

Serious environmental crimes as crimes against future generations: a legal good theory problem

Vítor de Souza Ishikawa*

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A. Introduction

The traditional model of wrongdoing in criminal law in German and Brazilian doctrine centres on acts or omissions that violate the legal goods of others with whom the perpetrator coexists. This framework applies to a wide range of offences, including homicide, theft, tax evasion, corruption, and participation in or association with armed criminal organisations.

In recent decades, however, criminal law scholarship has increasingly recognised that certain forms of conduct may give rise to harmful consequences that extend beyond the immediate present, affecting both current and future interests or legal goods.¹ Such conducts are often linked to industrial activity, technological development, or climate change and create risks or produce harms within a temporally distorted framework. Serious offences that result in long-term environmental damage, for example, violate legal goods of future generations.

* Doctoral student in criminal law at the University of São Paulo, Brazil and criminal lawyer. This paper is a summarized version of a Master's thesis that was funded by a CAPES scholarship for two consecutive years.

1 Future interests of present generations refer to long-term interests of those currently alive in a particular moment, such as an interest in living in a future environment free from pollutants, and future interests of future generations, to all interests of those who will come to exist in the future. This difference will be further addressed.

This paper addresses two central questions: (i) Is it justifiable to criminalise conduct that harms future generations? And (ii) is it justifiable to aggravate criminal sanctions for conduct that affects both present and future generations? The first question pertains primarily to the role of the legislature and elected policymakers, while the second is directed toward the judiciary and the interpretation and application of criminal penalties.

The protection of future generations through criminal law challenges the traditionally present or near-future-oriented core of the legal good doctrine. In order to adequately address the two questions outlined above, it is necessary to clarify (B) the aim and criteria presented by the legal good theory, (C) the three different positions adopted by the proponents of the legal good doctrine and their corresponding reasons, (D) how the concept of 'future generations' can be defined as an analytical category. Finally (E, F), this paper will argue that criminalising and/or punishing conduct violating legal goods of future generations is legitimate when its consequences affect present generations whose members (at least in part) will continue to exist in the future, taking into account the feature of succession, as in serious environmental crimes.

B. The legal good theory (Rechtsgutslehre) as a limit to the state's power to criminalise conduct

As a theory of criminalisation, the legal good theory seeks to establish substantive criteria for the legitimate use of criminal law.² Its central premise is that democratic legitimacy is insufficient to justify criminalisation: Even when a criminal provision is enacted through a procedurally

2 Due to space constraints, this paper will not examine two fundamental aspects of the contemporary debate surrounding the legal good theory, which may be described as its external and internal crises, nor the predominance of the harm principle doctrine in the United States and United Kingdom. Externally, the legal good theory has experienced a significant decline in influence, even in countries where it was dominant, such as Germany and Brazil. This decline is especially evident in Germany, where the Federal Constitutional Court (*Bundesverfassungsgericht*) has explicitly rejected its constitutionality. Internally, the theory suffers from a marked lack of consensus among its proponents, with ongoing disagreements regarding the definition of 'legal goods', the theory's liberal roots, and its capacity to fulfil its promises as a critical or limiting framework within criminal law. For further discussion, see Ivo Appel, *Verfassung und Strafe*, 1998, pp. 199–203; Carl-Friedrich Stuckenberg, 'The Constitutional Deficiencies of the German *Rechtsgutslehre*' (2013), 3(1) OSLS, p. 31, pp. 31 et seqq.

valid and democratically legitimate process, the resulting offence may still be acknowledged as substantively unjustified.

In response to the central question of under what material conditions the state may legitimately punish behaviours through criminal law, the legal good theory provides the following answer: only if that specific conduct (act or omission) creates a risk to, or causes a harm to, a legal good (ie when the conduct violates a legal good). However, this initial formulation still lacks clarity, as one must clarify what constitutes a 'legal good' and explain the reason for subjecting democratic decisions to this normative and critical device.

