Developing Country Studies
ISSN 2224-607X (Paper) ISSN 2225-0565 (Online)
Vol.5, No.16, 2015

Examining Environmental Discourses on Energy Utilisation in Select Nigerian Newspapers

Herbert E. Batta, Ph.D*, Clifford A. Ashong, Ph.D, Nevelyn W. Udousoro, Ph.D
Department of Communication Arts, University of Uyo, Uyo, Nigeria.

Abstract
This study examines the extent to which select Nigerian newspapers reflect the different environmental discourses pertaining to the use of clean or unclean energy sources. It undertakes a content analysis of newspaper articles in 156 weekly issues of published energy sections of three major Newspapers in Nigeria: *The Guardian, The Punch* and *The Nation* for all of 2013 – the year Nigeria implemented the privatisation of its power (electricity) industry and gearing up for a similar initiative for the petroleum sector. The study hinged on sustainability discourses as well as framing and environmental communication theories. Four approaches underpin it: I. A survey of the occurrence of energy issues in the sample. 2. Examination of the frames in which the sample engages on energy/environmental discourses. 3. Ascertainment of the perceptible voices prevalent in the coverage/discourses of energy issues. 4. Determination of the existence of any divide in the discourse/coverage of energy issues. Based on the findings of the study, the authors conclude that the three analysed newspapers showed a lopsided coverage of energy issues by ignoring or neglecting renewable energy issues while concentrating on oil, gas and electricity industry; depicting energy issue mainly as a business/economic frame, among others and thus contributed little or nothing to the sustainability discourse in Nigeria.
Keywords: Renewable Energy, Content Analysis, Sustainability

1. Introduction

From the beginning of time, energy has been critical for the survival of plants, humans, and animals. Interestingly, energy issues can hardly be discussed without dealing with environmental issues and vice versa. In media circles, this relationship is apparent particularly in the Western world where the reportage, coverage and framing of energy and environmental issues have been in practice since the 1970's (Friedman, 1990).

In 1977 when Curtis MacDougall wrote *Interpretative reporting,* he predicted that the 20th Century's most important journalistic undertaking would be the, "survival story – how to provide enough energy for the ever growing human race without degrading the planet to the point where it is uninhabitable" (p. 417). MacDougall observed that stories emanating from the energy-environment interface such as oil slicks, leakages of radioactive and hazardous materials, controversial oil and gas pipelines, community protests against construction of energy power protection plants, air pollution, ozone layer depletion, etc. were covered as spot news in the time-worn tradition of journalistic objectivity. He concluded that the overall picture was of a broader perspective than any singular story and that news gate keepers have come to see this as one of the most involving and challenging journalistic specialties. Kobre (1981) underscored the dire and to investigate the energy issue along with its environmental implications many decades ago when he noted that energy resources of nations were dwindling at a rapid rate, energy had become a national and local problem, and that reporters needed to keep the public informed about energy developments.

Where or how do Nigeria and the press fit into all these? Firstly, Nigeria has a huge population of 150 million people (National Planning Commission, 2004). This means Nigeria has huge energy needs. Secondly, Nigeria, Africa's largest economy at 924,768 square kilometers, is larger than Sweden, Norway, and Denmark combined. This means that meeting the energy needs of a land this vast besides being enormous can take a huge toll on the environment. Thirdly, Nigeria, the sixth largest hydrocarbon (oil/gas) producer in the Organisation of Oil Exporting Countries (OPEC) and the biggest in Africa, produces over 2 million barrels of oil (sufficient for some 30 years) and proven natural gas reserves of 174 trillion cubic feet. This means that Nigeria is heavily dependent on fossil fuels for its energy needs bringing to the fore issues of gas flaring, oil spills, air pollution, land degradation, water pollution, health and safety hazards, wildlife habitat destruction, etc.

Beyond these, other important issues concomitant to Nigeria's huge population and national recourse to fossil fuels include community protests, vandalism, oil theft, armed conflict and increasing urbanisation. Indeed Nigeria provides the world with two mega cities – Lagos and Kano with population of over 10 million inhabitants who require energy for homes, cars, offices, industries, institutions, commerce mining and agriculture.

Very significantly, electricity generation, transmission and distribution to Nigeria's teeming population has had to depend solely on hydro electric dams, thermal and gas powered turbines raising to the front burner the issue of sustainability. Investment in sustainable energy sources – solar, wind, geothermal and biomass is negligible or non-existent. A recent news report indicates that Sub-Saharan Africa is investing in renewable

energy amounting to about $5.9 billion in 2014 and growing to $7.7 billion in 2016. South Africa, Kenya, and Ethiopia are leaders in this green initiative while Nigeria is said to lag behind.

As noted earlier, the press does have a place in all these. Newspapers particularly constitute a veritable platform for the ventilation of views on issues in the polity. The purpose of this paper therefore is to examine the extent to which select (flagship) national dailies in Nigeria reflect environmental discourses pertaining to the use of clean and unclean energy sources. The overall essence of this scholastic endeavour is to evaluate the contributions of the Nigerian press to the practice of sustainability communication.

1.1 Background on Energy: Renewables and Non Renewables and Nigeria's Energy Profile

The John Ray Initiative (Undated) affiliated to the University of Glourcestershire provides simple and clear explanations on the concept of energy. Being of immense benefit, it sees energy as the heart of creation sustaining all aspects of life within the ecology, it is the lifeblood of existence. The initiative observes as follows:

a) The sheer scale of present demand for energy poses a lot of harm from pollutant emissions and other deleterious environmental impacts.
b) Per capita commercial energy use in the United States doubles that of the United Kingdom which is 50 times that of parts of central Africa.
c) Energy is classified into two: brown energy derives from underground sources of fossil fuels and nuclear ores; and green energy derives from ongoing energy supplies available in the natural environment.
d) Sunshine is a pervasive energy form which transforms into most of the renewable supplies thus sunshine heats the surface (solar water heaters, cookers, dryers, buildings) causes wind (wind turbines and pumps) which in turn causes sea waves (wave energy devices); evaporates water giving rainfull (hydropower) powers photosynthesis in plants (biomass, biofuels, gas, landfill gas) from light (photovoltaic electricity) and, via plants; provides animals with food hence (biogas, sewage gas). Other renewables include tides (tidal power) and subterranean heat (geothermal power stations, heat pumps).
e) Renewables harness mild forms of energy and so the equipment is relatively large and visible requiring extensive capital outlays using free harnessed energy but producing adverse visual impact.
f) Energy efficiency is the overriding importance for renewables and non renewables. Smaller equipment reduce visual impact and cheaper energy makes for more efficient renewable energy system whereas for non renewable energy, efficiency means reduced adverse impacts and reduced costs.

