Dependent Origination and Ecological Ethics: A Buddhist Foundation for Climate Change Response

Mr. Huynh The Bao[1], Dr. Priyadarsini Mitra[2]
[1,2]*Gautam Buddha University*

***Abstract*—The global climate crisis represents not merely a technological or political challenge but a philosophical one, rooted in the anthropocentric assumptions embedded in the dominant traditions of modern industrial civilisation. This article argues that the canonical Buddhist doctrine of *paṭicca-samuppāda* (dependent origination), as preserved in the Pāli Tipiṭaka, provides a philosophically rigorous and practically actionable foundation for a Buddhist ecological ethics adequate to the challenge of climate change. Drawing on primary sources from the *Sutta Piṭaka* and *Vinaya Piṭaka*, the article develops three interrelated arguments: first, that dependent origination, understood in its full cosmological as well as soteriological scope, articulates an ontological framework in which the human being and the natural world are constitutively interdependent rather than ontologically separate; second, that the canonical ethical framework of *ahiṃsā* (non-harm), the five precepts, and the *brahmavihāra* (divine abidings) translates this ontological recognition into a comprehensive ecological ethic whose practical implications extend from individual conduct to collective social organisation; and third, that the canonical doctrine of collective *kamma* provides a moral-causal framework for understanding and responding to the climate crisis as a consequence of collective human moral failure that requires collective moral transformation as its resolution. The article concludes by situating the canonical Buddhist framework in dialogue with contemporary climate ethics, including deep ecology, the capabilities approach, and climate justice frameworks, and by proposing a Dependent-Origination-Based Climate Ethic grounded in four canonical principles as the article's principal normative contribution.**

***Index Terms*—*paṭicca-samuppāda*, dependent origination, ecological ethics, climate change, Pāli Tipiṭaka, Buddhist environmental ethics, *ahiṃsā*, collective *kamma*, Theravāda Buddhism, religion and ecology.**

I. INTRODUCTION

The Sixth Assessment Report of the Intergovernmental Panel on Climate Change (2023) confirms that the Earth's climate system has undergone changes unprecedented in human history, driven by greenhouse gas emissions attributable to human economic activity. The consequences of these changes, including rising sea levels, intensifying extreme weather events, accelerating biodiversity loss, and the disruption of agricultural and water systems upon which billions of people depend, constitute a threat to the conditions of human and non-human life of a scale and urgency that no serious intellectual tradition can responsibly ignore.[1]

Yet the response to the climate crisis has been predominantly technological and political rather than philosophical. The dominant assumption of climate policy, shared across ideological boundaries, is that the crisis can be resolved through the decarbonisation of existing economic systems without any fundamental revision of the anthropocentric worldview that underlies those systems. Lynn White Jr.'s prescient 1967 observation that the ecological crisis has its deepest roots not in technology but in the philosophical and religious assumptions of Western civilisation applies, with particular force, to the climate crisis: a crisis driven, at its causal roots, by the treatment of the atmosphere and the biosphere as

[1]Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report* (Geneva: IPCC, 2023), 4. The report identifies human influence as the principal driver of unprecedented changes in the atmosphere, ocean, cryosphere, and biosphere.

unlimited sinks for the byproducts of human economic activity.[2]

This article argues that the Pāli Tipiṭaka, the canonical scripture of Theravāda Buddhism, offers philosophical resources for understanding and responding to the climate crisis that are both more fundamental and more practically actionable than the predominantly technological frameworks that have thus far shaped the climate policy debate. Specifically, the article argues that the canonical doctrine of *paṭicca-samuppāda* (dependent origination), read in its full cosmological as well as soteriological scope, provides an ontological foundation for a Buddhist ecological ethics adequate to the scale of the climate challenge.[3]
The argument proceeds in five stages. Section 2 examines the canonical doctrine of *paṭicca-samuppāda* and its ecological implications, including the doctrine of the four great elements and its account of human-climate interdependence. Section 3 analyses the canonical ethical framework as the practical expression of the ontological principles established in Section 2. Section 4 examines the canonical doctrine of collective *kamma* as a moral-causal framework for understanding the climate crisis and for identifying collective moral transformation as the foundational dimension of an adequate response. Section 5 situates the canonical Buddhist framework in dialogue with contemporary climate ethics and develops the Dependent-Origination-Based Climate Ethic. Section 6 offers a conclusion.

