

Ecocide Law for an Economy within Planetary Boundaries

How Ecocide Law corrects a fundamental flaw in our global economy and protects people and planet.



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END ECOCIDE SWEDEN

www.endecocide.se

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This is the most important new piece of international legislation proposed so far in the twenty first century and this report brilliantly makes the case for it. It is not an exaggeration to say that the future of both humanity and many other species depends on it being enacted. We call on the growing number of governments seeking to move their economies to a Wellbeing Economy system- one that delivers human flourishing and social justice on a healthy planet- to not just read this report but to actively promote its implementation.

- Stewart Wallis, Chair, WEAll-the Wellbeing Economy Alliance

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Ecocide Law for an Economy within Planetary Boundaries' is a careful, detailed, and sobering analysis of the unsustainability of our current economic model and the need for a law to bring it within bounds.

- Eleanor Sharpston KC, a former advocate general of the Court of Justice of the European Union

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Ecocide Law will provide the rules for economies that increase our wellbeing by preventing the loss of our fundamental systems of existence without which there is no economy.

- Ian Roderick, Director of The Schumacher Institute

Dedication

To pioneering barrister Polly Higgins (1968-2019),
who was the first to realize the urgent need for, and
transformative potential of, international Ecocide Law.

Her visionary work paved the way for us to bring it about.

Executive Summary

Some of our economic activity is now beyond Nature's carrying capacity. Hazards such as climate change, extreme weather, biodiversity loss, livelihood crises, natural resource crises, are becoming blatantly obvious to people across continents and political divisions. It is also hard to ignore the fact that human activity is the driving force behind these hazards. Current environmental laws, policies and agreements have proved inadequate to keep activities within safe bounds. There is a gap in our legal order. Something more is needed.

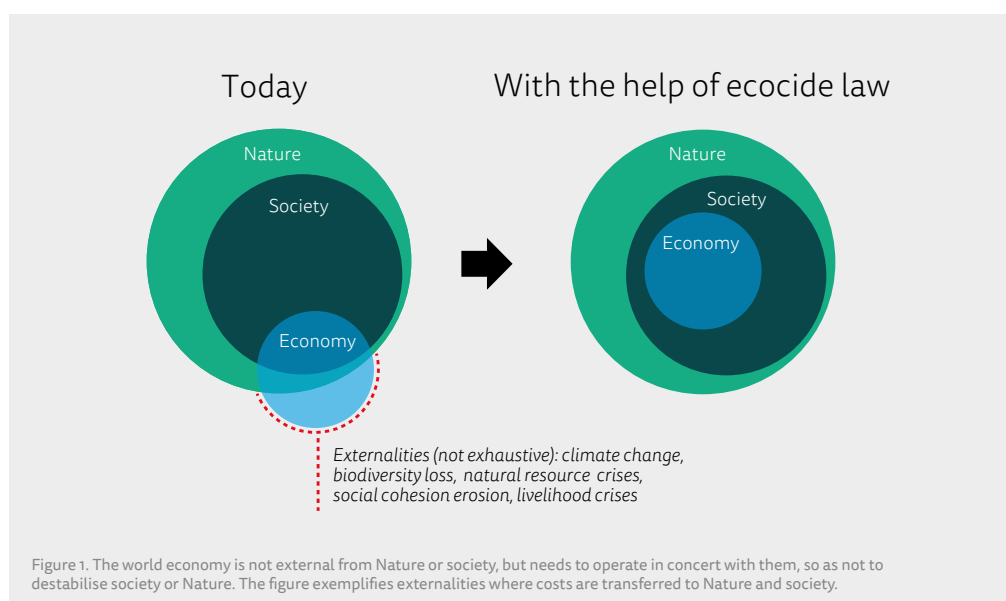
At present there is no international criminal law that regulates acts of mass destruction of the environment. Many countries lack environmental laws and/or the necessary resources to prosecute violations.

Adding a fifth crime – ecocide – to the Rome Statute of the International Criminal Court in the Hague, ICC, is an indispensable part of closing this gap.

By closing the door to wanton and illegal acts of mass destruction of Nature, Ecocide Law will help power a shift of the economy back within planetary boundaries in several ways. Ecocide Law holds the promise to:

1. Provide international protection for Earth's living systems on which the world economy depend;
2. Pre-empt ecocide, by making the worst illegal and wanton acts very risky for the decision-makers involved;
3. Level the playing field for business, improving conditions for more sustainable options.

Ecocide Law provides the motivation and support to cease the most wanton and destructive ventures, reorienting decisions in favour of a circular and regenerative economy. This is something voluntary and semi-binding agreements and standards are failing to do. In turn, and in many different ways, this will improve business conditions for circular and regenerative operations.



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Introduction

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Concerned that
the environment
is daily threatened
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human systems
worldwide.

“The laws of society affect how we perceive the world and ourselves. Law thus has great transformative potential.”

- Pella Larsdotter Thiel and Henrik Hallgren

The effects of the climate and biodiversity crisis are now palpable across the globe. Humanity has transgressed safety boundaries and is destabilising the systems upon which we depend. Change is needed, and law has great transformative potential.

Ending Ecocide is the goal for a fast-growing international movement where lawmakers, politicians, business leaders, investors, faith leaders and the global youth movement work together toward an international recognition of ecocide as a crime within the Rome Statute of the International Criminal Court in the Hague, ('the ICC').

In November 2020, the Stop Ecocide Foundation, at the request of Swedish Parliamentarians and with funding from the Greta Thunberg Foundation, brought together an independent panel of twelve leading experts in international law to propose a definition² of ecocide as an additional crime within the Rome Statute of the ICC.

This report presents how Ecocide Law, as defined by the expert panel, will assist a shift to a circular and regenerative economy, whilst at the same time supporting efforts to mitigate and adapt to the escalating environmental emergency.

Definition of ecocide as an international crime

The Rome Statute of the ICC currently contains four crimes: genocide, crimes against humanity, war crimes and the crime of aggression. International Humanitarian Law protects the natural environment directly and indirectly (as prohibitions and War Crimes), but this protection is limited to armed conflicts – they do not apply in peacetime.

To provide the background, the panel proposes adding the following words to the preamble: “Concerned that the environment is daily threatened by severe destruction and deterioration, gravely endangering natural and human systems worldwide.”³

¹ Larsdotter Thiel, P, and Hallgren, H., 2022. Naturlagen, p. 31. Volante.

² Independent Expert Panel for the Legal Definition of Ecocide, 2021. Commentary and Core Text. Stop Ecocide Foundation. Retrieved from: <https://static1.squarespace.com/static/5ca2608ab914493c64ef6d/t/60d7479cf8e7e5461534dd07/1624721314430/SE+Foundation+Commentary+and+core+text+revised+%281%29.pdf>

³ Independent Expert Panel for the Legal Definition of Ecocide, 2021.

Drawing on legal precedent and concepts already in the Rome Statute, the expert drafting panel then proposes the following definition:

Definition of ecocide proposed by expert panel

Paragraph 1. For the purpose of this statute, “ecocide” means unlawful or wanton acts committed with knowledge that there is a substantial likelihood of severe and either widespread or long-term damage to the environment being caused by those acts.⁴

The terms of the proposed definition were defined by the panel as follows

For the purpose of paragraph 1:

“Wanton” means with reckless disregard for damage which would be clearly excessive in relation to the social and economic benefits anticipated;

“Severe” means damage which involves very serious adverse changes, disruption or harm to any element of the environment, including grave impacts on human life or natural, cultural or economic resources;

“Widespread” means damage which extends beyond a limited geographic area, crosses state boundaries, or is suffered by an entire ecosystem or species or a large number of human beings;

“Long-term” means damage which is irreversible or which cannot be redressed through natural recovery within a reasonable period of time;

“Environment” means the earth, its biosphere, cryosphere, lithosphere, hydrosphere and atmosphere, as well as outer space.

For more information on the reasoning behind this definition, and its foundations in legal precedent, see Appendix I.⁵

For the process to amend the Rome Statute to include ecocide, see Appendix II.

⁴ Independent Expert Panel for the Legal Definition of Ecocide, 2021.

⁵ Independent Expert Panel for the Legal Definition of Ecocide, 2021.

Our current economic system

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If we **use more than we have**, the only thing left to eat will be imaginary cookies.

- Nicola, 10 years old

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In reality, 100% of the global economy is **100% dependent** on Nature.

Current economics are based on an untrue assumption

Economics has been defined as the use of scarce resources to achieve desirable ends.⁶ The word economy has its roots in the Greek word ‘oikonomos,’ made up from oikos, which means home, and nomos which means manager, steward. Thus, ‘oikonomos,’ or economy, originally means stewardship of our dwelling place. Our largest habitat is, of course, the planet itself. Where our habitat is damaged and destroyed, humans suffer.

It therefore borders on the absurd that our economic system is part of a situation where the global society is living beyond the limits of the Earth’s carrying capacity. Neither is the management of scarce resources up to the task, nor is the end result desirable.

The currently predominant economic theory assumes that the economy is independent from Nature. This is a core assumption and a fundamental flaw. In reality, 100% of the global economy is 100% dependent on Nature. Currently and historically, markets, trade and the global economy have “externalised” Nature and the distribution of economic gains from its use, leading to unsustainable exploitation, and causing escalating costs that are not visible in the economy. In the past, it has been possible to regard these as minor side effects, but they have now reached a point where they are resulting in the accelerating destabilisation of the Earth’s living systems, including the climate.

The economic system is, of course, part of a larger system, in which the legal framework plays a key part. The economic system assumes that the basis for the economy - Nature - has sufficient legal protection. It is now clear that this assumption is untrue. The shortfall can be addressed by expanding international criminal law, thereby closing the door in one direction and opening a door in a better direction. It has now become urgent to address the existing gap in the legal order, so as to ensure that our economic activity does not jeopardize the foundations of the economy.

Breached Planetary Boundaries and human suffering

Humanity has now breached five⁷ out of the nine planetary boundaries defined by Rockström and Steffen et al.^{8,9} These boundaries define the safe operating space for humanity with respect to the Earth system, and are associated with the planet’s biophysical processes and subsystems.¹⁰ If these thresholds are crossed, then important subsystems, such as a monsoon system or the Gulf Stream, could shift into a new state, often with deleterious or potentially even disastrous consequences for humans. Such shifts are generally referred to as tipping points.¹¹

When it comes to ecology, a paper in the prestigious Proceedings of the National Academy of Sciences described the current rate of species extinction as “biological annihilation” and concluded that it represents a “frightening

6 Corporate Finance Institute 2022. What is Economics? An inquiry into the Nature and causes of the wealth of nations. Retrieved July 2022 from: <https://corporatefinanceinstitute.com/resources/knowledge/economics/what-is-economics/>

7 Person, L., Carney, B.M., Almroth, C.D., et al., 2022. Outside the Safe Operating Space of the Planetary Boundary for Novel Entities. Environmental Science and Technology Vol 56(3), 1510-1521.

8 Rockström, J., Steffen, W., and Noone, K., et al., 2009. A safe operating space for humanity. Nature, Vol 461, 472-475 DOI: 10.1038/461472a

9 Steffen, W., Richardson, K., Rockström, J., et al., 2015. Planetary boundaries: Guiding human development on a changing planet. SCIENCE, Vol 347, Issue 6223. DOI: 10.1126/science.1259855

10 Rockström, J.; Steffen, W.; Noone, K., et al., 2009. Planetary Boundaries: Exploring the Safe Operating Space for Humanity. Ecology and Society, Vol. 14 (2), No. 32.

11 Lenton, T.M., Held, H., Kriegler, E., et al. 2008. Tipping elements in the Earth’s climate system. Proceedings of the National Academy of Sciences Vol. 105(6), 1786-1793.

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Resource
extraction and
processing
cause **more
than 90
per cent of
negative
impacts** on
land and water
(biodiversity
loss and water
stress).

assault on the foundations of human civilization.”¹² Critics of environmentalists who claim that we are failing to consider human needs are missing the point: without the wellbeing of the ecology of our planet, human wellbeing suffers.

Regarding climate change, we already have 415 ppm CO₂ in the atmosphere, dangerously overstepping the 350 ppm CO₂¹³ limit for a stable climate. The effects of too high CO₂ in the atmosphere and thus global average warming of 1.2°C¹⁴ are already visible across the Earth in the form of extreme weather events (droughts, floods, hurricanes), forest fires, crop failures, and acidification of oceans.

The effects of a linear economy

Even today, a fast way to wealth is to treat the natural world as a commodity and transform it to financial value, disregarding its value as a living, natural world. This way to create wealth is the norm and this is still mainstream economic activity. Dr Ralph Chami of the Institute for Capacity Development at the International Monetary Fund, IMF, bluntly concludes that our societies value living Nature, a living ecosystem or a living whale at zero, null.¹⁵ Small wonder then, that our activities destabilize the living systems of the planet, as society sees no value until the whale or tree is turned to a product. This blind spot

of the economy has severely damaged our Earth, particularly since the “great acceleration” of industrial activity that started around 1950, after World War II ended.¹⁶ As a result, production of most non-renewable natural resources has already peaked or will peak by 2050,¹⁷ with detrimental effects on the natural world and looming shortage of natural resources.

In the prevailing, linear economy, resources are extracted and processed into products that are discarded, typically after only one use-cycle.¹⁸ According to the United Nations, resource extraction and processing cause about 50 % of the total global greenhouse gas emissions and more than 90 % of land- and water-related impacts (biodiversity loss and water stress).¹⁹ These facts point to the enormous potential value of directing growth to areas where products and materials are circulated at their highest value. This means keeping materials in use, either as products or, when these can no longer be used, as components or raw materials.

The world economy is expected to continue to grow. By the middle of this century, the world’s population is estimated to have increased from today’s 8 billion to nearly 10 billion people.²⁰ An even more important factor is that the

¹² Ceballos, G., et al., 2017. Biological annihilation via the ongoing sixth mass extinction signalled by vertebrate population losses and declines, *Proceedings of the National Academy of Sciences*.

¹³ Hansen, J., et al. 2008. Target Atmospheric CO₂: Where Should Humanity Aim?, *Open Atmos. Sci. J.*, 2, 217-231

¹⁴ The World Meteorological Organization (WMO), 2021. Retrieved from: <https://public.wmo.int/en/media/press-release/2020-was-one-of-three-warmest-years-record-1.2°C-global-warming-compares-current-average-global-temperatures-to-pre-industrial-temperatures>.

¹⁵ Chami, R., 2022. Nature Based Sustainable and Shared Development. The ETU Initiative Conference, Retrieved from: <https://emnes.org/members-news/ralph-chami-presentation-on-Nature-based-sustainable-and-shared-development-at-the-etu-initiative-conference/>

¹⁶ Steffen, W., Broadgate, W., Deutsch, L., Gaffney, O. and Ludwig, C., 2015. The Trajectory of The Anthropocene: The Great Acceleration, *Anthropocene Review*, 2(1), 81-98.

¹⁷ Sverdrup H., Ragnarsdottir K.V., 2014. Natural Resources in Planetary Perspective. *Geochemical Perspectives* 3(2) 129-339.

¹⁸ A major study in 2015 by the Ellen MacArthur Foundation – “Growth Within” – calculated that we capture only 5% of the original raw material value after the first use-cycle. See Ellen MacArthur Foundation, 2015. Growth within: a circular economy vision for a competitive Europe. Page 17-18. Retrieved from: <https://emf.thirdlight.com/link/9lsqj16v3s3-b8ba93/@/preview/1?o>

¹⁹ UN Environment Programme, 2019. International Resource Panel. Global Resources Outlook, p 65 Retrieved from: <https://www.resource-panel.org/file/1172/download?token=muaePxOQ>

²⁰ UNDESA. 2015. World Population Prospects: The 2015 Revision, New York.

global middle class is expected to more than double, from 1.8 billion in 2009 to 4.8 billion people by 2030, pushing up consumption even further. As a result, the size of the world economy is expected to double by 2030, and to be about three times larger by the middle of this century than today.²¹ Given that we are already beyond the limits of the planet's carrying capacity, it is easy to see that if this threefold increase in GDP means a corresponding increase in resource use and environmental impact, it simply will not work.

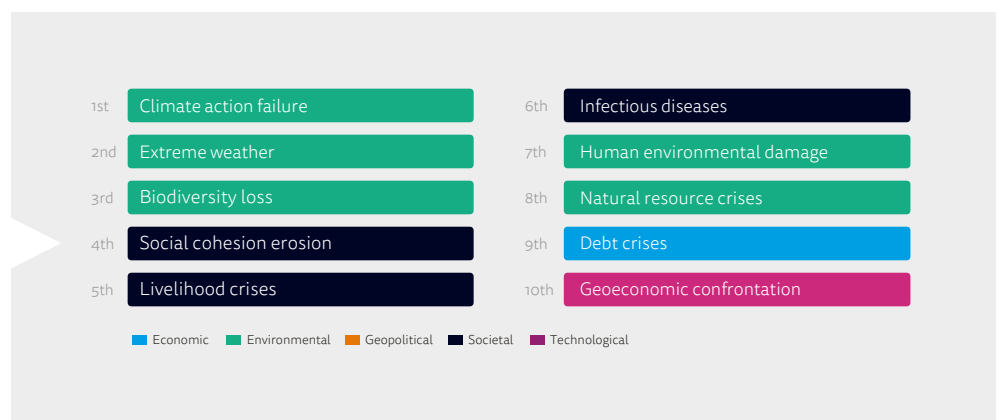
Our current economic and monetary systems are not geared to, and not capable of, delivering a healthy, meaningful and happy life for all.²² On a crowded planet with failing ecosystems, out-competing others while destroying the planetary life-support systems is not an evolutionary success strategy. Win-lose games in the long run turn into lose-lose games.

Green growth is a popular policy response to climate change and ecological breakdown. But empirical evidence on resource use and carbon emissions does not support green growth theory;^{23, 24} since green growth primarily focuses on renewable energy but is still material and energy hungry.²⁵ This paints a risky picture for our future. Unless, of course, we address the flaw in the system.

World Economic Forum's Global Risk perception survey of over one thousand thought leaders and experts from all over the world shows that 90% of them have a negative outlook on the world ahead.²⁶ The most severe risks raised were 1) Climate action failure, 2) Extreme weather, 3) Biodiversity loss, 4) Social cohesion erosion, 5) Livelihood crises, 6) Infectious disease, 7) Human environmental damage, 8) Natural resource crises, 9) Debt crises, 10) Geoeconomic confrontation (see Figure 2).

Figure 2
The most severe global risks over the next 10 years.

Source: World Economic Forum Global Risks Perception Survey 2021-2022.²⁷



²¹ Kharas, H., 2010. The emerging middle class in developing countries, OECD Working Paper No.285.

²² Oxfam, 2017. An Economy for the 99%: It's time to build a human economy that benefits everyone, not just the privileged few. Oxfam, London, UK.