Claus Roxin and Luís Greco define 'legal goods' (*Rechtsgüter*) as 'those essential to the individual's free development, the exercise of one's fundamental rights, and the proper functioning of a constitutional state designed to uphold these objectives'³. At the core of this definition lies the idea that criminal law must ensure conditions for peaceful and free coexistence while protecting individual rights.⁴ Accordingly, punishing mere moral transgressions is not legitimate because it does not protect legal goods nor contribute to guarantee the peaceful and free coexistence of citizens.

The legal good framework thus operates as a substantive limitation on the state's punitive authority in favour of personal freedom. It asserts that an offence is only substantially legitimate when it is grounded in the protection of the person, adopting a human-oriented perspective: as Winfried Hassemer states, its fundamental idea is that punishment is restricted by 'the existence of a legitimate interest on the part of one citizen (that is, of a legal good), and the violation of that interest by another citizen'⁵.

Individuals, however, are not merely independent and self-sufficient agents, but rather social beings embedded in collective life. Life, property, and physical integrity are legal goods as legitimate as collective legal goods. Their indivisibility defines the latter: A collective good cannot be partitioned or allocated among individuals, as it is shared and experienced collectively, eg the environment.⁶

3 Claus Roxin/Luís Greco, *Strafrecht Allgemeiner Teil, Band I*, 5th ed. (2020), p. 26 [own translation].

4 *Ibid.*

5 Winfried Hassemer, 'The Harm Principle and the Protection of "Legal Goods" (*Rechtsgüterschutz*): a German Perspective', in AP Simester/Antje Du Bois-Pendain/Ulfrid Neumann (eds.), *Liberal criminal theory: essays for Andreas von Hirsch* (2014), p. 187, 193.

6 Roxin/Greco (2020), pp. 27–28.

The legitimacy of collective legal goods depends on their personal dimension: violations must ultimately have repercussions on individual interests at least indirectly.⁷ For example, a punishable conduct against the environment doesn't need to affect specific individuals A, B, or C; it suffices that the offence impacts conditions essential for personal development.⁸ In this sense, acts such as air or water pollution may threaten individual well-being, and their criminalisation is justifiable even in the absence of a concrete harm, as these behaviours restrict or undermine the integrity and usability of shared natural resources and degrade the general conditions necessary for a healthy and balanced environment, essential for human life.

Ultimately, the main challenge in extending criminal protection to future generations lies in justifying the punishment of violating legal goods that will occur in the future, after the conduct itself has already ceased. In such cases, criminal sanctions would be imposed even before the consequences—normatively, the violation of legal goods—fully materialise. This raises a critical question: Can such forms of criminalisation and/or punishment be justifiable within the legal good theory framework?

C. Future generations in the legal good theory discourse

Scholars who follow a legal goods theory framework offer three different responses to the future generations problem in criminal law: (i) a negative answer, (ii) a positive answer, and (iii) an out-of-the-theory answer.

Cornelius Prittwitz and Philipp-Alexander Hirsch represent the negative answer (i). Prittwitz argues that there is no place for future generations within a (personal) legal good theory, whose framework is centred on live and real people.⁹ More broadly, Prittwitz adopts a sceptical stance regarding the capacity of Criminal Law to address ‘mega social problems of today and tomorrow’, particularly given that many of the behaviours most harmful to future generations remain legally permissible.¹⁰

7 Winfried Hassemer, ‘Lineamentos de uma teoria pessoal de bem jurídicos’, in Luís Greco/Fernanda Lara Tórtima (eds.), *O bem jurídico como limitação do poder estatal de incriminar?*, 2th ed. (2016), p. 9, 18 et seq.

8 Helena Regina Lobo da Costa, *Proteção penal ambiental* (2010), pp. 26 et seq.

9 Cornelius Prittwitz, ‘Teoria pessoal do bem jurídico e as “vítimas de amanhã”’, in Raphael Boldt (ed.), *Teoria crítica e Direito Penal* (2020), p. 123, 128.

10 *Ibid.*, pp. 131–135.