Concerning non renewable energy, Kebre (1981) notes that oil and natural gas resources the world over are depleting resources. This, one may add, fuels conflict in the world just as scarce water resource does. Besides, environmental problems such as elevated carbon dioxide emission occasioned by burning fossil fuels (gas flaring, motor operations, forest fires, etc) have led to global warming, climate change, ozone layer depletion health hazards, threat to food security, biodiversity losses, etc. Kobre (1981) has also associated huge human (in terms of lung diseases) and environmental costs to the utilisation of coal energy and quantities of water, heat and high costs needed to harness oil shale resources. Furthermore, for nuclear energy, though environmentally cleaner than fossil fuels, its drawbacks include the fact that nuclear wastes are difficult to store, transporting nuclear fuels and wastes may result in accidental catastrophes, and that ionic radiations may induce leukemic and other malignant carcinomas.

1.2 Nigeria's Energy Profile

According to data emanating from the Energy Commission of Nigeria (2010) the following facts would be useful for a thorough appreciation of Nigeria's energy situation.

(i) Nigeria's land mass of about 924,000 square kilometers form about 3.1% of the African continent. Its population of over 140 million is 15% of the continents' population.
(ii) Crude Petroleum forms 97.8% of Nigeria's major contributor to foreign exchange earnings.
(iii) The percentage energy consumption per capita (Kgoe/capita) stands at 81.4% while the percentage of access to electricity hovers around 55%.
(iv) The key players in the energy sector of the Nigerian economy are the Federal Ministry of Petroleum, (with its affiliates – DPR, NNPC, PPRA) the Federal Ministry of Power, The Federal Ministry of Mines and Steel, The Federal Ministry of Science and Technology, the Federal Ministry of Environment, and the Nigerian Electricity Regulatory Commission. Others are the Energy Commission of Nigeria, Nigeria Nuclear Regulatory Authority and Energy/Nuclear Research Centres.
(v) The fossil type energy resources at reserve benchmark, stand at crude oil; 36. 2 billion barrels; natural gas 187 trillion SCF; coal and lignite 2.7 billion tones and tar sands, 31 billion barrels of oil equivalent.
(vi) Renewable energy resources are treated as potentials. There is a capacity for 11,500 MW of large hydropower. The capacity is 3,500MV but 64.2MW are exploited. The capacity of solar resource is 3.5

kw/m/day – 7.0 kw/m/day with 4 – 7.5 hrs/day of sunshine. Wind potential is measured at 2.4 m/s at 10m height in the mainland. Biomass is available in capacities of fuel wood: (11 million hectares of forest and woodland), animal wastes: (245 million assorted) and energy crop/agric residues (72 million hectares of agric land).

(vii) In terms of energy production in Nigeria, coal is produced at 0%, crude oil at 2.2 million barrels/day, natural gas at 70.1 billion m^3 with 31.1% flared; while electricity generation stands at 16.94 billion kwh.

(viii) Nigeria's National Energy Policy was approved in 2005 articulating policies for solar energy, biomass and wind energy.

(ix) A renewable energy master plan was drafted from the National Energy Policy in 2005. In 2007, a biofuel policy initiated by the NNPC was approved allowing 10% ethanol in petrol, and 20% biodiesel in petrodiesel.

(x) The Nigerian electricity sector has been liberalised and privatised.

(xi) Regrettably, the National Energy Master plan including the Renewable Energy Initiative encapsulated in an energy Bill have yet to be enacted into law by the National Assembly.

1.3 Statement of the Problem

Energy is a critical global commodity. The living species cannot survive without it. As a third world country south of the Sahara, with a very dense population (over 150 million), Nigeria's energy requirement is high, for; though the country is a major foreign exchange earner due to its copious endowments in hydrocarbon resources, meeting its energy needs has become a national problem. Nigeria is still grappling with poverty, energy deficits particularly in the electricity sector, other deficits occur in education, health, food security, technology, infrastructure and sustainable livelihood. These unsavory indices have implications for the environment and energy.

For decades, Nigeria has relied on fossil fuels or unclean, unsustained energy sources to drive its mono-product economy with deleterious environmental consequences notably green house gas emission, air pollution, acid rain, oil spills and concomitant water and land degradation, loss of aquatic lives, deforestation and biodiversity losses. Batta, Ashong and Bashir (2013) took note of these problems including the facts that Nigeria flares more gas than any other country on earth, and has one of the highest rates of forest loss in the world. However, why are environmental and ecological concerns so important?

According to Haque (2000), "there has emerged a worldwide consensus that the environmental and ecological concerns represent one of the most critical factors related to socio economic development" (p. 4). He identifies global warming, deforestation, air pollution, depletion of the Ozone layer, and dwindling of non renewable natural resources, in that order as the most critical concerns threatening sustainability. Forsyth (2008), Reddy (2008), Grainger (2008) and Swanson (2008) have similarly established strong links involving energy, environment, and development.

It is equally true that communication plays a pivotal role in human affairs. Energy, environmental, and development issues have found expressions in the context of human communication which may assume intrapersonal, interpersonal, group, organisational, mass or cybersphere forms. Given this situation, it becomes expedient to interrogate the character of discourses which pervade the media in relation to energy use in Nigeria.

Without doubt, newspapers constitute a veritable platform for the ventilation of ideas in the polity. We observe that, there seems to be a paucity of research data on press coverage and framing or discourses of sustainable energy issues in Nigeria. Indeed, we do not know the extent to which Nigerian flagship newspapers engage in the sustainability aspects of environmental nuances of energy utilisation of Nigeria.

The key question before this study therefore is: to what extent are the select Nigeria newspapers reflective of environmental concerns in the framing of energy issues. In other words, what different environmental discourses are decipherable in Nigerian newspaper framing of energy issues?