²³ Hickel, J., Kallis, G., 2019. Is Green Growth Possible? New Political Economy, vol 25, 2020, issue 4. DOI:10.1080/13563467.2019.1598964

²⁴ Fuchs, F., Lange, S., Jacob, M., 2020. Ist Grünes Wachstum möglich? Science Media Center Germany (SMC). Retrieved from <https://www.ecologic.eu/18514>

²⁵ Ragnarsdóttir, K.V., and Parker J. 2022. Regenerative wellbeing economy. In Blewitt J. (ed.) New Economy, New Systems: Radical Responses To Our Sustainability Crisis. Good Works Publishing.

²⁶ World Economic Forum, 2022. The Global Risks Report 2022, 17th Edition, p 14. Retrieved from: https://www3.weforum.org/docs/WEF_The_Global_Risks_Report_2022.pdf

²⁷ World Economic Forum, 2022. The Global Risks Report 2022, 17th Edition, p 14. Retrieved from: https://www3.weforum.org/docs/WEF_The_Global_Risks_Report_2022.pdf

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It would be
a mistake to
view the risks
as isolated.

The survey not only suggests turbulent times ahead but also illustrates how interconnected our economy, our societies and our lives are with Nature. We can change the laws of humankind, but we cannot change the laws – nor boundaries – of Nature.

It would be a mistake to view the risks identified in the aforementioned survey as isolated risks. Rather the stresses we face – the Economic, Environmental, Geopolitical and Societal – are connected. They can – as 90% of the respondents feared – lead to a global crisis. These kinds of connected risks are often identified as “systemic risks.” Professor Thomas Homer-Dixon and Professor Johan Rockström note in a recent essay in the New York Times,²⁸ that most of these systemic risks have become more disruptive and hazardous. And that, in most cases, they are now worsening faster. In other words, these risks are both amplifying in severity and accelerating in rate.²⁹

Two factors are powerfully driving risk amplification and acceleration, Homer-Dixon and Rockström argue. First, the magnitude of humanity’s resource consumption and pollution output is weakening the resilience of natural systems, worsening the risks of climate heating, biodiversity decline and zoonotic viral outbreaks. Second, vastly greater connectivity among our economic and social systems has sharply raised the volume and velocity of

long-distance flows of materials, energy, and information, aggravating such risks as financial system instability, pandemics, economic inequality and ideological extremism.³⁰

This corresponds to Dr Barry Commoner’s first rule of ecology — everything is connected to everything else — but with a crucial amendment: some kinds of connections matter a lot more than others. Protection of the very fundament of our economy, our societies and our very lives is urgently needed. “Business as usual,” warned the United Nations secretary-general António Guterres, “could result in breakdown of the global order, into a world of perpetual crisis and winner-takes-all.”³¹

Wackernagel et al. (2017)³² mapped all nations according to the Human Development Index, HDI, and ecological footprint, and two conclusions become apparent: 1) There is not a single country in the world that meets the needs of its people and also keeps its consumption within planetary boundaries, 2) The natural resources of the economically weaker nations can easily be preyed upon by wealthier nations. See Figure 3.

Ecocide Law will be helpful in establishing a safety rail for populations with weaker possibilities to protect their land.

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²⁸ Homer-Dixon, T., and Rockström, J., 2022. What Happens When a Cascade of Crises Collide? The New York Times. Retrieved from: <https://www.nytimes.com/2022/11/13/opinion/coronavirus-ukraine-climate-inflation.html>

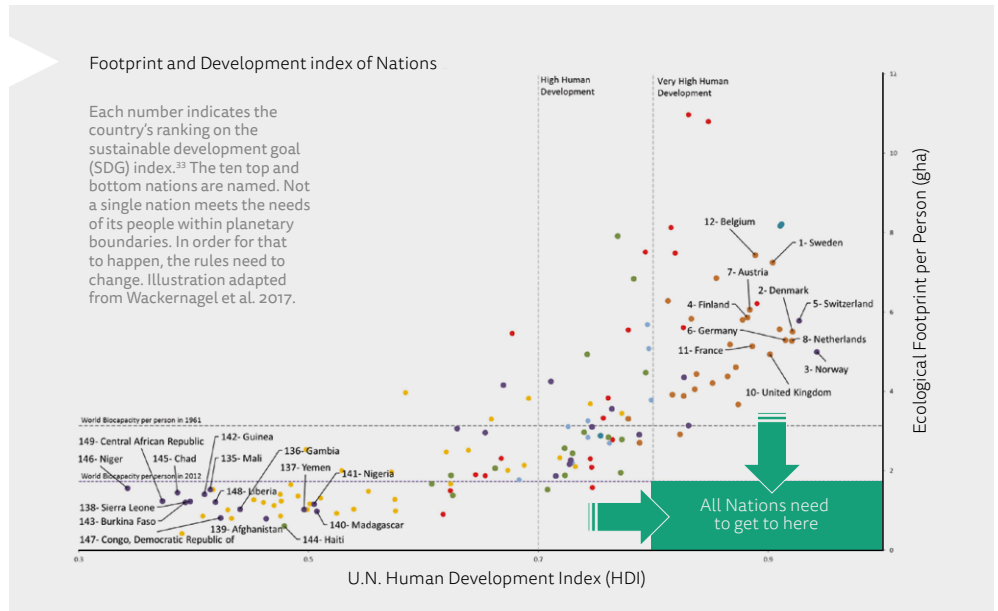
²⁹ Homer-Dixon, T., and Rockström, J.

³⁰ Homer-Dixon, T., and Rockström, J.

³¹ United Nations, 2021. Global Crisis Response ‘Too Little, Too Late’, Secretary-General Tells General Assembly ‘Our Common Agenda’ Event, Warning of Instability, Climate Chaos. Retrieved from: <https://press.un.org/en/2021/sgsm20891.doc.htm>

³² Wackernagel, M., Hanscom, L., Lin, D. 2017. Making the Sustainable Development Goals Consistent with Sustainability. *Frontiers in Energy Research*. DOI: 10.3389/fenrg.2017.00018

Figure 3
Ecological Footprint per person and HDI by country indicates how close each country is to basic global sustainable development criteria (high human development, within resource requirements that are globally replicable).



The destructive relationship between our current economy and Nature can be illustrated as shown in Figure 4, where Nature contributes to human wellbeing and to the economy with natural resources, regulating services such as purifying water, arable land, and a stable and predictable climate.

Our economy returns the service with pollution, unsustainable land-use, species extinction and waste, including plastic waste that ends up in oceans. This type of growth creates conflicts over food, water and land.

These conflicts are aggravated by climate impacts such as natural disasters, droughts, fires and floods. The conflicts are also aggravated by ecosystem and biodiversity decline, resulting in food scarcity. This jeopardizes not only the two

core planetary boundaries (Climate and Biosphere Integrity) that are foundational for the stability of human societies,³⁴ but also the natural capital stock needed to keep economic activity going (see Figure 4).

The macroeconomic growth and development theories that have shaped our beliefs about economic possibilities and our understanding of the progress and regress of nations do not recognise humanity's dependence on Nature.³⁵

According to current calculations, extinction rates are 100 to 1,000 times higher than their background rate over the past tens of millions of years (0.1-1 per million species per year), and are continuing to rise exponentially.³⁶ Continued species extinctions will damage the biosphere irreparably,

³³ Wackernagel, M., Hanscom, L., Lin, D. 2017. Making the Sustainable Development Goals Consistent with Sustainability. *Frontiers in Energy Research*. DOI: 10.3389/fenrg.2017.00018

³⁴ Rockström, J., Steffen, W., Noone, K., et al., 2009. Planetary Boundaries: Exploring the Safe Operating Space for Humanity. *Ecology and Society*, 14 (2), No. 32.

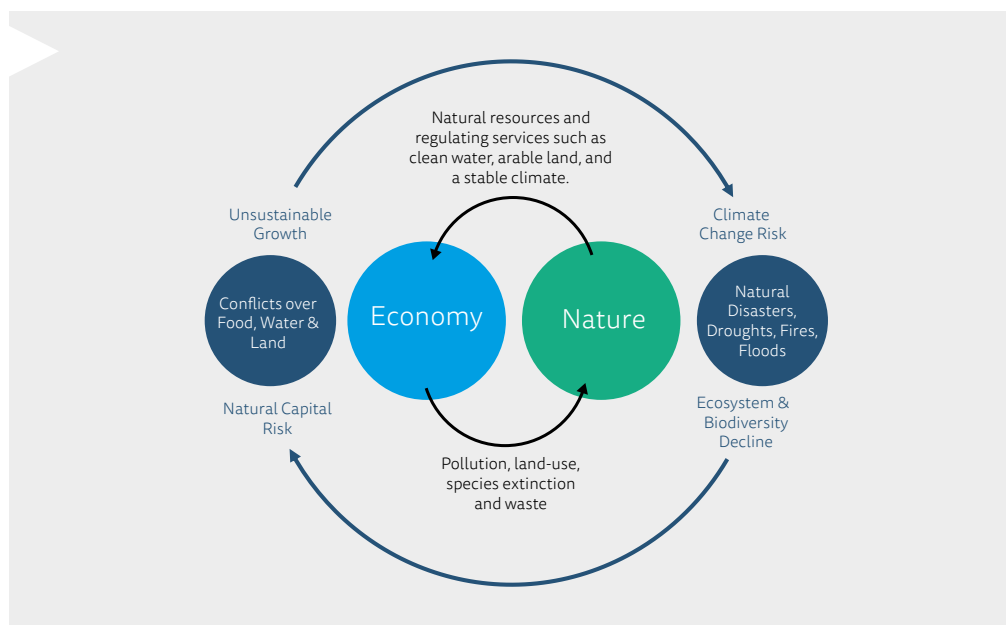
³⁵ Prominent representations of modern growth and development economics are Aghion and Howitt (1998), Barro and Sala-i-Martin (2003), Helpman (2004), Acemoglu (2008), and Galor (2011). The absence of Nature is also prominent in the models that inform government finance ministries and central banks.

³⁶ Dasgupta, P., p 32. See also Pimm, S. L., and P. H. Raven, 2019. The State of the World's Biodiversity, In Dasgupta P., Raven, P. H., and McIvor, A., eds. *Biological Extinction: New Perspectives*. Cambridge: Cambridge University Press, p xix.

Figure 4

By being oblivious to Nature, our current economic system sets in motion several systemic risks and crises.

Image adapted from Dasgupta Review,³⁷ and The Future of Nature Markets.³⁸



involving unknown numbers of tipping points. Such potential cascades cannot be staved off by mere technological fixes.

Over the past 70 years, global GDP has increased exponentially, in real terms by a factor of nearly 15, while our global demand for the biosphere's goods and services – our ecological footprint – now far exceeds the biosphere's ability to supply its goods and services on a sustainable basis.

Our take-make-waste economy consumes 100 billion tonnes of materials a year and wastes over 90%. This means that between the COP25 in Paris in 2015, where the Paris Agreement came into being, and COP26 in Glasgow in 2021, 70% more virgin materials were extracted than the Earth can safely replenish (see Figure 5).³⁹

It is nearly certain that unless we change something in the equation, our global demand for materials will continue to increase for the next several decades, and the biosphere is then likely to be damaged sufficiently to make future economic prospects a lot bleaker than we like to imagine today.⁴⁰

Because it is international in reach and is criminal law at the highest level, Ecocide Law is one of the most powerful ways to begin to protect the living systems.

A prime force behind the way the biosphere has been transformed is the competition for Nature's resources. Moreover, commercial demand frequently trumps local needs, especially under non-democratic regimes. There is a real need to consider when acts are needed for the sake of human development, even when those same

³⁷ Dasgupta, P., 2021. The Economics of Biodiversity: The Dasgupta Review. (London: HM Treasury), p 39.

³⁸ Zadek, S, Chami, R., Furtado, M., 2022. The Future of Nature Markets. Taskforce of Nature Markets and F4B, p12. Retrieved from: https://uploads-ssl.webflow.com/623899567434bf1b32de3c10/632b265d7b5810326dc8fd51_Taskforce-On-Nature-Markets_WhitePaper.pdf

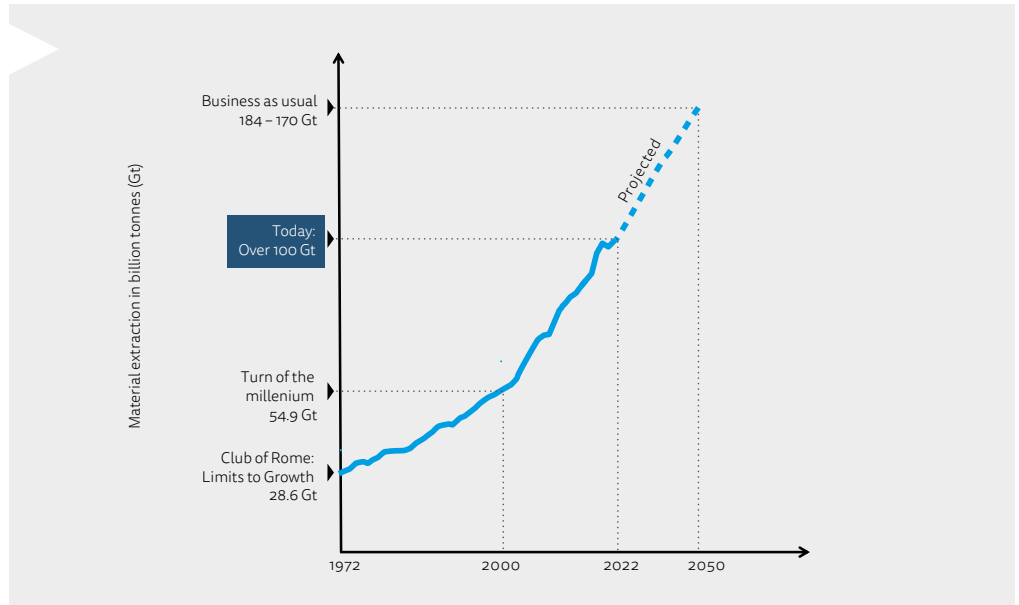
³⁹ Platform for Accelerating the Circular Economy (PACE), 2022. The Circularity Gap Report 2022, p 9. Retrieved from: <https://www.circularity-gap.world/2022#Download-the-report>

⁴⁰ Dasgupta, 2021, p. 32

Figure 5

Material extraction and use are climbing year by year, whilst we allow ourselves to be ever more wasteful with the resources we extract.

Illustration: PACE.



acts risk damaging ecosystems. These complex interrelationships have generally been ignored by growth and development economists.⁴¹ The proposed definition of Ecocide Law addresses this need to balance interests by including “wanton” as a threshold, defining wanton as meaning “with reckless disregard for damage which would be clearly excessive in relation to the social and economic benefits anticipated.”

The human environment will always change, and development will continue. There will be growth for some actors and stability or degrowth for others.⁴² The key questions are not whether there will be change and development but in which direction and by what means we will develop, what qualities we want to achieve, and what values we wish to guide our future. Or, simply put, growth of what.

Time to upgrade 18th century economics

With the emergence of industrial society came a long period of strong economic development. This has been characterized by a linear economy that is based on extracting natural resources, producing and then – after a brief period of usage – regarding the products and materials as waste to get rid of. This is sometimes referred to as “take-make-dispose.” In the linear economy people even refer to themselves not as citizens, but as consumers.

With the exception of local restrictions (e.g. regulating overgrazing of common pastures), the theory of economic growth established in the 1900s was based entirely on the factors of labour and capital.⁴³ For a long time, this was also in keeping with the practical experience of scholars, practitioners of business, and public officials.

⁴¹ Dasgupta, 2021, p 46

⁴² Hickel, J. 2021. Less is More: How Degrowth Will Save the World. Penguin Random House.

⁴³ Solow, R.M., 1956. A contribution to the theory of economic growth, *The Quarterly Journal of Economics*, 70(1):65–94.

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The scale of the economy is **400 times greater** than in Adam Smith's time.

”

We need a safety rail to get the global economy within planetary boundaries.

But the situation is radically different in a world where the scale of the economy is 400 times greater than in Adam Smith's (1723-1790) time, and man has breached the limits of the Earth's overall carrying capacity.

A fundamental question is, does growing the linear economy, as currently practiced and measured, really increase wealth? Is it making us richer in any aggregate sense, or might it be increasing costs faster than benefits and thus be making us poorer? Historically, economics does not have an answer to that.⁴⁴ The reason is that costs are not measured, but externalised: Gross Domestic Product measures only benefits. Economic theory has assumed that the economy is independent from Nature, or, put differently, that Nature is sufficiently protected.

To get the economy within planetary boundaries we need a safety rail. Starting with the most harmful cases of ecocide is a great place to start. With international law on ecocide in place, our global society gets a better chance to fine tune measurements, checks and balances for the economy.

Citizens are becoming increasingly concerned, as showcased by increasing litigation cases on greenwashing and governments acting against the welfare of people and Nature. At the same time, global capital is flowing towards more sustainable practices. Of note, however, is that while ESG (environment, society, governance) certified investments have gone from \$6 trillion in 2006 to more than \$80 trillion in 2021⁴⁵ – at the same time emissions continued to rise.

The ESG certification and reporting standards are simply not enough to redirect investment to a sustainable path. In other words “green growth” is not enough. We also need international criminal law to address those investment flows that are not voluntarily changing to a sustainable direction.

Financial market insiders conclude that without upgrading the regulatory frameworks for all capital, there will be no real progress.⁴⁶ This is not primarily a failure of the markets - the buyers, the sellers and the prices - but rather of the gap in the legal system and the institutional frameworks that allow behaviour that destabilises the very foundation for society and Nature.

Without upgrading the regulatory frameworks for all capital, there will be no real progress.

The Dasgupta review implicitly calls for Ecocide Law

In 2019, the UK Government commissioned a report on The Economics of Biodiversity. The report was published in February 2021. Headed by economics professor Sir Partha Dasgupta, it is popularly known as the Dasgupta review.

One of the conclusions of this over 600 page extensive review is that the natural capital must be very large, meaning thriving ecosystems in balance, to make economic progress possible. The Dasgupta review also argues that considering the evidence that we have left the safety zones of the planetary boundaries, protection and restoration of the biosphere need now to be a priority.⁴⁷

⁴⁴ Interview with Herman Daily by Marchese, D., 2022. This Pioneering Economist Says Our Obsession With Growth Must End. New York Times. July 17, 2022.

⁴⁵ Fullerton, J. Capital Institute, personal communication.

⁴⁶ The Economist, 2022. ESG is in need of a Rethink. Retrieved from: <https://play.acast.com/s/39fc4a99-8861-437d-81e2-684d13e48f92/b070855a-48c2-4f59-a01c-938b73253290>

⁴⁷ Dasgupta, 2021, p. 338

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We have left the safety zones of the planetary boundaries. Protection and restoration of the biosphere need now to be a priority.

