Review paper (SS-1)

THE APPLICATION OF THE PRECAUTIONARY PRINCIPLES IN THE PROOF OF ENVIRONMENTAL OFFENCES UNDER THE NIGERIAN LAW: CHALLENGES AND PROSPECTS

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ABSTRACT

Since 1992, especially after the Rio declaration, the precautionary principles have become an established feature of environmental law and regulation regimes in many different jurisdictions of the world on the appropriate regulatory strategies in cases of scientific uncertainties. Although the literature on the principles is a large one, even though, environmental problems do not respect borders (the effects of global warming, ozone depletion and contamination of the high seas do not recognize territorial or jurisdictional boundaries). For this reason, lawyers handling environmental issues have to work with legal materials which span international, regional and domestic systems of law. This paper presents the precautionary principles and its application to proof of environmental offences in Nigeria. The paper shows that the development of environmental law reflects the practical application of underlying general principles of law which have evolved in tandem with rising concern over environmental degradation and it threats for the survival of humankind and a dynamic relationship between rules, principles and ethics as to the formulation of the law and enforcement. To this end, agencies involved in environmental management should know that it has a particular responsibility to ensure that its policies and activities should be consistent with modern principles and has to adjust its policies to meet these expectations. The conclusion arising from this is that while there is no doubt that the precautionary principles is an established principles of environmental law, there is an urgent need to think extensively and carefully to identify the circumstances in which the principles can be legitimately invoked and applied under the Nigerian law. Above all, clear government laws, policies and competent bureaucracies for environmental management are needed to be put in place urgently to allow for a robust application of the principles in the overall interest of environmental protection in Nigeria.

Key Words: Environmental law, Judiciary environmental protection, Nigeria

INTRODUCTION

At its most basic, the precautionary principles is a principles of public decision making that requires decision makers in cases where there are threats of environmental or health harm not to use lack of full scientific certainty as a reason for not taking measures to prevent such harm. In other words, it is an environmental management rule that if a threat of serious or irreversible damage to the environment or human health exists, a lack of full scientific knowledge about the situation should not be allowed to delay containment or remedial steps if the balance of potential costs and benefits justifies applying them. The principles are therefore appreciated as a direct corollary of sustainable development since both principles lay emphasis on foresight and the need to be proactive rather than reactionary. The precautionary principles have been included in a number of international agreements and began to have a high profile in international environmental law. It is now common practice in many jurisdictions for
decisions to be made pursuant to the precautionary principles and public decision makers have considerable experience with applying it. Likewise, the case law relating to the principles is a large one, much of its subject matter being when and how public decision makers should apply the principles. Furthermore, the principles have also given rise to a debate about what are appropriate regulatory strategies in cases of scientific uncertainty. The principles are continued to have a role to play in international environmental law, particularly in relation to the protection of the commons.

AIMS AND OBJECTIVES
To focus is on the application of the principles in the proof of environmental offences in Nigeria. The paper is divided into seven sections. Sections I and II deal with introduction and conceptual framework. Sections III and IV looked at the framework of environmental legislations and the nature of environmental offences including enforcement methodologies in Nigeria. Section V discussed the application of the principles to proof of environmental offences, drawing from other jurisdictions. Sections VI examined the challenges and prospects of the application of the principles to proof of environmental offences in Nigeria and section VII is the conclusion.

DISCUSSION
Conceptualising precaution and precautionary principles
The determination of the theoretical basis for environmental law is achievable by an analysis of some of the principles on which it is founded. There are a plethora of principles that form the foundation of environmental law, such as the principles of environmental democracy, intergenerational equity, polluter-pays principles, sustainable development, etc. In this discourse, the scope is limited to the Precautionary Principles (PP). The Rio Declaration provides a widely recognized definition of precautionary principles in its principles 15 as follows:

In order to protect the environment, the precautionary approach shall be widely applied by states according to their capabilities. Where there are threats of serious or irreversible damage, lack of scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

By stating that lack of scientific certainty is not a sufficient reason to postpone decisions on environmental matters, the precautionary principles is creating a link between the acceptance of science and its simultaneous negation as a decision-making factor.

Today, this principles has found its way into the gamut of environmental legislation at both International and National level. For instance, Article 2 (5) of the Helsinki Convention on the Protection and Use of Trans-boundary Watercourses and International Lakes (1992 ILM, 1312) states that:

The parties shall be guided by the precautionary principles, by virtue of which action to avoid the potential transboundary impact of the release of hazardous substances shall not be postponed on the ground that scientific research has not fully proved a causal link between those substances, on the one hand and the potential transboundary impact, on the other hand.

The Vienna Convention for the Protection of the Ozone layer (Adopted March 22, 1985, 1513) and the Montreal Protocol on Substances that Deplete the Ozone layer (Adopted September 16, 1987, 26 ILM 1541) also embody this principles. It was thus asserted that the duo stands out as an attempt at giving life to the precautionary principles which embodies the idea that action should be taken by states without full scientific certainty so as to prevent an emerging problem from becoming a crisis.

The principles was applied in Gabcikovo Nagymaros Project case (Hungary v. Slovakia (1998) ILM 37, 162, where the International Court of Justice held that in the field of environmental protection, vigilance and prevention are required to take account of the often irreversible character of damage to the environment and of the limitations inherent in
the very mechanism of reparation of this type of damage.

Put simply, the need for precaution arises because of uncertainty. According to Cooney therefore if all potential hazards could be quantitatively assessed with minimal error, then it would be relatively easy to base policy decisions on quantitative risk assessments and little else. However, in a world in which global weather, aquifers and growing children still hold many mysteries, we believe the best environmental policies will be informed by the best available science, but will also be guided by a principles of erring on the side of caution.

