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# The shifting philosophy behind the protected area concept and its applicability in the South African context

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The necessity of increasing biodiversity conservation efforts has been highlighted by planetary boundary research. Through review and critical thinking, this paper aims to highlight inadequacies within historic and current environmental ideologies, many of which continue to entrench flawed conservation trajectories. The first part of this paper reviews the context in which the term *conservation* has been viewed within society, particularly between 1950 and the present day, revealing an early preservationist purpose that was embedded within a larger context of environmental plunder. It examines differing social, scientific and economic dimensions as well as certain approaches to environmental awareness within that period, particularly as it applies to the historic and emerging value of protected areas. It does this through the lenses of divergent thinking, including sequential iterations of colonialism, neoliberalism, "new conservation", convivial conservation and ecocentrism. By juxtaposing the gradual increase in environmental awareness with socio-political and economic milestones within the last 70 years, it illustrates why firstly, truly reformist thinking has not gained traction and secondly, why exploitative and inherently unsustainable forms of environmentalism have endured within policy. By illuminating these factors, the duplicity of certain conservation trajectories is exposed. Contrastingly, some unlikely alliances between previously antagonistic socio-environmental ideologies are introduced. The second part of the paper deals with how emerging environmental principles are being applied (or not) within South Africa's proud conservation history. It asserts that the post-Apartheid transformation within the environmental sector was incomplete, resulting in the retention of both social and environmental exploitation within policy. With the perpetuation of inadequate measures to stem global (and local) biodiversity loss, despite its now obvious need, the paper concludes with a set of actionable recommendations that have general application to conservation policy makers, researchers and practitioners including those within the South African context. The urgency of addressing the transgressed biodiversity planetary boundary, amidst inertia preventing rectification, provides the motivation underpinning this paper.

## KEYWORDS

biodiversity loss, protected areas, planetary boundaries, ecocentrism, Earth Jurisprudence, convivial conservation, neoliberalism

## Introduction

Presently, even as the planetary boundary pertaining to biodiversity loss is breached (Richardson et al., 2023), the socio-economic context of protected area management is changing. Environmental scientists and planners must adapt to these shifts to maximise positive change for humanity and the greater environment on which it depends. The integration of work in two areas: planetary boundaries (Rockström et al., 2009) and environmental law (Cullinan, 2002) are particularly relevant in advancing environmental thinking. The former, because the severity of impending environmental crises became certain beyond doubt and consequently environmental issues are elevated on international agendas. The latter, because it offers respite from seemingly disparate methodological approaches to address biodiversity conservation. Perspectives from these two areas of environmental work are utilised to examine the thinking behind global and South African environmental policy, culminating in actionable recommendations. This paper aims to provide the reader with a narrative that conflates diverse fields of thought – to highlight that despite the urgency of addressing biodiversity loss, interventions are either failing to gain traction or being countered by continued and accelerating threats. After examining divergent environmental frameworks, the paper moves into discussing how these frameworks and approaches are experienced in the South African biodiversity conservation context.

South Africa's well-documented environmental history spans three centuries with early interventions occurring in the 19<sup>th</sup> Century, simultaneous with interventions in the United States (Nash, 1982; Carruthers, 2001; 2017; Sapiñoli and Hitchcock, 2023). Within that period, South Africa's protected area policies underwent a series of iterations from colonial motivations, starting with staving off traditional utilisation and wholesale slaughter by the armed settlers, albeit to ensure the flourishing of "game" species for sporting elites. This resulted in the targeted removal of unwanted species including large predators (Carruthers, 2001). Interestingly, this paradigm underpinning early conservation efforts is commonly excised from contemporary marketing information (SANParks, 2024) which rather portrays a more sanitised version of environmental care. This sanitising trend may continue such that its succeeding motivations (of elite recreation) may also be replaced to perpetuate the illusion that conservation was always aimed at recognising local community members while simultaneously saving critically important species and landscapes; as this paper will unpack, nothing could be further from the truth.

This narrative begins by unpacking some of the controversies of human impacts and environmental degradation, before delving into some of the political principles which have governed humanity's responses to such impact. It goes on to examine the variety of responses to environmental threats including neoliberal vs political ecology approaches and subsequent ecological thinking that has challenged entrenched anthropocentric policy.

## Part A – controversies surrounding the treatment of human impacts and environmental degradation

### Containment of protected areas and anthropogenic change

Reducing negative human wildlife interactions and limiting wildlife movement by fencing, has often separated South African protected area management from that in the rest of Africa (Somers and Hayward, 2012; Miller et al., 2015) and yet this polarity is becoming blurred. Firstly, certain predators, like leopard and hyena, occur outside protected areas and where this is true, protected areas often exist with minimal or without predator-restricting fences (Greyling et al., 2023; Wilkinson et al., 2024). Secondly, several previously unfenced protected areas, in countries north of South Africa (Bariyanga et al., 2016; Pekar et al., 2019) are now utilising fences, motivated by mounting human pressure that both challenges protected area boundaries and cuts off potential corridors between wild and protected areas. This phenomenon has occurred within South Africa as well. As recently as ten years ago, packs of wild dog were envisaged moving outside the protected area network between its constituent conservation areas in KwaZulu-Natal (Whittington-Jones et al., 2014). But this notion has largely been replaced with an orchestrated metapopulation strategy applied to well contained packs (Nicholson et al., 2020), where the dispersers are identified early and translocated to the species' best genetic advantage. And yet the containment of conservation areas resurfaces within narratives pertaining to wildlife affecting human settlements and the effect of changing human demographics on wildlife.

The topic of mounting human pressure and human population growth is an uncomfortable one, with some advocates placing it front and centre as causal within environmental concerns (Washington and Koppina, 2022), others avoiding it as a political minefield and others still pegging it as a distraction to deeper underlying economic issues. The issue's contentiousness requires its early consideration within the philosophical discussion on protected areas.

### The link between human population numbers and land-use change

Human population growth is linked to increased food supply and improved medical care reducing mortality, combined with unabated natality associated with the perceived advantage of large families (United Nation, 2021; United Nations, 2024). Resultant socio-economic confidence and subsequent education costs tend to reduce the perceived need of large families, resulting in a curbing of human population growth rates (Caldwell, 2006). Africa has been

affected by historic imperial colonialism and the more recent versions of economic recolonisation by wealthy national (east and west) and transnational bodies aided by local elites (Kepe and Hall, 2018; Benyera, 2021). This induces an initial improvement of living standards that is subsequently arrested because the produced wealth is extracted by the controlling entity. Consequently, further socio-economic improvement is arrested, such that community members (under novel and revised forms of exploitation) may not lose confidence in large families (Caldwell, 2006; United Nations, 2024). While human population growth is curtailed in most developed-world countries and slowing down in many developing regions, in re-colonised Africa it continues unabated, and land-use change is also accelerating (Holechek et al., 2016; United Nations, 2021). Significantly, while the effects of this are continental – its causation is global because the drivers of imperial/economic colonisation were/are exterior to Africa. It is also noteworthy that many practices that are considered harmful in the developed world are outsourced to Africa, from extractive industries (Matonga, 2021) to dumping unrecyclable waste (Sirleaf, 2018) and the expansion of agri-industry – not to feed Africa but rather to increase dividends and market capture (Andrews and Cochrane, 2021). A common outcome of these processes is the transfer of forest and savannah biomes to partially covered scrubland or seasonally denuded cropland (Hoffman, 2014; Assede et al., 2023). The land-use change and wealth extraction associated with these processes are then causal in subsequent consequences, including poverty, biodiversity loss and climate change. Even within the African context, one cannot view these as continental issues; if the causes are shared with the developed world, so should the burden of rectification.

## Economic reform

Recognition of the global causes and consequences of poverty, biodiversity loss and climate change, including their macro-economic origin, must highlight the necessity of economic reform within any suite of solutions (Senge et al., 2008). Furthermore, the interpretation and intention of interventions, such as protected area management, are affected and contained by the economic framework in which they take place; scrutiny of any economic framework will reveal if interventions are serving the objectives of human sustainability and biodiversity protection or the perpetuation of wealth extraction.

Adherents of reform within the parameters of free-market capitalism highlight the necessity of innovation, that emerges from/through economic entities that are unencumbered by societal regulation. The magnification of individual freedom (to improve personal circumstances), within liberal thinking, birthed the term *neoliberal* – most often utilised by critics of unfettered individual freedom, when the excesses of unregulated wealth accumulation precipitate power imbalances that impinge upon societal freedom. It should be noted that within this context, the very term neoliberal takes on a pejorative tone (Sparke, 2024) with criticism being levelled from diverse economic, political and environmental perspectives (Castree, 2008; Carroll and Sapinski, 2016; Geerlof, 2019).

The neoliberal rationale assumes that the wealthy organisations and states must shoulder the responsibility of environmental protection and poverty reduction, which are to be achieved by apportioning some of the excesses/profits that it generates (Smith et al., 2022). Key points from the suite of criticisms of neoliberalism, cited above, reveal three weaknesses:

- The donors themselves (national or private) determine what excess or profit can be utilised for donations. The political or executive leadership, responsible for regulating such donations, often maintain their tenure by exhibiting the appearance of excess or profit in a manner that benefits the donors (Nuruzzaman, 2004; Smith et al., 2022). Rather than revealing a taxable profit, excesses are buried within unnecessary assets like luxury vehicles. With profits being hidden, the pool from which donations can be sought is perceptibly shrunk.
- Public companies are set up, as legal entities, to increase the economic growth of shareholders (Knuutinen, 2014), so all lawful activities must be orientated to that goal; by definition then, donations must be directly or indirectly beneficial to the share price and this brings into question the motives behind such donations as well as the veracity of the organisations who receive them (Senge et al., 2008), possibly being reluctant to bite the hand that feeds them.
- The process of generating the excess (that is to be tapped for charitable donations) is often the very cause of the environmental degradation and widening poverty gap (Wu et al., 2021), so arithmetically the magnitude of the benefit can never match or exceed the damage that is done.

