

## **Stable Climate: A Common Heritage of Humankind**

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## ABSTRACT

When the last report of the International Law Commission (ILC-UN) stated: "*The atmosphere and airspace are two different concepts, which must be distinguished(...)*", a pathway was open to autonomize the "functional" dimension of the Earth System as a separate entity from the "static" territorial element of sovereignty. This evolution makes it possible to answer: "**What is Climate from a legal perspective?**".

The current inability to legally portray the functional dynamics of Planet Earth resulted from the non-recognition of the **Common Good Stable Climate** as a Common Heritage of Humanity, opting instead to address **the problem** of *Climate Change as a Common Concern of Humanity*. The Common Concern option limited the strategic actions to avoiding/mitigating/neutralizing emissions, preventing the internalization of benefits that ecosystems perform in the Common Good Stable Climate, as these benefits disappear into a global legal void. Thus, it is impossible to build an economy capable of actively preserving/restoring/regenerating Climate. Today, there are no systems in place to compensate the performance of negative emissions.

By focusing on the "problem" of *Climate Change*, the Common Good Stable Climate was left with an undefined ownership. As it belongs to no one, the Tragedy of the Commons took place on a global scale. Recovering requires recognizing a Heritage that belongs to all, as well as congruent rules between the appropriation and provision of the Common Good Stable Climate, which are currently non-existent in the Paris Agreement.

## KEYWORDS

Climate Common Concern; Climate Common Heritage; Legal Innovation; Static Sovereignty vs functional Earth System; Intangible Natural Heritage; Portuguese Climate Law

## INDEX

ABSTRACT.....	2
KEYWORDS .....	2
INDEX.....	3
1 - A Problem of theorizing the dynamics of the Earth System .....	4
<b>2 - Which legal status of Stable Climate?</b> .....	6
<b>a) Climate Change as a Common Concern of Humankind</b> .....	7
<b>b) A "Concern" does not clear the atmosphere</b> .....	9
<b>3 - A legal imperative for Innovation</b> .....	11
4 - Stable Climate as a <i>proxy</i> for an Earth System favourable to life .....	13
5 - Stable Climate, an Intangible Good?.....	14
6 - A legal conceptualization of Climate .....	16
<b>a) The Tragedy of a Common Good on a global scale</b> .....	16
<b>b) Defining the Common Good: Stable Climate as a Common Heritage of Humankind</b> .....	17
<b>c) Heritage - the legal support of a regenerative economy of nature</b> .....	19
<b>d) The Portuguese Climate Law - Climate Heritage as a goal of Climate Diplomacy</b> .....	22
7. Conclusion.....	23
References .....	24

## 1 - A Problem of theorizing the dynamics of the Earth System

When in the 1980s the problem of Climate Change entered the United Nations (UN)´ agenda, the international community was faced with a crucial question: **"What is Climate from a legal point of view?"** It was then realized how difficult it was to interpret in the international legal context the finite Good - Stable Climate - that until then was considered to be inexhaustible. Climate, and in particular the global average surface temperature, is a property emerging from the dynamics of the Earth System, which affects the entire planet"<sup>1</sup>. This functional system exists inside and outside all sovereignties, and it is impossible to divide it, even in a purely abstract way. Climate´ s dynamic/functional characteristic creates an "Inextricable link between the activities of States on national territory and their effects on the Climate (...) a situation without precedent in International Law"<sup>2</sup>. After more than 40 years, this question still remains unanswered. Although our planet´ s "functional" dimension (whose most visible manifestation is Climate) is intangible, it exists *de facto* in the natural world and is the support of life as a whole, and the basis for the functioning of human societies.

The current exclusively territorial, unidimensional, and hyper-simplified legal perspective that considers the planet to be only a geographical territory of 510 million square kilometres divided among States, leaves out the natural processes, functions, and the whole functional system outside the legal object, addressing only territories or certain specific problems. This perspective considers Common Goods as only being the left over territories from the States´ divisions, such as the open sea, the seabed, the polar regions, celestial space, etc.

It was the inability to thoroughly portray the dynamic and functional reality of the planet at the time (1980s) that led to the non-recognition of the Common Good "Stable Climate" as a true legal object subject to a legal regime that organizes its use and maintenance. Consequently, the decision was to consider the problem of Climate Change as a Common Concern of Humanity, which should be avoided/mitigated. Thus, the starting question remains unanswered.

Nevertheless, a few steps have recently been taken towards the recognition of the existence of the functional dimension of our planet - the Earth System - from a legal perspective. The last report of the United Nations International Law Commission (ILC) for the period 2021-2029, in Chapter VI dedicated to the Protection of the Atmosphere, states: "The atmosphere and airspace are two different concepts, which must be distinguished. (...) The atmosphere, as an "envelope of gases" surrounding the Earth, is dynamic and fluctuating, with gases that

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<sup>1</sup> WILL STEFFEN AND JAMIE MORGAN, "From the Paris Agreement to the Anthropocene and Planetary Boundaries Framework: an interview with Will Steffen". *Globalizations*, ISSN 1474-7731, 2021, pp. 1-13, in <https://doi.org/10.1080/14747731.2021.1940070> (22.09.2022).

<sup>2</sup> SIMONE BORG, "Climate Change as a Common Concern of Humankind, Twenty Years Later...From UNGA to UNSC", *IUCN Academy of Environmental Law Towards an Integrated Climate Change and Energy Policy in the European Union*, University of Malta, 2007, in <http://www.iucnael.org> (22.09.2022).

constantly move without regard to territorial boundaries. The atmosphere is invisible, intangible, and indivisible."<sup>3</sup>

Although this statement is only a confirmation of evidence and a description of natural phenomena now thoroughly described by science, the ILC's remarks are of great relevance to International Law. In these remarks, the ILC made a clear distinction between the chemical composition of the atmosphere, mostly resulting from biochemical processes, and the dynamics of the functioning of the Earth System (in this case, partially represented by the atmosphere), as separate concepts from the airspaces, which are subject to the jurisdictions of the States. The truth is that although these two concepts coexist in an overlapping manner, they are actually entirely distinct. The airspace refers to a static and spatial entity over which the State, within its territory, has complete and exclusive sovereignty. The atmosphere, on the other hand, is considered as a "functional" entity, which consists of large-scale air movement with dynamic and fluctuating characteristics<sup>4</sup>.

The step, taken by the ILC, may be the starting point for an evolution that overcomes the current dysfunctionality between the concepts of static sovereign territory **vs.** the functional dynamics of the Earth System.

Although the distinction pathway seems to have been opened, a legal gap still remains, since the due legal consequences deriving from making the aforementioned distinction have not been established. That is, if this report already recognizes the situation of the atmosphere as an indivisible, intangible, and non-separable good *the factu*, completely distinct from the concept of airspace, the international community has not yet committed to the next logical corollary: to recognize the existence of a functional dimension - the Earth System - as a Common Good from a legal perspective, with all the consequences that this entails. Legally, this would imply considering the duty to respect an asset that should belong to all, the duty to comply with the rules of use and sanction those who harm its functioning state, and the right to be rewarded for the benefits performed to the Common Good - which comprise the first basic structural conditions, as recognized by economic doctrine, to allow for a successful management of a Common Good<sup>5</sup>, and thus avoid the inevitability of the "Tragedy of the Commons"<sup>6</sup>.

The absence of a legal status concerning this functional, systemic, and non-territorial dimension of the planet has definitively shaped the strategy to fight Climate Change. The fact that a common good exists in the natural world and is not recognized as such within the organization of human societies is a structural problem that underlies the successive decades of failures of climate negotiations. To adequately portray the facts of the ecological dynamics and to overcome the current legal hazy and undefined concepts that fill International Environmental Law texts requires legally representing the functional dimension of the Earth

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<sup>3</sup> A/76/10 Report of the International Law Commission - United Nations, seventy-second session, 26 April - 4 June and 5 July - 6 August 2021, in [https://legal.un.org/ilc/reports/2021/english/a\\_76\\_10\\_advance.pdf](https://legal.un.org/ilc/reports/2021/english/a_76_10_advance.pdf), pp.29 (22.09.2022).

<sup>4</sup> A/76/10 REPORT OF THE INTERNATIONAL LAW COMMISSION - UNITED NATIONS, SEVENTY-SECOND SESSION, 26 APRIL - 4 JUNE AND 5 JULY - 6 AUGUST 2021, IN [HTTPS://LEGAL.UN.ORG/ILC/REPORTS/2021/ENGLISH/A\\_76\\_10\\_ADVANCE.PDF](https://legal.un.org/ilc/reports/2021/english/a_76_10_advance.pdf), PP.17 (22.09.2022).

<sup>5</sup> ELINOR OSTROM ET AL., "REVISITING THE COMMONS: LOCAL LESSONS, GLOBAL CHALLENGES", *SCIENCE* 284(5412), 1999, PP. 278-282.

<sup>6</sup> GARRET HARDIN, "THE TRAGEDY OF THE COMMONS", *SCIENCE*, 162(3859), 1968, PP. 1243-1248.

