

ETHICO-LEGAL FOUNDATIONS FOR THE ENFORCEMENT OF ENVIRONMENTAL STANDARDS IN THE NIGERIAN ELECTRICITY INDUSTRY*

Abstract

This study made a holistic consideration of the ethical ideologies on environmental standards. It also made a critical analysis of the statutory provisions for handling environmental concerns in the Nigerian electricity industry. The methodology adopted is doctrinal using descriptive and analytical examination of primary sources such as statutes, regulations, case law, and secondary sources like journal articles, textbooks and internet materials on the subject. The Nigerian Constitution makes provision for the preservation of the environment from the adverse effects of activities in the Nigerian electricity industry and provides the imprimatur for the enactment of other laws on the same subject. These legal provisions are informed by the ecocentric perception that preservation of the environment as a whole is key to sustainable development of the society. Though loopholes exist in these laws, procuring an amendment of the Constitution so as to make its provisions on environmental protection justiciable among other statutory amendments will help Nigeria develop an eco-friendly electricity industry.

Keywords: Enforcement, Law, Ethics, Environmental Standards, Nigerian Electricity Industry.

1. Introduction

Energy is central to all human activities and it is needed to support development.¹ Indeed, the economic activities of production and consumption require the use of energy.² Of all the forms of energy, electrical energy, or better put, electricity is arguably the most important human discovery, nay, achievement. It has made life comfortable and is used for a myriad of purposes.³ Electricity has helped to remove darkness and increase human activity. Powerful lights are used in factories, schools, hospitals and other places where men have to work or live. Men are able to go anywhere even in the darkest of nights.⁴ Electricity has also enabled men to increase the production of goods, which are distributed throughout the world for the comfort of people.⁵ Electricity is even used for the treatment of people who suffer from peculiar diseases. In short, the use of electricity has changed the lives of men to such an extent that life without it is almost unthinkable.⁶ It is therefore fixed, like the Rock of Gibraltar, that the provision of regular, affordable and efficient electricity is crucial for the growth, prosperity, national security as well as the rapid industrialization of any society.⁷ It is also a truism that any nation that desires to develop ignores the power sector to its peril.⁸ Indeed, the above position throws more light on the reasons behind the economic crises bedeviling Nigeria as a country. According to Amadasun:

It is generally acknowledged that the present epileptic state of the electrical power supply situation in the country is one of the major causes (and perhaps the most important cause) of the economic underdevelopment of the country. It is the bane of the manufacturing industry in particular, and a major factor in the increased cost of doing business in all other sectors of the Nigerian economy.⁹

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¹AI Kankara, 'Energy-Environment Interactions: Potentials and Problems of Renewable Energy in Nigeria', (2013) 3(1) *Advance in Electronic and Electric Engineering*, 25 – 30, 25.

²GC Chow, 'China's Energy and Environmental Problems and Policies', <<http://www.princeton.edu/~gchow/China's%20energy%20and%20environment%20APJAE2.doc>> Last accessed on 18th January, 2021. Energy comes in various forms which include kinetic, potential, mechanical, chemical, electric, magnetic, radiant, nuclear, ionization, elastic, gravitational, rest, thermal, heat, solar, etc. See S Crosbie, *The Science of Energy – A Cultural History of Energy Physics in Victorian Britain* (Chicago: University of Chicago Press, 1998) p. 7.

³B Crowell, *Light and Matter* (California: Fullerton, 2011) p. 11.

⁴S Crosbie, *op. cit.*

⁵*Ibid.*

⁶*Ibid.*, p. 8.

⁷OJ Iseolorunkanmi, 'Issues and challenges in the Privatized Power Sector in Nigeria', (2014) 6(1) *Journal of Sustainable Development Studies*, 161 – 174, 162.

⁸ *Ibid.*

⁹M Amadasun, 'The Nigerian Electricity Supply Industry: Status, Challenges and Some Ways Forward', <<http://akindelano.com/wp-content/uploads/2014/03/Lecture-on-Nigerian-Electricity-Supply-Industry-190512.pdf>> Last accessed on 18th January, 2021.

Electricity can be generated from fossil fuels like petroleum, natural gas, coal, and from solar, wind, geothermal and nuclear energy conversion. Fossil fuels are generally not renewable and in limited supply, not to mention the impact of their extraction and combustion on the environment. Considering this, growing emphasis is now being placed on renewable sources such as hydroenergy and more recently, bioenergy, for the generation of electricity.¹⁰ Be that as it may, the truth remains that the use of bioenergy and hydroenergy as sources of electric power are not without their environmental impacts. Large areas of land that would have otherwise been available for agricultural or other uses may be lost, dams may fail resulting in loss of lives and property, and the use of some conversion technologies that involve combustion of biomass may result in air pollution, Greenhouse Gases emission, climate change, etc.¹¹ Since the use of any source of energy has some environmental cost, the drive towards sustainable development in the Nigerian electricity industry must embrace the articulation and enforcement of such standards that enhance the state of the environment.

2. Meaning of Environment and Environmental Standards

Generally, the term 'environment' is inherently technical in scope and application. This generally accounts for difficulties in finding a uniform and generally acceptable definition of the terminology.¹² The Oxford Advanced Learner's Dictionary defines the term 'environment' as 'the conditions that affect the development of something; the physical conditions that something exists in; ...the natural world in which people, animals and plants live....'¹³ The word environment is derived from an ancient French word *environner*, meaning to encircle.¹⁴ Environment, in ordinary usage, is defined as our surroundings, especially material and spiritual influences which affect the growth, development and existence of a living being.¹⁵ According to Shelton and Kiss,

By broadly applying to surroundings, environment can include the aggregate of natural, social and cultural conditions that influence the life of an individual or community. Thus, environmental problems can be deemed to include such problems as traffic congestion, crime, and noise.¹⁶

Environment has also been defined as a product of man's understanding and experience of his surroundings, and is perpetually shaped by man's usage and interaction with it.¹⁷ Hence, the United Nations Stockholm Conference on Human Development asserted that, 'man is both creature and moulder of his environment which gives him physical sustenance and affords him the opportunity for intellectual, moral, social and spiritual growth.'¹⁸ Environment has also been viewed as a complex relationship existing between the ecosystem and its inhabitants.¹⁹ Scientific explanation contends that environment is the product of a complex ecological system in which human beings and other living and non-living organisms co-exist.²⁰ Environment

¹⁰Hydroenergy is a renewable source of energy which uses the force or energy of moving water to generate power. Bioenergy, on the other hand, utilizes energy from biomass for the same purpose. See B Crowell, *op. cit.*, pp. 13 – 14.

¹¹ GN Alekseev, *Energy and Entropy* (Moscow: Mir Publishers, 1986) p. 45.

¹² OG Amokaye, *Environmental Law and Practice in Nigeria* (Akoka: University of Lagos Press, 2004) p. 3.

¹³S Wehmeier (ed), *Oxford Advanced Learner's Dictionary of Current English* (6th edn, Oxford: Oxford University Press, 2000) p. 389.

¹⁴ D Shelton & A Kiss, *Judicial Handbook on Environmental Law* (Stevenage: Earth Print, 2005) p. 4.

¹⁵ OG Amokaye, *op. cit.*

¹⁶D Shelton & A Kiss, *op. cit.* This view is in consonance with that offered by Wilkinson and Wyman to the effect that the term 'environment' refers to all the interesting factors and circumstances that surround, influence and direct the growth and behaviours of individual beings, groups, species and communities. See FF Wilkianson & M Wyman (eds), *Environmental Challenge: Learning from Tomorrow's World* (London: Althouse Press, 1986) p. 1. See also JG Rau & DC Wooten (eds), *Environmental Impact Analysis Handbook* (New York: McGraw Hill, 1980) p. 3. This general definition is rejected by Bell as too sweeping and subjective because it encompasses any relative object within any given surroundings. See S Ball & S Bell, *Ball & Bell on Environmental Law* (2nd edn, London: Blackstone Press Ltd, 1991) p. 4.

¹⁷ OG Amokaye, *op. cit.*, p. 4.

¹⁸United Nations, *Report of the United Nations Conference on Human Development and Environment, Stockholm 1972* (New York, 1972), p. 3, cited in OG Amokaye, *ibid.* Also, the United Nations General Assembly (UNGA), in adopting the environment ideals in the World Charter for Nature emphasized the centrality of man to the environment. The UNGA declared that man is part of nature and his life depends on the uninterrupted functioning of the natural system which ensures the supply of energy and nutrients to man. See UNGA Resolution 7 (XXXVII) of 28th October 1982, cited in OG Amokaye, *ibid.*

¹⁹ OG Amokaye, *ibid.*

²⁰In this context, environment is characterized and classified into two broad categories: physical and cultural. See *Ibid.* The physical environment is the natural environment, which consists of the biosphere, atmosphere, hydrosphere, lithosphere and their inherent resources. This accords with the view expressed by Shelton and Kiss that geographically, environment can refer to a limited area or encompass the entire planet, including the atmosphere and stratosphere. See D Shelton & A Kiss, *op. cit.* The cultural environment generally encompasses the way of life of a set of people in a specific location including human settlements, cultural, historical and religious aspects of human activities. See JG Rau & DC Wooten (eds), *op. cit.* This holistic definition of environment accords with that offered by the International Union for Conservation of Nature (IUCN) when it defined the environment as the totality of nature and natural resources, including the cultural heritage and the infrastructure essential for socio-economic activities. See OG Amokaye,

is perceived today in its totality by the recognition of the intrinsic relationship between man and natural environment and the quest to secure harmonious relationship with one another.²¹

Indeed, statutory definition of environment in most legal instruments is extensive and integrative in nature and incorporates the natural, human and non-living inhabitants of the planet.²² For example, section 37 of the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act²³ defines environment as including water, air, land and all plants and human beings or animals living therein and the relationships, which exist among these or, any of them. Similarly, the International Convention on Civil Liability for Environmental Damage includes in its definition of 'environment' natural resources both 'biotic' and 'abiotic' thus extending the scope of environment not only to the natural environment but also to the man-made environment, including man-made landscapes, buildings and objects which form part of man's cultural heritage. The definition also recognizes the interaction among various elements of the environment.²⁴ Thus, the 'environment' includes the ways in which the environmental media interact with one another and the ways in which they interact with the man-made environment, the fauna and flora which inhabit them.²⁵