Mainstream media's responses to the outcomes of COP27 (United Nations, 2022a; 2022b), provide illustrations of these weaknesses, where two emerging philosophies are apparent: firstly, looking good is more important than being good (Laville and van der Zee, 2022) and donating money is fine but don't scrutinise or decelerate the means of procuring it (Harvey, 2022). Secondly, the inertia inherent in the current economic model renders it resistant to change and inadequate to address the anticipated environmental problems (Rockström et al., 2009), because of its vociferous retention by benefitting global, political and economic entities. Its assumption of unlimited resources remains reasonable while the boundaries of those limitations are sufficiently distant to avoid notice.

## Part B – varying paradigms and responses to environmental threats

### Political ecology and convivial conservation

Academics within the scholarship of *political ecology* (Roberts, 2023) have supplied very cogent arguments regarding the inevitability of increased poverty and ultimate environmental collapse within a free-market capitalist framework (Arsel and Büscher, 2012) or the

modified/diluted versions of it that exist in Europe and Asia. Their framework for reform involves the dismantling of the causal structures that perpetuate wealth-capture under the rationale that perpetual growth is an impossibility that manifests itself in progressive social and environmental exploitation – prior to collapse. The primary thesis of political ecologists stresses that the relationship between different people and their perceptions of environment is a political one. While this inherent assumption has been met positively, one cannot overstate the frustration of political ecologists because, as their endeavours should shift from the theoretical to the practical, the current elites are unable or unwilling to perceive a future beyond the current economic system of capitalism. The proponents have illustrated numerous examples of how conservation, when funded by capitalism, leads to unsustainability and further exploitation of the environment and people, manifest in examples of socio-ecological violence, accelerated extinctions and increasingly authoritarian governance (Büscher and Fletcher, 2019; Blanc, 2022; Corbera et al., 2024). It points out that mainstream conservation evolved from the same cultural form as capitalism; so, the ideology and actions emanating from mainstream conservation are formed within the context of capitalism (Büscher and Fletcher, 2020). Consequently, not only does it have a blind spot to many of the issues of capitalism, but it is incapable of perceiving solutions that are not dependent on the funds produced by capitalism. If, as the political ecologists purport, capitalism itself is the engine driving human and environmental exploitation to the point of collapse, then, by definition, mainstream conservation will be incapable of supplying corrective solutions, because they would be self-destructive.

An aspect of mainstream conservation practice, that has been at the core of much criticism, is what Blanc (2022) refers to as “naturalisation” or “dehumanisation” of land – where people are removed from their home areas and prevented from carrying out traditional practices, that sustained their communities. The purpose of this move, according to Blanc (2022), was to create the illusion of an unpeopled wilderness that the western controlling elites could appreciate, in contrast to their own home-countries which had endured industrial conversion.

While this criticism is accurate, it contains two facets that have been conflated: the take-over by an external power and locking away of certain sections of land. This conflation has led Büscher and Fletcher (2019) and Blanc (2022) to all but abandon the entire protected area concept. But the conflation is synthetic. Most societies, including indigenous peoples, have systems which prevent the over-exploitation of the environment and many of these involve the exclusion of certain activities or presence/occupation from identified areas (Sapignoli, 2014; Hitchcock and Galvin, 2022; Sapignoli and Hitchcock, 2023; Sari and Susanti, 2024).

In such examples, the exclusionary practices, while accepted by the whole community are managed and enforced by leadership elements within society (Pattiselanno et al., 2024; Sari and Susanti, 2024). Ostrom (1990) cited such practices to dismantle Hardin’s (1968) “Tragedy of the Commons” argument because it illustrates inherent and functional community regulation which limits environmental exploitation. It also illustrates the validity of two other concepts. The

application of protecting certain areas with hard boundaries has been utilised by hunter-gatherers and local communities throughout human history. Secondly, even within hunter-gatherer or long-isolated local communities, the practice of establishing hard boundaries for the protection of *the commons* is led by the recognised elites within those societies. Consequently, the utilisation of hard boundaries, whether they protect sacred and/or natural sites, must be questioned more thoroughly: who is setting the boundaries and what purpose do they serve? But from here on, one conclusion is certain: the blanket dismissal of protected areas, because of their hard boundaries, is inappropriate.

Within the protected area concept, it is not the exclusionary aspect that is unsavoury, nor their imposition by leadership structures. It is the nefarious motives (commonly associated with various iterations of colonialism) that make it unpalatable. If the motives for protecting areas lack those nefarious aspects, then the protected area concept can be resurrected in a more inclusive form.

The practical application of political ecology in land management culminates in *convivial conservation* (Büscher and Fletcher, 2019, 2020) – a methodology driven by de-coupling environmental care from perpetual growth economics and capitalism. Instead, environmental protection is to be governed through “radical ecological democracy” (Büscher and Fletcher, 2019) manifest through a healthy relationship between centrally elected control and civil society; this is claimed to ensure that outputs serve local and broader objectives in an inclusive manner.

Convivial conservation has three significant contributions to make in this discussion.

- Highlighting similarities between environmental and social justice,
- Pointing out the inadequacies and implications of capitalism and
- Presenting a more accurate depiction of social divisions within humanity and attributing a more realistic version of accountability. This makes a mockery of current environmental strategies in which the continued environmental damage is overlooked and even tolerated because the plunderers are a) powerful and b) giving a small proportion of their plunder to conservation bodies who have become dependent on the donations, not necessarily for the cause for which they were formed, but often for their own perpetuation as entities.

But it must also be said that (a bit like Marx himself – who underpins much of political ecological theory) while the criticism of current economics is solid, the predictive components of political ecology are less sound, relying on simplicity and naivety that is problematic within this complex emergent field. Central to this methodology is that local communities are best placed to look after environments, utilising Elinor Ostrom’s treatise that Garret Hardin’s (1968) “Tragedy of the Commons” was little more than politically conservative dogma perpetuating social and environmental dominance and exploitation under the guise of patriarchal capitalism (Ostrom, 1990).



Hardin's (1968) "Tragedy of the Commons" drew heavily on the works of Thomas Malthus, whose predictions on population not only turned out to be inaccurate (because it did not account for increased food production that could keep up with 19<sup>th</sup> and 20<sup>th</sup> Century population growth, albeit through massive externalisation and hence more ecological devastation) but it also became linked to conservative politics with connections to racism and eugenics (Locher, 2013). These historic inaccuracies and their associated bigotry must be acknowledged within evolving environmental protection. But to extend these acknowledgements to downplay the significance of human population growth (Fletcher et al., 2014) contradicts ecological thinking. Similarly, three other oversights or failings of convivial conservation must be highlighted but with two caveats:

- The originators of convivial conservation (in not espousing to be experts on all things) may be open to these criticisms.
- If the following issues can be addressed, then a modified form of convivial conservation may form a solid basis for navigating change at the social/economic/environmental nexus.

The first deficiency of convivial conservation is that its criticism of exploitation tends to focus on the means of production as its locus of concern. This was an understandable position for Karl Marx, from whom the originators of convivial conservation draw reference (Büscher and Fletcher, 2020), who was seeking to illustrate the moral inadequacies and unsustainability of 19<sup>th</sup> Century industrialisation. But the consequence of retaining that locus in the 21<sup>st</sup> Century is that it focusses the criticism of exploitation in too narrow a manner. Any system where most inhabitants are exploited for the benefit of a minority will not endure because continuous extraction of benefit from a finite base is inherently unsustainable – irrespective of the moral considerations of such exploitation. It is not surprising that Marx's view of exploitation, in the 19<sup>th</sup> Century, ignored the 20<sup>th</sup> Century realisation that humanity itself was part of a community/system that included non-human members and those community members would be unable to endure continuous exploitation. Marx's perception and critique of exploitation was human on human, which did not perceive the rest of the (non-human) community members as part of greater community upon which humanity depended; that realisation was only to come a century later. Marx inadvertently relegated nature to remain an exploitable underclass. Some critical social scientists may dispute this dismissal of nature with the notion of metabolic rift (Foster, 1999; Büscher and Fletcher, 2020; Napolitano and Clark, 2020) in which humanity's relationship with the environment is described in terms of energy loss during metabolism. But, firstly, this idea was retrofitted to Marxism (Lynch et al., 2019) and secondly, applies so broadly (to all systems, including pre-capitalist economies – going back to and before the neolithic village) as to be little more than a distractive tactic to refute Marx's side-lining nature.

This first issue expands into a second. A common profit maximising practice, within capitalist economics, involves the utilisation of a resource without accounting for all the associated

costs. For example, a factory may extract clean water from a river and return polluted water; the costs of cleaning the exhaust water is saved and the harm is externalised to downstream users. Not without irony, political ecologists have duplicated a neoliberal trajectory of employing externalities as a mechanism within their economic reform (Kopnina, 2016a; Cafaro et al., 2017; Kopnina et al., 2018); in their case it is limited to environmental externalities whereas capitalism utilises social ones as well. But significantly, the necessitation of any externalities will ultimately conclude in an unsustainable outcome within a closed system, so the endpoint of the political ecologists' economics, in its current iteration, will exploit and impoverish the environment and ultimately people. This propensity is not unique to the originators of convivial conservation. Economic models that attempted to internalise social and environmental externalities like Natural Capitalism (Hawken et al., 1999) or Circular Economics (Kuznetsova, 2022) are often measured by how they contribute to economic growth (Binsuwadan et al., 2023), thereby utilising an index that assumes unlimited resources.

