cultural heritage, transport, energy) to the extent that it impacts on the natural environment and/or the right to live in a healthy environment.

Acknowledgements

ERCS would like to thank Dr Rachel Killean (University of Sydney Law School) and Prof Damien Short (School of Advanced Study, University of London) for applying their expertise on ecocide to the Scottish context and writing this report.

Thanks also to David Whyte, Jodie Bettis, Daniela Suarez-Vargas, Malayna Raftopoulos and Rupert Knox for their helpful insights and assistance.

This research report was commissioned by ERCS to scope the feasibility and options for incorporating ecocide into Scots law and is intended to inform any future proposals.

Contents

Acknowledgements	2
Who we are	2
Executive summary	5
1 Introduction	6
2 A very brief history of the campaign to criminalise ecocide	7
3 Approaches to the domestic criminalisation of ecocide	8
3.1 Early examples of ecocide as an atrocity crime	8
3.2 Implementing the Stop Ecocide Foundation's 2021 definition	9
3.3 Alternative framings of severe environmental destruction	14
3.4 Alternative definitions of ecocide	16
4 Examples of implementation	18
4.1 State-corporate ecocide	18
4.2 Conflict-related ecocide	18
5 Definitional issues	20
5.1 Legality	20
5.2 Determining appropriate gravity	21
5.3 Defining <i>mens rea</i>	23
6 Sentencing and enforcement	24
6.1 Challenges of enforcement	24
6.2 Determining appropriate sentencing	25
7 Conclusion and recommendations	28
References	30
Appendix 1: Domestic legislation	34
Appendix 2: Definitions of an international crime of ecocide	46





Executive summary

This report provides an overview of existing state practice regarding the criminalisation of ecocide. It outlines three main approaches discernible in state practice: framing ecocide as an atrocity crime; adopting the language of the Stop Ecocide Foundation's Independent Expert Panel's 2021 ecocide proposal; and criminalising severe environmental destruction without evoking the language of ecocide. It finds that while accountability for ecocide has been elusive, there is reason to believe that we may see more attempts to investigate and prosecute ecocide in future.

After reviewing this practice, the report discusses some of the definitional issues that would require attention should Scotland pursue a domestic crime of ecocide, including legality, gravity thresholds, intent, enforcement, and sentencing. It argues that a domestic crime that mirrors the language used by Stop Ecocide's Expert Panel might have value in furthering the campaign for an international crime. However, a Scottish law might also build on and strengthen Stop Ecocide's approach to suit the domestic context. Amendments might include adding a list of indicative acts, a less onerous gravity threshold (avoiding a 'wanton' test) and forms of liability that encompasses legal persons and avoid the inappropriate criminalisation of workers (e.g. superior responsibility).

The report also considers the challenges of enforcement. It recommends appropriate investment into environmental enforcement agencies such as the Scottish Environmental Protection Agency. It also considers whether additional measures might be adopted to strengthen public engagement with environmental enforcement, such as enhanced protections for whistle-blowers or those protesting ecocidal practices.

Finally, the report discusses how to determine appropriate penalties for ecocide. In particular, the report advocates an approach which i) ensures that corporations are unable to externalise the cost of fines e.g. through equity fines; and ii) incorporates environmental restorative methods.

“ While for a long time there was little evidence of crimes of ecocide being used in practice, there are signs that this might be changing. ”

1 Introduction

In November 2023, Monica Lennon MSP launched the public consultation on her proposed Member’s Bill to introduce ecocide law in Scotland. This comes at a time when the European Union have adopted the inclusion of ecocide level crimes in the revised Directive on protection of the environment through criminal law. Several other states are also considering introducing ecocide into their domestic law, others have already done so.

This report scopes the feasibility and options of incorporating ecocide into Scots law, drawing on independent research and participation in ERCS’s roundtable in January 2024.

The report gives a brief overview of the evolution of ecocide as a legal concept (Part 2). It then outlines the various approaches other states have taken to criminalising ecocide, including the justifications for and impacts of doing so (Part 3).¹ It identifies three main approaches that states have taken: framing ecocide as an atrocity crime; adopting the language of the Stop Ecocide Foundation’s commissioned Independent Expert Panel for the Legal Definition of Ecocide’s 2021 proposal (hereafter the Expert Panel); and criminalising severe environmental destruction without evoking the language of ecocide.

The report considers the effectiveness of domestic prosecution by reviewing incidences of investigations and prosecutions (Part 4). It finds that while for a long time there was little evidence of crimes of ecocide being used in practice, there are signs that this might be changing, with multiple states using (quite distinct) ecocide laws to investigate serious environmental harms in times of both war and peace (Part 5).

The report then discusses some of the definitional issues that would require attention should Scotland pursue a domestic crime of ecocide, including legality, gravity thresholds, intent, enforcement, and sentencing (Part 6). The report argues that while a domestic crime that mirrors the language used by the Expert Panel might have value in furthering the campaign for an international crime, there are strong arguments in favour of considering how a domestic crime might usefully differ from the Expert Panel’s approach. It concludes by summarising some of the key challenges of pursuing a domestic crime of ecocide, and potential ways forward.

2 A very brief history of the campaign to criminalise ecocide

Ecocide – meaning to ‘kill’ (-cide) our ‘home’ (eco) – initially emerged as a descriptor for the United States of America’s deliberate use of herbicides during the Vietnam War. Between 1961 and 1972, the USA sprayed more than 19 million gallons of a herbicide known as Agent Orange over South Vietnam, causing severe, long-term harm to humans and the area’s flora and fauna (Trung Le, Minh Pham & Polachek, 2022). Early uses of the term ‘ecocide’ are attributed to Professor Arthur Galston, a scientist whose research was used to develop Agent Orange and who subsequently campaigned to end its use (Zierler, 2011), and Richard A. Falk, a legal academic who proposed a 1973 Draft Convention on the Crime of Ecocide (Falk, 1973).

Since the 1970s, several definitions for an international crime have been developed – these are detailed in Appendix 2 of this report. Reflecting the origins of the concept, early definitions framed ecocide as a crime perpetrated during conflict.² While the International Law Commission considered adding an environmental crime against humanity to their Draft Code of Offences Against the Peace and Security of Mankind in the 1990s,³ by the time international crimes were codified in the Rome Statute of the permanent International Criminal Court (ICC) in 1998, only a war crime remained.⁴ This crime has been critiqued as being too narrow, and for being almost impossible to prosecute in practice (Smith, 2013). To date, there have been no successful prosecutions.

More recent campaigns to criminalise ecocide have moved away from its categorisation as a war crime (see e.g. Higgins, 2015 and Neyret et al., 2015). In 2021, the Expert Panel chose to forego any reference to war or peace in their proposed amendment to the Rome Statute, instead describing ecocide as:

‘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’ (Independent Expert Panel for the Legal Definition of Ecocide, June 2021).

On 27 February 2024, the EU Parliament approved a new Directive on the Protection of the Environment through the criminal law, which contains a qualified offence ‘comparable to ecocide.’ The Directive notes that ecocide is being discussed in international fora and may already be covered by some EU Member States’ laws (discussed further in Part 3.3).

Over the last decade the campaign to criminalise ecocide has gained unprecedented support from states, regional and international bodies, academics, and activists. There is apparent consensus amongst its proponents that a crime is needed that adequately reflects the various environmental crises of our times. Yet, it is important not to overstate the level of international consensus.

Legal questions remain around how to best frame the gravity threshold and requisite level of intention of such a crime, while broader policy questions remain as to the appropriateness and effectiveness of criminal law as a means of addressing serious environmental destruction.

Furthermore, while many advocates’ primary goal is to introduce a new international crime to the mandate of the ICC, this is not the only forum that has been explored. Some have argued for a new international environmental court (Jain & Soni, 2021–2022), others have suggested an international convention amongst willing states (Robinson, 2022). Discussions are also happening at regional and domestic levels. Several states have introduced or are considering introducing the crime of ecocide into their domestic criminal codes. The following section turns to the domestic sphere, exploring the justifications, formulations and impacts of domestic crimes of ecocide around the world.

3 Approaches to the domestic criminalisation of ecocide

Our research identified four main types of domestic practice: 1) early attempts to criminalise ecocide as an atrocity crime in the 1990s and early 2000s; 2) states implementing the Expert Panel's 2021 definition at a domestic level; 3) states choosing to criminalise severe environmental destruction without evoking the term 'ecocide'; and 4) states adopting their own definition of ecocide. These are considered in turn. All the domestic crimes discussed here are listed in Appendix 1. Please note this is a fast evolving area so there may be other examples not covered here.

3.1 Early examples of ecocide as an atrocity crime

Ten states added a crime of ecocide to their criminal codes in the 1990s and early 2000s, including Vietnam and nine former Soviet Union States.⁵ Reflecting the international context at the time, and potentially influenced by the work of the International Law Commission on the Draft Code of Offences Against the Peace and Security of Mankind during the 1990s (Gauger, 2012), these states frame ecocide as primarily a crime against peace, otherwise known as an atrocity crime. As such, ecocide appears in the same category as genocide, war crimes and crimes against humanity, rather than alongside other environmental offences.

3.1.a Vietnam

Vietnam's 1999 Penal Code lists 'ecocide' in Article 342 'Crimes Against Mankind', alongside 'annihilating en-mass populations', 'destroying the source of their livelihood', 'undermining the cultural and spiritual life of a country', 'upsetting the foundation of a society' and 'other acts of genocide.' No definition of 'ecocide' is provided in the 1999

code, and the specific word 'ecocide' is absent in the 2015 version of the Code, although the crime remains substantially the same.⁶ The 2015 Penal Code specifies that such crimes can be committed 'deliberately' or 'involuntarily' (appearing to cover the *mens rea* of intention, recklessness, or negligence (Articles 10–11)), and can be punished by imprisonment of ten to twenty years, life imprisonment or even capital punishment. We could find no evidence that ecocide has been investigated or prosecuted in Vietnam.

3.1.b Former USSR states

Over the course of the 1990s and 2000, the Russian Federation (1996); Kazakhstan and the Kyrgyz Republic (1997); Tajikistan (1998); Belarus and Georgia (1999); Ukraine (2001); Moldova (2002); and Armenia (2003) each introduced a crime of ecocide. These former USSR states inherited their criminal codes from the Soviet Union, and therefore largely mirror each other, framing ecocide as variations of the following:

Massive destruction of the animal or plant kingdoms, contamination of the atmosphere or water resources, and also commission of other actions capable of causing an ecological catastrophe, shall be punishable by deprivation of liberty... (see Appendix 1).

Ecocide is listed alongside crimes such as aggressive war, the manufacture or proliferation of weapons of mass destruction,⁷ genocide, and serious breaches of international humanitarian law (war crimes).

Some states provide additional guidance as to how 'ecocide' should be understood. For example, the Republic of Kazakhstan, which uses 'environmental disaster or environmental emergency' rather than 'ecological catastrophe,' defines environmental disaster as 'profound irreversible changes in the environment... resulting in a significant deterioration in public health, destruction of natural ecological systems and (or) deterioration in the condition of plant and animal life.'

“ Ecocide is distinguished from other environmental offences by ...severity ...*mens rea* ...and the substantial penalties ”

It defines environmental emergency as ‘sustainable negative environmental changes... that threaten the life and (or) health of people, the state of natural ecological systems, plant genetic funds and animals.’ In terms of the crime’s *mens rea*, Armenia and Belarus’ formulations include a specific requirement that mass destruction be ‘intentional,’ while others appear to rely on their codes’ general rules that criminality requires intentional or reckless behaviour.

Ecocide is distinguished from other environmental offences by virtue of the emphasis placed on severity (as demonstrated by the language of ‘mass destruction’ and ‘ecological catastrophe’), differences in *mens rea* (as other environmental crimes in these states appear to allow for strict liability) and the substantial penalties that attach to the crime (ranging from eight to twenty years imprisonment).

Nonetheless, there are instances where ecocide appears to overlap with environmental crimes listed elsewhere. For example, in addition to ecocide, Armenia prohibits the pollution of water which ‘wilfully or negligently caused significant damage’ or causes ‘mass destruction of animals’ which is punishable with a maximum three years’ imprisonment, while Belarus identifies the ‘spoilage of land... resulting in deliberate or negligent infliction of damage on a particularly large scale’ as attracting up to five years imprisonment. We were unable to find examples of investigations or prosecutions of ecocide in Armenia or Belarus, meaning it is difficult to know how these crimes would be distinguished in practice. However, examples do exist of initial investigations into ecocide in other countries – these are discussed in Part 4.

A final point to note about this category of states is that their framing of ecocide as a crime against peace has led to indicators that some could – in theory – exercise universal jurisdiction over ecocide. Universal jurisdiction refers to the ability of a State’s national court to prosecute individuals for serious crimes against international law, regardless of where the crime was committed and whether or not the alleged perpetrator is a national of the State. Most of the States discussed in this section have made statements extending universal jurisdiction to ecocide to the United Nations, although Georgia and Vietnam have limited their application of universal jurisdiction to international treaties to which they are parties, and Russia has resisted the concept of universal jurisdiction in its entirety. So far, there are no examples of a state exercising universal jurisdiction over ecocide, and this would likely be contentious in practice since ecocide is not currently an international crime. Nevertheless, the framing of these criminal codes creates the potential for future action in this space.

3.2 Implementing the Stop Ecocide Foundation’s 2021 definition

Some states who have offered vocal support for the Expert Panel’s definition have begun to explore the possibility of criminalising ecocide domestically, often alongside their advocacy for a new international crime.

3.2.a Belgium

In October 2020, the Belgian coalition government committed to take steps to recognise ecocide as an international and a domestic crime. A committee of experts was established and in 2021 a draft proposal was submitted to the Federal Parliament to include ecocide as a new federal crime in the Belgian Criminal Code. This was adopted by a majority (96–39 votes), and a new crime was included in the federal Minister of Justice’s proposed reforms of the Belgian Penal Code. This was approved, on the second reading, by the Council of Ministers in July 2023. It was approved by the Belgian Parliament on 23rd February 2024 (Chini, 2024).

The proposal for a new law provided important insights into the justifications for a new domestic crime, as well as what such a crime might look like. With regards to the justifications, the proposal centred global issues, such as the climate and biodiversity crises and serious environmental harms perpetrated with impunity by corporations. The proposal acknowledged that Belgium may confront direct risks to the environment in its own territory (including harms caused by transnational environmental disasters), but also highlighted that parent companies situated in its territory may perpetrate harm abroad.

The proposal declared domestic criminalisation to be ‘essential’ to realising the goals of global environment justice and framed its move in this direction as ‘offering Belgium a unique opportunity to present itself as a model and as a key player in this global enterprise.’⁸

Explaining the rationale for a domestic crime in particular, the proposal noted the lack of a ‘cross-cutting environmental crime’, as opposed to sectoral-specific offences, and the lack of a peace-time, rather than war-time, offence. It also highlighted the light penalties for environmental offences, which it argued does little to dissuade

large private companies, and that the protection of the environment is often left to administrative provisions rather than the criminal law.