Environmental standards are the statutory rules, regulations and other set administrative procedures implemented for the treatment and maintenance of the environment.²⁶ Environmental standards are typically set by government and may differ depending on the type of environmental activity. It can include the prohibition of specific activities, mandating the frequency and methods of monitoring of specific activities, and requiring of permits for specific activities.²⁷ Environmental standards may be used produce quantifiable and enforceable laws that promote environmental protection. The basis for the standards is determined by scientific opinions from varying disciplines, the views of the general population, and social context. As a result, the process of determining and implementing the standards is complex and is usually set within legal and administrative contexts.²⁸ The conception of environmental standards is based on the supposition that humans are permanently interlinked with their surroundings, which are not just the natural elements (air,

op. cit. According to the International Court of Justice (ICJ), 'Environment is not an abstraction but represents the living space, the quality of life and the very health of human beings, including generations unborn.' See the case of *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, ICJ Reports, 1996, pp. 241 – 242. The legal approach to definition of the 'environment' is to separate regulations into broad categories. Salter has suggested three groups. Under a heading of 'natural environment', protection of environmental media is included. A second category is the 'man-made environment' including the cultural heritage. A third category concerns 'human environment', including regulations on food content, products, safety issues, leisure and economic health (consumer protection, eco-labelling, and so forth). Further categories could be indoor and working environment, but in Salter's distinctions these should probably be treated as sub-categories of the 'man-made environment'. See JR Salter, 'European Environmental Law' in *International Environmental Law and Policy Series*, (1994) cited in M Larsson, 'Legal Definitions of the Environment and of Environmental Damage', <<http://www.scandinavianlaw.se/pdf/38-7.pdf>> Last accessed on 13th February, 2021. Rodgers uses the categories of 'human' (including health, social and other man-made conditions) versus 'natural' (including the physical condition of the land, air and water) environment. See WH Rodgers, *Environmental Law* (St. Paul: West Publishing Co., 1977) p. 1. Backer uses the categories social, physical, internal (working environment) and external (natural) environment. See IL Backer, *Innføring i naturressurs- og miljørett* (2 utg, Oslo: Ad Notam Forlag, 1995) p. 25. Sands notes 'four possible elements' included in international acts, '(a) fauna, flora, soil, water, and climatic factors; (b) material assets (including archaeological and cultural heritage) (c) the landscape and environmental amenity; and (d) the interrelationship between the above factors.' See P Sands, *Principles of International Environmental Law* (Vol. 1, Manchester: Manchester University Press, 1995) p. 629.

²¹OG Amokaye, *op. cit.*, p. 5. Kalu, in apparent support of this position, defined 'environment' as comprising prevalent human attitudes, organizational arrangements or dispositions, governmental policies and programs, as well as socio-cultural and economic forces. See I Kalu, *Disability and Human Rights: Issues and Prospects for Development* (Lagos: Pan Cerebra, 2004), p. 11.

²² *Ibid.*

²³National Environmental Standards and Regulations Enforcement Agency (Establishment) Act No. 25 of 2007. This Act repealed the Federal Environmental Protection Agency Act, Cap. 131 *Laws of the Federation of Nigeria* 1990, Cap. F10 *Laws of the Federation* 2004. The definition of 'environment' in s. 37 of the NESREA Act is *ipsissima verba* with that of s. 38 of the repealed FEPA Act. The 1991 Bulgarian Environmental Protection Act (as amended 2001), in s. 1(1), defines 'environment' as a complex of natural and anthropogenic factors and elements that are mutually interrelated and affect the ecological equilibrium and the quality of life, human health, the cultural and historical heritage and the landscape. Also, the 1993 Slovenian Environmental Protection Act, in Art. 5(1), defines 'environment' as that part of nature which is or could be influenced by human activity.

²⁴1993 International Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment (1993)32 ILM 1228, Art. 2(10).

²⁵Other notable international bodies, such as the European Economic Commission (EEC) adopt this holistic definition when it defines environment as 'the combination of elements whose complex interrelationships make up the settings, surroundings and conditions of life of the individual and of the society as they are and as they are felt.' See EEC Council Regulation No. 1972/84 of 28th June 1984 on 'Community Action Programme on the Environment', cited in OG Amokaye, *op. cit.*

²⁶K Pinkau, *Environmental Standards: Scientific Foundations and Rational Procedures of Radiological Risk Management* (Berlin: Springer, 1998) p. 45.

²⁷ZJB Plater, 'Human-Centered Environmental Values Versus Nature-Centric Environmental Values: Is This the Question?' (2014) 3(2) *Michigan Journal of Environmental & Administrative Law*, 273 – 290, 274.

²⁸ K Pinkau, *op. cit.*

water, and soil), but also culture, communication, co-operation, and institutions. As a result, environmental standards are aimed at preserving nature and the environment, protecting the environment against damage, and repairing past damages caused to the environment by human activities.²⁹

3. Ethical Ideologies on Enforcement of Environmental Standards

A number of ethical ideologies are relevant to the issue of environmental standards. These ideological perspectives directly or indirectly address the question of environmental ethics which is the basis of the problem of enforcement of environmental standards vis-à-vis the electricity industry in Nigeria.

Anthropocentrism

The term 'anthropocentrism' is etymologically derived from the Greek words '*anthropos*' meaning 'human being' and '*kentron*' meaning 'center'.³⁰ Anthropocentrism is an ethical ideology which basically claims that human beings are the essential or chief creature in the world; that humans are different and higher to nature; and that human life has inherent value while other creatures are resources that may precisely be exploited for the assistance of humankind.³¹ Anthropocentric views usually fall within two broad classifications, i.e. 'strong anthropocentrism' and 'weak anthropocentrism'. Strong anthropocentrists assign intrinsic value to human beings alone to the exclusion of other non-human things, whereas weak anthropocentrists assign a significantly greater amount of intrinsic value to human beings than to any non-human things such that the protection or promotion of human interests or well-being at the expense of non-human things turns out to be nearly always justified.³² Aristotle was one of the earliest anthropocentric thinkers. In his view, nature made all things specifically for the sake of man and the value of non-human things in nature is merely instrumental.³³ This thinking is favoured by the proponents of hedonism. For example, Epicurean, while theorizing on hedonism, opined that the gaining of pleasure and the avoidance of pain is the single standard by which man determines happiness and thereby judges the rightness or otherwise of his actions. Thus, an action is right once it maximizes man's happiness and helps him avoid pain, irrespective of its consequences to nature.³⁴ According to Lynn White Jr, the main strands of Judeo-Christian thinking supports anthropocentrism since it encouraged the overexploitation of nature by maintaining the superiority of humans over all other forms of life on earth, and by depicting all of nature as created for the use of humans.³⁵ Likewise, St. Thomas Aquinas argued that non-human animals are 'ordered to man's use'.³⁶ According to White, the Judeo-Christian idea that humans are created in the image of the transcendent supernatural God, who is radically separate from nature, also by extension radically separates humans themselves from nature.³⁷ Harsh as this tradition is, anthropocentrism does not rule out concern for the preservation of nature, as long as that concern can be related to human well-being.³⁸ For instance, Immanuel Kant suggests that cruelty towards an animal might encourage a person to develop a character which would be desensitized to cruelty towards humans. From this standpoint, cruelty towards non-human animals would be instrumentally, rather than intrinsically, wrong.³⁹ According to Plato, man is to be blamed for the destruction of the natural environment, while lamenting that this leads to soil erosion and loss of springs. He opined that "what now remains compared with what then existed is like the skeleton of a sick man, all the fat and soft soil having wasted away, and only the bare framework of the land being left".⁴⁰ Thus, anthropocentrism recognizes some non-intrinsic wrongness in anthropogenic, i.e. human-caused, environmental devastation. Such destruction

²⁹ *Ibid.*

³⁰ K Rajesh & V Rajasekaran, 'Environmental Ethics: Anthropocentric Chauvinism as Seen in Western Ethical Theories' (2019) 8(6S4) *IJITEE*, 1385 – 1389, 1385.

³¹ *Ibid.*

³² A Brennan & L Yeuk-Sze, 'Environmental Ethics' in EN Zalta (ed), 'The Stanford Encyclopedia of Philosophy', <<https://plato.stanford.edu/archives/win2020/entries/ethics-environmental/>> Last accessed on 31st March, 2021.

³³ *Ibid.*

³⁴ V Cook, 'Epicurus - Letter to Menoeceus', cited in K Rajesh & V Rajasekaran, *op. cit.*, p. 1386.

³⁵ Central to the rationale for White's thesis were the Bible itself and the works of the Church Fathers, supporting the anthropocentric perspective that humans are the only things that matter on earth. Consequently, they may utilize and consume everything else to their advantage without any injustice. See L White, 'The Historical Roots of our Ecological Crisis', (1967)155(3767) *Science*, 1203 – 1207, 1205.

³⁶ T Aquinas, *Summa Contra Gentiles* (trans. VJ Bourke, London: University of Notre Dame Press, 1975) p. 112.

³⁷ Clearly, without technology and science, the environmental extremes to which we are now exposed would probably not be realized. The point of White's thesis, however, is that given the modern form of science and technology, Judeo-Christianity itself provides the original deep-seated drive to unlimited exploitation of nature. See L White, *op. cit.*

³⁸ P Singer, *Practical Ethics* (New York: Cambridge University Press, 1993) p. 14. Thus, anthropocentric positions find it problematic to articulate what is wrong with the cruel treatment of non-human human constituents of nature, except to the extent that such treatment may lead to bad consequences for human beings. See A Brennan & L Yeuk-Sze, *op. cit.*

³⁹ I Kant, *Lectures on Ethics* (trans. P Heath & JB Schneewind, Cambridge: Cambridge University Press, 1997) p. 99.