The third flaw includes an assumption that synthetically conflates disparate motivations within a category they term *neo-protectionist*, perhaps to simplify their critique. This is significant because it unintentionally marginalises some viewpoints that their proclaimed inclusiveness would not want to exclude. What characterises this category, within their narrative, is that neo-protectionists perceive the inherent unsustainability of capitalism but remain trapped within the humanity/nature dichotomy, i.e. that humanity is separate from nature. While this may be convenient packaging, it is an inaccurate one, because the grouping would include many indigenous peoples, deep ecologists and environmental practitioners critical of anthropocentricity, all of whose ideologies include the concept of human/nature inseparability and interconnectedness, long before the concept of ecological complexity became commonplace. The significance of this discrepancy will be picked up later.

On the other hand, *new conservationists* (Kareiva and Marvier, 2007; Kareiva et al., 2007; Nordhaus and Shellenberger, 2007; Kareiva et al., 2012; Kareiva and Marvier, 2012), claim to move beyond the humanity/nature dichotomy by making everything natural, including human induced change. As such, technology can be used to address problems (that it may have contributed towards) – but done to benefit humanity while preserving biodiversity – only that which is necessary to achieve human well-being. This is to be funded by the extension of capitalism. In effect, it is doubling down on development and economic growth. With its inherent concepts of unlimited economic growth, outdated preservationist thinking, anthropocentrism (to be discussed later), simplistic environmental risk analysis, and unrealistic mitigations, this argument has been eviscerated (Soulé, 2013; Büscher and Fletcher, 2020; Wuerthner et al., 2020); it would not be included in this review but for its periodic resurrections within conservative political and corporate rhetoric.

This division of conservation theory makes for a convenient description of the role players (depicted in Table 1) where convivial conservation emerges as the most advanced and progressive model. This might have been true but for the composition of their neo-

TABLE 1 The self-perceived position of convivial conservation relative to its perception of other protective methodologies (adapted from [Büscher and Fletcher, 2019](#)).

	Embedded within nature/culture dichotomies	Beyond nature/culture dichotomies
Embedded within capitalism	Mainstream conservation	New conservation
Beyond current capitalist thinking	Neo-protectionism	Convivial conservation

protectionist category being inadequately described. Within their conflation of parts, there are fields of conservation thinking that have also moved beyond capitalism and human/nature dichotomies but with methodologies that incorporate a more realistic perception of environmental degradation and the complex interconnectedness of social, economic and ecological systems.

Before unpacking and redefining some of the composite parts of what [Büscher and Fletcher \(2019\)](#) termed neo-protectionist thinking, it is worth examining how environmental economics has reacted to capitalism and post-capitalism.

Paul Hawken distilled ideologies within *The Ecology of Commerce* ([Hawken, 1994](#)) and of *Natural Capitalism – The Next Industrial Revolution* ([Hawken et al., 2013](#)) to address the unsustainable and morally impoverished aspects associated with social and environmental externalities. [Boulding \(1966\)](#) highlighted the need for a more enlightened economic perspective within his metaphor of cowboy vs spaceship economics. The former charges ahead in the pursuit of wealth with little care or even awareness of social/environmental externalities. The latter adopts the perspective that the earth has limitations associated with biospheric containment. This concept became the foundation of circular economics ([Circular Academy, 2024](#)) where human operating systems would require specific design such that all waste could be utilised by other parts of the whole and not accumulate in harmful ways. The principles of circular economics are being espoused broadly ([Winans et al., 2017](#); [European Commission, 2020](#); [World Economic Forum, 2022](#)) but in many instances the application is partial or incomplete. Organisations whose operations are largely linear, adopt circular principles in part, because it benefits the share price and/or serves an advertising purpose to appease environmentally conscious consumers. Political ecologists would point out that, while the design of production addresses the environmental externalities (by internalising waste), it may still perpetuate a mode of production that externalises people through non-participative and exploitative means. Frustrations over partial economic reform (or outright resistance to it), despite the perceived need for it, has seen the word “revolution” enter the discourse. This has included a range of applications from the Marxist leanings of the political ecologists to softer advocations of the fourth industrial revolution ([Senge et al., 2008](#); [Schwab, 2016](#); [Büscher and Fletcher, 2020](#)). But [Boulding’s \(1966\)](#) spaceship economics, Natural Capital and circular economics have not precipitated the expected economic revolutions. Perhaps like [Marx and Engels’ \(1848\)](#) predictions of revolutions in the industrial centres of 19<sup>th</sup> Century Germany (1848), they never took place because the

circumstances that precipitate revolution were continuously staved off – just. Furthermore, the awareness of the necessity and morality of economic reform has never been sufficient motivation for systemic change – because individual decisions are most often driven by immediacy and the conflation of personal wants and needs. These, in turn, become tools within political systems, to perpetuate exploitative economies. In the 21<sup>st</sup> Century, while there is much discussion about the need to address inequality, poverty, climate change and environmental threats, the political powerhouses of the world are paying lip service to these issues whilst continuing destructive and competitive trajectories ([Harvey, 2022](#); [Laville and van der Zee, 2022](#)).

Another idea for economic change, considered inevitably emergent rather than reformist, could be termed *intentional ecosystem economics* after Otto Scharmer’s (and others) work on the unfinished evolution of capitalism ([Scharmer and Käufer, 2013](#)). This field of economics coalesced after the 2008 financial crash which, apart from its direct effects, created a sense of impending crisis because its causal circumstances were not removed or addressed. Consequently, economic systems are likely to respond organically to acknowledge and cope with inherent systemic uncertainty. Of significance to this discussion is that emergent *intentional ecosystem economics* responds to crisis, not by doubling down on existing trajectories with bailouts but rather by internalising the complex social and environmental factors ([Scharmer, 2010](#)) that are externalised in other economic models. The elimination of social and environmental externalities from an economic system will affect the way in which humanity perceives itself within the larger environment, and like the advocates of political ecology, [Scharmer \(2010\)](#) levels criticism at perpetual growth economics, albeit from a slightly different perspective. It exposes the commodification of the labour and larger environment (previously arenas for continuous market expansion) as unsustainable. Drawing on [Boulding’s \(1966\)](#) work, an economic system based on perpetual growth, while creating much initial wealth and innovation, was always going to out-grow its purpose within finite biophysical constraints, illustrating that humanity’s perceived ecological dominion was a temporary delusion. In contrast, the recognition of complex interdependence within *intentional ecosystem economics* results in emergent responses to change and crisis. This places it in a position to be integral in global and localised problem solving and that new information, pertaining to planetary boundaries and human sustainability ([Rockström et al., 2009](#)), is less likely to be perceived as threatening. Needless to say, thinking in this area of economic reform is ongoing but as it filters down, to affect protected area management, critically important biodiversity areas are less likely to be externalised as expendable commodities.

## Awareness of the threat to biodiversity

The severity of impending environmental crises, along with their anthropogenic origins or exacerbation, is concerning for two approaches to environmental protection, both of which reacted against the practical and moral deficiencies of perpetual-growth economics, residual colonialism and neoliberalism. Firstly, responding to continued marginalisation of indigenous peoples

and local communities, all progressive environmental strategies have incorporated the ideology that validates and includes indigenous and local knowledge systems within the identification and solving of environmental issues. It should be stressed here, that where indigenous knowledge holds the natural world and humanity as inseparable, two insights accentuate its value: such cultures have endured without imposing a causal role in expansive environmental disruption; and they may hold a perspective that illuminates a truly sustainable human/nature relationship. But some thinking has taken this so far to assume that local knowledge is the only way to manage the environment. The danger here, is that the environmental issues may be viewed from a purely human perspective, albeit a different one. If the central cause of anthropogenic environmental change is that humans are perceiving the environment as a resource instead of a complex interdependent system, then the core problem is retained (Hitchcock and Galvin, 2022; Washington et al., 2024). Secondly, in a different but equally mistaken manner, the convivial conservation model down-plays anthropogenic environmental risks because they have their origin in philosophies that have been associated with elitist and politically conservative ideologies like Malthusian demographics (Arsel and Büscher, 2012), Hardin's Tragedy of the Commons (Hardin, 1968) and Social Darwinism (Cavanagh, 2019). But Rockström et al. (2009) and others (Richardson et al., 2023) have illustrated that the environmental crises are very real and that for a completely different set of circumstances, the commons may yet be associated with tragedy.

To unpack this possibility, it is necessary to examine the debate between the advocates of convivial conservation and some of those they term the "neoprotectionists". Polarity crystallised over the semantics of the term "Nature Needs Half". While the term was evolving into a trendy catchphrase, it provoked outrage amongst political ecologists who perceived it as another opportunity to dispossess already marginalised local communities of land tenure. But that is not its intention nor desired outcome. To look beyond the term's slogan-like characteristic, it is necessary to examine the circumstances that lead to its use.