II. "PAṬICCA-SAMUPPĀDA": THE ONTOLOGICAL GROUND OF ECOLOGICAL ETHICS

2.1. The Canonical Doctrine and Its Cosmological Scope

The canonical statement of *paṭicca-samuppāda* in its most philosophically fundamental form is preserved in the *Sammāsambuddha Sutta* (SN 12.10): "When this exists, that comes to be. With the arising of this, that arises. When this does not exist, that does not come to be. With the cessation of this, that ceases" (*imasmiṃ sati idaṃ hoti; imassuppādā idaṃ uppajjati; imasmiṃ asati idaṃ na hoti; imassa nirodhā idaṃ nirujjhati*). This formula names the universal principle of conditionality that governs all conditioned phenomena without restriction: not only the psychological processes of individual minds but the arising and ceasing of natural systems and, by extension, the climatic and ecological processes that constitute the natural world within which human life is embedded.[4]
The twelve-link formula (*dvādasaṅga*) traces the arising of suffering from ignorance (*avijjā*) through a sequence of twelve mutually conditioning links. In its primary canonical application, this formula is a soteriological account of the causal conditions of individual suffering. Yet the *Mahā-nidāna Sutta* (DN 15) extends the analysis to the relationship between consciousness (*viññāṇa*) and name-and-form (*nāmarūpa*), establishing that the conditioned world, including its material natural dimension, enters the formula not as an external backdrop but as a constitutive element of the conditioned process that the formula maps.[5]

[2]Lynn White Jr., "The Historical Roots of Our Ecologic Crisis," *Science* 155, no. 3767 (1967): 1205. White argued that the dominant strand of the Western tradition treats nature as existing for human use, a view he traced to the Judaeo-Christian doctrine of creation and dominion.

[3]Bhikkhu Bodhi, trans., *The Connected Discourses of the Buddha: A Translation of the Saṃyutta Nikāya* (Boston: Wisdom Publications, 2000), 1: 544. *Kaccānagotta Sutta* (SN 12.15): the Buddha's middle-path account of conditioned arising between the extremes of eternalism and annihilationism.

[4]Bhikkhu Bodhi, *The Connected Discourses*, 1: 575–78. *Paṭicca-samuppāda-vibhaṅga Sutta* (SN 12.2): the canonical locus for the twelve-link formula (*dvādasaṅga*) and its detailed term-by-term analysis. The formula's universal scope is confirmed by the preceding *Sammāsambuddha Sutta* (SN 12.10), which states the general causal law without restriction to the soteriological domain.

[5]Maurice Walshe, trans., *The Long Discourses of the Buddha: A Translation of the Dīgha Nikāya* (Boston: Wisdom Publications, 1995), 223–28. *Mahā-nidāna Sutta* (DN 15): the most extended treatment of dependent origination in the *Dīgha Nikāya*, notable for its account of the mutual conditioning between consciousness (*viññāṇa*) and name-and-form (*nāmarūpa*) and its implications for the relationship between the knowing mind and the material natural world.

David Kalupahana's naturalistic reading of the canonical principle of conditionality identifies *idappaccayatā* (specific conditionality) as a universal causal law applicable to both psychological and natural processes. On Kalupahana's analysis, every phenomenon is what it is in virtue of its relationships with other phenomena, and no phenomenon can be understood, predicted, or governed in isolation from the web of conditions that constitutes it. This reading aligns *paṭicca-samuppāda* with the insights of ecological science, where the recognition of non-linear, feedback-driven causal relationships between natural phenomena embodies a fundamentally similar understanding of natural causality.[6]

Joanna Macy's dialogue between *paṭicca-samuppāda* and general systems theory provides the most sustained philosophical development of this alignment. Macy argues that the canonical Buddhist principle of mutual causality and the systems-theoretic concept of circular causality are functionally homologous: both describe a world in which causes and effects form loops and networks of mutual influence, and in which every element of a system is simultaneously cause and effect of the whole. Climate change is precisely the kind of phenomenon that both *paṭicca-samuppāda* and systems ecology illuminate: a complex, non-linear, feedback-driven process in which human industrial activity has disrupted the atmospheric and oceanic systems upon which terrestrial life depends, generating consequences that will in turn constrain the conditions available for human economic and social life.[7]