⁴⁰ JB Callicott & R Frodeman, *Encyclopedia of Environmental Ethics and Philosophy* (Michigan: Gale, 2009) p. 87.

might damage the well-being of human beings now and in the future, since human well-being is essentially dependent on a sustainable environment.⁴¹

Biocentrism

Biocentrism is etymologically derived from the Greek words 'bios' meaning 'life' and 'kentron' meaning 'center'.⁴² Biocentrism, simply put, is an ethical ideology that extends inherent value and the status of moral object from human beings to all living things in nature.⁴³ Biocentrism calls for a rethinking of the relationship between humans and nature; that nature does not exist simply to be used or consumed by humans, but that humans are simply one species amongst many;⁴⁴ and that because humans are part of an ecosystem, any actions which negatively affect the living things in the ecosystem of which humans are a part adversely affect humans as well.⁴⁵ Albert Schweitzer's 'reverence for life' principle was a precursor of modern biocentric postulations.⁴⁶ Schweitzer defines his principle of 'reverence for life' as, 'it is good to maintain and to encourage life; it is bad to destroy life or obstruct it.'⁴⁷ Schweitzer accepts as good preserving life, promoting life, developing all life that is capable of development to its highest possible value and considers as evil destroying life, injuring life, repressing life that is capable of development.⁴⁸ Schweitzer's notion of reverence includes respect and awe, ethics and spirituality; and with the life, Schweitzer implies the individual humans, animals, and plants, which are also interconnected.⁴⁹ Biocentrists observe that all living things have inherent value and pursue their own 'good' in their own ways; that humans are not 'superior' to other living things in a moral or ethical sense, but rather that humans and all other living things are members of earth's community and part of a system of interdependence.⁵⁰ A significant divide exists, nevertheless, between those biocentrists who argue that all living things are of equal value and those who maintain that some living things are more morally significant than others.⁵¹ Paul W. Taylor, while postulating on his principle of biocentric egalitarianism, demanded that respect be given to all living organism since none of the living beings has a privileged position over the others.⁵² In Taylor's view, every organism has a purpose and reason for existence, and are 'teleological centers of life'. The actions of every organism is therefore directed toward the accomplishment of their distinctive goals during their lives such that their conditions 'can be made better or worse' by human actions. Thus, man has a moral duty towards the preservation of living organisms.⁵³ However, most contemporary biocentrists disagree with Taylor's idea of biocentric egalitarianism, arguing that the possession of more complex psychological capacities, such as sentience, gives beings that possess them a higher level of moral significance than those who lack them.⁵⁴ This ideology, rather identified as biocentric inequality, is supported by Gary Varner⁵⁵ and David Schmidtz.⁵⁶

Ecocentrism

The term 'ecocentrism' is etymologically derived from the Greek words 'oikos' meaning 'house' and 'kentron' meaning 'center'.⁵⁷ Ecocentrism denotes a nature-centered system of values which consists

⁴¹J Passmore, *Man's Responsibility for Nature* (2nd edn, London: Duckworth, 1974) p. 80; M Bookchin, *The Philosophy of Social Ecology* (Montreal: Black Rose Books, 1990) p. 69. Note that recent developments in traditional anthropocentrism have seen to the birth of a new conception of anthropocentrism called 'enlightened anthropocentrism' (or, perhaps more appropriately called, prudential anthropocentrism), which simply put, is the view that all the moral duties which human beings have toward the environment are derived from the direct duties which human beings owe to each other and that this is the moral grounds for all social policies aimed at protecting the earth's environment and remedying environmental degradation. See BG Norton (ed), *Toward Unity Among Environmentalists* (New York: Oxford University Press, 1991) p. 54; A de Shalit, *Why Does Posterity Matter?* (London: Routledge, 1994) p. 72; A Light & E Katz, *Environmental Pragmatism* (London: Routledge, 1996) p. 24.

⁴² PG Derr & EM McNamara, *Case Studies in Environmental Ethics* (Maryland: Rowman & Littlefield, 2003) p. 21.

⁴³ M Yu & Y Lei, 'Biocentric Ethical Theories', (2009)2 *Environment and Development Journal*, 422 – 430, 422.

⁴⁴ J Bari, *Revolutionary Ecology: Biocentrism & Deep Ecology* (Melville: Trees Foundation, 1998) p. 57.

⁴⁵ D Ingram & JA Parks, *The Complete Idiot's Guide to Understanding Ethics* (Indianapolis: Alpha Books, 2002) p. 201.

⁴⁶ M Yu & Y Lei, *op. cit.*, p. 423.

⁴⁷ A Schweitzer, *The Philosophy of Civilization* (trans. CT Campion, New York: Prometheus Books, 1987) p. 309.

⁴⁸ A Schweitzer, *Out of My Life and Thought: An Autobiography* (trans. AB Lenke, Baltimore: The John Hopkins University Press, 1990) p. 157.

⁴⁹ MW Martin, *Albert Schweitzer's Reverence for Life: Ethical Idealism and Self-Realization* (England: Ashgate Publishing Limited, 2007) p. 1.

⁵⁰ J Jayme, 'Biocentric Ethics and the Inherent Value of Life', cited in PG Derr & EM McNamara, *op. cit.*

⁵¹ C Palmer *et al.*, 'Environmental Ethics', (2014)39 *Annu. Rev. Environ. Resour.*, 419 – 442, 423.

⁵² PW Taylor, *Respect for Nature: A Theory of Environmental Ethics* (2nd edn, New Jersey: Princeton University Press, 1989) p. 14. *Ibid.*

⁵⁴ C Palmer *et al.*, *op. cit.*

⁵⁵ G Varner, *In Nature's Interests? Interests, Animal Rights and Environmental Ethics* (Oxford: Oxford University Press, 1998) p. 56.

⁵⁶ D Schmidtz, 'Are all Species Equal?', (1998)15 *J. Appl. Philos.*, 57 – 67, 59.

⁵⁷ SJ Rowe, 'Ecocentrism: the Chord that Harmonizes Humans and Earth', (1994) 11(2) *The Trumpeter*, 106 – 107, 106.

primarily in an ontological denial that there are any existential divisions between human and non-human nature sufficient to claim that humans are either the sole bearers of intrinsic value or possess greater intrinsic value than non-human nature, while propagating the ethical claim of an equality of intrinsic value across both human and non-human nature, sometimes referred to as biospherical egalitarianism.⁵⁸ One may then wonder as to whether there exists any distinction between biocentrism and ecocentrism. Both biocentrism and ecocentrism are life-centered approaches and as a result, some philosophers, such as Sahotra Sarkar and Holmes Rolston III, make no distinction between them, and classify both approaches either under the name of biocentrism or ecocentrism.⁵⁹ However, some other philosophers such as P. S. Wenz prefer to distinguish them, on the basis that while biocentrism attributes values to individuals, ecocentrism attributes values to collective or composite entities such as species, communities, ecosystems, etc.⁶⁰ Thus, in contrast to the individualism of biocentrism, ecocentrism is a holistic approach and is morally concerned with both the organic and inorganic constituents of nature. Ecocentrism considers the biotic community, species, ecosystems, habitats, etc., and also nature itself as a whole and as possessing intrinsic value divorced from human utility.⁶¹ Hence, it does not conceive human beings as separated from the other parts of nature; the whole parts of nature are encapsulated by the biotic community itself, and are regarded as inseparable from each other. With regard to the holistic perspective, the species are important, not the individuals. While individuals are ephemeral, species are permanent.⁶² Aldo Leopold's work has been highly influential in the development of ecocentrism.⁶³ Leopold, using his 'land ethic' formulation, extends the moral sphere outward from the human community to include the biotic community. According to him, the land ethic simply enlarges the boundaries of the community to include soils, waters, plants and animals, or collectively, the land.⁶⁴ Thus, Leopold considers an action to be right when it tends to preserve the integrity, stability, and beauty of the 'land', and considers an action to be wrong when it tends otherwise.⁶⁵ This is not to say that Leopold thought individuals, or human individuals at least, as ethically irrelevant. He is usually interpreted as arguing that humans also ethically need to take the 'land' directly into account.⁶⁶ Leopold's ecocentric and highly suggestive ethic was not systematic; in particular, he did not suggest ways of resolving any conflict between individuals and the 'land'.⁶⁷

Modern environmental ethicists have endeavored to develop a more secure underpinning for ecocentric ethics.⁶⁸ However, their arguments as to why ecological communities or ecosystems should be accorded moral status differ considerably. Callicott argues that just as we have emotional loyalties and moral responsibilities toward the human communities in which we are located, so too we should have such loyalties and responsibilities to the ecological communities of which we are also members.⁶⁹ Rolston focuses on ecosystems as wild processes that create and nurture life; we should not value the organisms, the products of the system, without recognizing the systemic value of the processes that produced them.⁷⁰ Johnson argues that ecosystems should be understood as quasi individuals and that we can make sense of the idea that they have interests that do not necessarily coincide with the interests of their members.⁷¹

⁵⁸ *Ibid.*

⁵⁹ H Rolston, *Environmental Ethics: Duties to and Values in the Natural World* (Philadelphia: Temple University Press, 1988) p. 71; S Sarkar, *Biodiversity and Environmental Philosophy: An Introduction* (Cambridge: Cambridge University Press, 2005) p. 68.

⁶⁰ P S Wenz, *Environmental Justice* (Albany: State University of New York Press, 1988) p. 272.

⁶¹ ZJB Plater, *op. cit.*

⁶² H Ünder, *Çevre Felsefesi: Etik ve Metafizik Görüşler* (Ankara: Doruk Yayıncılık, 1996) pp. 210 - 211.

⁶³ A Leopold, *A Sand County Almanac: And Sketches Here and There* (2nd edn, Oxford: Oxford University Press, 1968) p. 200.

⁶⁴ *Ibid.*, p. 204.

⁶⁵ *Ibid.*, p. 224.

⁶⁶ JB Callicott, *In Defense of the Land Ethic: Essays in Environmental Philosophy* (Albany: State University of New York Press, 1989) p.35.

⁶⁷ BG Norton, 'The Constancy of Leopold's Land Ethic', (1988) 2(1) *Conserv. Biol.*, 93 – 102, 96. Conceptually related to Leopold's 'land ethic' is Singer's "animal liberation" approach which has become the underlying philosophy for the Australian and worldwide animal liberation movement. The approach depends upon the so-called 'argument for marginal cases', which can be explained as follows: humans differ from animals in having more sophisticated intellectual and emotional equipment, but they are the same in having the capacity to suffer and enjoy. We consider that this latter capacity is the source of rights independent of the other capacities; for we do not believe that intellectually handicapped infants may be used just as we please, and yet they are as little, or even less possessed of the more sophisticated capacities than many animals. Although, for the vast majority in the human society, this argument seems exaggerated, it is inherently strong. It is the sort of argument that helped to abolish slavery, secure civil rights for blacks and equal opportunities for women. See L Hens & C Susanne, 'Environmental Ethics', (1998) 11(1 – 4) *Global Bioethics*, 97 – 118, 107.

⁶⁸ H Rolston, *op. cit.*, p. 89; L Johnson, *A Morally Deep World* (Cambridge: Cambridge University Press, 1991) p. 88; JB Callicott (ed), *Companion to A Sand County Almanac: Interpretive and Critical Essays* (Madison: University of Wisconsin Press, 1987) p. 102.

