Climate Justice Charter Movement

Rights of Nature and **Natural Climate Solutions** RAFT POLICE

FOR PUBLIC ENGAGEMENT 22 APRIL 2023

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Contents

Executive Summary	2
Introduction	4
The Climate Crisis and Biodiversity Loss in the World and South Africa	6
Current Policy Limits and Challenges in South Africa	8
CJC Approach to Rights of Nature and Natural Climate Solutions	14
Rights of Nature Policies and Natural Climate Solutions for the State, Communities,	
Workplaces and Sectors to Accelerate the Deep Just Transition	16

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Executive Summary

The climate crisis is a threat multiplier. Nowhere is this clearer than in the loss of biodiversity. There is a directly proportional relationship between increased warming and species extinction. The IPCC's sixth cycle of reporting notes that a 3-degree increase in planetary warming will lead to 41% of mammals losing their habitat. Southern Africa is warming at twice the global rate of temperature increase meaning that as the world overshoots by 1.5°, the region will overshoot by 3°, this is disastrous for biodiversity. The climate crisis is changing weather patterns with extreme variations from severe floods to extreme and prolonged droughts, sporadic cold fronts and altered wind oscillations and, of course, heatwaves. Combined with high levels of humidity, heatwaves are increasingly causing higher wet-bulb temperatures. A high wet-bulb temperature is when a temperature increase is accompanied by the humidity being too high so that sweat cannot evaporate to cool the mammalian body, resulting in heatstroke. The changing climate is also changing the life-cycle events of animals and plants which are essential for breeding seasons and ecosystem survival. As the oceans warm, they become more acidic, corals bleach, marine habitats are destroyed and marine life such as oceanic plankton, drifting plants and algae which produce 50% of the oxygen on earth, die off. Urgent action must be taken to ensure ecosystem survival and a liveable world for human and non-human life. This Rights of Nature and Natural Climate Solutions Policy for South Africa, which is inspired by the 13th systemic alternative for transformative change in the Climate Justice Charter (CJC), outlines the urgent action that must be taken to accelerate the just transition by urgently decarbonising, building ecosystems adaptability and transformative regeneration of ecosystems.

The policy aims to advance the following goals:

- The first goal is to "Advance an awareness that we thrive and co-exist on one planet" (3rd goal of the CJC). This policy advances an ecosystems awareness which situates humans in nature. Its goal is to advance holistic complex systems thinking which respects the wholeness of life forms as well as the inter and intra-relationships between humans and non-human life forms.
- The second goal is to inspire a break with anti-human and human-centred approaches to biodiversity and conservation.

- The third goal of this policy is to drive forth an earth-centred approach to biodiversity and conservation. This approach rejects the logic of corporate environmentalism which posits non-human life as mere natural capital to be exploited. Instead, this policy defends the natural commons (land, water, biodiversity, creative human labour, the earth systems) as central to the deep just transition to bring down emissions and ensure eco-system adaptation capabilities. Our oceans are natural carbon sinks. Shallow till agro-ecology farming does not release carbon (see policy on food sovereignty) and protects top soil. Forests, biomes and plants also absorb carbon. And all together contribute to limiting the greenhouse effect. Humans protecting the natural commons are contributing to the survival of all life forms, ensuring resilient webs of life and healing the climate rift with the earth system commons.
- The fourth goal of this policy is to underline the urgency of the climate crisis and the tipping points and feedback loops that it has engendered, some of which are now irreversible within the century.
- The fifth goal of this policy is to strengthen the constitutional democracy of South Africa by advancing a community-centred approach to conserving biodiversity and the natural commons. This approach is based on the deep just transition principles of the Climate Justice Charter which *inter alia* include meaningful democratic participation, ubuntu, eco-centric living, climate justice and intergenerational justice.

South Africa is among the most biodiverse countries in the world with about 95000 known species. It is home to 10% of the world's plant species, 15% of the world's marine species, and about 7% of the world's mammal, reptile and bird species¹. It boasts some of the highest rates of endemism in the world. However, this rich biodiversity is seriously threatened. Several ecosystems are stressed and critically endangered to the brink of collapse. Environmental protection measures are not being followed and perpetrators of ecocide (mass-scale destruction of human and non-human life) are not being held accountable. There is poor coordination between government departments and agencies leading to a fragmented and incoherent approach to environmental management and biodiversity conservation. This state of affairs is being worsened by the climate crisis which is compounding these factors while creating new challenges and threats to life in South Africa.

¹ CBD Country Profile, Biosafety. 2022. 'CBD'. Secretariat of the Convention on Biological Diversity. 2022. https://www.cbd.int/countries/profile/?country=za.

Introduction

There is hope. Although the loss of species is irreversible, extinction rates can be slowed down and ultimately reversed, habitats can be regenerated, ecosystems can be restored, and the web of life can flourish again². The earth's systems have an incredible ability to transform, evolve and regenerate. However, time is of the essence. If urgent action is not taken, the rate of species extinction will continue to accelerate. Solving the crisis of biodiversity loss requires a transformative and decolonial way of thinking which requires reconnecting with an earthcentred approach to what it means to be human. Such an approach locates humans in nature as part of the web of life. All human activity, including economic activity, must be located in nature. Disembedding economic activity from nature results in the dangerous illusion that economic growth can be decoupled from environmental impacts or that resource extraction can happen in perpetuity despite the earth's limits and planetary boundaries.

