




Indigenous Environmental Ethics and the Decolonisation of Development: Ecological Moral Agency in Rural Zimbabwe

Cornelius Dudzai¹  · Rugare Mugumbate^{1,2} · Lynne Keevers³ · Noel G. Muridzo⁴ · John Chiwanza Magocha⁵ · Anesu Aggrey Matanga⁶

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Abstract

Dominant development paradigms remain largely anthropocentric, positioning the natural environment as a passive resource rather than an active participant in development. This study analyses Indigenous environmental ethics as a decolonial framework for reconfiguring human-environment relations. Drawing on insights from Birchenough Bridge and Honde Valley in Zimbabwe, the study employs a collaborative Indigenous research methodology involving purposive and relational sampling, engaging 29 participants in Birchenough Bridge and nine in Honde Valley. Data were generated through walking discussions, storytelling, environmental observations, site visits, and co-analysis. The findings show that the environment functions as a moral agent shaping human behaviour through relational reciprocity, ecological restraint, and community governance practices. Environmental elements such as rivers, trees, soils, and seasons informed ethical conduct, risk awareness, and livelihood decisions. At the same time, the erosion of these ethics through commercialisation, religious shifts, and environmental exploitation reveals tensions between Indigenous moral systems and contemporary development pressures. The study further demonstrates how Indigenous environmental ethics contribute to advancing the Sustainable Development Goals, particularly those related to environmental justice and sustainability. It also highlights implications for eco-social policy, calling for frameworks that recognise the environment as a co-participant in development processes.

Keywords Indigenous knowledges · Environmental ethics and rights · Rural communities · Decolonisation · Sustainable Development Goals

Extended author information available on the last page of the article

Introduction

As Melber and colleagues (2023) highlight, the development ideology of the Global North and South remains grounded in Gross Domestic Product measures, often overlooking broader dimensions of development, with environmental wellbeing frequently marginalised. This reflects forms of environmental colonialism that contribute to ecological degradation, including carbon markets, pollution, and extractive practices (Ritskes, 2012). These environmental crises, including climate change and global health risks, are largely driven by human-centred development pathways (Seifert et al., 2025). This gap highlights the need for ethical frameworks that reconfigure human-environment relations beyond extractive logics. Anthropocentric development has marginalised the natural environment, reducing it to a backdrop for human progress rather than a development partner. Such systems also undervalue marginalised groups, including women and girls whose care work sustains social and ecological wellbeing. As Koprina and colleagues (2018) observe, environmental ethics emerge as a corrective paradigm that establishes a moral relationship between humanity and the natural environment. Environmental ethics examine how humans ought to relate to the non-human world (Palmer et al., 2014). Palmer and colleagues' (2014) conceptualisation of environmental ethics aligns with Hourdequin's (2021) view which emphasises that environmental ethics are an academic field which arose out of professional philosophers' frustration with anthropocentrism, coupled with Western philosophy's historical treatment of humans with exceptionalism, leaving humans being viewed as distinguished from other animals and the rest of the living world.

We build on the meaning of environmental ethics to introduce Indigenous environmental ethics (IEEs) from the perspective of two Zimbabwean rural communities, demonstrating how locally grounded moral relationships between humans and the natural environment can serve as a framework for decolonising development across the Global South. As inferred from Grim (1997), natives of every land have a cosmology-cum-economy relationship with their land, and from this, we argue that IEEs arise from the sacred relationship between people and their environment. This positions rural contexts as important sites for generating decolonial knowledge that can inform broader socio-economic transformation, as locally grounded practices have the potential to challenge and reconfigure dominant development models beyond their immediate settings. IEEs are important in decolonising development because of their capacity to contribute to human wellbeing and environmental sustainability in local communities (Kelbessa, 2015). Since Kelbessa (2015) notes that IEEs are not a solution to global problems because of their own limitations, this paper seeks to present ways in which IEEs can be strengthened and utilised to establish a collaboration with the natural environment in an endeavour to attain Sustainable Development Goal 16 on partnerships for achieving SDGs. Drawing on data that emerged spontaneously on IEEs from a broader study on environment-driven rural community development in Birchenough Bridge and Honde Valley, this paper asks: how do these community experiences generate environmental ethics that can inform the decolonisation of development?

The two study areas which led to the findings for this paper are distinct rural communities located in the Manicaland Province of Zimbabwe. Birchenough Bridge is an arid area where participants reported being resettled during Zimbabwe's post-independence resettlement programme, and at first, the area was perceived as unliveable because of erratic rainfall patterns and harsh agricultural conditions. However, the passage of time allowed community members to reconnect with their natural environment and through Indigenous environmental research and Indigenous environmental innovation, they transformed their landscape into an opportunity of resilience and improved wellbeing. In contrast, Honde Valley is a tropical, fertile area where community members' engagement with the environment is guided by IEEs. The ethics inform environmentally ethical development practices which enhance both ecological wellbeing and human livelihoods. While their circumstances are contrary, the two communities demonstrate that Global South rural development must be grounded in IEEs, where harsh environments must be respected before they usher in their hidden potential, and fertile ecologies require ethical stewardship to sustain their generative power. Lessons are offered for eco-social policy and community development across similar contexts in the Global South. The subsequent sections present the background, methodology, findings, discussion and implications for environmental justice and SDGs, opportunities for heterogeneous eco-social policies, and conclusion.