2.2. The Four Great Elements and Human-Climate Interdependence

The canonical doctrine of the four great elements (*catumahābhūta*) — earth (*paṭhavī*), water (*āpo*), fire (*tejo*), and wind (*vāyo*) — provides the most specific and practically direct canonical expression of the ontological continuity between the human organism and the natural world. In the *Mahāhatthipadopama Sutta* (MN 28), the elder Sāriputta demonstrates that the same four elements that constitute the human body also constitute the natural world as a whole, and that internal and external expressions of each element are of the same nature (*sama-dhātu*).[8]

Sāriputta specifies that the internal earth element (*paṭhavī*) comprises bones, sinews, and flesh within the body, while the external earth element comprises rocks, soil, and all solid natural phenomena. Both are the same elemental quality: solidity, resistance, extension. The same logic applies to water (*āpo*): internal blood, bile, and sweat share elemental nature with rivers, rain, and the ocean. Internal bodily heat (*tejo*) is the same elemental quality as the heat of the sun and of fire. The breath and the winds that move through the body (*vāyo*) share elemental nature with the atmospheric circulation patterns that distribute heat and moisture across the planetary surface.[9]

The significance of this elemental identity for climate ethics is direct. The atmosphere, the primary

[6]David J. Kalupahana, *Causality: The Central Philosophy of Buddhism* (Honolulu: University of Hawaii Press, 1975), 54–67. Kalupahana's naturalistic reading of the canonical principle of conditionality, identifying *idappaccayatā* as a universal causal law applicable to both psychological and natural processes, provides an important philosophical framework for the ecological interpretation of dependent origination developed in this article.

[7]Joanna Macy, *Mutual Causality in Buddhism and General Systems Theory: The Dharma of Natural Systems* (Albany: State University of New York Press, 1991), 35–55. Macy's extended comparison of *paṭicca-samuppāda* with the systems-theoretic concept of circular causality remains the most sustained philosophical engagement with the ecological dimensions of dependent origination in the secondary literature.

[8]Bhikkhu Ñāṇamoli and Bhikkhu Bodhi, trans., *The Middle Length Discourses of the Buddha: A Translation of the Majjhima Nikāya* (Boston: Wisdom Publications, 1995), 279–83. *Mahāhatthipadopama Sutta* (MN 28): Sāriputta's systematic analysis of the four great elements in their internal (bodily) and external (natural-world) manifestations, demonstrating that the same elements constitute both the human organism and the natural world.

[9]Bhikkhu Ñāṇamoli and Bodhi, *The Middle Length Discourses*, 280. Sāriputta identifies the internal earth element (*paṭhavī*) as "whatever internally, belonging to oneself, is solid, solidified, and clung to," including bones, sinews, and flesh, and states explicitly that internal and external earth are of the same nature (*sama-dhātu*).

system disrupted by anthropogenic greenhouse gas emissions, is constituted by the element of wind (*vāyo*) in the canonical analysis: the same quality of motion and pressure that characterises the breath within the human body. The disruption of atmospheric chemistry by the accumulation of carbon dioxide and methane is, in canonical terms, a disruption of the wind element at the planetary scale, a disruption that reverberates through all four elements and ultimately through the elemental constitution of the human organism itself. The canonical *Rohitassa Sutta* (SN 2.26) declaration that the world arises and ceases within this very fathom-long body is, in the context of climate ethics, a statement of the most practically urgent kind: the world we are disrupting is the same world that constitutes us.[10]

III. THE CANONICAL ECOLOGICAL ETHIC: "AHIṂSĀ", PRECEPTS, AND "BRAHMAVIHĀRA"

3.1. "Ahiṃsā" as the Foundation of Climate Ethics

The canonical principle of *ahiṃsā* (non-harm, non-violence) names the foundational ethical orientation of the Pāli canonical tradition. *Ahiṃsā* in the canonical sense is not merely a negative prohibition on specific acts of physical violence; it is a comprehensive ethical orientation toward all sentient life, grounded in the recognition of the universal capacity for suffering (*dukkha*) that all sentient beings share and expressed in the commitment to refrain from causing harm to any sentient being by thought, word, or deed.[11]