Belgium’s definition is as follows:

Ecocide constitutes a crime, whether committed in time of peace or in time of war, deliberately or through a serious lack of foresight or precaution. The crime of ecocide is understood to mean unlawful or arbitrary acts committed with knowledge of the real probability that they will cause serious, widespread or lasting damage to the environment.

The influence of the Expert Panel’s definition is clear in the wording here, including in the *mens rea*, which centres intentional or reckless behaviour, and the gravity threshold of serious, widespread, or lasting damage. The proposal for the Act praised the Expert Panel’s definition for adapting language from the ICC’s Rome Statute, and specifically highlighted the importance of ‘avoiding the difficulties inherent in different interpretations depending on the national or international context.’ In fact, the law is understood as enabling Belgium to ‘initiate diplomatic procedures to introduce ecocide at the International Criminal Court’ (Stop Ecocide, 2023) highlighting the perceived connections between domestic and international criminalisation.

The crime will attract a penalty of imprisonment for twenty to thirty years, up to life if the crime caused the death of one or more persons. Interestingly, the crime is accompanied by other proposed measures, including powers to order the cessation of business activities, the closure of facilities, and measures of restoration or rehabilitation, including at the offender’s expense. The new law also makes the case for extending jurisdiction beyond Belgian territory, extending rules currently applied to international crimes in Belgium.

“ The crime is aimed at senior managers responsible for decisions that lead to the promotion, planning, financing, agency, contracting, management and execution of activities ”

3.2.b Brazil

On 8th November 2023, the Environment and Sustainable Development Committee of the Deputies Chamber of the Brazilian Congress approved Bill No 2933/2023, which aims to criminalise ecocide. The Bill was authored and submitted by the Partido Socialismo e Liberdade (PSOL) party, supported by a coalition of organisations including Ecoe Brasil, Climate Counsel, Observatório do Clima and Stop Ecocide International.

The proposed Bill includes justifications for proposing a new law of ecocide. In contrast to the Belgian proposal, Brazil's primarily connects the need for a new crime to its local context. In particular, the Bill highlights the need to curb the extractive and agro-industrial industries' illegal operations in the Cerrado and Amazon regions, and the associated violence against Indigenous peoples and groups who depend on forests and nature to live. However, global concerns are also noted, as the Bill links a crime of ecocide to Brazil's ability to combat climate change, and states that while protecting the Amazon may be a 'heavy burden', it is also a 'huge historic opportunity.'

Rationales for a domestic crime mirror some of those flagged by Belgium. For example, the Bill criticises the existing environmental protection system as having been overly depending on the administrative sphere, and for failing to keep up with the 'volume, intensity and speed of the process of environmental destruction underway in the country.'

The Bill defines ecocide as: 'carrying out illegal or reckless acts with the awareness that they generate a substantial probability of serious

and widespread or long-term damage to the environment.' It specifies that the crime 'is aimed at senior managers responsible for decisions that lead to the promotion, planning, financing, agency, contracting, management and execution of activities that fall under the heading of this article,' an addition that is arguably an important protection against the crime unintentionally punishing low level employees (Bol, 2024). Penalties can include imprisonment from five to fifteen years and a fine.

While the language of the Expert Panel's definition is evident, there are important changes. For example, the Bill uses 'reckless' rather than 'wanton' when describing the *mens rea* and makes explicit reference to 'senior managers' being held accountable. Reflecting the specific local context, the Bill also explicitly excludes 'Indigenous and traditional populations who continue to live in their traditional way and on their territories' from the crime's scope.

3.2.c Mexico

In Mexico, Deputy Karina Marlen Barrón Perales of the Institutional Revolutionary Party (PRI), congresswoman for Nuevo León, has submitted a Bill proposing a new article to Mexico's Federal Penal Code (Kaminski, 2023). The justifications for a new law are like those offered by Brazil. For example, the proposed Bill highlights the environmental challenges facing Mexico, including air and water pollution, deforestation, waste management, global warming, fracking, and the extinction of species, as well as the global impacts of these harms. Also reflecting Brazil, the Bill highlights the particular role of Mexico in protecting the world's biodiversity, due to the 'megadiversity' of its ecosystems.

The Bill critiques the use of fines as a response to environmental crimes and highlights the inability of existing environmental law to punish environmental crimes 'with the gravity they deserve.' Furthermore, the Bill draws attention to the human rights implications of environmental destruction, and connects the criminalisation of ecocide to the rights protected in Mexico's Constitution, including the 'right to an environment that is suitable for development and well-being.'

Reflecting the language of the Expert Panel's definition, the Bill would criminalise 'any unlawful or wanton act committed with the knowledge that there is a substantial likelihood of severe and either widespread or long-term damage to the environment.' If passed, perpetrators could face from ten to fifteen years imprisonment and a fine of up to as 1,500 pesos (approximately £70) per day.

At the time of the report, this Bill had not progressed any further. Rodrigo Lledó, Director of Stop Ecocide Americas and a member of the Panel of Independent Experts for the Legal Definition of Ecocide, has noted that similar initiatives are being prepared in Argentina, Chile, and other Latin American countries. However, in an interview with *The Guardian* he cautioned that the draft laws still require parliamentary approval, and few have the support of the governing party (Kaminski, 2023).

3.2.d The Netherlands

In July 2023, Member of Parliament Lammert van Raan of Partij voor de Dieren (Party for the Animals), officially launched a Bill to criminalise ecocide in the Netherlands. In the Bill's explanatory memorandum, van Rann discusses the urgency of the challenges the planet faces,

and identifies three limitations in the Dutch environmental criminal law: 1) that it does not protect the environment for its own good – there is no distinct crime of serious damage to the environment; 2) that it is almost entirely dependent on administrative law, meaning the criminal law is inadequate; and 3) the current system contains limited possibilities to criminalise serious forms of environmental damage perpetrated abroad by Dutch actors. He also noted that Dutch citizens were engaging in large-scale actions against climate and environmental crises, including through sustained, and successful, litigation against the Dutch government, demonstrating the appetite for domestic legal initiatives.

The Bill criminalises 'intentional acts or omissions that cause serious and widespread or long-lasting or irreversible damage to the environment or create a risk of such damage', with perpetrators liable to a term of imprisonment not exceeding fifteen years or a fine. The Bill was put to public consultation, revealing that the vast majority of the respondents were in favour of the law. For the Bill to become law, it will require Parliamentary approval. However, with the political shift to the right in the Netherlands it is very unlikely the Bill will now pass in the near future.

Notably, part of the Bill enables the crime to be prosecuted when a Dutch natural person or legal entity commits ecocide abroad. The possibility of adopting this approach was raised in the ERCS roundtable. While worth considering as one that would potentially enable Scotland to address harms perpetrated by Scottish citizens elsewhere, the reserved nature of foreign affairs may present a barrier to Scotland introducing extraterritorial jurisdiction.⁹

“ An important point raised at the ERCS roundtable was the importance of potential collaboration between Westminster and the Scottish Parliament ”

3.2.3 The United Kingdom

The final example comes from closer to home. In November 2023, Baroness Boycott presented an Ecocide Bill in the House of Lords. This Bill defines ecocide as:

- (a) *as it applies to an individual, means unlawful or wanton acts or omissions committed by persons of superior responsibility who had knowledge, or should have had knowledge, that there was a substantial likelihood of severe and either widespread or long-term damage to the environment being caused by those acts;*
- (b) *as it applies to a company, organisation, partnership or other legal entity, means strict liability for unlawful or wanton acts or omissions with a substantial likelihood of severe and either widespread or long-term damage to the environment being caused by those acts.*

While this Bill reflects some of the language of the Expert Panel, it differs in several important ways. For one, it introduces the possibility of a legal person being found liable, in addition to a natural person. It also adopts a different definition of wanton to that adopted by the Expert Panel. These differences are explored further below.

An important point raised at the ERCS roundtable was the importance of potential collaboration between Westminster and the Scottish Parliament. Due to the cross-boundary nature of environmental harm, there are obvious reasons for the jurisdictions to consider a joined-up approach to ecocide's criminalisation. As was also raised at the roundtable, this may prove difficult in practice due to the currently strained relationship between Westminster and Holyrood.



3.3 Alternative framings of severe environmental destruction

This final category of states encompasses those that have taken steps to criminalise severe environmental destruction in recent years but have either used the term 'ecocide' but have included a different definition, or have criminalised environmental crime without using the explicit language of 'ecocide'. As these examples often appear in discussions around ecocide's criminalisation, they are included here.

It is worth noting that this approach may become more common in Europe following the EU Parliament's adoption of new rules on environmental crimes and related sanctions.¹⁰

This Directive contains an updated list of criminal offences, including illegal timber trade, depletion of water resources, serious breaches of EU chemicals legislation and pollution. The Directive identifies 'qualified criminal offences' which should 'be punished with more severe penalties than those applicable in the event of other criminal offences contained in the Directive as:

intentional conduct... lead[ing] to catastrophic results, such as widespread pollution, industrial accidents with severe effects on the environment or large-scale forest fires... [which cause] 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 cause widespread and substantial damage which is either irreversible or long-lasting to the quality of air, soil, or water.

The Directive enables environmental crimes committed by individuals and company representatives to face imprisonment, depending on how long-lasting, severe, or reversible the damage is. Penalties can include up to eight years' imprisonment for a qualified offence.

The Directive also requires measures of restoration and compensation, and a fine system for corporations (discussed further in Part 6.2). Member states will be able to decide for themselves whether to introduce extra-territorial jurisdiction. All will be required to protect and support whistle-blowers under existing EU law.¹¹

The Directive notes that such qualified criminal offences 'can encompass conduct comparable to 'ecocide', which is already covered by the law of certain Member States and which is being discussed in international fora.' Member states will have two years to transpose the rules into their national systems, meaning the coming years may see the introduction of offences which, if not using the language of ecocide, criminalise similar conduct.

3.3.a Chile

After three years of debate, in August 2023 Chilean congress approved Law 21595: Economic Crimes Law, which expands criminal liability for economic and environmental crimes. The justifications for this reform can be found in Chile's recent history: the reforms follow social unrest and a widely held perception that white-collar crimes are insufficiently penalised (Miller & Chevalier, 2023). This context is reflected in the nature of the reform, which centres greater liability for economic crime, but also introduces a system of environmental criminal liability which applies to both individuals and legal entities (Clyde & Co, 2023).

Although it does not explicitly criminalise ecocide, this reform has been praised by the Stop Ecocide Foundation for including 'several elements of the legal definition' formulated by the Expert Panel, and by the organisation Chile Sin Ecocidio for systematising environmental crimes that were previously 'scattered across different legal bodies' (Stop Ecocide, 2023b).

“ It may be possible to identify a threshold at which point even licensed activities become criminal ”

In addition to modifying existing economic crimes, the Law introduces several new ‘Crimes Against the Environment’, including crimes specifically designed to protect certain ecosystems and areas, such as the crime of water extraction in areas of water scarcity, dumping soil or other solids into wetlands, and damage to national parks or reserves. Reflecting the Law’s focus on corporate crime, the Law classifies environmental crimes as ‘second-category economic crimes’ in situations where environmental crimes are committed while the perpetrator was exercising a company role or where the crime was perpetrated for the benefit of a company or legal entity.

Crimes can encompass a range of acts involving pollution and water extraction, which become criminal either by virtue of a failure to comply with environmental regulations, or from the severity of the harm to the environment (Articles 305–308). ‘Severity’ in this context is assessed considering how widespread and prolonged the harm is, how difficult it would be to repair, whether the harm impacts vulnerable species, whether humans’ health is at risk, and whether the harm has altered the ecosystem services or functions of the environment (Article 310a). The *mens rea* encompasses intention, as well as ‘reckless imprudence’ or mere imprudence or negligence in breach of the regulations (Article 309). The Law also introduces criminal penalties for those who ‘maliciously’ interfere with the accuracy of environmental impact assessments or obstructs environmental inspection activities.

These pathways to criminality may offer useful guidance for Scotland. At the ERCS roundtable, one question that arose was to what extent licensed activities could be covered by an ecocide law. As this example demonstrates, it may be possible to identify a threshold at which point even licensed activities become criminal.

Penalties range from up to five years’ imprisonment for crimes ‘of mere danger’ and up to ten years of imprisonment in case of effective environmental damage or loss. Mandatory fines ranging from 120 UTM (approximately £7,500) to 120,000 UTM (approx. £7,500,000) have also been established.

Interestingly, the Law also introduces a Crime Prevention Model, that enables legal persons to avoid criminal liability when they engage in appropriate risk assessments, introduce policies and procedures to prevent crime, introduce adequately supported compliance officers and engage in ongoing monitoring. This emphasis on prevention has been praised by Stop Ecocide as being in the spirit of an ecocide law (Article 4). At the time of this report, we could find no examples of prosecutions, and note that the Law does not come into force for legal persons until 1 September 2024.

3.3.b Ecuador

Although it is often included in lists of states that have criminalised ecocide, the Ecuador Penal Code does not contain a specific crime against ecocide. However, Ecuador has a comprehensive list of crimes against the environment and nature, or ‘Pacha Mama’, detailed in its Criminal Code. These include offences against water, land, and air when perpetrated in breach of relevant regulations, as well as specific crimes against areas of ecological importance, wild flora and fauna, and national genetic heritage. The *mens rea* of these crimes range from strict liability (e.g. the invasion of areas of ecological importance and crimes against wild flora and fauna), to negligence (e.g. if a small farmer’s fire becomes uncontrollable and causes a forest fire).

“ Courts have subsequently recognised that there is a relationship between the rights of nature and criminal accountability for environmental harm. ”

Notably, the Code envisions the liability of legal entities as well as natural persons (Art. 49), makes clear that the criminal liability of a legal entity is independent of the liability of a natural person, and sets out a system of fines to be applied in cases of legal entities' liability (Art. 258). The Code also contains both precautionary and reparative measures. The Criminal Court can adopt precautionary measures to protect the environment, including the seizure, disqualification or destruction of heavy machinery, and the sanctions for environmental crimes are accompanied by an obligation to restore and repair. Overall, penalties are less severe than other examples included in this report, with five years being the maximum imprisonment.

Ecuador's approach to environmental crime is shaped by the fact that Ecuador was the first country in the world to enshrine rights of nature in its Constitution, which it did in 2008. Courts have subsequently recognised that there is a relationship between the rights of nature and criminal accountability for environmental harm.

For example, courts have ordered criminal investigation into the destruction of forest, held governmental entities liable for issuing environmental permits for projects that could violate rights of nature, and recognised the right to exist of sharks, condors, and jaguars in criminal cases, further merging rights of nature protection with criminal liability (Kauffman & Martin, 2023).