It is well argued in the Strategic Perspective Documents of the CJCM that throughout its history, capitalism has always sought to enclose the human and natural commons. This enclosure has engendered the dispossession of indigenous lands, water, biodiversity and basically, life-enabling commons. This is accumulation by ecocide (the unlawful and deliberate destruction of humans, life-enabling commons systems and the earth's biosphere). Thus, this policy is an anti-ecocide policy. It defends the natural commons and challenges the capitalist logic which has spread throughout the world through colonial modernity (the domination of nature, women and the racial other).

This policy is based on an understanding that the protection of biodiversity is a socio-political act that must address the historical legacies of environmental injustice and the impacts of environmental racism. This is why the policy is guided by the plurivision of the Climate Justice Charter. This plurivision addresses the legacies of the past, the poly crisis of today and building a better future and world for human and non-human life. It situates and grounds the struggle for justice within the contentious histories and legacies of colonialism and apartheid and the capitalist nexus of racialised accumulation. It also situates it within the struggle against afroneoliberal accumulation and the continuity of the ecocide project and the destruction of the natural commons in democratic South Africa. The CJC plurivision engenders a rights-of-nature

² https://www.iucnredlist.org/

approach that is decolonial, anti-capitalist, anti-ecocide, and ecofeminist and defends the natural commons.

Rights of nature and natural climate solutions are the 13th systemic alternative for transformative change envisioned in the climate justice charter. The charter says,

"Our oceans have been polluted, forests destroyed, land stolen and biodiversity loss increased, all due to the pursuit of profit. If we are to survive, all living creatures need to be respected. All life and all ecosystems on our planet are deeply intertwined and need to exist, persist and regenerate their vital cycles. The rights of nature approach recognises the intrinsic value of all non-human life forms. Moreover, nature has its own solutions to climate change from which we can learn."

The Climate Crisis and Biodiversity Loss in the World and South Africa

Ecocide in South Africa started with the domination of nature, women and the racial other under colonialism and has continued with environmental apartheid the legacy of which still persists. Colonialism exploited the environment for the benefit of the colonial empire and the capitalists. Wildlife was decimated by trophy hunting, ivory exports and culling. Colonial acts such as the National Parks Act of 1926 prohibited non-white people from accessing the environment while large swaths of land were overgrazed and destroyed through mechanistic tillage farming which release tons of carbon from the soil. Colonialism introduced the separation between humans and nature and undermined African emancipatory ecologies and indigenous worldviews. The Khoi and San, the first environmentally conscious peoples in SA, fought for generations to resist the enclosure of the commons. Colonial attempts to 're-create home' introduced foreign exotic plant species which continue to outcompete native plants and destroy ecosystems and habitats. Some of these alien invasive plants are extreme water users, absorbing large volumes of water while those in riparian zones (next to rivers) have reduced river flows and runoffs. The impact of alien invasive plants on SA's surface water runoff is estimated to be at 1.44–2.44 billion m3 per year³. Even today, affluent domestic gardens in SA are still dominated by foreign plant species. Colonial administrations had poor mining regulations, this was evident from the first colonial mine in SA, set up in 1852, in the town of Springbok. This open-pit copper mine required the complete transformation of the environment and nearby ecosystems. The entire project had no environmental rehabilitation plans. Today, there are over 6000 abandoned mines which have not been rehabilitated.

The apartheid regime continued exploitation through ecocide by entrenching environmental racism and cramming black people into tiny Bantustans. The regime had loose regulations over white farmers and their use of water and chemicals like insecticides, pesticides and fertilizers which over the years have poisoned water streams, and caused eutrophication and insect loss. The regime established ESKOM with cheap migrant labour supplying coal from poorly regulated coal mines. This legacy of coal dependency has locked in SA as a carbon criminal

³ Le Maitre, D. C., Blignaut, J. N., Clulow, A., Dzikiti, S., Everson, C. S., Görgens, A. H., & Gush, M. B. (2020). Impacts of plant invasions on terrestrial water flows in South Africa. In Biological Invasions in South Africa (pp. 431-457). Cham: Springer International Publishing.

state. Unfortunately, the post-apartheid democratic government has only continued that degradation.

South Africa's biodiversity is deteriorating exponentially. The country is home to three of the 35 biodiversity hotspots of the world (Succulent Karoo, Maputaland-Pondoland-Alabany and Cape Floristic regions). A biodiversity hotspot is an area with an abundance of biodiversity and a high concentration of endemic species (meaning species only found in one area). For an area to be formally designated a biodiversity hotspot it means that it meets two conditions; firstly, it has more than 1,500 endemic vascular plants that are not found anywhere else on earth, and secondly, more than 70% of the natural area has been cleared, degraded or destroyed⁴. Once endemic species are lost, they are lost forever because they only grow in one area. Future generations of those species are therefore denied their right to exist. Some of these endemic species have spiritual significance to many people, their loss violates their freedom of religion as certain religious rites cannot be performed and it also violates their well-being which is enshrined in the constitution. Further to that, it is intergenerational injustice and it violates the Constitution. The National Biodiversity Assessment of 2018 makes the following dire observations about South Africa's biodiversity:

- Out of 1021 ecosystems assessed, half of them are classified as threatened.
- The highest proportion of critically endangered ecosystems is found in rivers and wetlands.
- 42% of river ecosystems are critically endangered while in wetlands it is 61%.
 Damming, unsustainable water use, the climate crisis, and heavy metal spillage (like acid mine drainage) are the leading causes coupled with the growing rate of raw sewage going into freshwater systems due to governance failure.
- There is an increased extinction rate in all taxonomical groups, meaning rate at all levels of the classification of living creatures - kingdom, phylum or division, class, order, family, genus, and species.
- 70% of fish stocks are fully exploited
- 99% of ecosystems in estuaries are threatened with extinction while in wetlands, 88% of species are threatened.