The international definitions of the precautionary principles unfortunately have little utility where the regulatory process is heavily prescribed because, there is little room for agency discretion as its decisions are likely to be challenged in the courts. This is also a problem in Nigeria in view of the provisions of section 46(1) of the Constitution of the Federal Republic of Nigeria, 1999 and the right of individuals to challenge the power of agencies. In its most progressive formulation, the precautionary principles may be utilised to overturn the traditional burden of proof which is presently weighed in favour of polluters, in the sense that any activity has to be proven to cause pollution before action may be taken to prevent, reduce or control it. The precautionary principles would act to reverse the burden of proof and require any potential polluter to ensure that the activity would not cause pollution before it is allowed to commence. Bearing in mind that some environmental pollution can never be cleaned up, or at least not without incurring substantial costs, it is clearly appropriate for environmental policy to focus upon avoiding environmental damage before it occurs. This is the concern of the precautionary principles.

Framework of environmental legislation in Nigeria

The major or principal environmental laws in Nigeria include the followings:
- Harmful Wastes (Special Criminal Provision) Act, Cap. H 1 LFN, 2004
- Federal Environmental Protection Agency Act, Cap. F 10 LFN, 2004
- National Environmental Standards and Regulations Enforcement Agency (Establishment) Act, No. 25 of 2007
- Environmental Impact Assessment Act, Cap. E 12 LFN, 2004
- Associated Gas Re-injection Act, Cap A 24 LFN, 1990

The Harmful Wastes (Special Criminal Provision) Act, 2004

This Act was enacted by the Military as Decree No. 42 of 25th November 1988. It was necessitated by the illegal dumping of toxic wastes in the port town of Koko in Delta state, Nigeria. The Act prohibits the carrying, depositing and dumping of harmful wastes on any land or territorial waters of Nigeria. It creates offences relating to the purchase, sale, importation, transportation, deposit and storage of harmful wastes (section 1). The offence is deemed to have been committed by any person who does any of the prohibited acts, omits to do any act, aids, counsels or procures any person to do the prohibited act (see section 2). Any person found guilty of the crime shall on conviction be sentenced to imprisonment for life and in addition whatsoever thing used in committing the offence, including land on which the harmful wastes was deposited or dumped shall be forfeited to and vested in the Federal Government (see section 6). A peculiarity of this Act is that there are no immunities in the offence created under the Act. This legislation is particularly important in view of the indiscriminate ways in which certain industrial wastes are dumped or discharged into the streams especially by battery manufacturing industries, textile factories and photograph processing industries and petro-chemical industries that use dangerous chemicals in production or have some dangerous chemicals as waste products.

The Federal Environmental Protection Agency Act, Cap F10 LFN, 2004

This Act was enacted by the Military as Decree No. 59 of 1988. The Act established the Federal
Environmental Protection Agency (FEPA) and specified the methods of governance, functions and financial regulations. The Act charged the Agency with overall responsibility for the protection of the environment as well as with the responsibility of encouraging the states and local government councils to set up their own environmental protection bodies. The Act also mandates the Agency to establish instruments for water quality standards; air quality standards and atmospheric protection, protection of the ozone layer and noise control (see sections 15, 16, 17, 18 and 19). In discharging its mandates, the Agency in 1991 published a number of regulations for the protection of the environment. These include:

**The National Guidelines And Standards For Industrial Effluents, Gaseous Emissions and Hazardous Wastes Management in Nigeria, 1991**

The guidelines are forms of prescription directing industries on how best to improve the quality of the environment and free it from pollutants in order to reduce environmental hazards. The guidelines set standards for environmental good behaviour for the industries. The guidelines relate to six areas of environmental pollution control:

- Effluent limitations
- Water quality for industrial water uses at the point of intake
- Industrial emission limitations
- Noise exposure limitations
- Management of solid and hazardous wastes, and
- Pollution abatement in industries.

**National Environmental Protection (Effluent Limitation) Regulations, 1991**

The regulations were formulated to control the release of hazardous or toxic substances into the environment. They require any industry that releases an effluent into the environment with constituents beyond permissible limits to apply for a waste discharge/disposal permit. The regulations are also aimed at enjoining industries to install anti-pollution equipment for the detoxification of their effluents and chemical discharges and to treat these effluents to stipulated levels of concentration before being discharged. It also states that the agency shall demand an environmental audit from existing industries and an environmental impact assessment from new industries.

**Waste Management and Hazardous Waste Regulations, 1991**

The regulations provide a comprehensive list of chemicals and chemical wastes by toxicity categorization. They intend to regulate the collection, treatment and disposal of solid and hazardous wastes from both municipal and industrial sources. By these regulations all industries are enjoined to adopt in-plant waste reduction and pollution control strategies. To this end, the collection, treatment, transportation and final disposal of industrial wastes are the responsibility of the generating industry.

**National Guidelines on Environmental Management Systems, 1999**

These guidelines establish the requirement for an environmental management system (EMS) in all organizations/facilities in Nigeria. They also state that this EMS should be audited annually or as deemed necessary by the Agency. The guidelines specify the core element for an EMS and the requirements for the audit.

**National Guidelines for Environmental Audit, 1999**

The guidelines are designed to serve as a reference for compliance with the environmental audit requirements of the Federal Ministry of Environment. The regulations state that it is mandatory for a
company to carry out an audit every three years or at the discretion of the Federal Ministry of Environment. The regulations list the types of audit, namely, regulatory compliance, process safety, occupational health, product quality, liability and management, as well as the scope of each type of audit.