The finiteness of Nature places bounds on the extent to which GDP can grow. It also places bounds on the extent to which inclusive wealth can grow.⁴⁸

The seminal Dasgupta report analyses why it is that our global economy and our current institutions have been incapable of processing and acting upon the signals and acknowledge that our current economic system destroys the Nature on which it depends. They point to several reasons. Here we discuss three of the key aspects that make it difficult for our current models and institutions to grapple with Nature.

(1) Nature is hard to fence in, and thus hard to protect. For global commons like the atmosphere and the oceans that are being used as sinks for our pollution, institutions never got a foothold to limit their use. One reason why this is, and why natural capital has eluded economic modelling and governance, is that Nature and its processes are in large part silent, invisible and fluid. These features of Nature make it hard for anyone to trace the adverse effects of many of our actions back to us.⁴⁹ This caters for an opportunistic economy, unless and until transparency, laws and culture create a sufficiently strong counterforce. Ecocide Law would help provide this missing foothold, through a clear, legislative framework to deal with the most serious cases of opportunistic over-exploitation of Nature.

(2) Nature does not behave in a linear way. Production and consumption possibilities involving the biosphere⁵⁰ are characterised by non-linearities. This is at odds with any well-functioning market system.⁵¹ Consider then an ecosystem from which goods and services are being drawn in excess of its capacity to regenerate.⁵² It is known that the ecosystem will tip over and collapse if it continues to be overused, but the state of the ecosystem at which collapse will occur is not known. So long as the ecosystem has not suffered from a regime shift, the decision maker has two options: (a) stick with business-as-usual (i.e. the status quo); or (b) change course of action. For open access ecosystems without regulating institution(s), the market tends to reward the decision makers that stay with option (a). It is a classic case of the prisoner's dilemma, in which individual decision makers have an incentive to choose in a way that is less than optimal for the whole.

This is one reason why national legislation and voluntary agreements are not enough. What is needed is an “umbrella” law that is global in its effects. With that in place, soft legal instruments like voluntary agreements, semi-binding declarations, and new, circular, and generative economy models can further inform decision makers on how to proceed, and provide courts with details of what is to be considered illegal or wanton.

⁴⁸ Dasgupta, 2021, p. 47

⁴⁹ Dasgupta, 2021, p. 48, 124

⁵⁰ That is to say all production and consumption on the planet.

⁵¹ Dasgupta, 2021, p. 124

⁵² Dasgupta, 2021, p. 157

(3) Problems compound with more market actors. The risks to life and property that are associated with ecological degradation increase as population grows. In economic terms, it is “positively correlated across people.” That means insurance premiums cannot be set at fair odds by private firms unless the destructive practices are weeded out. National and supra-national institutions are needed to fill the gap.⁵³

At present, there is no international criminal law that directly addresses acts of mass destruction of the environment. In addition, many countries lack environmental laws and in many of the countries which do have national environmental laws, enforcement is lax. As argued by Professors Kenneth W. Abbott and Duncan Snidal,⁵⁴ weak legal agreements do not suffice when:

1. the benefits of cooperation are great but the potential for opportunism and its costs are high;
2. violations would impose significant externalities on others;
3. national actions have many external effects;
4. non-compliance is difficult to detect [and curb in time].

Taking together the Dasgupta report’s findings on why our societies find it difficult to grapple with Nature, and Abbott and Snidal’s list of where weak legal instruments are insufficient, the conclusion is inescapable: the rules need to be upgraded to keep economic activities within planetary boundaries. The alternative is a recipe for chaos.

The careless practices of our linear economy can be seen as a symptom of insufficient legal frameworks. For the worst crimes, the deterrent needs to be strong. Recognising ecocide as an international crime in the Rome Statute is uniquely positioned to achieve this. But the benefits of this law are even more far-reaching.

Ecocide Law will render activities that risk causing ecocide difficult, if not impossible, to insure and fund. The decision-maker will hence become even less inclined to err on the wrong side of risk to people and planet. Ecocide Law will also support the transition to societies that are more careful in their dealings with the natural living world, thus altering the correlation between population growth and destruction of the natural world. More people do not necessarily have to mean more destruction of the living world.

The Dasgupta review does not explicitly mention Ecocide Law, but given what the report recommends, it appears to be crying out for it.

The pivotal role of Ecocide Law in the global response needed

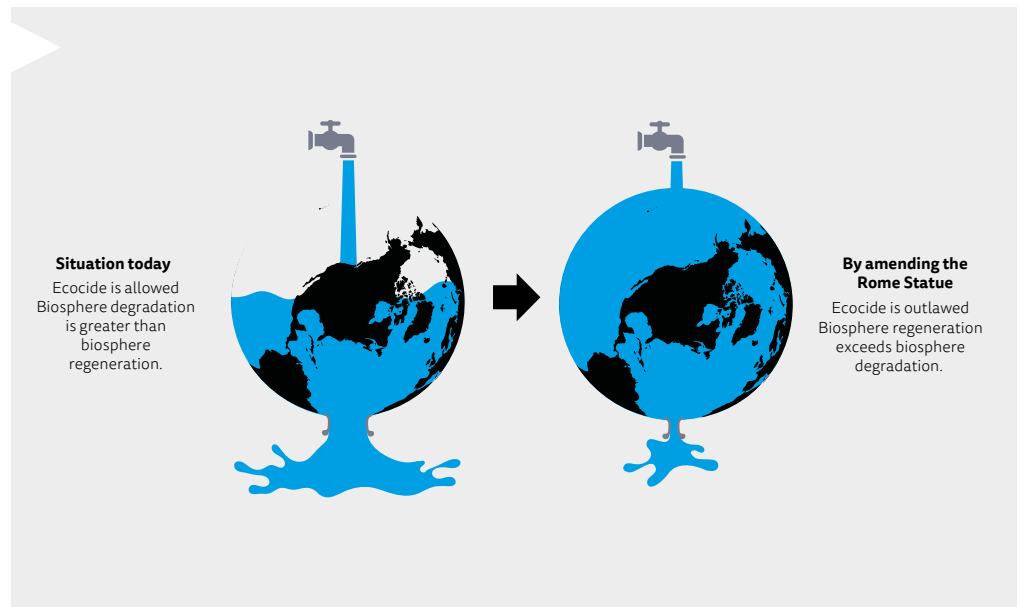
The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, IPBES, has found that global biodiversity loss can only be tackled through transformative economic, social, political, and technological changes. This means going beyond conservation and restoration efforts - crucial though they are - to fundamentally transform the way we make, use, and reuse products and nutrients. This means redesigning our economy to help achieve a Nature-positive future.

⁵³ Dasgupta, 2021, p. 124

⁵⁴ Abbott, K.W., and Snidal, D., 2000. Hard and Soft Law in International Governance. *International Organization* Vol. 54(3), 421-456, p 429. Doi:10.1162/002081800551280

Figure 6
Ecocide Law will help
us become better
custodians of the
Earth's resources.

Image adapted from Dasgupta 2021. The definitions and dynamics are described in Barrett et al. 2020, and in Dasgupta 2021.



Many actions will be needed to redesign our economy, but two stand out as indispensable:

Introduce Ecocide Law to power the shift on a global scale, with international protection for Earth's living systems. This also levels the playing field for more sustainable options.

Develop a circular and regenerative economy, as it offers an actionable framework for such transformative change.

As illustrated in Figure 6, we do not have to obtain a perfectly circular and regenerative world, we just need to disrupt the destructive cycle enough so that Earth's regenerative capacity gets the upper hand. The faster we address the cycle of harm, the less we need to intercept.

The Dasgupta report calls for a polycentric response that is a layered institutionalised approach: global, regional, national and community-wide. Each layer requires an authority at the apex to achieve coordination below. As shown in the report, such an approach both serves to coordinate responses of actors and aggregates information across the economy.⁵⁷

Ecocide Law in the Rome Statute does precisely this. It would stand at the apex. Inserting Ecocide Law into the Rome Statute would make it possible to take action at the highest level to prosecute the most egregious instances of wanton or unlawful degradation of our environment.

⁵⁵ Barrett, S., Dasgupta, A., Dasgupta, P. et al., 2020. 'Social Dimensions of Fertility Behavior and Consumption Patterns in the Anthropocene', *Proceedings of the National Academy of Sciences*, 117 (12), 6300–6307. DOI: 10.1073/pnas.1909857117

⁵⁶ Dasgupta, 2021, p. 118.

⁵⁷ Dasgupta, 2021, p. 123-125.

Its very presence in the Rome Statute would act as a powerful deterrent, create a level playing field for economic actors that encouraged environmentally responsible behaviour, and over time produce a valuable trickle-down effect into national legal systems. One year after Ecocide Law in the Rome Statute is ratified by a nation, activities amounting to ecocide that take place on that State's territory or involving that State's nationals will be outlawed under international law; and prosecution for alleged ecocide before the ICC will become possible. The State's national legal system will be expected to adapt so as to reflect the State's new international law obligations.⁵⁸ While the other four crimes in the Rome Statute take place against a background of violence between people, ecocide is often taking place in times of peace, as a part of ordinary civic activity. There is therefore a far better chance that it can be dealt with at the national level.

The International Criminal Court complements and strengthens existing national courts, kicking in only when national courts are unable or unwilling to prosecute.⁵⁹

The Dasgupta report goes further and points at institutional instruments such as directives that have the power to conserve natural habitats; the imposition of pollution taxes; the removal of subsidies on resource extraction and agricultural production, as well as changes in behavioural norms.⁶⁰ Inserting a new crime of ecocide into the Rome Statute would place large-scale and long-term degradation of the environment at the same level of criminality as the four existing crimes against humanity.

We need to draw 'red line in the sand' just as we have done with genocide, or apartheid, changing negative and perverse incentives into Nature and people positive incentives.

⁵⁸ Rome Statute of the International Criminal Court. Article 121; 5. "Any amendment to articles 5, 6, 7 and 8 of this Statute shall enter into force for those States Parties which have accepted the amendment one year after the deposit of their instruments of ratification or acceptance." <https://www.icc-cpi.int/sites/default/files/RS-Eng.pdf>. Retrieved Oct. 10, 2022.

⁵⁹ "It only kicks in where the national court that should be responsible for prosecuting these crimes doesn't do it, either because it lacks capacity, or because it is not willing to exercise its jurisdiction. Only in these cases does the ICC have jurisdiction." Ambassador Christian Wenaweser, serving president of the Assembly of the States Parties of the ICC, 2010. <https://law.vanderbilt.edu/news/international-criminal-court-serves-as-a-court-of-last-resort/>

⁶⁰ Dasgupta, 2021, p. 123.

The missing law

“We stand now where two roads diverge. But unlike the roads in Robert Frost’s familiar poem, they are not equally fair. The road we have long been traveling is deceptively easy, a smooth superhighway on which we progress with great speed, but at its end lies disaster. The other fork of the road — the one less travelled by — offers our last, our only chance to reach a destination that assures the preservation of the earth.”

– Rachel Carson, *Silent Spring*

Law has great transformative potential

The legal system is not a neutral tool. It is based on certain assumptions and beliefs that are taken for granted and form the very basis of our society. One such fundamental assumption in Western legislation is that man can and should dominate and control Nature. This can be called an anthropocentric, i.e. human-centred, assumption. It has roots back to antiquity and forms a starting point for the Western legal tradition. Nature is an object without inherent rights, a possession for man to use for his own interests. Since this order is instituted in our legal systems, this is how we treat Nature.⁶¹

In their seminal book “*Naturlagen*”, ecologists and knowledge experts in the UN Harmony with Nature initiative Pella Larsdotter Thiel and Henrik Hallgren argue that law represents society’s idea of itself. It reflects, expresses, and shapes society’s worldview, norms and values.

The law conveys what is acceptable and unacceptable behaviour, who has rights and who does not. South African solicitor Cormac Cullinan has called law the DNA of society – a force that actively shapes and institutionalizes perceptions of reality around what is seen as normal, right, and natural. The laws of society affect how we perceive the world and ourselves. Law thus has great transformative potential.⁶²

The power of Ecocide Law

Environmental scientist and pioneering systems thinker Donella Meadows studied how systems shift and how to intervene in systems. She distinguished between factors that have small impact – or leverage – to shift the system, and factors with powerful leverage.⁶³ She pointed out that the most popular measures have little effect on the system they are meant to impact.

Imagine that you wish to move a large boulder by hand. It is considerably easier to get the job done with a long iron crowbar than with a short one, because the longer one gives greater leverage.

Ecocide Law has great power to effect change (see Figure 7).

Adopting Ecocide Law is imperative to halt further ecocides. As Abson et al., 2017⁶⁴ point out, sustainability research and policy have primarily addressed relatively shallow leverage points such as level 12 – the system parameters including subsidies, taxes and standards.

⁶¹ Thiel, P., Hallgren, H., 2022. *Naturlagen*, p. 33. Volante.

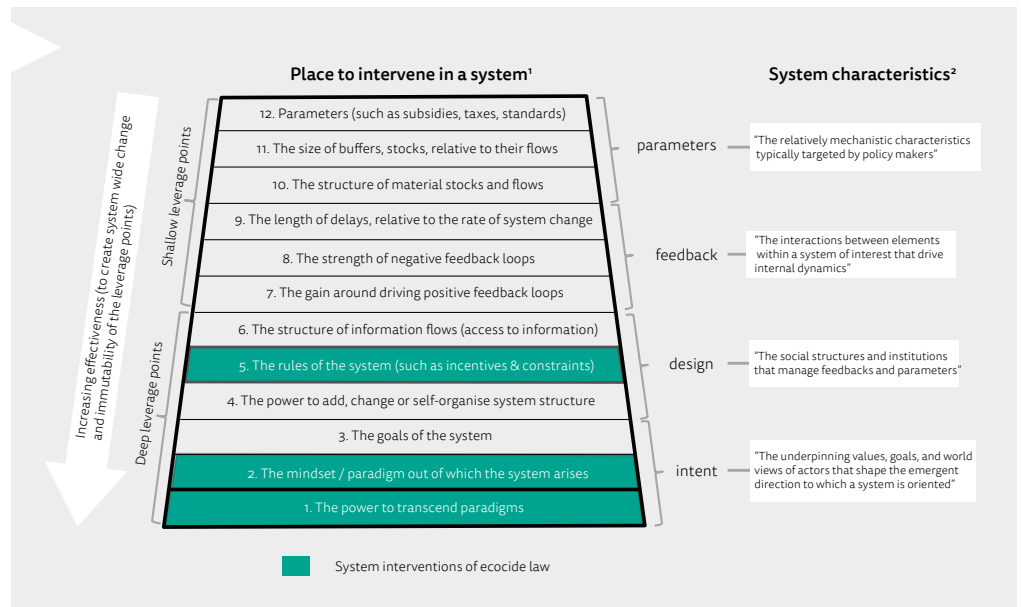
⁶² Thiel, P., Hallgren, H., 2022.

⁶³ Meadows, Donella. 1999. *Leverage Points: Places to Intervene in a System*. Hartland: The Sustainability Institute.

⁶⁴ Abson, D. J., Fischer, J., Leventon, J., Newig, J., Schomerus T., Vilsmaier, U., von Wehrden, H., Abernethy, P., Ives, C.D. Jäger, N.W. and Lang, D.J., 2017. Leverage Points for Sustainability Transformation. *Ambio* 46(1):30–39.

Figure 7

The 12 leverage points for intervening in a system as outlined by Donella Meadows (1999)¹ and four system characteristics from Abson et al., 2017.² Figure adapted from Abson et al.



Indisputably, Ecocide Law would affect the system at level 5, the rules of the system. This is a point of considerable leverage, affecting the design of the system itself. In addition, there is a strong case to be made that Ecocide Law intervenes at deepest, most fundamental, and most powerful leverage points, level 1: The power to transcend paradigms, and level 2: The mindset/paradigm out of which the system arises. These are the most effective points to intervene to create system-wide changes. Intervening in the system in this way addresses the intent of the system – the underpinning values, goals, and worldviews of actors that shape the emergent direction to which a system is oriented (see Figure 7).

Ecocide Law can apply power at those of Donella Meadows’ points that offer the greatest leverage. Ecocide Law shifts the

moral baseline and the mental models by changing the intent.

As noted by Professor of Laws Philippe Sands, there is a real problem with humankind’s relationship to the natural environment, and although criminal law is not a panacea and will not sort everything out, it is one instrument available to us that we have to focus attention on, [in] our need to do more.⁶⁷

Two important terms in law are *malum in se*, which means ‘wrong in itself’ and *malum prohibitum*, which means ‘wrong because it is prohibited.’ There is a crucial difference between the two. The first is a moral premise; the second is a legal one, often based on a moral premise that has been adopted as law. When our laws are built from *malum in se*, so that criminal law reflects what society regards as morally wrong, we have the makings of

⁶⁵ Meadows, Donella. 1999. *Leverage Points: Places to Intervene in a System*. Hartland: The Sustainability Institute.

⁶⁶ Abson, D.J., Fischer, J., Leventon, J. et al. 2017. Leverage points for sustainability transformation. *Ambio* 46, 30–39. <https://doi.org/10.1007/s13280-016-0800-y>

⁶⁷ Lea Main-Klingst, 2021. An International Definition for the Crime of Ecocide?, Interview with Philippe Sands. American Bar Association. Retrieved from: https://www.americanbar.org/groups/environment_energy_resources/publications/ierl/20210615-an-international-definition-for-the-crime-of-ecocide/

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When the rule
of law falters
locally, an
international
backbone is
needed.

a higher moral code.⁶⁸ A law of ecocide places people and planet at the heart of our values.

Ecocide Law will provide a safety rail for living systems which is currently missing. Making ecocide a crime brings a number of benefits, including supporting international peace-keeping, protection of human rights,⁶⁹ protecting the living forms that constitute the ecosystems which sustain life on Earth,⁷⁰ directing the power of tools like artificial intelligence toward the service of life,⁷¹ provide a missing tool to achieve the Paris Agreement,⁷² and, as we argue in this report, adding a moral baseline to the world economy.

Ecocide Law helps address a fundamental flaw in our economic system. Today, the lack of hard, international criminal law opens huge possibilities to accumulate wealth – and gain competitive advantage – through wantonly destructive activities. The gap in international criminal law might have been tolerable if the Earth’s resources were infinite and if its capacity to restore the damage inflicted were inexhaustible. Obviously, this not the case.

Including Ecocide Law as an additional crime in the Rome Statute establishes a legal framework and binding rules to contain human activities within the outer limits of global ecological systems’ carrying capacity.

When the rule of law falters locally, an international backbone is needed. For local communities this means justice; for the planet, it means helping to bring us back within the boundaries of what the planet can sustainably provide; for international business it translates to fair, and predictable rules.

Ecocide law will help make environmentally friendly alternatives preferable. Many materials that potentially can replace virgin materials are currently not viable due to unfair cost advantage for the virgin alternatives. When environmental costs cannot safely be “externalised,” the costs of virgin materials and goods increase, making more recycled materials and products competitive. This increases the scope for recycled materials, which further reduces costs in these value cycles, and reduces pressure on primary natural resources. Thus, putting a stop to the worst environmental crimes will propel the economy towards increased circularity.