⁴ Williams, Kristen J., Andrew Ford, Dan F. Rosauer, Naamal De Silva, Russell Mittermeier, Caroline Bruce, Frank W. Larsen, and Chris Margules. 2011. 'Forests of East Australia: The 35th Biodiversity Hotspot'. Biodiversity Hotspots: Distribution and Protection of Conservation Priority Areas, 295–310.

Biodiversity loss is a crisis on a global scale:

"Most species may not yet have gone extinct, but they are, on average, far less abundant than they once were. A recent landmark paper by Bar-On et al. estimated that 83% of wild mammal biomass has been lost since the rise of human civilization. The scale of human impact is also revealed by their estimate that wild mammals now comprise just 4% of mammalian biomass, with livestock comprising 60% and humans the remaining 36%. They also calculate that 70% of global avian biomass is made up of domestic poultry. Also released in 2018 was the World Wildlife Funds and Zoological Society of London's 'Living Planet Report', which estimates that the abundance of the world's wild vertebrates (fish, amphibians, reptiles, mammals and birds) fell by 60% between 1970 and 2014. I was born in 1965, and in my lifetime we have moved from an age of bio-abundance to one of bio-paucity. One has to wonder what wildlife will be left by the time my teenage children reach my age." (Goulson 2019, 967)

The International Union for Conservation of Nature (IUCN) makes the following estimates of the percentage of threatened species (with lower and upper estimates)

- amphibians 41% (35-50%);
- sharks, rays & chimaeras 37% (32-46%);
- reef-forming corals 36% (31-44%);
- selected crustaceans (lobsters; freshwater crabs; freshwater crayfishes; freshwater shrimps) 28% (17-56%);
- mammals 27% (23-37%);
- reptiles 21% (18-33%);
- selected insects (dragonflies & damselflies) 16% (11-41%);
- birds 13% (12.8-13.3%)...

Current Policy Limits and Challenges in South Africa

South Africa does not have a specialised environmental court. The constitution does not provide for the establishment of a specialised environmental court, nor has any act of parliament provided for the permanent establishment of such a court. There have been instances where a specialised environmental court was set up to deal with specific environmental crimes. Specialised courts can be established through the Superior Courts Act. They require the consent

of the Minister of Justice, the Chief Justice, and the President of the relevant division of the high court and ultimately the approval of Parliament and the National Council Of Provinces. For example, a specialised environmental court was set up in the Western Cape province in 2003 and a similar court was set up in the Eastern Cape in 2007. Both were established to combat abalone poaching. They dealt specifically with abalone poaching and no other environmental violation. Due to this narrow scope, these courts had a limited lifespan and they lacked sufficient resources hence they were subsequently closed. The lack of a specialised environmental issues are subject to the slow-moving wheel of justice and thus take years and immense financial resources to resolve. It is a known fact that the country's courts are overloaded with cases, understaffed and underfunded. Interviewees for the position of chief justice made this clear before the Judicial Service Commission in 2022.

There is also the issue of constitutional subsidiary. Constitutional subsidiary means that,

"[w]here legislation is enacted to give effect to a constitutional right, a litigant may not bypass that legislation and rely directly on the Constitution without challenging the legislation as falling short of the constitutional standard." African National Defence Union v. Minister of Defence subsidiary (2007) (5) S.A. 400 Par. 51, 52 (C.C.) ⁵

It means someone must first challenge lower legislation which has been enacted to realise a constitutional right before appealing to the constitutional right itself. Hence environmental cases are about processes and licensing procedures rather than rights. This has resulted in a poverty of case law dealing with substantive environmental rights. As the climate crisis worsens and complex environmental issues begin to dominate the legal nexus, a specialised environmental court or tribunal is essential. It is no surprise that "environmental law is widely recognised as the fastest growing area of international jurisprudence"⁶. Section 24 of the constitution is based on anthropocentric (narrowly human) values; the environment is protected for the enjoyment of present and future generations of humankind. Section 24b was designed to deal with the issue of economic advancement within environmental limits. However, section 24 b subsection 3 (*secure ecologically sustainable development and use of natural resources*)

⁵ South African National Defence Union v Minister of Defence and Others (CCT65/06) [2007] ZACC 10; 2007 (5) SA 400; 2007 (8) BCLR 863 (CC) ; [2007] 9 BLLR 785 (CC) ; (2007) 28 ILJ 1909 (CC) (30 May 2007)

⁶ Walters, R. and Westerhuis, D.S. (2013) 'Green crime and the role of environmental courts',

Crime, Law and Social Change, 59(3), pp. 279–290. Available at:

https://doi.org/10.1007/s10611-013-9415-4.

while promoting justifiable economic and social development) has been open for abuse and exploitation. It has been used as justification for some of the worst environmental degradation. The mining sector has taken full advantage of the open-ended meaning of "economic and social development" espoused in subparagraph 3.

Mining has always had preferential treatment in terms of environmental regulation. Although the NEMA law came into force in 1996, it was not until the 2006 publishing of the Regulations GNR 385, 386 and 387 published in Government Gazette 28753 of 21 April 2006 that mines were required to submit an environmental impact assessment. The failure to regulate mining has resulted in over 6000 abandoned mines with 2322 mines classified as a serious and immediate danger to communities. These mines are not rehabilitated, and the community cannot reuse the land. Most of them have toxic waste which spills into freshwater streams while polluting groundwater and killing riverine ecosystems. Ineffective and fragmented regulation has resulted in some mines constructing weak tailing dams which resulted in disasters like the 2022 Jagersfontein Tailings Dam Collapse which polluted water streams and agricultural land with heavy toxic metals. There are no records of how many tailing dams have collapsed due to poor regulation. This is one of the reasons the Global Industry Standard on Tailings Management has been sounding alarm bells on the management and regulation of tailing dams in South Africa.