**National Guidelines on Waste Disposal Through Underground Injection, 1999**

These guidelines are designed to control the underground disposal of oilfield and industrial wastes. Industrial wastes are classified as either hazardous or non-hazardous and disposal of either underground requires a permit from the Federal Ministry of Environment.

**National Guidelines and Standards for Water Quality, 1999**

These guidelines contain an exhaustive list of water quality parameters designed to protect public health and welfare and enhance the quality of water. Because of the lack of background data in Nigeria, they are based on water quality standards and guidelines from a range of other developed and developing countries. They address the following major uses of water:
- Drinking
- Recreational
- Freshwater aquatic life
- Agricultural (irrigation and livestock watering), and
- Industrial

In addition to these regulations made pursuant to the powers vested in the FEPA, the Act in its section 20 criminalizes the discharge of hazardous substances into the air or upon the land and the waters of Nigeria or on the adjoining shorelines. Penalties for contravention range from a fine of N100,000 for individual offenders to N500,000 for corporate offenders. This is in addition to terms of imprisonment of up to 10 years.

The FEPA Act, 2004 was repealed by the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act, 2007 (See NESREA Section 36). Much of the characteristics of the FEPA Act, 2004 are retained in the NESREA Act, 2007. The Act is essentially a substantive regulation, leaving it to the Agency it created to establish further substantive and procedural aspects of environmental control through legislative-type regulations and sectoral environmental protection laws. The Act also retained all regulations and guidelines made under the FEPA Act, 2004 (See NESREA Section 35).

**National Environmental Standards and Regulations Enforcement Agency (Establishment) Act, No. 25 of 2007**

Section 1 of the NESREA Act, 2007 established a body known as National Environmental Standards and Regulations Enforcement Agency. The Agency shall be the enforcement Agency for environmental standards, regulations, rules, laws, policies and guidelines. It shall be a body corporate with perpetual succession and a common seal and may sue and be sued in its corporate name.

The objectives of the Agency are stated in section 2 of the Act which provides that the Agency shall have responsibility for the protection and development of the environment biodiversity conservation and sustainable development of Nigeria’s natural resources in general and environmental technology, including co-ordination and liaison with relevant stakeholders within and outside Nigeria on matters of enforcement of environmental standards, regulations, rules, laws, policies and guidelines. The functions of the Agency are provided for in section 7, including:

(a) Enforce compliance with laws, guidelines, policies and standards on environmental matters

(b) Co-ordinate and liaise with stakeholders, within and outside Nigeria, on matters of environmental standards, regulations and enforcement

(c) Enforce compliance with the provisions of international agreements, protocols, conventions and treaties on the environment, including climate change, biodiversity, conservation, desertification, forestry, oil and gas, chemicals, hazardous wastes, ozone depletion, marine and wildlife, pollution, sanitation and such other environmental agreements as may from time to time come into force
(d) Enforce compliance with policies, standards, legislations and guidelines on water quality, environmental health and sanitation, including pollution abatement
(e) Enforce compliance with guidelines and legislations on sustainable management of the ecosystem, biodiversity conservation and the development of Nigeria’s natural resources

Under section 8 paragraph (12) of the Act, the Agency is required to submit for the approval of the Minister, proposals for the evolution and review of existing guidelines, regulations and standards on environment other than in the oil and gas sector including atmospheric protection, air quality, ozone depleting substances, noise control, effluent limitations, water quality, waste management and environmental sanitation, erosion and flood control, coastal zone management, dams and reservoirs, watershed management, deforestation and bush burning other forms of pollution and sanitation and control of hazardous substances and removal control methods.

Environmental Impact Assessment Act No. 86 of 1992

The passing of the Environmental Impact Assessment (EIA) Act No. 86 in 1992 was a direct response to the outcome of the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro in 1992. The Act outlines the goals and objectives of an EIA, the minimum content of an EIA and a list of activities that are not permitted to go ahead until the Agency has been consulted and has given its approval. The main aim of the Act is to ensure environmentally sound and sustainable development projects. This is to be achieved through ensuring that the possible negative impacts of development projects are predicted and addressed prior to project takeoff. To this end, the Act in section 13 makes it mandatory for an EIA to be carried out for certain types of projects comprising various industrial, mining and petroleum activities. The regulations also include the process of screening projects and reviewing and approving an EIA. Like every other law, the Act stipulates penalties for non-compliance (see Section 62).

Associated Gas Re-injection Act, Cap 20 LFN, 1990

The Act aimed at prohibiting the gas flaring associated with the oil industry and the resultant atmospheric pollution especially as it relates to the depletion of the earth’s protective shield, the ozone layer. In spite of the existence of this Act, gas flaring has continued. The monetization of the offence had little impact on the level of gas flaring. The financial penalty for the offence is so ridiculously low compared to the cost of gas re-injection that it made better business sense for the oil companies to pay the fines rather than give serious consideration to gas re-injection. In these circumstances, gas flaring is continuing unabated.

Environmental offences and enforcement methodologies under the Nigerian law

The National Environmental Standard and Regulations Enforcement Agency (Establishment) Act, 2007 and other enactments at both Federal and State levels provide an impressive array of enforcement strategies. The most often used include permit, licence, certificate, inspection, search, seizure, arrest, sealing, notice of violation, notice of revocation of permit, revocation order, administrative orders requiring compliance, administrative orders assessing civil penalties recourse to courts for civil penalties for violation, injunctive relief to require compliance, criminal sanctions for violations, etc.