3.4 Alternative definitions of ecocide

3.4.a France

In 2021, France introduced a new 'Climate and Resilience Law', which aims to both combat climate change and strengthen France's resilience to its effects. This Law was directly informed by the proposal of the 2019 Citizens' Climate Convention, a group of 150 randomly selected people who were mandated to define a series of measures to reduce greenhouse gas emissions at least 40% by 2030 (compared to 1990), while maintaining a spirit of social justice. The French President Macron committed to submitting their proposals to either a referendum, a vote in Parliament or direct implementation. Among the Convention's proposals was the crime of ecocide, originally defined as 'any action causing serious ecological damage by participating in the manifest and non-negligible overstepping of planetary limits, committed with knowledge of the consequences that would result and that could not be ignored' (Frémont, 2020).

The resulting legislation is somewhat different. The Law creates new Articles in the French Environmental Code, including a new general offence of polluting the environment (Art. L. 231-1), which can lead to the qualification of ecocide if there is an element of intent (Art. L. 231-3), and an offence of abandoning waste (Art. L. 231-2), which can also lead to the qualification of ecocide if there is an element of intent and the acts result in serious and long lasting (at least seven years') damage to health, flora, fauna or the quality of the air, soil or water (Art. L. 231-3). In this way, ecocide acts as an aggravated offence, rather than a criminal offence in its own right, a choice that has received some criticisms in the media (Navacelle, 2021).



4 Examples of implementation

Although they are relatively rare, and none that we found have made it to court, examples do exist of initial investigations into ecocide.¹² These can broadly be classified under two headings: state-corporate ecocide, and conflict-related ecocide.

4.1 State-corporate ecocide

In 2012, there were news reports that the Kyrgyz Republic Prosecutor's Office had begun criminal proceedings against the head of a Kyrgyz company. The company had allegedly shipped radioactive coal from a Kazakhstan mine to several schools, an orphanage, and a nursing home in the country (Khetani, 2012). This included a charge of ecocide. Criminal cases were also opened against health and sanitary officials who authorized the 9,000 ton-shipment. However, the charges against the company were dismissed for lack of evidence, and the government officials were cleared of wrongdoing (Greene, 2019). We were unable to find further information.

Since 2022, the Health and Environment Unit of the Marseilles judicial court have been undertaking the first investigations into France's new crime of ecocide. These investigations concern pollution in Grézieu-la-Varenne, an area outside Lyon, and the sale of houses on land polluted with hydrocarbons and heavy metals by the Mercier industrial laundry corporation, which operated on the site between 1959 and 2000. Residents who purchased land on the site have experienced emergency re-housings and temporary bans on drinking water. This is a case with a long history (Lamy, 2022). Civil cases have already successfully been taken against the sellers and notaries as long ago as the 1980s, including against the town's former mayor, a lawyer who was connected to both the industrialist Mercier and the lawyers responsible for the sale of the industrial site (Tribune de Lyon, 2023).

The complaint was launched shortly after the introduction of the French Climate and Resilience Act (Lamy, 2022), suggesting that victims of environmental crimes are keen to explore this additional pathway to accountability.

4.2 Conflict-related ecocide

There have been investigations into alleged ecocides by both Russia and Ukraine following the commencement of hostilities between the two states in 2014.

In 2021, the Investigative Committee of Russia appeared to open an investigation into alleged ecocide perpetrated by Ukrainian officials and Crimean Tatar leaders in the form of 'blockades' in Crimea. Ukraine had suspended water deliveries to Crimea following Russia's annexation in 2014 and had started construction of a dam to block water deliveries. The Investigative Committee of Russia stated that the suspension of water deliveries had damaged agricultural land, increased salt levels in the waters of the Gulf of Sivash and impacted the health of Crimea residents (Babin & Plotnikov, 2022). However, the case does not appear to have progressed, and has dubious legal legitimacy considering Russia's illegal annexation of Crimea.

Ukraine has investigated several alleged acts of ecocide related to Russia's annexation of Ukrainian territory and subsequent invasion of Ukraine. The first concerned the emission of chemicals from the Crimean Titan, the largest producer of titanium dioxide in Europe. Originally classified as 'abuse of authority' due to the improper documentation of disposal of hazardous waste, this investigation was reclassified as 'ecocide' and 'air pollution' after a 2018 incident in which 4,000 children had to be evacuated due to harmful emissions (Mendel, 2018). The investigation expanded to include other Russian-registered enterprises operating in the area, and were framed in part as crimes enabling 'occupational authorities' to use natural resources for their own needs. Other investigations connected to annexation include investigations into the decision of Russian-backed armed groups to flood an industrial nuclear explosion site in Donetsk ('Klivazh'), risking radioactive contamination of local water bodies (Ponomarenko, 2018). However, this investigation has reportedly since been downgraded to a less strict environmental offence (violation of environmental safety rules) (Babin & Plotnikov, 2022).

“ We found no successful prosecutions of ecocide ”

Since Russia's 2022 invasion of Ukraine, there have been further reports of investigations into ecocide. These include investigations connected to attacks on the Zaporizhzhia nuclear power plant in 2022 (Interfax, 2022), and the destruction of the Kakhovka Dam in 2023 (Kesaieva, 2023). While the latter are predominantly framed as war crimes, fifteen have also been characterised as ecocide (Petit, 2023). More broadly, Maksym Popov, special advisor for environmental crimes to the Ukrainian Prosecutor General, has identified three categories of potential ecocide crimes associated with the Russo-Ukraine war: attacks on civilian targets like water networks

and fuel reserves, resulting in the contamination of air, soil and groundwater; hostilities in the Black Sea, threatening dolphins with extinction due to Russian navy sonar; and the partial or complete destruction of forests and nature reserves protected by international conventions. Popov has noted the challenges associated with being 'pioneers' of these types of investigations, noting that ecocide 'is not considered as a full-fledged crime throughout the world' meaning 'there is no precedent in the international system' (Petit, 2023). As far as we can discern, this is an accurate assessment, as we found no successful prosecutions of ecocide.



“ The review of past and current investigations suggests that while accountability for ecocide has been elusive, there is reason to believe that we may see more attempts to investigate and prosecute ecocide in future ”

5 Definitional issues

The examples explored in Parts 3 and 4 highlight the multiple approaches that Scotland might adopt in its domestic law, should it choose to criminalise ecocide. The review of past and current investigations suggests that while accountability for ecocide has been elusive, there is reason to believe that we may see more attempts to investigate and prosecute ecocide in future. The French investigation into severe pollution offers one useful insight into the kind of case that might arise in the Scottish context, namely serious incidences of land pollution as a result of industrial activities. However, it seems likely that prosecutions will remain rare.

In terms of the crime's definition, the examples explored here provide precedent for Monica Lennon MSP's proposal that Scotland simply adopt the Expert Panel's definition. It is considered important, by a range of stakeholders, to anchor any draft bill in the thrust of the Expert Panel's definition as it allows any domestic offence to be grounded in an approach that has been adopted in other Parliaments. Adopting this wording may also play a role in building momentum towards the introduction of an international crime and may avoid future challenges if domestic and international definitions differ. If ecocide comes to be categorised as an international crime in future, domestic criminalisation may play an important role through the invocation of universal jurisdiction principles, meaning states may exercise jurisdiction committed by non-nationals outside their territory. As was flagged at the ERCS roundtable, domestic and international

criminalisation are interdependent – ecocide will need to be implemented at a state level for international jurisdiction to be possible.

However, states such as France, Chile and Ecuador offer insights into alternative models, whether through an aggravated offence or through the introduction of other serious environmental crimes. We think it is important to consider what lessons these alternatives offer, and whether adopting the Expert Panel's definition is the right path for Scotland. In part, this is about determining the purpose of introducing a new crime. If it is in preparation for one day implementing an international crime, then adopting language developed for that purpose makes sense (although introducing a new international crime raises questions around devolution and Scotland's powers in that regard).

However, if the goal is to introduce something workable at the domestic level, then different considerations apply, as there are reasons to question whether the Expert Panel's definition is appropriate for domestic law. We explore these reasons in the following sections, which consider some of the key challenges surrounding defining a crime of ecocide.

5.1 Legality

The principle of legality requires that crimes are specific and detailed enough for a person to understand what conduct is prohibited (*nullum crimen sine lege*). This poses challenges for a new crime of ecocide, which must balance certainty with sufficient flexibility to respond to emerging forms of environmental destruction.

“ There are reasons to question whether the Expert Panel’s definition is appropriate for domestic law ”

Different approaches are discernible amongst the definitions offered for an international crime – while the Expert Panel’s definition provides a general formula, previous definitions (Falk, 1973; Neyret et al., 2015) contain comprehensive lists of specific acts. Similarly, domestic practice reveals different approaches – while states adopting the Expert Panel’s definition similarly avoid lists, states such as Chile and Ecuador have provided far more detail as to what can constitute severe environmental crime.

Listing prohibited acts provides greater certainty and predictability than the formulaic approach (Gupta, 2021), and has expressive value in declaring the behaviour that is deemed unacceptable (Robinson, 2022). Yet, a definitive list of acts risks being ‘too limiting, and potentially carrying the notion of “justifying” acts that are not explicitly listed’ or excluding acts which ‘might not even be foreseeable from our current state of knowledge’ (Voigt, 2021). Some of these issues could be refined using ‘real situations featured in case law’ (Sarliève, 2021: 233), with ‘generally acceptable standards’ evolving through adjudication (Gray, 1996: 217). Yet, it is ultimately up to the legislator to abide by the principle of legality, and a definition that fails to satisfy this requirement may struggle to garner support.

This tension has arisen in several stakeholder workshops concerning the potential of a domestic crime of ecocide. Concerns have been expressed about the need for policy makers to better visualise likely examples of potential ecocides – which could involve such things as large-scale pollution, destruction of habitats, deliberate deforestation, widespread chemical pollution and the like. However, at the ERCS roundtable there was a corollary concern that if such examples were listed in a bill, they would function to limit liability to versions of those specific acts. Therefore, as a

balance between those two positions, it has been suggested that guidance or explanatory notes be added as an addendum to a bill. It was also suggested that such examples could be rooted in the past, whereby examples such as largescale river pollution, could be cited as an example of phenomena that would have been criminal if they had happened with a crime of ecocide in place.

In our view, it would be preferable to list specific qualifying acts, whether in explanatory notes or as part of the offence, but to also include a residual category of ‘other sufficiently ecologically destructive acts’ to enable flexibility.

5.2 Determining appropriate gravity

The appropriate gravity threshold has been the subject of debate at an international and domestic level. At the international level, various approaches have been adopted. For example, Richard Falk drew from the language of genocide, identifying ecocide as acts which ‘disrupt or destroy, in whole or in part, a human ecosystem’ (Falk, 1973). Polly Higgins centred the livelihoods of living entities, identifying ecocide as ‘the extensive damage to, destruction of or loss of ecosystems of a given territory... to such an extent that peaceful enjoyment by the inhabitants of that territory has been severely diminished’ (Higgins, 2015). End Ecocide on Earth framed ecocide as ‘severe damage’ with ‘severity’ assessed by reference to the persistence of the damage, the consequential environmental effects, or the increased risk of consequential effects (*End Ecocide, 2016: Article 8 ter*). This latter approach has echoes of the threshold contained in the Rome Statute’s environmental war crime: ‘widespread’, ‘long-term’ and ‘severe.’

“ We would argue that while an appropriate threshold is important, it is worth considering alternatives to the Expert Panel’s ‘wanton’ proportionality test ”

The appropriate use of ‘widespread’, ‘long-term’ and ‘severe’ has attracted differing perspectives. For example, Smith has argued that while the conjunctive approach – currently used in Article 8(2)(b)(iv) – is too high ‘to be of any real use in preventing environmental damage in the theatre of war’, it ‘may be just the right standard by which to judge the magnitude of environmental damage understood to amount to ecocide’ (Smith, 2013: 62). In contrast, an Expert Panellist has argued that the conjunctive approach is ‘appropriate for environmental harm during military attacks’, but ‘too high for ecocide’ (Voigt, 2021).

The Expert Panel chose to make the criteria disjunctive, shifting from ‘long-term, widespread and severe’ to ‘severe and either widespread or long-term damage.’ The disjunctive approach has received both praise for providing a less demanding test for assessing harm (Minkova, 2021), and critique for establishing a ‘complex hybrid formula’ (Robinson, 2022) which will require further debate. Nevertheless, it offers one pathway to distinguishing ecocide from other environmental crimes and has been both adopted by several states and proposed in the Private Members’ Bill before Westminster.

In the Scottish context, there will be a need to identify a threshold that differentiates ecocide from crimes such as that contained in s40 of the Regulatory Reform (Scotland) Act 2014, which makes it an offence for a person to act, or permit another person to act, in a way that causes or is likely to cause significant environmental harm, and s33 of the Environmental Protection Act 1990, which makes it an offence to treat, keep, or dispose of controlled waste or extractive waste in a manner likely to cause pollution (or harm to human health). As noted above, the threshold may also offer a way of clarifying when otherwise licensed activities nonetheless become criminal.

In seeking to address this problem, the Expert Panel’s definition requires ‘severe and either widespread or long-term damage’ to be unlawful or **wanton**, meaning ‘clearly excessive in relation

to the social and economic benefits anticipated’ (Burke & Celermajer, 2021; Minkova, 2021; Heller, 2021). However, the inclusion of ‘wanton’ has been critiqued for providing a ‘get-out-of-jail’ clause that undermines the practical and expressive power of the crime (Burke & Celermajer, 2021; Minkova, 2021), and introduces a complexity that risks reducing ecocide cases to ‘a battle of experts, with the verdict being left in the hands of judges with little economic or scientific training’ (Heller, 2021b).

Defending the Expert Panel’s proportionality test, Stop Ecocide Foundation’s chair Jojo Mehta has argued that the inclusion of ‘wanton’ recognises that ecocide is designed to address ‘disproportionately severe’ activity, while leaving other forms of environmental harm to national laws and regulations (Burke & Celermajer, 2021). In international criminal law there is the idea that individuals should be held criminally liable for crimes that ‘deeply shock the conscience of humanity’ (ICC, 2002: preamble), and thus the threshold is likely to be very high as it will need to enable accountability while distinguishing ecocide from other, less serious, environmental crimes. This raises the question of whether a domestic crime might pursue a less onerous threshold. We would argue that while an appropriate threshold is important, it is worth considering alternatives to the Expert Panel’s ‘wanton’ proportionality test.

Its inclusion will likely cause substantial debates in courts, would set a threshold significantly higher than generally required in Scottish environmental law, and may undermine any useful functionality of a domestic crime of ecocide. It is notable that the Private Members’ Bill submitted by Baroness Boycott adopts a different approach, using the same threshold of ‘severe and either widespread or long-term damage’ but defining ‘wanton’ as ‘reckless disregard for damage.’ Under Scots law, recklessness is understood as having taken an ‘unjustified risk’, which might enable courts to bring in a proportionality test that is less onerous and more familiar than that adopted by the Expert Panel.