The climate crisis is, from the perspective of canonical *ahiṃsā*, a crisis of harm at the most massive scale in human history. The disruption of climate systems caused by anthropogenic greenhouse gas emissions generates harm to sentient beings across the full range of the natural world: animal and plant species threatened with extinction by rising temperatures; human communities displaced by sea-level rise, drought, and extreme weather; and future generations, both human and non-human, who will inherit a world whose natural systems have been degraded by the choices of present generations. Each of these harms is, from the perspective of *ahiṃsā*, a moral wrong comparable in its structure to the harm prohibited by the first precept (*pāṇātipātā veramaṇī*), though vastly greater in its scale.[12]

The canonical *Vinaya Piṭaka* provides specific evidence that the tradition understood the principle of *ahiṃsā* to extend to the integrity of natural systems. The prohibitions on cutting living trees, contaminating water sources, destroying seeds and vegetation, and disturbing soil communities all reflect a concern for the integrity of natural systems that goes beyond the protection of individual sentient beings and encompasses the conditions upon which those beings depend. Extended to the contemporary context, these canonical principles provide warrant for the claim that actions disrupting the atmospheric and climatic systems upon which all terrestrial life depends are violations of *ahiṃsā* in its broadest canonical formulation.[13]

3.2. The Five Precepts and the "Brahmavihāra" as Climate Practice

The five precepts (*pañcasīla*) have direct implications for the climate crisis that deserve explicit articulation. The second precept (*adinnādānā veramaṇī*), the undertaking to refrain from taking what is not given,

[10]Bhikkhu Bodhi, *The Connected Discourses*, 1: 533–34. *Rohitassa Sutta* (SN 2.26): the canonical declaration that the world (*loka*), its arising, and its cessation are all to be found within this very fathom-long body together with its perception and consciousness.

[11]Peter Harvey, *An Introduction to Buddhist Ethics: Foundations, Values and Issues* (Cambridge: Cambridge University Press, 2000), 32–38 and 150–55. Harvey provides the most careful secondary-literature account of *ahiṃsā* as the foundational ethical orientation of the canonical tradition, including its extension to the natural world.

[12]Ibid., 150. Harvey notes that the canonical tradition's concern for the integrity of natural systems goes beyond the direct protection of individual sentient beings, reflecting a broader orientation of care toward the conditions upon which those beings depend.

[13]T. W. Rhys Davids and Hermann Oldenberg, trans., *Vinaya Texts*, Sacred Books of the East, vols. 13, 17, 20 (Oxford: Clarendon Press, 1881–85), 2: 4–12. The *Mahāvagga* environmental regulations, including *Pācittiya* 11 (prohibition on cutting living plants), the rules on water contamination, and the prohibition on disturbing soil communities, constitute the most practically specific canonical expression of the ecological ethic grounded in dependent origination.

is particularly significant: the global atmosphere is a shared resource on which all life depends, and the appropriation of the atmosphere's capacity for carbon absorption by the industrial activities of wealthy nations and corporations constitutes, in the spirit of the second precept, the taking of more than one's rightful share of a shared natural resource. The canonical tradition presents the observance of the five precepts as generating merit that benefits not only the practitioner but the broader community of sentient beings.[14]

The *brahmavihāra* (divine abidings) provide the affective and meditative foundation for climate-oriented practice. The cultivation of *mettā* (loving-kindness) toward all sentient beings without exception, as instructed in the *Metta Sutta* (Sn 1.8), orients the practitioner toward the full range of sentient life affected by climate disruption with genuine goodwill and care. The cultivation of *karuṇā* (compassion) toward beings who are suffering generates a quality of active moral concern that motivates the changes in personal conduct, economic behaviour, and political advocacy that the climate crisis requires. The cultivation of *upekkhā* (equanimity) provides the psychological stability necessary to sustain climate action over the long periods of time that genuine systemic transformation requires.[15]

Thich Nhat Hanh's concept of interbeing (*inter-être*), developed as a contemporary expression of *paṭicca-samuppāda*, illustrates how the *brahmavihāra* practices can be articulated for a contemporary audience in ways that are both canonically grounded and practically motivating. The practitioner who recognises interbeing, who perceives the cloud in the paper and the forest in the breath, is one whose relationship with the natural world has been transformed by a recognition of interdependence that the *brahmavihāra* practices cultivate and deepen.[16]