Criminal prosecutions and sanctions

Criminal prosecutions for environmental offence may be undertaken in Nigeria for the violation of any of the following offences:

1. Violation of any regulation for air quality and atmosphere protection. This is provided for in section 20(1) of the NESREA Act, 2007. Prosecution for violation of section 20(1) of the NESREA Act, 2007 may be taken against individual or corporate violator. Thus, a person who violates the regulations made pursuant to subsection (1) above commits an offence and shall on conviction, be liable to a fine not exceeding ₦200,000 or to imprisonment for a term not exceeding one year or
to both such fine and imprisonment and an additional fine of N20,000 for every day the offence subsists (S. 20(3)). Where the offence is committed by a body corporate, it shall on conviction be liable to a fine not exceeding N2,000,000 and an additional fine of N50,000 for every day the offence subsists (Ibid section 20(4)).

(2) Violation relating to regulations for the protection of ozone: Under section 21(1) of the Act, the Agency shall in collaboration with other relevant agencies undertake to study data and recognize developments in force in other countries, regarding the cumulative effects of all substances, practices, processes and activities which may affect the stratosphere. The Act anticipated that only corporate bodies can commit this offence. Thus, where an offence under this section is committed by a body corporate, it shall on conviction, be liable to a fine not exceeding N2,000,000 and an additional fine of N50,000 for every day the offence subsists.

(3) Section 22 relates to offence in connection with noise pollution: By section 22(1) therefore, the agency shall, in consultation with appropriate authorities: (a) identify major noise sources, noise criteria and noise control technology and (b) make regulations on noise, emission, control, abatement, as may be necessary to preserve and maintain public health and welfare. In addition, the Agency shall enforce compliance with existing regulations and recommend programmes to control noise originating from industrial, commercial, domestic, sports, recreational, transportation or other similar activities (S. 22(2)). A person who violates the Regulations made under this section commits an offence and shall on conviction, be liable to a fine not exceeding N50,000 or to imprisonment for a term not exceeding one year or to both such fine and imprisonment and an additional fine of N5,000 for every day the offence subsists (S. 22(3)). Where an offence so committed is by a body corporate, it shall on conviction, be liable to a fine not exceeding N500,000 and an additional fine of N10,000 for every day the offence subsists (S. 22(4)).

(4) Violation of regulations for quality standards of water is provided for in section 23 of the Act. The Agency shall in collaboration with other relevant agencies make regulations for the purpose of protecting public health or welfare and enhancing the quality of water (S. 23(1)). In drawing up proposals for such regulations and standards, the Agency shall take into consideration the use and value of public water supplies, propagation of marine and wildlife, recreational purposes, agricultural, industrial and other legitimate use (S. 23(2)). A person who violates the provisions of the regulations so made commits an offence and shall on conviction, be liable to a fine not exceeding N50,000 or to imprisonment for a term not exceeding one year or to both such fine and imprisonment and an additional fine of N5,000 for every day the offence subsists (S. 23(3)). Where an offence so committed is by a body corporate, it shall on conviction, be liable to a fine not exceeding N500,000 and an additional fine of N10,000 for every day the offence subsists (S. 23(4)).

(5) Offence relating to effluent limitations. Section 23(1) of the Act is to the effect that the Agency shall establish effluent limitations for new point sources which shall require application of the best control technology currently available and implementation of the best management practices. In addition, the Agency shall review effluent limitations for existing point sources which shall require the application of the best management practices, under circumstances as determined by the Agency and shall include schedules of compliance for installation and operation of the best practicable control technology as determined by the Agency (S. 24(2)). A person who violates the provisions of the regulations so made commits an offence and shall on conviction, be liable to a fine not exceeding N200,000 or to imprisonment for a term not
exceeding 2 years or to both such fine and imprisonement and an additional fine of ₦5,000 for every day the offence subsists. (S. 24(4)). Where such offence is committed by a body corporate, it shall on conviction, be liable to a fine, not exceeding ₦1,000,000 and an additional fine of ₦50,000 for every day the offence subsists. Other offences are:

i. Offence in connection with violation of environmental sanitation regulations in section 25 of the Act.

ii. Violation of regulations relating to the protection of land resources and watershed quality under section 26(1) of the Act.

iii. Offence relating to discharge of hazardous substances into the environment. This offence is created under section 27 of the Act.

**Civil penalties**

Civil penalty is an enforcement device that involves the payment of costs, damages or monetary compensation by the defendant/respondent in non-criminal or civil proceedings instituted to enforce specific provisions or infringed rights or obligations under the environmental laws. Such monetary penalties may have substantial deterrent value, particularly if they are imposed administratively.

Under section 28 of the NESREA Act, 2007, the Minister for the purpose of implementing the provisions of the Act, shall by regulations prescribe any specific removal method, financial responsibility level for owners or operators of vessels or onshore or offshore facilities notice and reporting requirements. Thus, the NESREA as an Agency of Federal Government is vested with the statutory power to impose administratively monetary penalties against any violation under the Act.

The Harmful Waste (Special Criminal Provisions, etc) Act, 2004 also creates civil liability under section 12 thereof. It states that where any damage has been caused by any harmful waste which has been deposited or dumped on any land or territorial waters or contiguous zone or Exclusive Economic Zone of Nigeria or its inland water ways, any person who deposited, dumped or imported the harmful waste or caused the harmful waste to be so deposited, dumped or imported shall be liable for the damage, except where the damage (a) was due wholly to the fault of the person who suffered it or (b) was suffered by a person who voluntarily accepted the risk thereof.

Private civil suit as an environmental enforcement device predate the NESREA Act, 2007 or the Harmful Waste (Special Criminal Provisions, etc) Act, 2004 and any other environmental law statute in Nigeria. Under the common law therefore, the principles of negligence, nuisance, the rule of Rylands v. Fletcher (1868) L.R. 3 H.L. 330 and trespass have long been used to redress various perceived environmental wrongs resulting in damages or injury to the plaintiff. This is particularly so with respect to civil actions instituted against oil companies for damages arising from oil pollution.