Background

IEEs originate from the moral and epistemological foundations of Indigenous knowledge systems (IKSs), which have long governed and sustained relationships both among human beings and between humans and the natural environment. According to Rawat and Mishra (2021), the natural environment is a basic life support system which is an important part of one's existence, comprising living and non-living beings and covers natural, spiritual, social, economic and political environment, and all the living and non-living beings are interrelated to each other. According to McGregor (2004), among the Aboriginal peoples of Australia, IKSs exist in the form of traditional ecological knowledge which enhances acquisition of environmental knowledge. A study by Berkes (2009) which uses the terms Indigenous knowledge and traditional ecological knowledge interchangeably, shows that in both the Global North and South, accumulation of environmental wisdom among Indigenous peoples originates from generations of lived interaction with the natural environment. Berkes (2009) further demonstrates that such knowledge systems function as repositories of moral and practical environmental wisdom guiding communities in sustaining biodiversity, managing resources and maintaining environmental harmony. Further confirmation of the nexus between the natural environment and IKSs is provided by Tassell-Matamua (2025, pp.1–2) who defines IKSs as:

...a cumulative body of knowledges, practices and beliefs evolving through adaptive processes and handed down across generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment. To unpack that definition further, Indig-

enous knowledges are empirically based wisdom that have and continue to inform behaviours and practices that enable Indigenous peoples, where they are able, to sustain their immediate environments in non-exploitative and non-damaging ways, ensuring a natural equilibrium is maintained for generations to come. This body of knowledge that informs these sustainable practices, is itself informed by worldviews that acknowledge the inherent interconnectedness of all material and non-material things, across time, place and space, including of course humans and the wider ecosystem that we dwell within.

This definition positions the natural environment as constitutive of Indigenous knowledge systems, with environmental ethics as their moral expression. Arguably, Indigenous communities respect rights of nature because their identity is hinged on the natural environment's wellbeing, as Kelbessa (2002) states, culture and the natural environment are inseparable. This implies that the natural environment is an architect of Indigenous peoples' culture, and because people's cultural identity is shaped by nature, they treat it with reverence. This concurs with Obiora and Emeka (2015, p. 89) who state that "society constructs culture in their encounter with and effort to understand and relate with nature, to harness its resources for the nurture of the society." Earlier on, Kelbessa (2002) argues, certain Indian cultural beliefs regard the natural world as having certain human qualities and containing sacred objects that command respect or worship. The relational understanding of the natural environment aligns with more recent scholarship on IKSs as pathways for sustainable environmental practice, and a given example is by Paul and Paul (2025) who illustrate that Indian knowledge systems are dynamic, community-generated, and culture-specific systems that fuse intellectual, spiritual, and ecological dimensions to develop resilience and ecological sustainability. Cultural resilience supports ecological wellbeing, while ecological sustainability sustains cultural continuity. Another Indian study by Kumar and colleagues (2025), establishes that Indigenous communities developed a strong connection with their natural environments, and through the IKSs developed through the relationships with the environment, Indigenous communities undertake environmental conservation and sustainable resource management.

In Africa, IKSs act as a substitute for technoscience-based adaptation and climate mitigation mechanism, where people rely on IKSs as an information source to guide agricultural decisions, and predict weather changes (Nyahunda, 2024). A study by Noyoo (2007) shows that in the Southern African Development Community, IKSs have served as IEEs through the moral restraint which sustain environmental balance, community cooperation, adaptive ecological practices like controlled grazing, seasonal fishing and soil fertility management. According to the author, the given examples from Zimbabwean Shona culture's respect for nature, Zambia's Barotse water conservation ethics and Botswana's Tswana grazing oversight illustrate that IKSs offer context-specific frameworks for environmental stewardship and sustainable development in the Southern African region. Similarly, in the West African region, IEEs seem to have been applied through IKSs practices like rain-making rituals, conservation of sacred forests and climate forecasting using animal behaviour, and all these have been confirmed to have promoted environmental sustainability (Egeruoh-Adindu, 2022).

Even though IKSs offer alternatives to anthropocentric models of development, different scholars have acknowledged that they are not without limitations. One of the limitations is identified by McGregor and colleagues (2023) who in a study in Canada's Great Lakes region found out that IKSs are best shared, articulated and understood in Indigenous languages. Based on this statement, there might be a probability that meaning gets lost in translation of IKSs into foreign languages hence limiting their replicability in certain settings. McGregor and colleagues' study also found out that Indigenous peoples do not want their knowledge to be shared with outsiders. Similarly, in Africa, Indigenous knowledge holders have been criticised for their secretive ways of preserving IKSs, managing and sharing of knowledge, that threaten the existence of these knowledges (Mdhului et al., 2021). At a policy level, Indigenous knowledges continue to experience marginalisation from environment sensitive policies such as climate change policies (Gaza & Masere, 2025), thus limiting the contribution that can be made by IKSs in enhancing effectiveness of eco-social policies. This highlights the potential role of eco-social policy researchers in bridging the gap between locally grounded Indigenous knowledge systems and broader national or global policy frameworks.