According to the White Paper on Conservation and Sustainable Use of South Africa's Biodiversity 2022, some provinces have not changed their biodiversity laws since the 1960s. That means there are provinces which have not developed new provincial laws post-1994 to address the worsening state of biodiversity. Municipalities are guilty of the same lacklustre approach, basically, local government has failed to develop by-laws to protect biodiversity and punish perpetrators of ecocide.

Several environmental laws have been enacted to give effect to section 24, principal among them is the National Environmental Management Act 107 of 1998. NEMA was regarded as a very progressive piece of legislation. It created an environmental participation framework that in theory, should be underpinned by meaningful democratic participation where consultation with communities and competent bodies should be fundamental to all environmental process licensing. NEMA also established the Environmental Assessment Mechanism, a key tool in mitigating environmental damage from various activities. However, the effectiveness of any legislation is dependent on implementation. Suffice it to say, the implementation of NEMA has had serious shortcomings; the continued biodiversity loss is evidence of that. Besides effective implementation, NEMA itself has come short in some respects.

To begin with, NEMA does not prohibit trophy hunting. This vile elitist practice only requires licensing under NEMA. Also, NEMA does not ban the trade in wild meat, does not prevent the overexploitation of marine life through industrial overfishing, does not ban culling and it is a human-centred set of regulations which does not respect the intrinsic value of non-human life forms. Nonetheless, NEMA has provided broad legal standing (*locus standi*) for people to approach a competent court for relief in environmental matters. NEMA has enshrined the right of communities to say no. The problem is that many communities do not understand their rights because South Africa is not a constitutionally conscious society. It is incumbent on activists to educate communities about their rights. Though not an exhaustive list, other laws drafted to give effect to section 24 are:

- The Marine Living Resources Act 1998 (For the conservation, utilisation and sustainable use of marine 'resources'). There has been a failure to implement the act by national and provincial officials. Industrial fishing exploits an unsustainable Total Allowable Catch (TAC) thereby putting marine ecosystems at risk of collapse. The 2014 amendment and the Small-Scale Regulations of 2016 have not remedied the defective regulation of small-scale fishers thus the act has created a fragmented process of *commercial fishing rights allocation* with over a thousand appeals lodged yearly. In some areas, small-scale fishers are forced into illegal fishing at night because they cannot obtain a fishing license. In other words, people are being turned into criminals in order to sustain their livelihoods due to a defective legislation. In 2020 SA exported 10 billion rands worth of seafood, the top destination being Europe.
- Biodiversity Act (Nema) 2004 (For the protection of species and ecosystems that warrant national protection; the sustainable use of indigenous biological resources; the fair and equitable sharing of benefits arising from bioprospecting involving indigenous biological resources; the establishment and functions of a South African National Biodiversity Institute). This act legalises bioprospecting (biological piracy) the capture of indigenous knowledge of plants for the purposes of commercial use. Along with the Genetically Modified (GM) Organisms Act, of 1997, this act permits the release of GM organisms into the environment and grants extraordinary discretionary powers to the Minister of the environment on the regulation of GM species.

- Protected Areas Act 57 of 2003, (for the establishment of a national register of all national, provincial and local protected areas.)
- Integrated Coastal Management Act No 24 of 2008, (to define rights and duties in relation to coastal areas; to determine the responsibilities of organs of state in relation to coastal areas; to prohibit incineration at sea; to control dumping at sea, pollution in the coastal zone, inappropriate development of the coastal environment and other adverse effects on the coastal environment). The act has failed to prevent pollution at sea. SA disposes of about 250 000 tonnes of waste into the ocean annually⁷. Plastic makes up the bulk of this waste. In 2018, 107 000 tonnes of plastic waste was disposed of into the sea. Globally, plastic makes up 80% of marine pollution. In SA, the accumulation of plastic waste next to river systems due to failing municipal waste control often ends up in the ocean. The SA coastline due to its geographic location has a high shipping volume. These cargo ships contribute to marine pollution through black carbon, nitrous oxide and carbon dioxide. Several ships have also lost or dumped cargo, having serious impacts on our coastal areas without any consequences.
- The World Heritage Convention Act no 49 of 1999, (Regulation, control and management of world heritage sites). SA has ten world heritage sites.
- National Water Act 1998, (for integrated management of all water resources). It has failed to protect wetland areas and has not addressed the colonial legacy of private dams which have diverted rivers and destroyed river ecosystems. (see CJCM water policy).
- National Forest Act 1998, (regulates the protection of forests, access to forests, management authorities for forests, and rules for forests management). It has not been updated to meet the scale of biodiversity destruction. Between 2001 and 2021, SA lost 26% of its tree cover, that is 1.53 mega-hectares of forest loss which represents 945Mt of CO₂ being released into the atmosphere through tree felling⁸. Tree cover loss exposes the land to the frequent and intensifying heatwaves caused by the climate crisis. Over the past 20 years, the province of KwaZulu-Natal has lost the most tree cover in SA with over 630 Kilo-hectares of tree cover lost.

⁷ https://mg.co.za/environment/2021-06-18-new-plan-to-tackle-marine-pollution/

⁸ Global Forest Watch. 2010. 'South Africa Deforestation Rates & Statistics | GFW'. 2010.

https://www.globalforestwatch.org/dashboards/country/ZAF

- Game Theft Act 1991 (To regulate the ownership of game in certain instances; to combat the theft and wrongful and unlawful hunting, catching and taking into possession of game; and to provide for matters connected therewith). It legalises trophy hunting.