**Inspection and searches**

The power of inspection and searches as methods for enforcement of environmental law are recognized under the Nigerian statutes. One of the unique features of this device from other strategies relates to the time of its application. While most other strategies are invariably embarked upon after the legislation or regulation concerned has been violated, usually, the power of inspection and searches are applied before the contravening act or omission or on the suspect of such contravention.

Powers relating to inspection and search is provided for in section 30 (1) of the NESREA Act, 2007 which states that an officer of the Agency may, in the course of his duty, at any reasonable time and on production of his certificate of designation if so required: (a) enter and search with a warrant issued by a court, any premises including land, vehicle, tent, vessel, floating craft at all times for the purpose of conducting inspection, searching and taking samples for analysis which he reasonably believes carried out activities or stores goods which contravene environmental standards or legislation. Also, under section 10 of the Harmful Waste (special criminal Provisions, etc) Act, 2004, any police officer may, without warrant enter and search any land, building or carrier, including aircraft, vehicle, container or any other thing whatsoever which he has reason to believe
is related to the commission of a crime under the Act.

Sealing, seizure and forfeiture

Under section 11 of the Harmful Waste (Special Criminal Provisions, etc) Act, 2004, the Agency is empowered to seal up any area or site which has been or is being or will or might be used directly or indirectly for the purpose of depositing or dumping any harmful waste. The power to seal up the dumpsite is a temporary measure. It may last for three months in the first instance and may be further extended for a period not exceeding twelve months (see section 11(3)). In addition, the Agency may direct that any substance found therein which in its opinion is of a harmful nature be destroyed or disposed of at such time and in such manner which it deems fit, (Ibid, section 11(4)) and may take necessary measures to safeguard lives or property found within the sealed premises.

Under NESREA, Act 2007, section 30 (1) paragraph (g) empowered the Agency to obtain an order of a court to suspend activities, seal and close down premises including land, vehicle, tent, vessel, floating craft or any inland water and other structure whatsoever.

The power to seize is provided for in both the Harmful Waste (Special Criminal Provisions, etc.) Act, 2004 and the NESREA Act, 2007. Section 30(1) paragraph (f) of NESREA Act, 2007 for instance empowered the Agency to seize and detain for such time as may be necessary for the purpose of the Act, any articles by means of or in relation to which it reasonably believes any provision of the Act or the regulations has been contravened. Under NESREA, Act 2007, section 30 (1) paragraph (g) empowered the Agency to obtain an order of a court to suspend activities, seal and close down premises including land, vehicle, tent, vessel, floating craft or any inland water and other structure whatsoever.

Arrest

The power of arrest as an enforcement measure is available virtually in all Federal and State legislations with regards to environmental protection. The power is given to an authorized enforcement agent to arrest any person who he has reason to believe has committed an offence under the Act or Law in question for the purpose of holding or detaining him to answer a criminal charge or civil demand arising under the said Act or Law. (See section 10(1) paragraph (c) of the Harmful Waste (Special Criminal Provisions, etc.) Act, 2004).

Permit, licence and certificate

The use of permit, licence, certificate, etc are also prominent as some of the most effective measures for guarding against environmental degradation in Nigeria. Thus, environmental statutes and regulations provide for issuing permit, licence or certificates etc, upon application and satisfaction of laid down conditions prior to the issue of the permit, licence or certificate. The importance of these devices is to assist the Agency in monitoring and regulation of activities which are potential sources of environmental degradation. Such permits, licence or certificate when issued is subject to revocation upon a breach of the regulations, statute or any of the laid down conditions specified on such permit, licence or certificate. (See for instance, paragraph 10 of the National Environmental Protection (Pollution Abatement in Industries and Facilities Generating Wastes) Regulations, 1991, which was saved by section 35 of NESREA Act, 2007).
Private litigation

Private litigation as a method of enforcement of environmental statutes and regulations is allowed under the Nigerian law. In Nigeria, judicial powers are vested in the courts established for the Federation or for a state (see section 6(1) CFRN, 1999). Such judicial powers shall extend to all matters between persons or between government or authority and to any person in Nigeria and to all actions and proceedings relating there to for the determination of any question as to the civil rights and obligations of that person (section 6(6)(b)) see also section 46 of the constitution). Since every citizen has a stake in environment, that proprietary interest gave every citizen some major of personal responsibility to protect and defend that interest. Private litigation is therefore the concerned citizens’ action to enforce environmental laws and regulations in the face of threatening actions by private or public organizations which are detrimental to the environment.

The application of the precautionary principles to proof of environmental offences

The application of the precautionary principles to proof of environmental damage may arise by using evidential concepts in either the courtroom proceedings or administrative decision making by administrative agencies such as NESREA. Once legislation is passed, a statute can create precautionary obligations and burdens either by an express obligation incorporated into the text or by implication (see Environmental Impact Assessment Act, 1992). Thus, irrespective of express inclusion of precautionary text or burden of proof, these statutes impose an obligation akin to a burden of proof on applicants and agencies. These regimes operate by creating a presumption of environmental damage from defined categories of activities or substances and regulating or prohibiting their use in some way. Such environmental regulations are usually designed so that lists of activities or substances fall into one of three generically described categories (prohibited, permitted upon obtaining further approval, permitted).

So, while parliaments themselves may not be bound by an evidence based approach to enacting laws, they can and have attached precautionary obligations to the regimes they enact. In terms of the language of burden and standard of proof, the question that remains unanswered by the legislators is to what extent is the administrative agency bound by evidential principles in performing its precautionary administrative functions? This question becomes necessary because in the absence of regulatory provisions that prescribe the quality of information or standard of proof, compliance with the regulation by simply submitting information on the prescribed subject matter of any quality can become just a matter of a mere formality for satisfying administrative process.