Methodology

The development of this concept emerged from a collaborative Indigenous research methodology involving multiple knowledge holders in the data collection process. The lead researcher collaborated with two research assistants to support data collection and co-analysis, ensuring that the interpretation of findings remained grounded in locally embedded environmental knowledge and lived community experiences. Community members were engaged not only as participants, but also as co-researchers, shaping the study through their lived environmental experiences and environmental wisdom. The Indigenous epistemology of the study was further informed by the participation of the natural environment as a study participant through environmental observations, as both the lands of Birchenough Bridge and Honde Valley were understood as knowledge-holders. Purposive and relational sampling was used to recruit participants with lived experience of environmental practices and long-term residency in the two communities. The study initially aimed to engage nine participants in each site; however, in Birchenough Bridge Ward 33, participant recruitment expanded to 29 through referral processes consistent with relational Indigenous research approaches, where community members identified others with relevant knowledge of IIEs. In contrast, in Honde Valley (Buwu Village), recruitment reached the intended nine participants, after which no further referrals were forthcoming, and data collection was concluded. The difference in sample size therefore reflects the dynamics of relational sampling and knowledge networks within each community, rather than a concern with numerical balance. In line with Indigenous research paradigms (Chilisa, 2012; Smith, 2021), emphasis was placed on depth of relational knowledge and contextual richness rather than equal representation across sites.

Data were generated through seven observational learning site visits linked to field-based walking discussions, comprising four field walks in Birchenough Bridge

and three in Honde Valley. Each field walk, led by community members, traversed key ecological and livelihood spaces including forests, homesteads, the Dewure Irrigation Scheme, and riverine environments, enabling situated environmental observation and experiential learning. In addition, data were generated through Indigenous knowledge-based discussions, working discussions, *ngano* (storytelling), and broader environmental observations.

Environmental observations formed a critical component of data generation, capturing ecological conditions, landscape features, and sensory experiences that informed community practices and interpretations. These included observations of soil conditions, vegetation, water systems, and climatic variations across the contrasting ecological contexts, enabling analysis of how environmental factors shape lived environmental experiences and ethical practices.

Data analysis was conducted through a co-analysis process in which the researcher, research assistants, community co-researchers, and participants collaboratively interpreted insights generated from discussions, site visits, and environmental observations. Environmental cues were also considered as part of the analytical process, contributing to the identification of recurring patterns and themes and leading to the development of culturally resonant, ecologically grounded, and methodologically rigorous findings.

The selection of Birchenough Bridge and Honde Valley was intentional to capture contrasting ecological contexts: arid and resource-constrained versus fertile and resource-abundant environments, thereby enabling a comparative understanding of how IEEs are enacted across different ecological conditions.

Findings: Indigenous Environmental Ethics as a Framework for Decolonising Development

The findings draw on lived rural environmental experiences to illustrate the natural environment's moral agency in building and shaping human behaviour, enforcing boundaries and sustaining communal harmony. Rivers, animals, soils, trees and seasons enact ethical relationships with rural community members, bringing to the fore, the rural morality embedded in the natural environment. Environmental observations further revealed how ecological conditions, including soil, water systems, and landscape dynamics, actively shaped community practices and contributed to the generation of environmental ethics. In both communities, there are also instances whereby IEEs are violated.

Theme 1: Relational Reciprocity and Environmental Moral Agency

This theme illuminates the moral agency of the natural environment as perceived by Indigenous communities in Birchenough Bridge and Honde Valley. According to submissions from participants, the environment is not an inanimate object but an ethical being that protects, communicates, and coexists with humans. This relational worldview underscores mutual accountability and the principle that the wellbeing of people and ecology are interdependent. The following are some of the statements that were expressed by participants.

Birchenough Bridge Participant 1: *“Trees help shield us from the wind and provide us with oxygen.”*

Birchenough Bridge Participant 2: *“The environment plays a protective role for people; for instance, trees act as a barrier against strong winds.”*

Birchenough Bridge Participant 3: *“....So, it means that when we protect the environment, the environment returns the favour by protecting us, and if we are left in the open, we won't be safe.”*

Birchenough Bridge Participant 4: *“I always tell my children that you are not allowed to cut these trees. If you cut down the tree, it will report you... the children know that you do not cut father's trees because the cut trees will report them to me.”*

Birchenough Bridge Participant 5: *“According to our traditional regulations, we are not required to shake down Baobabs (kukuzha mauyu). We are required to collect only fruits that would have fallen naturally, not the ones still hanging on the tree.”*

Honde Valley Participant 1: *“River water has rights because everyone survives on water... Pungwe River gives us water and electricity.”*

Honde Valley Participant 2: *“We are required to keep our environment clean. Before we lay out our agricultural produce for sale, we start by sweeping away any dirt from our spaces.”*

Honde Valley Participant 3: *“We are encouraged by our traditional leadership to plant Indigenous trees such as water berry tree along the riverbanks. Also, to preserve our wetlands, we are not allowed to grow crops within wetlands.”*

These statements reflect a moralised ecology in which environmental elements are treated as kin. By recognising the moral agency of trees and rivers, communities assert the environment's right to ethical consideration and protection.