Current international law provides only weak protection of Nature.⁷³ Eleanor Sharpston KC, a former advocate general at the Court of Justice of the European Union, likens laws to a toolkit for lawyers and says that while the current toolkit contains a number of small and medium-sized screwdrivers, it lacks the biggest screwdriver, for the biggest crimes: i.e. Ecocide Law in the Rome Statute.

68 Higgins, P., 2012. What will your legacy be? Resurgence and Ecologist.

69 Macintosh, K., Oldring, L., 2022. Human Rights and the Crime of Ecocide. How do they relate? Asser Institute/International Crimes Database. <https://internationalcrimesdatabase.org/upload/documents/20220531T164956-The Crime of Ecocide Through Human Rights.pdf>

70 Higgins, P., 2014. I dare you to be great. Clink Street Publishing.

71 Roupé, J., 2022. Artificial Intelligence in service to life on Earth. Artificial Intelligence within the framework of Ecocide Law. End Ecocide Sweden. Retrieved from: <https://www.ecodelawalliance.org/wp-content/uploads/2022/03/AI-Ecocide-Law.pdf>

72 Roupé, J., and Ragnarsdottir, K.V., 2022. Ecocide Law for the Paris Agreement. End Ecocide Sweden and Schumacher Institute, UK. Available from: <https://endecocide.se/wp-content/uploads/2022/11/Ecocide-Law-for-the-Paris-Agreement-Launch.pdf>

73 Report of the Secretary-General, 2018. Gaps in international environmental law and environment-related instruments: towards a global pact for the environment, the United Nations.

Criminal law has a deterrent effect before decisions are made. From the would-be perpetrator's point of view, there is a big difference between, on the one hand, the risk that the organisation might be fined for harming the environment, and on the other hand, the risk that the decision-maker personally might lose public regard, be seen as a criminal, and risk going to jail.

For this reason, criminalizing ecocide is likely to reduce the incidence of ecocide, halting the worst cases of environmental destruction at source, something our existing rules and regulations fail to do.⁵⁷

The umbrella effect of Ecocide Law in the Rome Statute

The Rome Statute is one of the most powerful legal documents in the world, effectively a consolidation of current international criminal law and applicable in all 123 State Parties (and on their nationals anywhere in the world). As shown in Figure 8, the introduction of Ecocide Law rebalances the economic system in three main ways:

First of all, Ecocide Law in the Rome Statute levels the international playing field. It does this by setting a minimum international standard of accountability for ecocide. Currently, existing laws are strong in some countries, and there, people can be held to account for gross environmental damage. In other countries, however, legislation is missing, or legal systems and social structures are too weak to ensure sustainability. Rather than allowing the lowest current standard to rule internationally, Ecocide Law raises the bar for a minimum international standard.

Without Ecocide Law, laws to check unlawful or wanton environmental destruction are insufficient. As a result, it is currently possible to gain competitive advantage and to accumulate huge amounts of wealth at the expense of others. Ecocide Law helps tackle the current impunity for the worst environmental crimes. It fills the gaps when the legal systems are lacking or weak and by so doing, it levels the playing field which benefits all responsible enterprises.

Figure 8
Three ways in which Ecocide Law rebalances the international economic system.

	Effect	How is this achieved?	Why is this important?
1 Upgrades rules	It levels the international playing field	It sets a minimum international standard of accountability for ecocide Fills in gaps when national laws are lacking or legal system is weak	Causing ecocide in states with weaker legal systems will not give competitive advantage, which is the case today
2 Strengthens	It strengthens existing international agreements	By making the worst transgressions against the climate and nature prosecutable	This improves the likelihood of success for Agenda 2030 and the Paris Agreement
3 Complements	It complements bi-lateral agreements and corporate law	Ecocide law acts as an 'umbrella' law when care for the environment is missing	This avoids court cases where nature is set against international trade agreements

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Ecocide Law
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development**
or profit, it will
change the rules of
how development
and profit are
achieved.

Secondly, Ecocide Law strengthens existing international agreements, which improves the likelihood of success for UN Agenda 2030, the Paris Agreement,⁷⁴ and other international agreements. Many of these agreements focus on what is desirable, not on what should stop. Making ecocide a crime before the International Criminal Court does not solve everything, but it does address the worst transgressions and may make them prosecutable, which will also improve the likelihood that voluntary and semi-binding agreements will be adhered to.

Furthermore, having an internationally agreed definition improves the understanding of what is wanton and what is responsible. This can be actively helpful to inform judges and prosecutors what practices are wanton and what practices are not. Thus, Ecocide Law and the international agreements support and reinforce each other. Ecocide Law improves the likelihood of success for voluntary agreements and semi-binding agreements.

Thirdly, it complements existing international agreements and corporate law. At present, environmental concerns are left out of many international trade agreements, and other aspects of corporate law. As a result, companies can file claims against governments who have signed these treaties if they do not fulfil them, even though fulfilling them would entail ecocide.

Ecocide Law changes that. In the same manner that you cannot force a government to commit genocide in order to fulfil its commercial obligations,

neither would you be able to take it to court for refusing to commit ecocide.

Without Ecocide Law, destabilizing biosphere integrity is not recognized as a crime internationally, which means that for instance a judgment from the International Court of Justice is in effect just a legal opinion. Legal opinion and other international declarations can simply be ignored. Making ecocide an international crime, however, gives power to the judiciary, which means that the whole justice system can kick into gear.⁷⁵

There are certain things that are illegal to make profit from, things that are morally wrong, for example murder, genocide, or corruption. Ecocide Law will not stop profit or development, it will change the rules of how development and profit are achieved – upgrade the rules if you will – setting a guardrail for Nature to shift activities (e.g. innovation, finance, product development and services) to a more sustainable direction.

Ecocide Law is needed to protect biodiversity – in the words of UNEP's Executive Director Inger Andersen in preparation for the UN Biodiversity COP15 in Montreal: "In delivering on biodiversity, we deliver on climate, on pollution, on the UN Decade of Ecosystem Restoration, and on the food and energy system transformation."⁷⁶ The UN Secretary General added to this statement at the opening of COP15 – "This conference is our chance to stop this orgy of destruction. To move from discord to harmony."⁷⁷ Ecocide Law would support this shift.

74 Roupé, J., Ragnarsdóttir, K.V., 2022. Ecocide Law for the Paris Agreement. The role of Ecocide Law in limiting global warming. End Ecocide Sweden and the Schumacher Institute. Retrieved from: <https://endecocide.se/wp-content/uploads/2022/11/Ecocide-Law-for-the-Paris-Agreement-Launch.pdf>

75 Higgins, P., 2018. Be a Legal Earth Protector. Eco 18-17. Retrieved from: <https://www.youtube.com/watch?v=iFlxSFFHG88>

76 Inger Andersen, 2022: <https://www.unep.org/un-biodiversity-conference-cop-15>

77 UN Secretary General: <https://www.un.org/sg/en/content/sg/speeches/2022-12-06/secretary-generals-remarks-the-un-biodiversity-conference-%E2%80%94-cop15>

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This is a missing piece. The more I learn about it, the more obvious it is that this is a **flagrantly missing part.**

- Andreas Föllér, Head of Sustainability, Scania⁷⁸

By adding ecocide as a fifth crime in the Rome Statute, we add a protection that is currently missing. We close the door to the worst cases of destructive activity and open the door to putting our increasingly powerful technologies and ingenuity at the service of life.⁷⁸

Ecocide Law will help power a shift of the economy back within planetary boundaries in several ways. See Figure 9.

Ecocide Law holds the promise to:

1. Provide international protection for Earth's living systems on which the world economy depends;
2. Pre-empt ecocide, by making the worst illegal and wanton acts very risky for the decision-makers involved;
3. Level the playing field for business, improving conditions for more sustainable options.

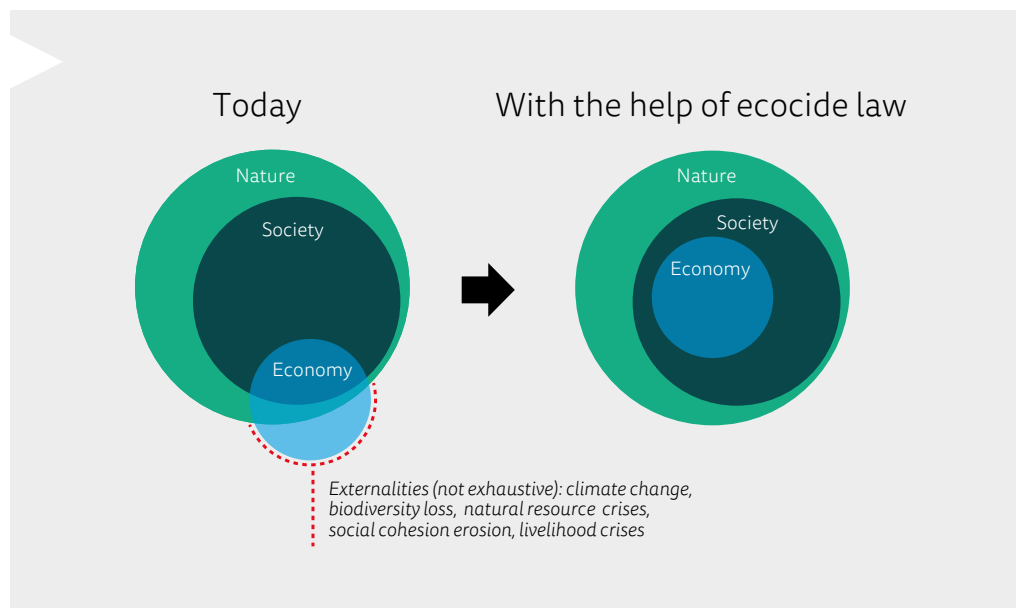
Persons of superior responsibility

To paraphrase Lenton, Rockström, Gaffney et al., what is needed is that the decision-maker becomes disinclined to err on the wrong side of environmental risk.⁷⁹ In international crime, the principle of 'superior responsibility' helps ensure that those who have 'effective control' over the criminal actions can be held responsible even if they are not the direct perpetrators and operate from a great distance.

Ecocide Law would make it possible to hold to account persons of superior responsibility: the directing minds in a given situation where the crime of ecocide has been committed. These persons may be public officials, officers of corporations or other bodies responsible for ecocide. The vast majority of business and government leaders are already moving away from these destructive practices, but the few remaining serious offenders are causing grave damage to us all.⁸⁰

Figure 9

The world economy is not external from Nature or society, but needs to operate in concert with them, so as not to destabilise society or Nature. The figure exemplifies externalities where costs are transferred to Nature and society.



⁷⁸ Conference on Ecocide Law. Associated event to Stockholm+50 Conference, May 31st, 2022. <https://youtu.be/HBApGnFtS3o?t=2955>

⁷⁹ Lenton, T., Rockström, J., Gaffney, O., et al., 2019. Climate tipping points — too risky to bet against. *Nature*, Vol. 575, 592-596.

⁸⁰ Ecocide Law Alliance, 2021. QnA on Ecocide Law, p 6. Retrieved from: https://www.ecodelawalliance.org/wp-content/uploads/2021/11/ELA_QA_230621.pdf

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Decision makers
become disinclined
**to err on the
wrong side of
environmental risk.**

The importance of superior responsibility

Ecocide Law provides an opportunity for decision-makers to reconsider, before risking facing international charges if the activities fall within the definition.⁸¹

Making ecocide-related activities criminal creates strong support not to engage in such activity.

1. Decision-makers will not wish to take decisions that would render them at risk of being accused of a crime;
2. Funders will be disinclined to sanction the funding of criminal activity;
3. Governments will be supported in avoiding policy decisions which promote such criminal activity.

Criminalizing ecocide strongly supports senior officials in corporations and governments to exercise their power for a healthy future.

Ecocide Law is not a new idea, but support is now growing fast

Making ecocide the fifth crime within the Rome Statute is not a new idea. During the 1970s, 80s and 90s, making ecocide an international crime was considered by the United Nations International Law Commission (ILC) for inclusion in the Code of Crimes Against the Peace and Security of Mankind, which later became the Rome Statute.⁸² A number of questions kept arising: should ecocide be a crime in peacetime as well as in wartime? Does the offender's intent to commit the crime matter, or are the consequences of extensive destruction of ecosystems severe enough to warrant ecocide being a crime of strict liability, regardless of the offender's intent? Ecocide as a concept was familiar and supported by many as a concept that should be included in international law, and yet it was dropped by the ILC in 1996.⁸³

The opposition in 1996 managed to prevent ecocide from becoming a fifth crime under the Rome Statute based mainly on two factors.

⁸¹ Independent Expert Panel for the Legal Definition of Ecocide, 2021.

⁸² International Criminal Court, ICC, 1998, (Last amended 2010). The Rome Statute of the International Criminal Court. <https://www.icc-cpi.int/resource-library/documents/rs-eng.pdf>.

⁸³ Gauger, A., Mai, P., Rabatel-Fernel, P., Kulbicki, L., Short, D., and Higgins, P., 2012. Ecocide is the missing 5th Crime Against Peace. The Human Rights Consortium.

First, there was an “apparent discomfort” felt among policymakers regarding the relationship between environmental degradation and humanitarian interests. Second, the “seriousness” of threats to the environment were questioned. Such a claim would be difficult to uphold today.⁸⁴ In the 25 years that have passed since then, the effects of environmental damage on humanity and Nature are as devastating as the effects of other international crimes⁸⁵ and the benefits of Ecocide Law for human wellbeing have been clarified.⁸⁶

Today there is a global movement advocating the inclusion of ecocide as a fifth crime in the Rome Statute. Amongst the many that support this idea are the European Parliament (January 2021), the International Parliamentary Union representing 179 parliaments around the world (May 2021), the UN Secretary General (July 2021), the EU European Economic and Social Committee⁸⁷ (Oct.

2021), the International Corporate Governance Network, whose members include the world’s largest public pension funds and asset management companies⁸⁸ (November 2021 and November 2022), Global Youth⁸⁹ (May 2022), World Council of Churches⁹⁰ (September 2022), the EU Environmental Affairs Committee⁹¹ (Oct. 2022), and more.

Restoring hope

Numerous surveys,^{92, 93, 94} including the World Economic Forum Global Risks Report,⁹⁵ show how the younger generations are losing hope for the future and in elected leaders’ ability to respond adequately. This is not surprising. Global greenhouse gas emissions need to be halved by 2030 and cut to zero by 2050 to avoid the worst impacts of climate change,⁹⁶ but most countries are not on track to meet these targets.

84 Abato, A., 2021. If the Shoe Fits, wear it (and Codify It as a Crime Against the Environment). Harvard International Law Journal. DOI: 1783.9425.5e1d891b-d4da-48ed-937d-81966a337e4c.1620944151

85 Abato 2021.

86 Mackintosh, K., Oldring, L., 2022. Human Rights and the Crime of Ecocide. How do they relate?. Asser Institute. <https://internationalcrimesdatabase.org/upload/documents/20220531T164956-The%20Crime%20of%20Ecocide%20Through%20Human%20Rights.pdf>

87 EU European Economic and Social Committee. Improving Environmental Protection through Criminal Law, 2021. <https://www.eesc.europa.eu/en/our-work/opinions-information-reports/opinions/improving-environmental-protection-through-criminal-law>

88 International Corporate Governance Network. Full 2021 statement available to members here: <https://www.icgn.org/user/login?destination=/statement-shared-climate-change-responsibilities-cop26>. 2022 statement: https://static1.squarespace.com/static/5ca2608ab914493c64ef1f6d/t/6370f09ec83473354ec7e63e/1668346015443/5.+ICGN+Statement+of+Shared+Climate+Change+ResponsibilitiesCOP27%2C+November+2022_o.pdf

89 Global Youth, 2022. Policy Paper, Third Official Version, p 4. “Recognize large scale environmental destruction, ecocide, as a punishable crime in domestic laws and in the Rome Statute of the International Criminal Court.” Retrieved from: https://www.youthstockholm50.global/_files/ugd/4658f6_826352d2e1de48cob380e3f1a06bd982.pdf

90 World Council of Churches: The Living Planet. September 11, 2022. Retrieved from: <https://www.oikoumene.org/resources/documents/the-living-planet-seeking-a-just-and-sustainable-global-community>

91 EU Committee on the Environment, Public Health and Food Safety. <https://www.stopecocide.earth/breaking-news-22/committee-vote-backs-call-to-include-ecocide-in-revised-eu-environmental-crime-directive>

92 See for instance IPSOS survey that shows “ 20% of young people think it is ‘too late to fix’ the climate crisis.” IPSOS, 2021. Climate fatalism grips young people worldwide while the urgency for solution-oriented media grows. Retrieved from: <https://www.ipsos.com/en-uk/climate-fatalism-grips-young-people-worldwide-while-urgency-solution-oriented-media-grows>

93 Marks, E., Hickman, C., et al. 2021. Young People’s Voices on Climate Anxiety, Government Betrayal and Moral Injury- A Global Phenomenon. University of Bath reported that: “Over half of those surveyed said they thought humanity was doomed and that governments were failing to respond adequately.”

94 Amnesty International, 2019. Generation Z Survey reported that: “Climate Change Ranks Highest as Vital Issue of Our Time”, a survey of more than 10 000 young people, and that “This is a wake-up call to world leaders that they must take far more decisive action to tackle the climate emergency or risk betraying younger generations further.”

95 McLennan, M., et al., 2021. The Global Risks Report. World Economic Forum.

96 IPCC, 2021. Sixth Assessment Report (AR6). Contribution from Working Group I. Climate Change 2021: The Physical Science Basis. Intergovernmental Panel on Climate Change, Geneva, Switzerland. Retrieved from: <https://www.ipcc.ch/report/ar6/wg1/>

Indeed, emissions are still rising, and COP27 in Egypt did not deliver on governments' pledges of emission reductions.⁹⁷ Only with truly transformative action will we leave our children the heritage of a liveable planet.

Almost every child on Earth (>99 per cent) is currently exposed to at least one climate and environmental hazard, shock or stress such as heat waves, cyclones, air pollution, flooding and water scarcity. A record-breaking 1 billion children – nearly half of the world's children – live in countries that are at an 'extremely high risk' from the impacts of climate change.⁹⁸ These children face a deadly combination of exposure to multiple shocks with high vulnerability resulting from a lack of essential services. The survival of these children is at imminent threat. A particularly concerning aspect of these hazards is that they overlap and compound each other and interact with other social, political and health risks.⁹⁹

Hope is a mobilising emotion and it is therefore crucial to restore hope in order for us to act to mitigate and adapt to climate change. Ecocide Law can help us curb climate change,¹⁰⁰ promote health by protecting living Nature, and help restore hope by demonstrating the fundamental transformative potential of Ecocide Law, as shown in Figure 7.