1.4 Purpose and Research Questions

The overriding purpose of this study was to gauge the contributions of the Nigerian press to the practice of sustainability communication in Nigeria. Pursuant to this, the following questions received focus:

(i) To what extent do energy issues occur in three of Nigeria's flagship newspapers: *The Guardian, Punch* and *The Nation?*

(ii) What different environmental discourses emanate from *The Guardian, Punch* and *The Nation* newspaper framing of energy issues?

(iii) Which dominant interests or voices are discerned from the discourse of energy in *The Guardian, Punch* and *The Nation*?

(iv) To what extent is there a divide in the framing of energy issues in *The Guardian, Punch* and *The Nation*?

1.5 Theoretical Framework on Sustainability, Framing and Environmental Discourse

We based this study about energy discourses in Nigeria's flagship dailies on sustainability, framing and environmental communication theories.

Sustainability: To Lindenfeld *et al*. (2012) sustainability is a science that builds on ideas relating to sustainable development. They define the concept as, "use-inspired research (Stokes, 1997) that spans and integrates a broad range of science, engineering, and policy discipline and is directed towards the management of human – environment systems in ways that meet needs for human livelihoods while protecting ecosystems and environmental integrity (Clark and Dickson, 2005; Turner *et al*., 2003, p. 39)." These scholars note that sustainability science depends on social science disciplines like communication, economics, political science, and anthropology adding that environmental communication offers particular contribution to the science.

However, as Redclift (2008) notes, the definition of sustainable development by the Brundtland Commission of 1987 as, "development that meets the needs of the present without compromising the ability of future generations to meet their own needs", is a deceptive simplicity fraught with underlying complexities and contradictions. These problems arise according to Redclift because needs change, needs are defined differently by cultures, and there is difficulty in establishing the course of action that is more sustainable. The relevance of the theory of sustainability is that, the cause of sustainable development would be deeply promoted if, in the coverage of energy issues, care is taken to address environmental and ecological concerns.

***Environmental Communication Theories*:** Environmental communication theories provide the rational basis in which humans relate to the environment and how they express those relationships. Milstein (2009) explains that the manner in which humans communicate affords their perception of the ecology and that these perceptions influence the way human treat nature. She adds that human relations with nature operate in the contexts of cultural communication, mass media, public communication, interpersonal communication, popular culture, etc. It is for this reason that environmental communication pulls knowledge from cultural theory, media theory, rhetorical theory, social movement theory, pop cultural theory, etc. An example of these, Milstein further states include the use of framing theory in media studies of environmental communication.

Since this study is about how energy issues are framed in three Nigerian newspapers, an understanding of framing theory is useful. Deacon, Pickering, Golding and Murdock (2010) cite Todd Gitbin as stating that frames are principles of selection, emphasis, and presentation composed of little tacit theories of what exists, what happens, and what matters. Zeroing in on news, Hansen (2010) cites Gamson (1985) as stating that news frames allow us determine what is captured, what is discarded and which is accentuated. This theory therefore explains the basis for the news media selection, exclusion, and projection of aspects of energy issues and the environmental issues that arise from energy utilisation. In simple terms, framing permits us to appreciate what the issue is, the actors involved in the issues and what the solutions are.

***Environmental Communication Discourses*:** Numerous studies of the environment are undertaken in the form of discourse analysis. This involves investigation of written media texts or analysis of media representations. Lassen *et. al*. (2011) cites Hajer (1995, p. 45) as defining discourses to mean, "specific ensembles of ideas, concepts, and categorisation that are produced, reproduced, and transformed in a particular set of practices". Dealing specifically with climate change discourses, Lassen *et. al*. State that three discourse are especially prominent: (a) discourse of ecological modernisation, (b) discourse of green governmentality (c) discourse of civic environmentalism. Ecological modernisation underscores the need for top-down institutional or political intervention as well as market regulation and less of bottom up citizen participation. Green governmentality emphasises the role of authorities and disciplinary strategies to realise growth sustainability. Civic environmentalism conveys the idea that citizens ought to play key roles in altering social acts.

In Tuler's (1997) review of John Dryzek's *The Politics of the Earth: Environmental Discourses,* several more categories of environmental discourses are presented. These are:

Survivalism, democratic pragmatism, economic rationalism, ecological modernisation, administrative rationalism and green radicalism.

i) The radical and prosaic category is labeled survivalism – a discourse identified by its tendency towards inputs and carrying capacity. By challenging endless economic growth and power relations it becomes radical but by proposing solutions within industrial constraints, it becomes prosaic.
ii) The reformist and prosaic category is tagged environmental problem solving made up of these discourses namely: administrative rationalism, democratic pragmatism, and economic rationalism.
iii) The reformist and imaginative category is driven by the yearnings for sustainability and includes discourse of sustainable development and ecological modernisation.
iv) The imaginative and radical category covers the discourse of green radicalism.

However, Tuler raises some questions such as whether we can empirically demonstrate that these

discourses are used, who uses them, and in which contexts, etc. It is significant that we add that in Third World countries where energy and environmental issues are only recently gaining currency, it may be difficult to see expressions of these discourses in their full array. It might therefore be more likely to find simpler, more straight forward discourses such as economic, political, eco-cultural, or environmental.

2. Literature Review

2.1 Media coverage; and Framing of Energy and Environmental Issues

There is some consensus that energy issues are also often times, environmental issues and vice versa. The media coverage of these issues bear several characteristics. Berger (2002) identified them to include sources, frames, expertise deficits, negativism, event orientation, transience, economics, trivialisation; and polarised and reductionist reporting. Concerning frames, Berger explains that power position and culture portray meaning in certain ways for example, Chernobyl was painted as a Cold War event instead of a nuclear power issue, and while the Bhopal poison gas catastrophe was portrayed as Third World inefficiency rather then multinational corner cutting, the turning of farmlands into game ranches rather than being framed from the point of view of social retrenchment, farm worker displacement and ecological capacities of the land, was framed as a tourism advantage. Lets take a look at the coverage of energy and environmental issues as well as their framing in several countries and regions of the world.

In Zimbabwe, Chagutah (2007), x-rayed communicating environmental sustainability in that country's press. An analysis of *The Standard* and *The Sunday Mail* showed that environmental issues were seldom given prominence as front page stories or head story status inside. The study also noted that what determines whether environmental issue make it to the media agenda in the local press is a complex interplay involving the influence of issue proponents, proprietary power and its influence on the value judgments of gatekeepers, exposure of the issue in other media… and sometimes evidence of environmental process. Furthermore, concerning frames, the finding was that, most environment stories fell within the related frames of risk, uncertainty, fear, outrage and crisis.