Theme 2: Nature as a Moral Regulator

During field visits to Honde Valley, while the main researcher and researchers 5 and 6 were swimming in the Pungwe River, a group of local boys approached and instructed us to leave the spot where we were swimming. One of them said:

I can see you are new in this community. Any strangers who swim at this spot get killed. The river does not allow non-native members to swim at that spot. Please, for your own safety, move to that other area.

This encounter shows the river is understood as a moral and spiritual authority. The warning expressed the community's held belief that the river enforces moral and spatial boundaries, particularly between insiders and outsiders. Such experiences reflect the living nature of IEEs, in which the environment itself participates in moral regulation and community protection. This further demonstrates how the environment communicates moral boundaries through lived experience, reinforcing its role as an active participant in ethical regulation.

Theme 3: Ethics of Ecological Balance and Climatic Restraint

Participants revealed inherent environmental wisdom that regulates human activities according to environmentally set limits. Their responses highlight ethics of restraint, correction, and regeneration.

Birchenough Bridge Participant 7: *“We had a challenge when we were debarking the trees and decided to stop when we noticed we were destroying the environment.”*

Honde Valley Participant 2: *“We usually do our farming far from the river, about 15 m ... so that the river itself won't be affected.”*

Birchenough Bridge Participant 8: *“We religiously apply organic manure to our crops within Dewure Irrigation Scheme. We obtain high yields because of cattle manure or compost matter. Organic fertilizers improve soil structure.”*

Birchenough Bridge Participant 9: *“Stone paving and stone bunds prevent soil erosion on sloping environments, so these stone pavements and man-made stone bunds bind soils together. In the event of cyclones, our soils are not washed away.”*

Mushati Village Head (Birchenough Bridge): *“We have experienced five years of poor rains; Baobab Trees are not fruiting; our cattle are dying, after community members shunned rainmaking ceremonies to embrace Christianity.”*

Birchenough Bridge Participant 10: *“Drought reduces grass; many cattle died for lack of feed. When rain comes, it sometimes destroys houses with wind and floods.”*

These accounts reflect a climate ethic grounded in observation and environmental feedback.

Theme 4: Indigenous Environmental Governance and Intergenerational Accountability

A recurring theme across both communities was custodianship of the environment through moral governance. Environmental management operates through traditional leadership, rituals, and Indigenous education, ensuring that environmental knowledge and responsibility are transmitted across generations.

Birchenough Bridge Participant 6: *“Cutting trees near people's compounds is not allowed. You are only allowed to cut a dry tree, not one with green leaves. You also need a letter from the Village Head to be permitted to cut down Indigenous trees.”*

Birchenough Bridge Participant 11: *“Traditional leadership doesn't allow people to cut trees without permission. You must apply for the Village Head's permission before cutting, and the Village Head instructs you to prune only the branches of mature trees. Felling the whole tree is not allowed.”*

Birchenough Bridge Participant 12: *“During the rainy season, we are not allowed to do brick laying... because... we will be chasing away rains.”*

Birchenough Bridge Participant 13: *“When we go to the fields, we go with our children and we tell them... we have to pay for these fields to the council... if we don't, they can take away the field.”*

Honde Valley Participant 3: *“My father was able to plant trees, even a mango tree ... so he would plant a tree that would help him get a livelihood in the future.”*

Honde Valley Participant 4: *“I always tell my grandchildren ngano (folktales) and these folktales contain environmental lessons which instruct young children about*

the dangers of greed and environmental recklessness. At the end of every folktale, I remind my grandchildren not to start veld fires because it destroys the environment.”

These examples reveal that Indigenous governance integrates moral and ecological dimensions. Village Heads, elders, and ancestral laws act as moral institutions that regulate environmental use. Teaching children through stories and rituals ensures continuity of ethical responsibility.

Theme 5: Ethical Livelihoods and the Moral Economy of Sustainability

This theme demonstrates that communities pursue livelihoods as ethical engagements with the land. Environmental knowledge informs innovation in pest control, apiculture, and crop production, balancing economic needs with eco-moral responsibility.