South Africa is also a signatory to the following international agreements:

- The Cartagena Protocol on Biosafety to the Convention on Biological Diversity (Cartagena Protocol, ratified by South Africa in 2003) (governs the movement of living modified organisms, resulting from biotechnological intervention, from one country to another)
- The Nagoya Protocol on access to genetic resources and the fair and equitable sharing of benefits arising from their use to the Convention on Biological Diversity (Nagoya Protocol, ratified by South Africa in 2014);
- The UN Convention to Combat Desertification (UNCCD, ratified by South Africa in 1997);
- The UN Framework Convention on Climate Change (UNFCCC, ratified by South Africa in 1997); commonly known by its annual Congress of Parties or COP process
- The International Plant Protection Convention (IPPC, ratified by South Africa in 1952);
- The Ramsar Convention on Wetlands (Ramsar, ratified by South Africa in 1971);
- The World Heritage Convention (WHC, ratified by South Africa in 1972); and
- the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA, ratified by South Africa in 2004).

South Africa is also a party to the following programmes:

- The UN Agenda 2030 for Sustainable Development and the Sustainable Development Goals (SDGs);
- the UNESCO Man and Biosphere (MAB) Programme;
- the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES).
- the Convention on Migratory Species and the Convention on Biological Diversity

CJC Approach to Rights of Nature and Natural Climate Solutions

The CJC approach to the rights of nature is based on a plurivision. That means it addresses the legacy of colonial environmentalism, the current project of capitalist accumulation by ecocide and the project of future enclosures through the patenting of life forms and the dispossession of the life-enabling commons. Understood in this way, the rights of nature is not just about law. It is not just about giving rights to non-human life forms but is more fundamental than that. At its core, the rights of nature are about transforming human relations with the natural world. That begins with a transformation in our thinking, meaning how we think about nature and how we see ourselves 'in the circle of life.' Our relationship with nature has been ruined by capitalism. Capitalism has declared war on nature. It denies the intrinsic value of nature and reduces the value of the non-human life forms into objects to be sold in the market. Our laws reflect this human-centred way of thinking. We have environmental laws that are designed to protect nature for human exploitation not for its intrinsic value. Even section 24 of the SA constitution says everyone has the right to have the "environment protected, for the benefit of present and future generations." That means the protection of the environment is based on the benefit of the present and future generations of humans. This is called anthropogenic environmentalism and the CJC rejects this.

CJC rights of nature is about reclaiming African emancipatory ecologies and indigenous philosophies. It is about reclaiming indigenous knowledge which had been discarded as fairy tales and rudimentary folklore. It is crucial to revisit, reclaim and continue to develop the philosophy, science and practice of African emancipatory ecologies. The CJC rights of nature is also about rejecting corporate-led environmentalism. This kind of environmentalism is about protecting the interests of capitalists. An example of this is tree planting for the timber industry (corporate monocultural plantations). Corporate-centred environmentalism endorses the separation between humans and nature.

Natural Climate Solutions.

Large corporations have promoted carbon markets, carbon offsets, geoengineering, carbon capture and storage as well as carbon trading, as forms of natural climate solutions. These are false solutions and they represent the corporate capture of real natural climate solutions. The CJCM is about reclaiming *Natural Climate Solutions* to strengthen the rights of nature and

ensuring the end of ecocide. It is a scientific fact that "Natural Climate Solutions (NCS) can provide 37% of cost-effective CO₂ mitigation needed through 2030 for a >66% chance of holding warming to below 2 °C. One-third of this cost-effective NCS mitigation can be delivered at or below 10 USD /MgCO₂." ⁹

This progressive understanding of NCS has the following characteristics: to begin with, it notes that NCS cannot be used as a substitute for cutting greenhouse gas emissions and the rapid phase-out of fossil fuels. Subsequent to that, NCS is not gardening, it is a socio-economic and political process that requires community participation and respect for indigenous lands and ways of being. Natural climate solutions cannot be a cover-up for the capitalist enclosure of the indigenous commons nor can they misappropriate millennia of Indigenous knowledge and practices. All natural climate solutions in Indigenous lands must have the free, prior and thoroughly informed consent of Indigenous people. 80% of global biodiversity is in Indigenous lands which store 20% of carbon sequestered by the tropical and subtropical forests. In the tropics, Indigenous lands can mitigate up to 50% of carbon emissions. That means Indigenous lands are crucial for NCS, thus, it is important to note that these lands are not terra nullius (territory without a master or nobody's land), they are being taken care of by Indigenous people and their contribution must not be ignored. In South Africa about 20% of land is still customary land. The Amadiba community struggle against mining is about defending this land and its ecosystems.

Importantly, at the core of NCS must be the restoration of biodiversity and resilient ecosystems not the continuation of nature's exploitation under capitalism. A transformative understanding of NCS rejects carbon budgets (with its emphasis on reducing emissions rather than rapidly phasing out fossil fuels), carbon emissions trading and all other greenwash forms of carbon pricing. Conceived in this manner, natural climate solutions advocate for a deep rootedness in nature's potential and intrinsic value thus standing in contrast to the Anthropocene economics of natural capital accounting in climate change mitigation and adaptation (nature must serve capitalism). Unlike the neoclassical and neoliberal economic understanding of nature as a web of interconnected life-giving systems; the need to ensure the natural commonwealth prevails

⁹ Griscom, Bronson W., Justin Adams, Peter W. Ellis, Richard A. Houghton, Guy Lomax, Daniela A. Miteva, William H. Schlesinger, et al. 2017. 'Natural Climate Solutions'. Proceedings of the National Academy of Sciences - PNAS 114 (44): 11645–50.

https://doi.org/10.1073/pnas.1710465114.

over state and market. Thus, a climate justice approach to RON and natural climate solutions transcends the technical and technotopian approach that often accompanies mitigation and adaptation to climate change by paving a path for real change; the change of knowledge systems and ways of being.