Another favourable factor is that, given the political will, it can be done within a few years. Furthermore, as soon as it becomes clear that it is on its way, even before it is ratified, it will affect thinking and decisions by economic actors, redirecting activities in favour of safer operations. With that said, there will be sufficient time before the law comes into effect to enable actors to adapt to new rules. See Appendix II for the process to amend the Rome Statute.

⁹⁷ Aberg, A. 2022. Chatham House: <https://www.chathamhouse.org/2022/11/cop27-what-was-achieved-and-what-needs-happen-now>

⁹⁸ Rees, N., Barkhof, M., Burdziej, J., et al., 2021. The Climate Crisis is a Child Rights Crisis: Introducing the Children's Climate Risk Index. New York: United Nations Children's Fund (UNICEF).

⁹⁹ Rees, N, et al.

¹⁰⁰ Ecocide Law for the Paris Agreement, 2022. The role of Ecocide Law in limiting Global Warming. Schumacher Institute and End Ecocide Sweden. <https://learning.endecocide.se/mod/resource/view.php?id=161>

Into a circular and regenerative economy

“Nature has introduced great variety into the landscape, but man has displayed a passion for simplifying it. Thus, he undoes the built-in checks and balances by which Nature holds the species within bounds [...]. The balance of Nature is not a status quo; it is fluid, ever shifting, in a constant state of adjustment. Man, too, [needs to become] part of this balance.”

– Rachel Carson, *Silent Spring*

The Role of the Economy

As should be clear from Section 2 on the current economic system, the economy is embedded in, and totally dependent on, Nature. Since the laws of Nature are non-negotiable - Nature does not negotiate - it is time to take a fresh look at the economic and legal order of man.

The economy is a man-made means to an end; not something to be valued in itself, but significant insofar as it contributes to producing good (happy, healthy, fulfilled, prosperous) lives in an equitable and socially just way, without placing unsustainable pressure on the Earth's resources.^{101, 102, 103}

Changing indicators and policies is a necessary step to shift the linear economy to a circular and regenerative economy. The New Economics Foundation (NEF) takes this further,¹⁰⁴ calling for recognition that a focus on wellbeing is in fact vital to sustainability – that it is only through moving away from the harmful, carbon intensive activities inherent in the current predominant model of progress that society has a hope of sustaining itself and the planet.¹⁰⁵ In particular, NEF argues that what is absent from predominant understandings and measurements of progress – also those that look beyond GDP to important areas such as health, education and environment – is a concern with how people feel about and experience their lives.¹⁰⁶

Six governments around the world have joined together in the Wellbeing Economy Governments (WEGo) partnership.¹⁰⁷ They have all developed wellbeing economy indicators and policies, to take attention away from GDP growth as the only success indicator for governments. WEGo is an offspring of the Wellbeing Economy Alliance,

¹⁰¹ Marks, N., Abdallah, S., Simms, A., & Thompson, S., 2006. The (un)Happy Planet Index: An index of human well-being and environmental impact. London: New Economics Foundation.

¹⁰² Thompson, S., Abdallah, S., Marks, N., Simms, A., & Johnson, V., 2007. The European (un)Happy Planet Index: An index of well-being and carbon efficiency in the EU. London: New Economics Foundation.

¹⁰³ Abdallah, S., Thompson, S., Michaelson, J., Marks, N., & Steuer, N., 2009. The (un)Happy Planet Index 2.0: Why good lives don't have to cost the Earth. London: New Economics Foundation.

¹⁰⁴ Abdallah, S., et al., 2011. Measuring our progress, The power of well-being. New Economics Foundation

¹⁰⁵ Marks, N., Thompson, S., Eckersley, R., Jackson, T., & Kasser, T., 2006. Sustainable development and well-being: relationships, challenges and policy implications. London: Defra.

¹⁰⁶ Michaelson, J., Abdallah, S., Steuer, N., Thompson, S., & Marks, N., 2009. National Accounts of Well-being: Bringing real wealth onto the balance sheet. London: New Economics Foundation.

¹⁰⁷ Currently including New Zealand, Iceland, Scotland, Wales, Finland and Canada: <https://weall.org/wego>

an international umbrella organisation that promotes human and ecological wellbeing.¹⁰⁸ This new economic thinking is essential for delivering a healthy planet for future generations – and the circular economy concept is a crucial concept of the new economy for the 21st century. The economy needs not only to be circular but also regenerative, because past and current economic activities have destroyed and degraded ecosystems. There is therefore a need to rejuvenate and regenerate Nature and society. Ecocide Law can support this new economic thinking.

Circular and regenerative economy for wellbeing

New economic thinking is now firmly established in many places of learning worldwide. Its foundations are underpinned by Herman Daly's observation that while the economy might continue to grow GDP, it would cease to grow wealth in any aggregate sense, as was possible while the world was "empty" population wise (1.6 billion at the turn of the 20th century). Rather, Daly argued that as the economy is currently practiced and measured in a "full world," it will incur more costs than gains on people and planet. This needed to be addressed once the world was getting full (4 billion in 1975).¹⁰⁹ His insight was not heeded. World GDP continued to grow without significant changes in the economic system or legal order. Since the 1970s the population has doubled to 8 billion. Together with Robert Costanza,¹¹⁰ Daly developed his

ideas further as ecological economics, in which Nature is valued. This is in sharp contrast to neoclassical economics, where the economy is considered to be independent from Nature and can operate outside the bounds of society.

Kate Raworth further developed this imagery by embracing the planetary boundary concept of Rockström et al. and fitting the safe and just space for humanity within the planetary boundaries, providing societal foundations for everyone within what she refers to as the doughnut.¹¹¹

What also needs to be taken into account for a new economy is the limits of natural resources as first set forth by Meadows et al. in "Limits to Growth" 50 years ago, where it was demonstrated with system dynamic modelling that perpetual growth of the population and accompanying resource use would lead to economic and environmental decline at the beginning of the 21st century.¹¹² We are there now. Therefore circularity of products and materials needs to be embraced in the new economy, based on the foundations for the Circular Economy set forth by the Ellen MacArthur Foundation.¹¹³ Changing our mind-sets to understanding "enough" – i.e. when do we feel that we do not need more "stuff," is an important component of the new economy, as well described by Trebeck and Williams in "The Economics of Arrival."¹¹⁴ Lastly, the concept of regenerating Nature and society needs to be based on natural principles

¹⁰⁸ <https://weall.org/>

¹⁰⁹ Daly, H. 1991 (1977). *Steady-State Economics*, 2nd ed. Island Press, Washington DC.

¹¹⁰ Costanza, R. 1992. *Ecological Economics. The Science and Management of Sustainability*. Columbia University Press, NY.

¹¹¹ Raworth, K., 2017. *Doughnut Economics. Seven Ways to Think Like a 21st Century Economist*. Chelsea Green Publishing, White River Junction, Vt.

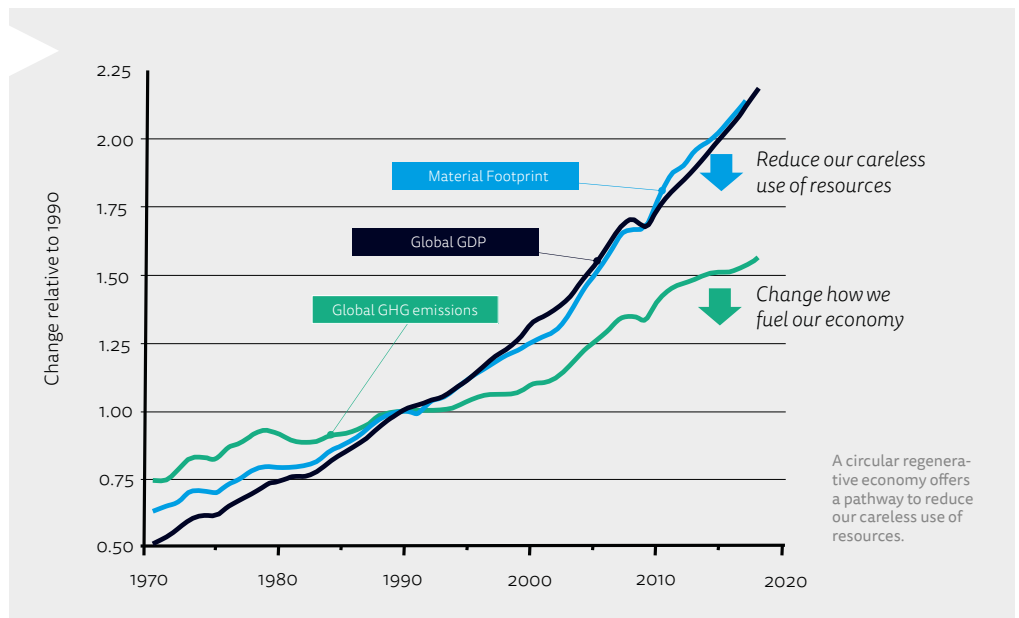
¹¹² Meadows, D. et al., 1972 *Limits to Growth*. Universe Books, New York.

¹¹³ Ellen MacArthur Foundation, 2013. *Towards the Circular Economy*. Ellen MacArthur Foundation, Isle of Wight, UK.

¹¹⁴ Trebeck, K., and Williams J., 2019. *Economics of Arrival. Ideas for a Grown-up Economy*. Policy Press, Bristol, UK.

Figure 10
Relative change
in main global
economic and
environmental
indicators from
1970 to 2018.

Image adapted from
European Environment
Agency (EEA), 2020.¹¹⁸



and patterns in the new economy as first outlined by John Fullerton¹¹⁵ and elaborated on with Lovins et al. as an economy in service of life.¹¹⁶ Many others¹¹⁷ have contributed to new economic thinking, and one conclusion is clear: the economy needs to be circular, and regenerative, for wellbeing of people and Nature.

The necessity of shifting the system, and taking a systems perspective for that shift, becomes apparent when looking at the strong correlation between resource use, greenhouse gas emissions and GDP growth (see Figure 10).¹¹⁸

As shown in Figure 10, changing fuels is not enough. We need also to deal

with how we use natural resources, the fundament on which our economy rests.

The circular, regenerative economy for wellbeing of people and Nature offers a pathway to:

1. Change how we fuel our economy;
2. Reduce our careless use of resources;
3. Regenerate degraded ecosystems.

Some 80% of our energy still comes from fossil sources¹¹⁹ (see Figure 11). Renewables increase energy security and drastically reduce the burden on climate and ecosystems. This is partly because

¹¹⁵ Fullerton J., 2015. Regenerative Capitalism. Capital Institute. <https://capitalinstitute.org/wp-content/uploads/2015/04/2015-Regenerative-Capitalism-4-20-15-final.pdf>

¹¹⁶ Lovins, H. et al., 2019. A Finer Future. Creating an Economy in Service to Life. New Society Publishers, Gabriola Island, BC, Canada.

¹¹⁷ E.g. Blewitt, J. (ed.) 2022. New Economy, New Systems. Radical Response to Our Sustainability Crisis. Good Works Publishing, Schumacher Institute, Bristol, UK; Kunkel, P., and Ragnarsdottir, K.V., 2022. Transformation Literacy: Pathways to Regenerative Civilizations. Springer, Berlin.

¹¹⁸ Relative change in main global economic and environmental indicators, European Energy Agency, 2020. Retrieved from: <https://www.eea.europa.eu/data-and-maps/figures/relative-change-in-main-global>

¹¹⁹ Roberts, D., 2019. The global transition to clean energy, explained in 12 charts. Vox. Retrieved from: <https://www.vox.com/energy-and-environment/2019/6/18/18681591/renewable-energy-china-solar-pv-jobs> See also the more recent Ren21, 2022. Renewables 2022 Global Status Report. P 44. Retrieved from: https://www.ren21.net/wp-content/uploads/2019/05/GSR2022_Full_Report.pdf

”

If we transform our global economy to one where waste and pollution are eliminated, products and materials are reused, and Nature is regenerated, **we can cut greenhouse gas emissions by at least 39%.**

Figure 11

Total final energy mix in the world 2020. Fossil fuels accounted for some 80%. Renewables are growing very fast but have a long way to go. The main sectors that use energy are: Heating & cooling (51% of total energy), transport (32%), and power (17%).

Graphic: Vox.¹²¹

fossil fuel combustion is wasteful. Mining or drilling for fossil fuels, transporting them, refining them, burning them, converting them to useful energy, using the energy, disposing of the waste and pollution — at every single stage of that process, there is loss. Burning fossil fuels for electricity, heat, or transportation inherently involves enormous levels of waste, the majority of which ends up as CO₂ emissions in the atmosphere.

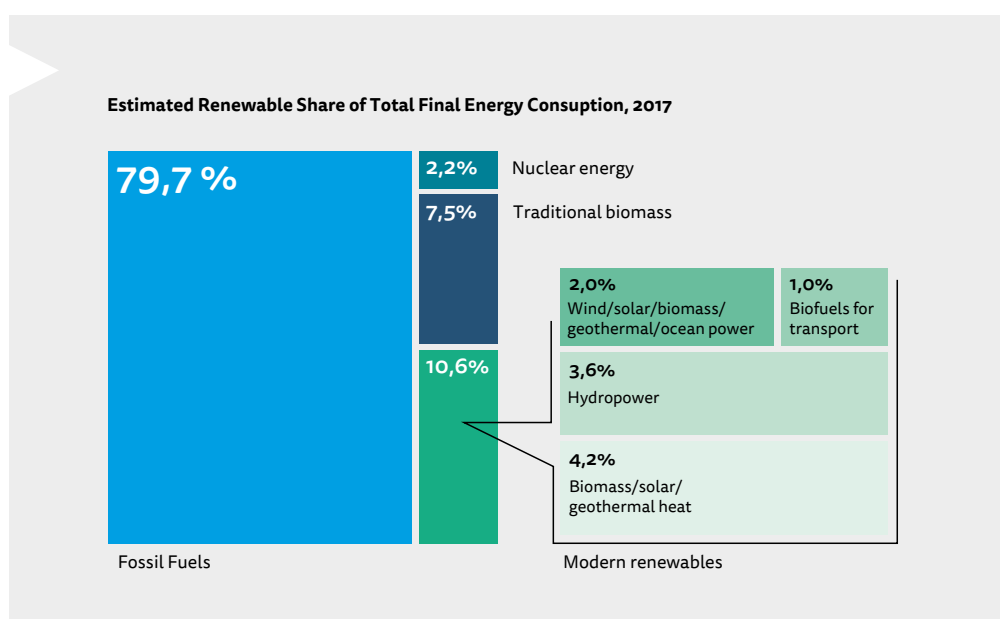
Burning fossil fuels is also a linear economy approach to energy and material use: take-use-waste. We extract and use and then they are gone. By contrast, if the equipment needed to capture and use renewables is designed according to circular principles, renewable sources of energy can be part of a circular and regenerative economy.

For most of our history as a species we managed our household (economy) based on understanding the patterns

of Nature (ecology). Locally adapted ‘circular regenerative economies’ are nothing new. Long-term, they are - very obviously - the only viable economies.

In Nature there is no waste. If we transform our global economy to one where waste and pollution are eliminated, products and materials are reused, and Nature is regenerated, we can cut material use by 28%, and greenhouse gas emissions by [at least] 39%.¹²⁰ Thus, satisfying our needs and wants within the framework of a circular, rather than a linear, economy can have radical positive impacts.

Unlike the linear take-make-waste economy, a circular economy is an economic system that promotes sustainability by mimicking Nature’s ability to design out waste and pollution, keep products and materials in use, and regenerate natural systems.



¹²⁰ Circular Gap Report 2022, retrieved from: <https://www.circularity-gap.world/2022>

¹²¹ Roberts, D., 2019. The global transition to clean energy, explained in 12 charts. Vox. Retrieved from: <https://www.vox.com/energy-and-environment/2019/6/18/18681591/renewable-energy-china-solar-pv-jobs>

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Everything is reused
or repurposed
in nonhuman
ecosystems. **The
natural world is
the perfect circular
economy**, where
everything, even
after its lifetime,
becomes a source
for something else.

– Dr Enric Sala¹²³

The rediscovery of the need to base all technological development and design on ecological understanding started half a century ago, with the ‘New Alchemy Institute’, founded in 1969 by John Todd, Nancy Jack Todd, and William McLarney. This was followed by the pioneering Club of Rome report “Limits to Growth” by Donella and Dennis Meadows and colleagues (1972). The 1980s saw the work of Walter R. Stahel on ‘circular industrial economy.’ It then all branched off into ‘industrial ecology’ and industrial symbiosis in the 1990s.¹²² This was further elaborated and rebranded as ‘Cradle to Cradle’ by William McDonough and Michael Braungart in the 2000s, only to be rebranded again by the Ellen MacArthur Foundation as the ‘circular economy’ in the 2010s.

A commonly used definition of a circular economy is this one, from the Ellen MacArthur Foundation:¹²⁴ “Looking

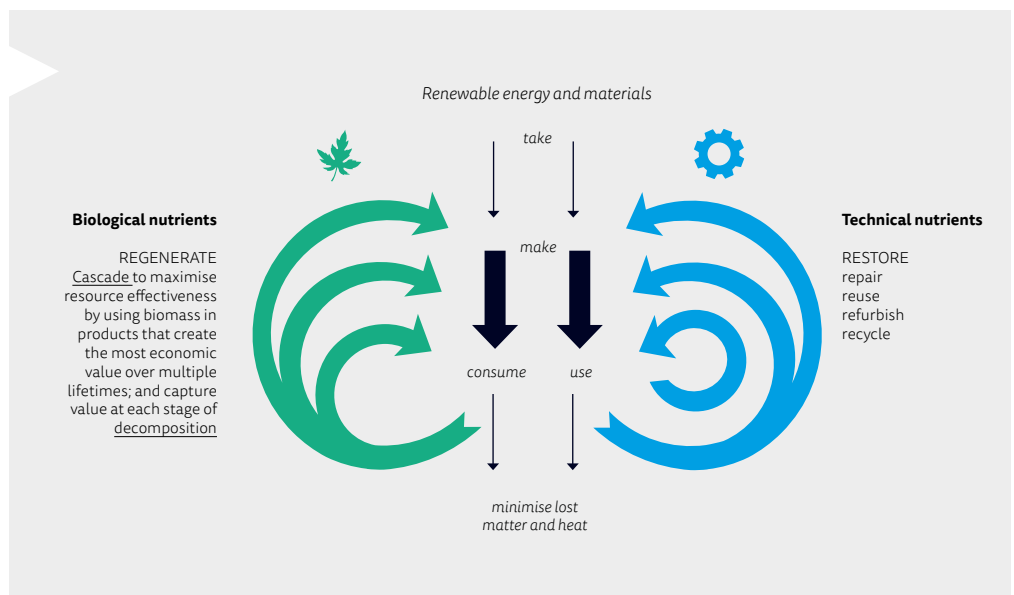
beyond the current take-make-waste extractive industrial model, a circular economy aims to redefine growth, focusing on positive society-wide benefits. It entails gradually decoupling economic activity from the consumption of finite resources, and designing waste out of the system. Underpinned by a transition to renewable energy sources, the circular model builds economic, natural, and social capital. It is based on three main principles:

1. Eliminate waste and pollution;
2. Circulate products and materials (at their highest value);
3. Regenerate Nature.”

These principles are illustrated in Figure 12.^{125 126}

Figure 12
A circular economy
that is regenerative
by design.