Honde Valley Participant 5: *“These mujerenje trees were imported from Kenya... they are used as a pest control measure. Certain pests avoid areas with mijerenje trees.”*

Honde Valley Participant 6: *“These are bee hives. I surround the fields with bee-hives because bees are important in agroforestry as they support cross pollination. They carry pollen from one plant to another, hence improving our yields.”*

Honde Valley Participant 6: *“We reduce deforestation by planting exotic trees such as lychee for agribusiness. Instead of cutting our Indigenous trees for firewood, we trim the branches of these exotic trees in our fields for our energy needs. This preserves the life of our Indigenous trees.”*

Honde Valley Participant 7: *“Bananas can pay school fees from ECD to university and help people build houses; if you farm properly and apply inputs in time.”*

Honde Valley Participant 8: *“We grow a lot of bananas in this area. Most of them are rotting because there is no market.”*

During our fieldwork in Honde Valley, we observed that most plants had nests of quelea birds, implying that the growing of bananas helped Indigenous species to secure a habitat. This observation illustrates how the natural environment contributed to knowledge generation, with ecological conditions providing empirical insights that complemented participant narratives. It was also evident that some of the bird species were surviving on ripe unharvested bananas. This observation and the expressions from participants linked prosperity to ethical stewardship. Farming and innovation are framed as moral obligations to sustain nature. However, global market exclusion undermines these ethical enterprises, exposing inequities that marginalize Indigenous economies. Recognising Indigenous eco-enterprise as an ethical economic model is vital for achieving sustainable development that restores dignity to both people and the environment. These practices also illustrate how human agency contributes to restoring and enhancing ecological resilience, including through the sharing of seeds, species, and knowledge across contexts, as well as efforts to report environmental degradation.

Theme 6: Ecological Violations and the Erosion of Indigenous Moral Order

The final theme reflects the growing erosion of Indigenous ecological ethics as communities face modernization, religious influence, and economic exploitation. In

Honde Valley, the expansion of banana plantations has displaced native trees, diminishing biodiversity and sacred ecological spaces. Participants also lamented that people no longer plant trees, signalling the fading of intergenerational responsibility.

Honde Valley Participant 9: *“Land is being cleared to plant more bananas, hence leading to the displacement of Indigenous trees. It is only now that people realize that they have created a disaster. They need firewood, but banana plants cannot be used for firewood.”*

Birchenough Bridge Participant 12: *“Nowadays, people have departed from the traditions, they no longer respect the ancestors and sacred landscapes as was done in the past.”*

Birchenough Bridge Participant 13: *“There are some mountains which were not to be occupied before... but nowadays, our traditional leaders are now settling people on these mountains, with some people establishing homes on mountain tops.”*

Mushati Village Head: *“People are no longer appeasing ancestors. Tradition is fading because of the church and civilization. As such, we are experiencing more droughts.”*

Birchenough Bridge Participant 14: *“Village Heads... are just settling people everywhere... there are no designated areas for farming... no areas for cattle grazing....”*

Birchenough Bridge Participant 16: *“What affects our environment is that when someone cuts a tree and burns that tree, he would have destroyed that tree, and it won't shoot again.”*

These testimonies show that environmental degradation mirrors eco-moral decay. The replacement of forests with banana plantations in Honde Valley illustrates the commodification of land, while declining tree planting further reveals a breakdown in the ethic of reciprocity between generations and the environment. The erosion of Indigenous ethics thus represents both a moral and ecological crisis, one that demands a return to Indigenous moral frameworks for sustainability.

Discussion

The findings from Birchenough Bridge and Honde Valley communities reveal that IEEs comprise a moral framework that can be adopted in decolonising human activities by redefining coexistence between humans and the natural environment. These findings challenge dominant anthropocentric development models that marginalise environmental wellbeing (Melber et al., 2023), while environmental wellbeing remains marginalised in the process of economic growth. That capitalistic model sustains what Ritskes (2012) terms environmental colonialism, whereby resource extraction, carbon markets, and toxic trade-offs perpetuate global crises such as climate change and biodiversity loss (Seifert et al., 2025). In response, environmental ethics, as Kohn et al. (2018) emphasise, offer a moral corrective approach that restores harmony between humans and ecology. These insights were informed not only by participant narratives but also by environmental observations, where ecological conditions acted as co-constitutive elements in shaping the interpretation of environmental ethics. These ethics, defined by Palmer and colleagues (2014) as inquiries

into how humans ought to relate to the non-human world, seek to transcend Western exceptionalism that Hourdequin (2021) identifies as the root cause of environmental injustice.

From Anthropocentrism to Relational Ethics

The study's findings affirm that IEEs are grounded in relational reciprocity, where the natural environment is recognised as a living moral agent rather than a passive resource for human extractivism. This aligns with Grim's (1997) concept of a sacred human-environment relationship, and with Kelbessa's (2015) claim that Indigenous ethics are crucial to human and ecological wellbeing. The restraint shown by Birchenough Bridge participants in forbidding tree felling and restraining from wetland farming in Honde Valley demonstrates environmental reverence emerging from reciprocity with nature. Such acts constitute Ubuntu and *ukama* ethical principles of respect, coexistence, and cooperation (Ngubane & Makua, 2021; Chigangaidze, 2023) which consider the natural environment as kin to humans. In this case, relational ethics comprise a decolonial alternative to the exploitative approach of Western development, and echo Chibvongodze's (2016) view that African spirituality situates humans as being because of others, including the natural environment. Relational ethics also resonate with broader ethical frameworks recognising the intrinsic value of the natural environment, such as Pope Francis' *Laudato Si'* (2015), which calls for moral responsibility and care for the Earth as a shared home. On the other hand, the findings also reveal that failure to observe environmentally set moral boundaries results in environmental destruction through droughts, and loss of biodiversity, in a way aligning with environmentally unethical extractive projects exposed by Kativu (2021) and the human-induced degradations outlined by Nguyen et al. (2023). Adherence to IEEs protects communities from environmental harm.