This paper therefore considers burden of proof and standard of proof as they can or might relate to fact finding in a precautionary context. It also discuss the manner and extent to which these concepts have emerged in precaution in other jurisdictions including law making, administrative decision making, judicial and merit review of administrative decision making and statutory construction. A good example of this application can be seen in Australia. While precautionary environmental regulation in Australia does not expressly address issues of proof and evidence in environmental fact finding and decision making, Australian administrative decision makers are not entirely without some more general (but limited) guiding doctrinal influences about fact determination in administration. Thus, in De Brett Investments Pty Ltd and Anor and Australian Fisheries Management Authority, Re (2004) 82 ALD 163 at 207, the Administrative Appeals Tribunal (AAT) stated that the precautionary principles is still regarded as requiring that caution be exercised but only in situations in which it is established, on the balance of probabilities, that serious or irreversible environmental damage can reasonably be expected if a certain course of action is taken. The Tribunal further stated that the aspect needs to be established on the balance of probabilities for, in the absence of any contrary indication in the Act, it is the civil standard of proof that should be adopted (see Briginshaw v. Briginshaw (1938) 60 CLR 336 at 361–362).8
The notion of a precautionary shifting of the burden of proof is recognized as a method of proof in environmental litigations. However in Nigeria, like in Australia, to focus simply on the use of the term shifting, at least in a legal sense, is somewhat misleading. It is now accepted that the correct way to view what is in fact a burden to prove something, is for the burden to be located on a party. By the imports of section 133 (2) of the Evidence Act, 2011, when that party proves whatever it is, then the burden to prove something else is placed on another party. The burden of proof has been considered within the Australian environmental law discourse on precaution. In an administrative context, once the threshold test of the precautionary principles has been satisfied, the applicant for a licence, for example, has the burden to demonstrate that the activity does not threaten environmental damage. Ordinarily, in the absence of precaution, an objector arguing that a development ought not to proceed on environmental grounds would have an obligation to produce evidence of the failure by a party (applicant or agency) to discharge statutory obligations. The traditional obstacle for an objector is that in matters of environmental damage, what is likely to be required is a considerable weight of scientific evidence to prove the alleged environmental damage. Such scientific evidence, particularly conclusive evidence, may not be available to the objector or indeed to anyone. Consequently, it has typically been difficult, in evidential terms, for objectors to challenge such decisions. Precaution, it has been argued, has the potential to strike at the heart of this evidential problem by modifying the burden of proof that objectors must satisfy. This means that the application of precaution modifies the burden of proof in civil proceedings so that all that an objector needs to establish is a prima facie case.

The issue of burden of proof may arise either in criminal law or civil proceedings. In criminal law the burden of proof flows from the presumption of innocence, which is a fundamental human right protected by section 36 (5) of the Constitution of the Federal Republic of Nigeria, 1999. This presumption operates to show that the prosecution has to prove guilt, rather than the defence having to prove innocence. In many environmental regimes, the obligation on applicants to comply with statutory provisions to provide factual information and on decision makers to be independently satisfied of factual matters is not statutorily mandated. Therefore, which party, in the process of policy making, administrative decision making or court proceedings, has the obligation to satisfy or be satisfied of something, or indeed to prove or disprove something? What is it that they need to prove? It is important to note that there is not one kind of burden that shifts around. All these questions beg for answer when applying the precautionary principles to proof in environmental offences.

A number of commentators have also referred to standards of proof in the context of precaution. The notion of standards of proof in the courtroom exists to determine the quantum or level of proof, that is, how much evidence is required to convict the accused? The Nigerian courts like courts in other common law jurisdictions, have traditionally worked with two broad standards of proof. These have been beyond reasonable doubt, historically adopted as the criminal standard and on balance of probabilities, the civil standard. Importantly, these legal standards fall short of requiring absolute proof with both standards accommodating and acknowledging that factual certainty is almost impossible. These constraints on fact-finding processes in the courtroom are not confined to the environmental context. Not all relevant evidence is necessarily admissible in court because parties and the courts do not have infinite resources to engage in fact finding. The quality of the evidence admitted to court proceedings relates more generally to the fairness of legal processes. Thus, in Jago v. District Court (NSW) (1989) 168 CLR 23 at 49, it was held that the common law does not impose on trial judges a duty to achieve perfect justice, but rather an obligation to ensure a fair trial which is about making the proceedings as fair as the courts can make it. Environmental law commentators in Australia have suggested a number of different
precautionary standards of proof. Some considers that there is no clear guidance on the requisite standard of proof but he captures aspects of the familiar civil and criminal standards of proof in his favoured approach, suggesting that an objector would be required to bring forward legitimate scientific evidence that raised the possibility of serious or irreversible environmental damage. The applicant would then be required to disprove the probability of such harm beyond reasonable doubt. 12

An alternative standard and one that have been argued might have potential for precaution, is the civil standard in which contextual factors become relevant. The civil standard of proof has been held to be case-or context-dependent. What constitutes the amount of proof necessary for reasonable satisfaction in a civil matter varies, as Justice Dixon in Briginshaw V. Briginshaw (1938) 60 CLR 336 at 361–362. The seriousness of an allegation made, the inherent unlikelihood of an occurrence of a given description or the gravity of the consequences flowing from a particular finding are considerations which must affect the answer to the question whether the issue has been proved to the reasonable satisfaction of the tribunal.