The book *Silent Spring* (Carson, 1962) is often attributed with having had a catalytic effect on shifting American public opinion to distrust political and industrial leadership's condonation of environmentally damaging wealth production. This can be adopted as one possible starting point for a global environmental movement which then tracks a trajectory of increased awareness, recorded in the adoption of protective strategies and policy, starting with the Stockholm Conference which highlighted humanity's dependence on a finite and deteriorating environment. The World Charter for Nature (United Nations, 1982) challenged the anthropocentric notion and rather placed humanity within and dependant on the environment. The Rio Summit in 1992 saw this increasing awareness culminate in two international treaties: the Convention on Biological Diversity and the UN Framework Convention on Climate Change (United Nations, 1992a; b). But it should also be noticed that the same period saw very different intentions when viewed from the global economic and political perspectives. Figure 1 depicts a comparable timeline of political, economic and environmental milestones, which indicates that even

while environmental awareness was growing, the prevailing economic system was evolving (with systemic political change) to fuel continued growth through the identification of social and environmental externalities and the shedding of accountability (for continued exploitation) within the hidden machinations of central banks' relationships to privately owned wealth.

As environmental awareness was growing, political leadership on both sides of the Atlantic were cementing their power by supporting unfettered and deregulated capitalism. Within the same period, political and economic changes in Eastern Europe and Asia made it possible to partake in increased extractive and production industries resulting in the formation of new economic elites. It is not surprising then, that the environmental enthusiasm stemming from the Rio Summit became diluted when it came time for the Conference of Parties (which notably excluded the US) to assess threats and set limits of environmental protection.

In 1994, upon recognition that biodiversity loss was continuing, the adopted strategy set no targets or limits but was defined by the sentence "slow the bleeding" (Locke, 2015). In 2010 the UN Secretary General, Ban Ki-moon, in the forward of the *Global Biodiversity Outlook 3* (CBD Secretariat, 2010), acknowledged that this had failed. The concept of sustainable development had become sustained development where the engineers of the economic system (dependent on growth) sought new areas to grow into. These included hitherto un-exploited environments, debt and futures trading. Economic entities, that were caught exploiting developing-world labour, could sanitise their reputations by conducting audits once they had distanced the issue through "outsourcing" or shell companies (Mares, 2010). Perhaps to avoid another Rachel Carson incident (where evidence of social and environmental harm effected wealth production), industry invested in research that would bring the seriousness of the environmental threats into question – just enough to prevent the public from galvanising against their efforts (Supran et al., 2023). To counter the ensuing confusion within the public domain, it became necessary to gather and publish solid scientific work. By 2007, the first four reports by the UN Intergovernmental Panel on Climate Change (1992; 1995; 2001; 2007) initiated this task and revealed a deteriorating trajectory. But broader information was required regarding the forms of environmental threats, what the current situation is with respect to those threats and where the tipping points or limits were with respect to each of those threats. Rockström et al. (2009) provided this jarring clarity on the significance of environmental problems facing humanity in the face of anthropogenic change. This work categorised the most significant areas of human induced environmental change and then proposed where the safe, threatening, and catastrophic boundary lines were for each category.

While current information points to six planetary boundaries being transgressed (Richardson et al., 2023) in the initial 2009 iteration, the situation regarding some categories were uncertain, but within the categories of climate change, biodiversity and Nitrogen cycles, the situation was clear beyond doubt (Rockström et al., 2009): Earth's systems were stressed to levels that threatened catastrophic collapse. Despite these findings, the outcome of the 2012 Rio+20 Conference (well attended by international leaders),



Date	Selected environmental milestones	Selected economic milestones	Selected geo-political milestones
1952	Industrial air pollution reaches critical levels		Great Smog of London kills 4000 people
1956		Bank of England deregulates transactions between two non-residents, working in a foreign currency from UK law.	Suez Canal crisis
1958		DOT spraying increases agricultural yields but simultaneously creates new super-pests like the red spider mite.	China's great leap forward – innovates agriculture. North Vietnam invades Laos.
1959	Pest extermination of sparrows in China induces explosion of crop-eating insects	China's Four Pests Campaign "man must conquer nature" seeks to control flies, mosquitoes, rats and sparrows.	Famine in China claims 20-40 million human deaths within three years.
1962	Rachel Carson publishes Silent Spring	"Financialisation" of the UK pound – i.e. pound no longer maintained by local/colonial production but by inflow from investors seeking private and profitable short-term interest rates.	Commencement of work of the UN Special Committee on decolonisation
1966		Formation of "secrecy jurisdictions" – as an extension of trust law on British dependencies, including the Cayman Islands, Bermuda and the Virgin Islands.	Increased spending and troop deployment by the US in Vietnam
1967		US emulates UK off-shore banking (Caribbean and elsewhere?) to support the value of the dollar - balance outflow money for the Vietnam war with inflow money from wealthy individuals, corporations and organised crime - seeking tax benefits and secrecy.	Chinese Cultural Revolution begins
1969		Bank of England acknowledges secrecy laws in British overseas territories.	
1971		US detaches from gold – free currency trading.	Domestic and Vietnam War costs – means there is not enough gold to back US\$.
1972	The Stockholm Conference		Fourth Arab-Israeli War with respective support from the USSR and USA. USA pulls out of Vietnam
1973		Oil crisis.	
1976		Elevation of high yield (junk) bonds as a high-risk wealth generating tool.	US de-limits political campaign spending and the definition of express advocacy (for funding specific individuals) fuelled the use of dark money, which falls outside disclosure rules in US elections (REF).
1977		China expands economy to include large scale and cheap manufacturing to join Singapore, Taiwan, Hong Kong and South Korea.	Chinese communism adapts to expand its economy with responsiveness to market forces.
1979		Second oil crisis.	Iranian revolution. Margaret Thatcher heads the new Conservative UK Government
1981		Deregulation of UK economy.	Republican Ronald Reagan becomes US President
1981	World Charter for Nature	Diminished US trade union powers. Deregulation of US economy and corporate tax cuts, ostensibly for trickle down beneficentation.	
1982		Rise of pension fund managers using junk bonds to precipitate a wave of hostile takeovers, shifting corporate decision making from executives to shareholders - facilitated initially by opportunists and later by specialist fund managers and banks. Deregulated free markets created feedback loops where shareholders select for fund managers/executives that increase share price over the well-being of the companies, people or the environment. Consequent gutting of companies shifts manufacturing to the east.	
1986			Chernobyl nuclear disaster
1987	UN Brundtland Report: Our Common Future	Stock crash	
1989		Recapture of western economy by banks.	Berlin Wall comes down wwv
1990			Nelson Mandela released. The Gulf War
1991		Fledgling Russian market economy suffers under transitions and opportunism.	Collapse of the USSR, rise of Russian oligarchs.
1992	Rio Summit: Convention on Biological Diversity Framework Convention on Climate Change		
1994	COP CBD – slow the bleeding concept selected over setting biodiversity limits	New Labour government in the UK continues the conservative policy of deregulation	Tony Blair leads New Labour UK government
1996		Russian oligarchs extend state capture by funding Boris Yeltsin's election campaign	Re-election of Russian President Boris Yeltsin.
1997	Kyoto Protocol.	UK relinquishes exchange control.	
1999		World Trade Organisation protests in Seattle	Vladimir Putin's rise to power
2001	Criminalisation of environmental activism within the Patriot Act.		New York Twin Towers attack. Patriot Act introduced to address terrorism.
2002	Rio+10.		
2003		Increased oil prices benefit US and Russian elites with individuals, from the political elites of both, benefiting personally.	Invasion of Iraq with forces from United States, the United Kingdom, Australia and Poland.
2008	Copenhagen Accord.	Culmination of the global financial crisis and consequent bail-out through the US Emergency Economic Stabilization Act: banks too big to fail.	
2009			Conservatives under David Cameron, win UK election and introduces austerity to limit spending on social services.
2010	Nagoya Protocol. Global Biodiversity Outlook 3, UN Secretary General Ban Kimoon announces that initiatives to reduce biodiversity loss have failed.		
2011			Japan - Fukushima nuclear accident.
2015	Paris Agreement on climate change. Scientific estimates of the minimum protected area target is established at 30%.	UN tax initiatives to benefit developing nations blocked by US and UK.	
2016		Bank of England warn that EU regulations could disrupt their operation.	David Cameron calls for a referendum on the UK leaving the EU.
2020			Global spread of coronavirus. UK leaves the EU
2022	COP27 Sharm el-Sheikh Climate Change Conference. Kunming-Montreal Global Biodiversity Framework establish protected area target established at 30%.		Russian invasion of the Ukraine. Multi-millionaire hedge fund manager Rishi Sunak becomes UK Prime Minister.

FIGURE 1

An explanation of the failure of environmental traction within global policy. The image above tracks a 70-year timeline, between 1952 and 2022, in which milestones sequencing environmental policy and protection are juxtaposed against economic and geo-political milestones. A progression of economic developments, conflated with political opportunism culminated in a broad policy trajectory that made environmental sustainability subservient to the emergent priority of immediate and continuous wealth production. While all inclusions interconnect, red arrows denote direct connections between events. Most inclusions were news-worthy events; lesser known inclusions were accessed from the Brundtland Commission (1987), the Bank of England (2015), Sæveld (2018), Shaxson (2011) and Palan (2009).

was a non-binding agreement (United Nations, 2012; Locke, 2015). Furthermore, the nature of that agreement was based around an economic model that was not rid of the assumption of unlimited resources and so steered political actions of signatory states towards further unsustainability. The outcome's claim of social and environmental care was placatory at best. The COP 10 (CBD, 2010) established protected area targets of 17% and 10% for terrestrial and marine environments respectively.