IV. COLLECTIVE "KAMMA" AND THE CLIMATE CRISIS: A CANONICAL FRAMEWORK

4.1. The Canonical Doctrine of Collective "Kamma"

The Pāli canonical doctrine of *kamma* provides a moral-causal framework for understanding the climate crisis that is both philosophically rigorous and practically illuminating. The canonical definition in the *Aṅguttara Nikāya* is explicit: *cetanāhaṃ bhikkhave kammaṃ vadāmi* — "It is intention (*cetanā*), monks, that I call *kamma*." The *Cakkavatti-Sīhanāda Sutta* (DN 26) provides the canonical locus for collective *kamma*: the discourse narrates how the collective moral failure of a human community generates progressive environmental deterioration, including the reduction of soil fertility, the disappearance of nutritious plants, and the disruption of natural cycles of abundance.[17]

The climate crisis maps onto the canonical account of collective *kamma* with striking precision. The greenhouse gas emissions driving climate change are

[14]Bhikkhu Bodhi, trans., *The Numerical Discourses of the Buddha: A Translation of the Aṅguttara Nikāya* (Boston: Wisdom Publications, 2012), 654–58. AN 8.39, the *Abhisanda Sutta*, identifies the observance of the five precepts as a source of merit that benefits not only the practitioner but the broader community of sentient beings in the practitioner's environment, providing canonical warrant for the present article's account of the precepts as a framework for collective ecological responsibility.

[15]K. R. Norman, trans., *The Group of Discourses (Sutta-Nipāta)*, 2nd ed. (Oxford: Pali Text Society, 1992), 16–18. *Metta Sutta* (Sn 1.8): the canonical account of *mettā* cultivated toward all sentient beings without exception, seen and unseen, near and far, already born and yet to be born. The universal scope of this instruction constitutes one of the canonical tradition's most direct and most practically significant expressions of universal moral concern.

[16]Thich Nhat Hanh, *The Heart of the Buddha's Teaching: Transforming Suffering into Peace, Joy and Liberation* (Berkeley: Parallax Press, 1998), 223–30. Thich Nhat Hanh's concept of interbeing (*inter-être*) as a practical expression of dependent origination for a contemporary audience provides an important engaged Buddhist perspective on the ecological and climate dimensions of the *brahmavihāra* practices.

[17]Walshe, *The Long Discourses*, 395–407. *Cakkavatti-Sīhanāda Sutta* (DN 26): the canonical account of progressive environmental deterioration as a direct consequence of collective human moral failure, presenting the causal connection between collective conduct and environmental condition as a natural, not supernatural, consequence of *kamma* and its effects on the conditions of existence.

the cumulative consequence of billions of individual and collective choices, each driven to some degree by *lobha* (greed), in the form of the insatiable appetite for material growth; *dosa* (aversion), in the form of the denial and resistance that have impeded meaningful climate action; and *moha* (delusion), in the form of the collective failure to recognise the causal connection between human economic choices and the disruption of natural systems. Phra Prayudh Payutto's systematic account of *kamma* within the living Theravāda tradition provides the most authoritative confirmation of this reading.[18]

The *Aggañña Sutta* (DN 27) reinforces this analysis through its cosmogonic narrative of environmental decline driven by human greed. As the primordial beings begin to appropriate more than their share of the earth's natural abundance, the abundance itself diminishes; social institutions of property and governance emerge to manage the resulting scarcity; and the original condition of natural generosity and social equality is lost. The structural parallel with the anthropogenic climate crisis, in which the overappropriation of the atmosphere's carbon-absorbing capacity has generated a cascading series of natural and social disruptions, is philosophically significant even if the narrative form is mythological rather than scientific.[19]

4.2. Collective Moral Transformation as the Canonical Response

The canonical tradition's account of collective *kamma* does not merely diagnose the problem; it identifies the solution. The *Cakkavatti-Sīhanāda Sutta* narrates the moral renaissance that eventually reverses the cycle of environmental decline: a collective human recognition of the harmfulness of the current pattern of conduct, followed by a collective commitment to ethical renewal, which in turn generates the conditions for environmental recovery. The natural world regenerates not through supernatural intervention or technological management but through the natural consequence of improved moral quality in collective human action.[20]

