

Extended Abstract

Illegal Surface Gold Mining (Galamsey) and Environmental Degradation in Ghana: A Cry for an Integral Ecology Mitigation Approach

'Nature abuse threatens human lives' – Cardinal Turkson on the mining-induced ecological problem in Ghana

Karl C Alorbi

Background

Ghana, Africa's largest gold producer, is facing a serious human-induced ecological crisis due to intense illegal surface gold mining (*Ajene & Adams, 2025; Botchwey and Crawford, 2025*).

Known locally as 'galamsey,' Illegal surface mining, has led to heavy metals contaminating water bodies, agricultural land and food far above WHO safety guidelines (*Anokye & Darko, 2025*). The poor and the voiceless, especially children, have become the main victims.

Respiratory diseases, congenital deformities, child fatalities, heart defects and cognitive impairments have become very common in the mining areas (*Awewomom, Benyade, Osei, Azanu, Opoku, Sackey, & Akoto, 2024*).

Artisanal gold mining has been practiced for centuries in Ghana (formerly Gold Coast). In the pre-colonial era, artisanal mining was done under the auspices of indigenous laws and belief systems that collectively shaped the traditional African . ecological knowledge (*Ikeke, 2018*). Traditional leaders served as custodians, and the spiritual, cultural, and social stewards of all natural resources (*Hilson & Potter, 2003*). Humans and nature coexisted for their mutual benefit. This interlocking relationship was, however, broken and replaced by a utilitarian perspective that

saw nature as an object that had to be subjugated and exploited (Mintah, 2025). Taboos that restricted artisanal mining to Tuesdays, Thursdays and Sundays (Dumett, 1998) were thrown overboard and replaced with unrelenting surface mining with heavy machinery without the indigenous guardrails. So, sacred grooves or traditionally protected mammals, for instance, are no longer held sacrosanct and are destroyed by local illegal gold miners and foreign businesspersons from faraway places including China, Armenia, Russia, Philippines and Bulgaria (Meng, 2015, Addy & Adhikari, 2021).

Efforts have been made to improve the situation. These include using the military to arrest people and burn their machinery (Hilson, 2017), and criminalizing artisanal mining (Tuokuu, Idemudia, Bawelle, & Baguri Sumani, 2020,) but the canker has rather gathered pace in tandem with the increases in world gold prices. A flaw of the enforcement-based methods is that they appear not to be listening to “both the cry of the earth and the cry of the poor” (Laudato Si para. 49). There is currently no answer to the extreme poverty in the mining areas or to the pervasive pollution of the ecosystem. Cardinal Turkson, however, proposes that decent alternative job opportunities be provided to the local youth to stop them from drifting into galamsey.

While there are many other recommended solutions, each one is packaged as a standalone solution contrary to the integral ecology perspective. There is therefore the need for an integrated multidisciplinary solution as proposed by Deane-Drummond and Deneulin, (2021). that is targeted at the complex ecological problem facing Ghana.

The integral ecological perspective avers the interconnectedness between nature and humans and calls for the use of insights from multiple disciplines to address the environmental catastrophes

facing humanity (Deane-Drummond, & Deneulin, 2021). It emphasizes comprehensive solutions and not the fragmented and piecemeal approaches hitherto followed by many to solve the ecological threats that affect us. This perspective stresses human dignity by tackling degrading poverty and systemic injustices. and the need to accompany and pay attention to those suffering and working with them (Laudato Si para, 90; Fratelli Tutti, parag 8). Deane-Drummond, and Deneulin noted that the Integral Ecological perspective should not be seen as a blueprint but rather a tool that can be adapted to local conditions. This means it can be adjusted to respond to the contingencies of the Ghanaian situation.

A very useful tool that has gained currency is the seven Laudato Si goals championed by the Laudato Si Action platform designed to guide actions on the ground. While the seven goals on a broader level can guide activities in Africa, the actions and activities may need to be adjusted to help ameliorate the unique situation in Ghana.

Problem Statement:

Illegal surface mining has resulted in serious ecological degradation in Ghana with the poor, the marginalized, and the voiceless bearing the brunt of the disaster. The enforcement-based approach and the fragmented solutions have failed to mitigate the problem. Could Ghana's dire ecological situation serve as a living laboratory to benefit from the integral ecological perspective?

Objective:

The main objective of this paper is to explore the possibility of adapting the integral ecological perspective for implementation in Ghana to mitigate the ecological disaster facing the country.

Methods:

The paper explores the extant literature on the problem. It then uses the insight gained from different but relevant disciplines, with particular focus on the African context, to adapt the actions and activity details of the Seven Laudato Si goals, to assist the application of the integral ecological perspective in Ghana. If successful, this would enrich the perspective and its application in the developing world.

Results and Discussion:

While the main thrust of the seven Laudato Si goals remain intact, the actions and activities driving its implementation have been adapted, based on the literature, to fit the African context of the problem (see Appendix A). The mainstream ideas from the literature could be easily adapted and assimilated into integral ecological perspective that will work in Ghana. Another strand of knowledge, which calls for the re-discovery of traditional African ecological guardrails (“Sankofa”) may not be easily assimilated into the integral ecological perspective. How do we incorporate traditional African ecological guardrails which are embedded in traditional belief systems into a Christocentric integral ecological perspective? This will require research, dialogue and education to achieve the desired outcome.