Over the past two decades, green capitalism has sought to capture and co-opt nature-based solutions. This attempted co-optation has manifested through trendy tree-planting initiatives. The World Bank has set up initiatives such as the Forests Carbon Partnership Facility (FCPF), the Forest Investment Fund, and the donor-funded Program of Forests which was succeeded by the Progreen Global Partnership Program in 2020. All these initiatives promote tree planting for climate change mitigation, adaptation and sustainable development. These initiatives promote forest management, reforestation and the promotion of the forest carbon sink based only on 'sustainable development' and the economic viability of forests. South Africa must reject afforestation that is just based on profits for the timber industry.

Rights of Nature Policies and Natural Climate Solutions for the State, Communities, Workplaces and Sectors to Accelerate the Deep Just Transition

The management of biodiversity must transcend political borders through bioregionalism. Bioregions are nature's map of the world. They can be defined as geographical boundaries that are determined by ecosystems, climatic conditions, geological features and unique cultures. They can also be defined as geographical boundaries of endemism. Unlike politically determined state boundaries, bioregions are not subject to political territorial delineation, they are subject to the natural world and people's cultures that have symbiotically evolved within the ecology of their habitation. As the climate crisis worsens, more and more people are being displaced. Internal displacement and cross-border migration are worsening. Several states have responded to this violently, they have militarised their land and sea borders while others are refusing to help migrants stuck in freezing conditions or drowning at sea. This is inhumane. It also has an element of far-right racist nationalism and xenophobia.

Bioregional governance stems from the fact that the nation-state was designed solely on political boundaries with a logic of conquest over nature. The state is no longer the best instrument to protect life in the context of the climate crisis. Political boundaries ignore the biocultural relationship that has existed between people and nature. For example, the delineation of provinces post-1994 and the continued demarcation of municipalities does not consider biodiversity. Mbokodo et al. (2020) investigated the projected effect of climate change on the future of South Africa¹⁰ with a focus on heatwaves. They found that across the interior of South Africa, average temperatures may rise by 6°C by 2070–2099 with respect to 1983–2012, under a high emissions scenario¹¹. This will make heatwaves more severe and longer lasting. The coast will also experience more heatwaves but not as intense and longer lasting as the interior. Their climate models also show that the north-western part of the country will have the most dramatic increase in the frequency and intensity of heatwaves. Animals will need bio-corridors to be able to navigate the heatwaves, droughts, fires, floods and other extreme weather conditions. With bio-corridors, wildlife are able to mitigate conditions like heat-stress and prolonged droughts as well as deteriorating habitats and fractured ecosystems. This will require conservation beyond provincial and municipal demarcation. It will also require a coordinated bioregion approach across the Southern African region. This has to entail a bio-regional policy architecture within the country and with countries in the region. Some of the following policy measures and approaches need to be taken forward as part of a bio-reginal policy architecture.

Immediate measures for the state to advance at a policy level to stop bio-diversity loss

- An immediate ban on trophy hunting.
- A ban on ivory and rhino horn trading, with serious legal penalties such as life long sentences to be imposed for offenders.
- Wild meat trading to be properly regulated through existing laws ensuring that it protects the rights of animals and benefits local community consumption.
- Urgent action must be taken to fix wastewater plants to prevent raw sewage spillage into the oceans.
- Regulation on chemical plants near freshwater systems and the ocean must be tightened or they should be prohibited.
- An urgent estuary and wetland recovery plan must be developed.

¹⁰ using regional climate model downscalings obtained from the Conformal Cubic Atmospheric Model (CCAM) for the periods 2010–2039, 2040–2069, and 2070–2099, with 1983–2012 as the historical baseline

¹¹ Mbokodo, Innocent, Mary-Jane Bopape, Hector Chikoore, Francois Engelbrecht, and Nthaduleni Nethengwe. 2020. 'Heatwaves in the Future Warmer Climate of South Africa'. *Atmosphere* 11 (7): 712. https://doi.org/10.3390/atmos11070712.

• An abandoned mine rehabilitation plan and tailing dams strategy must be urgently developed to protect communities, regenerate eco-systems and protect water systems.

Tree planting through mixed species

Tree planting is critical in the fight against the climate crisis but, it depends on which trees are planted and where, because monoculture forests are not forests at all, they are deserts. The monocultural forests which have been promoted as natural solutions for carbon sequestration have been a disaster for biodiversity and native ecosystems preservation. Over the last 300 years, the earth has lost over 1.5 billion hectares of forest land.; In the 1980s about 150 million hectares of forests were lost and "since then, deforestation rates have steadily declined, to 78 million hectares in the 1990s; 52 million in the early 2000s; and 47 million in the last decade."¹² Mixed species plantations deal with some of the most obvious problems of monoculture plantations. To begin with, they produce species and genetic diversity and strengthen the resilience of a bio-region. This leads to a diverse ecosystem, an ecological community with an ecosystem multifunctionality where keystone species can thrive (these are plants and animals that the health of the ecosystem as a whole depends on). Studies have shown that multi-species forests have more biomass than monoculture forests. This includes plenty of living soil organisms that regenerate the soil while increasing fertility, nutrient mineralization, water filtration and absorption. According to carbon content research conducted by Qin and others, "biomass is positively correlated with carbon storage"¹³. In short, mixed species plantations absorb more carbon dioxide. A mixed species regeneration and planting policy, related to specific biomes, needs to be championed by all levels of government, including ensuring a national bio-materials protection system of seeds and plant materials, anchored in peoples biodiversity registers and protocols.