In Iraq, Al-Mawlawi's (2011) study funded by Spain and supported by UNESCO, and UNDP, analysed Iraqi media coverage of the energy sector. It involved *al-Sabah,* and *al-Zaman* newspapers as well as the Aswatal-Iraq News Agency. A total of 161 energy-oriented stories published between September and October 2010 showed that, some 72% came from a single source. A staggering 82% of stories depended on official government sources with over half of the stories lacking sourcing in a way that significantly affected the credibility of the news story. Another finding of the study was the total absence of stories dealing with community-level impact of the oil industry. Regarding frames, the study noted the following frameworks for stories on the Iraqi energy sector: Politics (34%), Business (28%), International Relations (20%), Social Issues (17%). The environmental paradigm is almost totally lacking from Iraqi media coverage of the oil industry. Lastly, the study observed that, "there was very little coverage of the Extractive Industries Transparency Initiative" (p.5) and that there was no demonstration of an understanding of the process.

Earlier, In South Africa, Lawhon and Fincham (2006) examined environmental issues in the South Africa Media focusing on the *Natal Witness.* The study categorised 158 articles into 25 environmental issues. Out of 259 stories captured in the study, ecological disasters topped with 17% followed by Wildwife (15.4%), Tourism and Recreation (8.5%). Energy polled a paltry 1.2% indicating that energy issues were hardly seen as a serious environmental concern by the paper. The study concluded that to achieve environmental protection in South Africa, environmentalism must gain broader support and that, "the media can either hinder this through limited portrayal of environmental concerns, or enhance it by making environmental concerns more inclusive" (p. 119).

In Kyrgyzstan and Kazakhstan, Freedman (2011) in his study of environmental journalism in the two countries found out that journalists there gave low priority to environmental stories, that there were inadequate financial and time resources for in-depth reporting, a low public interest, difficulties in access to information, constraints on the press, and a limited working relation between journalists and environmental NGOs among others.

Dealing directly with the discourse on energy relations between the European Union and Russia, Tichy and Kratochvil (2013) based on the analysis of 115 unabridged documents, speeches and interviews found the existence of three energy discourses namely the integration discourse, the liberalisation discourse and the diversification discourse pointing out the predominance of the integration discourse. This gives, "emphasis to the mutual benefits derived from the energy cooperation between the EU and Russia based on the interdependence of the two actors", (p. 21).

However, a less recent study carried out in the United Kingdom on renewable energy and the discourses of objection by Ellis, Barry and Robinson (2006) was more elaborate involving the analysis of policy documents, promotional materials, campaign materials, and local/national media reports. The themes under opposition discourse themes were identified as sacrifice and disempowerment, lack of trust, language of war, conflict and

defense; foreigners, aliens and anti-colonial rhetoric, industrialisation and commercialisation of the environment; and NIMBY rebuttal. The supporter discourse themes included, the assumption of consensus; rational knowledge-based, scientific, communicating opposition, urgency and threat of climate change and low carbon emission; and ecological modernisation.

The study summarised a year-long study into the nature of objection to wind energy in the United Kingdom underscoring the common rhetorical devices employed in both objector and supporter discourse. These include trinities, strategic silences, contested use of naturalness, visible and invisible threats, exaggeration, use of photomontages, etc. The study concluded that there is need to put social sustainability on an equal footing with the publicly accepted environmental and economic aspects of sustainable development.

In the United States, Stephen, Rand and Melnick (2009) in their study of wind energy in the US media noted its critical importance in climate change mitigation technology being the most rapidly growing renewable energy technology in the USA because it provides carbon free electricity generation. The study involved a comparative content and frame analyses of newspaper coverage of wind power in Taxas, Minnesota, and Massachusettes. The study, "demonstrated that wind's climate change mitigation potential has been a limited but growing part of media coverage on wind power" (p. 168).

Regarding public engagement with information on renewable energy development with reference to single semi-urban turbines, Parks and Theobald (2011) found that their United Kingdom study "supported the evidence in the literature of a shift towards the recognition for the planning process to be more human" (p.61). It needs to involve the public, be specific about each local content, and take into account how local residents react to the way information is delivered plus the way preexisting knowledge impinges on local residents' interpretation of new, delivered information.

Besides media framing, countries do so too. The Canadian Council of Chief Executives (2012) in framing an energy strategy for Canada aim among others to enhance the Canadian brand, strengthen, energy literacy, build a culture of energy conservation and facilitate informed choice; invest in sound energy infrastructure, create a Canadian energy technology advantage and facilitate a coherent national climate policy.

Concerning photovoltaic (Solar) energy and the media in Spain, Heras–Saizarbitoria *et. al*. (2011) examined the public acceptance issue of renewable energy specifically, solar energy and notes that media reporting of some environmental issues is heavily influenced by socio-political factors overtime and has become significantly affected by industry interests.

In a broader study by Mander and Gough (2006) involving media framing of carbon capture and storage in five countries: Australia, Canada, New Zealand, Great Britain, and USA, showed that more articles presented a positive or neutral view of technology than a negative or mixed view. The study also revealed that mainly in Australia and the UK, carbon capture and storage gained representation in the press though seen as costly in the US and Australian media. The study became relevant to the extent that, "the way in which the media report new technology can radically affect the success of its implementation" (p. 6).

On the framing of fossil fuels and climate change, Rogala (2011) sought the different forms of frames that three American newspapers: USA today, New York Times, and the Washington Post adopted in covering environmental issues of fossil fuels and climate change. The study identified frames such as conflict, "be worried", solutions and environmental stewardship.

Relating to media framing and public attitude toward biofuels, Delshad and Raymond (2013) conducted a detailed content analysis of 610 articles from the New York Times and the Washington Post between 1999 and 2008. The media frames identified in the study included national security, environmental costs, environmental benefits, unfair, fair, economic cost (food versus fuel subframe) and economic benefits. The findings of the study showed that "media framing of the biofuels issue documents the rise of new negative frames especially frames describing the economic costs of biofuels" (p. 205). Also, the study revealed that, "a national public opinion survey offers remarkably consistent results with these shifts in media framing: weak public support for biofuels in general and for corn-based ethanol in particular.

