Ecocentrism and Rights of Nature: Utilising Artificial Intelligence for Climate, Biodiversity and Environmental Impact Assessments

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Kariuki Muigua*

Abstract

This paper examines how Artificial Intelligence (AI) can be used to foster ecocentrism and the rights of nature. The paper observes that AI provides innovative solutions towards achieving harmony with nature for Sustainable Development. It discusses specific ways through which AI can be utilised towards recognising and respecting nature for its intrinsic value. Due to its benefits, the paper posits that it is imperative to harness AI in order to safeguard the rights of nature through ecocentrism. In particular, it examines how AI can be utilised for climate, biodiversity and Environmental Impact Assessments (EIAs) in order to foster ecocentrism and the rights of nature.

1.0 Introduction

Recognizing and safeguarding the rights of nature is a vital global agenda in the pursuit of sustainability. According to this ideal, nature has an independent and inalienable right to exist and flourish[1]. It has been observed that the idea of rights of nature means recognizing that ecosystems and natural communities are not merely property that can be owned and exploited by human beings[2]. At the heart of this concept is the recognition that nature and our ecosystems – including trees, plants, oceans, animals, rivers, lakes and mountains – have rights just as human beings have rights[3]. The idea of rights of nature has been hailed as an innovative approach which challenges the traditional notion of nature as a mere resource for human consumption and instead recognizes it as a living entity with inherent rights[4]. This concept is vital in fostering legal recognition and protection for ecosystems, and other natural entities such as rivers and forests, through a similar approach to human rights[5].

Fostering the rights of nature is therefore a key approach that aims to restore the intrinsic connection between humanity and the environment[6]. This idea involves the holistic recognition that all life and all ecosystems on our planet are deeply intertwined and should thus be respected and protected[7]. In particular, ecocentrism provides an effective pathway towards upholding the rights of nature. Ecocentrism posits that everything in the natural world has its own intrinsic value and deserves moral consideration[8]. It has been observed that ecocentrism emphasizes the intrinsic value of nature and places a moral

* PhD in Law (Nrb),SC, FCIArb (Chartered Arbitrator),OGW, LL. B (Hons) Nrb, LL.M (Environmental Law) Nrb; Dip. In Law (KSL); FCPS (K); Dip. in Arbitration (UK); MKIM; Mediator; Consultant: Lead expert EIA/EA NEMA; BSI ISO/IEC 27001:2005 ISMS Lead Auditor/ Implementer; ESG Consultant; Advocate of the High Court of Kenya; Professor of Environmental Law and Conflict Management at the University of Nairobi, Faculty of Law; Member of the Permanent Court of Arbitration (PCA) [May, 2026].

[1] International Joint Commission., 'Rights of Nature' Available at https://www.ijc.org/system/files/commentfiles/2019-10-Nicolette%20Slagle/FAQ.pdf (Accessed on 07/05/2026)

[2] Ibid

[3] Global Alliance for the Rights of Nature., 'What are the Rights of Nature?' Available at https://www.garn.org/rights-of-nature/ (Accessed on 07/05/2026)

[4] Peluso. C., 'What are the Rights of Nature?' Available at https://www.populationmedia.org/the-latest/what-are-the-rights-of-nature (Accessed on 07/05/2026)

[5] Ibid

[6] Ibid

[7] Global Alliance for the Rights of Nature., 'What are the Rights of Nature?' Op Cit

[8] Proctor. J. D., 'Nature, Concepts of: Environmental and Ecological' Available at https://www.sciencedirect.com/science/article/abs/pii/B0080430767041280 (Accessed on 07/05/2026)

obligation on humanity to respect and conserve the environment for the benefit of present and future generations[9]. This concept focuses on ecological integrity of the Earth's ecosystems, wild places, and natural processes upon which all beings are completely dependent[10].

Embracing ecocentrism is therefore necessary towards safeguarding the rights of nature. This concept is anchored in the intrinsic (inherent) value in all of nature[11]. Ecocentrsim has been identified as the broadest world view since it recognises and advocates respect for environmental systems as wholes, and their abiotic aspects, beyond world views that only focus on respect for living species including humans, animals and plants[12]. It has been argued that since nature is the source of life on the planet, ecocentrism requires human beings to prioritise the health of the planet over individual needs[13]. By recognising humanity's duties towards nature, ecocentrism is central in efforts to solve environmental challenges facing the planet including climate change, biodiversity loss, environmental degradation and pollution towards safeguarding the rights of nature[14].