The Sustainable Development Goals (SDG) (United Nations, 2015) make specific provision for economic growth in developing nations – including the provision of banking services to the poor. The poor referred to here (who, by definition, would own very little) would then be provided with the opportunity to acquire debt, to participate in the global market. Commentators of such access (Subramaniam et al., 2021; Hilary and Bisherurwa, 2024) pointed out that these inclusions, while creating new markets for developed



world entities to grow into, would not provide poor people with sufficient leverage to participate, other than being that market, rather like the lower levels of a Ponzi scheme. The environmental footprint of these people would, however, increase. The targets of the environmental agreements are not being met so far (Malekpour et al., 2023) and the likelihood of reaching 2030 targets seem unlikely. The series of unrealistic environmental targets, while placating the public into the delusion that the problems are being managed, have served the economic objectives set in the Thatcher/Ragan era which seems to have prevailed, regardless of whether subsequent US/UK governments were democrat/republican or labour/conservative. Capitalism found a stronger footing in those nations while gaining novel traction in previously communist nations. China and Europe each found mechanisms to make selective use of free markets with different levels of influence. Within developing nations, leadership grasped the perpetual growth component of the SDG focus to attempt elevating their countries out of poverty. This intention often got sidelined, especially where individual leaders harboured dynastic aspirations for their political parties or personal wealth.

## Towards ecocentrism

But in one critical sense, the proverbial cat was out of the bag; the growing knowledge of planetary boundaries was revealing a terrible disconnect between the language of the UN earth summits/CBD and that of science. The targets set by the SDGs, even if they were at all reachable, would be inadequate to avert global environmental disaster.

Harvey Locke (2015), in addition to pointing out the failure of strategies between the Stockholm Conference and Rio+20, showed that the targets set for establishing a network of protected areas were arbitrary and insufficient. He noted that the allocation of protected areas was decided on what land humanity could spare within the context of its primary economic endeavours, making the allocations political rather than scientific (Locke, 2015). Confirming other works (Noss and Cooperrider, 1994), it further noted that mid-point scientific assessments required just under 50% protection, to ensure environmental sustainability. The title of that work was *Nature Needs (At Least) Half: A Necessary New Agenda for Protected Areas*. The term may have been derived from E.O. Wilson's (2016) work, described in the Smithsonian Magazine article (Hiss, 2014), whose vision included being financially supported by free-market economics.

Reactions to the Nature-Needs-Half term was a trichotomy:

- The political ecologists, seizing Wilson's endorsement of capitalism, concluded that this was another marketed ploy to further exploit the underclass and went on to repress their main argument that environmental protection was not possible without economic change that would dismantle capitalism (Büscher et al., 2016). They lost ground in sidelining issues that other research (including planetary boundaries) was showing to be critical, including species extinctions and human population pressure (Washington and Kopnina, 2022).
- A volley of publications (Büscher et al., 2016; Kopnina, 2016a; Büscher et al., 2017; Cafaro et al., 2017; Crist et al., 2021), first revealed the battle lines between non-anthropocentric thinking and that of the political ecologists. But out of the debate some very interesting common ground was revealed. Firstly, that the Nature-Needs-Half concept that came out of the work of Harvey Locke (2015) opposed neoliberalism and endorsed the need for economic reform. Secondly, political ecologists were in agreement with the necessity of non-human community members right to exist and thrive. The difference, then, was revealed to be one of emphasis rather than content: the starting point for political ecologists is economic reform, whereas the starting point from a non-anthropocentric (or ecocentric) perspective is recognising that humanity's dominion over the global ecological community was a transitory delusion.
- Profiteers of perpetual growth economics continued efforts to capture the severity of the situation into funding large conservation NGOs, whose dependency on corporate funding would prevent any real turbulence - by diluting campaigns like Nature Needs Half. Economic power would tolerate environmental protection (and even support it) as part of corporate social investment advertisements of philanthropy but continued to undermine any efforts which threatened growth.

## Earth Jurisprudence

With its origins attributed to Thomas Berry (Cullinan, 2002; 2011; Hosken, 2011), the core concept of Earth Jurisprudence examines the outcome of denying rights to subservient sectors of a community by a dominant sector. Such a slanted emphasis may initially produce significant benefit to the dominant sector, in a disproportionate manner, and the entire community (exploiters and exploited) may become accepting of the system. But while the disproportionate extraction of benefit may be tolerable in the system's early stages, continuous exploitation cannot endure without eventual resistance, within a limited system. Akin to Boulding's (1966) spaceship economics, such resistance is an arithmetic certainty, its inevitability assured whether conscious or unconscious. Additionally, the long-term effects of domination are revealed as immoral rather than paternally benign.

The prevalence, within human history, of slavery, conquest and occupation, plunder and expropriation, illustrates that domination is woven into the fabric of human nature. Institutionalised domination (like colonialism or Apartheid) shows that humanity may justify ignoring the rights of others. The economic growth stemming from agricultural and industrial revolutions were dependent on jurisprudence that limited rights to ruling elites. And yet the moral revulsion, behind such intentions, emerges within society - manifest, for example, in the abolition movement, the civil rights movement and the anti-Apartheid movement.

Berry (1999) proposed that the moral and sustainability arguments, against perpetual exploitation, apply to all systems, whether political or ecological. On a global level, humanity's perceived dominion over the non-human community members (on which humanity depends) is as transitory as that of dominating political regimes. In all such cases, the greater community cannot, or will not, endure unending exploitation; the system will head towards economic and ecological collapse – with or without moral censure. Across the world, current legal systems are based on humanity's paternal and exploitative dominion over the greater community. Findings between the 1972 Stockholm Conference to knowledge of planetary boundary research, indicate ecological exploitation is unsustainable. The philosophical underpinning of humanity's legal systems require revision. Whether or not the moral aspects are considered, from a sustainability perspective alone, a new jurisprudence is required. The folly of the current jurisprudence was the perceived elevation of humanity above and from the greater community of which it is a radically interconnected part.

The call for a revision of jurisprudence has two pillars, both of which are gaining impetus in the 21<sup>st</sup> Century. The first pertains to evidence that many indigenous communities, particularly hunter/gatherer societies, had/have systems of governance based around environmental kinship, where humanity's wellbeing was interconnected with the wellbeing of the greater community (Hitchcock and Galvin, 2022). In so doing, protected rights were/are attributed to non-human members. The first pillar of a revised jurisprudence acknowledges philosophies of law that had been previously dismissed, particularly the concept of environmental kinship. While many indigenous knowledge systems address sustainability and morality of environmental protection, the juggernaut of industrialisation and expansion has, intentionally and passively, undermined, eroded and assimilated many indigenous cultures, along with their philosophies of law. While the current economic growth paradigm holds sway, this trajectory will endure, with cosmetic lip-service applied to indigenous knowledge.

The second pillar supporting a global revision of jurisprudence arrives at the same conclusion to the first but from a completely different direction (Swimme and Berry, 1992). It starts by tracking the evolution of humanity, including the shift to settled living, the formation of neolithic villages, nations and empires. Within these changes the formation of socially and environmentally exploitative systems became more entrenched and required knowledge to deal with the associated complexity. These, in turn, fuelled advances in language, mathematics and other sciences, all of which were utilised to perpetuate/advance the social systems that supported them. Within this long trajectory, spanning at least three millennia and as many continents, a key philosophical moment was the separation of mind from matter along with the notion of humanity (alone) having mind (Descartes, 1641). The elevation of humanity, above the rest of nature, removed moral consequence for any form of environmental manipulation. This, along with reductive reasoning, provided the opportunity for rapid advancement of knowledge in the fields of science, engineering, agriculture and many others. The wealth afforded by these pursuits fuelled evermore scrutiny to maximise human well-being. Even when the first warning signs of excess

materialised, this burgeoning portion of human society could justify the costs and risks on the grounds of humanity's elevated separation from the rest of the Earth community. With academia established within society, it was inevitable that scrutiny would be applied to the mechanisms of scrutiny themselves – where the efficacy of reductionism would be revealed to be limited – especially in areas of study that were increasingly seen to be complex; linear predictions were failing to describe or anticipate emergent outcomes. Perhaps more importantly, within the fields of economics and ecology (let alone biology and neurology), humanity's seclusion (from the environment) was revealed to be false. Consequently, prioritising humanity over other inhabitants of the planet turns out to be damaging to humanity – through damage to the whole. This tortuous route, through the delusion of dominion, reductionism, and plunder, has led humanity to the reality and necessity of environmental kinship. There is, of course, irony within this second justification of environmental kinship, in that it came out of study that was afforded by the very destructive elements it critiques (not unlike Moran's paintings of Yellowstone or Marx and Engels' manifesto). Perhaps this is why some/many accounts of Earth Jurisprudence's origin and justification, focus on the indigenous peoples perspective and do not mention the return of the prodigal son. But to Berry, the two-pillar approach was important (Swimme and Berry, 1992; Berry, 1999) because the justification coming from both pillars is more resilient to the (still dominant) adherents of deluded human supremacy who remain addicted to its short-term advantages. But when the self-realised conclusion of the modern expansionist paradigm is implosion, its dismissal of environmental kinship is weakened and the need for its own revision is assured. While each of the two pillars have independent and sufficient credibility, it is their conflation that, in a completely novel way, provides the resilience. In 1999, Berry felt this justified what he termed a "new jurisprudence" with its newness stemming from that conflation – the term Earth Jurisprudence did not materialise for another few years (Cullinan, 2011; Hosken, 2011).

The challenge that Berry faced, in seeking to include non-human interactions within a revised jurisprudence, is that the philosophy must apply between humans, non-human to human and between non-humans. It had to reflect the complex interrelatedness of the system without being derailed by seemingly antagonistic ecological and interpersonal interactions like parasitism, competition or predation. It also needed to apply irrespective of whether the elemental community members had any or advanced levels of consciousness. He proposed that, whilst different groups within the whole community may require specific rights (i.e. a river requires river-rights and not human rights), three basic rights apply to all members of the Earth community, namely: the right to be; the right to habitat; and the right to play their role in the greater community.