In line with the agreement that energy and environmental issues are also science issues, Nisbet (2008) identified eight frames that consistently appear across policy debates on science. These include social progress, economic development, competitiveness, morality/ethics and scientific technical uncertainty, Pandora's Box/ runaway science, public accountability/governance, middle way/alternative path and conflict/strategy. Note that the run away science frame calls for precaution in the face of possible impacts or catastrophe and this according to Nisbet (2008) is often attributed to nuclear energy.

As we have seen so far, frames are important to meaning sharing and understanding of issues. For example, Smith and Lindenfeld (2014) state that a comprehensive content analysis of all news coverage in Maine's two leading newspapers from 1995 to 2012 enabled them to understand what messages citizen were reading. Their analysis confirmed that, "Maine's newspapers primarily used a political frame when relaying information about alternative energy and minimised information regarding the environmental, technical, health and safety issues related to alternative energy development (p. 187). They also found a bare-faced lack of

scientific discussion as well as the fact that the majority of stories dealt with wind power even though other energy advancements such as tidal power and biomass were occuring at the same time.

Similarly, discourses with consequences going beyond the realm of linguistics shape our awareness and behaviour toward the living world. They help us to understand the construction of the meaning of environmental issues and the interests that these meanings serve (Ozen, 2014). Dealing with the Turkish government discourse against anti-hydroelectric power plants movements, Ozen argues that, "governments that are committed to neoliberal principles may attempt to counter environmental challenges to their economic policies by actively engaging in symbolic acts that… also repress environmental groups" (p. 446).

A fitting conclusion to this section is Foerstner, Humphreys, and Shearer's (2013) research on emerging media coverage of energy issues: impact of different reporting frames on audience engagement and understanding. In one of the phases of the study, they conducted a content analysis of the *New York Times*, *Wall Street Journal,* and *USA Today* using the Factiva database. Foerstner *et. al.* found three major themes or discourses related to energy and environmental reporting namely:

(a) Harm discourse referring to how energy use and extraction harm or might potentially harm the environment.
(b) Protection discourse deals with how the environment sought to be protected from such harms.
(c) Technology discourse concerns technological solutions through which environmental damage could be mitigated.

On frames the authors identified three as follows: Science frame which stresses technology, human interest frames which, "casts issues, in term of their effects on members and citizens," and the political frame which is marked by conflict (p. 4). The conclusion of this study was that, "the way an issue is reported can immensely impact the way the public perceives its risks and importance" (p. 1).

3. Methodology

This study undertook a content analysis of energy pages dedicated to news, features, and opinions or analytical articles and published weekly by two purposively selected newspapers. This choice was predicated on the fact that *The Guardian, Punch* and *The Nation* are major (flagship) dailies in Nigeria.

The *UNDP* guide to the Nigerian media (undated) lists the major print media outlets in Nigeria to include: *The Guardian, ThisDay, Punch, Tribune, Vanguard, Daily Trust, Business Day, Champion, The Sun, Daily Independent, etc.* To these can be added *Leadership,* and *Nation* which are newer titles.

The Guardian, Punch and *The Nation* were selected for this study because of wide readership, elitist and populist orientation, national circulation, accessibility and availability to the researchers. The UNDP guide describes *The Guardian* as "flagship," "serious", "sober" and "appeals largely to the upper/middle class" (p.2). On the other hand, *Punch* is described as one of the "largest circulating newspapers in Nigeria", "bold" "sassy" with "extensive operations" (p.3).

The population of the study consisted of 52 weekly issues of the energy pages for the two newspapers summing up to 104 issues. A census sampling procedure was adopted while the period of study covered January 1, to December 30, 2013 – the year Nigeria implemented the privatisation of its power (electricity) industry and commencing initiatives to extend to the petroleum industry.

With the "article" as the unit of analysis, the study categorised the environmental discourse on energy into renewable and nonrenewable energy and examined the frames and discourses based on political, technoscientific, economic, risk/health/safety/human interest, conflict/ criminal/legal subcategories.

4. Result /Discussion of Findings

The results of this study are presented in tables bearing the percentage scores on the study variables. The discussion that goes along with the results are based on the objectives and research questions earlier set for the study.

4.1 Incidence of Energy Issues

Table 1: Occurrence of Energy Issues in Three Nigerian Newspapers

Energy/Issues	**Newspapers**						**Total**	
	The Guardian		*The Punch*		*Nation*			
Non-Renewable	n	%	n	%	n	%	n	%
Oil and Gas	236	69.41	228	73.08	224	74.67	688	72.27
Coal	0	0	0	0	0	0	0	0
Nuclear Energy	0	0	0	0	0	0	0	0
Electric Power	92	27.08	84	26.92	68	22.67	244	25.63
Wood Fuel	4	1.17	0	0	0	0	4	0.42
Renewable								
Solar	4	1.17	0	0	4	1.33	8	0.84
Wind	4	1.17	0	0	0	0	4	0.42
Geothermal	0	0	0	0	0	0	0	0
Biomass	0	0	0	0	4	1.33	4	0.42
Total	340	100	312	100	300	100	952	100

Table 1 bears data on the occurrence, incidence, or frequency of energy issues in the three select Nigerian newspapers. The table shows that there were a total of 952 energy stories during the period of the study and that *The Guardian, The Punch* and *The Nation* bore between 300 and 340 energy stories. The significant finding is that non renewable energy issues particularly oil and gas (72%) and hydro/electric power (25%) formed the major focus of the three newspapers. Other nonrenewable energy issues either did not occur or did so at very insignificant levels.

Table 1 equally indicates that the three newspapers gave scant or no attention to renewable energy issues. The percentage of occurrence of solar, wind, geo-thermal and biomass energy issues did not record up to 1 percent in the total coverage.

The answer therefore to research question one: to what extent do energy issues occur in three Nigerian newspapers is that, to a very large extent, the coverage or reportage of energy issues in the three select Nigerian dailies is skewed in favour of non renewable energy by about 97% and that even there, the coverage is lopsided and concentrated mainly on oil and gas as well as electricity issues in Nigeria. It can be said that renewable energy issues in Nigeria hardly received mention in the analysed newspapers at smaller than 2 percent. This revelation shows the dominance of the oil, gas and hydro-electric power industries in the energy configuration of the Nigerian economy. Being one of the largest oil and gas producers in the world, this state of reportage is reflective of Nigeria's dependence on hydrocarbon resources for energy, industrialisation, agriculture, economy, etc.