⁶⁹ JB Callicott, *In Defense of the Land Ethic: Essays in Environmental Philosophy*, *op. cit.*

⁷⁰ H Rolston, *op. cit.*

⁷¹ L Johnson, *op. cit.*

Deep Ecology

'Deep ecology' was formulated by the Norwegian philosopher Arne Naess, as a result of discussions with his colleagues, Sigmund Kvaløy and Nils Faarlund.⁷² The core idea of this viewpoint is the postulation that humanity is inseparable from nature thereby rejecting the notion of atomistic individualism. The idea that a human being is such an individual possessing a separate essence, Naess argues, radically separates the human self from the rest of the world and not only does this leads to selfishness towards other people, it also induces human selfishness towards nature.⁷³ As a counter to egoism inherent in atomistic individualism at both the individual and species level, Naess proposes an idea of relationalism which posits that organisms (human or otherwise) are best understood as 'knots' in the biospherical net, such that the identity of a living thing is essentially constituted by its relations to other things in the world, especially its ecological relations to other living things.⁷⁴ Deep ecologists argue that if people conceptualize themselves and the world in relational terms, then people will take better care of nature and the world in general.⁷⁵ Thus, deep ecological thinking idealize that neither humans nor other living organisms are more important than the other, but it is the totality of nature which has moral value. Human actions are only valuable if they benefit the ecosystem as a whole. As a consequence it is not possible to injure nature without injuring an integral part of ourselves.⁷⁶ Naess's formulation rejected what he called the 'shallow ecology movement' which according to him, outwardly appears to be a 'fight against pollution and resource depletion' but the central objective of which is 'the health and affluence of people in the developed countries.'⁷⁷ His 'deep ecology movement', in contrast, endorses 'biospheric egalitarianism', the view that all living things are alike in having value in their own right, independent of their usefulness to others. The deep ecologist respects this intrinsic value, taking care, for example, when walking on the mountainside not to cause unnecessary damage to the plants.⁷⁸ Naess argues that environmental problems can only be solved by people who are able to make value judgments that go beyond narrowly conceived human concerns. People not only require an ethical system, but a way of conceiving of the world and themselves in such a way that the intrinsic value of life and of nature is obvious. They need an ethical system based on 'deep ecological principles'.⁷⁹ This process of reasoning is called ecosophy, from which stems, not only an ethics, but also a practical way of acting.⁸⁰ As developed by Naess, the 'deep ecology' position also came to focus on the possibility of the identification of the human ego with nature. The idea is, briefly, that by identifying with nature I can enlarge the boundaries of myself beyond my skin thereby identifying with my larger – ecological – self which deserves respect as well. To respect and to care for myself is also to respect and to care for the natural environment, which is actually part of me and with which I should identify.⁸¹ 'Self-realization', in other words, is the reconnection of the shriveled human individual with the wider natural environment. Naess maintains that the deep satisfaction that we receive from identification with nature and close partnership with other forms of life in nature contributes significantly to our life quality.⁸²

Ecofeminism

Ecofeminism is a diverse movement sharing one basic premise; that there is a mutually reinforcing link between the domination of nature and the domination of women.⁸³ As Reuther puts it:

Women must see that there can be no liberation for them and no solution to the ecological crisis within a society whose fundamental model of relationship is domination. They must unite the demands of the women's movement with those of the ecological movement to envisage a radical reshaping of the basic socioeconomic relations and the underlying values of this society.⁸⁴

⁷²A Naess, 'The Shallow and the Deep, Long-Range Ecology Movement', (1973)16 *Inquiry*, 151 – 155, 153. Also see N Witoszek & A Brennan (eds), *Philosophical Dialogues: Arne Naess and the Progress of Eco-Philosophy* (New York: Rowan and Littlefield, 1999) p. 16.

⁷³A Brennan & L Yeuk-Sze, *op. cit.*

⁷⁴*Ibid.*

⁷⁵L Hens & C Susanne, *op. cit.*, p. 108.

⁷⁶*Ibid.*

⁷⁷A Naess, *op. cit.*

⁷⁸A Brennan & L Yeuk-Sze, *op. cit.*

⁷⁹A Naess, *Ecology, Community, Lifestyle* (Cambridge: Cambridge University Press, 1989) p. 79.

⁸⁰A Light, 'Callicott and Naess on Pluralism', (1996)39 *Inquiry*, 273 – 294, 275.

⁸¹A Brennan & L Yeuk-Sze, *op. cit.*

⁸²*Ibid.*

⁸³K Warren, 'Introduction to Ecofeminism', in ME Zimmerman *et al* (eds), *Environmental Philosophy: From Animal Rights to Radical Ecology* (New Jersey: Prentice Hall, 1993) pp. 253 – 267.

⁸⁴RR Ruether, *New Woman, New Earth: Sexist Ideologies and Human Liberation* (New York: Seabury, 1975) p. 204.

Ecofeminists argue that patriarchal modes of thinking encourage not only the widespread inferiorization and colonization of women, but also of people of colour, animals and nature.⁸⁵ Sheila Collins, for instance, argues that male-dominated culture or patriarchy is supported by four interlocking pillars: sexism, racism, class exploitation, and ecological destruction.⁸⁶ Emphasizing the importance of feminism to the environmental movement and various other liberation movements, some writers, such as Ynestra King, argue that the domination of women by men is historically the original form of domination in human society, from which all other hierarchies of domination and exploitation flow. Thus, human exploitation of nature is a manifestation and extension of the oppression of women, in that it is the result of associating nature with the female, which had been already inferiorized and oppressed by the male-dominating culture.⁸⁷ Even though ecofeminism maintains that there is a connection between the domination of women and of nature, there is disagreement about the nature of the link between these twin oppressions, and more recently, most interpretations of ecofeminism have been expanded further to include oppressions of class and race.⁸⁸ However, within the plurality of ecofeminist positions, some writers, such as Val Plumwood, understand the oppression of women as only one of the many parallel forms of oppression sharing supported by a common ideological structure, in which one party (the oppressor and colonizer) uses a number of conceptual and rhetorical devices to privilege its interests over that of the other party (the oppressed and colonized).⁸⁹ Facilitated by a common structure, these seemingly diverse forms of oppression can mutually reinforce each other.⁹⁰ Not all feminist theorists would call that common underlying oppressive structure ‘androcentric’ or ‘patriarchal’, though it is generally agreed that the core features of such oppressive structure include ‘dualism’, ‘hierarchical thinking’, and the ‘logic of domination’, which are typical of, if not essential to, male-chauvinism.⁹¹ In a bid to avoid such oppressive rationalizations, ecofeminists tend to be wary of identifying particular capacities that permit beings or things to qualify for moral status⁹². This, they argue, potentially sets up value dualisms, a practice ecofeminists resist as displaying the characteristics of essentialism, abstraction, hierarchy, and individualism while assuming that relationships are morally insignificant.⁹³

The ‘value dualism’ pattern of thinking and conceptualization of the world, many ecofeminist theorists argue, also nourish and sustain other forms of chauvinism, including, human-chauvinism (i.e., anthropocentrism), which is responsible for much human exploitation of, and destructiveness towards, nature. This dualistic way of thinking, for instance, sees the world in polar opposite terms, such as male/female, masculinity/femininity, reason/emotion, freedom/necessity, active/passive, mind/body, pure/soiled, white/coloured, civilized/primitive, transcendent/immanent, human/animal, sentient/non-sentient, culture/nature. Furthermore, under dualism all the first items in these contrasting pairs are assimilated with each other, and all the second items are likewise linked with each other. For example, the male is seen to be associated with the rational, active, creative, Cartesian human mind, and civilized, orderly, transcendent culture; whereas the female is regarded as tied to the emotional, passive, determined animal body, and primitive, disorderly, immanent nature. These interlocking dualisms are not just descriptive dichotomies, according to the feminists, but involve a prescriptive privileging of one side of the opposed items over the other.⁹⁴ Dualism confers superiority to everything on the male side, but inferiority to everything on the female side. The ‘logic of domination’ then dictates that those on the superior side (e.g., men, rational beings, humans) are morally entitled to dominate and utilize those on the inferior side (e.g., women, beings lacking in rationality, non-humans) as mere means.⁹⁵ In contrast, ecofeminists generally defend ideas of a relational self, whereby individuals are understood as partly constituted by their relations and in which particular caring relationships, significantly featuring the emotions, are key to ethical decision making.⁹⁶

⁸⁵ *Ibid.*

⁸⁶ S Collins, *A Different Heaven and Earth* (Valley Forge: Judson Press, 1974) p. 101.

⁸⁷ Y King, ‘The Ecology of Feminism and the Feminism of Ecology’, in J Plant (ed), *Healing the Wounds* (Philadelphia: New Society Publishers, 1989) pp. 18 – 28. Also see Y King, ‘Healing the Wounds: Feminism, Ecology, and Nature/Culture Dualism’, in AM Jaggar & SR Bordo (eds) *Gender/Body/Knowledge: Feminist Reconstruction of Being and Knowing* (New Brunswick: Rutgers University Press, 1989) pp. 115 – 141.

⁸⁸ C Palmer *et al.*, *op. cit.*, p. 433.

⁸⁹ V Plumwood, *Feminism and the Mastery of Nature* (London: Routledge, 1993) p. 53.

⁹⁰ KJ Warren, ‘Feminism and Ecology: Making Connections’, (1987)9 *Environmental Ethics*, 3 – 21, 9.

⁹¹ A Brennan & L Yeuk-Sze, *op. cit.*

⁹² M Kheel, ‘From Heroic to Holistic Ethics: The Ecofeminist Challenge’, in G Gaard (ed), *Ecofeminism: Women, Animals, Nature* (Philadelphia: Temple University Press, 1993) pp. 243 – 271, 251.

⁹³ V Plumwood, *op. cit.*, p. 112.