System. The lack of representation of the functional aspect of the Earth System drives some countries to still have doubts and ask questions about the ILC's statement, such as: "That may be the case... but what is the legal status of the atmosphere? Is it different from the high seas or international waters?"<sup>7</sup>.

## 2 - Which legal status of Stable Climate?

Despite the uncertainties that the characteristics of the Common Good Stable Climate raise in legal terms, the vital essential character that Climate represents for human life motivated the Maltese proposal of September 12<sup>th</sup>, 1988, that recommended for the recognition of Climate as a "Common Heritage of Humankind"<sup>8</sup>. However, the United Nations General Assembly Resolution of December 6<sup>th</sup>, 1988, opted to consider Climate Change as a "Common Concern of Humanity"<sup>9</sup>, a concept enshrined at the Earth Summit (Rio, 1992). This remains the legal framework for the 2015 Paris Agreement.

The "Concern" concept derives from the Heritage principle and it was the approach choice due to, among other reasons, the fact that it was technically impossible to apply the status of Common Heritage of Humanity to Climate by then. At the time, there were no scientific tools that allowed for the delimitation, explanation, and definition of the Stable Climate as a legal object. There is another possibility for opting to consider the problem of Climate Change as a *Common Concern* instead of recognizing the Common Good Stable Climate as a *Common Heritage*. The Concern option bypasses the direct approach of the subversive character of Climate in relation to the static characteristics of the territoriality principle of International Law. This may have been the most determinant factor for the Concern approach. The Climate's legal status problem was thus "circumvented", but the basic legal problem - static sovereign territory vs. functional dynamics of the Earth System - remains unsolved and this has had tragic consequences for the Earth System, and consequently for territories and society.

The term *Common Concern* is still considered a vague<sup>10</sup> and undefined concept, which since its creation raises implementation problems. As early as 1991, Mostafa Tolba, one of the personalities who contributed the most to formulating this concept stated: "It is very important that the concept of the Common Concern of Humankind be further elaborated to make its content and scope understandable and clear; it is also important to see how this concept can be interpreted in terms of the rights and obligations of States in the process of its implementation"<sup>11</sup>. Thirty years after the formulation of the project to define the "Common Concern of Humankind", claims continue to be made about the need for its evolution towards

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<sup>7</sup> A/CN.4/735, UNITED NATIONS GENERAL ASSEMBLY, 11-FEBRUARY-2020, "PROTECTION OF THE ATMOSPHERE COMMENTS AND OBSERVATIONS RECEIVED FROM GOVERNMENTS AND INTERNATIONAL ORGANIZATIONS", PP 20/45.

<sup>8</sup> A/43/241 UNITED NATIONS GENERAL ASSEMBLY, 12 September, 1988, in <https://digitallibrary.un.org/record/46039> (22.09.2022).

<sup>9</sup> A/43/905 UNITED NATIONS GENERAL ASSEMBLY, 30 November 1988.

<sup>10</sup> ZAKER AHMAD, "The Prospects of Common Concern of Humankind in International Law", T. Cottier (Ed.), *The Prospects of Common Concern of Humankind in International Law* (pp. I-II), Cambridge, Cambridge University Press, 2021.

<sup>11</sup> MOSTAFA K.TOLBA, "The Implications of the "Common Concern of Mankind Concept in Global Environmental Issues", *Revista IIDH*, 13, 1991, in <http://www.juridicas.unam.mx/publica/librev/rev/iidh/cont/13/doc/doc27.pdf> (22.09.2022), pp. 237-246.

defining rights and obligations: "Although its contours have, so far, remained vague and indeterminate, we suggest that a future principle may emerge in a process of claims and responses (...)"<sup>12</sup>. This fact was determinant for the ILC itself to refuse to use the concept: "Although several treaties and some literature show "some support for the concept of Common Concern of Humankind", the Commission decided not to adopt this language for the characterization of the problem, as the legal consequences of the concept of common concern of humankind remain unclear at the present stage of development of International Law related to the atmosphere."<sup>13</sup>

As the structural legal issue of the choice to consider "Climate Change as a Common Concern of Humankind" rather than the "Stable Climate as a Common Heritage of Humankind" has negative systemic cascading effects, some of which we highlight below.

### a) Climate Change as a Common Concern of Humankind

*"A Common Concern of Humankind remains a vague political formula, which could be used to legitimize the lack of concrete actions simply by declaring an environmental concern"*<sup>14</sup>. This warning from 1991 was given during a meeting of legal experts about this concept, after this option already had been approved<sup>15</sup>, and which definitively marked its path to the present day.

As the semantics of the word itself indicates, Concern (preoccupation) results from a feeling of responsibility, an idea of anticipation (pre-occupation) in relation to something that may cause us suffering and which motivates us to have behaviours that avoid the danger. From a legal perspective, in the case of Climate Change, the practical effects of a "Common Concern of Humankind"<sup>16</sup>, imply a commitment of self-restraint of the amount of greenhouse gas emissions by States, in which each one commits to make efforts to **reduce** new emissions, trying to **avoid, mitigate or neutralize new damages**, with the aim of limiting the temperature increase well below 2°C<sup>17</sup>. This approach can be summarized by the two statements as follows:

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<sup>12</sup> ZAKER AHMAD, "The Prospects of Common Concern of Humankind in International Law", T. Cottier (Ed.), *The Prospects of Common Concern of Humankind in International Law* (pp. I-II), Cambridge, Cambridge University Press, 2021.

<sup>13</sup> A/73/10 ILC REPORT - Chapter VI Protection of Atmosphere, p. 164.

<sup>14</sup> MOSTAFA K.TOLBA, "IMPLICATIONS OF THE "COMMON CONCERN OF MANKIND" CONCEPT IN GLOBAL ENVIRONMENTAL ISSUES", NOTES FROM THE EXECUTIVE DIRECTOR OF UNEP TO THE GROUP OF LEGAL EXPERTS MEETING, MALTA, REVISTA IIDH. VOL 13, DECEMBER 13-15, 1990.

<sup>15</sup> A/43/905 UNITED NATIONS GENERAL ASSEMBLY, 30 November 1988.

<sup>16</sup> Para um estudo mais aprofundado sobre a problemática, características e conteúdo do conceito de Preocupação Comum da Humanidade em matéria climática, consultar PAULO MAGALHÃES, "Common Interest, Concern or Heritage? The "commons" as a structural support for an Earth System Law. Earth system law: standing on the precipice of the Anthropocene", Routledge, 2021, e ainda "Climate as a Concern or a Heritage? Addressing the legal structural roots of climate emergency", RED — Revista Electrónica de Direito, n.º 1, 2020, vol. 21, in [https://cije.up.pt/client/files/0000000001/6-artigo-paulo-magalhaes\\_1592.pdf](https://cije.up.pt/client/files/0000000001/6-artigo-paulo-magalhaes_1592.pdf) (22.09.2022).

<sup>17</sup> PARIS AGREEMENT, COP21, 2015, in <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement> (22.09.2022).

- Common concerns do not define specific rules or obligations (neither of result, nor of conduct), but rather establish a general basis for cooperation (in its own right, or even by mandate) so that the concerned community can act to address the concern.

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- "The concern" element presupposes nothing more than that the States are objectively invited towards joint and concerted actions".<sup>19</sup>

The current Concern option is not to recognize the existence of the Common Good, but rather to recognize the existence of the problem of Climate Change, and, therefore the current strategy is an agreement to mitigate this problem, and not the recognition of the Good Stable Climate as a legal object. Consequently, it does not establish its own legal regime, which is necessary to institutionalize the management of this Common Good.

The current strategy for action is in line with the "legal revolution" that the 21<sup>st</sup> principle of the 1972 Stockholm Declaration<sup>20</sup> represented for International Law at the time. This principle proclaimed that: "States shall ensure that activities under their jurisdiction or control do not cause damage to the environment of other States or of areas beyond national jurisdiction," and reappeared as Principle 2 in the Rio Declaration, adopted at the 1992 Earth Summit. Probably the most significant principle of both Declarations is the "**no-harm**"<sup>21</sup> rule, now widely recognized as a principle of customary International Law by which a State has a duty to prevent environmental harm to other States. The problem is that, in practice, the *no-harm rule*, not only fails to include the Global Commons, but confines the strategy for action to damage control, hiding the need to safeguard, manage, and restore - that is, to positively and actively ensure the provision of the Global Commons. The exclusively "negative" approach of avoidance or mitigation remains the cornerstone of all climate action policy, and is in the percussive line of the very concept of *Common Concern* and the current strategy of the Paris Agreement.

If this strategy could make some sense thirty years ago, when the effects of human activities on Climate were still shrouded in substantial uncertainties, today, with this problem being an emergency and with the awareness that only through a large-scale cleanup of the atmosphere (removal of CO<sub>2</sub>) we can achieve Paris goals and avoid catastrophic Climate Change, the current model of approach to the problem, without recognizing the existence of a Common Good that must be managed, restored, and maintained, was demonstrated to be clearly insufficient.

