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# A REFRAMED CONSISTENT ETHIC OF LIFE ON NUCLEAR ENERGY

## Exploring the Moral Implications of the Revival of the Bataan Nuclear Power Plant

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**Abstract.** This paper critically examines the moral implications of reviving the Bataan Nuclear Power Plant (BNPP) of the Philippines under the lens of the Reframed Consistent Ethic of Life (RCEL). Despite the economic benefits perceived by the Philippine government, the potential risk posed by nuclear waste raises concerns about the safety and degradation of affected life forms, both human and non-human. In this relation, the paper presents the pros and cons of nuclear energy by stressing the risks and threats to life it carries. It also questions the adequacy of the government's plan for nuclear waste disposal given the geopolitical and security issues involved. With these, the paper recommends the following moral perspectives, namely, redefining our understanding of God's presence in creation, reframing our notion of the sanctity of life, and fighting against our human greed. Finally, the paper contends that we have the moral obligation to safeguard all lives, both human and non-human. This is our worship toward the God of life, our accountability to future generations, our sustaining of our only common home, and our solidarity for the common good of all that exists.

**Keywords.** Bataan Nuclear Power Plant; nuclear energy; morality; ecology; reframed consistent ethics of life; creation

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In light of the Philippine government's plans to revive the Bataan Nuclear Power Plant (BNPP),[1] a growing concern regarding the harmful effects of nuclear waste for both humans and the environment is in the loop. Some science organizations and nationalist scientists have publicly opposed the BNPP's reopening, saying that its use poses dangers to human safety and the environment.[2] The fear of replicating in the Philippines the horrors of the infamous nuclear accidents at Three Mile Island, Chernobyl, and, recently, Fukushima was also raised in opposition to the rehabilitation of the nuclear plant.[3] On the other hand, however, perceived economic and national benefits tag along with the plan of reviving the BNPP. The country's recurring energy shortage will be resolved, opines the government, by the utility of nuclear energy. With this in mind, the previous administration under President Rodrigo Duterte had high hopes for nuclear energy addressing the increasing energy demands of the country in its release of Executive Order (EO) No. 164 entitled "Adopting a National Position for a Nuclear Energy Program, and for other Purposes."[4] Given EO 164, some government officials had voiced their support for the administration's action toward energy security given the negative

[1] E. Dela Cruz, "Philippines Approves Revival of Nuclear Power to Help Replace Coal," *Reuters* (March 3, 2022), available at https://www.reuters.com/business/energy/duterte-approves-inclusion-nuclear-power-philippine-energy-mix-2022-03-03/ (accessed October 21, 2022).

[2] J. Mangaluz, "Science Advocates Renew Call Against Bataan Nuclear Power Plant Revival," *Inquirer.net* (September 22, 2022), available at https://newsinfo.inquirer.net/1668766/science-advocates-renew-call-against-bataan-nuclear-power-plant-revival (accessed October 21, 2022).

[3] B. Pinlac, "Anti-nuclear Power Group Opposes Possible Rehab of Bataan Plant," *Inquirer.net* (May 25, 2022), available at https://newsinfo.inquirer.net/1602531/anti-nuclear-power-group-opposes-possible-rehab-of-bataan-plant#ixzz7fb1z6l93 (accessed October 21, 2022).

[4] Office of the President of the Philippines, *Executive Order No. 164: Adopting a National Position for a Nuclear Energy Program, and for Other Purposes*, available at https://www.officialgazette.gov.ph/2022/02/28/executive-order-no-164-s-2022/.

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impact of rising oil prices due to the Ukraine-Russian war.[5] The revival of the nuclear power plant is equally viewed as a boost to the country's economy and businesses which are highly reliant on electricity. Moreover, it can also serve as a deterrent for future power outages.

The Reframed Consistent Ethic of Life (RCEL) is a relevant moral perspective in the continuing conversation regarding the reopening of the BNPP. Given its more inclusive moral vision, it can serve as the basis of moral decisions concerning the rehabilitation of the nuclear plant. The RCEL's main thrust in this article gravitates toward the valuation of the sanctity of all forms of life and the care of our "common home."[6] Therefore, the article aims to provide an exposition concerning the moral grounds for the sanctity of all forms of life vis-à-vis our human obligation to care for all of God's creation, our common home. This moral principle will then be used as a moral lens concerning the BNPP (in particular) and nuclear energy utility (in general), most especially in the issue of generated nuclear waste.