Hirsch, in turn, bases his position on the grounds of reciprocity. A liberal model of criminal law requires that the perpetrator and the victim(s) must be capable of interacting with each other in a relationship of mutual acknowledgement and equal freedom.¹¹ Since future generations do not yet exist, they are not entitled to rights, and their identity is inherently indeterminate, dependent on the contingent actions of present individuals.¹² A justice-based approach must take into account the autonomy and concrete interests of existing persons and resist defining individual interests in abstract terms imposed by the state, as this would contravene the normative core of a liberal model.¹³

In contrast, the positive answer (ii) encompasses two distinct lines of reasoning.

Bernd Schünemann and Luis Gracia Martín advocate for a 'dualistic' concept of legal goods, according autonomy to collective legal goods and dismissing the requirement of individual referentiality.¹⁴ From a social contract perspective, future generations must be regarded as participants whose interests merit protection and consideration.¹⁵ The very legitimacy of the state presupposes its ability to guarantee the minimal conditions necessary for the self-development of future persons as a foundational norm.¹⁶ On this view, intergenerational equity and the preservation of a healthy, balanced natural environment are elevated to the status of supreme values.

11 Philipp-Alexander Hirsch, 'Klimastrafrecht und materieller Unrechtsbegriff. Probleme einer liberalen Strafrechtsbegründung angesichts der Herausforderungen des Klimawandels', in Helmut Satzger/Nicolai von Maltitz, *Klimastrafrecht* (2020), p. 111, 115 et seq.

12 *Ibid.*, p. 118.

13 *Ibid.*, pp. 119–121.

14 Bernd Schünemann, 'O princípio da proteção de bens jurídicos como ponta de fuga dos limites constitucionais e da interpretação dos tipos', in Luís Greco (ed.), *Estudos de direito penal, direito processual penal e filosofia do direito* (2013), p. 39, 50; Luis Gracia Martín, 'Contribución al esclarecimiento de los fundamentos de legitimidad de la protección penal de bienes jurídicos colectivos por el Estado social y democrático de derecho' (2012), 12(1) *RPCP*, p. 263, 379.

15 Bernd Schünemann, 'Consideraciones críticas sobre la situación espiritual de la ciência jurídico-penal alemana', in Manuel Cancio Meliá (ed.), *Cuestiones básicas del Derecho Penal em los umbrales del tercer milênio* (2006), p. 187, 193; Luis Gracia Martín, 'A modernização do Direito Penal como exigência da realização do postulado do Estado de Direito (Social e Democrático)' (2011), 88 (1) *RBCCrIm*, p. 95, 130.

16 Bernd Schünemann, 'Principles of Criminal Legislation in Postmodern Society: The Case of Environmental Law' (1997), 1 (1) *BCLR*, p. 175, 191–192.

Departing from a social contract reasoning, Ulfried Neumann and Helena Regina Lobo da Costa argue that it is sufficient, in an initial analysis, to establish whether the affected legal good could be qualified as personal.¹⁷ The interests of those who will exist in the future remain fundamentally human interests. The indeterminacy of future individuals' identities does not disqualify them from protection under the legal good doctrine, just as it does not disqualify collective legal goods.¹⁸ Future generations' interest in a healthy and balanced natural environment is a valid one, and its justification rests on personal grounds.

Finally, the position advanced by Claus Roxin and Luís Greco could be characterised as an out-of-the-theory answer (iii). Behaviours that violate legal goods of future generations do not interfere with the peaceful and free coexistence of humans, and therefore cannot be justified within the legal good theory approach.¹⁹ Nonetheless, both authors recognise the legitimacy of protecting future generations through criminal law as an exception to the theory for two reasons: (i) present generations deprive future generations of means of subsistence through exploitation and environmental degradation; and (ii) the responsibility of present generations towards future ones is rooted in the principle of solidarity between generations, which is enshrined as a constitutional duty in Art. 20a of the German constitution.²⁰

Accordingly, Roxin and Greco propose a relativisation of the traditional legal good framework, asserting that it is legitimate to criminalise and punish conduct based on the violation of legal goods of future generations by invoking additional criteria, such as the principle of solidarity and constitutional duties.²¹ In this expanded view, the legal good no longer functions as the sole substantive criterion for the legitimacy of criminalisation, thereby creating space for a broader normative justification.