Fostering ecocentrism is thus a practical approach towards recognizing and safeguarding the rights of nature. However, this ideal is yet to be achieved since nature is usually subjected to human exploitation and misuse resulting in some of the environmental challenges being experienced throughout the world including environmental degradation, biodiversity loss, pollution, and climate change[15]. It has been observed that anthropocentrism is the dominant world view projecting humanity as the primary agent of value and moral reasoning over the natural world[16]. This world view has seen the natural world being viewed primarily as a resource for human benefit, a situation that has contributed to and worsened environmental crises including the triple planetary crisis of climate change, biodiversity loss and pollution[17]. In light of these challenges, it is imperative to foster ecocentrism towards protecting the rights of nature for true Sustainable Development.

This paper examines how Artificial Intelligence (AI) can be used to foster ecocentrism and the rights of nature. The paper observes that AI provides innovative solutions towards achieving harmony with nature for Sustainable Development. It discusses specific ways through which AI can be utilised towards recognising and respecting nature for its intrinsic value. Due to its benefits, the paper posits that it is imperative to harness AI in order to safeguard the rights of nature through ecocentrism. In particular, it

[9] Ibid
[10] What is Ecocentrism? (A Definition)., Available at https://www.ecologicalcitizen.net/what-is.php?t=ecocentrism-definition (Accessed on 07/05/2026)
[11] Paul. C et al., 'Why ecocentrism is the key pathway to sustainability' Available at https://mahb.stanford.edu/blog/statement-ecocentrism/ (Accessed on 07/05/2026)
[12] Ibid
[13] Gray. J., Whyte. I., & Curry. P., 'Ecocentrism: What it means and what it implies' Available at https://www.ecologicalcitizen.net/pdfs/v01n2-02.pdf (Accessed on 07/05/2026)
[14] Open Global Rights., 'Ecocentrism: A Refusal to Compromise on Ecological Integrity' Available at https://www.openglobalrights.org/ecocentrism-refusal-to-compromise-ecological-integrity/ (Accessed on 07/05/2026)
[15] International Joint Commission., 'Rights of Nature' Op Cit
[16] Frantz. P., Rego. F., & Barbas. S., 'Ecocentrism vs. Anthropocentrism: To the Core of the Dilemma to Overcome It' Available at https://pmc.ncbi.nlm.nih.gov/articles/PMC12152000/ (Accessed on 07/05/2026)
[17] Ibid

examines how AI can be utilised for climate, biodiversity and Environmental Impact Assessments (EIAs) in order to foster ecocentrism and the rights of nature.

2.0 Role of Artificial Intelligence in Fostering Ecocentrism and Rights of Nature

With the world facing mounting environmental crises, AI provides vital solutions towards safeguarding the rights of nature. For example, it has been observed that AI is improving environmental governance by strengthening climate action, biodiversity conservation, sustainable waste management, and ecosystem monitoring thus protecting nature[18]. Through AI and other modern technologies, it is possible to enhance environmental data collection, monitoring and policy enforcement thus giving a voice to ecosystems including forests, rivers and lakes through stronger protection[19]. It has been observed that through data-driven and actionable evidence, AI is promoting the rights of nature by enabling humanity to better understand the needs and perspectives of other species[20]. AI tools are being utilised to track and monitor endangered species and critical habitats and ecosystems thus amplifying the needs and interests of nature and bolstering conservation efforts[21].

Harnessing AI is therefore important towards promoting ecocentrism and the rights of nature. It has been observed that through AI and other modern technologies, it is possible to reimagine and strengthen our relationship with the natural world. By collecting, analyzing and interpreting vast amounts of environmental data, AI and technology expands and reawakens our natural consciousness by enabling humanity to anticipate environmental threats and drive innovation towards protecting nature[22]. AI is therefore crucial in fostering ecocentrism since it enables humanity to sense, understand, value and connect with nature thus fostering prosperity for all species and ecosystems and safeguarding the planet for the benefit of present and future generations[23]. According to the United Nations Environment Programme (UNEP), AI is a valuable technology in monitoring the environment, and helping governments, businesses and individuals make more planet-friendly choices[24]. UNEP further notes that AI can enable the world to effectively tackle environmental threats including the triple planetary crisis of climate change, nature and biodiversity loss, and pollution and waste towards safeguarding nature[25].