Another important implication of the finding is that the coverage noticeable in the electric power sector is in sync with the Nigerian reality. Electricity infrastructure is in doldrums in Nigeria and much of the coverage deals with inefficiency, vandalism, theft, sabotage, and other criminal acts involving electricity generation distribution and transmission. It also means that Nigeria as a nation may not be paying attention to renewable energy issues in spite of their salutary impact on the environment.

Also, the dismal state of renewable energy sector coverage may be indicative of the paltry state of research, scholarship, innovation, manufacture, and investment in renewable energy in Nigeria. This study bears some semblance in results to Chagutah's (2007) observation that environmental issues were seldom given prominence in Zimbabwe. Lawhon and Fincham (2006) also observed a paltry 1.2% coverage of energy issues in a South African paper. The import of these findings is that for Nigerian newspapers to contribute substantially to the sustainability discourse, they must escalate the tempo of coverage of energy issues beyond oil, gas and electricity and also adopt an appropriate interest in renewable energy.

4.2 Energy Discourses

Table 2: Energy Discourses in Three Nigerian Newspapers

Energy Discourses	Newspapers						Total	
	The Guardian		*The Punch*		*Nation*			
	n	%	n	%	n	%	n	%
Techno Science	16	4.71	4	1.28	26	8.67	46	4.83
Business/Economy	228	67.05	208	66.07	174	58	610	64.08
Politics	0	0	8	2.56	6	2	14	1.47
Health/Safety	36	10.59	28	8.97	18	6	82	8.61
Environment	20	5.88	24	7.70	14	4.67	58	6.00
Legal/Criminal/ Corruption/Inefficiency	40	11.76	40	12.82	62	20.66	142	14.92
Total	340	100	312	100	300	100	952	100

Table 2 bears data on how energy discourses or frames were undertaken in the three select newspapers. It is seen clearly that energy discourses were mainly depicted in the light of business and economy at the level of 64 percent. Apart from the legal/criminal frame that covers the corruption or inefficiency in the energy sector which recorded about 14 percent, relevant frames including techno-science, politics, health/safety and sadly environment; recorded a level smaller than 9 percent. The study has shown that energy issues in the select Nigerian newspapers were not seen in the light of environmental/ecological implications. They were seen rather more like development, infrastructural, investment, economic, business, or financial matters. This sort of discourse or framing has serious implications for the environment.

The study also shows that the techno-scientific, political, health/safety aspects of energy issues were not given prominence in the discourse. This means that the field is not covered or framed in its full breadth. Smith and Lindenfeld (2014) reported that, Maine's newspapers used a political frame when relaying information about alternative energy and downplayed information on environmental, technical, health and safety issues related to alternative energy.

Similarly, Al-Mawlawi (2011) found that the framing of the Iraqi energy sector was done in terms of politics (34%), Business (28%), International relations (20%) whereas the environmental paradigm was totally lacking.

To answer the question: What environmental discourses emanate from the select Nigerian newspaper framing of energy issues: this study shows that the business and economy frame was clearly dominant followed by the crime and legality frame. The techno-science, political, health and safety, and environment frames were hardly used.

4.3 Prominent Voices in Energy Coverage

Table 3: Dominant Voices in Energy Coverage in Three Nigerian Newspapers

Voices in Energy Coverage	Newspapers						Total	
	The Guardian		*The Punch*		*Nation*			
	n	%	n	%	n	%	n	%
Government/Political	80	23.53	76	24.35	65	21.17	221	23.21
Scholars/Scientists	12	3.53	0	0	25	8.33	37	3.89
Media	32	9.41	32	10.26	33	11	97	10.19
Corporation	150	44.12	188	60.26	121	40.33	459	48.21
Civil Society/NGO's, Persons, Communities	66	19.41	16	5.13	56	18.67	138	14.50
Total	340	100	312	100	300	100	952	100

Table 3 captures the dominant voices behind energy news in the three select Nigerian newspapers. In news reportage, attributions or sources, apart from infusing credibility into the news, do help in evaluating who has access and who has little or no access to the media. They also help to gauge the various levers of power wielded by certain social agents in society. The data in the table shown above indicate that the groups that are most vocal in the energy news in the three select newspapers include corporations (48%), government agencies and politicians (23%) and individuals, NGOs, Civil Societies and Communities (14%). While the media are shown to generate own coverage at the level of about 10 percent, scholars and scientists are the least heard concerning energy news pointing to the need for the two groups to participate or engage more in the media coverage and framing of energy issues.

One significant finding in this study showing the contribution of corporate sources to energy news at 48 percent is that, energy news in the select Nigerian newspapers may be crafted mainly from press releases by energy corporations. This means that the media may unwittingly be playing the role of mouthpieces for energy

firms. Al-Mawlawi (2011) observes that 82 percent of the stories in three Iraqi news media depended on official government sources.

To answer the question: Which dominant voices are discerned from the discourses of energy in the three select newspapers; the study shows that corporate, political, and civil society voices were clearly dominant. Whereas the media and scholars/scientists' voices were less heard.

4.4 Divides in the Coverage of Energy matters

Table 4: Observed Divide in the Coverage of Energy Issues in Three Nigerian Newspapers

Divides in Energy Coverage	**Newspapers**						**Total**	
	The Guardian		*The Punch*		*Nation*			
	n	%	n	%	n	%	n	%
Energy-Specific Focus	300	88.23	264	84.62	280	93.33	844	88.66
Environment-Related Focus	40	11.77	48	15.38	20	6.67	108	11.34
Total	340	100	312	100	300	100	952	100

Table 4 pertains to the observed divide perceptible in the coverage of energy issues. The data in the table are helpful in answering research question four: To what extent is there a divide in the framing of energy issues in the three select newspapers? The table indicates that an overwhelming 88 percent of stories from the newspapers had energy-specific focus whereas only about 12 percent of the stories related energy to environmental issues. In Nigeria, it appears energy correspondents see themselves as business correspondents and newspaper publishers tend to separate energy coverage from environmental reportage assigning staff and newshole to energy or environmental issues reported on different days of the week. This sort of coverage seems not to take cognizance of the fact that energy issues cannot and should not be treated without recourse to their environmental aspects. There is need therefore, to bridge this divide in spaces of practice.