Berry held that the combination of these three principle rights reflected, firstly, the beliefs of those human cultures that held environmental kinship as a basis for existence; secondly, tracked the journey of those human cultures that had adopted a separate, elevated and exploitative relationship with nature - through to the conclusion of its folly; and thirdly, a definition of community that is ecologically and economically inclusive (i.e. sensitive to

externalities) of all components, conscious or unconscious, living or non-living. Collectively, they serve to indicate when intra or inter-specific relationships shifts towards un-sustainability.

Berry viewed the mainstreaming of environmental kinship into society's institutions of law, education, and commerce as a necessity. The priority in 1999, when he published *The Great Work*, was that of law. The London based *Gaia Foundation* facilitated this pursuit that led to the publishing *Wild Law* (Cullinan, 2011). Earth Jurisprudence highlights the social and environmental wrongs of the past, including the formation of protected areas that removed indigenous peoples from land they had been co-inhabiting. But it does not suggest that such areas no longer need protection, rather that the protection needs to have a different focus. With environmental kinship, or ecological interconnectedness, as a central theme, the role of humanity shifts from being the controller and primary recipient of benefit to participant within the complex ecological system that is this planet. The transition from old thinking to new is extensive and the old mindset is deeply entrenched with some alluring facets. When motives for environmental protection includes the phrase “for future generations” (most conservation organisations), it means future generations of humans – and this plays into that anthropocentric aspect of neoliberalism (Kopnina et al., 2018) that endorses environmental externalities. Similarly, when projects assert a piece of land does not belong to the controlling elite but rather to the local community – the interactive methodology has only shifted within the same anthropocentric ideology; social and environmental exploitation will endure under a different guise. Washington et al. (2017) and Kopnina (2016b) point out that the removal of neoliberal thinking, from both economics and ecology, requires a consciousness shift from anthropocentric to ecocentric principles.

The adoption of the term Earth Jurisprudence by the United Nations (2019) and World Economic Forum (Toolan, 2018) is commendable but the levels of commitment and/or comprehension remain questionable. Within Earth Jurisprudence, social and environmental justice become inseparable – cemented by its non-anthropocentric paradigm and call for radical economic reform. In this context, the ongoing efforts at collaboration between convivial and ecocentric conservationists (albeit within spirited debate) takes on a magnified significance. The nuclear glue, holding these hitherto repellent entities together, may well be Earth Jurisprudence – because of it exposing social and environmental externalities as criminal, necessitating economic and cultural reform to be rid of such externalities; and it is gaining traction within political and economic institutions, including the United Nations (2019).

## Part C – the application of biodiversity conservation paradigms within the broader South African environmental context

### South African environmental protection

The 1994 South African election provided a watershed moment in the country's political history, separating the termination of

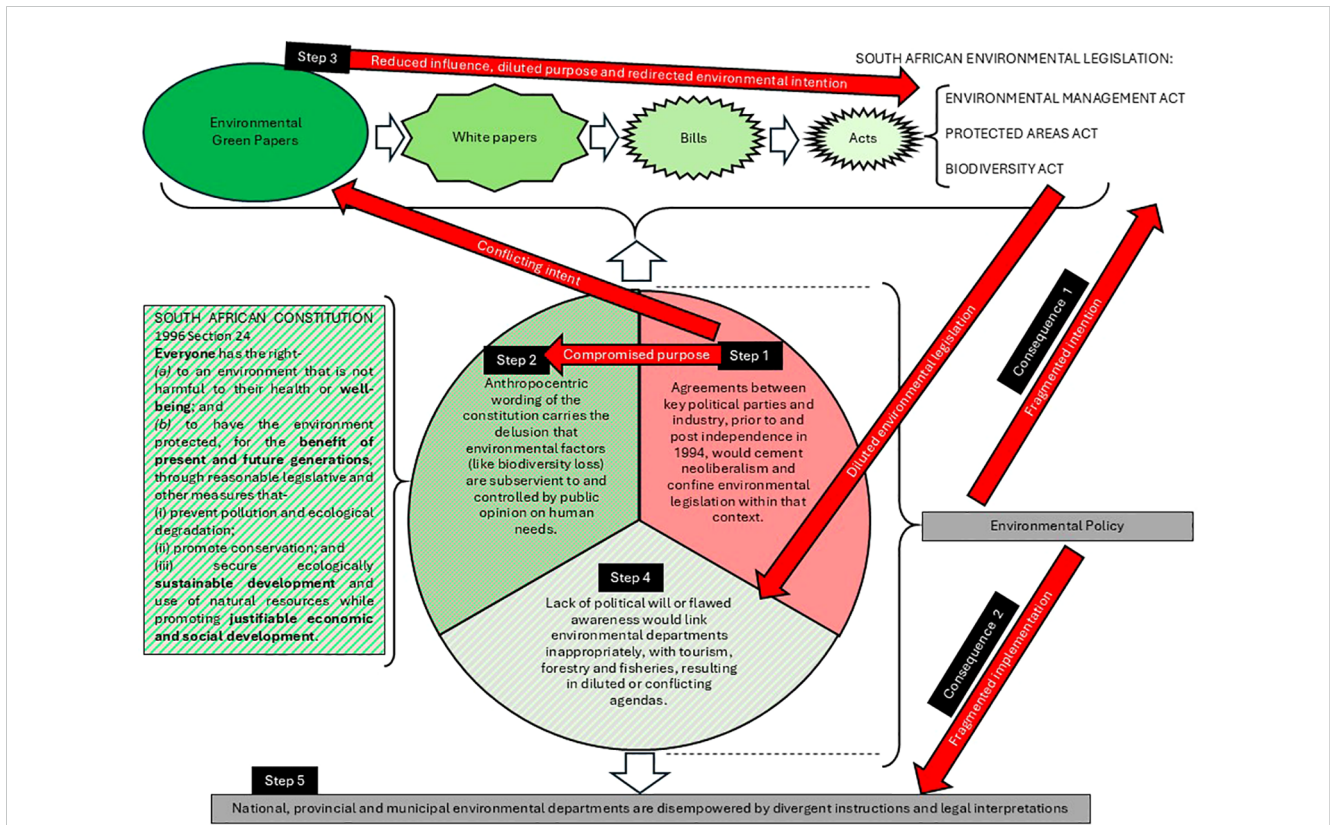
Apartheid's racial elitism from the inclusivity that followed independence. The post-independence inclusion of environmental protection within the South African Constitution (1996) may, in balance, be counterproductive to environmental care. Prior to the 1996 constitution, anthropocentric thinking was implicit and so, it could be downplayed or even bypassed within environmental policy. But after 1996, the utilitarian and commodified interpretation of the environment was explicit (see Figure 2), so attempts to temper environmental impact on the grounds that it damages the other species or habitats can be challenged by the notion that human benefit is prioritised under law. The post 1994 South African governments, supported by the wording in the constitution, have repeatedly de-prioritised environmental policy between its inception and implementation (see Figure 2).

The 1992 Rio Earth Summit influenced the early environmental policy of the post 1994 New South Africa, placing the environment as a core policy (Le Quesne, 2000). But such emphasis was not to last: the Reconstruction and Development Programme's base document lost its entire environmental chapter when it was converted to a White Paper in 1994; core government policies were increasingly controlled by the Ministry of Finance and the Ministry of Trade and Industry whilst environmental issues were excised and relegated to the political backwaters of the Consultative National Environmental Policy Process in 1995. Attempts to instate a powerful Department of Environmental Affairs and Tourism (DEAT) failed and the government opted for a weakened DEAT, with only partial and oblique responsibility for the implementation of environmental law (Le Quesne, 2000). As such, many issues affecting biodiversity and sustainable development fell outside their jurisdiction.

In 2006 the South African president stated that environmental legislation was delaying development (Macleod, 2006). The unavoidable conclusion is that South Africa's environmental legislation became a product of a policy era that no longer prevailed. This trajectory of diluted or hijacked environmental policy continued within the formation of the South African Biodiversity Economy. Signed by the South African Government and social partners on 17 November 2011, the opening sentences of the Green Economy Accord (Republic of South Africa, 2011) reveals three critical factors:

- It ignored the critical environmental threats including biodiversity loss and Nitrogen cycle disruption (Rockström et al., 2009), to focus only on climate change.
- The term “New Growth Path” transmits a continued neoliberal commitment to perpetual growth economics.
- Emphases on job creation and economic opportunities of “climate change innovations” create circumstances to be seized by those with capital such that they can employ people to grow their investments; local community members become staff.

Considering South Africa's continued commitment to coal, the failure to produce the intended number of jobs by 2020 and the increase in poverty, it would be safe to say that the South Africa's Green Economy Accord has failed.



**FIGURE 2**  
 The steps and consequences of the dilution of South African environmental law and policy. Decreasing area size and colour tone of draft legislation/ acts denote diluted levels of environmental protection. Bold text denotes anthropocentric language, while red arrows denote cause and effect. Laws are represented in upper case: National Environmental Management Act No. 107 of 1998, National Environmental Management: Protected Areas Act No. 57 of 2003 and the National Environmental Management: Biodiversity Act No. 10 of 2004.