The Environment as Moral Regulator and Teacher

In Honde Valley, the belief that Pungwe River forbids outsiders from swimming in its sacred zone exemplifies how the environment enforces ethical conduct. This moral regulation corresponds with Taringa's (2006) and Machoko's (2013) studies of African environmental religion, where water spirits (*njuzu*) serve as custodians of morality and balance. The spiritual power vested in rivers mirrors Risko's (2018) findings from India, where rivers such as the Ganga are worshipped for their life-giving purity, and underscores Youatt's (2017) call to extend personhood and rights to non-human entities. Such recognition positions the environment as both teacher and regulator, reinforcing Eyong's (2007) view that Indigenous knowledge evolves through lived experience and adaptive practice.

Additionally, the findings confirm that IEEs are expressions of broader IKSs, defined by Rawat and Mishra (2021) and Tassell-Matamua (2025) as cumulative bodies of ecological wisdom passed through generations. McGregor (2004) and Berkes (2009) explain that such knowledge functions as both empirical and moral science, ensuring biodiversity and balance. When Birchenough Bridge villagers interpret droughts as punishment for abandoning rainmaking rituals, they demonstrate the

feedback ethic embedded in IKSs; an environment-driven moral accountability. This aligns with Gone's (2019) notion of knowledge generated through observation and relational experience, and with Knauß's (2018) call for recognising the rights of nature as essential to sustainable justice.

Decolonising Knowledge and Development

The findings further advance the argument that decolonising development requires decolonising knowledge, particularly by restoring the natural environment's epistemic agency. As Chilisa (2012) and Twance (2019) suggest, Indigenous epistemologies decentralise human authority, recognising nature as a co-creator of wisdom. When community members interpret environmental signs through folktales such as *Tsuro na Gudo*, they are not engaging in mere storytelling but in moral education where the land is the classroom and nature is the teacher. This mirrors the role of *ngano* (folktales), proverbs, and taboos in transmitting environmental ethics, as Chibvongodze (2016) and Sinthumule (2023) observe. The process is in line with McGregor and colleagues' (2023) assertion that IKSs are best communicated in Indigenous languages, a factor which reinforces the need for cultural authenticity and resists epistemic distortion through translation.

In the moral framework of IEEs, development becomes a reciprocal exchange of care rather than an extractive pursuit. Paul and Paul (2025) and Kumar and colleagues (2025) show that IKSs in India integrate spiritual and ecological dimensions to promote resilience and sustainable livelihoods; similarly, Noyoo (2007) and Nyahunda (2024) demonstrate that Southern African communities use IKS-based moral restraint to sustain soil fertility, regulate grazing, and preserve biodiversity. Thus, the IEEs identified in Zimbabwe's Birchenough Bridge and Honde Valley communities belong to a wider Global South ethical system which reinforces that decolonised development must start with the moral partnership between humans and the natural environment.

The Moral Economy of Sustainability

The Indigenous environmental practices described by participants such as applying for permission before cutting trees, using organic fertilizers, constructing stone pavements, and constructing contour ridges demonstrate that at rural community level, economic activities are inherently environmentally ethical. This supports Kelbessa (2002)'s explanation that moral life and sustainability are inseparable. Participants' agricultural practices also embody Simpson's (2017) and Williams' (2021) notion that IKSs regenerate species, climate, and ancestral knowledge. When analysed through the lens of Melber and colleagues (2023), this ethical approach to livelihoods defies the GDP-oriented model of growth and instead redefines prosperity as ecological balance and moral restraint. The various practices of IEEs align with Sustainable Development Goals 15 and 16, illustrating that environmental justice and partnership with nature are achievable through Indigenous environmentally ethical economies.

Limitations of Indigenous Environmental Ethics

Despite their significance, IEEs are characterised by limitations. Mdhuli and colleagues (2021) and McGregor and colleagues (2023), highlight that Indigenous knowledge is sometimes withheld, mistranslated, or marginalised in environmental policy (Gaza & Masere, 2025). The findings confirm these vulnerabilities; for example, in Birchenough Bridge, Village Heads permitting settlements on sacred mountains reveal moral compromises driven by political or economic pressures. Such violations, as York (2020) suggests, erode spiritual foundations and disrupt environmental balance. Likewise, Honde Valley's shift from Indigenous trees to banana and lychee plantations exemplifies environmental colonialism where foreign species displace Indigenous ecosystems and cultural identity (Cariou, 2018). These erosions underline Kelbessa's (2015) caution that IEEs are not panaceas, yet they remain moral compasses that can be strengthened through inclusive eco-social policies. If colonial enclave economies and neo-liberal development models persist, rural communities will continue to face such pressures. However, linking local IEE practices with global decolonial movements such as the Rights of Nature frameworks in Ecuador and New Zealand (Knauß, 2018) and Buen Vivir-inspired alternatives in Latin America (Richter, 2025) demonstrates how the Zimbabwean examples can both inform and be reinforced by transnational efforts against neo-liberal economic arrangements.