Image adapted from the Ellen MacArthur Foundation¹²⁵ and Raworth’s Doughnut Economy Action Lab.¹²⁶



¹²² See for example the work of Walter R. Stahel, Thomas E. Graedel, Bradon R. Allenby, and Marian R. Chertow.

¹²³ Sala, E., 2020. The Nature of Nature; Why We Need The Wild. National Geographic.

¹²⁴ Ellen MacArthur Foundation, FAQ. Retrieved 2022 10 07 from: <https://ellenmacarthurfoundation.org/media-centre/overview>

¹²⁵ Ellen MacArthur Foundation, The butterfly diagram: visualising the circular economy. Retrieved Oct. 7, 2022 from: <https://ellenmacarthurfoundation.org/circular-economy-diagram>.

¹²⁶ Strasse, Z.: Donut Desire, What is the roadmap to a Doughnut Economy? 5 tips!. Doughnut Action Lab, Retrieved from: <https://doughnuteconomics.org/stories/39>

The first principle of the circular economy is to eliminate waste and pollution. Currently, our economy works in a take-make-waste system. We take raw materials from the Earth, we make products from them, and eventually we throw them away as waste. Much of this waste ends up in landfills or incinerators and is lost. This system cannot work in the long term because the resources on our planet are finite.

Many products could be circulated by being maintained, shared, reused, repaired, refurbished, remanufactured, and, as a last resort, recycled. Food and other biological materials that are safe to return to Nature can regenerate the land, fuelling the production of new food and materials. With a focus on design, we can eliminate the concept of waste.

The second principle of the circular economy is to circulate products and materials at their highest value. This means keeping materials in use, either as a product or, when the product can no longer be used, as components or raw materials. This way, the intrinsic value of products and materials are retained, and we can reduce the need for raw materials (including fuels), and thereby meet our needs with a much smaller ecological and climate footprint.

There are a number of ways that products and materials can be kept in circulation and it is helpful to think about two fundamental cycles – the technical cycle (to the right in Figure 12), and the biological cycle (to the left in Figure 12). In the technical cycle, products are reused, repaired, remanufactured, refurbished and recycled. In the biological cycle, biodegradable materials are cascaded, which in circular economy means the sequential and consecutive use of resources to maximise effectiveness by

using biomass in products that create the most economic value over multiple lifetimes. As a last resort, the materials are returned to the Earth through processes like composting and anaerobic digestion. This cascading requires that bio-based materials are kept free of toxins and of technical materials that should not end up in the biosphere. This is one of the aspects where the circular economy mimics how Nature operates. In Nature there is no waste, everything is food for other organisms in a cascading or cooperative way. Circular and regenerative practices do not need to be invented. We can use Nature as our model and source of inspiration.

The most effective way of retaining the value of products is to maintain and reuse them. Take a power drill for example: it is far more valuable as a drill than as a pile of components and materials. So, the first steps in the technical cycle are focused on keeping products whole, to retain the maximum possible value. Getting the most value from the product could involve business models based on sharing, so users get access to a product rather than owning it, and more people get to use it over time. It could involve reuse through resale. It could mean cycles of maintenance, repair, and refurbishment. This process could be strengthened by legalising the “rights to repair” that a number of organisations are currently fighting for, particularly in Europe.¹²⁷ This repair activity can be supported by eliminating VAT from repair.

Biodegradable materials that cannot be reused, like some food by-products, can be circulated back into the economy in the biological cycle. By composting or anaerobically digesting organic materials, valuable nutrients, such as nitrogen, phosphorous, potassium, and micronutrients, can be used to help

¹²⁷ <https://repair.eu/>

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Industries that are stuck in a linear mode of operation need **something more than knowledge** about circular economy or voluntary sustainable standards.

regenerate the land so we can grow more food or renewable materials like cotton and wood.

Some products, like clothing or wooden furniture, can be circulated through both the technical and biological cycle. They can be maintained, reused, repaired, and sometimes even recycled, but eventually they can be returned to the biological cycle from which they came – provided that they are free of toxins. Composted or anaerobically digested, they can feed the soil to grow new cotton or wood.

The third principle of the circular economy is to regenerate Nature. By moving from a take-make-waste linear economy to a circular economy, we support natural processes and leave more room for Nature to thrive.

By shifting our economy from linear to circular, we shift the focus from extraction to regeneration. Instead of continuously degrading Nature, we build natural capital. We employ farming practises that allow Nature to rebuild soils and increase biodiversity (commonly referred to as agroecology, organic agriculture, or regenerative farming), and return biological materials to the Earth. Currently, most of farming materials are lost after use and the land used to grow them is depleted of nutrients.

If we move to a regenerative model, we begin to emulate natural systems. When a leaf falls from a tree it feeds the forest. For billions of years, natural systems have regenerated and purified themselves. In shifting from a linear to a circular mind-set, we need only look to Nature, and emulate it, because it is a perfect example of a circular, regenerative economy for wellbeing of Nature (and people – we are part of Nature).

The concept mentioned above, that we can reduce the need for raw materials by becoming better at circulating products and materials, has a name if we manage 100% recycling, which is impossible: it is called “absolute decoupling.” The theory implies that we can grow without corresponding increases in environmental pressure. Circular economy spells out how this can be approached and achieved.

The Ellen MacArthur Foundation has found that investments with circular economy as a sole or partial investment focus perform better than their benchmarks, five per cent better in the case of public equity funds.¹²⁸ In some industries however, investments in environmentally friendly technologies can mean loss of competitiveness and loss of business. What is needed then is not circular and regenerative economy principles or voluntary standards. What is needed is international law with teeth that changes the rules for the industry globally, compelling / enabling actors throughout the industry to upgrade.

The principles of a circular, regenerative economy can tackle the root causes of biodiversity loss by eliminating waste and pollution, and reducing the need for extraction of materials and fuels. By introducing Ecocide Law, we can power the shift to a circular economy also for industry and other actors that are stuck in a linear economy. As detailed by thought leaders such as those mentioned above, many more actions are needed to bring the economy within planetary boundaries – Ecocide Law is not a panacea. However, Ecocide Law provides a safety rail that laws and policy at lower levels of the legal order cannot deliver.

128 Ellen MacArthur Foundation, 2021. Financing the circular economy, Capturing the opportunity, p 15. Retrieved from: <https://ellenmacarthurfoundation.org/financing-the-circular-economy-capturing-the-opportunity>

”

The Paris Agreement is possible if we could become merely half as wasteful.

We ‘just’ need to change the rules.

”

A guardrail strong enough to give billions of people better options by **removing impunity** for about a hundred directing minds of ecocide.

A circular and regenerative economy is within reach

The rapid acceleration of consumption is currently accompanied by rising waste levels: ultimately, over 90% of all materials extracted and used are wasted. Only 8.6 % make it back into our economy. This constitutes an important indication of the improvement potential of an economy that is circular and regenerative. An economy within planetary boundaries is not an impossible dream, we just have to cease – or at least temper – our careless destruction of the resources we have extracted. So far, we are still on the wrong path and things are getting worse, not better: in only two years, global circularity wilted from 9.1 % in 2018, to 8.6 % in 2020.¹²⁹ Our resource appetite does not feel the planetary boundaries. By adopting the principles and practices of a circular, regenerative economy, this can be turned around and Ecocide Law can help power the transition.

According to calculations by the Circle Economy team, we could achieve the Paris Agreement by a mere doubling from 8.6 % to 17 % circularity.¹³⁰ The biggest gains are within the sectors of housing, nutrition, travel and consumables. With all our ingenuity at our disposal, this must be possible to achieve, and even exceed with a wide margin for errors.

What is needed is ‘just’ a matter of changing the rules, compelling decision makers across the globe to avoid mass harm to the natural world.

A very limited number of people are taking – and profiting financially from – decisions that destroy the planet for us

all. The number of people can probably be counted in the hundreds. It would seem that the harm to life on the planet is out of proportion to the benefit for these few individuals. Only a tiny number of people need be concerned that Ecocide Law will impact them negatively: instead, the vast majority of the world population stands to gain. When it comes to health, wellbeing and safety, we all stand to gain.

How Ecocide Law will help

By outlawing large-scale destruction of Nature, thereby also protecting our rapidly diminishing sources of virgin raw materials, Ecocide Law will make reuse of materials more attractive. This will slow down the depletion of natural resources, reduce fuel consumption, and liberate the circular and green solutions from the constraints of unfair competition.

Making mass destruction and damage to Nature a crime will align incentives with what is safe for people and planet. When the incentives are appropriately realigned, decision makers will be less inclined to try to cut costs by authorizing acts that endanger people and planet. This will give the economic system a healthy nudge towards the circular.

As we are very late in managing this transition in time, we would be well advised to investigate where the greatest gains can be made. One issue that becomes apparent, is that it is not the consumers but rather the institutions and subsidies that propel us in the wrong direction. An article published by participants at COP27 outlines the magnitude of subsidies versus climate action contributions needed.¹³¹

¹²⁹ Platform for Accelerating the Circular Economy (PACE), 2022. The Circular Gap Report 2022. Retrieved from: <https://www.circularity-gap.world/2022>

¹³⁰ Platform for Accelerating the Circular Economy (PACE), 2021. Circular Economy Strategies Can Cut Global Emissions by 39%. Retrieved Oct. 7, 2022 from: <https://www.circle-economy.com/news/circular-economy-strategies-can-cut-global-emissions-by-39>

¹³¹ Schlosser, P. and Dorsey, M., 2022. COP27: Show me the money – supported by policy. Inter Press Service News Agency, November 16, 2022. Retrieved November 18, 2022 from <https://www.ipsnews.net/2022/11/cop27-show-money-supported-policy/>

Schlosser and Dorsey outline that the International Monetary Fund (IMF) reports that fossil-fuel subsidies in 2020 were USD \$5.9 trillion.¹³² By comparison, the IPCC estimates that globally, USD \$1.6-3.8 trillion must be invested every year through public and private climate-related finance to keep warming well below 2°C.¹³³ See Figure 13.

The money is thus not lacking in our global system. All that is needed is shifting where the funds go. We need a guardrail strong enough to choose a better path than the one we are on.

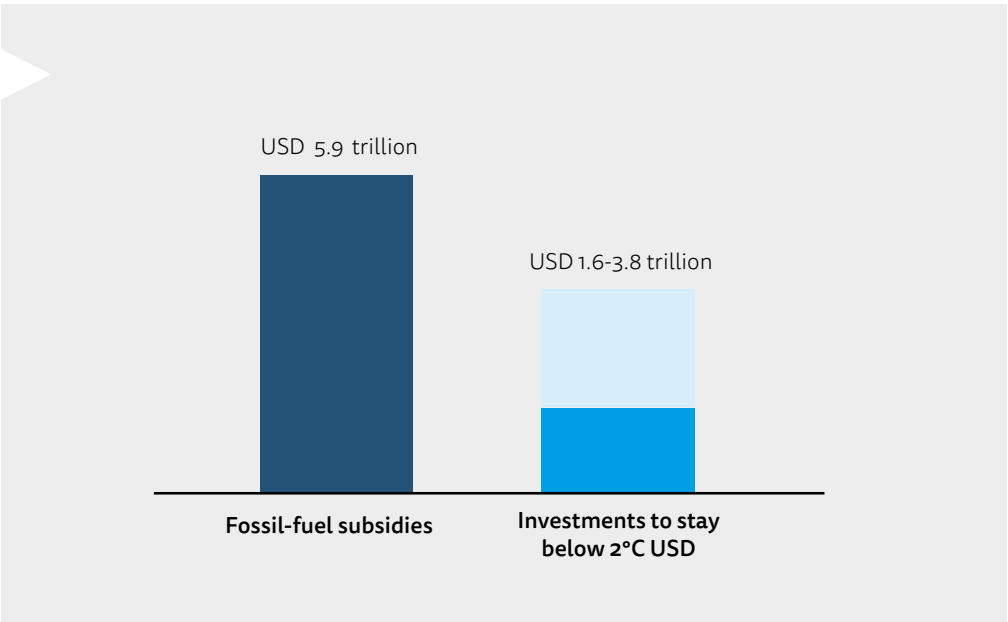
By closing the door to wanton and illegal acts of mass destruction of Nature, Ecocide Law will help advance the principles of a circular, regenerative economy in several ways. Thus, for example, it will:

1. Provide international protection for Earth's living systems on which the world economy depends;
2. Pre-empt ecocide, by making the worst illegal and wanton acts very risky for the decision-makers involved. Activities that risk causing ecocide will need to adopt more stringent safety measures;
3. Level the playing field for business, improving conditions for more sustainable options.

Ecocide Law will support the shift of investments and subsidies that has already started, further strengthening the advantage that circular and regenerative solutions already have. Such solutions will gain a competitive advantage, which will further increase the demand and scale of the benevolent solutions.

Figure 13

The sum of fossil-fuel subsidies is much greater than the investments needed to keep the Paris Agreement. By removing fossil fuel subsidies, we can save USD 2 trillion and stay below 2°C warming.^{132, 133}

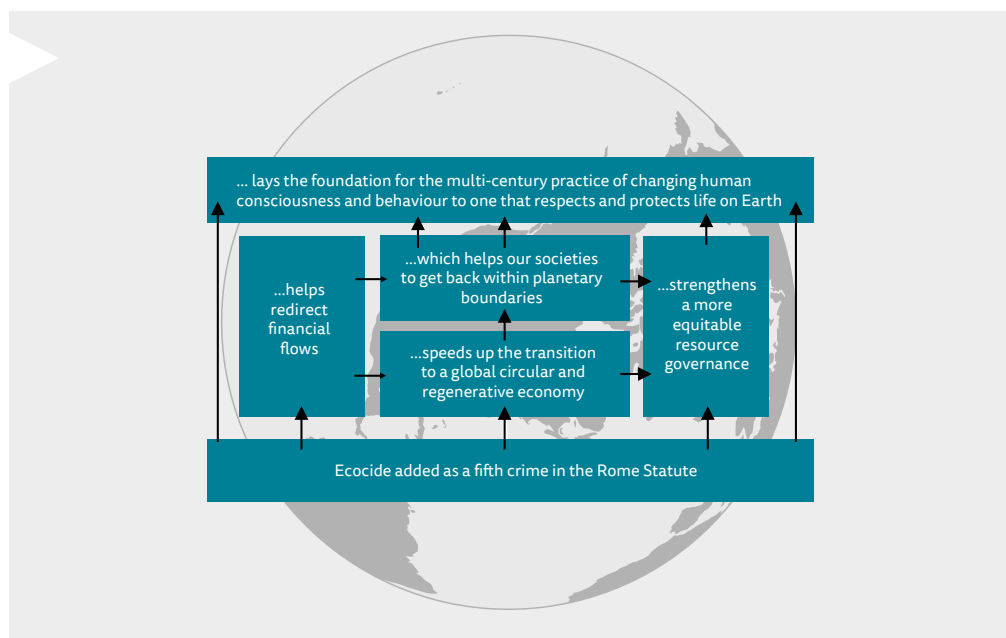


¹³² Schlosser, P and Dorsey, M., 2022. COP27: Show me the money – supported by policy. Inter Press Service News Agency, November 16, 2022. Retrieved November 18, 2022, from <https://www.ipsnews.net/2022/11/cop27-show-money-supported-policy/>

¹³³ IPCC, 2018. IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. Cambridge University Press, Cambridge, UK and New York, NY, USA, p. 321, doi:10.1017/9781009157940.001.

Figure 14

Ecocide Law will bring about a shift in consciousness, reinforced and cemented by the changed flow of investments, revised understanding of the principles of economy, and solutions that are in harmony with Earth's ecology.



Thus, Ecocide Law helps shift the global system towards becoming regenerative and circular.

Over time, the law will also advance society's consciousness regarding how we use resources and how we treat the planet, our home.

A change in consciousness

Professor Philippe Sands sums up what ecocide is about in the following manner: "Having argued cases about genocide and crimes against humanity, I am not starry-eyed about the law. You don't suddenly pass a law and all of a sudden everyone starts being nice to each other and stops mass killing. The ecocide legal campaign is contributing to something that is already happening. [Ecocide Law] is about a change of consciousness."¹³⁴

Redirecting financial flows, empowering and speeding up a global circular, regenerative economy and strengthening a more equitable resource governance

are all steps on a longer journey. Ecocide Law will begin the practice, the long drawn-out, multi-century practice, of changing human consciousness and behaviour over the long term. Ecocide Law will also be helpful to prompt our global society back within planetary boundaries. This is of the essence if we are to have a future. It may sound complicated. And it is. But it can be drawn up in a simple diagram as shown in Figure 14.

Ecocide Law will provide a guardrail to power a shift to an economy within planetary boundaries, and a shift toward a future we can and want to be alive in. Future generations deserve swift action to implement Ecocide Law in the UN Rome Statute.

¹³⁴ Clark, P., 2021. Crime of ecocide could transform fight against climate change. Financial Times. Retrieved from: <https://www.ft.com/content/1343dceo-f328-49cc-abc8-2e5060b79eea>

Risks or opportunities?

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... we didn't
invest in our past.
We invested in
our future.

– Bill Peduto, Mayor of Pittsburgh

Concerns over Ecocide Law are likely to be many, including the effect on investments and mainstays of industry, international competitive edge, job market transition, support from industry and unions, how to finance the transition, ability to pay loans, and more. Each of these concerns is addressed below, showing how Ecocide Law provides opportunity for a shift to a better state.

Legal clarity benefits investments

Ecocide Law will speed up the transition to a greener and more sustainable economy. This will have positive effects on some assets and investments, negative effects on others. Changed conditions is nothing unique to Ecocide Law or to a shift to a sustainable economy: the phenomenon is as old as trade.

Stranded assets do not necessarily mean that industry as a whole suffers. For some assets the negative effects are obvious, for instance unconventional oil resources (oil shales, oil sands) and open cast mines. It is less certain that the effects will be negative for industry as a whole. With a level, green playing field across the globe, investments in sustainable practices become profitable.

As corporate heavy-weight Claes Dahlbäck, former CEO and Chair of Investor AB and former board member of global investment bank Goldman Sachs, states: “Legal clarity will make it easier to operate sustainable and important business.”¹³⁵

The predictable and level market conditions created by Ecocide Law will be positive for investments. Businesses and governments are currently faced with highly uncertain outcomes from climate negotiations, and vastly questionable effectiveness of existing legal frameworks. With clear laws there will be room to plan and adapt. Investments are likely to shift as soon as it is clear that such legislation will be agreed upon.