4.5 Orientation of Energy News

Table 5: Place Orientation of Energy News in three Nigerian Newspapers

Place	**Newspapers**						**Total**	
	The Guardian		*The Punch*		*Nation*			
	n	%	n	%	n	%	n	%
National Focus	340	95.50	312	51.31	300	98.68	952	75.08
Foreign Focus	16	4.50	296	48.69	4	1.32	316	24.92
Total	340	100	312	100	300	100	952	100

Table 5 shows the difference in the incidence of coverage between national and foreign energy news. For both *The Guardian* and *The Nation*, more than 95 percent of the focus was on national energy issues whereas, *The Punch* bore foreign energy news which was as high as 48 percent. The implication of this finding is that by concentrating mainly on national energy issues, national readership may not have the benefit of wide ranging energy and environmental discourses gaining currency at the global level. It may benefit the national readership to be aware of and if possible also engage with energy discourses particularly as they pertain to the development and sustainability aspects of renewable energy.

5. Summary of Findings, Conclusion and Recommendations

Based on the analysis of the data obtained from this study the following findings were apparent:

i) Well over 1268 national and foreign content on energy issues were found in the three select Nigerian newspapers covering a one-year period of study. Out of that number, 952 stories were national in orientation, 72% dealt with oil and gas matters while 25% pertained to electric power. These two issues formed the dominant themes of energy coverage in *The Guardian, The Punch,* and *The Nation.* Coverage of the sector clearly showed that renewable energy issues only occurred in the newspaper at a miserable rate of below 2 percent. This means that renewable energy discourse is almost absent in the analysed newspapers.

ii) The three analysed newspapers framed or depicted the energy sector principally as a business and economic discourse to the tune of 64 percent whereas discourses of technoscience, politics, health and safety, and environment were portrayed below 9 percent meaning that energy issues are not portrayed in the true context of their multi and interdisciplinary relationships with environment, health, science and politics.

iii) The attributed voices that dominate the coverage and reportage of the energy sector are corporations (48%), government/politicians (23%), civil society (14%) and the media (10%). Significantly, scholars and scientists received little mention (3%) in the stories.

iv) A huge divide is decipherable in the coverage of energy issues by three Nigerian newspapers. The sector is covered foremost, as economic, business, investment, or financial infrastructure at over 88

percent occurrence and only at 11 percent as embodying environmental concerns.

v) Energy news in the three analysed newspapers are largely oriented to the national scene by about 75 percent and 25 percent to the foreign arena.

It is therefore the conclusion of the authors of this study that whereas there is a sufficient incidence of non-renewable energy issue coverage in the analysed printed media, the reportage is unduly heaped in favour of the oil, gas and electricity segments of the energy industry. Also, and more significantly, this study concludes that because there is such a disappointing content on renewable energy in the three select dailies, the analysed press has not contributed meaningfully to the promotion of sustainability in Nigeria; more so where the environmental implications of non renewable energy issues are also not given reasonable media attention.

In the light of these conclusions, it is recommended that:

(a) The newspapers involved in this study should increase the frequency with which they cover the energy sector and should do so beyond the oil/gas, and electricity sectors. By also focusing attention on coal, nuclear energy, and wood fuel, the readers' breadth of perspective can only expand. Very importantly, Nigerian newspapers, in tandem with the global aspirations concerning sustainability should play prominent advocacy role for coverage, research, investment and focus on renewable forms of energy.

(b) Nigerian newspapers may do more to deepen the energy discourses available in the media. The practice of framing energy mainly as a business/investment/economic matter or focusing on the criminal, legal and inefficiency directions of the energy problem detracts from the fact that energy does have technoscientific, political, health, and environmental sides which should be fully explored.

(c) Apart from generating by themselves more energy content in the media, the analysed newspapers should engage a lot more scholars and scientists by giving them more voice in the reportage of energy issues. This would widen the sphere of media participation among scholars and scientists as well as bestowing more credibility to the news.

(d) Newspapers covering energy issues should ensure to explore and bring to the fore the various ways in which environmental concerns are x-rayed alongside energy issues for the purpose of strengthening sustainable development in Nigeria. This would help to bridge the divide in the space of practice where energy issues are covered separately from environmental issues as if they had no serious linkages.

References

Al-Mawlawi, A, *et. al*. (2011). Analysis of Iraqi Media Coverage on the Energy Sector. Iraqi Institute for Economic Reform. A Project founded by the Government of Spain.

Batta, H. E., Ashong, C. A., & Bashir, A. S. (2013). Press Coverage of Climate Change Issues in Nigeria and Implications for Public Participation Opportunities. *Journal of sustainable development,* 6 (2): 56 – 79.

Berger, G. (2002). All Change: Environmental Journalism Meets the 21st Century. A paper prepared for 11c Conference, Johannesburg, September 31.

Canadian Council of Chief Executives (2012). Framing an Energy Strategy for Canada. Submission to the Council of the Federation, July.

Chagutah, T. (2006). Communicating Environmental Sustainability in the Zimbabwean Press. A paper based on research finding for the Master of Arts degree, University of Zimbabwe. Available at http://environcom.wordpress.com/environmental-reporting/.Dowloaded on August 11, 2013.

Clark, W. C. & Dickson, N. M. (2003). Sustainability Science: The emerging research program. Proceedings of the National Academy of Sciences, 100, 8059-8061.doi:10.1073/anas 1231333100.

Deacon, D., *et al*. (2010). *Researching communications: a practical guide to methods in media and cultural analysis* (2nd ed.) London: Bloomsbury.

Delshad, A. & Raymond, L. (2013). Media Framing and Public Attitude Towards Biofuels. *Review of policy research,* 30 (2): 190 – 210.

Ellis, G. Barry, J. & Robinson, C. (2006). Renewable Energy and Discourses of Objection: Towards Deliberative Policy-Making. Queen's University, Belfast and Economic and Social Research Council.

Energy Commission of Nigeria (2010). Renewable Energy Development in Nigeria. A Paper presented by A. S. Sambo at the World Future Council/Strategy Workshop on Renewable Energy, Accra, Ghana. Available at www.power.gov.ng.Downloaded on December 15, 2014.