“Notably, several states have drawn explicit links between grave environmental harm and the acts of people in positions of corporate power”

5.3 Defining *mens rea*

Several approaches to *mens rea* are discernible in existing definitions of ecocide, ranging from strict liability and negligence offences to a focus on intentional or recklessness/wantonness. While previous proposals for an international crime of ecocide have encompassed strict liability (see e.g. Higgins, 2015), the Expert Panel's definition is centred around 'acts committed with knowledge that there is a substantial likelihood' of damage caused by those acts, and 'wanton' acts perpetrated with 'reckless disregard' for the damage. This means the perpetrator does not need to intend to harm the environment but needs to have acted with the knowledge that there was a substantial likelihood of harm.

We would argue that it is worth considering alternatives to the Expert Panel's approach to *mens rea*. The reality of environmental harm is that people rarely act with the intention of harming the environment, rather it is a consequence of the pursuit of other goals (Higgins, Short & South, 2013: 262; Robinson, 2021). Moreover, 'crimes of omission' can have severe environmental consequences (Kramer, 2014) and their criminalisation has been identified by many proponents of ecocide as crucial to creating an environmental duty of care (Chiarini, 2021; White, 2018). Too high a *mens rea* threshold is likely to undermine the usefulness of a crime.

Turning to domestic practice, several approaches are discernible. While some jurisdictions have also limited the crime to intentional or reckless acts, some jurisdictions have extended *mens rea* to encompass negligence, and in some cases have used a strict liability approach to even serious environmental crimes. These differences in approach make sense – domestic environmental crimes are often strict liability offences (Robinson, 2021), while the international community has

been somewhat resistant to the idea of framing international crimes as capable of being committed by negligence or as strict liability offences.

In Scottish environmental regulation, strict liability is a dominant form of liability. This is in part due to the challenges that arise when attempting to hold corporations accountable for environmental damage (Whyte & Tombs, 2017), as it has been notoriously difficult in UK law to develop a *mens rea* test for corporations (see Slapper, 1999 and Wells, 2001). This raises the possibility that different forms of *mens rea* be applied, depending on whether the offence is perpetrated by a natural or a legal person. Such a distinction might offer a useful way of ensuring corporations can be held liable.

Regarding the liability of natural persons, it might be important to consider the inclusion of a negligence (or a 'should have known') standard of *mens rea*. Such a standard might enable prosecutors to target individuals in positions of power within corporations perpetrating ecocide. A related form of liability might be 'superior responsibility', where a superior in a corporation is charged with failing to prevent or address the commission of a crime by his or her subordinates, rather than for committing the crime themselves (Boll, 2024).

Notably, several states have drawn explicit links between grave environmental harm and the acts of people in positions of corporate power, including in Brazil, where the Expert Panel's definition is adapted to include specific reference to 'senior managers', and Chile, where the new environmental crime regime is intertwined with attempts to address white collar crime. Brazil's approach is worth considering, in order to avoid the inappropriate penalisation of workers and to focus on those responsible for developing and implementing corporate policies that cause ecocide.

“ There is a dominant view that enforcement efforts are not robust enough to tackle environmental crimes effectively ”

6 Sentencing and enforcement

6.1 Challenges of enforcement

At present, there is growing concern over a crisis in UK environmental enforcement. This concern emerged in the ERCS roundtable – there is a dominant view that enforcement efforts are not robust enough to tackle environmental crimes effectively. Some also expressed a fear that pursuing new crimes was a distraction from the key issues, which are to improve the enforcement of existing laws and/or develop more enforcement powers for the Scottish Environmental Protection Agency (SEPA). While some noted the possibility of a simply ‘expressive’ or signalling piece of legislation, most expressed a preference that any law be capable of meaningful enforcement.

Frequently cited issues include a lack of resources, inadequate penalties, and challenges in monitoring and deterring environmental offences. Particularly since the instigation of ‘austerity’ politics, environmental agencies have seen huge budget cuts (McGlone, 2021), and thus have faced considerable challenges due to limited resources, affecting their ability to adequately investigate and enforce environmental laws. The Scottish Government has not been protected from this, and in turn neither has the Scottish Environment Protection Agency (Dobson & Edwards, 2023). Austerity politics budget cuts have also hit monitoring and surveillance capabilities to detect and prevent environmental crimes, such as illegal waste dumping or a myriad of pollution incidents (Environment Analyst, 2019).

These issues present significant challenges to a potential ecocide Bill. A crucial question will be: which agency will be responsible for investigation and commencement of prosecutions?

Notwithstanding the comments above, it would be usual for the SEPA to lead on such prosecutions, but an effective funding cut of 26% since 2010 (Dobson & Edwards, 2023) would make taking on additional investigative measures extremely challenging. The 2008 financial crisis, and the following increase in neoliberal political austerity in the UK, has had dire consequences for the prosecution of corporate environmental crime – currently a staggering 6% of what they were a decade ago (Colbert, 2022). Thus, any ecocide Bill would need to incorporate a ‘budgetary provision’ to be made by the appropriate department to provide the necessary funds for effective enforcement. Without an effective enforcement procedure, the deterrent effect will be negligible to non-existent. Indeed, it is instructive to consider that workplace deaths have doubled in Scotland since the introduction of the 2007 Corporate Manslaughter and Corporate Homicide Act (CMCHA) in Scotland, with not a single prosecution (Williams, 2023).

We also need to consider the potential interaction of a proposed Bill with the Regulatory Reform (Scotland) Act 2014 which is primarily concerned with regulatory processes and functions of public authorities.

“ While there is no existing practice to draw upon, there are a range of perspectives on appropriate sentencing for ecocide ”

The Regulatory Reform (Scotland) Act 2014 could play a role in shaping how regulatory bodies enforce and oversee any new ecocide-related regulations. It would obviously be desirable if there was coordination between the regulatory authorities established under the Regulatory Reform (Scotland) Act and those responsible for enforcing the ecocide prohibition under the proposed Bill. This would ensure a cohesive approach to environmental protection as there could be challenges in reconciling new ecocide provisions with existing regulatory frameworks, and amendments or clarifications may be needed to ensure a harmonized legal landscape. Thus, rather than creating a new authority, it would make sense for SEPA to be supported in enforcing any new crime of ecocide.

Looking beyond SEPA, it may be worth considering how workers and communities can be supported in responding to ecocidal behaviour. In their submission to the Ecocide (Prevention) (Scotland) Bill consultation, Whyte et al. (2024) suggest that the new offence should include mechanisms that, for example, enable workers and their representatives to report ecocide and to request an investigation by the enforcing authorities, and/or allow communities and community-based organisations to report ecocide and to request an investigation by the enforcing authorities. Notably, despite protections already existing under EU law, the EU Directive on the protection of the environment through criminal law explicitly reinforces the importance of these protections being offered in the case of workers or members of the public coming forward to report wrongdoing.¹³ Similarly in Scottish law, this may be about enforcing existing protections rather than introducing new ones. Relatedly, a new law criminalising ecocide could also contain

a provision for a ‘necessity defence’ for those protesting against ecocide acts committed by individuals or corporations (see Whyte, et al., 2024), to further protect public intervention and encourage accountability.

It is arguable that medium to long term enforcement costs incurred would be outweighed by the economic gains from effective environmental protection measures. It is well known in academic literature that environmental costs are externalised by industry with society and governments bearing the costs; effective enforcement may ultimately reduce this tendency. However, as we have seen in this review, there is currently very little state practice suggesting that the criminalisation of ecocide leads to prosecutions.

6.2 Determining appropriate sentencing

While there is no existing practice to draw upon, there are a range of perspectives on appropriate sentencing for ecocide. At the ERCS roundtable in January, for example, some raised the importance of having sufficiently strong penalties to act as a deterrent, both on individuals and corporations. This reflects broader criticisms that have been levied at current penalties for environmental offences. Fines and sanctions have done little to create a sufficient deterrent to prevent illegal activities that harm the environment. Others have questioned whether criminalisation and imprisonment are the right approach to environmental harm, or whether a greater focus on restorative justice is necessary. Among the domestic examples we found, sentences were often severe, including imprisonment of up to twenty years or life in some instances.

“ We see the almost daily regularity with which water companies are able to effectively ignore hefty fines for repeated, systematic, dumping of raw sewage because their profit margins are enormous ”

The EU Directive on the protection of the environment through criminal law refers to introducing a system of fines for legal persons found guilty of environmental crimes. For companies the fines will reach 3 or 5% of their yearly worldwide turnover or alternatively 24 or 40 million euro depending on the nature of the crime. However, practice over the last few decades has demonstrated the relative ineffectiveness of fining corporations. Moreover, if we take a major UK scandal, we see the almost daily regularity with which water companies are able to effectively ignore hefty fines for repeated, systematic, dumping of raw sewage because their profit margins are enormous (Laville & Horton, 2023). Alongside the impacts of industrial farming, this behaviour is causing severe long-term damage to natural ecosystems (Monbiot, 2021). If senior managers are left in charge of determining how fines are to be paid, then they will perform their fiduciary duty to their shareholders and ensure those interests are protected. In such a case, it may be that they seek to cut back on essential maintenance of their equipment or externalise the costs to consumers of their products. Fines alone are therefore unlikely to prevent future harm and may even cause it.

It is possible that a range of measures might be appropriate. One proposal being advanced by some advocacy groups is the introduction of ‘equity fines’, whereby courts require corporations to hand over shares in the firm, which can either be controlled by a local authority, or consumers, or the corporation’s trade union. Such a move targets shareholders without allowing cuts elsewhere in the organisation to compensate for the fine. For individuals in positions of power within corporations, prohibitions on holding directorships or trusteeships could also be considered. For corporations themselves, details of investigations, prosecutions and their outcomes could be held on a public register administered by SEPA. Moreover, as part of

the sentence, the courts could require that all convictions must be published in company annual reports and accounts (Whyte et al., 2024), enabling corporations to be named and shamed.

When it comes to developing a sentencing tariff for individuals, there are many elements to consider and thus possibly the best option would be to pass the task on to the Scottish Sentencing Council. While certain forms of sentence, such as prison sentences, fines, and community payback, may be reasonably stipulated in a draft Bill, the Sentencing Council could instigate a consultation exercise and then set the tariffs accordingly.

One option worth considering, regardless of whether the offender is a natural or legal person, is the use of environmental restorative justice, either prior to sentencing or court ordered as an aspect of sentencing. Although there is no practice to draw upon from states that have criminalised ecocide so far, environmental restorative justice techniques and processes have been used in Australia, New Zealand, Canada, the United States and the United Kingdom (Hamilton, 2021). These can involve perpetrators meeting with victims and making reparation or restitution for the crime (Preston, 2011). There is a wealth of literature on the benefits of a restorative justice response to crime, including its emphasis on repair rather than solely punishment, and the additional opportunities for participation and voice that it offers those impacted by the crime (Pali et al., 2022). While restitution is unlikely to be possible given the gravity of ecocide, requiring perpetrators to either undertake or contribute to environmental restoration projects offers a powerful way of ‘bringing our inescapable connection to the land into consciousness for those who have ignored its living value and integrity’ (Mehta, 2019). Notably, the EU Directive on the protection of the environment through criminal law refers to the possibility of ordering restoration, or compensation where restoration is no longer possible.



“ We are in a time of unprecedented support for ecocide’s criminalisation ”

7 Conclusion and recommendations

Our overview of existing domestic practice demonstrates that we are in a time of unprecedented support for ecocide’s criminalisation. Several states are considering bills that mirror the Expert Panel’s 2021 definition. Others are pursuing their own paths, either adapting ecocide to suit their domestic context, or criminalising serious environmental harm in other forms. Following the EU’s adoption of the Directive on the protection of the environment through criminal law, we are likely to see more states introducing new serious environmental crimes, whether or not they explicitly use the term ‘ecocide.’ Our review also demonstrates that investigations to date are rare and successful cases non-existent. ***But this finding should be understood in its context: many states are in the very early stages of criminalisation.***

It is important to consider what the purpose of such a crime might be. Is it to condemn ecocide as a (future) international crime, alongside genocide, war crimes and crimes against humanity, as has been the approach of Vietnam and former USSR states? Or is it to introduce a workable domestic offence, as has appeared to be the goal of several European and Latin American states over the last few years? If the latter, then our review of practice and the debates surrounding international and national criminalisation suggest that there are reasons for Scotland to be cautious before simply integrating the Expert panel’s definition into domestic law. In particular, it might be worth considering alternative approaches to the gravity threshold (e.g., creating a threshold that differentiates ecocide from existing crimes while avoiding the Expert Panel’s overly restrictive definition of ‘wanton’) and *mens rea* (e.g. considering negligence, superior responsibility, and strict liability offences for corporations). Diverse examples exist in the existing practice of states adapting the Expert Panel’s definition in meaningful ways, including in the Private Members Bill put forward in the Westminster House of Lords.

Looking beyond the definition, challenges around enforcement and appropriate sentencing remain. There is an argument that the main drawback to existing environmental regulation is not (only) the absence of serious environmental crimes, but the inability of environmental protection agencies and other state bodies to identify and respond to breaches of those regulations. If this is the case, introducing a new crime is unlikely to make a substantial difference to the risks of environmental harm, unless it is accompanied by renewed investment in making enforcement possible. Appropriate sanctions will also require careful thought; research suggests that an emphasis on fines for corporate actors is entirely ineffective. We have offered some possible alternatives here, including equity fines and more targeted sanctions against those in positions of senior management. Finally, we have drawn attention to the possibilities of restorative justice. While protecting the environment via deterrence is frequently cited as the main justification for a new crime of ecocide, restoration should arguably be central to any system designed to respond to environmental harm.

Recommendations

- Priority should be given to ensuring appropriate investment into environmental enforcement agencies (SEPA) and existing methods of environmental protection. While an increasing number of states are introducing crimes of ecocide or other serious crimes, there is no evidence in our report that introducing a new serious environmental crime makes a substantial difference to environmental protection on its own.
- Adopting language like the definition offered by the Expert Panel may play an important role in increasing international support for a new international crime of ecocide. If this is the primary goal in pursuing criminalisation, then this is an important consideration.
- However, if seeking to adopt a workable domestic crime, Scotland should consider whether the Expert Panel's definition can be strengthened to reflect the domestic context. Amendments might include an indicative list of harmful acts, a less onerous gravity threshold, and forms of liability that encompasses legal persons and avoid the inappropriate criminalisation of workers.
- A new crime of ecocide might usefully be accompanied by enhanced protections for whistle-blowers or those protesting ecocidal practices. Such measures could encourage public engagement with the crime's enforcement. However, protecting whistle-blowers and protesters are important aspects of environmental protection in their own right, and are not dependent on a new crime being introduced.
- When designing appropriate penalties, it is worth considering i) how to ensure that corporations are unable to externalise the cost of fines e.g. through equity fines; and ii) the possibility of more environmental restorative methods.