This article first explores the pros and cons of nuclear energy alongside competing opinions regarding the reopening of the BNPP. However, the survey is not intentionally exhaustive given that the major aim of this article is to present not the advantages and disadvantages of nuclear power but rather the moral grounds of nuclear waste generation and its impact on human and non-human lives. Second, it will discuss the RCEL's moral stance on the acceptability of reviving the BNPP. Finally, the article concludes with three moral proposals vis-à-vis the BNPP.

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[5] L. Lectura, "Nuke Can Do," *BusinessMirror* (March 5, 2022), available at https://businessmirror.com.ph/2022/03/05/nuke-can-do/ (accessed October 21, 2022).

[6] Francis, *Laudato Si'*, no. 1, available at https://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html (accessed October 28, 2022).

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## The Pros and Cons of Nuclear Energy: A Brief Survey

Nuclear energy has been dubbed a low-carbon emission energy source.[7] Its proponents assert that it is the solution to the world's high carbon emission levels. They are convinced that it can positively mitigate currently unfavorable climate change. Moreover, nuclear power plants (NPPs) produce energy with less expense compared to coal-powered plants and the burning of biomasses.[8] Compared to other power sources and producers, nuclear power plants are also considered to be the most stable in terms of generating power.[9] They likewise operate with low costs, are a dependable energy source, and have a stable base load, low pollution output, adequate fuel availability, and a high energy density.[10] To the joy of many Filipinos, nuclear power plants can lower the price of electricity to ₱2 per kilowatt hour from current electricity costs of ₱6 per kilowatt hour.[11] The reduction of power outages in the country is an added benefit of employing nuclear power, and a consistent and lower-priced power supply can predictably

[7] M. Rosen & I. Dincer, "Nuclear Energy as a Component of Sustainable Energy Systems," *International Journal of Low-Carbon Technologies* 2:2 (2007): 109–125, here at 100.

[8] A. Ong, Y. Prasetyo, J. Salazar, J. Erfe, A. Abella, M. Young, T. Chuenyindee, R. Nadlifatin, & A. Redi, "Investigating the Acceptance of the Reopening Bataan Nuclear Power Plant: Integrating Protection Motivation Theory and Extended Theory of Planned Behavior," *Nuclear Engineering and Technology* 54:3 (2022): 1115–1125, here at 1115.

[9] J. Yap, "Towards a Balanced Assessment of the Viability of Nuclear Energy in the Philippines," *Journal of Environmental Science and Management* 24:2 (December 2021): 17–29, here at 23.

[10] Yap, "Towards a Balanced Assessment of the Viability of Nuclear Energy in the Philippines," 23–25.

[11] J. Alano, "The Pros and Cons of Reopening the Bataan Nuclear Power Plant," *Power Philippines* (September 19, 2016), available at https://powerphilippines.com/pros-cons-reopening-bataan-nuclear-power-plant/ (accessed November 18, 2022).

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lead to the lowering of prices of basic goods, commodities, and services that are reliant on electricity. It can open more technological progress in the country such as in education (especially given the high demand for hybrid educational learning modes), infrastructure (electricity-dependent machines and computerized equipment), and business (given that many businesses nowadays are migrating online). The IT sector, BPO companies (where many Filipinos work), schools, hospitals, government offices, supermarkets, households, etc. will all reap the economic benefits and convenience of nuclear power. Additional employment opportunities may be available as well.[12] These are but some of the advantages of having a nuclear power plant in the country, making the revival of the BNPP something that can feasibly improve the quality of life of most Filipinos.

As promising as these advantages of nuclear energy are, it has its own undeniable and inevitable dark side. First, it is expensive to build and run a nuclear power plant. The inception of the BNPP, for one, cost the Philippine government $1.9 billion.[13] It left the country with $2.3 billion worth of debt that was finally paid off in 2007.[14] Taxpayers kept paying, aware or unaware, the interest of over ₱1 billion until 2008 while the National Power Corporation paid ₱40 million for its annual upkeep.[15] Now, with the government's plan of rehabilitating the BNPP, additional costs and expenditures are foreseeable. Together with the four years needed to train operators for its commissioning, the BNPP's rehabilitation will cost another $1 billion,[16] which will become yet another debt to be shouldered by Filipinos.

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[12] Ong et al., "Investigating the Acceptance of the Reopening Bataan Nuclear Power Plant," 1123.

[13] World Nuclear Association, *Nuclear Power in the Philippines* (March 2022), available at https://bit.ly/46CHVO6 (accessed November 18, 2022).

[14] Alano, "The Pros and Cons of Reopening the Bataan Nuclear Power Plant."

[15] T. Santos, "Bishops Adamant: No to Nuclear Power," *Inquirer.net* (October 12, 2014), available at https://newsinfo.inquirer.net/644258/bishops-adamant-no-to-nuclear-power (accessed November 18, 2022).