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<sup>18</sup> DINAH SHELTON, "COMMON CONCERN OF HUMANITY", ENVIRONMENTAL POLICY AND LAW, 39/2, 2009, p. 3.

<sup>19</sup> IDEM 25.

<sup>20</sup> STOCKHOLM DECLARATION, 1972, IN [HTTPS://WEDocs.UNEP.ORG/BITSTREAM/HANDLE/20.500.11822/29567/ELGP1STOCKD.PDF](https://wedocs.unep.org/bitstream/handle/20.500.11822/29567/ELGP1STOCKD.PDF) (22.09.2022).

<sup>21</sup> KLAUS BOSSELMANN, "WHERE IS "EARTH" 50 YEARS AFTER STOCKHOLM?", 2021, IN [HTTPS://WWW.PATHWAY2022DECLARATION.ORG/ARTICLE/WHERE-IS-EARTH-50-YEARS-AFTER-STOCKHOLM/](https://www.pathway2022declaration.org/article/where-is-earth-50-years-after-stockholm/) (22.09.2022).



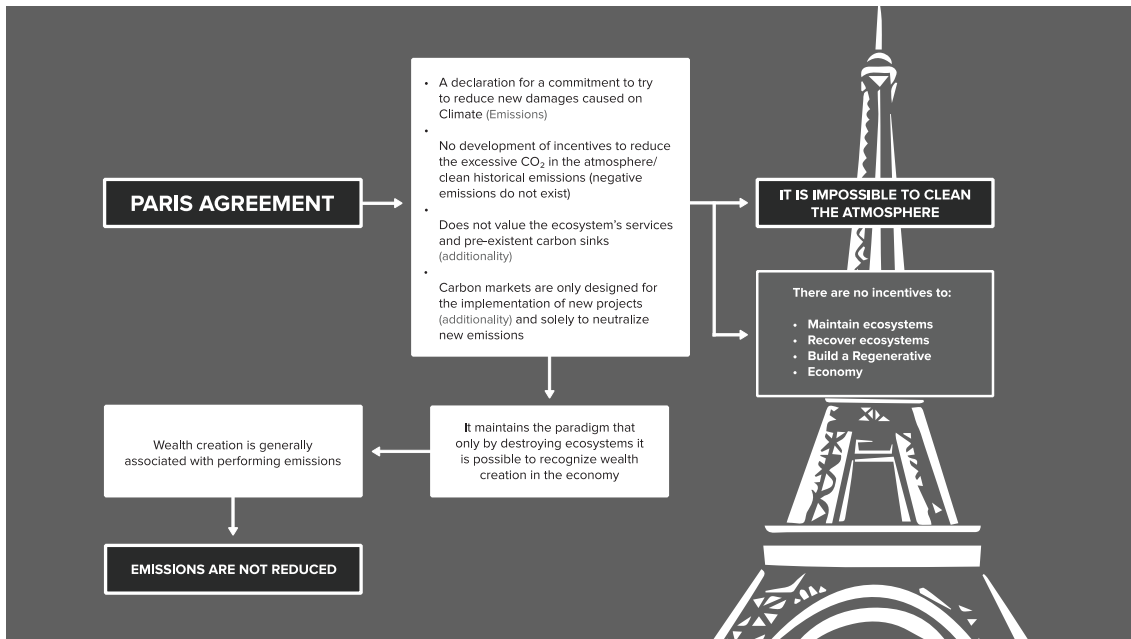


Fig.1 – The Paris Agreement as an attempt of voluntary commitments to reduce new emissions

This impossibility of acting positively in the restoration of the Common Good of the *avoided damages/no-harm rule* approach happens because it is impossible to define the rights and respective duties that have been claimed since the *Common Concern* conception. As Pham King Hang<sup>22</sup> explains, what is most relevant is not the subject/object relationship, but rather the relationship between individuals that results from the relationship with the object. That is, the structure of relationships that emerges around the forms of use or the ownership regime that is exercised over a given good. As in the case of Climate, the object is not even recognized, the structure of relationships that results from the shared use of this object - the Common Good Stable Climate - is not only, not recognized, but it is not subject to a legal regime.

While it is true that there is already a voluntary system with the goal of controlling damage, as part of the content of COP's negotiations, Kyoto's protocol, and the Paris Agreement, the creation of a system to ensure the provision of a Stable Global Public Good Stable Climate is still missing. In this sense, neither the duties that should emerge from the use/depreciation of the Common Good Stable Climate - nor the rights that should result from the provision of a Stable Climate, are recognized. This is also a structural problem, as the only object from which these rights and obligations could emerge - the Stable Climate - does not exist from a legal standpoint.

### **b) A "Concern" does not clear the atmosphere**

The goal of voluntary creating limits for emissions and control systems, omits the vital need to create incentives for provision of the Common Good Stable Climate, and all the "restoration" dynamics that could emerge from this. "Currently, there are no economic

<sup>22</sup> PHAM HANG, "Essays on Game Theory and Natural Resource Management", PhD thesis, Tilburg University, 2003.

mechanisms designed to pay for negative emissions”<sup>23</sup>, and CO<sub>2</sub> removals are still seen as a future activity<sup>24</sup>. The construction of a climate policy capable of making viable the cleaning of what belongs to everyone - removing CO<sub>2</sub> from the atmosphere/negative emissions - will also be crucial to overcome the current paradigm that only tries to avoid emissions, without, however, changing the concept of value that is at the base of the emissions. If we recognize the true wealth creation for societies that the provision of a Stable Climate represents, this evolution in the concept of value will have positive cascading effects on the current logic of emissions production and reduction.

In the current model, because the objective of the Common Concern is exclusively to mitigate new emissions, the wealth creation recognized by society is in the reduction and/or neutralization of new emissions and not in the recognition of the value arising from the provision of the Global Public Good Stable Climate. This happens because the environmental services that make this provision spread throughout the Earth System, in this Global Intangible Good that is a Stable Climate, in a legal vacuum at a global level, making these benefits "external" to the social system, the so-called positive "externalities" to the economy. Although "external" in relation to the concepts of sovereignty and economic value, these factors are vital to the adequate functioning of the Earth System, and therefore assume an existential character for humanity.

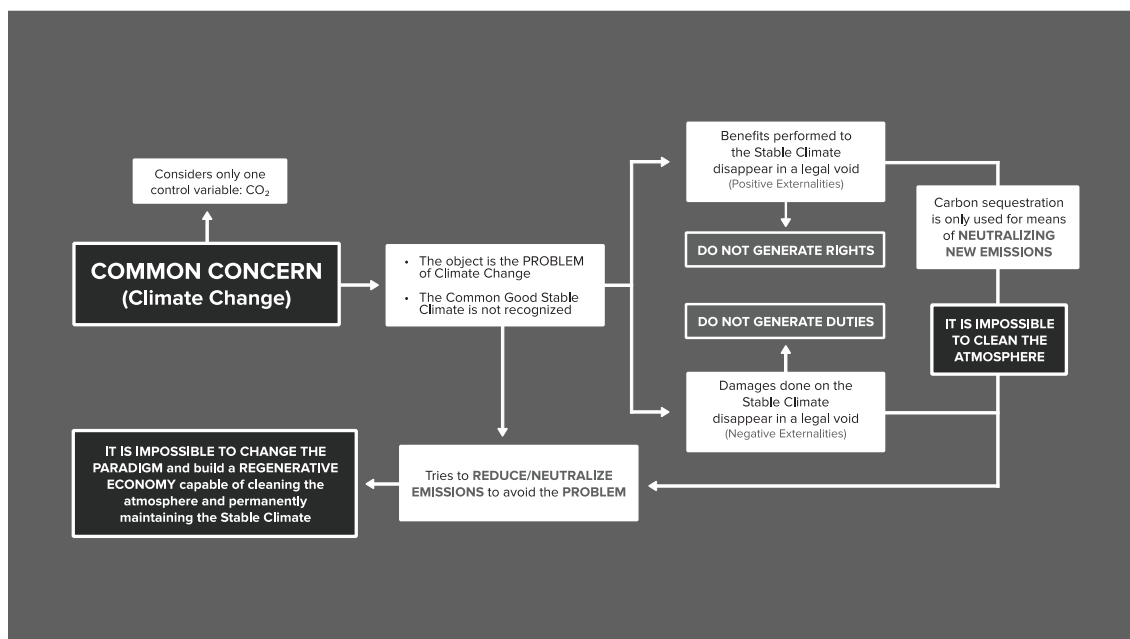


Fig.2 – The Common Concern does not provide the structural basis for cleaning the atmosphere

Because making Climate benefits is an "externality" to the economy, the only way to get financial credits is through avoided or neutralized new emissions, by selling carbon credits that

<sup>23</sup> ENERGY & CLIMATE INTELLIGENCE UNIT, "NEGATIVE EMISSIONS: WHY, WHAT, HOW?", 2018.