⁹⁴ A Brennan & L Yeuk-Sze, *op. cit.*

⁹⁵ *Ibid.*

⁹⁶ C Palmer *et al.*, *op. cit.*

Eco-Critical Theory

An often overlooked source of ecological ideas is the work of the neo-Marxist school of critical theory founded by Max Horkheimer and Theodore Adorno.⁹⁷ While classical Marxists regard nature as a resource to be transformed by human labour and utilized for human purposes, Horkheimer and Adorno saw Marx himself as a representative of the problem of ‘human alienation’. At the root of this alienation, they argue, is a narrow positivist conception of rationality – which sees rationality as an instrument for pursuing progress, power and technological control, and as being capable of solving all problems. Such a positivistic view of science combines determinism with optimism.⁹⁸ Natural processes as well as human activities are seen to be predictable and manipulable. Nature (and, likewise, human nature) is no longer mysterious, uncontrollable, or fearsome. Instead, it is reduced to an object strictly governed by natural laws, which therefore can be studied, known, and employed to human benefit. By promising limitless knowledge and power, the positivism of science and technology not only removes man’s fear of nature, the critical theorists argue, but also destroys man’s sense of awe and wonder towards it. That is to say, positivism ‘disenchants’ nature – along with everything that can be studied by the sciences, whether natural, social or human.⁹⁹

The progress in knowledge and material well-being may not be a bad thing in itself, where the consumption and control of nature is a necessary part of human life. However, the critical theorists argue that the positivistic disenchantment of natural things (and, likewise, of human beings – because they too can be studied and manipulated by science) disrupts human relationship with them, encouraging the undesirable attitude that they are nothing more than things to be probed, consumed and dominated.¹⁰⁰ According to the critical theorists, the oppression of ‘outer nature’ (i.e., the natural environment) through science and technology is bought at a very high price; the project of domination requires the suppression of man’s ‘inner nature’ (i.e., human nature) - e.g., human creativity, autonomy, and the manifold needs, vulnerabilities and longings at the centre of human life.¹⁰¹ To remedy such an alienation, Horkheimer and Adorno propounds a replacement of the narrow positivistic and instrumentalist model of rationality with a more humanistic one, in which the values of the aesthetic, moral, sensuous and expressive aspects of human life play a central part. Thus, their aim is not for man to give up his rational faculties or powers of analysis and logic. Rather, the ambition is to arrive at a dialectical synthesis between ‘Romanticism and Enlightenment’, and return to the anti-deterministic values of freedom, spontaneity and creativity.¹⁰² In his later work, Adorno advocates a re-enchanting aesthetic attitude of ‘sensuous immediacy’ towards nature. Not only do we stop seeing nature as primarily, or simply, an object of consumption, we are also able to be directly and spontaneously acquainted with nature without interventions from our rational faculties. According to Adorno, works of art, like natural things, always involve an ‘excess’, something more than their mere materiality and exchange value.¹⁰³ The re-enchantment of the world through aesthetic experience, he argues, is also at the same time a re-enchantment of human lives and purposes.¹⁰⁴

The eco-critical theory greatly influenced Murray Bookchin’s philosophical expositions and birthed his ‘social ecology’ postulations, which he claimed to be radical, subversive, or countercultural.¹⁰⁵ Bookchin’s version of critical theory takes the ‘outer’ physical world as constituting what he calls ‘first nature’, from which culture or ‘second nature’ has evolved. Environmentalism, on his view, is a social movement, and the problems it confronts are social problems.¹⁰⁶ While Bookchin is prepared, like Horkheimer and Adorno, to regard (first) nature as an aesthetic and sensuous marvel, he regards our intervention in it as necessary. He suggests that we can choose to put ourselves at the service of natural evolution, to help maintain complexity and diversity, diminish suffering and reduce pollution. Bookchin’s social ecology recommends that we use our gifts of sociability, communication and intelligence as if we were ‘nature rendered conscious’, instead of turning them against the very source and origin from which such gifts derive. Exploitation of nature should

⁹⁷ M Horkheimer & T Adorno, *Dialectic of Enlightenment* (trans. J Cumming, New York: Seabury Press, 1969) p. 121.

⁹⁸ A Brennan & L Yeuk-Sze, *op. cit.*

⁹⁹ *Ibid.*

¹⁰⁰ J Bernstein, *Adorno: Disenchantment and Ethics* (Cambridge: Cambridge University Press, 2001) p. 196.

¹⁰¹ R Eckersley, *Environmentalism and Political Theory* (London: UCL Press, 1992) p. 98.

¹⁰² T Morton, *Ecology without Nature: Rethinking Environmental Aesthetics* (Cambridge: Harvard University Press, 2007) p. 5.

¹⁰³ S Vogel, *Against Nature: The Concept of Nature in Critical Theory* (Albany: State University of New York Press, 1996) p. 144.

¹⁰⁴ *Ibid.* Adorno’s work remains largely unexplored in mainstream environmental philosophy, although the idea of applying critical theory (embracing techniques of deconstruction, psychoanalysis and radical social criticism) to both environmental issues and the writings of various ethical and political theorists has spawned an emerging field of “ecocritique” or “eco-criticism”. See TW Luke, *Ecocritique: Contesting the Politics of Nature, Economy, and Culture* (Minneapolis: University of Minnesota Press, 1997) p. 78.

¹⁰⁵ M Bookchin, *Toward an Ecological Society* (Montreal: Black Rose Books, 1980) p. 92.

¹⁰⁶ M Bookchin, ‘Social Ecology versus Deep Ecology: *Green Perspectives*’, (1987) 4(5) *Newsletter of the Green Program Project*, 281 – 301, 285.

be replaced by a richer form of life devoted to nature's preservation.¹⁰⁷ Mumford adopted a regionalist perspective to the social ecology postulations, arguing that strong regional centres of culture are the basis of 'active and securely grounded local life'.¹⁰⁸ While Bookchin is more of a technological optimist than Mumford, both writers have inspired a regional turn in environmental thinking. Bioregionalism gives regionalism an environmental twist. This is the view that natural features should provide the defining conditions for places of community, and that secure and satisfying local lives are led by those who know a place, have learned its lore and who adapt their lifestyle to its affordances by developing its potential within ecological limits. Such a life, the bioregionalists argue, will enable people to enjoy the fruits of self-liberation and self-development.¹⁰⁹

Neo-Animism

The term 'animism' which is etymologically derived from the Latin word '*anima*' meaning 'breath', 'spirit', or 'life'¹¹⁰ is the belief that objects, places, and creatures all possess a distinct spiritual essence.¹¹¹ Potentially, animism perceives all things - animals, plants, rocks, rivers, weather systems, human handiwork, etc as animated and alive. Animism encompasses the beliefs that all material phenomena have agency, that there exists no hard and fast distinction between the spiritual and physical (or material) world and that soul or spirit or sentience exists not only in humans but also in other animals, plants, rocks, geographic features such as mountains, rivers and other entities of the natural environment.¹¹² Earlier anthropological perspectives, which have since been termed the old or traditional animism, were concerned with knowledge on what is alive and what factors make something alive.¹¹³ Modern animistic perspectives, otherwise called neo-animism, places focus on knowing how to behave toward other beings, some of whom are not human.¹¹⁴ The neo-animists have been much inspired by the serious way in which some indigenous peoples placate and interact with animals, plants and inanimate things through ritual, ceremony and other practices. According to the neo-animists, the replacement of traditional animism by a form of disenchanting positivism directly leads to an anthropocentric perspective, which is accountable for much human destructiveness towards nature.¹¹⁵ In a disenchanted world, there is no meaningful order of things or events outside the human domain, and there is no source of sacredness or dread of the sort felt by those who regard the natural world as peopled by divinities or demons.¹¹⁶ The neo-animists argue for a re-conceptualization of the boundary between persons and non-persons. For them, 'living nature' comprises not only humans, animals and plants, but also mountains, forests, rivers, deserts, and even planets.¹¹⁷ Whether the notion that a mountain or a tree is to be regarded as a person is taken literally or not, the attempt to engage with the surrounding world as if it consists of other 'persons' might possibly provide the basis for a respectful attitude to nature.¹¹⁸ If disenchantment is a source of environmental problems and destruction, then the new animism can be regarded as attempting to re-enchant, and help to save, nature. More poetically, David Abram has argued that such a phenomenological approach reveals that man is part of the 'common flesh' of the world, and is, in a sense, the world thinking itself.¹¹⁹

In her work, Freya Mathews has tried to articulate a version of neo-animism that captures ways in which the world (not just nature) contains many kinds of consciousness and sentience.¹²⁰ Pontificating on this ideology of panpsychism, she argues that there is an underlying unity of mind and matter in that the world is a 'self-realizing' system containing a multiplicity of other such systems. According to Mathews, we are meshed in communication, and potential communication, with the 'One' (the greater cosmic self) and its many lesser selves.¹²¹ Materialism, i.e. the monistic theory that the world consists purely of matter, she argues, is self-defeating by encouraging a form of 'collective solipsism' that treats the world either as unknowable or as a

¹⁰⁷ M Bookchin, *The Philosophy of Social Ecology* (Montreal: Black Rose Books, 1990) p. 45.

¹⁰⁸ L Mumford, *The Condition of Man* (New York: Harcourt, Brace, Jovanovich, 1944) p. 403.

¹⁰⁹ RL Thayer, Jr., *Life Place: Bioregional Thought and Practice* (Berkeley: University of California Press, 2003) p. 197.

¹¹⁰ R Segal, *Myth: A Very Short Introduction* (Oxford: Oxford University Press, 2004) p. 14.

¹¹¹ MD Stringer, 'Rethinking Animism: Thoughts from the Infancy of our Discipline', (1999) 5(4) *Journal of the Royal Anthropological Institute*, 541–556, 544.

¹¹² A Hornborg, 'Animism, Fetishism and Objectivism as Strategies for Knowing (or Not Knowing) the World', (2006) 71(1) *Ethnos: Journal of Anthropology*, 21 – 32, 29.

¹¹³ G Harvey, *Animism: Respecting the Living World* (London: Hurst & Co., 2005) p. xi.

¹¹⁴ *Ibid.*

¹¹⁵ A Brennan & L Yeuk-Sze, *op. cit.*

¹¹⁶ A Stone, 'Adorno and the Disenchantment of Nature', (2006)32 *Philosophy and Social Criticism*, 231 – 253, 238.

¹¹⁷ A Brennan & L Yeuk-Sze, *op. cit.*

¹¹⁸ G Harvey, *op. cit.*

¹¹⁹ D Abram, *The Spell of the Sensuous* (New York: Vintage Books, 1996) p. 195.

¹²⁰ F Mathews, *For Love of Matter* (Albany: State University of New York Press, 2003) pp. 45 – 60.