[16] Alano, "The Pros and Cons of Reopening the Bataan Nuclear Power Plant."

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Second, nuclear accidents such as those at Three Mile Island, Chernobyl, and, recently, in Fukushima, Japan are foreseeable dangers. Similar nuclear crises have a high propensity for occurring in the Philippines given the country's susceptibility to natural calamities. Third, nuclear power plants produce radioactive wastes which are very harmful to both human and non-human lives. Fourth, nuclear power plants pose security threats as these are prime targets for terrorism. Lastly, these plants have a limited fuel supply—uranium and thorium, which fuel nuclear power plants, are finite natural resources. Once these resources are consumed, nuclear power plants can no longer run. Nuclear power can only be a temporary rather than permanent source of energy.[17]

The BNPP is also located inside a geological danger zone—it is within eight kilometers of Mt. Natib volcano and within 40 kilometers of three geologic faults.[18] An earthquake or the eruption of Mt. Natib could result in a nuclear meltdown like that of Fukushima in Japan. However, the nuclear wastes that all nuclear power plants produce comprise the biggest problem confronting the BNPP. Authorities around the world continue to face the great challenge of keeping nuclear waste in perpetual safety to avoid contaminating the planet. Nuclear waste has been proven to be highly radioactive and requires safe storage for about one million years before it fully decays.[19] To elaborate further:

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[17] Yap, "Towards a Balanced Assessment of the Viability of Nuclear Energy in the Philippines," 25.

[18] B. Dumaine, "The $2.2 Billion Nuclear Fiasco," *Fortune* (September 1, 1986), as cited by Yap, "Towards a Balanced Assessment of the Viability of Nuclear Energy in the Philippines," 20.

[19] C. Ro, "The Staggering Timescales of Nuclear Waste Disposal," *Forbes* (November 26, 2019), available at https://www.forbes.com/sites/christinero/2019/11/26/the-staggering-timescales-of-nuclear-waste-disposal (accessed November 21, 2022); International Atomic Energy Agency [IAEA], *Getting to the Core of Radioactive Waste: Managing the By-products of Nuclear Technologies to Protect People and the Environment*, 4, available at https://www.iaea.org/sites/default/files/18/10/radioactivewaste.pdf (accessed November 21, 2022).

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> High level waste consists mostly of spent fuel from reactors. Some countries also reprocess spent fuel, which gives rise to additional types of high level waste. All of this high level waste and spent fuel, when declared as waste, poses a sufficiently high enough radiological risk that a high degree of isolation from the biosphere is required for a long period of time.…[20]

Radioactive nuclear waste will outlive us. Relative safety from the hazards of nuclear waste is not assured for upcoming generations—while we might be safe now from nuclear waste radiation, those coming after us may not necessarily be. Our rigorous calculations for safety are never infallible. Hence, we cannot fully assure ourselves against future nuclear waste contamination. Nuclear waste does not promise us a safe future.

It is very unfortunate to know that all countries using nuclear power lack a "sustainable and safe solution for managing the vast volumes of nuclear waste."[21] This big amount of highly radioactive nuclear waste can definitively put the entire planet in great danger not just for the peoples of today but also those of tomorrow. As such, the issue of nuclear waste disposal in relation to the utility of nuclear power involves intergenerational justice. When the problem of nuclear waste is not fully resolved, we are placing our species and our common home on the verge of extinction. Thus, it is apt to ask: Do the short-term benefits of nuclear energy outweigh the long-term risks it brings to all?

## Reframed Consistent Ethic of Life: Moral Implications vis-à-vis the BNPP

Not only the country's economy and energy requirements but also, and more importantly, human and non-human lives are at stake in the revival of the mothballed BNPP. The defense of the sanctity of all forms of life is paramount vis-à-vis the BNPP. On this note, the

[20] IAEA, *Getting to the Core of Radioactive Waste*, 3.

[21] P. Roche, B. Thuillier, B. Laponche, M. Goldstick, J. Swahn, H. Ban, & R. Alvarez, *The Global Crisis of Nuclear Waste* (France: Greenpeace, 2018), 7.