The paper's findings affirm that IEEs redefine development as a moral relationship rather than material achievement. Grounded in reciprocity, restraint, and reverence, these ethics transform the environment from a backdrop into a moral subject, a partner, and a co-researcher. They operationalise Palmer and colleagues' (2014) vision of environmental ethics as prescriptive moral guidance and exemplify Hourdequin's (2021) call to overcome anthropocentrism. By placing environmental wellbeing at the heart of human progress, IEEs provide a decolonial framework for sustainable development which guides both community practice and Global South eco-social policies towards justice for humans and non-humans.

Implications for Environmental Justice and SDGs

For rural communities to attain peace, justice and strong institutions envisioned in SDG 16, it should start with recognising that the natural environment is an ethical agent as evidenced in the rural ecologies of Birchenough Bridge and Honde Valley. As Schlosberg and colleagues (2025) argue, environmental justice demands inclusion of ecological justice in governance. Arguably, current human suffering can be attributed to the colonial world's failure to preserve peace with the natural environment. In the environmentally colonial world, the natural environment is disrespected by being treated as a colonised entity and pillaged for its resources without reciprocal care. Environmental degradation reflects fractured human-nature relations, often framed as 'natural disasters.' The result is that the violation of environmental ethics and rights manifests in what the colonial world calls natural disasters, which are in fact signs of a fractured relationship between people and land (Dudzai & Mabvurira, 2024). As the colonial human being fails to maintain peace with nature, the environmental

consequences can further escalate into intra-human conflicts as environmentally disadvantaged groups seek to redress suffering.

Restoring peace requires re-establishing ethical relationships with the environment. The communities not only restore local human-environment relations but also engage with and strengthen their practices through alignment with broader decolonial movements across the Global South and beyond, such as *Buen Vivir* (Richter, 2025) and Rights of Nature frameworks in Ecuador and New Zealand (Knauß, 2018). Peace with the environment requires Indigenous environmental research in rural Global South development. Embedding this research before external development will provide room for technocrats to listen to the land, through lived environmental experiences, cultural wisdom and ecological ethics of rural communities. This shift broadens environmental governance while enacting decolonial environmental justice which ensures development aligned with preservation of environmental integrity and dignity. It must therefore be mandatory for all institutions seeking development to understand and uphold the ethical frameworks of the land in rural communities.

On their own, rural communities of Birchenough Bridge and Honde Valley demonstrate that rural areas are strong institutions because of ecological wisdom and eco-cultural ethics. The communities have knowledge systems and environmentally ethical practices which enable them to coexist with their environments by partnering with nature to govern sacred spaces, ethical management of wildlife, interpretation of environmental signals, and intergenerational transmission of IEEs. The Global South can therefore take a cue on how strength of institutions is attained through understanding and respect of environmental decisions. For global and Global South institutions to gain strength, they must learn from rural communities that peace, justice and sustainable development are preserved and amplified through IEEs.

A current weakness of the United Nations' SDG 17 (partnerships for the goals) is the colonial imagination of advancing collaboration among governments, donor organisations and corporate entities, while partnership with the environment itself is not mentioned. However, evidence from Birchenough Bridge and Honde Valley shows rural communities can attain a good quality of life from establishing eco-relational partnerships with soils, rivers, trees, stones, seasons, wildlife and land spirits. While this paper does not propose abandoning the SDGs, it offers heterogeneous eco-social policies grounded in IEEs as a decolonial alternative to the current anthropocentric implementation of the SDGs, particularly Goals 16 and 17. The eco-relationships guided by environmental ethical codes display equal partnerships and ethical dialogue between nature and community members. We therefore argue that comprehensive attainment of SDG 17 in Global South areas should begin with listening to the land through the knowledge of its custodians. That way, development activities like agriculture can become decolonial as they move from intervention to collaboration with the environment, and from theoretical sustainability to environmental partnerships in practice. For true partnership in pursuit of sustainable development to be achieved in the Global South, the environment should be recognised as a co-developer, and rural communities as Indigenous environmental researchers and interpreters of environmental development messages.

Achievement of all other 15 Sustainable Development Goals becomes possible when the Global South and the rest of the world become bound by heterogeneous

IEEs, which oblige institutions and governments to consider nature as a rightful development partner. For example, a state of no poverty (SDG 1) is reachable when the environment is treated with dignity and respect. Respect of environmental decisions and shunning of environmental colonialism which demands the growth of alien or exotic crops and trees may help the Global South to attain SDG 2 on zero hunger. It is also possible to achieve good health for the population if governments and other stakeholders safeguard rural communities' Indigenous medical knowledges and respecting the health of the environment by prohibiting pollution, hence guaranteeing achievement of SDG 3 (good health and wellbeing).