¹²¹ *Ibid.*

social-construction.¹²² Mathews, while taking inspiration from the Daoist idea of ‘letting be’ and bringing about change through ‘effortless action’, argues that the focus in environmental management, development and commerce should be on ‘synergy’ with what is already in place rather than on demolition, replacement and disruption.¹²³ Instead of bulldozing away old suburbs and derelict factories, the synergistic panpsychist sees these artefacts as themselves part of the living cosmos, hence part of what is to be respected. Likewise, instead of trying to eliminate feral or exotic plants and animals, and restore environments to some imagined pristine state, ways should be found – wherever possible – to promote synergies between the newcomers and the older native populations in ways that maintain ecological flows and promote the further unfolding and developing of ecological processes.¹²⁴

4. The Nigerian Electricity Industry

The Nigerian electricity industry is an amalgam of all stakeholders and component units involved in the generation, transmission and distribution of electricity in Nigeria.¹²⁵

Generation

There are currently 23 grid-connected generating plants in operation in the Nigerian electricity supply industry with a total installed capacity of about 10,396.0 MW and available capacity of about 6,056 MW. Most generation is thermal based, with an installed capacity of 8,457.6 MW (81% of the total) and an available capacity of 4,996 MW (83% of the total). Hydropower from three major plants accounts for 1,938.4 MW of total installed capacity (and an available capacity of 1,060 MW).¹²⁶ The various sub-classifications under the generation sub-sector of the Nigerian electricity industry are as follows:

- (a) Successor Generation Companies (GENCOs): There are 6 successor GENCOs in Nigeria.¹²⁷ The Federal Government holds 20 percent interest in the GENCOs (with 80 percent of equity sold to private investors).¹²⁸ The Federal Government has set aside ₦50,000,000,000 (50 Billion Naira) in escrow accounts in 3 Nigerian Banks to serve as a buffer for losses that the GENCOs may suffer in the course of power transmission. The Nigerian Bulk Electricity Trading Plc (NBET) manages the said accounts.¹²⁹
- (b) Independent Power Producers (IPPs): IPPs are power plants owned and managed otherwise than by the Federal Government. Although there were IPPs existing in Nigeria prior to the privatization process, the Nigerian Electricity Regulatory Commission (NERC) has recently issued several licenses to IPPs in order to improve the power situation in the country.¹³⁰
- (c) National Integrated Power Projects (NIPPs): The NIPPs are an integral part of Federal Government’s efforts to combat the power shortages in the country. It was conceived in 2004 as a fast-track public sector funded initiative to add significant new generation capacity to Nigeria’s electricity supply system along with the electricity transmission and distribution and natural gas supply infrastructure required to deliver the additional capacity to consumers throughout the country. There are 10 NIPPs currently in Nigeria, with a combined installed capacity of 5,455 MW.¹³¹

¹²² F Mathews, *Reinhabiting Reality: Towards a Recovery of Culture* (Sydney: UNSW Press, 2005) pp. 12 - 15.

¹²³ *Ibid.*

¹²⁴ Panpsychism, Mathews argues, frees humans from the “ideological grid of capitalism”, can reduce our desire for consumer novelties, and can allow us and the world to grow old together with grace and dignity. See *ibid.*

¹²⁵ E Onaiwu, ‘A Guide to the Nigerian Power Sector’, <<http://www.kpmg.com/Africa/en/IssuesAndInsights/Articles-Publications/Documents/Guide%20to%20the%20Nigerian%20Power%20Sector.pdf>> Last accessed on 4th February, 2021.

¹²⁶ *Ibid.*

¹²⁷ The GENCOs and their installed capacities are as follows: (a) Afam Power Plc (1-V) (Thermal – 987.2 MW); (b) Egbin Power Plc (Thermal – 1,320 MW); (c) Kainji/Jebba Hydro Electric Plc (Hydro – 1,330 MW); (d) Sapele Power Plc (Thermal – 1,020 MW) (d) Shiroro Hydro Electric Plc (Hydro – 600 MW); and (e) Ughelli Power Plc (Thermal – 942 MW). See *ibid.*

¹²⁸ CA Awosope, ‘Nigeria Electricity Industry: Issues, Challenges and Solutions’, (2014) 3(2) *Covenant University Public Lecture Series*, 1 – 40, p. 6.

¹²⁹ E Onaiwu, *op. cit.*

¹³⁰ *Ibid.* Currently, the IPPs owned by some State Governments in Nigeria include: (a) AES with installed capacity of 297 MW and owned by the Lagos State Government; (b) Ibom Power with installed capacity of 190 MW and owned by the Akwa Ibom State Government; (c) Omoku-I with installed capacity of 150 MW and owned by the Rivers State Government; (d) Trans-Amadi with installed capacity of 100 MW and owned by the Rivers State Government; and (e) New Afam I & II with installed capacity of 360 MW and owned by the Rivers State Government. IPPs owned by some oil companies in Nigeria include: (a) Okpai with installed capacity of 480 MW and owned by Nigeria Agip Oil Company Plc; and (b) Afam VI with installed capacity of 650 MW and owned by the Shell Petroleum Development Company of Nigeria Plc. See M Amadasun, *op. cit.*

¹³¹ The NIPPs and their installed capacities are as follows: (a) Alaoji Generation Company Nigeria Limited (1,131 MW); (b) Benin Generation Company Limited (508 MW); (c) Calabar Generation Company Limited (634 MW); (d) Egbema Generation Company Limited (381 MW); (e) Gbarain Generation Company Limited (254 MW); (f) Geregu Generation Company Limited (506 MW); (g) Ogorode Generation Company Limited (508 MW); (h) Olorunsogo Generation Company Limited (754 MW); (i) Omoku Generation

Transmission

The Transmission Company of Nigeria (TCN) is the successor company of PHCN, following the unbundling of the power sector. Currently, the Federal Government owns 100% of TCN,¹³² though it is being managed by a Management Contractor, Manitoba Hydro International (Canada). Manitoba is responsible for revamping TCN to achieve technical and financial adequacy in addition to providing stable transmission of power without system failure.¹³³ Currently, the transmission capacity of the Nigerian Electricity Transmission System (NETS) is made up of about 5,523.8 km of 330 KV lines and 6,801.49 km of 132 KV lines,¹³⁴ with an on-going proposal for the construction of specific transmission infrastructure to operate at 760KV (the so-called 'Super Grid').¹³⁵ In the Power Sector Road-Map Plan of 2010, the power wheeling capacity of the entire Grid projected in order to ensure the evacuation of projected generation is 16,852 MW (7886 MW for the 330KV Lines, and 8986 MW for the 132KV Lines).¹³⁶ However, just as in the case of generation, the actual transmission capacity available is far short of this projection, though there are ongoing efforts (particularly within the frame work of the NIPP programme) to strengthen the Grid with the expansion of the major/strategic substations, replacement of ageing substation transformers (150MVAs are being installed in substations in Lagos and Kano for instance), as well as the construction of new 330KV and 132 KV lines (the on-going construction of the 3rd Benin - Onitsha 330 KV line is one such example).¹³⁷

Distribution

There are 11 electricity distribution companies (DISCOs) in Nigeria. The DISCOs are 60 percent owned by private sector, while the remaining 40 percent equity interest is held by the Federal Government.¹³⁸ In the Power Sector Road-Map Plan of 2010, the projected total distribution capacity of the DISCOs is supposed to be 8,061 MW. However, with the current generation of about 6,056 MW, it is clear that total distribution is a far cry from the projected capacity.¹³⁹

5. The Law and the Ethics of Enforcement of Environmental Standards in the Nigerian Electricity Industry

The different theories on enforcement of environmental standards already examined in this study support the protection and preservation of nature, the only point of divergence being the philosophical basis for such position. However, it does appear that the ecocentrism theory better validates the articulation and enforcement of environmental standards in the electricity industry. Several reasons abound for this postulation. First is that apart from traditional anthropocentrism, all the other philosophical perspectives to environmental standards may arguably be considered as theoretical adaptations of ecocentrism. Secondly,

Company Limited (265 MW); and (j) Omotosho Generation Company Limited (513 (MW). See E Onaiwu, *op. cit.* The projected available generation capacity requirement of the country going by data in the Power Sector Road-Map Plan of 2010 is 11,879 MW. From the data so far presented, the total available capacity is far short of the country's requirement. For many of the plants, there is a huge difference between the installed capacity and the available capacity. In the absence of adequate electricity supply from the grid, self-help generation has become the norm rather than the exception. All manner of generating sets abound in the country, from the huge LPFO/diesel-powered generators used by the big industrial and commercial firms to the very small petrol powered 1.5 KVA sets popularly called 'I better pass my neighbour'. See M Amadasun, *op. cit.*

¹³² CA Awosope, *op. cit.*

¹³³ E Onaiwu, *op. cit.*

¹³⁴ *Ibid.*

¹³⁵The 'Super Grid' was conceived for the transportation of power to the major load centres in the country The major load centres are Lagos-Ibadan Axis, the Aba-Port Harcourt Axis, the Benin-Warri Axis, the Enugu-Onitsha Axis, Abuja-Kaduna Axis, and Kano Axis. See M Amadasun, *op. cit.*

¹³⁶The Transmission Grid is centrally controlled from the National Control Centre (NCC) located at Oshogbo in Osun State, while there is a Back-up or Supplementary National Control Centre (SNCC) at Shiroro in Niger State. In addition to these two centres are three Regional Control Centres (RCCs) located at the following substations: Ikeja West (RCC1), Benin (RCC2), and Shiroro (RCC3). See *Ibid.*

¹³⁷ *Ibid.*

¹³⁸CA Awosape, *op. cit.*, p. 9. The DISCOs, their coverage areas and load allocation are as follows: (a) Abuja Electricity Distribution Company covering Niger State, Kogi State, Nasarawa State and the FCT, with load allocation of 11.5%; (b) Benin Electricity Distribution Company covering Ekiti, Ondo, Edo, Delta with load allocation of 9%; (c) Eko Electricity Distribution Company covering Lagos State (Island) with load allocation of 11%; (d) Enugu Electricity Distribution Company covering Anambra State, Enugu State, Imo State, Abia State and Ebonyi State, with load allocation of 9%; (e) Ibadan Electricity Distribution Company covering Kwara State, Oyo State, Ogun State and Osun State, with load allocation of 13%; (f) Ikeja Electricity Distribution Company covering Lagos State (Mainland) with load allocation of 15%; (g) Jos Electricity Distribution Company covering Bauchi State, Plateau State, Benue State and Gombe State, with load allocation of 5.5%; (h) Kaduna Electricity Distribution Company covering Sokoto State, Kebbi State, Zamfara State and Kaduna State, with load allocation of 8%; (i) Kano Electricity Distribution Company covering Katsina State, Kano State and Jigawa State, with load allocation of 8%; (j) Port Harcourt Electricity Distribution Company covering Cross River State, Akwa Ibom State, Rivers State and Bayelsa State, with load allocation of 6.5%; and (k) Yola Electricity Distribution Company covering Yobe State, Borno State, Adamawa State and Taraba State, with load allocation of 11.5%. See E Onaiwu, *op. cit.*

¹³⁹ M Amadasun, *op. cit.*

ecocentrism considers the natural environment as a whole and as being inseparable. Activities in the electricity industry invariably affect both the organic and inorganic components of the natural environment and none can be separated from the other. Thirdly, ecocentrism considers man's well-being as being intrinsically dependent on the state of the environment of which he is a component hence the moral duty to protect and preserve same. Since electricity is central to human existence today, developments and activities in the Nigerian electricity industry must be considered relative to the over-riding moral duty of every individual to preserve the same environment of which he is a component, and upon which his well-being depends.