D. Two definitions of 'future generations'

Before analysing the three positions outlined above, it should be noted that Criminal Law scholarship often lacks a clear and consistent definition of

17 Ulfried Neumann, 'Ergänzung "extensive Interpretation" oder Erweiterung der personalen Rechtsgutslehre?', in Beatrice Brunhöber et al. (eds.), *Strafrecht als Risiko* (2023), p. 157, 170 et seq.; Costa (2010), pp. 27 et seq.

18 Neumann (2024), pp. 170 et seq.

19 Roxin/Greco (2020), p. 64.

20 Ibid, pp. 63 et seq.

21 Ibid, p. 64.

'future generations'. The term is typically used to refer to those who do not yet exist at the time of the harmful conduct. However, conceptualizing 'future generations' exclusively as individuals who will only exist in the future and whose interests or legal goods are absent in the present fails to account for those who are already alive and will continue to exist in the future.

The notion of 'human generation' as a snapshot that freezes time and attributes the status of members of the present generation only to its participants is, at best, arbitrary and artificial. Human life and generations are marked by continuity: births and deaths occur in a non-stop succession. That raises questions as 'Are new-borns members of the present or future generations?' and 'Do individuals who have just passed away still belong, in some sense, to the present generation or already to the past?'. Even if one takes the moment a particular offence is committed as a temporal reference point, its consequences may extend far beyond that moment and affect successive generations. These considerations suggest that the meaning of 'future generations' is neither self-evident nor static, and requires conceptual refinement in order to serve as an effective analytical tool.

The feature of intergenerational continuity appears to be the key to delineating the boundaries between past, present, and future generations and how they overlap.²² By intergenerational continuity, one refers to the unbroken succession of human generations and the persistence of specific fundamental interests or legal goods, such as those related to environmental protection.

A lato sensu or broad definition of future generations includes those who are currently alive and those who will exist in the near future, reflecting an overlapping relationship between generations. Consider, for example, an individual named A, who is 27 years old, who coexists with their 80-year-old grandmother and 3-year-old nephew. All three share a common and present interest in a healthy and balanced natural environment, a collective legal good. Even if environmental harm resulting from present conduct will affect the youngest member of this group in the future, that legal good already exists and is violated in the present. This is especially evident in the case of children's legal goods, due to the inherently future-oriented nature

22 Andre Santos Campos, 'Long-term urgent interests and human rights practice: a challenge to the political conception' (2020), CRISPP, <https://doi.org/10.1080/13698230.2020.1737478> (last accessed: 22 July 2025), p. 13.

of some of their rights. As Campos notes, ‘they have special interests in the future that are subject to present truth conditions’²³.

By contrast, a *stricto sensu* or strict definition of future generations, usually adopted by criminal law scholars, refers exclusively to non-overlapping generations, focusing primarily on individuals who will exist only in the future and do not exist at the moment that the offence is committed. In these cases, there is no present interest or legal good. That would be the case of human germline genetic engineering, which is criminalised in Germany under the Law of Embryo Protection (*Embryonenschutzgesetz*) and in Brazil under the Biosafety Law (*Lei de Biossegurança*). It also applies to recent proposals of climate crimes – those examples will be addressed further.

Distinguishing between a *lato sensu* and a *stricto sensu* definition of future generations contributes to developing a present-rights-of-future-generations view, grounded ‘on the succession and continuous overlap between members of different generations’²⁴. Only by recognising the succeeding intervals can one avoid non-reciprocity and non-identity problems as detailed before.

E. Protecting future generations through protecting present generations

Taking into account a present-rights-of-future-generations approach, one can adequately engage with the arguments raised by the negative, the positive, and the out-of-the-theory answers.