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[18] United Nations Educational, Scientific and Cultural Organization., 'AI for Environment and Ecosystems Toolkit for Policymakers' Available at https://www.unesco.org/ethics-ai/en/node/288#:~:text=While%20AI%20can%20support%20climate,dynamics%20is%20no%20longer%20optional. (Accessed on 08/05/2026)

[19] The Role of Technology in Environmental Governance., Available at https://www.igi-global.com/chapter/the-role-of-technology-in-environmental-governance/363225 (Accessed on 08/05/2026)

[20] AI, Decoding Animal Communications, and Rights for Nature., Available at https://accelerator.chathamhouse.org/article/ai-interpreting-meaning-and-rights-for-nature (Accessed on 08/05/2026)

[21] Ibid

[22] When Nature Meets AI: Reimagining Our Relationship with the Natural World for the Common Good., Available at https://medium.com/iipp-mpa-blog/when-nature-meets-ai-reimagining-our-relationship-with-the-natural-world-for-the-common-good-b63016444eeb (Accessed on 08/05/2026)

[23] Ibid

[24] United Nations Environment Programme., 'AI has an environmental problem. Here's what the world can do about that' Available at https://www.unep.org/news-and-stories/story/ai-has-environmental-problem-heres-what-world-can-do-about (Accessed on 08/05/2026)

[25] Ibid

Harnessing AI is therefore important in promoting ecocentrism and rights of nature. However, AI presents several risks and challenges that can undermine rights of nature. For example, it has been observed that AI models can sometimes produce incorrect predictions due to flaws or limited data thus leading to potentially coherent but incorrect responses[26]. For instance, use of AI tools in biodiversity monitoring has often resulted in species being mislabeled thus undermining conservation efforts[27]. Further, it has been observed that bias towards certain species, ecosystems or regions can undermine sound conservation efforts[28]. For example, the use of AI tools in conservation efforts in the Global South is associated with bias and discrimination against indigenous knowledge systems undermining inclusive, participatory and culturally-sensitive approaches that are key in fostering the rights of nature[29]. In addition, it has been pointed out that AI systems and data centres rely on vast amounts of energy and water for cooling while also generating large quantities of electronic waste thus creating environmental concerns and worsening threats to nature[30].

From the foregoing, it is evident that while AI can foster ecocentrism and rights of nature is appropriately harnessed, its risks and challenges can also undermine sound environmental governance. It is therefore necessary to effectively harness AI while mitigating its risks and challenges in order to promote ecocentrism and rights of nature for sustainability.

3.0 Utilising Artificial Intelligence for Climate, Biodiversity and Environmental Impact Assessments

AI provides valuable solutions towards promoting ecocentrism and rights of nature. AI can be harnessed to rethink how humanity interacts with nature through tools that monitor, discern and predict the needs of species and ecosystems[31]. It has been observed that through AI, it is possible to value nature thus strengthening efforts to grant legal rights and representation to ecosystems and non-human species[32]. However, in light of risks and challenges, it is imperative to effectively and appropriately harness AI in order to foster ecocentrism and rights of nature.

In particular, harnessing AI can bolster the global response to climate change towards upholding the rights of nature. It has been observed that through its recognition of the inherent value of nature and humanity's duties towards nature, ecocentrism is central in solving environmental challenges facing the planet including climate change, biodiversity loss and pollution[33]. AI can fast-track the achievement of this goal by enabling humanity to effectively confront climate change and uphold the rights of nature. For example, AI tools can help to detect greenhouse gas emissions thus enabling sound action towards tackling climate

[26] Brown. A., 'The benefits and risks of using AI in Nature Restoration' Available at https://www.greeneconomycoalition.org/news-and-resources/the-benefits-and-risks-of-using-ai-in-nature-restoration (Accessed on 08/05/2026)
[27] Ibid
[28] Ibid
[29] When Nature Meets AI: Reimagining Our Relationship with the Natural World for the Common Good., Op Cit
[30] United Nations Environment Programme., 'AI has an environmental problem. Here's what the world can do about that' Op Cit
[31] When Nature Meets AI: Reimagining Our Relationship with the Natural World for the Common Good., Op Cit
[32] Ibid
[33] Open Global Rights., 'Ecocentrism: A Refusal to Compromise on Ecological Integrity' Op Cit

change[34]. AI tools can strengthen efforts to minimize energy waste, optimize energy consumption and distribution, and identify emission hotspots thus enabling sound climate action[35]. In addition, due to its predictive capabilities, AI can strengthen early warning systems enabling the world to anticipate, respond to and recover from adverse climatic events including droughts, floods and hurricanes towards protecting people and planet[36]. Utilising AI for climate action is therefore key towards safeguarding both people and planet and upholding the rights of nature.