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RCEL reminds us that a morally consistent demand for the respect and protection of human lives involves equal respect for and protection of non-human lives.[22] All forms of life and the right to life must be defended.[23] As such, we are morally justified in saying "no" to the commissioning of the BNPP in particular given the life-threatening, long-term risks of nuclear power plants. The precautionary principle counsels that "if there is greater proof that an activity does more harm than good, it must be prevented."[24] The dangers the BNPP poses to life overshadow its benefits. It is better to be safe than sorry; our moral stand must be on the side of safety. All developments must consider the safety of both humans and non-humans alike. In this case, governmental projects like the BNPP's reopening must give foremost consideration toward the protection of life through the prioritization of public safety. Developments, particularly human ones, must not be oblivious to this moral obligation. On this note, *Laudato Si'* further teaches that

> authentic human development has a moral character. It presumes full respect for the human person, but it must also be concerned for the world around us and "take into account the nature of each being and of its mutual connection in an ordered system." Accordingly, our human ability to transform reality must proceed in line with God's original gift of all that is.[25]

Substantial threats to life and human rights violations become blatant in activities ranging from uranium mining to nuclear waste disposal. For instance, one report says that miners in Nigeria who

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[22] See A. Aseneta, "The Consistent Ethic of Life of Joseph Cardinal Bernardin and the Crisis of Our Common Home," *Landas* 33:1 (2019): 37–62 for further and deeper discussion.

[23] J. Bernardin, "A Consistent Ethic of Life: Continuing the Dialogue," *The Priest* 40 (June 1984): 17.

[24] F. Cheever & C. Campbell-Mohn, "Principles of Environmental Law," *Britannica*, available at https://www.britannica.com/topic/environmental-law/Principles-of-environmental-law (accessed November 27, 2022).

[25] Francis, *Laudato Si',* no. 5.

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were exposed to highly radioactive ores were paid only $2 a day.[26] Moreover, aside from being underpaid, these miners were placed in a life-threatening situation—they contracted bone and lung cancer due to their exposure, even at low concentrations, to these highly radioactive materials. The problem is further aggravated with uranium milling where the waste product of ore processing is "normally dumped as sludge in special ponds or piles, where they are abandoned and uncovered." The sludge reportedly contains about 85% of the ore's original radiation along with other heavy metals and toxic contaminants that become susceptible to dispersion throughout the environment.[27] Climactic conditions such as rain, wind, and floods spread these toxic contaminants to bodies of water and the surrounding air and soil, risking not only human lives but the environment as well by poisoning the local flora and fauna. In addition, "seepage from tailings piles is another major hazard posing a risk of contamination to ground and surface water." There are also the clouds of dust from controlled explosions at the open pit mines which carry radioactive gas toward towns proximate to the mines.[28] Radioactive contamination definitively is a surefire threat to both the quality of life and life per se. Such human-induced environmental pollution is a sin.[29] It is an assault on life and an insult to God, the Creator.[30]

Alongside the contamination of the environment and health problems caused by the mining of nuclear fuel near towns, there are the resulting birth defects, congenital illnesses, infertility, miscarriages, and pre-mature deliveries.[31] These negative effects on human populations

[26] Roche et al., *The Global Crisis of Nuclear Waste*, 20.

[27] Roche et al., *The Global Crisis of Nuclear Waste*, 18.

[28] Roche et al., *The Global Crisis of Nuclear Waste*, 19.

[29] An intimation of Pope Francis's notion that it is a sin to contaminate the earth's waters as these are indispensable in supporting all life forms (*Laudato Si'*, nos. 8 & 28).

[30] Francis, *Laudato Si'*, nos. 8 & 28.

[31] Roche et al., *The Global Crisis of Nuclear Waste*, 20.

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near the mines must also have analogous, if not equal, consequences for animals and plants. Needless to say, corporate greed and the dismissal of human and environmental safety are nameable culprits of this sad condition—all for the sake of attaining economic gains from a nuclear power source. All these moral violations toward life will come along with the Bataan Nuclear Power Plant when it is commissioned.

The disrespect for the sanctity of all forms of life, of God's creation, climaxes with nuclear waste—in its disposal and storage. By the fact that nuclear waste will outlive us, it is clear that nuclear power plants are a definitive threat to all forms of life from their inception down to waste disposal. The BNPP will be no exception the moment it operates. Therefore, given that no country has yet devised a failsafe storage and disposal system for high-level nuclear waste, we risk exposing the Philippines (in the case of the BNPP) or the entire planet to deadly radioactive contamination. The Philippines' climatic conditions, such as frequent typhoons, can also aggravate contamination or high-level nuclear waste leaks by spreading these across a much wider area. Are we ready for such a disaster?