Duties to protect future generations are grounded in two fundamental aspects that may be summarised by the idea of the domain held by present generations against future generations. People currently in existence possess the power to shape the living conditions of those who are yet to exist: the availability of resources, the natural foundations for personal and collective self-development, and even the political framework necessary for the exercise of fundamental rights. This capacity to influence and effectively determine how future generations will live correlates with their vulnerability, since they are unable to reciprocate (*stricto sensu* definition), or only in a limited manner (*lato sensu* concept). In criminal law, this domain becomes relevant when assessing the danger or harm posed to their legal goods.

23 Ibid, p. 14.

24 Ibid, p. 13.

This introductory assessment provides a more concrete and less theoretical approach than that proposed by social contract theories, as adopted by Schünemann and Gracia Martín. This new approach also confirms the personal aspect involved in protecting future generations' legal goods, as stated by Neumann and Lobo da Costa. Still, the challenges posed by the objections of non-identity, non-reciprocity, and the lack of impact on free and peaceful coexistence remain the primary liberal arguments against the legitimacy of criminalising conduct that exclusively harms the legal goods of future persons.

One alternative, as previously noted, is to renounce the exclusivity of the legal good theory as the sole substantive criterion for assessing the legitimacy of criminal provisions, thereby opening space for other criteria. However, the answer proposed by Roxin and Greco should not be accepted, as it would entail a substantial weakening of the legal good theory: Incorporating extraneous criteria not derived from the concept of legal goods would severely diminish its liberal and critical function. Vague principles, such as the solidarity principle, could then be arbitrarily invoked to justify questionable criminal provisions. The appropriate answer must remain within the theoretical boundaries of the legal good doctrine, whether through a negative (critical or transcendental) or a positive formulation (teleological or intrinsic).²⁵

The core challenge in Criminal Law concerning future generations lies in determining how the legal goods of persons who do not yet exist at the time of the crime are violated, particularly in a non-overlapping or *stricto sensu* definition of future generations. Against this backdrop, it must be acknowledged that while such concerns arise in cases like human germline genetic editing, they do not apply to all forms of conduct that affect future generations, for example, environmentally harmful behaviours.

Germline gene editing may produce long-term effects that span generations; still, at the time of the act, those who would suffer these consequences do not yet exist, including the individual directly subjected to genetic manipulation, as germ cells and embryos are not considered holders of fundamental rights under current frameworks. Criminalising such

25 A critical or negative formulation of the legal good theory provides an analytical tool to challenge the legitimacy of criminal provisions: It seeks to answer whether the reasons for criminalising a behaviour are justified by a violation of legal goods. Otherwise, a teleological or positive formulation of the legal good theory serves as an interpretation reference, establishing what is intended to be protected through a particular criminal provision.

conduct would therefore be illegitimate from the standpoint of the legal good theory, as there is no existing person whose legal good is violated. Justifying such criminalisation would require recourse to other robust reasons within the legal good theory, which lies beyond the scope of this paper.

Environmental crimes, in turn, have the capacity to harm legal goods of present people at the moment of the conduct. These harms can not only be 'extended' over a continuous period, but their consequences, such as the deprivation of natural resources, can be interpreted as including harm to future generations. Under a *stricto sensu* definition of future generations, aggravating criminal sanctions solely on that basis would still be illegitimate, due to the three aforementioned objections.

However, adopting a present-rights-of-future-persons view and embracing a *lato sensu* definition of future generations mitigate those objections. Environmental harm affects legal goods of present individuals and communities within the continuity and succession of generations: Those who existed at the time of the conduct will continue to exist as new generations are born, resulting in overlapping coexistence. The conditions of a determined identity, the ability to reciprocate and engage of the victim(s), and the impact on the free and peaceful coexistence are fulfilled and maintained over time, justifying the criminalisation or aggravation of sanctions.