References

- Boll, D (2024), 'Plea for ecocide plans to not unintentionally be "punishing employees" *The Herald*, 14 February 2024, <https://www.heraldscotland.com/news/24117960.plea-ecocide-plans-not-unintentionally-punishing-employees/>.
- Burke, A and Celermajer, D (2021), 'Human Progress is No Excuse to Destroy Nature' *The Conversation*, 31 August 2021, <https://theconversation.com/human-progress-is-no-excuse-to-destroy-nature-a-push-to-make-ecocide-a-global-crime-must-recognise-this-fundamental-truth-164594>.
- Chiarini, G (2021), 'Ecocide and International Criminal Court Procedural Issues' *Centre for Criminal Justice & Human Rights, Legal Research Series, Working Paper No. 5*, papers.ssrn.com/sol3/papers.cfm?abstract_id=3964753.
- Chini, M (2024), 'Belgium becomes First in EU to Recognise Ecocide as International Crime' *The Brussels Times*, 23 February 2024, <https://www.brusselstimes.com/937229/belgium-becomes-first-in-eu-to-recognise-ecocide-as-international-crime-tbtb>.
- Clyde & Co (2023), 'From "box-ticking" corporate compliance to a more thorough approach: a New Economic and Environmental Crimes Law is Enacted in Chile' *Clyde & Co*, 8 September 2023, <https://www.clydeco.com/en/insights/2023/09/from-box-ticking-corporate-compliance-to-a-more-th>.
- Colbert, M (2022), 'Environmental Agency Prosecutions 6% of the Level they Were a Decade Ago' *Byline Times*, 9 November 2022, <https://bylinetimes.com/2022/11/09/uk-environment-agency-prosecutions-6-of-the-level-they-were-a-decade-ago/>.
- Environment Analyst (2019), 'Budget Cuts Hampering Environmental Protections Say Groups' *Environment Analyst*, 30th August, <https://environment-analyst.com/uk/81435/budget-cuts-hampering-environmental-protection-say-groups>.
- Falk, RA (1973), 'Environmental Warfare and Ecocide-Facts, Appraisal, and Proposals' *Revue Belge de Droit International* Vol. 9 No. 1, 1-27.
- Frémont, A (2020), 'The Citizens' Climate Convention wants a Referendum on the Crime of "Ecocide"' *Le Figaro*, 21 June 2020, <https://www.lefigaro.fr/sciences/la-convention-citoyenne-pour-le-climat-veut-un-referendum-sur-l-ecocide-20200621>.
- Gauger, A et al. (2012), *The Ecocide Project: Ecocide is the Missing 5th Crime Against Peace*, Human Rights Consortium, School of Advanced Study, University of London, 2012, <https://sas-space.sas.ac.uk/4830/>.
- Gray, M (1996), 'The international crime of ecocide' *California Western International Law Journal*, Vol 26, No. 2, 215-272.
- Greene, A (2019), 'The Campaign to Make Ecocide an International Crime: Quixotic Quest or Moral Imperative?' *Fordham Environmental Law Review* Vol 30, No. 3, 1-49.
- Gupta, S (2021), 'The Proposed Definition of "Ecocide"' *Jurist*, 15 July 2021, <https://www.jurist.org/commentary/2021/07/sarthak-gupta-ecocide-fifth-international-crime/#:~:text=In%202010%2C%20in%20a%20proposal,other%20causes%2C%20to%20such%20an>.
- Hamilton, M (2021), *Environmental crime and restorative justice* (Palgrave MacMillan), London.
- Heller, KJ, (2019), 'The Rome Statute's Flawed Amendment Regime – Starvation in NIAC Edition', *Opinio Juris*, 7 December 2019, <http://opiniojuris.org/2019/12/07/the-rome-statutes-flawed-amendment-regime-starvation-in-niac-edition/>.
- Heller, KJ, (2021a), 'Sceptical Thoughts on the Proposed Crime of "Ecocide" (That Isn't)', *Opinio Juris*, 23 June 2021, <http://opiniojuris.org/2021/06/23/skeptical-thoughts-on-the-proposed-crime-of-ecocide-that-isnt/>.
- Heller, KJ (2021b), 'The Crime of Ecocide in Action', *Opinio Juris*, 28 June 2021, <http://opiniojuris.org/2021/06/28/the-crime-of-ecocide-in-action/>.
- Higgins, P, (2015), *Eradicating Ecocide* (Shepherd-Walwyn).
- Higgins, P, Short, D, South, N, (2013), 'Protecting the Planet' *Crime, Law, Society and Change* Vol 59, 251-266.
- ICC (1998), *Rome Statute of the International Criminal Court*, in force on 1 July 2002, United Nations, Treaty Series, Vol. 2187, No. 38544.
- Interfax (2022) Prosecutor General: investigation into ecocide in connection with attack of Russian troops on Zaporizhia NPP launched, *InterFax*, 4 March 2022, <https://interfax.com.ua/news/general/807113.html>.
- Jain, A, and Soni, C (2022), 'Ecocide: A New International Crime' *Jus Corpus Law Journal* Vol 2, no. 2, 627-634.

-
-
-
- Kaminski, I (2023), 'Growing number of countries consider making ecocide a crime' *The Guardian*, 26 August 2023, <https://www.theguardian.com/environment/2023/aug/26/growing-number-of-countries-consider-making-ecocide-crime>.
- Kauffman, C and Martin, P.L (2023), 'How Ecuador's Courts are Giving Form and Force to Rights of Nature Norms' *Transnational Environmental Law* Vol 12, No. 2 366-395.
- Kesaieva, Y (2023) Ukraine launches "ecocide" and war crimes probe into Nova Kakhovka dam incident, *CNN*, 7 June 2023, https://edition.cnn.com/europe/live-news/russia-ukraine-war-news-06-07-23/h_36848cd5abb76e0ddd522cd78f4f5f431/1/12.
- Khetani, S (2012), 'Oops: Kazakhstan (Accidentally) Sent Radioactive Coal to Kyrgyzstan Orphans' *Business Insider*, 10 February 2012, <https://www.businessinsider.com/oops-kazakhstan-accidentally-sent-radioactive-coal-to-kyrgyzstan-orphans-2012-2#:~:text=Kyrgyzstan%20has%20arrested%20seven%20government,a%20Kyrgyz%20state%20energy%20company>.
- Killean, R (2022), 'From Ecocide to Eco-Sensitivity' *The International Journal of Human Rights* Vol 25, No. 2, 323-347.
- Kramer, R (2014), 'Climate Change' in T. Spapens, R. White and M. Kluin, *Environmental Crime and its Victims* (Ashgate) 23-41.
- Kuaeva, A and Zyablitseva, S (2021), 'Principles for Legal Regulation of Relations of Aquaculture (fish farming)' *E3S Web of Conferences*, 03005.
- Lamy, G (2022), 'Ecocide à Grézieu-la-Varenne :l'ancien maire, candidat à l'élection du bâtonnat du barreau Lyon' *Lyon Capitale*, 13 November 2022, <https://www.lyoncapitale.fr/actualite/ecocide-a-grezieu-la-varenne-l-ancien-maire-candidat-a-l-election-du-batonnat-du-barreau-lyon>.
- Laville, S and Horton, H, (2023), 'Water Firms Discharged Raw Sewage 300,000 times last year, court hears', *The Guardian*, 4th July, 2023 <https://www.theguardian.com/environment/2023/jul/04/thames-water-fined-33m-for-pumping-sewage-into-rivers>.
- Marolleau, L (2022), 'French Climate and Resilience Law: What Impact on Environmental Criminal Law' *Soulier Avocats*, 27 January 2022, <https://www.soulier-avocats.com/en/french-climate-and-resilience-law-what-impact-on-environmental-criminal-law/>.
- McGlone, C. (2021), 'Funding cuts have put communities and environment at risk, EA chair tells Eustice', *Ends Report*, 22nd June 2021. <https://www.endsreport.com/article/1720062/funding-cuts-put-communities-environment-risk-ea-chair-tells-eustice>.
- Mehta J (2019), 'Restorative Justice for Nature? A Tribute to Polly Higgins and the Power of a Law of Ecocide' in E. Biffi and B. Palie (eds) *Environmental Justice Restoring the Future: Towards a Restorative Environmental Justice Praxis* (European Forum for Restorative Justice, Leuven).
- Mendel, L (2018), '4,000 Children Flee Pollution Disaster on Ukraine-Crimea Border' *New York Times*, 14 September 2018, <https://www.nytimes.com/2018/09/14/world/europe/crimea-ukraine-pollution.html#:~:text=4%2C000%20Children%20Flee%20Pollution%20Disaster%20on%20Ukraine%2DCrimea%20Border,-Share%20full%20article&text=KIEV%2C%20Ukraine%20%E2%80%94%20A%20strange%20mist,Fields%20turned%20black>.
- Miller & Chevalier (2023), The New Economic Crimes Law in Chile: Severe Sanctions and Broad List of Corporate Crimes for Companies Operating in Chile, *Miller & Chevalier*, 9 June 2023, <https://www.millerchevalier.com/publication/new-economic-crimes-law-chile-severe-sanctions-and-broad-list-corporate-crimes#English>.
- Minha, D. (2020), 'The Possibility of Prosecuting Corporations for Climate Crimes Before the International Criminal Court' *Michigan Journal of International Law* Vol 41, No. 3, 491-539.
- Minkova, L, (2021), 'The Fifth International Crime: Reflections on the Definition of "Ecocide"' *Journal of Genocide Research* Vol 25, No. 2, 62-83.
- Monbiot, G. (2021) 'Britain's Rivers are Suffocating to Death', *The Guardian*, 21st July 2021, <https://www.theguardian.com/commentisfree/2021/jul/21/britains-rivers-suffocating-industrial-farm-waste>.
- Navacelle (2021) 'The Creation of the Crime of Ecocide in French Law Unleashes Passions' *Navacelle*, 14 July 2021, <https://navacelle.law/the-creation-of-the-crime-of-ecocide-in-french-law-unleashes-passions/>.
- Nègre, C 2000, 'Les atteintes massives à l'environnement', in H. Ascensio, E. Decaux and A. Pellet (eds), *Droit international pénal* (Pedone) 537-554.
- Pali B, Forsyth M, and Tepper F (eds) (2022) *The Palgrave Handbook of Environmental Restorative Justice* (Palgrave, London).

-
-
-
-
- Petit, F (2023), Kakhovka Dam: Ukraine Pioneers Prosecution for Ecocide, *JusticeInfo.Net*, 10 July 2023, <https://www.justiceinfo.net/en/119148-kakhovka-dam-ukraine-pioneers-prosecution-ecocide.html>.
- Ponomarenko, I (2018) 'Ecological Disaster Feared in Donbas as Russian-led Forces Inundate Infamous 'Nuclear Pit'', *Kyiv Post*, 13 April 2018, <https://archive.kyivpost.com/ukraine-politics/ecological-disaster-feared-donbas-russian-led-forces-inundate-infamous-nuclear-pit.html>.
- Robinson, D., (2021), Your Guide to Ecocide Part 1, *Opinio Juris*, 16th July 2021, <http://opiniojuris.org/2021/07/16/your-guide-to-ecocide-part-1/>.
- Robinson, D., (2022), Ecocide – Puzzles and Possibilities. *Journal of International Criminal Justice* Vol 20, Issue 2, 313-347.
- Sarliève, M. (2021), 'Ecocide' in W. Leal Filho et al. (eds.), *Life on Land, Encyclopedia of the UN Sustainable Development Goals* (Springer: London) 233-243.
- Smith, T., (2013), 'Creating a Framework for the Prosecution of Environmental Crimes in International Criminal Law' in W. Schabas, Y. McDermott and N. Hayes, *The Ashgate Research Companion to International Criminal Law, Critical Perspectives* (Routledge) 45-62.
- Stop Ecocide Expert Panel (2021), Independent Expert Panel for the Legal Definition of Ecocide: Commentary and Core Text, June 2021, <https://www.stopecocide.earth/legal-definition>.
- Stop Ecocide (2023a) Belgium One Step Closer to Ecocide Law' *Stop Ecocide*, 21 July 2023a, <https://www.stopecocide.earth/breaking-news-2023/belgium-one-step-closer-to-ecocide-law>.
- Stop Ecocide (2023b) 'Chile: New Laws Introduce Elements of Ecocide Definition' *Stop Ecocide*, 24 October 2023b, <https://www.stopecocide.earth/breaking-news-2023/chile-new-laws-introduce-elements-of-ecocide-definition>.
- Tombs, S & Whyte, D. (2020), 'The Shifting Imaginaries of Corporate Crime' *Journal of White Collar and Corporate Crime* Vol 1, Issue 1, 16-23.
- Tribune de Lyon (2023), 'Exclusif. Le futur bâtonnier de Lyon, Yves Hartemann, démissionne' *Tribune de Lyon*, 8 November 2023, <https://tribunedelyon.fr/justice/exclusif-le-futur-batonnier-de-lyon-yves-hartemann-demissionne>.
- Trung Le, D, Minh Pham, T and Polachek, S (2022) 'The Long-Term Health Impact of Agent Orange: Evidence from the Vietnam War' *World Development* Vol 155, 105813.
- Voigt, C, (2021), 'Ecocide as an International Crime', *EJIL: Talk!*, 3 July 2021, <https://www.ejiltalk.org/ecocide-as-an-international-crime-personal-reflections-on-options-and-choices/>.
- White, R. (2018) 'Ecocide and the carbon crimes of the powerful' *University of Tasmania Law Review*, Vol 37, Issue 2, 95-115.
- Whyte, D, Knox, R. Watterson, A. Godwin, E. Bettis, J. Bernat, I. (2024), 'Response to the Ecocide (Prevention) Bill (Scotland), proposed by Monica Lennon MS', <https://cccjustice.org/wp-content/uploads/2024/02/Monica-Lennon-consultation.pdf>.
- Williams, M. (2023), Piper Alpha: Corporate Killing laws 'failure' as work deaths double', *The Herald*, 7th July, 2023. <https://www.heraldscotland.com/news/homenews/23639057.piper-alpha-corporate-killing-laws-failure-work-deaths-double/>.
- Yurevna, G, Viktorovna, B and Viktorovic, V (2015), 'Legal Analysis of Ecocide in Russian Criminal Law' *Biosciences Biotechnology Research Asia*, April 2015. Vol. 12, Issue 1, 831-836.
- Zierler, D (2011), *The Invention of Ecocide: Agent Orange, Vietnam, and the Scientists who Changed the Way We Think about the Environment* (University of Georgia Press).