Opportunities for Heterogeneous Eco-Social Policies

Building on the argument by Kelbessa () and Nyahunda (2024), eco-social policies need to integrate Indigenous moral principles with scientific insights to produce heterogeneous frameworks responsive to local ecologies, and to deal with some of the current limitations of IEEs. To help Global South countries realise the concept of establishing peace, justice and strong institutions while maintaining partnerships with rural environments and their communities, there is need for governments to formulate heterogeneous eco-social policies. In this paper, we define eco-social policies as context-responsive frameworks formulated by integrating IEEs, and principles of social justice to inform development initiatives which fulfil ecological integrity and dignity and human wellbeing.

An integrated pathway to formulation of eco-social policies is illustrated in Fig. 1. As shown in the flowchart, eco-social policy formulation is founded in the rural environment which is the context, co-educator and moral agent informing rural communities' IEEs. Eco-social policy researchers engage in reciprocal relationships with rural communities by learning from their ecological insights whilst also collaborating with rural communities in introducing environmentally ethical scientific tools that can enhance sustainability. The knowledge from the rural environment, rural communities and eco-social policy researchers assists in formulating heterogeneous eco-social policies that guide programme interventions for each community. The entwinement between three components of eco-social policy formulation (rural environment, rural communities, and eco-social policy researchers) ensures that policy frameworks are ecologically dignified and environmentally just. Ultimately, the process leads to sustainable development which helps fulfil SDGs 16 and 17. Feedback from successful eco-informed sustainable development feeds back into the rural communities and rural environment through the eco-policy researchers.

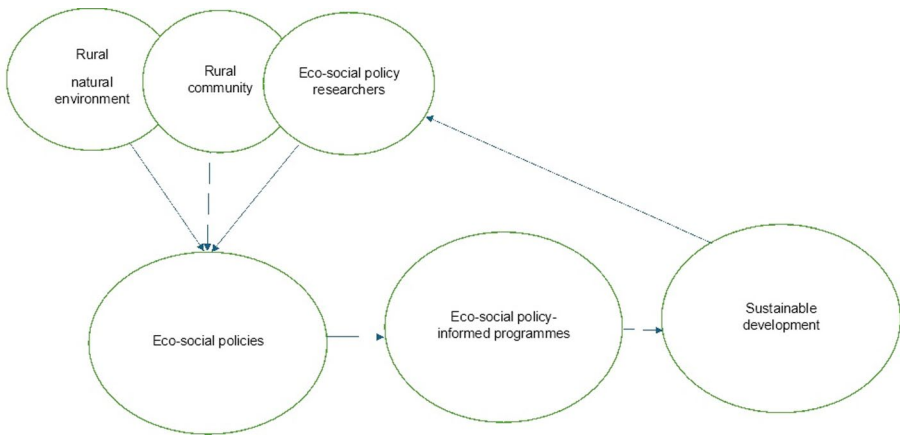


Fig. 1 Flowchart for eco-social policy formulation pathways

Conclusion

This paper utilises IEEs from two Zimbabwean rural communities to develop a framework which can help Global South countries to achieve SDGs 16 and 17 through maintaining peace, environmental justice and collaborating with the natural environment. Engaging in reciprocal partnerships with the natural environment decolonises development by producing place-based frameworks in the form of heterogeneous eco-social policies that recognise the natural environment’s moral authority, rights and wisdom. It is thus argued that the Global South and international institutions should listen to the natural environment and let the environment decide how development should be. In this process, rural communities act as Indigenous environmental researchers and interpreters of environmental wisdom that informs eco-social policy. Eco-social policy researchers play a pivotal role by recognising the agency of both local communities and the natural environment, collaborating reciprocally with them, and linking these efforts to other communities and institutions engaged in the same decolonial struggles across the Global South and beyond (e.g., *Buen Vivir* and Rights of Nature frameworks).

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Declarations

Conflicts of interest The authors declare no known conflicts of interest.

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Authors and Affiliations

Cornelius Dudzai¹  · Rugare Mugumbate^{1,2} · Lynne Keevers³ ·
Noel G. Muridzo⁴ · John Chiwanza Magocha⁵ · Anesu Aggrey Matanga⁶

✉ Cornelius Dudzai
cd165@uowmail.edu.au

Rugare Mugumbate
rugare_mugumbate@uow.edu.au

Lynne Keevers
lynne.keevers@canberra.edu.au

Noel G. Muridzo
muridzon@staff.msu.ac.zw

John Chiwanza Magocha
joemagocha112@gmail.com

Anesu Aggrey Matanga
matangaa@staff.msu.ac.zw

¹ School of Social Sciences, University of Wollongong, Wollongong, Australia

² Senior Research Associate, University of Johannesburg, Johannesburg, South Africa

³ Social Work and Discipline Lead Social Work, School of Health Sciences, University of

Canberra, Canberra, Australia

⁴ School of Social Work, Midlands State University, Harare,, Zimbabwe

⁵ Department of Social Work, Africa University, Mutare, Zimbabwe

⁶ Department of Social Work, Midlands State University, Harare, Zimbabwe