As a general rule, then, it must be concluded that it is only legitimate to criminalise and/or punish based on protecting future generations when the conduct in question violates legal goods of individuals who exist at the moment and will continue to exist thereafter. One must, still, pursue efforts of concreteness and identify the specific cases in which this proposition may be appropriately applied.

F. Serious environmental crimes as crimes against future generations: human-made natural disasters, ecocide, and climate crimes

Depending on how the notion of 'affecting future generations' is interpreted, numerous criminal offences could potentially be classified as crimes against future generations, insofar as their consequences negatively impact the legal goods of persons living in the future. For example, offences such as corruption and tax evasion deprive future generations of public resources that could be allocated to essential services, including healthcare, education, and infrastructure.

Given the *ultima ratio* character of criminal law, a restrictive perspective must be adopted, following the constitution as the primary normative reference. This leads to the conclusion that mainly environmental crimes whose consequences transcend generation boundaries, affecting legal goods of future generations while simultaneously violating legal goods of the present one, should qualify as crimes against future generations. Notably, the constitutions of Brazil and Germany expressly link the duty to protect future generations to the obligation to safeguard the environment.

Article 225 of the Brazilian Constitution (*Constituição Federal*) recognises a 'right to an ecologically balanced environment, which is an asset of common use and essential to a healthy quality of life', establishing the duty of the government and the community 'to defend and preserve it for present and future generations' and submitting environmentally harmful behaviours to criminal and administrative sanctions. Similarly, Article 20a of Germany's Basic Law (*Grundgesetz*) asserts that the state bears responsibility towards future generations by mandating the protection of the natural foundations of life and animals.

On the basis of this constitutional foundation and through a restrictive perspective, the main conclusion of this paper is that only serious environmental degradation may be legitimately criminalised and/or punished with the express aim of protecting future generations, as those crimes would have to violate legal goods of present persons and simultaneously of future persons that are correspondent with them, understood within a framework of intergenerational continuity.

To test the validity of this normative claim, it is helpful to examine two prominent criminalisation demands in environmental criminal law that explicitly aim to protect future generations: ecocide and climate crimes.

Ecocide is conceptualised as 'the extensive damage to, destruction of or loss 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 severely diminished'²⁶. Other terms frequently employed to describe ecocide are 'severe', 'widespread', 'long-term', 'sub-

26 Polly Higgins/Damien Short/Nigel South, 'Protecting the planet: a proposal for a law of ecocide' (2013), 59(1) CLSC, p. 1, 10.

stantial', 'irreversible' and 'damage to the natural environment'²⁷, all of which emphasise the gravity and longevity of the harm inflicted.

In this sense, human-made disasters or anthropocentric hazards may fall within the category of ecocide. In the Brazilian context, notable examples include the Mariana dam disaster (2015) and the Brumadinho dam disaster (2019), both of which occurred in the state of Minas Gerais. In each case, mining companies responsible for tailing dams released massive quantities of toxic waste following structural failure, resulting in catastrophic loss of life and severe, lasting environmental degradation. In the aftermath of these events, two legislative proposals were introduced in the Brazilian Congress seeking to criminalise ecocide as a direct political response.²⁸

By definition, ecocide involves the infliction of long-term negative consequences on the environment, in a continuous violation of legal goods of present and future generations regarding the relationship between human beings and their environment, as well as their resources. The aforementioned dam disasters exemplify this: they cause immediate, large-scale destruction while simultaneously degrading the conditions necessary for future generations in a broad sense to enjoy and rely upon those natural resources.

In turn, climate crimes refer to criminalisation demands to protect the atmosphere or the climate as legal goods, framed as part of broader state policies to meet net-zero emissions targets, such as those required by the Paris Agreement.²⁹ Helmut Satzger and Nicolai von Maltitz claim that, in order to avoid excessive and illegitimate criminalisation, climate crimes must be subject to a 'relevance clause' that excludes punishment of 'neutral conduct', ie, necessary and/or common daily actions.³⁰ Paul Krell further argues that climate crimes would essentially punish two types of behaviours: illegally and substantially increasing the concentration of

27 Helmut Satzger/ Nicolai von Maltitz, 'Der "Ökozid" – ein Tatbestand des "Klimavölkerstrafrechts"?' in Helmut Satzger/Nicolai von Maltitz (eds.), *Klimastrafrecht* (2020), p. 437, 441 et seq.