Restoration through rewilding

Rewilding is characterised by the autonomy afforded to nature. Unlike other conservation projects that require constant human intervention, in rewilding, nature becomes the steward.

¹² Ritchie, Hannah, and Max Roser. "Forests and deforestation." Our World in Data (2021).

 ¹³ Sharma, Harish, K. S. Pant, Rohit Bishist, Krishan Lal Gautam, Rushal Dogra, Munesh Kumar, and Amit Kumar.
 "Estimation of biomass and carbon storage potential in agroforestry systems of north western Himalayas, India." CATENA 225 (2023): 107009.

South Africa has dedicated swaths of land for farming, not all this land is being used to produce food. Some of this land can be effectively rewilded in a way that does not threaten food production. Indigenous/naturalised tree seeds including flowers and bushes can be randomly dispersed over a region to restore it. This can restore populations of pollinators improving overall food production. In rewilding, the stewardship and progress of the project entirely depend on nature's potential to regenerate ecosystems. For example, the reintroduction of keystone species to rehabilitate ecosystems has been done successfully in places like Scotland where beavers were reintroduced into the fresh waters of the Knapdale Forest and that led to many complex ecosystems being revived with insect populations rising. Another example is the reintroduction of wild fauna, non-interference in bushfire cycles and other processes that rely upon nature's ability to revive itself. Rewilding can also be applied in certain urban spaces and in marine spaces and freshwater systems.

Over the years different projects have emerged that take a 'conservation' approach to restore biodiversity including:

Half-Earth Project

This project aims to turn half the earth into a protected area by creating a series of networks or conservation grids between current protected areas on land and sea (Griscom et al. 2017) Only 15.4% of the land surface of the earth is protected and only 3.4% of the oceans thus, protecting 50% of the earth would require relocations and forced removals of people, the closure of fishing areas for fisherfolk and other radical measures. It also raises many questions such as: What happens to states that refuse to partake? Who controls the 50%? What happens to the other half that is not protected? What about the socio-economic and political consequences?

30 X 30 Project

This project aims at protecting 30% of the earth's land and sea by the year 2030. Its proponents argue that the project will benefit over 1000 species and that 11 billion tons of CO_2 emissions would be avoided annually. The project is seen as a way of eventually protecting half the earth by 2050. It is being spearheaded by the High Ambition Coalition for Nature and People which is an informal intergovernmental group founded by the Marshall Islands Republic in 2014 as part of the Convention on Biological Diversity. In the Amazonia region, there are fears that

indigenous people are being forcibly removed to make way for protected areas.¹⁴ Thus, the project is being used as a cover-up for green fascism in certain regions of the world.

This form of fortress conservation is emerging as neo-colonial land grabbing. Land previously utilized and occupied by indigenous people is closed off as a conservation 'fortress' depriving indigenous people of their land and source of livelihood. South Africa has a complicated land history of racial dispossession. It must approach such projects with the plurivision envisioned in the Climate Justice Charter and its principles guiding a deep just transition. Plurivision means addressing the legacy of the past, the crisis of today and building a better world for all human and non-human life. The 30X30 project may be well-intentioned by its advocates and social movements however, it can lead to land-grabbing and racialised exploitation as witnessed in the Amazon.

Conservation organisations have tried to walk an apolitical stream, avoiding directly engaging with the economic and political issues around conservation. In South Africa, liberal conservation refuses to address the racial history of land dispossession. It is simply concerned about animals and not the people, especially the black people who continue to be victims of environmental racism. This apolitical approach to conservation is a false illusion. Activists need to recognise that there are three categories of environmental movements¹⁵. The first is called the neo-protectionist. These groups believe that human and non-human nature cannot exist outside an exploitative relationship. In their antihumanist philosophy, human nature will always exploit the natural world hence, the only solution is environmental protectionism like the anti-human half-earth project. The neo-protectionist promote neo-colonial land-grabbing programmes implemented through green fascism and complete disregard for the socio-political processes. One of the projects that fall under this group is the 30 by 30 group. This group also blames the loss of biodiversity on the on the entire human population instead of directly blaming the ordering of society through capitalism. The second category of environmental groups is new conservationists.¹⁶. They argue against pristine wilderness conservationism. They argue that the earth should be managed as a rambunctious lively garden where human

¹⁴ Gatti, Luciana V., Luana S. Basso, John B. Miller, Manuel Gloor, Lucas Gatti Domingues,

Henrique L. G. Cassol, Graciela Tejada, et al. 2021. 'Amazonia as a Carbon Source Linked to Deforestation and Climate Change'. Nature 595 (7867): 388–93. https://doi.org/10.1038/s41586-021-03629-6.

 ¹⁵¹⁵ Büscher, Bram, and Robert Fletcher. 2019. 'Towards Convivial Conservation'. Conservation and Society 17 (3): 283. https://doi.org/10.4103/cs.cs_19_75.

¹⁶ Marris, Emma. 2011. Rambunctious Garden: Saving Nature in a Post-Wild World. Bloomsbury Publishing USA.

and non-human nature live side by side. New conservationists have moved beyond the pristine wilderness and they have moved beyond the human-nature dichotomy that seeks to separate humans from the rest of the natural world. The problem with these conservation groups is they do not confront capitalism and its continued destruction of life. They are also ahistorical and they ignore the social dynamics and the material conditions that have resulted in the destruction of life forms. In South Africa afro-neoliberal conservation is concerned with awarding tenders to black capitalists to continue exploiting the environment as the white capitalist did. The third category of environmental groups which activists must know is convivial conservation. The CJCM supports decolonial convivial conservation, grounded in South African conditions and realities.