<sup>24</sup> STEVE ZWICK, "ARTICLE 6 AND ITS GLASGOW RULEBOOK: THE BASICS", ECOSYSTEM MARKETPLACE, 2021.

have not been used, but no one is compensated for removing the existent excess CO<sub>2</sub> from the atmosphere in the interest of all humanity (negative emissions).

Perversely, to have "value", there must be new emissions from those who need to pay to neutralize their emissions, or have to buy the credits in order to emit. The result is a *zero-sum* or *neutral-sum game*, and this has been a decisive factor in the results obtained until now in fighting Climate Change.

In this sense, the still prevailing concept of *Common Concern* prevents us from doing what is now considered essential to be able to meet the goals of Paris Agreement and avoid catastrophic Climate Change - restoring terrestrial and marine ecosystems on a large scale, removing excessive CO<sub>2</sub> and cleaning the atmosphere, as already demonstrated in the latest IPCC reports<sup>25</sup>. Because the benefits are not internalized and globally disappear in a legal void resulting from the non-recognition of the Common Good, these positive externalities remain invisible to nations' economies and thus, remain outside the wealth production chain and any decision-making by governments.

With the *Common Concern* approach, the natural processes that support life and all wealth production are invisible to the economy. Even current projections of the total amounts of CO<sub>2</sub> that will be possible to remove from the atmosphere - CDR - Carbon Dioxide Removals - through different solutions (nature based solutions, nature restoration, DACCS, Biochar, BECCS...)<sup>26</sup> are seen as an aid for the emission reductions that are needed and not to clean the liabilities. Still, these projections about the estimates of the needed CDRs to avoid going over the 1.5°C limit, always neglect how these plans can be applied on the ground, to be able to perform the recovery of all those natural areas, and the implementation of other CO<sub>2</sub> removal techniques.

### **3 - A legal imperative for Innovation**

There is a long history of conflicts between the international legal-political regulation, based on an exclusively territorial vision of the planet still resulting from the Westphalia Treaty on 1648, and an Earth System, global, *uno*, indivisible and highly interconnected. Initially local in character, these conflicts resulted from the confrontation between the global circulation of water and the atmosphere, or migratory species vs. the static character of sovereignty. With Climate Change this conflict has reached a systemic character due to human interference in global biogeophysical cycles. Regardless of the scale, the dysfunctionality resulting from the exclusively territorial view of International Law to explain, represent and harmonize the global interdependencies arising from the global functioning of the Earth System, was the backdrop

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<sup>25</sup> IPCC, "Summary for Policymakers, Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change" [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekci, R. Yu, and B. Zhou (eds.)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 2021, pp. 3–32, in 10.1017/9781009157896.001.

<sup>26</sup> ENERGY TRANSITIONS COMMISSION 2022: "MIND THE GAP: HOW CARBON DIOXIDE REMOVALS MUST COMPLEMENT DEEP DECARBONISATION TO KEEP 1.5°C ALIVE", 2022, IN [HTTPS://WWW.ENERGY-TRANSITIONS.ORG/PUBLICATIONS/MIND-THE-GAP-CDR/](https://www.energy-transitions.org/publications/mind-the-gap-cdr/) (22.09.2022).

of the failure of Environmental Law. "Fifty years after Stockholm, it is obvious that International Environmental Law has failed"<sup>27</sup>.

But if this "functional" reality has already been identified in the atmosphere by the ILC, as previously mentioned, its origin, constraints, interactions, and consequences are still outside this analysis and the atmosphere itself is not an element that can be separated from the system. However, the ILC noted, right at the preamble, the close interaction between the atmosphere and the oceans. Oceans, which in turn are determinants to Climate, while the United Nations General Assembly has already recognized the effect of Climate Change on the oceans and "stressed the importance of increasing scientific understanding of the oceans-atmosphere interface"<sup>28</sup>.

Separating oceans from the atmosphere and biodiversity is something that exists only in humans' imaginations and representations, as means to allow for the articulation and organization of narratives in an attempt to explain a single deeply interconnected reality, where emergent phenomena cannot be explained, neither by simple division, nor by the summation its different parts. In recent years, the Earth System Science has represented a significant paradigm shift, an authentic scientific revolution in Kuhn's language<sup>29</sup>, because it revealed a new way of conceiving and thinking about the Earth.

"Earth System Science represents an integrative meta-science of the entire planet as an interconnected, complex, and ever-evolving system, far beyond a mere collection of isolated ecosystems or global processes. In this sense, only by approaching the System as a whole, and not the atmospheric or oceanic circulation separately, and how these are influenced and influence biodiversity, can we portray the facts more accurately. This paradigm shift is already recognized in several official United Nations documents: "The proliferation of multilateral environmental agreements and the resulting separate and distinct mandates ignore the unity, interconnectedness and interdependence of the Earth's ecosystem"<sup>30</sup>.

A new principle of International Law is already emerging<sup>31</sup>. Addressing this unity and the interconnections is not only an enormous challenge for the natural sciences, but it will be above all for Law, Political Science, and Economics. In short, it is an exceptional governance challenge. As Gomes Canotilho teaches us, "as all knowledge obeys to mechanisms of permanent changing and learning, decisions on innovative issues also move away from stable and definitive administrative models, to adapt with flexibility and dynamism to the challenges brought by the instability of knowledge"<sup>32</sup>.

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<sup>27</sup> KLAUS BOSSELMANN, "Where is "Earth" 50 Years after Stockholm?", 2021, in <https://www.pathway2022declaration.org/article/where-is-earth-50-years-after-stockholm/> (22.09.2022).

<sup>28</sup> GENERAL ASSEMBLY RESOLUTION 71/257 OF 23 DECEMBER 2016 ON OCEANS AND THE LAW OF THE SEA, PARAS. 185-196 AND 279.

<sup>29</sup> THOMAS S. KUHN, "THE STRUCTURE OF SCIENTIFIC REVOLUTIONS", 1962.

<sup>30</sup> A773/419 – "Gaps in international Environmental law and environment-related instruments: towards a global pacy for the environment", 30 November 2018, in [https://www.commonhomeofhumanity.org/\\_files/ugd/deeae3\\_0054f53a156a46989d5b84bb50ca5eb9.pdf](https://www.commonhomeofhumanity.org/_files/ugd/deeae3_0054f53a156a46989d5b84bb50ca5eb9.pdf) (22.09.2022).

<sup>31</sup> PAULO MAGALHÃES, WILL STEFFEN, ANA BARREIRA, KATE MEYER, JOSÉ MANUEL VIEGAS, KLAUS BOSSELMANN, ET AL., "Integrity and Unity of the Earth System – A new principal of International Law", 2019, in [https://wedocs.unep.org/bitstream/handle/20.500.11822/27974/IIDMACHH\\_proposal.pdf?sequence=1&isAllowed=y](https://wedocs.unep.org/bitstream/handle/20.500.11822/27974/IIDMACHH_proposal.pdf?sequence=1&isAllowed=y) (22.09.2022).

<sup>32</sup> JOSÉ JOAQUIM GOMES CANOTILHO, "A crise do direito e o direito da crise", Boletim da Faculdade de Direito da Universidade de Coimbra, Coimbra, v. LXXXVIII. t. II, 2012, p. 1073 e ss.

The inability of legal developments to evolve and adapt to the growing knowledge about the functioning of the Earth System, is at the base of the actions that try to adapt, without however, structurally evolving to have the slightest chance to succeed, and to integrate and cooperate with the functioning of the system on which these actions depend. The truth is that "in response to climate and environmental urgency, the approach has been one of slowing down, reducing the pace and intensity of the most impactful activities, and strengthening resilience and recovery after the disaster. In essence, the concept of resilience corresponds to a conformation with the inevitability of the trend and the inability to bend it, reducing the ambition to only reduce the slope of the line that draws the future trend."<sup>33</sup> And what is certain is that "*incremental improvements to the current socio-economic system, are not sufficient to stabilize the Earth System.*"<sup>34</sup>. "If the moment we live is quantitatively and qualitatively different, more of the same is not the appropriate response. Quantitatively and qualitatively different measures are required. The need to innovate for ecological transition is, therefore, undeniable. We are facing what the Organization for Economic Cooperation and Development (OECD) has already called the "innovation imperative"<sup>35</sup><sup>36</sup>.