Besides the revival of the BNPP, do the authorities have a concrete and failsafe plan for nuclear waste disposal? At the time of the writing of this paper, the suggestion from the Philippine Nuclear Research Institute was to place the BNPP's nuclear waste on Pag-asa Island in the West Philippine Sea. However, this suggestion was judged as irresponsible and problematic.[32] It violates guidelines from the International Atomic Energy Agency (IAEA) which mandate that

> nuclear waste disposal areas should be located away from populated or ecologically sensitive areas; should be in geologically stable areas safe from risks from earthquakes, flooding, or other hazards; should be located in areas where the risk to populations from transporting the waste from the nuclear facilities is minimized as much as possible; and should be in locations where site security can be easily maintained.[33]

[32] "Keep Nuclear Waste Out of WPS," *The Manila Times* (June 15, 2022), available at https://www.manilatimes.net/2022/06/15/opinion/editorial/keep-nuclear-waste-out-of-wps/1847443 (accessed November 28, 2022).

[33] "Keep Nuclear Waste Out of WPS."

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Transporting nuclear waste alone poses dangers as accidents during transport can lead to the contamination of the West Philippine Sea and all life forms therein. The geopolitical contest between China and the Philippines over the territory suggests a heightened security problem. Once the BNPP is revived and the Pag-asa Island nuclear waste storage facility opens, will China not threaten, on the basis of geo-political contestation, our government or, to a greater extent, our sovereignty by holding the storage facility hostage? Moreover, even if the authorities find a much better and safer repository for nuclear waste, are we ready for comparable or greater contamination like that of the Hanford nuclear waste dump site in the United States?[34] Rodolfo notes that

> waste disposal is the very worst, unsolvable problem [of] nuclear weapons and power plants! People must understand that should the Bataan Nuclear Power Plant (BNPP) be activated, its wastes will be impossible to get rid of, and will permanently harm the environment.[35]

Given the Philippines' inefficiencies in managing household wastes and landfills, we cannot be certain that nuclear waste will be managed well. Indeed, it appears that Philippine authorities do not have the capacity to manage nuclear waste effectively. Let us take note of the technologically advanced nuclear power plant in Fukushima, Japan. Despite their safety precautions and advancements in technology, they still failed to stop the nuclear meltdown and the spread of nuclear radiation. The event displaced millions of people from their homes, never again to return, exposed persons to deadly nuclear radiation, and poisoned the environment.[36] Our authorities must be wise enough to learn from this very disastrous event. How well-equipped and prepared

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[34] K. Rodolfo, "The Hanford Site: Where Nuclear Pollution Began and Still Reigns," *Rappler* (April 20, 2022), available at https://www.rappler.com/voices/thought-leaders/opinion-hanford-site-where-nuclear-pollution-began-still-reigns/ (accessed November 28, 2022).

[35] Rodolfo, "The Hanford Site: Where Nuclear Pollution Began and Still Reigns."

[36] See A. Sugimoto, S. Krull, S. Nomura, T. Morita, & M. Tsubokura, "The Voice of the Most Vulnerable: Lessons from the Nuclear Crisis in

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are our national and local governments if such things happen in our country? How competent will authorities be when high levels of radiation wreak havoc on nearby areas proximate to the BNPP? How long can our government keep all life forms within the nuclear waste repository safe from being contaminated? Or, perhaps, the better question is this: do we have a nuclear waste repository that is better off than that of Fukushima to assure us of public and environmental safety? On this note, we must consider that "irreducible uncertainties exist in even the most rigorous calculations."[37] The BNPP and nuclear power plants in general, with their high potential for catastrophe, are "just too dangerous to exist, not because we do not want to make them safe, but because, as so much experience has shown, we simply cannot [do so]."[38] What we refuse to learn from history will be repeated for us to learn eventually. We should be wise enough not to let that happen while we still can.

The revival of the BNPP likewise calls for intergenerational justice as the long-lasting lifespan of high-level nuclear waste endangers the lives of upcoming generations. With the BNPP's definitive nuclear waste and accompanying life-threatening repercussions, we are putting the future and lives of our children's children on the brink of extinction instead of keeping them safe. With the dangers of nuclear power plants such as the BNPP, we are doing a grave injustice to future Filipinos. Moreover, the already forever-raped environment (forests and mountains destroyed due to incessant mining) can never fully recover from the further environmental abuse brought by harnessing nuclear energy. We will be leaving upcoming generations of all life forms a devastated environment.

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Fukushima, Japan," *Bulletin of the World Health Organization* 90:8 (August 1, 2012): 629–630, https://doi.org/10.2471/BLT.11.094474.

[37] J. Downer, "Disowning Fukushima: Managing the Credibility of Nuclear Reliability Assessment in the Wake of Disaster," *Regulation & Governance* 8:3 (July 22, 2013), 17, https://doi.org/10.1111/rego.12029.