This conception suggests that the standard of proof demanded by the courts will differ according to the gravity of consequences bearing in mind that the precautionary principles is applicable where there is the prospect of serious or irreversible consequences. It has also been suggested that a unique standard of proof, such as on the balance of scientific opinion or beyond reasonable environmental concern ought to be developed. 5 Whatever the standard adopted, it is important to recognize that the threshold standard of proof ought to be lower than the ultimate standard of proof that needs to be satisfied.

It is worthy to note that in an adversarial setting, the courts are experienced at the task of testing the reliability or certainty of expert testimony. When an expert giving scientific testimony in the courtroom provides an opinion or evidence (or a prediction, or estimate), there is normally a process of close examination and testing of the reliability of that evidence through cross-examination and ensuring that the witness qualifies as an expert (see Sowewimo v. The State (2000) FWLR (pt. 79) 1296 C.A.). If one moves from the arena of the courts to bureaucracy, how does the administration perform essentially the same task, of assessing the scientific evidence of prospective environmental damage? In Nigeria, such evaluations (perhaps equivalent to cross-examinations) of the evidence occur behind the closed doors of policy makers and administrators and there is limited empirical data available on this process.

The challenges and prospects of the application of precautionary principles in Nigeria

Environmental litigation serves to enforce environmental laws and in advanced societies, where environment enjoys more protection, this end has been achieved not merely by enacting laws but by enforcement of such laws through the courts. In Nigeria, environmental litigation has not assumed this advanced role of protecting the environment. 1 The result has been the existence of judicially untested environmental enactments in Nigeria. The series of challenges and questions which face efforts to establish and elaborate the application of precautionary principles and management frameworks for environmental protection and litigation in Nigeria include the following factors:

Poverty

Poverty as one of the inhibiting factors militating against environmental litigation in Nigeria is rooted in the character or nature of environmental litigation which requires scientific evidence. In proving scientific evidence, expert witnesses knowledgeable in the area are needed. These experts are rather too expensive and cannot come within the reach of the ordinary victim of environmental harm. Most often, these victims use technical personnel who may not be sufficiently qualified and versed in the relevant field (Seismograph service Ltd V. Onokpasa (1972) 4.S.C. 123). In Seismograph Service Ltd V. Ogbeni (1976) 4 S.C. 85) the Supreme Court of Nigeria held that expert witnesses are necessary in seismic operations in order to
properly assess the damages to properties affected by the operations. It is only the testimony of the expert witness that can give the judge the understanding of the technological issues involved in the case. In *Ogale* V. Shell petroleum Development Co. Ltd (1997), NWLR (pt 480)148 the court held that the case of the plaintiffs was of a technical character and as such the evidence in support of it must of necessity be that of people specially qualified in the particular field of the sciences involved. The court dismissed the claim of the plaintiffs as it believed the evidence of the expert witnesses called by the defendant was more convincing than that called by the plaintiffs (See also Seismograph Services Ltd V. Akporavo (1974) 6 SC. 119).

The likelihood of losing a suit on account of poverty to the powerful agents of environmental degradation is often a big disincentive to victims of environmental harm as no one is prepared to commit his scarce resources and precious time to a cause not likely to yield dividends.

**The problems of ignorance and proving environmental harm**

Ignorance of environmental harm and the anthropogenic effects of such harm on human health and the environment is a factor inhibiting environmental litigation in Nigeria. In other words, institution of cases for environmental damage results from the awareness by victims of the harm of such damage to their lives, economies or properties. This accounts for low environmental litigations in Nigeria (see the following cases : Shell petroleum Dev Co. Ltd V. Tiebo (1996) 4 N W L R (pt .445) 657; Shell petroleum Dev. Co. Ltd. V. Farah (1995) 3 NW L R (pt.383) 148). All these cases borders on oil spilling into the Community Rivers thereby polluting the water which the community depended on for drinking and washing, pollution of land leading to desertification of land on which crops could no longer grow or that the activities of the defendants had diminished their harvests, etc.

In addition, environmental harm taken time to manifest in the sense that an act causing environmental harm may be committed to day, but the harm resulting from the act may manifest some months or years afterward. Proving such harm where the suit is filed immediately after the act was committed becomes a problem. Moreover, if litigation is delayed until the manifestation of the harm, then proving causation for the purpose of attributing liability becomes a problem due to proximity rule (see George Thorsfall & Ors V. Shell B.P. Dev. Co. (1974) 2 R.S.L.R 126 and Seismograph Service Ltd V. Onokpasa (1972)4 S.C. 123). Also, due to the Scientific and technical nature and character of evidence involved in environmental cases, most polluting agencies often employ delay tactics to sap the patience and resources of the plaintiff with the hope of eventually making him abandon the suit or at least delay justice (See the case of Nwadiaro V. Shell Petroleum Dev. Co Ltd (1990) 5 N W L R (pt.150) 322).

**Problem of locus Standi**

The problem of locus standi in environmental litigation is occasioned by the nature and character of environmental problem as public offences. For example, air is the general property of all and nobody can lay claim to it as his private property, where therefore it is polluted an individual will lack the locus standi to complain in a court of law. See section 32(3) of the NESREA Act, 2007 that vests the power to prosecute offences on the Attorney-General of the Federation. The case of Oronto Douglas V. Shell Petroleum unrep S/N FC/CS/513/93 serves to illustrate the locus standi of an aggrieved individual to sue for environmental harm. Elsewhere, judicial activism in favour of environmental litigation by individuals is gaining grounds. Thus, in Mehta V. Union of India Air (1998) S.C. 115 the Indian Supreme Court upheld the right of a citizen to litigate issues relating to pollution of the Ganges River. See also Minors Oposa V. Secretary of the Department of Environment and Natural Resources (1994) 33 ILM 173 Supreme Court of the Philippines.