Applying the ecocentric theory to the 'energy-environment interaction', one can safely posit that the issue of electricity developments and environmental protection deals with a very sensitive issue – human well-being and by implication, life. The problematic relationship between these three factors is not difficult to understand. The electricity industry is essential to human life and well-being. Thus, the development and improvement of the electricity industry, arguably, is directly relational to improvements in human well-being in any given society. The more developments a society achieves in its electricity industry, the better the standard of life of the human beings in that society, and *vice versa*. Similarly, the protection and preservation of the environment promotes and enhances human well-being and life and is directly relational thereto; thus, the healthier the environment, the healthier the people that inhabit the said environment. However, developments in the electricity industry portend adverse effects on the environment and are inversely relational to it. Thus, the more the environment is being exploited as a result of activities in the electricity industry, the more the processes of nature are increasingly altered to the detriment of human well-being. The multiplicity of interests involved in this conundrum further exacerbates the situation from one of individual concern to one of public interest; after-all, the well-being and life of any individual is usually the concern of their relatives, friends and other persons who one way or the other will be affected by whatever happens – good or bad.¹⁴⁰ Then comes the law, as an ultimate arbiter in the regulation of human interests, to strike a balance between the competing needs of electricity development on one hand, and the preservation of the environment on the other hand, all aimed at achieving an improved and healthier standard of life for all persons in the society. Hence, the institution and enforcement of environmental standards in the electricity industry must reckon with the multiplicity of competing interests on the subject. This, perhaps, is the only way to make such law(s) or rule(s) workable in terms of advancing human progress.¹⁴¹

The 1999 Constitution of the Federal Republic of Nigeria (as amended 2018) is the *grundnorm* in Nigeria¹⁴² and expressly provides for the protection of the environment. In section 20 thereof, it provides that the State shall protect and improve the environment, and safeguard the water, air, land, forest and wild life in Nigeria. This means that there is a duty on the State to protect lives, properties and the whole environment against any adverse effects from activities in the electricity industry. Sadly, section 6(6)(c) of the same Constitution provides that the judicial powers vested in the Courts by the Constitution shall not extend to any issue or question as to whether any act of omission by any authority or person or as to whether any law or any judicial decision is in conformity with the Fundamental Objectives and Directive Principles of State Policy set out in Chapter II of this Constitution. The implication of this provision is that the provisions of section 20 of the Constitution which provides for environmental protection are non-justiciable and therefore cannot be directly enforced by an action in Court, except as may be otherwise provided in the Constitution.¹⁴³ In a bid to evade the consequences of section 6(6)(c) of the Constitution, the applicant in the case of *Jonah Gbemre v Shell Petroleum Development Co. Nig. Ltd & Ors*¹⁴⁴ initiated his environmental action as a claim for enforcement of his fundamental rights under section 33 and 34 of the Constitution rather than under section 20 of the Constitution. In its judgment, the Court, per Nwokorie J, held that the fundamental rights to life and dignity of the human person as provided in sections 33(1) and 34(1) of the 1999 Constitution of Nigeria inevitably

¹⁴⁰JA Ayodele, 'The Realities Surrounding the Applicability of Medical Paternalism in Nigeria', (2015) 14(1) *Global Journal of Social Sciences*, 55 – 61, 55.

¹⁴¹J Omoregbe, *Socio-Political Philosophy: A Systematic and Historical Study* (Lagos: Joja Educational Research and Publishers Limited, 2010) p. 12.

¹⁴²S. 1(1) & (3) of the 1999 Constitution of the Federal Republic of Nigeria (as amended 2018) provides for the supremacy of the Constitution over all persons and authorities in Nigeria, and that any law inconsistent with the Constitution shall be void to the extent of the inconsistency. See the cases of *AG - Abia State & 35 Ors v AG - Federation* (2000)3 SC 106; *AG - Ondo State v AG - Federation & 35 Ors* (2002)10 NSCQR 1036; *INEC & Anor v Balarabe Musa & Ors* (2003)13 NSCQR 39.

¹⁴³*AG - Ondo State v AG - Federation* (*supra*); *Okogie v AG - Lagos State* (1981) NCLR 2187. Also see OVC Ikpeze, 'Non-Justiciability of Chapter II of the Nigerian Constitution as an Impediment to Economic Rights and Development', (2015) 5(18) *Journal of Developing Country Studies*, 48 – 56, 50.

¹⁴⁴*Ibid*, s. 6(6)(c). (Unreported) judgment in Suit No. FHC/B/CS/53/2005 delivered by the Federal High Court, Benin Judicial Division, per C.V. Nwokorie, J.

include the right to a clean and pollution-free environment.¹⁴⁵ By virtue of section 2(2) of the 1999 Constitution, Nigeria operates a federal system of government. In consonance with established principles of federalism, there is a constitutionally sanctioned division of legislative powers between the federal and state governments in Nigeria.¹⁴⁶ Consistent with this position, Item 13, Part II of the Second Schedule of the 1999 Constitution empowered the National Assembly to make law for the federation or any part thereof with respect to electricity and the establishment of electric power station, and particularly as it pertains: (a) the generation and transmission of electricity in or to any part of the federation and from one state to another state; (b) the regulation of the right of any person or authority to dam up or otherwise interfere with the flow of water from sources in any part of the federation; (c) the participation of the federation in any arrangement with another country for the generation, transmission, and distribution of electricity for any area partly within and partly outside the federation; (d) the promotion and establishment of a national grid system; and (e) the regulation of the right of any person or authority to use, work or operate any plant, apparatus, equipment or work designed for the supply or use of electrical energy. In like manner, the State Houses of Assembly have the competence to legislate on matters listed in Item 14, Part II of the Second Schedule of the Constitution to wit: (a) electricity and establishment in that state of electric power station; (b) the generation and transmission and distribution of electricity to areas not covered by the national grid system within that state; and (c) the establishment within that state of any authority for the promotion and management of electric power stations established by the state. The import of the above provisions is that both the National and State Houses of Assembly have concurrent powers to make laws regulating all matters relating to electricity generation, transmission and distribution and this power extends even to the articulation and enforcement of environmental standards and other issues arising from or connected with the electricity industry.¹⁴⁷

Pursuant to the above constitutional provisions, the National Assembly has enacted several laws providing for the enforcement of environmental standards in the electricity industry, for example, the Electric Power Sector Reform Act which was enacted to establish the Nigeria Electricity Regulatory Commission (NERC)¹⁴⁸ and provide for the licensing and regulation of all activities in the electricity industry.¹⁴⁹ The grant of such licence shall be subject to such conditions that ensure that the physical environment is protected and there is no greater damage to streets or interference with traffic than is reasonably necessary.¹⁵⁰ The Act makes it an offence for any person to construct, own or operate an undertaking or in any way engage in any business in the electricity industry without a valid licence issued by the NERC.¹⁵¹ Pursuant to the Act,¹⁵² NERC made the 2009 Grid Code for the Electricity Industry which stipulates the guidelines, standards and operating procedures for operators in the electricity industry in Nigeria and was designed to ensure that operators act within standards for public safety.¹⁵³ Contravention of any provision of the Act or any regulations made pursuant to it is an offence and upon conviction, where no specific penalty is prescribed, a first offender is liable to a fine not exceeding one hundred thousand naira or to imprisonment for a period not exceeding one year or both.¹⁵⁴ For subsequent convictions, the offender is liable to a fine not exceeding five hundred thousand naira or imprisonment for a period not exceeding three years or both.¹⁵⁵ NERC also has powers to cancel a license on the ground of fraud, misrepresentation, contravention of the law or license obligations.¹⁵⁶

¹⁴⁵Interestingly, in *Centre for Oil Pollution Watch v NNPC* [2019]5 NWLR (pt. 1666) 518, the Supreme Court reversed the decisions of the lower courts and allowed an environmental action brought by an NGO even when the action was not brought under the Fundamental Rights (Enforcement Procedure) Rules 2009. The decision therein was premised on the fact that the NGO was registered under CAMA with the object of restoring the environment in cases of oil spillage. The exact extents and limits of the application of this decision to environmental actions *vis-à-vis* section 20 of the Constitution is to be determined from future cases.

¹⁴⁶ 1999 Constitution of the Federal Republic of Nigeria (as amended 2018), s. 4; *AG – Ondo State v AG – Federation* (*supra*).

¹⁴⁷However, by virtue of the doctrine of covering the field, if any law enacted by the House of Assembly of a State is inconsistent with any law validly made by the National Assembly, the law made by the National Assembly shall prevail and that other law shall to the extent of the inconsistency be void. See the 1999 Constitution of the Federal Republic of Nigeria (as amended 2018), s. 4(5); *A-G Abia State v A-G Federation* [2002]6 NWLR (pt. 763) 264 SC.

¹⁴⁸ Electric Power Sector Reform Act No. 6 of 2005, s. 31.

¹⁴⁹See the preamble to the Electric Power Sector Reform Act. Also see HO Onyi-Ogelle, 'The Implications of Legal Reform in the Nigerian Power Sector', (2016) 10(3) *African Research Review*, 279 – 289, 279.

¹⁵⁰ Electric Power Sector Reform Act, s. 77(7).

¹⁵¹*Ibid*, ss. 62(1) & 98. This rule does not include undertakings for generating electricity not exceeding 1 MW in aggregate at a site or an undertaking for distribution of electricity with a capacity not exceeding 100 KW in aggregate at a site, or such other capacity as the Commission may determine from time to time. See *ibid*, s. 62 (2).

¹⁵² *Ibid*, ss. 81 & 96.

¹⁵³ See Preamble to the Grid Code.

¹⁵⁴ Electric Power Sector Reform Act, s. 94(1)(a).

¹⁵⁵ *Ibid*, s. 94(1)(b).

¹⁵⁶ *Ibid*, s. 74.