#### **4 – Stable Climate as a proxy for an Earth System favourable to life**

A Stable Climate is a visible manifestation of an Earth System in a well-functioning state from the point of view of human interest, which in turn, depends on a functioning and resilient biosphere. This relative stability is based on well-defined patterns of atmospheric and oceanic circulation. A pattern of stable dynamics of the Earth System's functioning can be understood as the 'Software' of the planet. This 'software' is being "attacked", that is, modified by human activities that by changing the chemical composition of the atmosphere, cause an increase in global temperature, which, among many other consequences, is contributing to the melting of the ocean's ice, which in turn, leads to a decrease in the reflection of solar radiation, which will be absorbed more in the ocean, increasing its temperature and also that of the atmosphere, contributing to a change in the thermodynamic behaviour between the poles and the tropics, leading to the destabilization of atmospheric circulation patterns and the deceleration of ocean circulation.<sup>37</sup> All of this results in climate change with cascading effects on all natural systems and, consequently, on all social endeavours. This cascade of interdependent effects, interconnections, and feedbacks makes the intellectual operations of separating the

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<sup>33</sup> ALEXANDRA ARAGÃO, "Densificação jurídica do princípio daecoinovação. A inovação jurídico-ecológica como resposta adequada à emergência climática e ambiental", in GOMES, ANA CLÁUDIA NASCIMENTO; ALBERGARIA, BRUNO; CANOTILHO, MARIANA RODRIGUES (Coord.), *Direito Constitucional: diálogos em homenagem ao 80.º aniversário de J. J. Gomes Canotilho*, Belo Horizonte Forum, 2021.

<sup>34</sup> WILL STEFFEN ET AL., "Trajectories of the Earth System in the Anthropocene", Edited by WILLIAM C. CLARK, Cambridge, MA, Harvard University, and approved July 6, 2018 (received for review June 19, 2018).

<sup>35</sup> OCDE, "The innovation imperative. Contributing to productivity, growth and well-being", Paris: OCDE, 2015, in <http://dx.doi.org/10.1787/9789264239814-en> (22.09.2022).

<sup>36</sup> IDEM 34.

<sup>37</sup> PAULO MAGALHÃES E WILL STEFFEN, "WHY WE NEED A CRITICAL LEGAL INNOVATION TO SAVE OUR CLIMATE", 2021, IN <HTTPS://WWW.COMMONHOMEOFHUMANITY.ORG/CLIMATE> (22.09.2022).

atmosphere, oceans, and biodiversity, a dangerous and dysfunctional exercise. However, this does not prevent these intellectual divisions from being necessary to organize human thought and action. The problem is not the abstract operations of territorial (borders) or sectorial (oceans, biodiversity or atmosphere) division, but the absence of a framework capable of representing and integrating the global dynamics, and in this way giving meaning to territorial or sectorial actions. For all intents and purposes, what is missing is a new concept capable of giving representation to the interconnections - to the global and deeply interdependent functioning of an indivisible Earth System.

The fact that a Stable Climate corresponds to a certain pattern of functioning of the whole Earth System and that this pattern represents a well functioning state of this system, makes the Stable Climate a *proxy*<sup>38</sup> of the whole system (including the atmosphere, oceans, and biodiversity, etc...). The fact that Climate is an "intangible natural resource, which crosses and goes beyond the national territories of States"<sup>39</sup>, is highly challenging for one of the fundamental pillars of International Law - the territoriality principle.

We know today that it is possible to perform an operation of abstract legal division of the geographic space of the oceans by creating borders and different maritime zones, or by dividing the atmosphere into different airspaces through legal abstractions, which are absolutely valid and necessary for the organization of human communities; however, we must also be aware that a similar operation of legal division, even in a purely abstract way, cannot be performed at the level of the biogeochemical composition of the atmosphere, the oceans, or the Climate, since the fluids that compose them flow all over the planet. Thus, although subject to depreciation, these biogeochemical compositions cannot be appropriated or divided. Representing these two deeply connected and mutually influencing, yet distinct realities, the *territory* - where legal abstractions of division are possible - and the *Earth's functioning system* - where no legal abstraction of division is possible, in a new concept that represents the Functional System as a single whole, capable of adequately reflecting the facts, is the challenge that the ILC brought us in its latest report.

## 5 - Stable Climate, an Intangible Good?

As ILC recognizes, the atmosphere has "physical and functional components"<sup>40</sup>, that is, a chemical composition and a circulation pattern. And its functioning pattern - the *software* - is truly intangible.

"When we refer to the relatively stable pattern of the dynamics of the Earth System, which corresponds to a Stable Climate, we are not referring to "matter" or the physical planet, but

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<sup>38</sup> No entendimento da linguagem de computação o Proxy é um servidor que age como um intermediário e representante da rede da internet, e que facilita o acesso a esta e a todos os seus serviços.

<sup>39</sup> SIMONE BORG, "Climate Change as a Common Concern of Humankind, Twenty Years Later... From UNGA to UNSC", IUCN Academy of Environmental Law, Towards an Integrated Climate Change and Energy Policy in the European Union, University of Malta, 2007, in <http://www.iucnael.org> (22.09.2022).

<sup>40</sup> A/73/10 ILC REPORT - "Chapter VI, Protection of Atmosphere", p. 179.

to the way how matter and energy move and circulate around the planet. Matter is always in transformation through chemical reactions and physical processes - and, in the long run, through biological evolution. But the patterns and rates of these changes and their interactions that form higher-order structures, such as ecosystems, follow well-defined patterns of organization and stability. At the planetary scale, the ways in which matter and energy move around the planet, creating various patterns of atmospheric and oceanic circulation, follow the laws of thermodynamics and result in a Stable Climate. A Stable Global Climate is something that can only be legally classified as an intangible natural asset"<sup>41</sup>. Because this vital good for humanity is a way of functioning, a pattern of atmospheric and oceanic circulation, this proper mode of functioning is an intangible good. And there are already several references<sup>42</sup> in doctrine and in official documents, which recognize Climate as an Intangible Good.

Human societies have a long history of recognizing intangible assets, as is the case of intellectual property protection, in its two aspects (copyright and related rights, and industrial property), and it was this legal evolution that created the necessary structural conditions and allowed for the development of the society of knowledge and technological innovation. But the recognition of intangible assets did not stop with the innovations and intellectual creations that are born from the human spirit, but have already extended to intangible natural phenomena, such as the geostationary orbit or radio-magnetic frequencies, in the domain of Space Law. However, "International Law itself was (and to some extent, still is) 'ill-equipped' to address activities, public or private, that negatively affect an intangible natural resource that extends within and beyond the national territories of states"<sup>43</sup>. If it is already recognized that Climate is a result of a certain *modus operandi* of the Earth System, and that is an intangible asset, if Law since the early 18<sup>th</sup> century<sup>44</sup> recognizes the existence of intangible assets, and if this recognition is no longer exclusive to human creations and has already extended to natural phenomena whose use had to be regulated, why can we not innovate legally and recognize also from a legal point of view the most valuable asset of our planet - the life support system - a functioning pattern of the Earth System, to which corresponds a relatively Stable Climate?

Because the recognition and valuation of intangible assets determines the way we manage tangible assets, recognizing the existence of a global intangible legal good may not only be determinant in overcoming the problem that results from the incompatibility between global ecological dynamics and the static/territorial approach to sovereignty, but may also make visible in the economy the vital value of the services that tangible ecological infrastructures produce in the intangible functioning of the Earth System.

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<sup>41</sup> Idem 38.

<sup>42</sup> SIMONE BORG, "International law itself was (and to a certain extent remains) ill-equipped to address state activities affecting negatively an intangible natural resource which spans across and beyond the national territories of states", Key Note Speech at the unveiling ceremony of the Climate Change Initiative Monument, University of Malta, 21 April 2009, p.1, in <https://www.um.edu.mt/newsoncampus/features/?a=62770> (22.09.2022).

<sup>43</sup> SIMONE BORG, "Climate Change as a Common Concern of Humankind, Twenty Years Later...From UNGA to UNSC", IUCN Academy of Environmental Law - Towards an Integrated Climate Change and Energy Policy in the European Union, University of Malta, 2007, in <http://www.iucnael.org> (22.09.2022)..

<sup>44</sup> Promulgada durante o reinado da Rainha Ana de Inglaterra, entre 1709 a 1710, entrou em vigor em 10 de abril de 1710. The Statue of Anne ou Copyright Act, concedeu aos editores de livros proteção legal por 14 anos com o início após a publicação. Também concedeu 21 anos de proteção para qualquer livro já impresso.

## 6 – A legal conceptualization of Climate

### a) The Tragedy of a Common Good on a global scale

Climate Change is often described as a "Tragedy of the Commons on a global scale"<sup>45</sup>. According to classical economic doctrine, the fatality of the tragedy in the management of commons is associated with the fact that the benefits resulting from the use/appropriation of an asset/resource are readily accessible to all on a free access basis, a situation that is often also associated with uncertainty about the ownership of the asset - the "insufficient delimitation of property rights resulting in over-exploitation of natural resources."<sup>46</sup>. Beyond the propensity for misuse/appropriation of a good/resource, the vagueness surrounding the ownership of the good, results in another consequence with greater relevance: the impossibility of a collective/governmental solution that can actively ensure the maintenance and provision of the Common Good over time.

Currently, the *Common Concern* - Climate Change - focuses on the causes and consequences of the problem itself, without recognizing or defining the Common Good - Stable Climate - nor defining to whom it belongs. The "Concern element carries with it no meaning of ownership, but relates to the causes as well as the responses to the Common Concern"<sup>47</sup> to mitigate the problem, that is, acting only as an attempt to control the Good's use to avoid damage. On the other hand, the concept of *Heritage* focuses on the exploitation/management of a resource that has the meaning of shared Heritage, a Common Heritage that belongs to all humanity. "The concept of the Common Heritage of Humankind generally applies to geographic areas or resources, while the concept of the Common Concern of Humankind applies to specific issues."<sup>48</sup>.