Protecting current mainstays or investing in the future?

Every long-term successful business has faced a number of challenges to adapt to new circumstances. Over time, the businesses that fail are those that cling to past successes, products and ways of doing business. Kodak photographic film makers are a case in point.¹³⁶

In order to support business, governments tread a delicate balance between too much change too fast, and insufficient adaptation to a changed external situation and changed public awareness and demand. Over the centuries, companies have had to adapt to new laws on everything from slavery, working conditions and child labour, to environmental and data protection regulation. Change is thus constant, but like most organisations, business prefers long-term, stable rules, dealing with the most important issues. To quote Claes Dahlbäck again: “I have always been a believer in clear, long-term, responsible rules. I think they are a good thing in this area as well.”¹³⁷ International legislation that makes ecocide a crime provides long-term, responsible rules.

¹³⁵ Interview with Claes Dahlbäck. Retrieved from: <https://endecocide.se/claes-dahlback-lattare-att-bedriva-hallbar-naringsverksamhet-nar-lagen-blir-tydlig/>

¹³⁶ https://startuptalky.com/kodak-bankruptcy-case-study/#Kodak-Why_did_Kodak_Fail?

¹³⁷ Dahlbäck.

For many businesses, Ecocide Law will be a boon. While these companies may currently not be the largest in the economy, they may well be the businesses of the future, when Ecocide Law reduces unfair competition from firms willing to engage in ecocide.

Change is already under way, as witnessed by increased interest in Corporate Social Responsibility (CSR) and Environmental, Social and Corporate Governance (ESG).

In a recent article about CSR and ESG it was concluded that the Triple Bottom Line (People, Planet, Profit) was becoming increasingly relevant to successful business. Thus, more and more, corporate performance is measured not just in financial terms. Evaluating impact on the planet and its inhabitants is fast becoming the norm.¹³⁸ It has been shown that focus on sustainability, ethics and business integrity can enhance corporate performance rather than coming at its expense. Therefore, companies more and more operate according to CSR policies, and undertake ESG Reporting – which potential investors can use as ESG Ratings when choosing companies to invest in.

With the adoption of Ecocide Law, different industries would compete for having the greenest policies and operations. Companies will be able to create and advertise green jobs as well as competing for the best employees.

There are now groups of organisations and industries signing up for environmentally friendly operations and learning from each other through for example Sistema B¹³⁹ and Positive.¹⁴⁰ The latter is already a supporter of Ecocide Law. Positive's members are going the extra mile from aiming for sustainable, to becoming regenerative through making positive impact in the following ways:

1. Do more good;
2. See themselves as guardians of Mother Earth;
3. Consider their company as a living system with an evolutionary purpose;
4. Adopt a collaborative value-for-all mindset;
5. Think long-term as custodians for future generations;
6. Challenge the status quo disrupting traditional ways of doing business;
7. Respect locality including community, bioregions and culture;
8. Foster empowered participation, equity, and redistribution; and
9. Embrace qualitative and systemic transformation.

¹³⁸ Farnham, K., 2021. Digital Insights, July 2021. <https://insights.diligent.com/esg>

¹³⁹ <https://www.sistemab.org/en/about-global-b-movement/>

¹⁴⁰ <https://www.makeapositiveimpact.co/>

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Aduna’s
philosophy is
that by **focusing**
on being
planet-leading
we will end
up being
market-leading

– Andrew Hunt, founder
and CEO of Aduna

As shown by the city of Pittsburgh in Pennsylvania, USA, transition to a new way is possible, and can increase job opportunities. Historically, coal and steel have been the foundation for Pittsburgh jobs and economy. When offered a future with fracking, which would have threatened access to clean ground water, Pittsburgh decided to change direction. In the words of Mayor Bill Peduto: “... we didn’t invest in our past, we invested in our future. We are the example of what the Paris Agreement could mean for jobs and the economy in the United States.”¹⁴¹

The fundamental technological transitions that are needed are already happening

Many of the fundamental technological transitions that are needed are already happening.¹⁴² Dorr and Seba conclude that the disruption is inevitable because of economic forces alone. It will not happen everywhere at exactly the same time, but for those regions that chose to lead, a 100 per cent solar, wind, and battery system is possible as soon as 2030. This conversion is currently being unexpectedly supported by the war in the Ukraine, which has become a war for energy. Denmark’s energy companies are now aiming to increase their offshore wind production by 50%.¹⁴³ Conventional coal, gas, nuclear, and other power generation assets will become stranded, and thus no new investments in these technologies are rational from now forward.

In their technological transition analysis, Dorr and Seba further argue that in all technology disruptions, cost is the fundamental driving force. Since 2010 the cost of solar PVC (photovoltaic cells) has fallen 82%, an average of nearly 16% per year. They project that cost reduction will continue at 12% per year during the 2020s and so by 2030, the cost of solar will be less than a third of its current cost. In just two decades the cost of solar will have improved by a factor of 20. Wind energy cost improvements are also substantial, 46% since 2010. That is an average of almost 6% per year, and they project 5.5% per year during the 2020s for another 43% by the end of the decade, an improvement by a factor of three in 20 years. Their claim for lithium-ion batteries is even more impressive with 87% cost reduction since 2010, averaging nearly 20% per year, and they project 15% improvement during the 2020s totalling another 80% by 2030 for an astounding 45 times improvement in two decades.

Dorr and Seba conclude that costs improve as market supply and demand expand. Business leaders also have a new view of how to operate. Andrew Hunt, founder and CEO of Aduna stated: “Aduna’s philosophy is that by focusing on being planet-leading we will end up being market-leading. It’s great to be part of a community of people and businesses who share this belief and who are engaged in the messy work of demonstrating it.

¹⁴¹ Pittsburgh has unexpectedly become a climate battleground after Trump ditched the Paris Agreement. Business insider 3/6, 2017. <https://www.businessinsider.com/pittsburgh-trump-paris-agreement-2017-6?r=US&IR=T>

¹⁴² Dorr, A., and Seba T., 2020. Rethinking Energy 2020-2030: 100% solar, wind and batteries is just the beginning. RethinkX <https://www.youtube.com/watch?v=6zgwiQ6BoLA>

¹⁴³ <https://stateofgreen.com/en/news/danish-wind-energy-giants-join-forces-to-double-denmarks-offshore-wind-capacity/#:~:text=Two%20of%20the%20biggest%20players,Denmark%27s%20current%20offshore%20wind%20capacity.>

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Net increase of
18 million jobs
across the world.

”
I don't want anything
to do with people
committing ecocide,
just as I don't
want to have any
subcontractor doing
trafficking or arms
deals. **So I want a
law that takes
them away.**

Mats Bjelkevik, CEO of
Indoor Energy, Sweden.

This is a powerful movement and by supporting each other we can and will change the world.”¹⁴⁴ The transformation of mainstays of industry is thus not only inevitable: it is already under way. What Ecocide Law will provide is a level playing field, with the same rules for all, world-wide, and giving clear rules that enable businesses to plan ahead. The mainstays of industry, save the stranded asset-based industries, thus become more fit for the future.

National and corporate benefits of international law

By the same token as outlined above, operating according to the triple bottom line and aiming for high ESG Ratings, companies are likely to win, not lose, in international competition when they benefit from fair and equal rules worldwide.

International law is needed: tightening national legislation will disadvantage local businesses, whereas international law levels the playing field globally.

More jobs

The World Employment Social Outlook report “Greening the Economy” states that measures taken in the production and use of energy, for example, will lead to job losses of around 6 million, but this is more than offset because they will create some 24 million jobs.¹⁴⁵

The skills needed for renewable energy at industrial scale are very similar to those

skills in use for fossil energy. In many cases, no additional training, or very little additional training, is needed.¹⁴⁶ As an example, the same type of welding skills is needed for an oil pipeline as for a wind turbine. It is therefore no surprise that a survey in Canada shows that a clear majority of fossil fuel workers are in support of a migration from fossil energy to renewables; 61 % of the oil, gas and coal sector workers surveyed are in favour of pivoting to a net zero economy.¹⁴⁷ The resistance to change is thus not with the workers, but with some owners and high-ranking executives that stand to benefit short term from keeping society at status quo. The sectors identified by the International Labour Organization, ILO, as sectors subject to scale down were “carbon- and resource-intensive industries”.¹⁴⁸ The net increase of approximately 18 million jobs across the world will be the result of the adoption of sustainable practices, including changes in the energy mix, the projected growth in the use of electric vehicles, and increases in energy efficiency in existing and future buildings.¹⁴⁹

This shift is not only inevitable, but already well under way. Renewable energy already accounts for more jobs than fossil energy,¹⁵⁰ despite the fact that less than 20% of the energy is renewable today. Thus, shifting to renewables is not a threat to jobs or economic welfare – quite the contrary.

¹⁴⁴ <https://www.makepositiveimpact.co>

¹⁴⁵ ILO, 2018. World Employment Social Outlook. Retrieved from: https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_628644/lang-en/index.htm

¹⁴⁶ Iron & Earth, 2021. Climate Emergency polling & transition to renewable sources with oil & gas sector workers. Retrieved from: https://d3n8a8pro7vhmx.cloudfront.net/ironandearth/pages/1702/attachments/original/1635867551/Abacus_-_Iron___Earth_poll_July_13_.pdf?1635867551

¹⁴⁷ Iron & Earth, 2021.

¹⁴⁸ ILO, 2018.

¹⁴⁹ ILO, 2018.

¹⁵⁰ IEA, 2022. Energy employment in fossil fuel and clean energy sectors, 2019-2022. Retrieved from: <https://www.iea.org/data-and-statistics/charts/energy-employment-in-fossil-fuel-and-clean-energy-sectors-2019-2022>

Support from Unions and Industry

World Economic Forum's (WEF) survey of 140,000 business people and policy-makers in 2009 found that 75 per cent thought the world was facing not just an economic crisis, but a values crisis as well. Respondents stated that they wished they could practice the same values at work as they do at home.¹⁵¹

Ecocide Law is a key to making this possible, and CEOs are beginning to understand its potential. For example, French lawyer Valérie Cabanes addressed a thousand CEOs in the Palais des Congrès in Paris.¹⁵² She explained that international law that criminalizes ecocide would enable them to say no to some shareholder demands and instead shift investments to greener products and industries. At the end of her talk, the CEOs jumped to their feet and gave her a standing ovation.¹⁵³

The Swedish Trade Union Confederation has already come out in support of Ecocide Law¹⁵⁴ in order to facilitate the rapid changes needed so that it becomes easy for consumers, workers, communities, and business to act responsibly.

Furthermore, both industrial leaders and Union Members have children and/or grandchildren and they are learning from their young people that a new direction is needed for them to have a safe future.

This issue has a generational interest. Professor of Laws Philippe Sands, co-chair of the expert drafting panel on the legal definition of ecocide, recounts that his children, who are in their 20s and usually tend to ignore what he does, got in touch with him when they read a piece in the Guardian¹⁵⁵ about drafting the Ecocide Law definition – and said to him: “Well, that’s great what you are doing.”¹⁵⁶

As more and more CEOs of industry “wake up,” support for Ecocide Law may actually help policy-makers gain industry and union support, whilst at the same time providing both the policy-makers and business leaders with the opportunity to champion an act of real importance.

Popular support

Politicians and policy-makers typically work with a time frame of the next 4-5 years, which constitutes the election cycle. In the past, the political parties that are likely to have supported Ecocide Law are Green Parties. Research has shown that so far, there is international consistency in the demographic and attitude profile of green voters. They have tended to be young, highly educated, disproportionately female, and employed in the social and cultural services, and also above-average levels of environmentalism and social liberalism.¹⁵⁷ There are Green Parties in around 90 countries around the globe,

151 Global Agenda Council on Values: A New Social Covenant, www3.weforum.org/docs/WEF_GAC_Values_2013.pdf

152 Stop Ecocide International, 2020. Changing The Rules #2: Valérie Cabanes & Jojo Mehta in conversation. Retrieved from: <https://youtu.be/LDPZs98FGmo?t=2076>

153 Conversation with Valérie Cabanes. https://soundcloud.com/stopecocide/changing-the-rules-2-valerie-cabanes-jojo-mehta-in-conversation?utm_source=clipboard&utm_campaign=wtshare&utm_medium=widget&utm_content=https%253A%252F%252Fsoundcloud.com%252Fstopecocide%252Fchanging-the-rules-2-valerie-cabanes-jojo-mehta-in-conversation. At 34:04 minutes.

154 Thorwaldsson, K.-P., and Sundström, A., 2020. Kriminalisera storskalig miljöförstörelse. <https://www.svd.se/kriminalisera-storskalig-miljo-forstorelse>

155 Bowcott, O., 2020. International lawyers draft plan to criminalise ecosystem destruction. <https://www.theguardian.com/law/2020/nov/30/international-lawyers-draft-plan-to-criminalise-ecosystem-destruction>

156 Defining Ecocide. Interview with Philippe Sands. Völkerrechtsblog <https://voelkerrechtsblog.org/defining-ecocide/>

157 Dolezal, M., 2010. Exploring the Stabilisation of a Political Force: The Social and Attitudinal Basis of Green Parties in the Age of Globalisation. *West European Politics*. 33 (3): 534-552. doi:10.1080/01402381003654569. S2CID 154994735. Oesch, D., 2013. The class basis of the cleavage between the New Left and the radical right: An analysis for Austria, Denmark, Norway and Switzerland. In Rydgren, Jens (ed.). Chapter 3: Class Politics and the Radical Right. London: Routledge. pp. 31–51. ISBN 978-0415690522.

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The Swedish Trade
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Ecocide Law will
help the transition
no matter how you
organise it.

but with rare exceptions (e.g. Germany, European Parliament, New Zealand) Green Parties have never obtained a large proportion of votes. However, the votes are likely to shift now, with young people around the world taking part in climate school strikes and university strikes. The leader of the Fridays for Future movement Greta Thunberg of Stockholm has inspired millions of young people around the world to take action, demand that governments listen to scientists, and set climate policies that halt global warming. It has been shown that young people can effect change through intergenerational conversations. A recent survey of 10 - 14 year-olds¹⁵⁸ who shared their worry about climate change increased their parents' concerns. Male and conservative parents showed the largest difference in climate concern following the intervention, and daughters were particularly influential.¹⁵⁹

In the summer of 2021, young environmentalists in Iceland rated political parties according to their environmental policies – and showed that only three parties passed their evaluations with respect to addressing climate change, Nature protection and circularity. Only these three parties were thus seen to have policies fit for the future.

As a result of this evaluation, other political parties in Iceland scrambled to re-think their environmental policies, before elections at the end of September 2021, to attract the votes of young people. While voter support varies from country to country, the overall trend is clear. We conclude that more and more parties and politicians are likely to engage with what is good for climate and Nature – and therefore support Ecocide Law as an enabler.

A Greenpeace survey discovered that 79% of people thought that crimes against Nature should be prosecuted like crimes against humanity.¹⁶⁰ It can thus be argued that promoting Ecocide Law is likely to increase voter support.

The rise of nationalism and reduction in trust in governments can be seen in part to be a result of a widening gap between what matters to people and the issues on the table in governments. There is widespread agreement, even in the richer countries, that what has been called the “social contract” is broken. This is the belief that if you work hard and play by the rules, the system will reward you and ensure your security. Now, instead, many people fear the loss of their jobs, insecurity in old age, and the destruction of their dreams and cultural norms.

¹⁵⁸ Lawson, D.F., Stevenson, K.T., Peterson, M.N., Carrier, S.J., & Seekamp, E., 2019. Children can foster climate change concern among their parents. *Nature Climate Change* 9: 458-462.

¹⁵⁹ Gonzalez, M. (nd) Children can influence their parents' perspective on climate change: A conversation with Dr. Danielle Lawson. Pass the Mic Youth. <https://www.greenpeace.org/usa/democracy/the-lewis-powell-memo-a-corporate-blueprint-to-dominate-democracy/>

¹⁶⁰ <https://www.etc.se/debatt/dags-att-gora-ekocid-till-ett-internationellt-brott>

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Acts that risk causing **ecocide will lose in appeal**, increasing the attraction of other options to square debt.

They feel they have no voice and are of no value. In the global South, globalization has brought great benefits to some, but failed to protect many others.¹⁶¹

While it is not sufficient on its own to restore the social contract, Ecocide Law helps protect ecosystems from the worst violations, promoting health and wellbeing for people and Nature, and enabling more people to sustain a good life.

How to Finance the Transition

Governments and local authorities may be concerned about how to finance their activities if polluting enterprises no longer pay taxes to them. But there are strategies that can be followed to increase revenue. These include tax reform, supporting local businesses, Universal Basic Income, and local parallel currencies.

Tax reform and debt relief

By getting their fair share of companies' profits, governments, both national and local, can pay their loans, thereby minimizing debt. The Tax Justice Network estimates that \$21 to 32 trillion in financial assets are sitting offshore in tax havens.¹⁶² In July 2021, 130 countries and jurisdictions joined a statement establishing a new framework for international tax reform.¹⁶³

This followed the G20 meeting in June of the same year, where it was agreed to close the loophole that large corporations have used to not pay taxes in their countries of operation – by placing the headquarters in a tax haven. Governments and local authorities often take loans for new initiative to fulfil their legally binding duties. More often than not, loans may be in a foreign currency, making it crucial to support the stability of the country's currency.

Ecocide Law will be actively helpful, because it forces the lender to the borrower's end of the table. Just as a lender cannot require a borrower to commit genocide in order to pay their debt, with the introduction of the Ecocide Law, the lender cannot force the borrower to commit ecocide either. Since it is not in the lender's interest that the borrower defaults, they can join forces in working out a better way. Furthermore, acts that risk causing ecocide are likely to lose in appeal to lenders (and the directing minds of the initiators involved), increasing the attraction of more sustainable options. The pressure on government officials to look the other way and continue to sign-off on ecocide will lessen.

¹⁶¹ Morris, E. 2006. Globalization and its effects on youth employment trends in Asia. ILO. Page 2. Retrieved from: https://www.un.org/esa/socdev/nyin/workshops/regm_asia_ilo_elizabeth_morris_paper.pdf

¹⁶² Tax Justice Network. Retrieved November 21, 2022. <https://taxjustice.net/faq/how-much-money-is-in-tax-havens/>

¹⁶³ OECD (2021) 130 countries and jurisdictions join bold new framework for international tax reform. OECD, Paris. <https://www.oecd.org/newsroom/130-countries-and-jurisdictions-join-bold-new-framework-for-international-tax-reform.htm>

It is not likely that all debts from the global South to the rich countries will be written off, but the capacity of the rich countries to create money when they want to is enormous. According to the International Monetary Fund (IMF), the cost of providing full or partial debt relief to the 39 countries most in need would be around \$75 billion in 2014 terms.¹⁶⁴ This is roughly the amount of money the US Federal Reserve printed each month that year after the financial crisis and referred to as “quantitative easing.”