Decolonial Convivial Conservation

Unlike the two groups of conservation identified, convivial conservation deals with the socioeconomic roots of the biodiversity crisis which has resulted in the sixth mass extinction. As a result of this, at its core is a political ecology critique of capitalism.

"Convivial conservation is built on a politics of equity, structural change and environmental justice. It directly targets the extreme capitalist interests of the global elites, positively engages with but transcends technocratic beliefs of pragmatists and enthusiastically builds on the current upswell in many parts of global society that demand structural change." ¹³

Convivial conservation advocates for promoted rather than protected areas, from saving nature to celebrating nature, a move from alien-human paradigms of visiting nature to purposeful and engaged visitation, daily conservation, as well as a democratic approaches to all environmental efforts. It is based on the transformative idea of a convivial society; a society rooted in the understanding that environmental justice is social justice and that the use of nature should be tailored toward improving people's lives not in creating wealth for the few or driving capitalism's growth paradigm. It should be about enabling the life enabling commons to thrive, with the human as an integral part of nature. Conservation should not be approached from a once size fits all model. Societies and communities are diverse; their histories, economies, politics and beliefs are all different. Indigenous ecological and botanical practices are crucial in this regard. This knowledge must be recovered. Every conservation effort must take all these into account in order to protect the life-giving systems of the earth. Convivial conservation understands this hence it argues for pluralistic conservation that protect biodiversity and achieves social and climate justice. The principle of conviviality is essential in tackling

biodiversity loss while simultaneously dealing with the unjust history of forced removals and land grabs behind the establishment of South Africa's national parks.

The cultural and spiritual relationship between humans and non-human nature is an important aspect of conviviality. Celebrating sacred spaces is crucial to a convivial society. South Africa is a mega-cultural country with many sacred places such as Isinuka (the place of smell) sulfur water springs in Port St. Johns, San rock art sites, Lake Fundudzi in Limpopo, eMakhosini Park where King Shaka was born, and many other sites. We must consider the rights of sacred sites in the constitution and recognize the rights of these sites in law. Declaring the rights of sacred sites would mean recognizing the rights of all nature; land, river, lakes, animals, and plants in these places. Moreover, there needs to be a national registry of sacred sites and rock art sites. In addition, documentation centres need to be created to educate the public about these spaces and their place in bio-regions and indigenous ecology. This is a crucial step towards protecting and ultimately restoring South Africa's biodiversity.

Policy Implications of Decolonial Convivial Conservation for South Africa

- A National registry of indigenous sacred spaces and rock art sites, supported by documentation centres, must be established;
- Further research must be done at universities on indigenous emancipatory ecologies to rebuild the indigenous archive and to share such knowledge with the public;
- Current national parks need to be expanded and connected through bio-corridors;
- Canned hunting must be banned and all unused farm land brought under national parks to create new national parks;
- Industrial scale fishing must be banned in South Africa (see below on people's biodiversity registers and protocols to protect the natural commons including our oceans)
- Biomes, wetlands, forests, riverine systems and oceans must be protected through people's biodiversity registers and protocols;
- Transition towns and eco-social housing must be developed to promote the natural commons through parks, agroecology gardening systems at household and community level, eco-walks and protection of endemic wild species;
- An ecocide law must be promoted and enacted for South Africa;
- An environmental court must be established;

• Extractivism must be prohibited in communal land in South Africa and people's rights to consent respected;

People's Biodiversity Registers and Protocols to protect the natural commons

People's biodiversity registers are attempts to make sure that indigenous knowledge of biodiversity is not lost. This approach comes from an initiative launched in 1995 by the Foundation for Revitalization of Local Health Tradition in Bangalore India¹⁷. Volunteers from different NGOs compiled the biodiversity registers and by 1996, there were several biodiversity registers in about 10 states in India. This was done to protect biodiversity by getting the communities involved in the conservation programmes. Also, this was to prevent the theft of indigenous knowledge through bioprospecting by providing written evidence that the community had prior knowledge of the plant and therefore no corporation could apply for a patent. Together with community-led bio-diversity protocols, championed in different parts of the continent, such approaches can embed and strengthen the land and ocean commons. In this regard the state would also have to play its part to support such bottom up commons frameworks which are crucial for bio-regions to emerge in South Africa. Bio-registers and protocols create climate jobs including for the removal of alien plant and tree species.

It is often said that when an elder dies in Africa, a whole library perishes. This knowledge must not be lost forever. Biodiversity registers are an essential way to protect biodiversity and the cultural heritage of South Africa. With all these different approaches to nature-based solutions, it is clear that something needs to be done to protect the life-giving systems of the earth. It is also clear that there are reactionary forces that seek to maintain the status quo. These reactionary forces are fascist in nature and they promote a life-boat approach where they save their countries and their people while the rest of the world perishes. It is thus essential for South Africa's attempt to protect its biodiversity to stand resolute and affirm that climate and environmental justice is social justice.

All comments and feedback can be sent to the Climate Justice Charter Movement: cjcm@mweb.co.za

¹⁷ Gadgil, Madhav, P. R. Seshagiri Rao, G. Utkarsh, P. Pramod, and Ashwini Chhatre. 2000. 'New Meanings for Old Knowledge: The People's Biodiversity Registers Program'. Ecological Applications 10 (5): 1307–17. https://doi.org/10.1890/1051-0761(2000)010[1307:NMFOKT]2.0.CO;2.