This whole problem is centred on the option of considering *Climate Change* as a "*specific issue*", in the interest of humanity to avoid and/or mitigate this problem that is a consequence of the abusive use of a good that we thought as being unlimited, has given rise to the tragedy of the depletion or deterioration of this Good; as opposed to considering the good *Stable Climate* as a natural phenomenon that represents the favourable functional dimension of the entire Earth System, which exists *de facto* in the natural world. In this sense, this Good should be managed as a Common Good, which implies defining the Good, and giving the ownership of that good to someone. As Alexander Kiss teaches us, "how can a Good that belongs to no one be subject to a legal regime?"<sup>49</sup>.

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<sup>45</sup> SHAHZAD ANSARI, F. WIJEB AND B. GRAY, "Constructing a Climate Change Logic: An Institutional Perspective on "Tragedy of the Commons", *Organization Science*, Vol.24, No.4 July-August 2013.

<sup>46</sup> GARRET HARDIN, "THE TRAGEDY OF THE COMMONS", *SCIENCE*, 1968, 162(3859), pp. 1243-1248.

<sup>47</sup> WERNER SCHOLTZ, "Human Rights and Climate Change: Extending the Extraterritorial Dimension Via Common Concern", Chapter 7, *The Common Interest in International Law*, Wolfgang Benedek, Koen De Feyter, Matthias C. Kettmann and Christina Voigt (Eds) Intersentia, Cambridge, 2014.

<sup>48</sup> CHELSEA BOWLING, E. PIERSON AND S. RATTE, "The Common Concern of Humankind: A Potential Framework for a New Internationally Legally Binding Instrument on the Conservation and Sustainable Use of Marine Biological Diversity in the High Seas", 2016, in [https://www.un.org/depts/los/biodiversity/prepcom\\_files/BowlingPiersonandRatte\\_Common\\_Concern.pdf](https://www.un.org/depts/los/biodiversity/prepcom_files/BowlingPiersonandRatte_Common_Concern.pdf) (22.09.2022).

<sup>49</sup> ALEXANDER KISS, "LA NOTION DE PATRIMOINE COMMUN DE L'HUMANITÉ", *ACADÉMIE DE DROIT INTERNATIONAL DE LA HAYE, RECUEIL DES COURS*, TOMO 175, 1982, pp. 103-256.



If preventing Climate Change is a fundamental Common Interest of humanity, it must be recognized that "this notion of common interest of humanity is the fundament of the common heritage of humanity and even, or we may say, that this heritage is the materialization of the common interest of humanity, in one area or in certain resources<sup>50</sup>(...)". Given that Climate Change is not just a feeling/concern, like a war that should be avoided or disarmament that should be promoted, but rather an alteration of a certain natural phenomenon - the functioning pattern of the Earth System that corresponds to a Stable Climate - it is legitimate to state that the Stable Climate, although being an intangible asset, is the materialization of this concern.

The point is that we didn't know it was finite, nor could we define it. Today not only it is possible to define it, but we know that since it is not a free and unlimited Good, it is necessarily a Common Good. Basically, we have to accept that Climate Change is a Tragedy of a Common Good. But because this good is intangible, indivisible, and does not respect State borders, not only has the existence of the good itself not been accepted, but also its inevitable common ownership has not been defined. By not belonging to anyone, the structural conditions are created for the Tragedy of the Common Good to happen. Avoiding the fatality of this Tragedy implies creating the structural conditions for the successful management of this Common Good.

As Ostrom<sup>51</sup> explains to us, there are three fundamental initial conditions to avoid this fatality: a) define and delimit the Common Good that is at stake, b) define a community willing to act as steward of this user/holder resource, c) build a congruent system between the rules of Common Good provision and appropriation.<sup>52</sup>

### **b) Defining the Common Good: Stable Climate as a Common Heritage of Humankind**

The biogeophysical conditions that enabled the pattern of the favourable functioning of the Earth System for the past 11,700 years are the result of millions of years of interactions in the history of life on the planet, and are a true heritage to humanity. These were the intangible conditions that allowed for the development of civilizations, and therefore have a vital/existential value for humanity. They are a true *Grundnorm*<sup>53</sup> on which all other legally protected values depend. In this context, there is a vital need to pass on to future generations the biogeophysical conditions that support this favourable mode of functioning of the Earth System. Thus, we can argue that the specific state of the Earth System corresponding to the geological period of the Holocene carries the meaning of Heritage, as something we need to

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<sup>50</sup> ALEXANDER KISS, "La notion de patrimoine commun de l'humanité", Académie de droit international de La Haye, Recueil des cours, tomo 175, 1982, pp. 226.

<sup>51</sup> ELINOR OSTROM ET AL., "REVISITING THE COMMONS: LOCAL LESSONS, GLOBAL CHALLENGES", SCIENCE 284(5412), 1999, pp. 278–282.

<sup>52</sup> A enumeração das regras de Ostrom para uma gestão bem-sucedida de bens comuns, usualmente é seguinte: Limites do bem comum claramente definidos, Equivalência proporcional entre benefícios e custos, Arranjos governativos resultantes da escolha coletiva, Monitorização permanente, Sanções graduadas, Resolução rápida e justa de conflitos, Autonomia local, Governança Policêntrica.

<sup>53</sup> KIM RAKHYUN & KLAUS BOSSELMANN, "International Environmental Law in the Anthropocene: Towards a Purposive System of Multilateral Environmental Agreements", Transnational Environmental Law, 2, 2013, 285–309, in 10.1017/S2047102513000149.

maintain in the interest of all. "Heritage is an idea. It is a philosophical idea, a legal concept, because it is something we need to conserve."<sup>54</sup> Today the Heritage idea can be scientifically defined and measured. The imperative recognition of the need for an operational Law that does not appeal to imprecise and diffuse references requires defining and delimiting its object, at the level of its own entitlement. This task can be methodologically accomplished by using the best available data provided by the scientific state-of-art.<sup>55</sup>

The growing scientific knowledge about the Earth System and the recent description of the nine main control variables that determine its functioning state, through the *Planetary Boundaries* (PBs)<sup>56</sup> provides a possibility to better understand this interconnected functioning state. The PBs consider the highly interconnected intrinsic characteristics of the Earth System, and define a combination of variables, relationships, and parameters that together describe the state of the Earth System. This enables a better understanding of the role of the interaction between chemical, biological, and physical processes in maintaining an Earth System favourable state of functioning for humanity (i.e., the Holocene), as well as humanity's role in pushing this System out of this stable and desirable state. These limits are a combination of science-based limits regarding nine fundamental processes (e.g., climate change, ozone depletion, biosphere integrity, ocean acidification) that together describe the intangible functioning of the Earth System and the limits to the degradation of these processes.<sup>57</sup>

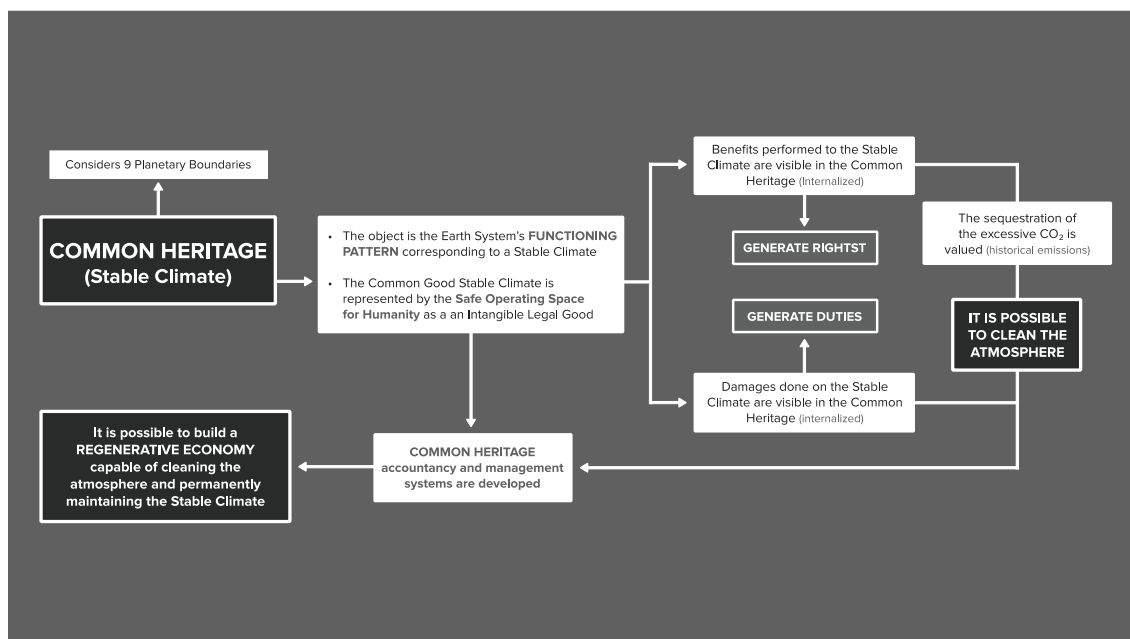


Fig.3 The Common Heritage concept applied to the Stable Climate provide a structural basis for cleaning the atmosphere.