The rich world has the capacity to stimulate development, and create jobs, simply by reducing numbers on computer spread sheets. Call it “quantitative development.” Debt relief would benefit the rich world, as it would cut long-term migration from South to North, much of which is driven by inequality and a lack of jobs. By allowing more orderly development, and much greater local investment, it would improve living standards and even reduce the rate of population growth in many poor countries.

For example, the Heavily Indebted Poor Countries (HIPC) Initiative and the Multilateral Debt Relief Initiative (MDRI) organized by the World Bank and IMF led to a 97% reduction in the debt stock of the 36 countries involved by writing off \$42 billion of debt.

They reduced their debt service levels from 22% of government revenues to 9%.¹⁶⁵ The initiatives freed considerable revenue in the poor countries that could now be used for health and education expenditure and to strengthen development.

Supporting local businesses

The mission of government is to act on behalf of its constituency. The spending decisions of governments can increase the amount of money in poorer people's pockets, or can leave them worse off. As the greatest single budget holders in poorer communities, public sector workers (from regeneration partnerships, schools, healthcare organisations, procurement departments, and more) have a major role to play in developing strong and resilient local economies. In many places, the local authority is the biggest employer and purchaser by far.

More effective spending decisions by government can benefit local people and government strategy, too. As the local economy improves, government will have less need to spend money on welfare benefits and can apply the money they save to strategic economic solutions.¹⁶⁶ Supporting local business and industry strengthens local jobs and local economies.

¹⁶⁴ Debt Relief Under the Heavily Indebted Poor Countries (HIPC) Initiative. IMF, 2016. Retrieved from: imf.org/external/np/exr/facts/hipc.htm.

¹⁶⁵ Debt Relief Facts, World Bank, April 2017. pubdocs.worldbank.org/en/702021492519096192/Debt-relief-facts-April-2017.pdf

¹⁶⁶ Sachs, J., 2002. The Money Trail - Measuring your impact on the local economy using LM3, New Economics Foundation.

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The Commercial
Circuit Credit
allows SMEs
to stay afloat
during financial
downturns.

The local businesses do not need to grow, many successful firms have followed the policy of staying steady state, making them a firm anchor in the local economy. In a recent book “Throwing Rocks at the Google Bus”, Douglas Rushkoff¹⁶⁷ concludes that we need to “develop local, resilient, human-scaled enterprises that work in a variety of economic landscapes.” His proposals include solutions to unemployment in light of automation (e.g. Universal Basic Income – see below), as well as complementary currencies designed to keep money circulating locally, and new ways to generate value for investors without needing an “exit event” where stocks are sold and are often invested elsewhere.

Universal Basic Income

Universal Basic Income (UBI), where each person receives a guaranteed income, has been experimented with in various versions in Europe, Africa and India and it has been proposed in the US. Canada did the longest experiment.¹⁶⁸ All evaluations of UBI trials have been positive, with the children seen as overall winners. The UN Universal Declaration of Human Rights (1948) stated that one day it would come – as a human right for everyone. UBI gives people the freedom to pursue interests, including growing their own food and improving local ecosystems. Parents can also play a larger part caring for their children and elderly parents, taking the pressure off educational and social services. Lastly people can have the time to start a new business, strengthening the local economy.

Local parallel currencies

The late Bernard Lietaer was a promoter of complementary currencies. After designing the Euro, which was intended to be a trade currency only, he helped design the C3 (Commercial Circuit Credit) complementary currency of Uruguay. In C3, the credit-unit is in the form of Value Claims: “this means of payment can be rooted in a mix of backings, as long as there is an ultimate guarantee of a capable third party, such as trustable financial institutions, guarantee funds or credit insurances (Figure 13). Sachy (2013)¹⁶⁹ outlines that “... it is possible to restore a viable monetary system by adding complementary agreements. By virtue of the analogy with process ecology, I will conclusively argue that Value Claims flow in the C3 network as a ductile financial instrument whose implementation modifies systemic interconnectivity and, in turn, it desirably enhances the performance of the system as a whole.”

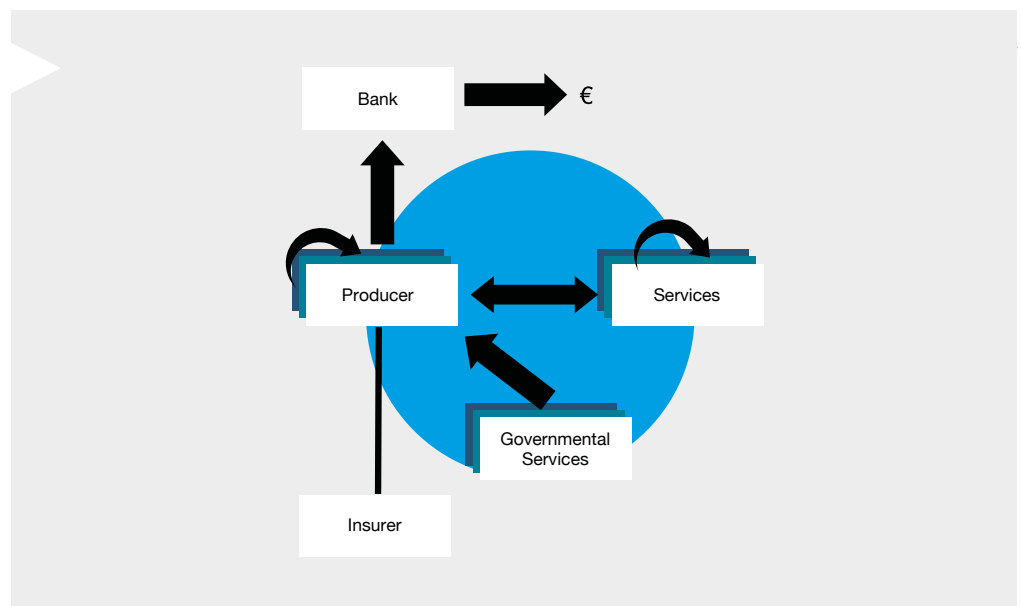
Sachy outlines that the C3 is conceived as an innovative policy instrument for structurally addressing unemployment because the C3 allows SMEs to stay afloat during financial downturns and keep the local economy going. In turn this increases jobs, and tax payments, benefitting the local and national economies – and hence aids in financing the transition we are calling for here.

¹⁶⁷ Rushkoff, D., 2017. Throwing Rocks at the Google Bus. How Growth Became the Enemy of Prosperity. Portfolio.

¹⁶⁸ Ragnarsdottir, K.V., and Parker, J., 2022. Regenerative Wellbeing Economy. In J. Blewitt (ed.) New Economy, New Systems. Good Works Publishing, Bristol.

¹⁶⁹ Sachy, M., 2013. The new frontier in payment systems: Virtual currency schemes, the C3 Uruguay case and the potential impact on SSE. UNRISD. (SSE refers to Social and Solidarity Economy.) [https://www.unrisd.org/unrisd/website/document.nsf/\(httpPublications\)/70F675806EAEFF0C1257B600055B9D5?OpenDocument](https://www.unrisd.org/unrisd/website/document.nsf/(httpPublications)/70F675806EAEFF0C1257B600055B9D5?OpenDocument)

Figure 15
The dynamics
of the C3
network.¹⁷⁰



Further benefits include making the national monetary system less brittle, since participating businesses would be able to strengthen their access to credit by means of the second currency, which is loaned at costs that are lower than conventional interest rates. Sachy further concludes that “... C3 has also the potential to re-structure the European monetary system through a design that frames an economic win-win situation for all participants” (see Figure 15).

The C3 mechanism has six steps:

1. Participating businesses secure invoice insurance;
2. Business A then opens a checking account in the clearing-network and pays business B through its checking account;
3. To receive its payment, business B opens its own checking account in the network.
4. Business B can either cash in for national money (at a cost); or pay his own supplier (business C) with clearing funds (no cost). This happens only if business C has a bank account in the network.

5. At maturity of invoice, the network gets paid the amount of the invoice in national money, either by business A or by the insurance company.

There are hundreds of complementary currencies around the world. The oldest, established in the 1930s, is the WIR¹⁷¹ of Switzerland through which business transactions occur, as opposed to using the Swiss currency, the Franc. Since Switzerland is resource poor, but has one of the most stable long-term economies of the world, we should take a closer look at their methods and operations.

Shifting subsidies and investments. As shown above, yearly subsidies for fossil-fuel extraction and operation are of the order of 2x the funds needed every year through public and private climate-related finance to keep warming well below 2°C.

In conclusion,¹⁷² there are a number of known and proven ways to finance the transition to an economy and thriving businesses that put people and Nature first.

¹⁷⁰ Lietaer, B. in collaboration with STRO (Social Trade Organization) (2010) Commercial Credit Circuit(C3) – A Financial Innovation to Structurally Address Unemployment. <https://www.scribd.com/doc/101247964/Bernard-Lietaer-Commercial-Credit-Circuit-a-Financial-Innovation-to-Structurally-Address-Unemployment-2008>

¹⁷¹ Kaminska, I. (2009) The WIR bankmodel, or back to barter. The Financial Times, February 18, 2009. <https://www.ft.com/content/227440c4-b725-3e88-b27a-a908df73110f>

¹⁷² Schlosser, P. and Dorsey, M., 2022. COP27: Show me the money – supported by policy. Inter Press Service News Agency, November 16, 2022. Retrieved November 18, 2022, from <https://www.ipsnews.net/2022/11/cop27-show-money-supported-policy/>

Conclusion

”
Legal clarity will
make it easier
to operate
sustainable
and important
business.

- Claes Dahlbäck,
former CEO and Chair of
Investor AB, and former
board member of global
investment bank
Goldman Sachs.

Because of a gap in the legal order, some of our economic activity is now outside the bounds of Nature and society. The gap in the legal order, along with the potential for opportunism by externalising costs on others have brought us to a point where we experience hazards such as climate change, extreme weather, biodiversity loss, livelihood crises, natural resource crises, and social cohesion erosion. Continued species extinctions and climate change will damage the biosphere irreparably. These hazards overlap and compound each other, interact with other social, political and health risks, and look set to trigger tipping points in Nature.

A circular and regenerative economy is fundamental to a healthy future. In order to achieve the Paris Agreement, we need to go from 8 % circularity to at the very least 17 % circularity in the world economy. At present, responsible and circular methods are operating under competitive disadvantage, and the linear practices prevail. This can, however, be changed.

Where voluntary agreements and policies do not suffice, international criminal law provides a safety rail that enables and compels a shift toward the circular and regenerative. It will not solve everything by itself, but it will address the most destructive, illegal, and wanton practices. It offers protection when the national legal system is weak and where international agreements have failed.

Recognising ecocide as an international crime also strengthens existing international agreements, such as the Paris Agreement,¹⁷³ and gives power to the judiciary, which means that the whole environmental justice system can kick into gear.

Although the perils of an economy that disregards the value of living Nature have been known for more than half a century, they have been ignored. Now, however, support for Ecocide Law growing fast, from virtually all parts of society. National governments across the world are discussing Ecocide Law, the world's most influential investors, ICGN, with USD 70 trillion under management (Global GDP by comparison is USD 96 trillion), has repeatedly demanded that governments recognise Ecocide as an international crime. The European Parliament has on several occasions called for the establishment of ecocide as a criminal offence to safeguard human rights and democracy, biodiversity, the climate and environmental defenders. Leaders of the world religions recently came together in "Faith Voices for Ecocide Law," recognising the necessity for criminalising ecocide¹⁷⁴. Business leaders are getting organised behind Ecocide Law, global youth is already organised and sets criminalising ecocide as their first demand.

¹⁷³ Roupé, J., Ragnarsdóttir, K.V., 2022. Ecocide Law for the Paris Agreement. The role of Ecocide Law in limiting global warming. End Ecocide Sweden and the Schumacher Institute. Retrieved from: <https://endecocide.se/wp-content/uploads/2022/11/Ecocide-Law-for-the-Paris-Agreement-Launch.pdf>

¹⁷⁴ See: <https://www.faithforecodelaw.earth>

The widespread and accelerating support comes at a time of great sense of urgency due to a compounding of hazards which are felt across the world. Ecocide Law holds the promise to help us change course at a time when we urgently need to improve our ways. Ecocide Law applies power at the point where the potential to shift the system is greatest. Ecocide Law will shift the conception of what is morally acceptable behaviour vis-a-vis the natural environment. And, in doing so, it will help push businesses to adopt practices that are sustainable rather than destructive, pre-empting acts that risk causing ecocide.

With the right political will and focus, adding Ecocide Law to the Rome Statute could be done within a few years. The law would impact operational decisions by potential violators even before it is ratified. It will upgrade and level the playing field in a way that accelerates a transition to the sustainable.

Ecocide Law holds the promise to:

1. Provide international protection for Earth's living systems on which the world economy depends;
2. Pre-empt ecocide, by making the worst illegal and wanton acts very risky for the decision-makers involved;
3. Improve conditions for more sustainable options.

Appendix I - Proposed definition of ecocide

In June 2021, an independent panel of experts (IEP) in international law, convened by the Stop Ecocide Foundation, presented a definition of ecocide as an international crime.

The proposed amendment to the Rome Statute to include a crime of ecocide

1. For the purpose of this statute, “ecocide” means unlawful or wanton acts committed with knowledge that there is a substantial likelihood of severe and either widespread or long-term damage to the environment being caused by those acts.

2. For the purpose of paragraph 1:

a) “Wanton” means with reckless disregard for damage which would be clearly excessive in relation to the social and economic benefits anticipated;

b) “Severe” means damage which involves very serious adverse changes, disruption or harm to any element of the environment, including grave impacts on human life or natural, cultural or economic resources;

c) “Widespread” means damage which extends beyond a limited geographic area, crosses state boundaries, or is suffered by an entire ecosystem or species or a large number of human beings;

d) “Long-term” means damage which is irreversible or which cannot be redressed through natural recovery within a reasonable period of time;

e) “Environment” means the earth, its biosphere, cryosphere, lithosphere, hydrosphere and atmosphere, as well as outer space.

The definition is crafted in such a way that only those practises that are the most damaging for the environment are covered.

First, there must exist a substantial likelihood that the conduct (which includes an act or omission to act) will cause severe and either widespread or long-term damage to the environment. The Panel recognised that this threshold may, taken on its own, be overly inclusive. There are activities that are legal, socially beneficial and responsibly operated to minimise impacts that nonetheless cause (or are likely to cause) severe and either widespread or long-term damage to the environment. Therefore, the Panel considers it necessary to include a second threshold.

The second threshold requires proof that the acts are unlawful or wanton. This additional threshold draws upon environmental law principles, which balance social and economic benefits with environmental harms through the concept of sustainable development.

With these two thresholds, the prosecution would need to prove a substantial likelihood of causing severe and either widespread or long-term damage through acts or omissions that are either unlawful or wanton.¹⁵¹

The crime of ecocide is formulated as a crime of endangerment rather than of consequence. It is the commission of acts with knowledge of the substantial likelihood that they will cause severe and either widespread or long-term damage that is criminalised.

Appendix II - The process for adding ecocide to the Rome Statute

The governing document of the International Criminal Court, the Rome Statute, currently lists four crimes: genocide, crimes against humanity, war crimes and the crime of aggression. The proposal is to amend it to include a fifth crime: ecocide.

The procedure for amending the Rome Statute is set out in Article 121 thereof,¹⁷⁵ and has already been put to use when the crime of aggression was added.

There are four steps to include an additional crime:

The process to amend the Rome Statute

1. Proposal

Any state which has ratified (officially agreed to) the Rome Statute of the International Criminal Court (ICC) may propose an amendment. There are currently 123 of these “States Parties”.

2. Admissibility

A majority of those present and voting at the next annual assembly of the ICC need to agree that the proposed amendment can be considered. One state, one vote.

3. Adoption into the Statute

At least a 2/3 majority of States Parties (currently 82/123) need to be in favour of the amendment. As with any international agreement, the precise formulation of the text adding ecocide as the fifth crime to the Rome Statute would be discussed and agreed amongst the States Parties.

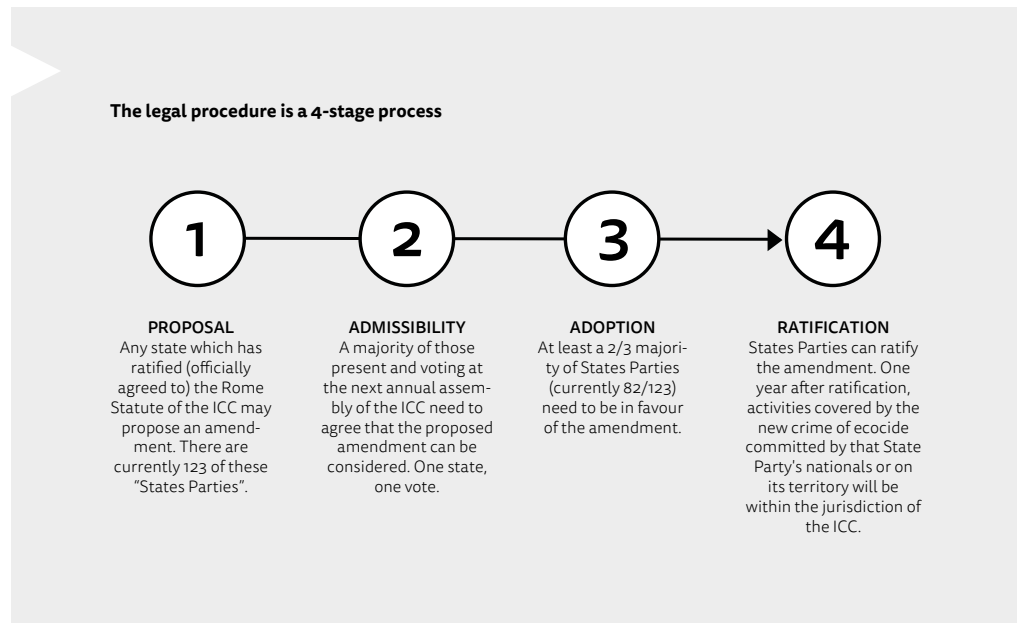
4. Ratification

States Parties can then ratify (officially indicate their willingness to be bound by) the amendment (that is, the new article of the Statute). One year after a State Party has ratified the amendment, activities covered by the new crime of ecocide committed by that State Party’s nationals or on its territory will be brought within the jurisdiction of the ICC. Prosecution for such activities before the ICC will then become possible. The State Party will also be expected to adapt its national legal system so as to reflect the State’s new obligations under international law.

¹⁷⁵ The Rome Statute of the International Criminal Court, Article 121, p 55. <https://www.icc-cpi.int/sites/default/files/RS-Eng.pdf> Retrieved: December 2022.

Figure All:1

The procedure for amending the Rome Statute to add ecocide as a fifth crime.



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