28 As of September 2025, neither of the proposals has been approved by the Brazilian Congress (Congresso Nacional).

29 Helmut Satzger/Nicolai von Maltitz, 'Das Klimastrafrecht – Ein Rechtsbegriff der Zukunft' (2021), <https://doi.org/10.1515/zstw-2021-0001> (last accessed: 22 July 2025), pp. 2–5.

30 *Ibid.*, pp. 16–18.

greenhouse gases in the atmosphere, and operating a company that does not satisfy the requirements of emission certificates.³¹

In criminal law, however, one can only be punished for one's own conduct and not be responsible for others' actions. It is highly questionable whether a single conduct, no matter how serious, is capable of harming the atmosphere as a whole or altering the global climate in a manner consistent with the principle of personal responsibility, even in a cumulative danger structure that is generally accepted in criminal law doctrine.

Although the atmosphere and climate affect personal interests, they cannot be considered legitimate legal goods as they are not capable of being put in danger or harmed by a single or by cumulative conduct.³² Instead, their degradation arises from the long-term functioning of complex economic systems over decades.³³ Moreover, the effects of any given conduct on these global anthropocentric phenomena tend to materialise only in the distant future, raising additional difficulties regarding the temporal connection between the behaviour and the harm, which would take place in a far-off future perspective.

While the criminalisation of ecocide satisfies the criteria for legitimate protection of future generations under criminal law, the case for climate crimes proposals initially remains questionable. This, however, represents only a preliminary assessment. For any criminal provision, further evaluation is required in light of other foundational principles such as the legal certainty principle and the *ultima ratio* of criminal law.

G. Conclusive remarks

Criminalising or aggravating sanctions on the basis of protecting future generations is justifiable when the conduct in question causes serious environmental harm, thereby violating legal goods of people who are alive at the time of the act and will continue to exist and have personal legal goods in the future, be it individual (such as life, well-being, health) or collective (such as environment). An exception to this thesis concerns hu-

31 Paul Krell, 'Zur Legitimität von Kumulationsdelikten', in Helmut Satzger/Nicolai von Maltitz (eds.), *Klimastrafrecht* (2020), p. 139, 146.

32 See Maria Kaiafa-Gbandi, 'Strafrecht und Klimawandel', in Helmut Satzger/Nicolai von Maltitz (eds.), *Klimastrafrecht* (2020), p. 41, 45 et seq.

33 Christoph Burchard/Finn-Lauritz Schmidt, 'Kritik des Klimastrafrechts', in Helmut Satzger/Nicolai von Maltitz (eds.), *Klimastrafrecht* (2020), p. 83, 95 et seq.

man germline engineering, whose criminalisation must satisfy additional normative conditions to be deemed legitimate. Accordingly, the answers to the two questions posed in the introduction are affirmative.

Future generations, as a normative concept, must be understood not only as persons who will only come into existence in the future (*stricto sensu*), but also as those who already exist and are entitled to legal goods that can be adversely affected by the future negative consequences of present conducts (*lato sensu*). This *lato sensu* approach provides a coherent and rational foundation for imposing or increasing criminal sanctions for environmentally harmful behaviours whose consequences transcend generations, without relying solely on indeterminate principles such as the solidarity or the sustainability principle, or a rights-of-future-persons framework.

In conclusion, (i) aggravating criminal sanctions for anthropocentric hazards and (ii) criminalising ecocide pass the legitimacy test and satisfy the conditions to protect future generations through criminal law justifiably. In contrast, (iii) existing proposals for climate crimes do not meet the legitimacy threshold, due to the impossibility of a single conduct, even in a cumulative sense, to violate the legal goods ‘atmosphere’ or ‘climate balance’ attributed to present or near-future individuals.