Between 2012 and 2014 the South African Government collaboratively expanded the Biodiversity Economy with its subset, the Wildlife Economy. Perhaps exacerbated by some of the collaborators – who were keen to entrench their extractive practices within policy, the concepts of perpetual economic growth were sewn into the fabric of subsequent outcomes; 15 plans were formulated at a “Wildlife Economy Lab” (Republic of South Africa, 2016) all of which denote that the purpose of the environment is human wellbeing while not one indicates that humanity is dependent on the environment; four of the plans were to promote self/de-regulation of the game and hunting industries. An orchestrated consequence of this process was an unsuccessful attempt at reclassifying 32 wild animals as farm animals (Somers et al., 2020); not one of the initiatives associated with these proposed farm animal conversions would benefit the ecological integrity of the South African environment.

Far from being deterred by civil society’s rejection of the government’s wildlife commodification attempt, it pressed on with its draft National Biodiversity Economy Strategy (Republic of South Africa, 2023) which claims to be aligned with the Kunming-Montreal Global Biodiversity Framework. This framework was lauded to create the tools and mechanisms to protect biodiversity – and do so in an equitable manner that was inclusive of indigenous peoples and local communities – especially

those proximal to critical biodiversity areas (UNEP, 2022). From the perspectives of both economics and ecology, the targets and goals were diluted to increase political inclusivity (Obura, 2023). The dilutions mean that the framework does not reflect the severity of the biodiversity crisis, as reflected by planetary boundary research (Richardson et al., 2023). While the Kunming-Montreal Global Biodiversity Framework is a correct starting point for the South African Government to develop a strategy, it should nevertheless be noted that it is a compromised starting point. But it is the National Biodiversity Economy Strategy’s trajectory from this starting point that is most alarming. As mentioned above, the research areas of economics, biodiversity conservation and environmental law all acknowledge the inappropriateness of anthropocentricity in perceiving the environment. A core tenet of emerging environmental awareness (Rockström et al., 2009; Scharmer and Käufer, 2013; Locke, 2015; United Nations, 2019) recognises that humanity is part of, and subservient to, the well-being of the global ecosystem. The utilitarian perception that the environment is for people and owned by people (whilst initially supporting selective opulence) is the root cause of environmental crisis. Commodification of the environment, especially critical biodiversity areas, is the pinnacle of anthropocentric thinking. And yet commodification is at the centre of South Africa’s Draft National Biodiversity Economy Strategy. Worse still, is that the



draft strategy benefits special interest groups including the trophy hunting industry, rhino horn, ivory and lion bone traders, blood-sport gambling syndicates and industrial bio-prospectors (Republic of South Africa, 2023).

In summary, South Africa's Biodiversity Economy prioritises industrial utilisation (by existing and emerging elites) over biodiversity within its purported geographical expansions of environmental protection. It is the antithesis of the Kunming-Montreal Global Biodiversity Framework because its methodologies perpetuate exploitation of the environment and community disenfranchisement. Left unchecked, this will not only result in continued exploitation by newly emerging industrial elites but the trajectory, if selected by South Africa, will be identified as counter-flow to emergent environmental solutions. This may be reminiscent of (and as embarrassing as) South Africa's previous counter-flow policies: Apartheid; HIV denial; prevarications regarding linked whaling and wildlife trade (Macleod, 2002).

Complicating this situation, is the possibility of a pendulum swing that may further diminish social and environmental sustainability. As with the rest of the world, conservation has been expert-led. But in South Africa, with its history of colonialism and Apartheid, the marginalisation of local communities proximal to identified protected areas was extreme. Increasingly, within best practice guidelines (Beltrán, 2000; Thomas and Middleton, 2003; Hilty et al., 2020; Verschuuren et al., 2021), indigenous knowledge systems and local community involvement is considered essential to protected area planning and management. But to assume that local communities are automatically the best custodians may not be correct, especially under circumstances where leadership elements within communities have been lured by the rewards of exploitative methodologies (Washington et al., 2024).

Combined, the above-mentioned factors of conflicting political agendas, diluted commitment, entrenched and powerful elitism and complicated participative processes all contribute to a multi-layered South African conservation landscape. Its exclusionary history has made it particularly vulnerable to questionable conservation agendas that are linked (financially and ideologically) to neoliberal economics, which remains prevalent within and outside South Africa.

## Part D – actionable recommendations

The discussion, so far, raises the question of, what next? How must environmental action, conservation and protected area management be viewed? Are approaches to be altered? Addressing these questions culminates in a series of sequential recommendations:

- Sociological, economic and scientific research to avoid political or populist compromise. The foundations for conservation and protected area strategy are evolving from science, social science and economics. Authority and accountability within formal conservation agencies means that governing principles need to be grounded in law,

underpinned by jurisprudence. Instituting social change is always difficult and the attempt to be inclusive results in compromise, evident in the Paris Climate Agreement and the Kunming-Montreal Protocol, which fall short of the necessary commitments to save humanity from itself and its addiction to excess. There is a danger, that associated academic fields may mimic political dilution to retain social and political palatability. This must be avoided (Bradshaw et al., 2021). The conflated outcomes of these previously disparate academic fields must hold true to the severity of the situation: planetary boundaries are being compromised; perpetual economic growth is delusional; vast wealth accumulation with externalised social/environmental costs is admired and holds sway within the halls of power. Within such turbulence, the academic emergences of economics, science, social science and jurisprudence must be beacon-like, such that the unwieldy political structures can be guided or be held accountable when they choose not to be.

- Acknowledgement and integration of broad and diverse scientific concepts within conservation, beyond the utilitarian. If policy regarding conservation is to include a scientific grounding, it cannot be selective about which science it chooses to include. Political institutions, within and outside South Africa, tend to cherry-pick from science when formulating policy. Commonly, this involves the utilisation of synthetic boundaries or assumptions when framing the parameters of an issue. For example, shifting to gas power meets reduced coal targets but remains within the fossil fuel fraternity. Another complex example concerns certain protected areas within Southern Africa having too many elephants (Gillson, 2015). Unchecked, the ecological change precipitated within these areas will be devastating to elephants and ecosystems. With equal certainty, elephant over-population in particular areas in Africa is counter-balanced by the continent, as a whole, having far too few, with an estimated 95% drop in numbers in the last hundred years (Ritchie, 2022). At a local scale, within over-populated parks, the issue is about numbers. At a larger scale it is about distribution and habitat. To make a general claim that there is an elephant over-population problem is to cherry pick the local above the continental. Does this imply that elephants in areas like Kruger National Park and Hluhluwe-iMfolozi Park do not need management? Of course not, but the selected management interventions should take cognisance of all knowledge pertaining to elephant ecology and biology (Gillson, 2015). South African National Norms and Standards for the Management of Elephants (Republic of South Africa, 2008) make provision for sequential interventions to limit or reduce elephant numbers, starting with less invasive methods and culminating in dead removal, delineating that culling, when applied, must involve whole groupings, to contain the trauma within the group to be terminated. But the methods prescribed to cull may not meet

humanitarian standards (Slotow et al., 2021). Research into their biology has illuminated advanced cognitive abilities (Byrne et al., 2009) beyond that acknowledged in the Norms and Standards. These have included self-reflexive consciousness (Raviv et al., 2023), learning and abstraction (Irie, 2012), alarmingly advanced communication (Pardo et al., 2024) and behaviours that include compassion, mourning as well as focussed empathy and aggression (de Silva and Wittemyer, 2012; Rees, 2020; Plotnik and Jacobson, 2022). These are the very attributes that humanity has utilised to elevate itself from the animal world (Raviv et al., 2023). Contrary to the Norms and Standards, elephants are different and ignoring this constitutes cherry-picking science. Note that this does not eliminate the option of culling but it necessitates an additional layer of both public and expert circumspection. With current levels of social and economic commitment, it is hard to imagine a future for elephants that does not involve various forms of dead removal and, as many field workers can attest, there are far worse fates than culling. Having self-reflexive consciousness does not avert harsh ecological outcomes. Marginalised humans within the developing world face similar disregard, but with the added irony that its aetiology is intraspecific. Such difficult issues demand openness rather than concealment.