The canonical framework thus points to moral transformation, rather than technical management alone, as the foundational response to the climate crisis. The canonical tradition identifies the roots of the climate crisis in *lobha*, *dosa*, and *moha*, and proposes the cultivation of their opposites, *alobha* (non-greed, generosity), *adosa* (non-aversion, compassion), and *amoha* (non-delusion, wisdom), as the path to genuine resolution. This moral-transformative response is not an alternative to technical and political action; it is the foundation without which such action will remain inadequate to the depth of the challenge.[21]

V. TOWARD A DEPENDENT-ORIGINATION-BASED CLIMATE ETHIC

5.1. Dialogue with Contemporary Climate Ethics

The canonical Buddhist framework developed in this article stands in productive dialogue with three major traditions in contemporary climate ethics. Identifying the specific convergences and divergences between these traditions and the canonical Buddhist position

[18]Phra Prayudh Payutto [P. A. Payutto], *Buddhadhamma: Natural Laws and Values for Life*, trans. Grant A. Olson (Albany: State University of New York Press, 1995), 42–52. Payutto's systematic account of *kamma* and its collective dimensions provides an authoritative perspective from within the living Theravāda tradition and is particularly relevant to the present article's application of the canonical doctrine to the climate crisis.

[19]Walshe, *The Long Discourses*, 407–15. *Aggañña Sutta* (DN 27): the canonical cosmogonic narrative of environmental decline driven by human greed (*lobha*), presenting the depletion of natural abundance as a direct consequence of collective moral failure rooted in craving (*taṇhā*).

[20]Walshe, *The Long Discourses*, 403–07. The *Cakkavatti-Sīhanāda Sutta*'s account of the moral renaissance that reverses the cycle of environmental decline demonstrates that collective moral transformation is, in the canonical analysis, a genuine causal possibility and not merely a pious aspiration. The natural world regenerates in direct proportion to the improvement in the moral quality of collective human action.

[21]Payutto, *Buddhadhamma*, 78–90. Payutto's account of the cultivation of *alobha*, *adosa*, and *amoha* as the canonical path to the resolution of the conditions that generate suffering and environmental harm provides the primary Theravāda resource for the present article's account of moral transformation as the foundational ecological response.

helps to clarify the distinctive contribution of the latter.

Deep ecology (Næss) and the canonical Buddhist account of *paṭicca-samuppāda* converge in their rejection of anthropocentric ontologies and their affirmation of the interdependence of all natural phenomena. Næss's concept of biospheric egalitarianism resonates with the canonical Buddhist extension of *ahiṃsā* to all sentient life. The divergence lies in Næss's concept of Self-realisation, which expands the human self to encompass the biosphere, as against the canonical Buddhist doctrine of *anattā* (non-self), which dissolves the self rather than expanding it. The canonical Buddhist position avoids the philosophical difficulty of Næss's ecological Self while achieving a comparably expansive orientation toward the natural world through the cultivation of *mettā* and *ahiṃsā*.[22]

The capabilities approach (Nussbaum, Sen) and the canonical Buddhist account share a concern for the conditions necessary for flourishing life, but the capabilities approach remains primarily focused on human capabilities, with animal capabilities as an important but secondary concern. The canonical Buddhist framework, grounded in the universal extension of *ahiṃsā* and *mettā*, extends moral concern to all sentient life without the hierarchical ordering that the capabilities approach tends to maintain. At the same time, the canonical framework lacks the detailed account of specific capabilities and their thresholds that Nussbaum's and Sen's work provides, and a synthesis of the two traditions would be more practically actionable than either alone.[23][24]

Climate justice frameworks (Shue, Schlosberg) emphasise the inequitable distribution of the causes and consequences of climate change, with the poorest and most vulnerable communities bearing the greatest burdens from a crisis they did not primarily create. The canonical Buddhist doctrine of collective *kamma* provides a framework for understanding collective moral responsibility that is structurally compatible with climate justice analysis, while adding the dimension of moral-psychological transformation that justice-based frameworks alone cannot provide. A genuinely effective climate ethics requires both the analytical precision of climate justice frameworks and the moral-transformative depth of the canonical Buddhist account of *kamma* and its roots.[25][26][27]

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[22]Arne Næss, *Ecology, Community and Lifestyle: Outline of an Ecosophy*, trans. David Rothenberg (Cambridge: Cambridge University Press, 1989), 65–80 and 130–62. Næss's account of biospheric egalitarianism and Self-realisation provides the primary Western philosophical framework with which the canonical Buddhist account of *paṭicca-samuppāda* and *anattā* is placed in dialogue in section 5.1.