- 1 This review was inevitably limited by the researchers' language skills and ability to access domestic legal documentation. A high-quality translation software was used to enable greater access to sources in diverse languages, but there is always the chance that we have missed relevant material. This is particularly the case in relation to domestic jurisprudence, which may not always be accessible online.
- 2 Revised and Updated Report on the Question of the Prevention and Punishment of the Crime of Genocide, UN ESCOR, Human Rights Sub-Commission on the Prevention of Discrimination and Protection of Minorities, 38th Sess., UN Doc. E/CN.4/Sub.2/1985/6.
- 3 ILC 1991, 'Report of the International Law Commission on the work of its forty-third session (29 April–19 July 1991) (A/46/10); Yearbook of the International Law Commission Vol. ii Part Two.
- 4 ICC 1998, Rome Statute of the International Criminal Court, in force on 1 July 2002, United Nations, Treaty Series, vol. 2187, No. 38544, Article 8(2)(b)(iv).
- 5 Uzbekistan is often included in this list but does not have a criminal offence of ecocide. We have included it in Appendix 1, but do not discuss it in this section.
- 6 Any person who, whether in peacetime or wartime, commits genocide against population of an area, destroys sources of living, cultural or spiritual life of a nation or sovereign territory, upsets the foundation of a society in order to sabotage it, or commits other acts of genocide, or destroys of the environment shall face a penalty of 10 – 20 years' Imprisonment, life imprisonment, or death. PENAL CODE No. 100/2015/QH13, Chapter XXVI: Disruption of Peace, Crimes against Humanity and War Crimes, Article 422. Crimes against Humanity.
- 7 Commentary on Kazakhstan's criminal code has further explained the meaning of 'mass devastation', as encompassing 'damage that goes beyond typical environmental violations and has an impact on entire populations or vast areas. See Borchashvili I.Sh. Kommentarij k ugolovnomu kodeksu Respubliki Kazahstan (Osobennaya chast'). [Commentary on the Criminal Code of the Republic of Kazakhstan (Special Part)] (Zheti zhargy, Almaty, 2015, 1120 p.), cited in S. T. Tulibayev, Ecocide in International Law: Draft Definition for the Rome Statute, BULLETIN of L.N. Gumilyov Eurasian National University. Law Series, № 2(143)/2023.
- 8 Proposed Law to Introduce the Crime of Ecocide into the Criminal Code (1 December 2021) DOC 55, 2356/001 (translation by the authors).
- 9 Scotland Act 1998 (Section 29 read with <https://www.legislation.gov.uk/ukpga/1998/46/schedule/5/part/I/crossheading/foreign-affairs-etc>)
- 10 European Parliament legislative resolution of 27 February 2024 on the proposal for a directive of the European Parliament and of the Council on the protection of the environment through criminal law and replacing Directive 2008/99/EC (COM(2021)0851 – C9-0466/2021 – 2021/0422(COD)).
- 11 Directive (EU) 2019/1937 of the European Parliament and of the Council of 23 October 2019 on the protection of persons who report breaches of Union law (OJ L 305, 26.11.2019, p. 17).
- 12 Note: we found some references to an ecocide investigation following the bleach poisoning and extermination of several million salmon fry at the Ozerki fish hatchery in the Kamchatka Peninsula of Russia in 2002, but we were unable to find any further details about this case and so do not discuss it in detail. See Yureva, Viktorovna and Viktorovic, 2015; Kudaeva and Zyablitseva, 2021.
- 13 Supra n. 11.

Appendix 1: Domestic legislation

Ecocide as a crime against peace

Country	Legal Framework
<p>Armenia</p>	<p>CRIMINAL CODE OF THE REPUBLIC OF ARMENIA (Adopted on 18 April 2003, translation for the European Commission for Democracy Through Law, 12 March 2021)</p> <p>Section 13: Crimes Against Peace and Human Security</p> <p>Chapter 33: Crimes Against Peace and Human Security</p> <p>Article 394: Ecocide</p> <p>Intentional mass destruction of flora or fauna, contamination of the atmosphere, soils or water resources, as well as commission of other acts which have caused an ecological catastrophe – shall be punished by imprisonment for a term of ten to fifteen years.</p>
<p>Belarus</p>	<p>CRIMINAL CODE OF THE REPUBLIC OF BELARUS, 9 July 1999 No. 275-Z, translated by the authors of this report.</p> <p>Special Part Section VI: Crimes against peace, security of mankind and war crimes.</p> <p>Chapter 17: Offences against the peace and security of mankind</p> <p>Article 131. Ecocide</p> <p>Intentional mass destruction of flora or fauna, or poisoning of atmospheric air or water resources, or committing other intentional acts capable of causing an ecological disaster (ecocide) shall be punished by imprisonment for a term of ten to fifteen years.</p>
<p>Georgia</p>	<p>Criminal Code of Georgia 1999, as amended 2019.</p> <p>Article 409 – Ecocide</p> <ol style="list-style-type: none"> 1. Ecocide i.e. contamination of the atmosphere, soil, water resources, mass destruction of fauna or flora, or any other act that could have led to an ecological disaster, shall be punished by imprisonment for a term of twelve to twenty years. 2. The same act committed during armed conflicts, shall be punished by imprisonment for a term of fourteen to twenty years or by life imprisonment.

Country	Legal Framework
Kazakhstan	<p>The Code of the Republic of Kazakhstan dated 3 July 2014 No. 226-V of the Law of the Republic of Kazakhstan</p> <p>Chapter 4: Crimes against Peace and Human Security</p> <p>Article 169. Ecocide Mass destruction of vegetable or animal world, poisoning of the atmosphere, land and water resources, as well as commission of other actions, that caused or could cause ecological disaster or environmental emergency, shall be punished by imprisonment for the term of ten to fifteen years.</p> <p>Ecological disaster and environmental emergency are defined in Article 404 of the Environmental Code of the Republic of Kazakhstan:</p> <ol style="list-style-type: none"> 1. An environmental emergency is an ecological situation that has arisen in a section of territory or water area where, as a result of anthropogenic activities or natural processes, sustained negative environmental changes occur that threaten the life and (or) health of people, the state of natural ecological systems, plant genetic funds and animals. For the purposes of this paragraph, a threat to public health means an increase in the frequency of reversible health disorders associated with environmental pollution. 2. Environmental disaster – an environmental situation that has arisen in a section of territory where, as a result of anthropogenic activities or natural processes, profound irreversible changes in the environment have occurred, resulting in a significant deterioration in public health, destruction of natural ecological systems and (or) deterioration in the condition of plant and animal life. For the purposes of this paragraph, a significant deterioration in public health means an increase in the number of irreversible and incompatible health disorders, changes in the structure of causes of death and the emergence of specific diseases caused by environmental pollution, as well as a significant increase in the frequency of reversible health disorders associated with environmental pollution. 3. The classification of a territory (water area) as a zone of environmental emergency or zone of environmental disaster is carried out in order to determine the causes of the current environmental situation and develop reasonable urgent measures to stabilise and reduce the degree of environmental distress, reduce the level of impact of anthropogenic activities on the environment, and implement operational measures to ensure restoration of the environment and minimisation of negative consequences for life and (or) health of the population.

Country	Legal Framework
<p>Kyrgyz Republic</p>	<p>CRIMINAL CODE OF THE KYRGYZ REPUBLIC, No. 68 of 01/10/1997</p> <p>Chapter 34: Crimes against the peace and security of mankind</p> <p>Article 374. Ecocide Massive destruction of the animal or plant kingdoms, contamination of the atmosphere or water resources, and also commission of other actions capable of causing an ecological catastrophe, shall be punishable by deprivation of liberty for a term of 12 to 20 years.</p> <p>Article 22. Types of Guilt Only a person that has committed a socially dangerous act, whether deliberately or through carelessness, shall be recognised guilty.</p>
<p>Moldova</p>	<p>THE CRIMINAL CODE OF THE REPUBLIC OF MOLDOVA, No. 985-XV dated 18.04.2002, Special Part</p> <p>Chapter 1: Crimes against the Peace and Security of Humanity, War Crimes</p> <p>Article 136. Ecocide Deliberate mass destruction of flora and fauna, poisoning the atmosphere or water resources, and the commission of other acts that may cause or caused an ecological disaster shall be punished by imprisonment for 10 to 15 years.</p>
<p>Russia</p>	<p>THE CRIMINAL CODE OF THE RUSSIAN FEDERATION, No. 63-FZ of 13 June 1996.</p> <p>Section XII: Crimes against peace and mankind's security</p> <p>Article 358. Ecocide Massive destruction of the animal or plant kingdoms, contamination of the atmosphere or water resources, and also commission of other actions capable of causing an ecological catastrophe, shall be punishable by deprivation of liberty for a term of 12 to 20 years. Under Articles 78 and 83, statutes of limitation do not apply to Article 358.</p>
<p>Tajikistan</p>	<p>CRIMINAL CODE OF THE REPUBLIC OF TAJIKISTAN, SECTION XV. CRIME AGAINST PEACE AND SECURITY OF HUMANITY</p> <p>Chapter 34. Crime Against Peace And Security Of Humanity</p> <p>Article 399. Biocide The use of nuclear, neutron, chemical, biological (bacteriological), climatic or other weapons of mass destruction in order to destroy people and the natural environment, is punished with imprisonment for a term of fifteen to twenty-five years or the death penalty or life imprisonment (ZRT of 07.15.2004 N46) (ZRT of 03.01.2005 N86).</p> <p>Article 400. Ecocide Mass destruction of flora or fauna, poisoning of the atmosphere or water resources, as well as the commission of other actions capable of causing an ecological disaster, is punished with imprisonment for a term of fifteen to twenty years.</p>

Country	Legal Framework
Ukraine	<p>CRIMINAL CODE OF THE REPUBLIC OF UKRAINE 2001 (official translation)</p> <p>Chapter XX: Criminal Offences against Peace, Security of Mankind and International Legal Order</p> <p>Article 441: Ecocide</p> <p>Mass destruction of flora and fauna, poisoning of air or water resources, and also any other actions that may cause an environmental disaster, shall be punishable by imprisonment for a term of eight to fifteen years.</p>
Vietnam	<p>PENAL CODE No. 15/1999/QH10</p> <p>Chapter XXIV: Crimes of Undermining Peace, Against Humanity and War Crimes</p> <p>Article 342: Crimes against Mankind</p> <p>Those who, in peace time or war time, commit acts of annihilating en-mass the population in an area, destroying the source of their livelihood, undermining the cultural and spiritual life of a country, upsetting the foundation of a society with a view to undermining such society, as well as other acts of genocide or acts of ecocide or destroying the natural environment, shall be sentenced to between ten years and twenty years of imprisonment, life imprisonment or capital punishment.</p> <p>CRIMINAL CODE No. 100/2015/QH13</p> <p>Chapter XXVI: Disruption of Peace, Crimes against Humanity and War Crimes</p> <p>Article 422. Crimes against humanity</p> <ol style="list-style-type: none"> 1. Any person who, whether in peacetime or wartime, commits genocide against population of an area, destroys sources of living, cultural or spiritual life of a nation or sovereign territory, upsets the foundation of a society in order to sabotage it, or commits other acts of genocide, or destroys of the environment shall face a penalty of 10 – 20 years' imprisonment, life imprisonment, or death. 2. This offence is committed under pressure or order given by superior officers, the offender shall face a penalty of 10 – 20 years' imprisonment.

Inspired by the Independent Expert Panel's formulation

Country	Legal Framework
Belgium	<p>Proposed Law to Introduce the Crime of Ecocide into the Criminal Code (1 December 2021 – may have been amended following Council of Ministers process)</p> <p>Article 141 quater (translation by the authors).</p> <ol style="list-style-type: none"> 1. Ecocide, whether committed in time of peace or in time of war, deliberately or through a serious lack of foresight or precaution, constitutes a crime. The crime of ecocide means unlawful or arbitrary acts committed with knowledge of the real likelihood of causing serious, widespread or long-term damage to the environment. <p><i>For the purposes of this definition:</i></p> <ol style="list-style-type: none"> 1. “arbitrary” means recklessly and without regard to the damage which would be manifestly excessive in relation to the social and economic benefits expected; 2. “serious” means that the damage causes highly prejudicial changes, disturbances or harm to any of the components of the environment, including serious repercussions on human life or on natural, cultural or economic resources; 3. “widespread” means that the damage extends beyond a limited geographical area, that it crosses national borders, or that it affects an entire ecosystem or species or a significant number of human beings; 4. “lasting” means that the damage is irreversible or that it cannot be corrected by natural regeneration within a reasonable period of time; 5. “environment” means the Earth, its biosphere, cryosphere, lithosphere, hydrosphere and atmosphere, as well as outer space. <p>The offences are punishable by imprisonment for twenty to thirty years. They are punishable by life imprisonment if they have resulted in the death of one or more persons.</p> <p>In accordance with Article 7 bis, third paragraph, 1, 2, 3, 4, if the offences provided for in 1 have been committed by legal entities, the judge may also pronounce special confiscation, dissolution, with the exception of legal entities governed by public law, temporary or permanent prohibition from exercising a certain activity within the scope of the corporate purpose, with the exception of activities that fall within the scope of a public service remit, the closure of one or more establishments, with the exception of establishments where activities that fall within the scope of a public service remit are carried out, and the publication or dissemination of the decision.</p> <p>In all cases, the judge may impose a penalty of reinstatement.</p> <p>As the crime of ecocide is considered a serious crime, it will be at level six in the new penalty scale which has eight levels, which is equivalent to imprisonment of 10 to 20 years.</p>

Country	Legal Framework
<p>Brazil</p>	<p>On 8th November 2023 the Environment and Sustainable Development Committee of the Deputies Chamber of the Brazilian Congress approved Bill No 2933/2023 which aims to criminalise the most serious cases of illegal or wanton destruction of the environment, known as “ecocide”.</p> <p>The proposal is to add:</p> <p>Art. 69-B Carrying out illegal or reckless acts with the awareness that they generate a substantial probability of serious and widespread or long-term damage to the environment: Penalty – imprisonment from 5 to 15 years and a fine.</p> <ol style="list-style-type: none"> I. illegal act: an act that does not comply with the law in force or a licence or authorisation issued by the environmental authorities. II. reckless act: an act in which there is knowledge of the risk of creating damage that is clearly excessive in relation to the social and economic benefits expected from an activity; III. serious damage: damage that implies very serious adverse changes, disturbance or damage to any element of the environment, including serious impacts on human life, biodiversity or natural, cultural or economic resources; IV. generalised damage: damage that extends beyond a limited geographical area, crosses national borders or is suffered by an entire ecosystem or species or a large number of beings; V. long-term damage: irreversible damage or damage that cannot be repaired through natural recovery within a reasonable period of time. <p>Paragraph 2 The crime of ecocide is aimed at senior managers responsible for decisions that lead to the promotion, planning, financing, agency, contracting, management and execution of activities that fall under the heading of this article.</p> <p>Paragraph 3 The crime of ecocide does not apply to indigenous and traditional populations who continue to live in their traditional way and on their territories.</p>
<p>Mexico</p>	<p>Chapter Two: Biodiversity</p> <p>Article 417 A penalty of 10 to 15 years' imprisonment and a fine of 1,000 to 1,500 days shall be imposed on anyone who commits any unlawful or arbitrary act carried out in the knowledge that there is a high probability that it will cause serious damage that is extensive or long-lasting damage to the environment.</p>

Country	Legal Framework
<p>The Netherlands</p>	<p>TITLE VI. ECOCIDE</p> <p>Article 153</p> <ol style="list-style-type: none"> 1. Anyone who, by act or omission, intentionally causes serious and widespread or serious and long-lasting damage to the environment, or creates a risk of such damage, shall be liable to a term of imprisonment not exceeding fifteen years or a fine of the sixth category, which in any case concerns all hazards that meet the damage criterion for ecocide. 2. For the purposes of the first paragraph: <ol style="list-style-type: none"> a. the environment means: the set of conditions and influences within the physical environment that are intended for the protection of people, animals, plants and goods, of water, soil and air and of landscape, natural scientific and cultural-historical values and of climate control, as well as the relationships between them. b. damage to the environment is classified as: <ol style="list-style-type: none"> 1. widespread, if the damage occurs in a more than limited geographical area, crosses national borders, or concerns an important part of an ecosystem, a large number of people or a large number of a certain animal or plant species; 2. long-term, if the damage is irreversible or cannot be done within a reasonable period of time 3. serious, if the damage results in a very serious adverse change or changes, disruption or disruptions to one or more parts of the environment.
<p>United Kingdom</p>	<p>Offence of ecocide</p> <p>It is an offence of “ecocide” for a person, company, organisation, partnership or any other legal entity registered in the United Kingdom, to be in breach of section 2 of this Act.</p> <p>2 Ecocide</p> <p>For the purposes of this Act, “ecocide”:</p> <ol style="list-style-type: none"> (a) as it applies to an individual, means unlawful or wanton acts or omissions committed by persons of superior responsibility who had knowledge, or should have had knowledge, that there was a substantial likelihood of severe and either widespread or long-term damage to the environment being caused by those acts; (b) as it applies to a company, organisation, partnership or other legal entity, means strict liability for unlawful or wanton acts or omissions with a substantial likelihood of severe and either widespread or long-term damage to the environment being caused by those acts.