[38] Downer, "Disowning Fukushima: Managing the Credibility of Nuclear Reliability Assessment in the Wake of Disaster," 17.

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Everything in our common home is interconnected,[39] and what negatively affects our environment inevitably affects us. Such afflictions will be carried down to succeeding human and non-human generations. Indeed, the intergenerational injustice that accompanies the operation of nuclear power plants equally amounts to inflicting injustice toward God. It is an implied refusal to love our God who graciously reveals the God-self by bestowing abundant life in our common home. It is an offense to the life God abundantly gifted creation with. Offending life is tantamount to offending God who so generously gifted creation with life. As God's stewards, ought we not do the same? As stewards of creation, honoring God's graciousness to creation must mean pursuing human development projects that are life-promoting and -defending rather than ventures that are motivated solely by short-sighted economic gains and false human advancement.

## Reframed Consistent Ethic of Life: Moral Proposals

*Reframing our notion of God's presence.* The prospect of reopening the BNPP to address our country's energy requirement must morally consider the theological principle of God's abiding presence in the world (Rom. 1:19). This principle can aid our moral attitude toward our common home apropos of our moral stance for the sanctity of life. W. Berry notes that we need to reconstruct our notion of "God's house."[40] He intimates that there is a need for us to rectify our understanding of God's "presence" in creation. Our notion of God's house (or God's presence) should not be identified exclusively with church buildings or holy places like the city of Jerusalem, the Vatican, pilgrimage sites, etc. It should not be exclusively and limitedly "locational." Rather, it must be inclusive of all that God has made,

[39] Francis, *Laudato Si'*, no. 70.

[40] W. Berry, "Christianity and the Survival of Creation," *CrossCurrents* 43:2 (1993): 153. In this essay, Berry intimates "house" to God's "presence" regarding God's relationship to the world.

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meaning that God's "presencing" should be recognized as omnipresent in *all* of creation—God is in all things. The whole of creation is made by God and is indwelt by God's Spirit (Gen. 1:1–30). When God made everything in creation, God hallowed every single being in it. And, more importantly, *God loves all God has made.*

Our practice of "locationalizing" God can only be suspect in our abuses toward God's creation. Such localization of God's presence has blinded us for many years to the hallowedness of all creatures. It has hindered us from seeing that God abides in farms as much as God dwells in our temples. Thus, when we empty our mountains of uranium and other radioactive substances, we step on our brethren's human dignity and endanger human and non-human lives. All because we fail to recognize God's holy presence in all that there is. We ought to remind ourselves that "creation is nothing less than the manifestation of God's presence in creatures."[41]

Our full recognition of God's holy presence in all creatures informs our moral position regarding the employment of nuclear energy, in general, and the BNPP, in particular. And when we perceive the sanctity of life under this lens, we learn that we have a moral commitment to all that exists. If we thus conceive of development for the Philippines, we need to see development with respect to that divine presence abiding in every single part of our common home. Consequently, we need to be vigilant of and evaluative toward prevailing models of global development that we employ at the service of this country's progress so that these truly serve the common good and render respect to the sanctity of all forms of life.[42] Simply put, reframing our notion of God's presence means understanding that God's self pervades the whole of

[41] P. Sherrard, *Human Image: World Image* (Ipswich, Suffolk, England: Golgonooza Press, 1992), 152.

[42] Catholic Bishops' Conference of the Philippines [CBCP], "An Urgent Call for Ecological Conversion, Hope in the Face of Climate Emergency" (July 16, 2019), available at https://cbcpnews.net/cbcpnews/an-urgent-call-for-ecological-conversion-hope-in-the-face-of-climate-emergency/ (accessed November 25, 2022).

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creation. And this "presence" must serve as a moral yardstick in our defense of the sanctity of life against those that jeopardize it, such as the BNPP.

*Reframing our notion of the sanctity of life.* The Reframed Consistent Ethic of Life reminds us that "protecting and promoting the life and dignity of the human person at every stage and in every circumstance entails safeguarding our common home as this is one of the conditions necessary for upholding and sustaining human life and dignity."[43] Concomitant to our rectified notion of God's presence in creation is our reframed understanding concerning the holiness of life. "Sanctity of life" must not be the exclusive turf of human beings alone. It must extend to non-human lives. God did not sanctify our human species only. God did so equally with the rest of creation. Holiness is not exclusively human. This reframed understanding affirms the inherent value and sanctity of non-human creatures.[44] As a consequence, God's holiness can also be revealed by non-human creatures as much as their lives are hallowed by God.