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APPENDIX A

The actions and activities to support the Seven Laudato Si Goals in Ghana to mitigate ecological degradation due to illegal surface mining

<p>Response to the Cry of the Earth</p> <ul style="list-style-type: none"> • Institute government policy that encourages remediation, restoration, re-afforestation (<i>Timsina, Hardy, Woodbury, Ashton, Cook-Patton, Pasternack, & Martin, 2022</i>). • Promoting and integrating traditional African ecological knowledge (TEK) for restoration of degraded land (<i>Sinthumule, 2023</i>) • Enact laws that incorporate traditional beliefs, rules and regulations on nature. (<i>Gbadegesin, & Gbadamosi, 2024</i>) • Make policies and legislation that restrict the use of dangerous chemicals by illegal miners in forests. (<i>Odumo, Nanos, Carbonell, Torrijos, Patel, & Rodriguez Martin, 2018</i>) • Protect the endangered animals and plants that are going extinct because of environmental degradation. (<i>Asiedu-Amoako, Ntiamoah, & Gedzi, 2016</i>) • Establish policies that protect water bodies against mining activities. (<i>Asiedu-Amoako, Ntiamoah, & Gedzi, 2016</i>)
<p>Response to the Cry of the Poor</p> <ul style="list-style-type: none"> • Provide decent alternative job opportunities to the local youth to stop them from drifting into illegal surface mining (<i>Cardinal Turkson, 2025</i>) • Policies to provide adequate health care for victims exposed to health hazards of illegal mining (<i>Leuenberger, Cambaco, Zabré, Lyatuu, Utzinger, Munguambe, & Winkler, 2021</i>). • Promote clean energy for the poor that minimizes charcoal burning and firewood harvesting in forests (<i>Balume Baderha, Bijmens, Abrams, Banza, & Deferme, 2025</i>) • Walking with the excluded, the poor, the outcasts, and those whose dignity has been violated, (<i>Jesuit Universal Apostolic Preference</i>)
<p>Foster Ecological Economics</p> <ul style="list-style-type: none"> • Invest in Africa using renewable natural capital with low entropy (<i>Izac, 1997</i>) • Encourage and popularize the <u>Inclusive Green Economy</u> of the United Nations at the grassroots level (<i>Stenseke, 2024</i>) • Adopt and adapt the System of Environmental-Economic Accounting (SEEA) of the United Nations. • Popularize the triple bottom line concept to artisanal and small-scale miners (<i>Mensah-Abludo, Peprah, & Baddianaah, 2023</i>). • Popularize ecological economics in Ghana's universities, (<i>Ocloo, & Mizunoya, 2025</i>).

<p>Adopt a Sustainable Lifestyle</p> <ul style="list-style-type: none"> • Encourage the cultivation and consumption of medicinal foods (<i>Awuchi, 2019; Iwu, 2016</i>). • Introduce sustainable mining practices, (<i>Gilberthorpe, Agol & Gegg, 2016</i>). • Replace the linear model lifestyle ("take-make-dispose") and replacing it with the circular economy model (reduce, reuse, recycle). (<i>Schröder, Anantharaman, Anggraeni, Foxon & Barber, 2019</i>). • Develop and introduce utility-scale solar energy to mitigate ecological degradation, (<i>Moore-Oleary et al, 2019</i>) • Regulate the indiscriminate use of chemicals that destroy the ecosystem, (<i>Schröder, Anantharaman, Anggraeni, Foxon & Barber, 2019</i>).
<p>Offer Ecological Education</p> <ul style="list-style-type: none"> • : Craft “Sankofa programs” to retrieve lost traditional ecological protection knowledge (Pompper & Adae, (2022)). • Introduce various dimensions of integral ecology in the country’s educational curriculum (<i>Damoah, Khalo & Adu, 2024</i>)). • Encourage non-formal and mass education programs that promote "ecological citizenship," in all mining areas similar to the successful mass education models used between 1943 and 1969 in Ghana (Hagan, 1975) • Designing policies to foster ecological awareness, and “ecological citizenship," and promoting environmental education. (Masinga, Chiwara, Mokgalaka-Fleischmann, Shayamano, & Dlamini, 2025). • Modernize traditional laws and taboos about the environment. traditional African culture (Essel, 2020).
<p>Develop Ecological Spirituality</p> <ul style="list-style-type: none"> • Encourage Africa-centric ecological ethics and spirituality (<i>Okemasisi (2022).</i>) • Re-discovering and “having a reverential attitude towards the environment in taking care of it while dwelling within its premises” Suganthi, p. 2019) • Developing a sacralized worldview of African eco-spirituality especially among the youth. (Kanu, 2022). • Blending African ecological knowledge with Christian thoughts and the Bible (Van Klinken, 2022)
<p>Community Resilience and Empowerment:</p> <ul style="list-style-type: none"> • Community-based conservation schemes (Noe & Kangalawe, 2015). • Develop cross-sectoral national and local policies that use participatory processes to prioritize environmental sustainability, adaptation, community empowerment (Adebayo, 2025). • Cross-fertilization of knowledge among African communities on ecological protection (Ndebele-Murisa et al, 2020)

Source: Derived from the literature