<sup>54</sup> JOSÉ MANUEL SOBRINO, "Património é Uma Ideia (...) Património é Algo que é Necessário Conservar no Interesse de Todos", *Jornal Quercus*, 50 (Jan-Fev), 2012, 4-5, in <http://www.quercus.pt/images/PDF/QA/QA50.pdf> (22.09.2022).

<sup>55</sup> MARIA REGINA REDINHA, MARIA RAQUEL GUIMARAES, "CLIMA ESTÁVEL: A URGÊNCIA DE UM DIREITO, A PROPÓSITO DO CASO MILIEUDEFENSIE ET AL. V. ROYAL DUTCH SHELL", *RED — REVISTA ELETRÓNICA DE DIREITO*, OUTUBRO, N.º 3, 2021, p. 3, (VOL.26), in 10.2480/2182-9845\_2021-0003\_0001.

<sup>56</sup> JOHAN ROCKSTROM ET AL., "A SAFE OPERATING SPACE FOR HUMANITY", *NATURE*, 2009, 461(7263), 472.

<sup>57</sup> TIMOTHY M. LENTON, MARCEL VAN OIJEN, "GAIA AS A COMPLEX ADAPTIVE SYSTEM", 357:1421 *PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY B*, 2002, p. 683.

In this context, the favourable biogeophysical state corresponding to an Earth System in a well-functioning state, can be defined quantitatively - the Safe Operating Space for Humankind. Within this space's limits, the system is resilient - that is, it has the capacity to absorb "shocks", maintaining its way of functioning.<sup>58</sup> When these limits are exceeded, the system no longer tends to regain its original "identity", but tends toward a different configuration.<sup>59</sup>

Thus, by delimiting this *safety space*, a non-territorial and intangible space, this common interest of humanity was "materialized" in a quantifiable and definable natural resource.

"Since literally everything in our society is based on a Stable Climate"<sup>60</sup>, the need for the restoration and maintenance of this Common Good, is a fundamental structural issue for the organization of human societies and existential for the whole humanity, thus cannot be tackled solely with the current strategy of *no-harm/avoided damages*.

Going beyond concern and mitigation, and moving towards a strategy of actively cleaning the atmosphere, regenerating the biosphere, and reversing the Tragedy of the Common Good, implies defining the Common Good, assigning its ownership to all humanity and all generations, and creating a governance system capable of developing incentive mechanisms for the maintenance and restoration of that Good.

We, therefore, propose the implementation of the legal regime of the Common Heritage of Humankind to the Stable Climate, represented by the Safe Operating Space for Humanity, a non-territorial natural reality, intangible, indivisible, and materially non-appropriable, but depreciable and limited, and therefore, subject to the Tragedy of the Commons.

### **c) Heritage - the legal support of a regenerative economy of nature**

In any case, the unavoidable conceptual challenges that Climate imposes on Law and Economics have been, unfortunately, circumvented through the undefined concept of the "Common Concern of Humankind". The recognition of the existence of a Common Good that spans across borders was avoided, and by doing that, the current concept of wealth creation was maintained, making it impossible to internalize benefits (positive externalities), that is to compensate those who practice positive actions to the Common Good. The consequences, positive or negative, of individual decisions to make benefits in the Common Good Stable Climate, do not fall on those who made the decisions. Instead, the consequences spread across the Common Good that belongs to no one. And because the Common Good does not belong to anyone, no one will be willing to economically compensate those who performed benefits to a Good that belongs to no one. Consequently, there is no economic rationality for benefits to be produced.

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<sup>58</sup> CARL FOLKE ET AL., "RESILIENCE AND SUSTAINABLE DEVELOPMENT: BUILDING ADAPTIVE CAPACITY IN A WORLD OF TRANSFORMATIONS", 2002.

<sup>59</sup> KIM RAKHYUN & KLAUS BOSSELMANN, "Operationalizing Sustainable Development: Ecological Integrity as Grundnorm of International Law", *Review of European Community & International Environmental Law*, RECIEL 24 (2) 2015 ISSN 2050-0386, 2015, in 10.1111/reel.12109.

<sup>60</sup> JOHAN ROCKSTROM, 10 YEAR TO TRANSFORM THE FUTURE OF THE EARTH, TED, 2020, IN [HTTPS://WWW.TED.COM/TALKS/JOHAN\\_ROCKSTROM\\_10\\_YEARS\\_TO\\_TRANSFORM\\_THE\\_FUTURE\\_OF\\_HUMANITY\\_OR\\_DESTABILIZE\\_THE\\_PLANET](https://www.ted.com/talks/johan_rockstrom_10_years_to_transform_the_future_of_humanity_or_destabilize_the_planet) (22.09.2022).

Since in a Global Common Good, it is impossible to make the positive consequences fall entirely on those who produced these benefits, the only way to internalize the benefits to those who practiced them is by creating a compensation system. This would fulfil the second structural condition identified by Elinor Ostrom for the management of Common Goods and allow for collective action: the existence of a congruent system between the rules of provision and appropriation of the Common Good. Currently, neither one of these conditions is present in the Paris Agreement.

That is, those who produce benefits for all do not receive the proper compensation, and therefore, nobody takes care of or is responsible for something that belongs to nobody. Currently, wealth creation emerge from activities that are usually associated with emissions, or in the reduction/neutralization of emissions, but the vital wealth creation that the provision of the Common Good Stable Climate generates throughout society is not recognized. States and individuals driven by self-interest have no incentive to maintain and restore ecosystems, once the benefits are spread in a Common Good where no one can be excluded from access to those benefits, and today there is no way to internalize those benefits.

This perpetuates the machine that is set up to destroy the foundations of life, because only through the extraction/destruction of natural resources, wealth creation is recognized in society. Changing this cycle of destruction implies representing/capturing and internalizing the value of intangible services produced by tangible natural infrastructures - in the economy. For example, ecological economists estimate that the ecological services provided by a whale (absorption of CO<sub>2</sub>, oxygen production, organic matter, etc.), are valued at about 2 million Euros.<sup>61</sup> If this value is much higher than the value of whale meat, how will it be possible to incorporate this value into the economy, and by doing so ensure the survival of these animals and the maintenance of the services they provide to the functioning of the entire Earth System? Who owns these whales that migrate throughout the oceans and territorial waters of various countries? Who should be compensated based on the corresponding value of these vital services to promote the continued existence and the maintenance of these services? And what is applicable to whales could be applied to forests, mangroves, tundra, wetlands, mountain areas, and all ecosystems whose ecological services represent a much higher value to humanity, when compared to the value obtained by simply destroying the ecosystems or the species.

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<sup>61</sup> RALPH CHAMI, ET AL., "NATURE'S SOLUTION TO CLIMATE CHANGE, INTERNATIONAL MONETARY FUND, FINANCE & DEVELOPMENT", 2019, IN [HTTPS://WWW.IMF.ORG/EN/PUBLICATIONS/FANDD/ISSUES/2019/12/NATURES-SOLUTION-TO-CLIMATE-CHANGE-CHAMI](https://www.imf.org/en/PUBLICATIONS/FANDD/ISSUES/2019/12/NATURES-SOLUTION-TO-CLIMATE-CHANGE-CHAMI) (22.09.2022) AND [HTTPS://OCEANA.ORG/BLOG/WATCH-WHY-EACH-WHALE-WORTH-MORE-2-MILLION/](https://oceana.org/blog/watch-why-each-whale-worth-more-2-million/) (22.09.2022).