Our acknowledgment of the holiness of life for all that exists should measure our Christian discipleship. No steward of creation, no true disciple of Christ, can genuinely claim to be such without a sincere acceptance that non-human lives are also sanctified. They, too, possess deep meaning and value.[45] A true Christian disciple has a loving gaze toward all that God has created, and the moral consequence of this is our protection of all lives against the hazards of nuclear power plants. This is our stewardship-in-action, our discipleship-in-flesh. When life is put in great danger, not just today but also tomorrow, with the employment of nuclear power for the sake of short-sighted progress and economic benefits, we are morally compelled to stand and

[43] Aseneta, "The Consistent Ethic of Life of Joseph Cardinal Bernardin and the Crisis of Our Common Home," 60.

[44] *Catechism of the Catholic Church* (Rome: Libreria Editrice Vaticana, 2003), no. 339.

[45] Paul VI, *Lumen Gentium*, no. 36.

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defend it at all costs. Doing so is our moral "enfleshment" of Christ's preaching of the gospel of life (cf. Mk. 3:4; Jn. 10:10).[46]

The activation of the BNPP is in the moral position of threatening life's sanctity. Focusing rather on non-life-threatening sources of energy must be our better moral course of action. The Philippines is rich with renewable energy sources such as sunlight, wind, water, ocean, geothermal, etc.—we only have to harness their power. Moreover, these have already been proven to be effective sources of energy. Efficiently collected solar energy, for example, has already helped to provide electricity to communities devastated by Typhoon Pablo in Mindanao.[47] Renewable energy is viable in the country and makes for better moral options. "From an ecological standpoint, renewable energy is the most sustainable because it is generally cleaner than fossil fuels or nuclear energy, and some forms of renewable energy (especially wind and solar) are potentially inexhaustible."[48]

The Philippine government should not solve our energy crisis with the long-term ecological hazards and damage that will be brought about by reopening the BNPP.[49] Its solution needs to prioritize utmost respect for all lives, human and non-human alike. Hence, it must pursue projects that respect human dignity and ecological integrity. It must remember that

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[46] For further discussion on the topic of Jesus preaching life, see X. Leon-Dufour, ed., *Dictionary of Biblical Theology*, 2nd ed. (Maryland, USA: The Word Among Us Press, 1988), 315.

[47] G. Lacorte, "Regreening Mindanao Grid," *Inquirer.net* (November 27, 2022), available at https://newsinfo.inquirer.net/1698281/regreening-mindanao-grid (accessed December 3, 2022).

[48] E. Biviano, D. Cloutier, E. Padilla, C. Peppard, & J. Schaefer, "Catholic Moral Traditions and Energy Ethics for the Twenty-First Century," *Theology Faculty Research and Publications*, Marquette University (2016): 24, available at https://epublications.marquette.edu/theo_fac/625/ (accessed November 27, 2022).

[49] This is an intimation to the CBCP's "What Is Happening to Our Beautiful Land" (January 29, 1988), available at https://cbcponline.net/what-is-happening-to-our-beautiful-land/ (accessed November 25, 2022).

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> energy systems that destroy the homelands and livelihoods of people in diverse places around the world contradict the protection of life. Life itself relies on a broader ecological balance that transcends geographic and temporal boundaries, and includes the conditions that support all of life on earth, now and in the future.[50]

*We must morally fight against human greed.* Rising electricity rates and prices of goods are results not just of the Philippines' energy crisis but also, undeniably, of unbridled human greed, of corruption. Unhampered greed fuels corruption in the ranks of government administrators and employees. And this is not new to us! A corrupt government administration plus corrupt government officials equal corporate greed—a "structural sin."[51]

Greed in its very nature is anti-poor. It robs the poor, who are the first victims of human greed, of what they justly deserve by allocating more resources of our common home to a few groups or individuals. Likewise, they are the first and the last to suffer nuclear energy's biological hazards caused by human greed. Opening the BNPP might probably ease our energy crisis, yet with greed left unchecked, we will continue to suffer, especially the poor. Indeed, greed must be diminished not just within the ranks of government workers and officials but also in every Filipino household. Greed does not just happen in government offices. It likewise happens and gets nurtured at home. Take, for example, our wanton use of goods and our highly consumeristic "throwaway culture" today. They are but products of greed—of inordinately wanting more. The greed that began at home has proliferated into a wider scale of the public sphere. It must be extinguished accordingly in our immediate environment if we truly want to fight it. We do so by refusing to be part of the "throwaway culture," living a simple lifestyle, and, of foremost importance, through

[50] Biviano et al., "Catholic Moral Traditions and Energy Ethics for the Twenty-First Century," 8.