- Ongoing post-colonial transformation. The post-1994 transformation process, with respect to nature conservation is incomplete. While the initial focus was for staff compliments within conservation agencies becoming racially and gender representative, the reprioritisation of the environment within the political agenda has resulted in many of the old policies being re-enacted by a different body of people (Smidt, 2022). The policies themselves, retained reductionist and elitest undertones which allows for further social and environmental exploitation, evident within the Biodiversity Economy Strategy (Republic of South Africa, 2023). The consequences then undermine the transformation efforts that have been made, because it is inevitable that racist and gender issues will re-manifest in the present, because of them being endorsed subtly within old policy. This needs to be acknowledged and transformation must be recognised as an ongoing process rather than an event.
- Modernise legal interpretations of the environment to reflect the emerging findings of science and social science. Initially purported to be progressive, the inclusion of environmental protection within the South African Constitution contains language which encourages anthropocentrism, commodification and economic exploitation (Republic of South Africa, 1996). Such language was perceived as problematic or at least redundant in terms of emerging environmental consciousness (Cullinan, 2002). But with South Africa retaining untransformed environmental policy (see above) and this being utilised by special interest groups (to further sway policy toward environmental commodification) the danger of such language becomes evident. The anthropocentric language of the Biodiversity Economy is contrary to global trends in environmental protection – including the essence of the Kunming-Montreal Global Biodiversity Framework (UNEP, 2022), from which it supposedly draws reference. The environmental section within the South African Constitution needs to be perceived within the context of its time at formulation. If its wording cannot surpass neoliberalism then it requires revision. The Biodiversity Economy concept needs to be challenged from economic, social science and biodiversity perspectives. Opposition to commodified environmental exploitation within South Africa can be based on its involvement in the UN Interactive Dialogue of the UN General Assembly on Harmony with nature as well as South Africa being a signatory of the World Charter for Nature (United Nations, 1982); both of these are antagonistic to the trajectory of the Biodiversity Economy policy. The emergent acceptance of Earth Jurisprudence as a guiding principle (United Nations, 2019) should be followed.
- Broad and holistic economic auditing of activities affecting the environment. To assist a process of economic reform that addresses social/environmental externalities, the manner in which economic activities are measured and judged requires expanded parameters. When ecotourism or trophy hunting are utilised as funding mechanisms for nature conservation, scrutiny must extend beyond tracking the proportion of funding that reaches the people protecting the environment or the areas and species being protected. It must also extend beyond examining the environmental costs of travel. It should include examining the system that provides individuals with a surplus of funds to spend on the vacation; by definition, they must have extracted sufficient wealth from some other part of the planet to holiday in another unspoilt part of it. As unpopular as this concept may be, the removal of social and environmental externalities demand that it is examined. Utilisation of activities, like ecotourism, may, in balance, retain interim economic and educational value.
- Participative re-assessment of protected area strategy, planning and management. All cultures make use of hard boundaries to limit their own behaviours and both local conditions and planetary ones may now justify the use of hard boundaries (fenced or unfenced) in ensuring the protection of biodiversity. But first it must be acknowledged that the protected area concept, so far, has involved motives that served the elites within sequenced imperial and economic colonialism. With that acknowledgement, the justification for future protected areas and existing ones (albeit with unsavoury histories) needs to be assessed, through the lens of Earth Jurisprudence, in terms of the local and planetary environmental threats. The assessment, planning, formation and management of protected areas needs to be done in a highly participative manner including: an amalgamation of local and global perspectives; leadership and grassroot participation; and trans-disciplinary recognition of local, scientific, sociological and cultural expertise (Shackleton et al., 2023; Dawson et al.,

2024). Anything short of this will perpetuate social and environmental exploitation and accelerate (rather than reverse) the traversing of planetary boundaries. This understanding applies to the management intentions for all the IUCN protected area categories and the types of protected areas defined in South African law. But it has particular reference to the stricter categories; the harder boundaries associated with special reserves, national parks and nature reserves, as well as the possible wilderness designations within protected areas, cannot be perpetuated fairly if they remain an elite imposition, especially when that imposition is associated with commodification and financial exploitation rather than environmental protection. In this regard South African policy needs severe transformation. At all levels of society, protected areas need to be perceived as contributing to an holistic interspecific wellbeing, of which humanity is a part. The restrictive aspects of protected areas should take cognisance of and support cultural belief systems. For example, if communities with connections to sacred natural sites and historic cultural sites within protected areas had special access, acknowledged within management plans, it would go some way in repairing the damaged reputation of conservation in South Africa.

The above listed recommendations are summarised in Table 2, below, denoting who should implement the actions and where/who the actions will affect.

## Discussion

Historically, in times of great social turmoil or war, environmental issues take a back seat, until the turmoil has

settled. But more recently, environmental issues are central to the turmoil (disputes over water resources or food producing regions) such that their significance is retained. This, coupled with transgressing planetary boundaries, has elevated the status of environmental policy, including conserving ecosystems and species within identified areas requiring protection. The ethical and practical aspects of protecting the environment make it an amalgamated political, social, economic, geographical and ecological pursuit. Despite (and within) the emergence of environmental awareness between 1952 and 2024, the accumulation of political and economic power within local, national and international governance has been driven under the assumption of unlimited resources. With this notion remaining implicit, long after its invalidation, unsustainable principles have been underpinning development agendas, maintained by the externalisation of social and environmental factors. Overseen by a series of political iterations affecting all continents, the increase in poverty, continued social exploitation and inevitable environmental degradation has been blamed on diversionary causes from natural cycles to divine will. The reality is that resources are running out and those at the helm of political and economic leadership are, on balance, accelerating their extraction and utilisation. The power/prevalence behind the current systems has an inertial effect on change – even when the necessity of such change is perceived.

Corrective responses to historic and current environmental exploitation have been addressed by disparate forms of criticism. From different perspectives these differing forms of criticism (for example convivial and ecocentric conservationists) have each considered the others as part of the problem. Within the context of this papers discussion, convivial conservationists assert that humanity’s environmental perspectives are primarily political. The framing of the environmental situation has been maintained by a series of elites whose primary motives are wealth extraction

TABLE 2 Summary of recommendations denoting implementing (I) and recipient entities (R).

Recommendations	Academia	Civil society	Local communities	Formal conservation agencies	Local governance structures	Provincial/national governance structures
Sociological, economic and scientific research to avoid political or populist compromise	I			R	R	R
Acknowledgement and integration of broad and diverse scientific concepts within conservation, beyond the utilitarian.	R	R	R	I	I	I
Ongoing post-colonial transformation		I	I	I	R	R
Modernise legal interpretations of the environment to reflect the emerging findings of science and social science.		I	R	R	I	I
Broad and holistic economic auditing of activities affecting the environment	I	R	R	R	I	I
Participative re-assessment of protected area strategy, planning and management	I	I	I	I	R	R

manifest through economic control. Contrastingly, the ecocentric foundational principles revolve around relinquishing the ecological delusion of human planetary dominion. On-going debate between these two camps is revealing more commonality than difference which the principles of Earth Jurisprudence may catalyse into a combined strategy that views social and environmental justice as challenges with the same antagonists.

Planetary boundary research has revealed the magnitude and urgency of anthropogenic environmental threats. Despite well-funded research downplaying the seriousness of environmental degradation, the threat posed by breached planetary boundaries is beyond doubt. Even with long-standing political tensions that existed at the end of 2019, the arrival of COVID-19 precipitated broad reactive measures which crossed borders. Each of the transgressed planetary boundaries has the capacity to impact humanity far greater than COVID-19 and will demand similar international cooperation.

Clawing humanity back within safe planetary boundaries must include radical systemic economic reform which not only decelerates or reverses the causes of problems but also reallocates financial resources to address social and environmental areas of concern. From a socio-economic perspective, this involves desisting in the commodification of people and environment to acknowledge that environmental kinship is an ecological reality rather than an ideological choice. But this is no easy task; the political and economic powerhouses within humanity seem content with insulating themselves from the ill-effects of environmental threats and influencing their constituent societies into trusting diluted and ineffective mitigations that do not threaten the ambient economic paradigm. Individuals, including economic reformers, environmental activists and even the disenfranchised poor, remain tied to the ambient economic modus operandi – by maintaining or aspiring towards living standards that could only support a minute fraction of humanity.

With such pervasiveness, mechanisms to change entrenched thinking, policy and legislation are slow. Academia and civil society must apply pressure jointly, to encourage change. Action, in this regard, has three parts. Firstly, through conduct and writing there should be continuous protest at unsustainable and exploitative modus operandi. The second activity is to commit to self-reflection (however uncomfortable) and transparency regarding continued, residual or indirect association with neoliberalism, whether it is ideological or economic. The third action component is to persist in the advocacy of change (including cogent warnings of its absence) and by acting in terms of best practice even before the changes are manifest.

## Conclusions

The existence of many protected areas represents positive biodiversity protection with flawed original purposes; in many cases these positive environmental aspects are offset by continued social dismay of proximal local communities – who ultimately threaten the security of the protected areas. The inappropriateness of early protected area strategies must be acknowledged but so too must the current need of protected areas as a means of combatting biodiversity loss at local and global levels: a necessity for human sustainability. Despite

protected area's unsavoury evolution, they have a critical role to play in global biodiversity strategy (Thomas and Middleton, 2003; Verschuuren et al., 2021); their ecological integrity needs strengthening, there needs to be more of them and they need to be connected (Hilty et al., 2020). But while the ambient economic/political system drives continued wealth extraction (for elites) from externalised communities (human and non-human), how can broad support for protected areas be anticipated? With the expansion and linkage of protected areas being foundational in addressing biodiversity loss, it becomes essential, for planetary (and so human) wellbeing, that protected area management rids itself of those aspects that do not serve planetary wellbeing. Essentially, the method of defining and maintaining protected areas must be re-modelled in a participatory manner, especially where hard boundaries are required to protect people and/or wildlife. Protected areas can no longer serve the interests of exploitative elites. Where that mentality prevails, it must be exposed.

South Africa's failure to implement comprehensive transformation of the conservation sector has resulted in archaic linear and reductionist management strategies being retained within environmental policy. This has culminated in the Biodiversity Economy policy being inappropriate in its ideals and implementation plan. Its ideals of commodification are linked to the very causes of environmental degradation and its implementation is linked to elitist special interest groups capturing wealth through more social and environmental externalities.

Conservation practitioners, especially those working in formal/government agencies, are bound by the environmental laws, most of which are compromised or hamstrung by being linked to unsustainable economics and exploitative practice. But if those same laws make mention of adhering to scientific principles, then an impasse is created because the science is saying that the current human operating systems are unsustainable, resulting in impoverished human and non-human communities as a prelude to ecological collapse. Under such an impasse, conservation practitioners can justify distancing themselves from the refuted methodologies of the past and rather proceed with participative environmental policy that re-orientates humanity towards safe planetary boundaries. Such a stance should be supported by research into the nature and formation of inclusive conservation objectives that serve ecosystems at local and planetary scales. Further research is required into how the magnitude and urgency of biodiversity protection will be represented in protected area management systems and how effectiveness will be measured.

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