Alternative framings

Country	Legal Framework
Chile	<p>In August 2023 Chilean congress approved a bill to expand criminal liability for economic and environmental crimes (Law 21595: Economic Crimes Law). It is the largest ever reform of Chilean law and aims to enable a tougher stance on white collar crime.</p> <p>The new law has been praised by Stop Ecocide for including ‘several elements of the legal definition of ecocide’ formulated by the Independent Expert Panel, so it is included here for completeness. It includes several new environmental crimes under the heading ‘Attacks against the environment’ These include:</p> <p>Article 305: Circumvention of the Environmental Impact Assessment System and Pollution.</p> <p>Article 306: Repeated infringement of environmental regulations</p> <p>Article 307: Illegal water extraction in restricted areas</p> <p>The above crimes relate to environmental affectation and administrative illegality. There are also crimes where the main element of the crime is the seriousness of the impairment of the environment. This is assessed considering the following under Article 310:</p> <ul style="list-style-type: none"> A. Spatial extension B. Prolonged effects over time C. Be irreparable or difficult to repair D. Reaching a meaningful group of species E. Affect species categorised as extinct, extinct in the wild, critically endangered or endangered or vulnerable F. Putting the health of one or more people at serious risk of serious harm G. Significantly affect the ecosystem services or functions of the environmental element or component <p>Article 308: Polluting action: pouring, depositing or releasing polluting substances, or extracting water or components from the soil or subsoil.</p> <p>Article 310: Causing serious impact on the environmental components of protected areas such as unspoilt region reserve, national park, natural monument, national reserve, wetlands of international importance, glaciers.</p> <p>These new criminal figures carry penalties ranging from 61 days to 5 years of imprisonment for crimes ‘of mere danger’ (“delitos de peligro”, that is, those were the punishable conduct relates to the generation of a risk or ‘danger’, regardless if an actual damage or loss was produced in the end), and up to 10 years of imprisonment in case of effective environmental damage or loss. Additionally, mandatory fines ranging from 120 UTM (approx. USD\$ 9,500) to 120,000 UTM (approx. USD\$ 9,530,000) have been established.</p>

Country	Legal Framework
Ecuador	<p>Ecuador does not explicitly criminalise ecocide. However, it appears on lists such as Ecocide Law's due to its criminalisation of offences against the environment and nature or Pacha Mama. The crimes against natural resources seem to have similarities to existing ecocide definitions.</p> <p>COMPREHENSIVE ORGANIC CRIMINAL CODE, Oficio No. SAN-2014-0138, 2014 (translation by authors)</p> <p>Title Four, Chapter Four: Offences against the environment and nature or Pacha Mama</p> <p>Section One: Crimes against biodiversity</p> <p>Article 245: Invasion of areas of ecological importance.</p> <p>Article 246: Forest and vegetation fires</p> <p>Article 247: Crimes against wild flora and fauna</p> <p>Article 248: Crimes against national genetic heritage resources</p> <p>Articles 249 – 250: The contravention of mistreatment and killing of pets or companion animals</p> <p>Section Two: Crimes against natural resources</p> <p>Article 251: Offences against water</p> <p>The person who, in contravention of the regulations in force, pollutes, despoils or alters the water bodies, springs, sources, ecological flows, natural flowing or underground waters of the hydrographic basins and in general the hydro-biological resources or discharges into the sea, causing serious damage, shall be punished with a prison sentence of three to five years.</p> <p>The maximum penalty shall be imposed if the offence is perpetrated in a space of the National System of Protected Areas or if the offence is perpetrated for profit or with methods, instruments or means that result in extensive and permanent damage.</p> <p>Article 252: Offences against land.</p> <p>The person who, in contravention of the regulations in force, pollutes, despoils or alters the water bodies, springs, sources, ecological flows, natural flowing or underground waters of the hydrographic basins and in general the hydro-biological resources or discharges into the sea, causing serious damage, shall be punished with a prison sentence of three to five years.</p> <p>The maximum penalty shall be imposed if the offence is perpetrated in a space of the National System of Protected Areas or if the offence is perpetrated for profit or with methods, instruments or means that result in extensive and permanent damage.</p> <p>Article 253: Air pollution</p> <p>Any person who, in contravention of the regulations in force or by not adopting the measures required by the regulations, pollutes the air, the atmosphere or other components of airspace at levels that result in serious damage to natural resources, biodiversity and human health, shall be punished with deprivation of liberty for a term of one to three years.</p>

Country	Legal Framework
Uzbekistan	<p>Uzbekistan does not have a criminal offence of ecocide. However, the following are often cited as related offences (e.g. in Ecocide Law's list of 'ecocide/serious environmental crimes in national jurisdictions' list) so are included here for completeness (it is not discussed in the brief).</p> <p>CRIMINAL CODE OF THE REPUBLIC OF UZBEKISTAN 1994</p> <p>Section Four: Crimes in the Sphere of Ecology</p> <p>Article 196: Pollution of the Environment</p> <p>Pollution or damage to lands, pollution of waters or atmospheric air, resulting in a mass disease of people, death of animals, birds or fish, or other grave consequences, shall be punishable by a fine of one hundred to two hundred basic monthly wages, or deprivation of a certain right up to five years, or compulsory public works up to three hundred and sixty hours, or correctional labor up to three years. The same acts that caused the death of a person – shall be punishable by restraint of liberty from one to three years, or imprisonment up to three years, with the deprivation of certain rights.</p> <p>Article 198. Damage or destruction of crops, forests, trees or other plants</p> <p>Damage or destruction of crops, forests, trees or other plants as a result of careless handling of fire, which caused major damage or other grave consequences, shall be punishable by a fine of fifty to one hundred basic monthly wages, or compulsory community service up to two hundred and forty hours, or correctional labor up to one year. Illegal felling of forests, trees or other plants, which caused major damage, shall be punishable by a fine from one hundred to one hundred and fifty minimum monthly wages, or compulsory public works from two hundred and forty to three hundred hours, or correctional labor from one to two years, or restraint of liberty from one to three years, or imprisonment up to three years.</p> <p>Intentional damage, injury, destruction of crops, forests, trees or other plants, which caused major damage – shall be punishable by a fine of 150 to 200 basic monthly wages, or compulsory community service from 300 to 360 hours, or correctional labor from 2 to 3 years, or restraint of liberty from 1 to 3 years, or imprisonment up to 3 years.</p> <p>In the case of compensation for the material damage caused in a threefold amount, punishment in the form of restriction of freedom and imprisonment is not applied.</p>

Alternative definitions of ecocide

Country	Legal Framework
France	<p>Law No. 2021-1104 of 22 August 2021 on combating climate change and strengthening resilience to its effects (the “Climate and Resilience Law”), adopted on 20 July 2021 and promulgated on 24 August 2021. (translation the authors’ own).</p> <p>The Climate and Resilience Law creates new Articles in the French Environmental Code, including a new general offence of polluting the environment (Article L. 231-1 of the French Environmental Code), which can lead to the qualification of ecocide if there is an element of intent (Article L. 231-3 of the French Environmental Code), and an offence of abandoning waste, (Article L. 231-2 of the French Environmental Code), which can also lead to the qualification of ecocide if there is an element of intent (Article L. 231-3 of the French Environmental Code).</p> <p>Art. L. 231-1.</p> <p>The act, in a manifestly deliberate breach of a particular duty of care or safety laid down by law or regulation, of emitting into the air, throwing, discharging or allowing to flow into surface or ground water or into the waters of the sea within territorial waters, directly or indirectly, one or more substances whose action or reactions result in serious and lasting harmful effects on health, flora or fauna, with the exception of the damage referred to in Articles L. 218-73 and L. 432-2, or serious changes to the normal water supply system, is punishable by five years' imprisonment and a fine of one million euros, which may be increased up to five times the benefit derived from the commission of the offence.</p> <p>The first paragraph of this article applies:</p> <ol style="list-style-type: none"> 1. In the case of emissions into the air, only if the emission limit values set by decision of the competent administrative authority are exceeded; 2. In the case of authorised discharge operations and the use of authorised substances, only if the requirements set by the competent administrative authority are not complied with. <p>Harmful effects on health or damage to flora or fauna that are likely to last for at least seven years are considered to be long-lasting.</p> <p>The limitation period for prosecution of the offence referred to in the first paragraph runs from the time the damage is discovered.</p>

Country	Legal Framework
France	<p>Art. L. 231-2.</p> <p>The act of abandoning, depositing or causing to be deposited waste, under conditions contrary to Chapter I of Title IV of Book V, and the act of managing waste, within the meaning of Article L. 541-1-1, without complying with the requirements concerning the characteristics, quantities, technical conditions for the treatment and disposal of waste and the treatment processes implemented set out in application of articles L. 541-2, L. 541-2-1, L. 541-7-2, L. 541-21-1 and L. 541-22, when they cause substantial degradation of the fauna and flora or the quality of the air, soil or water are punishable by three years of imprisonment and a fine of €150,000.</p> <p>The limitation period for prosecution of the offence referred to in the first paragraph of this article runs from the time when the damage is discovered.</p> <p>Art. L. 231-3.</p> <p>The offence provided for in Article L. 231-1 constitutes ecocide when committed intentionally.</p> <p>The offences set out in Article L. 231-2, when committed intentionally, also constitute ecocide when they result in serious and lasting damage to health, flora, fauna or the quality of the air, soil or water.</p> <p>The prison sentence provided for in articles L. 231-1 and L. 231-2 is increased to ten years' imprisonment.</p> <p>The fine provided for in the same articles L. 231-1 and L. 231-2 is increased to 4.5 million euros, which may be increased up to ten times the benefit derived from the commission of the offence.</p> <p>Harmful effects on health or damage to flora, fauna or the quality of soil or surface or ground water that are likely to last for at least seven years are deemed to be long-lasting.</p> <p>The limitation period for prosecution of the offence referred to in the first paragraph of this article runs from the time the damage is discovered.</p>

Appendix 2: Definitions of an international crime of ecocide

Source	Definition
<p>Richard Falk, 'Environmental Warfare and Ecocide-Facts, Appraisal, and Proposals' <i>Revue Belge de Droit International</i> Vol. 9 No. 1 (1973) 1-27.</p>	<p>Although not the first to use the term, academic debate around how to define ecocide as a crime can be traced to Richard A. Falk's 1973 article 'Environmental Warfare and Ecocide – Facts, Appraisal, and Proposals' (Falk, 1973). Drafted in response to the environmental devastation caused by the US tactics in the Vietnam War, Falk defined ecocide in the following terms:</p> <p><i>Article I. The Contracting Parties confirm that ecocide, whether committed in time of peace or in time of war, is a crime under international law which they undertake to prevent and to punish.</i></p> <p><i>Article II. In the present Convention, ecocide means any of the following acts committed with intent to disrupt or destroy, in whole or in part, a human ecosystem:</i></p> <ol style="list-style-type: none"> a) <i>The use of weapons of mass destruction, whether nuclear, bacteriological, chemical or other;</i> b) <i>The use of chemical herbicides to defoliate and deforest natural forests for military purposes;</i> c) <i>The use of bombs and artillery in such quantity, density, or size as to impair the quality of soil or to enhance the prospect of diseases dangerous to human beings, animals, or crops;</i> d) <i>The use of bulldozing equipment to destroy large tracts of forest or cropland for military purposes;</i> e) <i>The use of techniques designed to increase or decrease rainfall or otherwise modify weather as a weapon of war;</i> f) <i>The forcible removal of human beings or animals from their habitual places of habitation to expedite the pursuit of military or industrial objectives.</i> <p><i>Article III. The following acts shall be punishable:</i></p> <ol style="list-style-type: none"> (a) <i>Ecocide;</i> (b) <i>Conspiracy to commit ecocide;</i> (c) <i>Direct and public incitement to ecocide;</i> (d) <i>Attempt to commit ecocide;</i> (e) <i>Complicity in ecocide</i> <p><i>Article IV. Persons committing ecocide as defined in Article II or any of the acts described in Article III shall be punished, at least to the extent of being removed for a period of years from any position of leadership or public trust. Constitutionally responsible rulers, public officials, military commanders, or private individuals may all be charged with and convicted of the crimes associated with ecocide as set forth in Article III.</i></p>