[51] John Paul II, *Sollicitudo Rei Socialis*, no. 36, available at https://www.vatican.va/content/john-paul-ii/en/encyclicals/documents/hf_jp-ii_enc_30121987_sollicitudo-rei-socialis.html (accessed November 27, 2022).

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the proper formation of our conscience.[52] It is at this point where stakeholders of society (churches, schools, local government units, non-governmental organizations) need to collaborate.

Fighting against greed leads to a more Biblically-attuned notion of domination which is technically about "tending God's garden."[53] As *imago Dei*, we are not set on top of the hierarchy of creatures; rather, we are in God's image because, like God, we are tasked to tend and care for the world, the garden of God. With this, we ought to see ourselves with other creatures within the circle of life instead of conceiving ourselves as being at the apex of the pyramid of beings. If we find ourselves irresponsibly dominating God's creation under the pretense of being given the task to "dominate," this indicates that our understanding of domination is already fueled by greed and not by the Holy Scriptures. Domination untouched by greed denotes the kind of stewardship that is not exaggeratedly anthropocentric.[54] Our fight against human greed converts the excessive anthropocentric notion of domination into a genuine care for our "common home." Only with greed extinguished can we sing, with St. Francis of Assisi, his *Canticle of Brother Sun and Sister Moon.*

## Epilogue

As much as we look forward to the end of the energy crisis in the Philippines and a better future vis-à-vis the planned governmental revival of the mothballed BNPP, we must also not forget that our first moral obligation to the country is the defense of all God's creation. Our moral judgments must be colored by this principle on which all

[52] This author will not elaborate further the process of attaining a well-formed conscience since it is not the main concern of this article. This author rather suggests that the reader consult Francis's *Laudato Si'* for the sufficient exposition on this matter.

[53] Francis, *Laudato Si'*, no. 67.

[54] For further discussion, see Francis, *Laudato Si'*, nos. 115–121.

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else hangs. Ceasing to see the value of all creation is tantamount to existential suicide. The value we give to creation is essential to our humanity and is equally our highest form of worship of the God of life (Mk. 12:27). When proponents of the BNPP marketed nuclear energy as climate-friendly, they belied the "enormous and documented ecological and human risks and harms associated with extraction, processing, enrichment, waste storage, and nuclear accidents, as well as with uranium's potential use in weapons production."[55]

We are accountable to future generations. And this accountability is being challenged today in our moral stance regarding the BNPP. Are we not supposed to leave a safer world for our children instead of a nuclear-threatened future? Our moral action that defends all forms of life is our moral response—a response that sees the inherent value of all that God has created. Our defense for all forms of life is our sustaining of the earth and our solidarity for the common good. It is our act of justice for all generations to come, humans and non-humans alike. And it is our very own contribution toward the elimination of the sufferings of our world groaning in pain (Rom. 8:22). The poignant words of Noah Harari about *us* tell of how we are and what have we done so far in our finite existence in this common home:

> Unfortunately, the Sapiens regime on earth has so far produced little that we can be proud of. We have mastered our surroundings, increased food production, built cities, established empires and created far-flung trade networks. But did we decrease the amount of suffering in the world? Time and again, massive increases in human power did not necessarily improve the well-being of individual Sapiens, and usually caused immense misery to other animals.
>
> Moreover, despite the astonishing things that humans are capable of doing, we remain unsure of our goals and we seem to be as discontented as ever. We have advanced from canoes to galleys to steamships to space shuttles—but nobody knows where we're going. We are more powerful than ever before, but have very little idea what to do with all that power. Worse still, humans seem to be more irresponsible than ever.

[55] V. Sharpe, "'Clean' Nuclear Energy? Global Warming, Public Health, and Justice," *The Hastings Center Report* 38:4 (2008): 17, DOI: 10.1353/hcr.0.0040.

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> Self-made gods with only the laws of physics to keep us company, we are accountable to no one. We are consequently wreaking havoc on our fellow animals and on the surrounding ecosystem, seeking little more than our own comfort and amusement, yet never finding satisfaction.
>
> Is there anything more dangerous than dissatisfied and irresponsible gods who don't know what they want?[56]

The issue surrounding the moral implications of the BNPP is not just about the energy crisis or economy of the Philippines but, more importantly, about the future of our common home, God's creation, and all the lives that depend on it. It is a moral call to defend all forms of life in solidarity with all of God's creation. Here lies our true human moral fulfillment and living out of our sincere worship of God, the Lover of all that exists.

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[56] Y. Harari, *Sapiens: A Brief History of Humankind* (London: Harvill Secker, 2014), afterword.

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