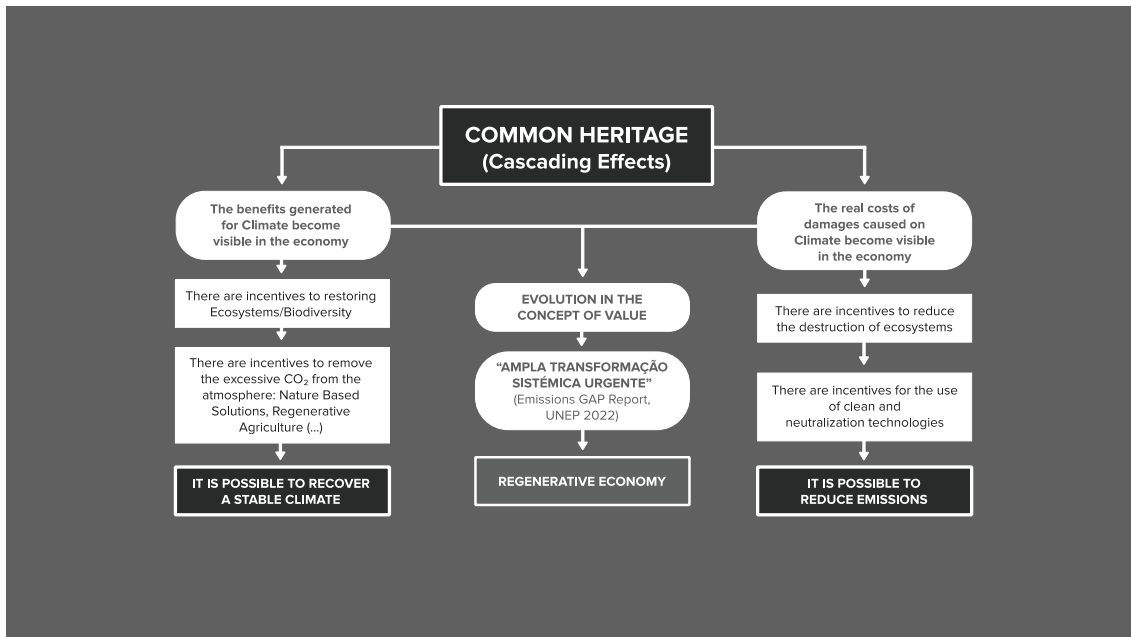


Fig.4 – Possible cascading effects following the recognition of the Stable Climate as a Common Heritage of Humankind.

Today, the economic value of functional dimension of the ecosystem services is already recognized and measurable, apart from the intrinsic value of ecosystems and native species, based on the extensive work already done by ecological economists. The challenge is to find solutions to internalize these benefits, and this involves defining the Common Good.

Therefore, recognizing the Stable Climate as the Common Heritage of Humankind, defined as the Intangible Global Common Good that exists within and outside of States, is the structural basis that will allow for building an economy capable of regenerating the natural processes that support life, and recognizing the value that these services represent to humanity. "It is clear that the restoration of the Common Good, or the common intangible software of the Earth System, will imply some evolution in the interpretation of the Common Heritage of Humanity, but the "diversity of regimes corresponding to the Common Heritage of Humankind and unity of its foundations"<sup>62</sup> clearly indicates the possibility of improvement and adaptation. The most important is to give visibility to the positive contributions derived from its maintenance, accompanied with incentives, mechanisms and balance sheets for contributions to each of the parts."<sup>63</sup>

<sup>62</sup> ALEXANDER KISS, "LA NOTION DE PATRIMOINE COMMUN DE L'HUMANITÉ", *ACADÉMIE DE DROIT INTERNATIONAL DE LA HAYE, RECUEIL DES COURS*, TOMO 175, 1982, p. 225.

<sup>63</sup> PAULO MAGALHÃES, "COMMON INTEREST, CONCERN OR HERITAGE? THE "COMMONS" AS A STRUCTURAL SUPPORT FOR AN EARTH SYSTEM LAW", *EARTH SYSTEM LAW: STANDING ON THE PRECIPICE OF THE ANTHROPOCENE*, ROUTLEDGE, 2021, IN [HTTPS://WWW.ROUTLEDGE.COM/EARTH-SYSTEM-LAW-STANDING-ON-THE-PRECIPICE-OF-THE-ANTHROPOCENE/CADMAN-HURLBERT-SIMONELLI/P/BOOK/9781032056241](https://www.routledge.com/Earth-System-Law-Standing-on-the-Precipice-of-the-Anthropocene/Cadman-Hurlbert-Simonelli/p/book/9781032056241) (22.09.2022).

#### **d) The Portuguese Climate Law - Climate Heritage as a goal of Climate Diplomacy**

The reopening of the discussion about the legal status of Climate began when the Recommendation for a Climate Law of the Portuguese National Council for the Environment and Sustainable Development (CNADS) <sup>64</sup> stated: "In a matter such as Climate, in which the property itself is difficult to define and frame in the existing legal framework, it is essential to resort to the most recent scientific knowledge in order to build upon them definitions that can ground the legislative options. When climate becomes an issue that needs to be addressed, the problem arises of which good is to be restored and maintain, with two distinct approaches emerging: (a) Good that should be the object of restoration and permanent maintenance, which implies the concept of Stable Climate – the Common Heritage Stable Climate; (b) Damage that should be avoided, centred on Climate Change – the Common Concern Climate Change. The current need to go beyond emission reductions, by using new CO<sub>2</sub> capture technologies and nature-based solutions, and to actively and deliberately restore Climate requires a new legislative framework to regulate these activities. "Considering the technological options that are required and the time period that the future Climate Law aims to frame and adapt, it is important to mention that the future regulation of these activities should be guaranteed within the international framework. (...) The restoration of a Stable Climate implies an integrated approach to the Earth System. It is recommended that the Climate Law recognizes the functioning pattern of the Earth System corresponding to a Stable Climate as a Common Heritage of Humankind, a legal support for the management of this Global Common Good at the international level."<sup>65</sup> This recommendation was accepted by the Portuguese Parliament on November 5<sup>th</sup>, 2021, through the inclusion of the diplomatic goal of recognizing the Stable Climate as a Heritage of Humankind by the United Nations, in Art.15, f), in the Climate Law. This can also be a contribution of the Portuguese language to a new world order, and start a process of building a common future around the management, restoration of a Common Heritage that all peoples and generations depend on - the Stable Climate.

"A consistent proposal would be, perhaps, to bring into the "obscure chamber" of Law the notion of a Stable Climate - manifestation of a stable and definable pattern of the functioning of the Climate System, within the limits of natural variability that was observed after the last glaciation (Holocene period), and that resulted in a rich functional biodiversity. A notion that passes the sieve of the strictest legal technique because, despite its intangibility, it is based on a measurable physicality that gives it an objective determination and a concretizing drive. The Law has, moreover, a secular experience in dealing with intangible assets - *Et quidem naturali jure communia sunt omnium haec: aer, aqua profluens, et mare et per hoc litora maris* (Institutas, II, I, §I) - and increasingly refines a flexible instrument of

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<sup>64</sup> CONSELHO NACIONAL DO AMBIENTE E DO DESENVOLVIMENTO SUSTENTÁVEL (CNADS), RECOMENDAÇÃO SOBRE UMA LEI DO CLIMA, 12 FEVEREIRO DE 2021, [HTTPS://WWW.CNADS.PT/IMAGES/DOCUMENTOS/2021\\_RECOMENDACAO-LEICLIMA.PDF](https://www.cnads.pt/images/documentos/2021_RECOMENDACAO-LEICLIMA.PDF) (22.09.2022).

<sup>65</sup> CONSELHO NACIONAL DO AMBIENTE E DO DESENVOLVIMENTO SUSTENTÁVEL (CNADS), RECOMENDAÇÃO SOBRE UMA LEI DO CLIMA, 12 FEVEREIRO DE 2021, [HTTPS://WWW.CNADS.PT/IMAGES/DOCUMENTOS/2021\\_RECOMENDACAO-LEICLIMA.PDF](https://www.cnads.pt/images/documentos/2021_RECOMENDACAO-LEICLIMA.PDF) (22.09.2022).

adaptation (indeterminate concepts, general clauses, "recomendology", codes of good practices, etc.) to the times of acceleration and fluidization of modernity (Zygmunt Bauman) which, undoubtedly, make it possible to accommodate a notion that, although complex, has the added advantage of scientific parameterization over others"<sup>66</sup>.

## **7. Conclusion**

The recognition of a Common Heritage that spans across and beyond all borders, that belongs to all humanity and to all generations, should become the structural basis for the development of a regenerative economy of nature, that is, one that allows the transition from an exclusive logic of no-harm rule to a logic of production of benefits in the Common Heritage, of cleaning up and ensuring the maintenance of what belongs to all. And this implies the institutionalization of the management of this Common Good, which also means an evolution of global governance. Without this profound but necessary change of perspective in public International Law (the recognition that a "functional aspect" of the Earth System, which, although overlapping, is distinct from the static concept of territorial sovereignty, and which must therefore be autonomized), it will not be possible to find an effective platform for global political and economic cooperation, the only possibility for overcoming the current impasse that seems to be leading the international community towards an irreversible collapse, despite the increasingly painful warnings. The current model of considering Climate Change as a Common Concern (no-harm rule) has clearly been proven to be insufficient and prevents the development of a society capable of aiming at sustainability, and of doing what is necessary to avoid climate catastrophe. Climate Change is not a Concern, but rather a crucial problem of our society, on whose resolution depend the very historical and existential continuity of humanity. Discussing the legal status of our most vital and precious Common Good is not something to postpone any further.

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<sup>66</sup> MARIA REGINA, REDINHA e MARIA RAQUEL GUIMARÃES, "Clima estável: a urgência de um direito, a propósito do caso", *Milieudéfensie et al. v. Royal Dutch Shell*, RED - Revista Eletrónica de Direito, Outubro 2021 - Nº 3, pag.3, (Vol 26), in 10.2480/2182-9845\_2021-0003\_0001.

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