Source	Definition
<p>Whitaker, B., 1985 (Special Rapporteur) Revised and Updated Report on the Question of the Prevention and Punishment of the Crime of Genocide, UN ESCOR, Human Rights Sub-Commission on the Prevention of Discrimination and Protection of Minorities, 38th Sess., UN Doc. E/CN.4/Sub.2/1985/6</p>	<p>In the 1980s, ecocide was debated in the context of the other core crimes. The UN-Sub Commission on the Prevention of Discrimination and Protection of Minorities considered, but ultimately discarded, adding ecocide to the definition of genocide. The Special Rapporteur defined ecocide for this purpose as being:</p> <p><i>Adverse alterations, often irreparable, to the environment – for example through nuclear explosions, chemical weapons, serious pollution and acid rain, or destruction of the rain forest – which threaten the existence of entire populations, whether deliberately or with criminal negligence (Whitaker, 1985: 17).</i></p>
<p>ILC 1991, 'Report of the International Law Commission on the work of its forty-third session (29 April – 19 July 1991) (A/46/10);' <i>Yearbook of the International Law Commission</i> Vol. ii Part Two.</p>	<p>During the 1980s, the International Law Commission also considered whether environmental crimes should constitute part of the Draft Code of Offences Against the Peace and Security of Mankind. In their 1991 code (ILC, 1991), reference was made to environmental harm as both a war crime and a crime against humanity:</p> <p><i>Article 22. Exceptionally serious war crimes</i></p> <p>(2) <i>For the purposes of this Code, an exceptionally serious war crime is an exceptionally serious violation of principles and rules of international law applicable in armed conflict consisting of any of the following acts:</i></p> <p>d) <i>employing methods or means of warfare which are intended or may be expected to cause widespread, long-term and severe damage to the natural environment'</i></p> <p><i>Article 26. Wilful and severe damage to the environment.</i></p> <p><i>An individual who wilfully causes or orders the causing of widespread, long-term and severe damage to the natural environment shall, on conviction thereof, be sentenced...</i></p> <p>Liability is restricted to 'individuals', including those who commit, attempt, aid, abet or provide the means for the commission of a crime (Article 3), and includes superior responsibility for those who 'knew or had information enabling them to conclude, in the circumstances at the time, that the subordinate was committing or was going to commit such a crime and if they did not take all feasible measures within their power to prevent or repress the crime' (Article 12).</p>

Source	Definition
<p>Gray, M. 1996. The international crime of ecocide. <i>California Western International Law Journal</i>, Vol 26, No. 2, 215-272.</p>	<p>Mark Allan Gray was the Former Head of the Environmental Law Unit in the Australian Department of Foreign Affairs, and the First Secretary for the Australian Permanent Mission to the United Nations. In 1996, he wrote an article examining whether ecocide could be considered an international crime on the basis of existing principles of international law. To do so, he defined ecocide as:</p> <p><i>The deliberate or negligent violation of key state and human rights and according to the following criteria: (1) serious, and extensive or lasting, ecological damage, (2) international consequences, and (3) waste.</i> (Gray, 1996).</p> <p>Gray identified 'serious' damage as something that can arise from its scale (in terms of geography or number of humans and species affected), its impact in terms of social and economic costs, through the loss of unique natural assets, and from the difficulty associated with reversing the harm (1996: 217). Gray argued that ecocide could be perpetrated by states, individuals and organisations, and although he argued that ecocide should be based on strict liability, his emphasis on exiting international legal principles led him to define liability as based on fault and knowledge:</p> <p><i>The act or omission can be wilful, such as the deliberate destruction of endangered species habitat or illegal use of driftnets, or failure to act to prevent them; reckless, as in exploiting resources or lending development funds without regard for the known or foreseeable risk of destruction; or negligent, as in undertaking inappropriate development projects or improperly regulating development.</i> (Gray, 1996: 218).</p> <p><i>International law's current state of development requires, for the existence of ecocide, knowledge or unreasonable failure to realize that the general scientific consensus is that the act or omission causes or contributes significantly to global environmental impairment, such as ozone layer depletion, climate change or destruction of biological diversity, with deleterious consequences for health, property and economic and spiritual interests.</i> (Gray, 1996: 219)</p>



Source	Definition
<p>Higgins, P, 2015, <i>Eradicating Ecocide</i> (Shepherd-Walwyn)</p>	<p>After the ratification of the International Criminal Court's Rome Statute, campaigns to criminalise ecocide began to focus on the introduction of a fifth crime into its mandate. Polly Higgins, a British barrister, became a prominent voice calling for ecocide in the 2000s. In 2010 she proposed an amendment to the Rome Statute, premised on the definition of ecocide as 'the extensive loss or damage or destruction of ecosystem(s) of a given territory, whether by human agency or by other causes, to such an extent that peaceful enjoyment by the inhabitants of that territory has been or will be severely diminished'. In a draft law of ecocide, the crime of ecocide was defined as:</p> <p><i>The Crime</i></p> <ol style="list-style-type: none"> 1. <i>acts or omissions committed in times of peace or conflict by any senior person within the course of State, corporate or any other entity's activity which cause, contribute to, or may be expected to cause or contribute to serious ecological, climate or cultural loss or damage to or destruction of ecosystem(s) of a given territory(ies), such that peaceful enjoyment by the inhabitants has been or will be severely diminished.</i> 2. <i>To establish seriousness, impact(s) must be widespread, long-term or severe.</i> 3. <i>For the purposes of paragraph 1:</i> <ol style="list-style-type: none"> (a) <i>'climate loss or damage to or destruction of' means impact(s) of one or more of the following occurrences, unrestricted by State or jurisdictional boundaries: (i) rising sea-levels, (ii) hurricanes, typhoons or cyclones, (iii) earthquakes, (iv) other climate occurrences;</i> (b) <i>'ecosystems' means means a biological community of interdependent inhabitants and their physical environment;</i> (c) <i>'territory(ies)' means one or more of the following habitats, unrestricted by State or jurisdictional boundaries: (i) terrestrial, (ii) fresh-water, marine or high seas, (iii) atmosphere, (iv) other natural habitats;</i> (d) <i>'peaceful enjoyment' means peace, health and cultural integrity;</i> (e) <i>'inhabitants' means indigenous occupants and/or settled communities of a territory consisting of one or more of the following: (i) humans, (ii) animals, fish, birds or insects, (iii) plant species, (iv) other living organisms.</i> <p><i>The Elements</i></p> <ol style="list-style-type: none"> 1. <i>The perpetrator's acts or omissions caused, contributed to, or may be expected to cause or contribute to serious ecological, climate or cultural loss or damage to, or destruction of ecosystem(s) of a given territory(ies).</i> 2. <i>The perpetrator's activity has or will severely diminish peaceful enjoyment by the inhabitants.</i> 3. <i>The perpetrator had knowledge or ought to have had knowledge of the likelihood of ecological, climate or cultural harm.</i> 4. <i>The perpetrator was a senior person within the course of State, corporate or any other entity's activity in times of peace or conflict.</i>

Source	Definition
<p>L. Neyret (dir.), Des écocrimes à l'écocide – Le droit pénal au secours de l'environnement, Bruylant, 2015.</p>	<p>Under the supervision of Laurent Neyret, a team of sixteen jurists of six different nationalities, with specialities in environmental law, criminal law, international criminal law, and international human rights law worked for three years to put together a proposal for the protection of the environment through criminal law, including an international convention prohibiting ecocide.</p> <p><i>Article 1 – Scope of Application</i></p> <ol style="list-style-type: none"> 1. <i>The provisions of this Convention shall apply to the most serious crimes against the environment that, both in times of peace and in times of armed conflict, have an impact on the safety of the planet.</i> 2. <i>The present Convention is without prejudice to the relevant rules of international humanitarian law prohibiting environmental damage in time of armed conflict.</i> <p><i>Article 2 – Definition of Ecocide</i></p> <ol style="list-style-type: none"> 1. <i>For the purpose of this Convention, ecocide means the intentional acts committed in the context of a widespread and systematic action that have an adverse impact on the safety of the planet, such acts being defined as follows:</i> <ol style="list-style-type: none"> a) <i>the discharge, emission or introduction of a quantity of substances or ionizing radiation into air or atmosphere, soil, water or the aquatic environments;</i> b) <i>the collection, transport, recovery or disposal of waste, including the supervision of such operations and the after-care of disposal sites, and including action taken as a dealer or a broker in the framework of any activity related to the waste management;</i> c) <i>the operation of a plant in which a dangerous activity is carried out or in which dangerous substances or preparations are stored or used;</i> d) <i>the production, processing, handling, use, holding, storage, transport, import, export or disposal of nuclear materials or other hazardous radioactive substances;</i> e) <i>the killing, destruction, possession or taking of specimens of wild fauna or flora species whether protected or not;</i> f) <i>other acts of a similar character committed intentionally that adversely affect the safety of the planet.</i> 2. <i>The acts referred to in paragraph 1 adversely affecting the safety of the planet when they cause:</i> <ol style="list-style-type: none"> a) <i>a widespread, constant and serious degradation of the quality of air or the atmosphere, the quality of soil or the quality of water, the fauna and flora or their ecological functions; or</i> b) <i>death, permanent disabilities or other incurable serious illnesses to a population or they strip permanently the latter of their lands, territories or resources;</i> 3. <i>The acts referred to in paragraph 1 must have been committed intentionally and with the knowledge of the widespread and systematic nature of the actions in whose framework the aforementioned acts are being carried out. These acts shall also be deemed intentional where their perpetrator either knew or should have known that there existed a high probability that such acts may adversely affect the safety of the planet.</i> <p>The Convention outlines the criminal liability (including superior responsibility) for both legal persons and natural persons, and criminalises committing, ordering, soliciting, inducing, facilitating, contributing to or attempting the commission of ecocide.</p>

Source	Definition
<p>End of Ecocide, 2016, Ecocide Amendments Proposal, https://www.endecocide.org/wp-content/uploads/2016/10/ICC-Amendments-Ecocide-ENG-Sept-2016.pdf.</p>	<p>In 2016, End Ecocide on Earth proposed a further ecocide definition in the form of a proposed amendment to the Rome Statute:</p> <p><i>Article 8 ter: Crime of Ecocide</i></p> <ol style="list-style-type: none"> 1. <i>For the purpose of this Statute, any person is guilty of ecocide who causes severe damage to:</i> <ol style="list-style-type: none"> (a) <i>any part or system of the global commons, or</i> (b) <i>an Earth’s ecological system.</i> 2. <i>For the purpose of paragraph 1, “causes” means to be fully or partially responsible, by means of an action or a failure to act, wheresoever such action or failure to act may have occurred, and without consideration of the state of mind of the person responsible.</i> 3. <i>For the purpose of paragraph 1(a), “severe damage” means the introduction of or the removal of a material substance or a quantity of energy, as defined in paragraph 10 below, to an extent that exceeds planetary boundaries, or the violation of any international treaty covering the global commons.</i> 4. <i>For the purpose of paragraph 1(b), “severe damage” means elimination, obstruction, or reduction to an extent that undermines, or creates an increased risk of undermining, the resilience of Earth’s ecosystem.</i> 5. <i>For the purpose of Paragraph 1, “severe damage” means the persistence of the damage in time, or of the consequential environmental effects arising from the damage, or of an increased risk of consequential environmental effects arising from the damage, as determined by the United Nations Environmental Programme, or other internationally recognized institution specializing in global environmental monitoring science.</i>

Source	Definition
<p>Promise Institute for Human Rights (UCLA) Group of Experts, Proposed Definition of Ecocide, 9 April 2021.</p>	<p>On February 29, 2020, the Promise Institute for Human Rights at UCLA School of Law convened a cross-functional group of experts (“Group of Experts” or “Group”) to explore the potential of international criminal law to protect the environment and mitigate climate change. The Group of Experts researched and deliberated on the legal, practical and political parameters of developing a new crime of “ecocide”. The Group’s findings and this report were submitted to the Independent Expert Panel for the Legal Definition of Ecocide established by the Stop Ecocide Foundation.</p> <ol style="list-style-type: none"> 1. For the purpose of this Statute, “ecocide” means any of the following acts, committed with the knowledge that they are likely to cause widespread, long-term and severe damage to the natural environment: <ol style="list-style-type: none"> a. [Substantial] destruction or despoliation of natural habitats, ecosystems, or natural heritage; b. Destruction or despoliation of biological resources, in a manner likely to have adverse effects on biological diversity; c. Introducing harmful quantities of substances or energy into the air, water, or soil; d. Illegal traffic in hazardous waste; e. Production, import, export, sale, or use of ozone-depleting substances or of persistent organic pollutants; f. Killing, destruction, or taking of specimens of protected wild fauna or flora species, on a scale likely to impact the survival of the species; g. Significantly contributing to dangerous anthropogenic interference with the climate system, including through large scale emissions of greenhouse gases or destruction of sinks and reservoirs of greenhouse gases; h. Any other acts of a similar character likely to cause an ecological disaster. 2. For the purpose of paragraph 1, conduct is not ecocide if it is (a) lawful under national law, (b) lawful under international law, and (c) employs appropriate available measures to prevent, mitigate, and abate harms. 3. For the purpose of paragraph 1: <ol style="list-style-type: none"> a. “Widespread” means having effects that extend beyond a limited geographic area, cross state boundaries, or adversely affect a large number of human beings; b. “Long-term” means lasting for at least a decade; c. “Severe” means involving serious or significant disruption or harm to ecosystems, human life, natural and economic resources, or other assets. d. The terms in paragraphs (a) to (h) shall be interpreted in accordance with international law, particularly international environmental law. 4. Paragraph 1(g) applies after the expiration of the transition period. The transition period shall be [X] years.

Source	Definition
<p>Independent Expert Panel for the Legal Definition of Ecocide: Commentary and Core Text, June 2021.</p>	<p>In 2020, the Stop Ecocide Foundation convened an Independent Expert Panel for the Legal Definition of Ecocide, bringing together twelve lawyers with expertise in criminal, environmental and climate law (Stop Ecocide Expert Panel, 2021). The panel worked on a definition for six months, a process that involved a public consultation as well as engagement with external experts. Following Higgins and the End Ecocide on Earth approach, the Panel designed a crime that they hoped could be incorporated into the International Criminal Court’s Statute. Although the Panel acknowledge that there have been previous efforts, they do not specify whether and the extent to which they have been influenced by them.</p> <p>The Panel defined ecocide as:</p> <p><i>Article 8 ter Ecocide</i></p> <ol style="list-style-type: none"> 1. <i>For the purpose of this Statute, “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.</i> 2. <i>For the purpose of paragraph 1:</i> <ol style="list-style-type: none"> a. <i>“Wanton” means with reckless disregard for damage which would be clearly excessive in relation to the social and economic benefits anticipated;</i> b. <i>“Severe” means 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;</i> c. <i>“Widespread” means 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;</i> d. <i>“Long-term” means damage which is irreversible or which cannot be redressed through natural recovery within a reasonable period of time;</i> e. <i>“Environment” means the earth, its biosphere, cryosphere, lithosphere, hydrosphere and atmosphere, as well as outer space.</i>







Environmental Rights Centre for Scotland
c/o Scottish Environment LINK
Dolphin House
4 Hunter Square
Edinburgh EH1 1QW

www.ercs.scot

 @ERCScot

Scottish Charitable Incorporated Organisation (SCIO) SC050257