Also, the National Assembly in exercise of its constitutional powers to make laws providing for the enforcement of environmental standards in the electricity industry enacted the Hydroelectric Power Producing Area Development Commission (Establishment, Etc) Act. This Act established the Hydroelectric Power Producing Area Development Commission (HPPADC) as the entity charged with the responsibility of managing the ecological menace due to operation of dams and related matters.¹⁵⁷ Another legislation that was made by the National Assembly in exercise of its constitutional powers to make laws for the enforcement of environmental standards in the electricity industry is the Nigeria Electricity Management Service Authority Act.¹⁵⁸ This Act established the Nigeria Electricity Management Service Authority (NEMSA) to carry out the functions of enforcement of technical standards, regulation, technical inspection, testing and certification of all categories of electrical installations, electricity meters and instruments etc; as well as to ensure the efficient production and delivery of safe, reliable and sustainable electricity power supply.¹⁵⁹ One of the basic responsibilities of NEMSA is to specify safety requirements for construction, operation and maintenance of electrical power plants, transmission system, distribution network and electric lines.¹⁶⁰ The Act provides that breach of any enforcement order made by NEMSA constitutes an offence punishable upon conviction with a term of three months imprisonment or five hundred thousand naira or both.¹⁶¹ The National Assembly has equally enacted the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act. This Act established the National Environmental Standards and Regulations Enforcement Agency (NESREA) charged with the responsibility of protection and enforcement of environmental standards in Nigeria.¹⁶² The Act empowered NESREA to make and review regulations, specifications and standards on air and water quality, effluent limitations, control of harmful substances and other forms of environmental pollution and sanitation towards tackling environmental challenges in Nigeria.¹⁶³ This power extends to environmental issues arising from activities in the electricity industry. The Act also criminalized violation of regulations made by NESREA. Any person who violates regulations made by NESREA, upon conviction, is liable to imprisonment for a term not exceeding one year or fine.¹⁶⁴ Curiously, one of the radical innovations introduced by the Act establishing NESREA is the authority given to NESREA to enforce compliance with the provisions of international agreements, protocols, treaties and conventions as may from time to time come into force.¹⁶⁵ Under the Nigerian law it is now settled beyond argument that an undomesticated international instrument ratified by Nigeria is a mere executive act which confers no legal right unless it is enacted into law by the Nigerian parliament pursuant to Section 12(1) of the Constitution.¹⁶⁶ While section 12(1) of the Constitution expressly provides in plain terms that no treaty between the federation and any other country shall have the force of law except to the extent to which any such treaty has been enacted into law by the National Assembly, section 1(1) and (3) declares the supremacy of the Constitution and the corresponding nullity of any law inconsistent with the Constitution.¹⁶⁷ The term 'any law' as used in section 1(3) of the Constitution was interpreted by the Supreme Court in the case of *Abacha v Fawehinmi*¹⁶⁸ to extend to treaties ratified by Nigeria. Section 12(1) of the Constitution reinforces the notion that Nigeria is a sovereign nation and as such foreign legislations and treaties do not have general

¹⁵⁷Preamble to the Hydroelectric Power Producing Areas Development Commission (Establishment, etc) Act No. 7 of 2010 (as amended 2013).

¹⁵⁸ Nigeria Electricity Management Service Authority Act No. 6 of 2015

¹⁵⁹ See the preamble to the Nigeria Electricity Management Service Authority Act.

¹⁶⁰ *Ibid*, s. 6(f).

¹⁶¹ *Ibid*, s. 11(5).

¹⁶² National Environmental Standards and Regulations Enforcement Agency (Establishment) Act No. 25 of 2007, ss. 1, 2 & 7.

¹⁶³ *Ibid*, ss. 8, 20 – 27. Note that several Regulations have been made under this Act. These include the National Environmental (Pollution Abatement in Mining and Processing of Coal, Ores and Industrial Minerals) Regulations, 2009; National Environmental (Sanitation and Wastes Control) Regulations, 2009; National Environmental (Pollution Abatement in Chemicals, Pharmaceuticals, Soaps and Detergent Manufacturing Industries) Regulations, 2009; National Environmental (Pollution Abatement in Food, Beverages and Tobacco Sector) Regulations, 2009; National Environmental (Pollution Abatement in Textiles, Wearing Apparel, Leather and Footwear Industry) Regulations, 2009; National Environmental (Wetlands, River Banks and Lake Shores Protection) Regulations, 2009; National Environmental (Watershed, Hilly, Mountainous and Catchment Areas) Regulations, 2009; National Environmental (Ozone Layer Protection) Regulations, 2009; Environmental (Noise Standards and Control) Regulations, 2009; National Environmental (Access to Genetic Resources and Benefit Sharing) Regulations, 2009; National Environmental (Permitting and Licensing Systems) Regulations, 2009; and the National Environmental (Pollution Abatement in Industries and Facilities Generating Waste) Regulations, 2009.

¹⁶⁴ National Environmental Standards and Regulations Enforcement Agency (Establishment) Act, s. 31.

¹⁶⁵ *Ibid*, s. 7(c).

¹⁶⁶ 1999 Constitution of the Federal Republic of Nigeria (as amended 2018), s. 12; P Onyenweife, 'The Jurisdiction of the National Industrial Court of Nigeria over Domesticated Treaties Ratified by Nigeria: Another Look', (2012) 6(3) *Nigerian Journal of Labour and Industrial Relations*, 38 – 42, 40.

¹⁶⁷ *Ibid*.

¹⁶⁸ [2006]6 NWLR (pt. 660) 228 SC.

application in Nigeria.¹⁶⁹ It is therefore manifest that no matter how beneficial to the country or its citizenry an international treaty to which Nigeria has become a signatory may be, it remains unenforceable if it is not enacted into law by the Nigerian legislature.¹⁷⁰ It follows that section 7(c) of the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act which gives NESREA authority to enforce undomesticated international instruments is an empty shell with no practical utility. NESREA is also charged with the function of enforcing the provisions of the Environmental Impact Assessment Act.¹⁷¹ Thus, any person or body intending to undertake any project likely to affect the environment, including electricity projects¹⁷² is required to procure an environmental impact assessment of the said project and must apply to NESREA for that purpose. Upon application, NESREA determines whether or not the proposed activity is likely to have adverse impact on the environment and whether or not such impacts can be mitigated, in which case it prescribes measures to prevent or mitigate the effects.¹⁷³ NESREA has powers to make an application to a court of competent jurisdiction for an order of injunction to restrain any person who has or is likely to contravene a prohibition under the Act from carrying out an activity which will adversely affect the environment.¹⁷⁴ Any person who contravenes the provisions of the Act is guilty of an offence and liable on conviction in the case of an individual to ₦100,000 fine or to five years imprisonment and in the case of a firm or corporation to a fine of not less than ₦50,000 and not more than ₦1,000,000.¹⁷⁵

6. Conclusion

Energy, nay, electricity production and use drive the world's economies, Nigeria inclusive and offer hope for growth and prosperity. Yet, the development of electricity facilities is among the greatest threats to the global environment.¹⁷⁶ Thus, although electricity is a fundamental necessity for civilization and, indeed, for life itself, we cannot repeal the second law of thermodynamics, which teaches that in a closed system such as Planet Earth, the use of energy, electricity inclusive, will gradually transform everything of value into a state of useless entropy.¹⁷⁷ Maintenance of a balance in the 'energy-environment' interaction process remains the key to sustainable development in any society. In Nigeria, the electricity industry has seen tremendous growth, with output having risen from a mere capacity of 60 KW in 1896 when electricity was first introduced into Lagos by the British, to the current available capacity of about 6,056 MW.¹⁷⁸ However, this current status is far from satisfactory, and successive governments in Nigeria have continued to seek a solution to the problem. Indeed, developments in Nigeria's electricity industry significantly affect the environment, and some of the effects include land use change, Greenhouse Gases (GHG) emission, biodiversity habitat changes, flooding and loss of ecosystems, as well as changes in soil, air and water quality.¹⁷⁹ In as much as the grim implications of developments in Nigeria's electricity industry viscerally portends the ineluctable reality of environmental consequences, legal regulations on environmental standards prove useful in striking the much desired balance in the 'energy-environment' trade-off. These legal provisions are informed by the ecocentric perception that preservation of the environment as a whole is key to sustainable development of the society. Despite the statutory framework established to address environmental challenges birthed by activities in Nigeria's electricity industry, the country continues to witness disturbing upsurge in environmental degradation due to the loopholes in these laws and the techniques for their implementation. Such loopholes include the non-justiciability of section 20 of the Constitution, the seeming conflict between the Constitution and the statutory powers of NESREA to enforce international environmental treaties,¹⁸⁰ and the paltry amount of fines and term of imprisonment for breach of environmental standards. In order to achieve sustainable development of the Nigerian electricity sector, it

¹⁶⁹ P Onyenweife, *op. cit.*

¹⁷⁰ See *Abacha v Fawehinmi (supra)*; *Nnaji v NFA* [2010]11 NWLR (pt. 1206) 438; *MHWUN v Minister of Labour & Productivity* [2005]17 NWLR (pt. 953) 120.

¹⁷¹ Environmental Impact Assessment Act, s. 2(4); National Environmental Standards and Regulations Enforcement Agency (Establishment) Act, ss. 35 & 36.

¹⁷² Environmental Impact Assessment Act, ss. 12 – 14 & 23. See also the Schedule to the Act.

¹⁷³ *Ibid.*, ss. 2 & 21; National Environmental Standards and Regulations Enforcement Agency (Establishment) Act 2007, ss. 35 & 36.

¹⁷⁴ Environmental Impact Assessment Act, s. 54.

¹⁷⁵ *Ibid.*, s. 62.

¹⁷⁶ T Ahmad, 'Environmental Regulation of the Energy Sector in India', <<http://ssrn.com/abstract=2456399>> Last accessed on 11th of January, 2021.

¹⁷⁷ *Ibid.*

¹⁷⁸ OI Okoro & E Chikuni, 'Power Sector Reforms in Nigeria: Opportunities and Challenges', (2007) 18(3) *Journal of Energy in Southern Africa*, 52 – 57, 52.

¹⁷⁹ M Ikyator, 'Problems and Prospects of Adopting Bio-energy Technology in Nigeria', <https://www.academia.edu/12338371/problems_and_prospects_aof_adopting_bioenergy_technology_in_Nigeria> Last accessed on 30th February, 2021.

¹⁸⁰ 1999 Constitution of the Federal Republic of Nigeria (as amended 2018), s. 12(1). Also see National Environmental Standards and Regulations Enforcement Agency (Establishment) Act No. 25 of 2007, s. 7(c).

is recommended that: (a) the Nigerian Constitution be amended so as to make its provision on environmental protection to be justiciable; (b) the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act be amended so as to remove the conflict between the Constitution and NESREA's statutory powers to enforce international environmental treaties; and (c) the statutory provisions on criminal sanctions for breach of environmental standards be reviewed so as to provide stiffer punishment for such offences. Religious adherence to the above recommendations will provide the requisite impetus for the sustainable development of an eco-friendly electricity industry in Nigeria.