In addition, AI can be utilised for biodiversity conservation towards ecocentrism and the rights of nature. It has been observed that AI tools can be used to help identify and monitor species and track ecosystem health, as well as conduct real-time analysis of environmental changes like deforestation thus enabling sound biodiversity conservation efforts[37]. AI tools including remote sensing and analysis platforms can operate continuously and across a broader area of ecosystems providing accurate data on threats such as habitat degradation, illegal logging, illegal hunting, deforestation, human-wildlife conflict, and species migration therefore informing sound biodiversity conservation approaches[38]. Further, by predicting threats to species and ecosystems, AI can inform sound conservation approaches such as protection of endangered species, tackling invasive species and ecosystem restoration towards safeguarding the rights of nature[39]. Utilising AI for biodiversity has been identified as a powerful approach towards reducing the cost and expanding the scale of biodiversity monitoring and analysis for effective conservation measures[40].

AI can also be utilised for EIAs towards protecting the rights of nature. EIA is a process of evaluating the likely environmental impacts of a proposed project or development, taking into account inter-related socio-economic, environmental, cultural and human-health impacts, both beneficial and adverse[41]. It has been observed that the implementation of EIA ensures decisions likely to have adverse effects on the environment are well-informed using scientific documentation of foreseeable risks and public consultations[42]. In particular, EIA is an important tool towards safeguarding nature by minimizing adverse impacts of development projects on the environment[43]. It has been observed that if the EIA process is conducted in an appropriate manner, then the safety of the environment can be properly managed at all stages of a project- planning, design, construction, operation, monitoring and evaluation as well as

[34] United Nations Environment Programme., 'AI has an environmental problem. Here's what the world can do about that' Op Cit

[35] United Nations Climate Change., 'AI and Climate Action: Opportunities, Risks and Challenges for Developing Countries' Available at https://unfccc.int/news/ai-and-climate-action-opportunities-risks-and-challenges-for-developing-countries (Accessed on 08/05/2026)

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[37] Brown. A., 'The benefits and risks of using AI in Nature Restoration' Op Cit

[38] United Nations Development Programme., 'People-Centric AI for Conserving Biodiversity' Available at https://www.undp.org/sites/g/files/zskgke326/files/2025-12/people-centric-ai-for-conserving-biodiversity.pdf (Accessed on 08/05/2026)

[39] Ibid

[40] Ibid

[41] Secretariat of the Convention on Biological Diversity., 'What is Impact Assessment?' Available at https://www.cbd.int/impact/whatis.shtml (Accessed on 08/05/2026)

[42] Benoit Mayer, 'Climate Impact Assessment as an Emerging Obligation under Customary International Law' (PhD Research Paper No. 2018-16, Chinese University of Hong Kong, 2018) 2

[43] National Environment Management Authority., 'Environment Impact Assessment (EIA)' Available at https://nema.go.ke/services/environment-impact-assessment-eia/# (Accessed on 08/05/2026)

decommissioning[44]. It has been observed that AI can strengthen EIA processes including baseline studies by analyzing satellite imageries to detect environmental changes and classifying habitats[45]. Further, through its predictive capabilities, AI can analyze vast amounts of environmental data towards effectively identifying and addressing the likely environmental impacts of development projects[46]. Utilising AI for EIAs can therefore strengthen efforts to protect nature during development projects.

Utilising AI for climate, biodiversity and EIAs is therefore necessary towards promoting ecocentrism and rights of nature. It is therefore imperative to harness AI including through integrating it in environmental governance frameworks and closing the digital divide between developed and developing countries[47]. In addition, it is vital to tackle the risks and challenges of AI including through training AI models on accurate, inclusive and adequate environmental data and utilising indigenous knowledge systems including Traditional Ecological Knowledge (TEK) in AI models in order to effectively safeguard the rights of nature towards ecocentrism[48].

4.0 Conclusion

The growth of AI is providing immense opportunities towards fostering ecocentrism and the rights of nature. It is therefore imperative to harness and integrate AI into environmental governance frameworks towards safeguarding nature for the benefit of present and future generations. In particular, utilising AI for climate, biodiversity and EIAs provides a valuable approach that can foster ecocentrism and rights of nature for posterity.

[44] Ibid
[45] The risks and benefits of AI in environmental impact assessments., Available at https://www.ciwem.org/news/the-risks-and-benefits-of-ai-in-environmental-impact-assessments (Accessed on 08/05/2026)
[46] Ibid
[47] Brown. A., 'The benefits and risks of using AI in Nature Restoration' Op Cit
[48] When Nature Meets AI: Reimagining Our Relationship with the Natural World for the Common Good., Op Cit

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