Foerstner, A., Humphreys, A., & Shearer, E. (2013). Energising Media Coverage of Energy Issues: Impact of Different Reporting Frames on Audience Segments and Understanding. Medill Northwestern University.

Forsyth, T. (2008). The Brown Environmental Agenda. In Desai, V. & Potter, R. B. (Eds*). The companion to development studies.* (2nd ed). London: Hodder Education.

Freedman, E. (2011). Environmental Journalism in Kyrgyzstan and Kazakhstan: Reporting Scarce Amid Environmental and Media Problems. *Applied environmental education & communication,* 10 (2) 126 – 134, doi:10.1080/1533015x.2011.577378.

Friedman, S. M. (1990). Two Decades of the Environmental Beat. *Gannett Center Journal,* 4 (3) Summer: 13 – 23.

Gamson, W. (1985). Goffman's Legacy to Political Sociology. *Theory and Society*, 14 (5): 605 – 22.

Grainger, A. (2008). Tropical Moist forests and development. In V. Desai & R. B. Potter (eds). *The companion to development studies.* (2nd ed). London: Hodder Education.

Guide to the Nigerian Media (Undated). Prepared by the Communication Unit, UNDP Nigeria.

Hajer, M. A. (1995). *The Politics of Environmental Discourses: Ecological Modernisation and the Policy Process.* London: Oxford University Press.

Haque, M. S. (2000). Environmental Discourse and Sustainable Development: Linkages and Limitations. *Ethics and the environment,* 5 (1): 3 – 21.

Hansen, A. (2010). *Environment, media and communication.* London: Routledge.

Heras-Saizarbitoria, I, *et. al*. (2011). Public acceptance of renewables and the media: An analysis of the Spanish PV Solar experience. *Renewable and Sustainable Energy Reviews,* 15 (2011) 4685 – 4696.

John Ray Initiative (Undated). Renewable Energy: ethical, Scientific and technological debate. Briefing prepared by Prof. John Twidell, University of Reading. Available at ww.jri.org.uk/brief/energy_renewable.pdf. downloaded on January 21, 2015.

Kobre, S. (1981). *Reporting news in depth.* Washington D. C: University Press of America.

Lassen, T. *et al*. (2011). Climate change discourses and citizen participation: A case study of the discursive construction of citizenship in two public events. *Environmental Communication,* 5 (4) 411 – 427.

Lawhon, M & Fincham, R. (2006). Environmental Issues in South African Media: A case study of the *Natal Witness. Southern African journal of environmental education,* 23: 107 – 120.

Lindenfeld, L. A., Hall, D., McGreavy, B., Silka, L. & Hart, D. (2012). Creating a place for environmental Communication Research in Sustainability Science. *Environmental communication: Journal of nature and culture,* 6 (1) 23 – 43. Doi: 10.1080/17524032.2011.640702.

MacDougal, C. D. (1977). *Interpretative reporting.* (7th ed.) New York: Macmillan.

Mander, S. & Gough, C. (2006) Media Framing of New Technology: The Case of Carbon Capture and Storage. The Tyndall Centre, University of Manchester, United Kingdom.

Milstein, T. (2009) Environmental Communication Theories. In S. W. Little John & K. A. Foss, (Eds.) *Encyclopedia of communication theory.* Los Angeles: Sage.

National Planning Commission (2004). *National Economic Empowerment and Development Strategy*. Abuja: NPC.

Nisbet, M. (2006). Going Nuclear: Frames and Public Opinion about Atomic Energy. *Science and the media.* School of Communication, American University, Washington Dc.

Nisbet, M. (2008). Framing Science: A new paradigm in public engagement. Chapter scheduled for 2009 in *New agenda in science communication.* Kahlor L. & Stout P. (Eds) Taylor and Francis Publishers. Available at www. Iderscience. Ca/pdf/framing science pof.downloaded on November 22, 2013.

Ozen, H. (2014). Overcoming environmental challenges by antagonising environmental protesters: The Turkish government discourse against anti-hydroelectric. *Environmental communication,* 8 (4) 433 – 451.

Parks, J. M. & Theobald, K. S. (2011). Public engagement with information on renewable energy developments: The case of single, semi-urban wind turbines. *Public understanding of science,* 22 (1) 49 – 64.

Redclift, M. (2008) Sustainable development. In V. Desai & R. B. Potter, (Eds). *The companion to development studies.* (2nd ed). London: Hodder Education.

Reddy, S. (2008). Energy and development. In V. Desai, & R. B. Potter, (Eds). *The companion to development studies.* (2nd ed). London: Hodder Education.

Rogala, B. (2011). The framing of fossil fuels and climate change: Coverage of environmental issues in three of the nation's top newspapers. *The Elon journal of undergraduate research in communication,* 292) 76 – 85.

Smith, H. M. & Lindenfeld, L. (2014). Integrating media studies of climate change into transdisciplinary research. Which direction should we be heading? *Environmental communication: A journal of nature and culture,* 8 (2) 179 – 196.

Stephen, H., Rand, G. M. & Melnick, L. L. (2009). Wind Energy in US Media: A Comparative State-Level Analysis of a Critical Climate Change Mitigation Technology. *Environmental communication,* 392) 168 – 190.

Swanson, T. (2008). Development and Biological Diversity. In V. Desai, & R. B. Potter, (Eds). *The companion to development studies.* (2nd ed). London: Hodder Education.

Tichy, L. & Kratochvil, P. (2013). The European Union's Discourse on Energy Relations with Russia. *Energy policy,* 5/2013: 1- 22.

Tuler, S. (1998). The Politics of the Earth: Environmental Discourses by John S. Dryzek. *Human ecology review*, 5 (1): 65 – 66.

The IISTE is a pioneer in the Open-Access hosting service and academic event management. The aim of the firm is Accelerating Global Knowledge Sharing.

More information about the firm can be found on the homepage:
http://www.iiste.org

CALL FOR JOURNAL PAPERS

There are more than 30 peer-reviewed academic journals hosted under the hosting platform.

Prospective authors of journals can find the submission instruction on the following page: http://www.iiste.org/journals/ All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Paper version of the journals is also available upon request of readers and authors.

MORE RESOURCES

Book publication information: http://www.iiste.org/book/

Academic conference: http://www.iiste.org/conference/upcoming-conferences-call-for-paper/

IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digtial Library , NewJour, Google Scholar