[23]Martha C. Nussbaum, *Frontiers of Justice: Disability, Nationality, Species Membership* (Cambridge, MA: Harvard University Press, 2006), 325–407. Nussbaum's extension of the capabilities approach to include a list of central capabilities for non-human animals provides the most developed capabilities-theoretic account of animal flourishing and is the primary reference for the present article's comparison with the canonical Buddhist account of *ahiṃsā* and *mettā*.

[24]Amartya Sen, *Development as Freedom* (New York: Anchor Books, 1999), 74–110. Sen's articulation of the capabilities approach as a framework for understanding development in terms of the substantive freedoms that individuals have reason to value provides the philosophical foundation for the subsequent extension of the approach to environmental and animal ethics discussed in this section.

[25]Henry Shue, *Basic Rights: Subsistence, Affluence, and U.S. Foreign Policy*, 2nd ed. (Princeton: Princeton University Press, 1996), 19–45. Shue's account of subsistence rights and their priority provides the philosophical foundation for the climate justice argument that the most vulnerable human communities have a right to protection from the consequences of a crisis they did not primarily create.

[26]David Schlosberg, *Defining Environmental Justice: Theories, Movements, and Nature* (Oxford: Oxford University Press, 2007), 1–30. Schlosberg's comprehensive account of environmental justice as encompassing distribution, recognition, participation, and capabilities provides the primary reference for the present article's comparison of climate justice frameworks with the canonical Buddhist doctrine of collective *kamma*.

[27]Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), *Global Assessment Report on Biodiversity and Ecosystem Services* (Bonn: IPBES Secretariat, 2019), 12–18. The IPBES assessment documents the convergence of biodiversity loss, ecosystem degradation, and climate

5.2. The Dependent-Origination-Based Climate Ethic: Four Principles

Drawing on the canonical analyses of Sections 2 through 4 and the comparative dialogue of Section 5.1, this article proposes a Dependent-Origination-Based Climate Ethic grounded in four canonical principles.

The first principle is ontological interdependence: the recognition, grounded in *paṭicca-samuppāda* and the elemental analysis of the *Mahāhatthipadopama Sutta*, that the human organism and the natural climate system are constitutively interdependent. Climate disruption is not a harm done to an external nature; it is a harm done to the web of conditioned interdependence within which the human being is itself embedded.[28]

The second principle is universal moral concern: the recognition, grounded in *ahiṃsā* and the *Metta Sutta*'s instruction to extend goodwill to all sentient beings without exception, that the moral scope of climate ethics must encompass all sentient beings affected by climate disruption, human and non-human, present and future. This principle directly challenges the anthropocentric and presentist assumptions of much current climate policy.[29]

The third principle is collective moral responsibility: the recognition, grounded in the canonical doctrine of collective *kamma* and the *Cakkavatti-Sīhanāda Sutta*'s account of collective moral failure and renewal, that the climate crisis is a consequence of collective human moral failure and that its resolution requires collective moral transformation. This principal resist both the reduction of the crisis to individual lifestyle choices and the reduction of its resolution to purely technical or political measures.[30]

The fourth principle is transformative practice: the recognition, grounded in the canonical path of *sīla*, *samādhi*, and *paññā*, that genuine ecological transformation requires the transformation of the fundamental orientation of consciousness from which environmentally harmful conduct arises. The cultivation of *alobha*, *adosa*, and *amoha* through the practice of the *Dhamma* provides the psychological and moral foundation without which technical and political climate action will remain inadequate to the depth of the challenge.[31]

VI. CONCLUSION

This article has argued that the canonical Buddhist doctrine of *paṭicca-samuppāda*, read in its full cosmological as well as soteriological scope, provides a philosophically rigorous and practically actionable foundation for a Buddhist ecological ethics adequate to the challenge of the climate crisis. The argument has moved through three principal analytical stages: the ontological stage, establishing the material and causal continuity between the human organism and the natural climate system; the ethical stage, translating this ontological recognition into a comprehensive ethic of non-harm, precept observance, and loving-kindness cultivation; and the causal stage, grounding collective ecological responsibility in the canonical doctrine of collective *kamma* and identifying

change as mutually reinforcing dimensions of a single systemic ecological crisis.

[28]Bhikkhu Ñāṇamoli and Bodhi, *The Middle Length Discourses*, 279–83. The *Mahāhatthipadopama Sutta* (MN 28) elemental analysis, already discussed in section 2.2, provides the primary canonical grounding for the first principle of the Dependent-Origination-Based Climate Ethic: ontological interdependence.

[29]Norman, *The Group of Discourses*, 16–18. The *Metta Sutta* (Sn 1.8) instruction to cultivate *mettā* toward all sentient beings, seen and unseen, near and far, already born and yet to be born, provides the primary canonical grounding for the second principle, universal moral concern, including its extension to future generations.

[30]Walshe, *The Long Discourses*, 395–407. The *Cakkavatti-Sīhanāda Sutta* (DN 26) provides the primary canonical grounding for the third principle, collective moral responsibility, through its account of collective moral failure as the cause of environmental degradation and collective moral renewal as the condition of environmental recovery.

[31]Bhikkhu Bodhi, *The Numerical Discourses*, 1572–82. AN 11.15, the *Mettā Sutta* in its *Aṅguttara Nikāya* context, provides the canonical account of the eleven benefits of *mettā-bhāvanā* that grounds the fourth principle, transformative practice, including the benefit of the practitioner's transformed relationship with the natural world.

collective moral transformation as the foundational dimension of an adequate response.[3233]

The Dependent-Origination-Based Climate Ethic proposed in Section 5.2, grounded in the four canonical principles of ontological interdependence, universal moral concern, collective moral responsibility, and transformative practice, represents the article's principal normative contribution. The framework is not proposed as a replacement for the technical and political dimensions of climate action; it is proposed as the philosophical and moral foundation without which those dimensions will remain insufficient to the depth and urgency of the challenge.[34]

The *Cakkavatti-Sīhanāda Sutta* (DN 26) narrates that at the nadir of the cycle of moral decline and environmental deterioration, a group of survivors resolve collectively to return to ethical conduct, and that the natural world begins to recover as a direct consequence of that collective moral renewal. The narrative is mythological in form, but its philosophical claim is both precise and urgent: the recovery of the natural world is possible, and its possibility depends upon the recovery of human moral life. In the context of the climate crisis, this canonical teaching carries a message that is simultaneously a diagnosis and a counsel. The crisis is the consequence of collective moral failure, and its resolution lies in collective moral transformation. The Buddhist tradition, at its canonical best, offers not merely a description of the problem but a path to its resolution.[35]

ABBREVIATIONS

AN = *Aṅguttara Nikāya*; DN = *Dīgha Nikāya*; MN = *Majjhima Nikāya*; PTS = Pali Text Society; SN = *Saṃyutta Nikāya*; Sn = *Sutta Nipāta*; Vin = *Vinaya Piṭaka*

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[32]Rupert Gethin, *The Foundations of Buddhism* (Oxford: Oxford University Press, 1998), 141–60. Gethin's philosophically rigorous account of dependent origination and its implications for the Buddhist understanding of the relationship between the knowing subject and the natural world provides the scholarly foundation for the present article's synthesis.

[33]Padmasiri de Silva, *Environmental Philosophy and Ethics in Buddhism* (London: Macmillan, 1998), 55–75. De Silva's systematic analysis of the ecological implications of canonical Buddhist philosophical principles, including his account of the *brahmavihāra* as a foundation for environmental ethics, provides the closest scholarly precedent for the Dependent-Origination-Based Climate Ethic proposed in this article.

[34]Walshe, *The Long Discourses*, 403–07. The *Cakkavatti-Sīhanāda Sutta*'s account of the moral renaissance that reverses environmental decline, recalled here as the canonical narrative that provides both the diagnosis and the resolution of the climate crisis as understood within the framework of the present article.

[35]Bhikkhu Bodhi, *The Connected Discourses*, 1: 544. *Kaccānagotta Sutta* (SN 12.15), cited in full in footnote 5, is recalled here to close the argument: the world arises in its arising, ceases in its cessation. The climate crisis arises from conditions that can be changed; its resolution lies in the change of those conditions, beginning with the transformation of the moral orientation from which they flow.

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