**Uncertainty and dynamism of environmental factors**

Environmental factors are generally uncertain and dynamic in nature. This makes understanding or prediction of outcomes inherently impossible or highly unreliable. This is particularly a problem when the uncertainties
which precaution must confront go well beyond strictly defined ‘scientific’ uncertainty and involve a close and complex interaction between natural and human systems. A decision maker contemplating applying the precautionary principles in response to an uncertain threat of overexploitation of a timber species must consider not only uncertainties relating to biological factors (what are the trends in forest cover? what is the distribution and status of a particular tree species? is a particular forest bird in decline?) the consequences of these changes for biodiversity and associated ecological functions (is harvest level of a species threatening it with extinction? what is the impact of logging practices on forest fauna? will a particular intensity of logging impact on watershed functions or lead to soil erosion?) but also what factors drive the overexploitation (poverty? over-consumption? market failure? Poor enforcement?) and what effective interventions are likely to look like (a logging moratorium? stricter penalties? etc. While the boundaries of science are subject to dispute, relevant uncertainties clearly go well beyond the biological and ecological sciences and into the murky realms of the dynamics of human, social, economic and political systems.  

The challenge of choice between socio-economic costs and other values in the society  

The level of protection to be extended to biodiversity and how threats to biodiversity are to be balanced against socio-economic costs are important normative choices which are rarely well-defined in biodiversity-related law or policy. Stakeholders vary widely in how they value biodiversity and how they view trade-offs with other values, even within the constituency broadly in favour of environmental protection. Some focus on the welfare and rights of individual animals and seek to avert suffering or death of individuals. Some seek to conserve biodiversity as a whole for its intrinsic and aesthetic value and prevent any significant loss of biodiversity. Some seek to ensure the continued provision of utilities such as ecosystem services, like freshwater supply or microclimate regulation, rather than biodiversity per se. Some aim to sustain livelihoods, income or ways of life rather than species or ecosystems and may tolerate major reductions in stocks or simplification of ecosystems to do so. In most decision-making contexts, interest groups with no stake in environmental protection will also be involved. Values are likely to vary from the local, to national, to global level. This provides fertile ground for conflict over the precautionary principles and highlights the need for transparent and participatory decision-making processes when applying it. Other challenges include:

i. The challenge of lack of judicial personnel on account of environmental law being a comparatively new branch of law.

ii. The challenge of good governance and weak legal framework.

iii. The challenge of distributional impacts and equity, which links between environment and poverty are complex and context-specific, depending on scale, geography, social and political dynamics and context In this regard, the poor who rely solely on natural resources in places like Nigeria are on a disadvantage because they lack money and technological capacity to be able to satisfy the standards and scientific requirements for a strict application of the precautionary principles, which some said is inequitable Asking indigenous or local communities to demonstrate that their use of forest products (wood and non-wood) was not causing any harm would be tantamount to ending the livelihood activities of a substantial proportion of the Nigerian’s rural poor. Effective and equitable implementation of the precautionary principles would seem to demand an integrated policy and management framework that addresses environmental, social and economic dynamics.

What then are the prospects for the application of the precautionary principles in Nigeria? The paper suggests:

a. The establishment of National Environment Court in Nigeria will therefore assist the judiciary in the discharge of its judicial function.

b. There is need for legislation to stipulate broadly the range of factors professional
decision makers should adhere to in exercising discretion in the application of the precautionary principles. This guidance may be context-specific, varying according to the regulatory domain, as well as establishing some general expectations and principles governing the approach to decision making when dealing with scientific uncertainty.

c. There is need for environmental Agencies in order to prevent the uncertain threats to conservation and natural resource management to engage in the practice of adaptive management. This is a management approach that expressly tackles the uncertainty and dynamism of complex systems and its hallmark is an emphasis on learning by doing.  
d. Applications of the precautionary principles are important and must be persisted with in Environmental Impact Assessment (EIA).

e. Use the definition of the precautionary principles agreed to internationally at the Rio Conference on Environment and Development in any new legislation, regulations and amends any the legislations to use the definition.

f. Work with international partners to assist in the implementation of the precautionary principles in Nigeria.

g. There is need to recognize and develop a strong, growing and diversified economy which can enhance the capacity for environmental protection.

h. Decisions and actions should provide for broad community involvement on issues which affect them.

CONCLUSION

This discussion of the application of the precautionary principles to proof of environmental offences showed that in the determination of facts dealing with uncertainty when applying legal principles the same problem confronts both administrative decision makers and adjudicators. What is clear from this discussion is that the precautionary principles are a legitimate principles that can be operationalized and its legitimacy or worthiness to be recognised can be seen in the fact that it has been embraced by countless mainstream actors in numerous jurisdictions. The principles are not the product of one culture, one agenda or one ideology. Thus, where there is uncertainty as to the existence or extent of risk to environment or human health, the institutions may take protective measures without having to wait until the reality and seriousness of those risks become fully apparent. There are two distinct aspects of the precautionary principles, the political decision to act or not to act and the measures resulting from application of the precautionary principles. In relation to the factors that trigger application of the precautionary principles, it is necessary to note that the principles is relevant only in the event of a potential risk of harm. Existence of a risk requires evaluation of the scientific data (accepting that the data may make it impossible to determine with sufficient certainty the risk in question). This evaluation should be followed by an assessment of the potential consequences of inaction. Environmental protection is an urgent and compelling current global imperative and the precautionary principles should be seen as a fundamental policy principles underpinning this effort. However, equitable and effective implementation faces major challenges. Of all these perhaps the most profound is the balancing of different interests involved in precautionary decision making. This dilemma is common to all contexts where precaution is applied but in the natural resources context those who may bear the immediate costs of precautionary decision making may be groups which are already vulnerable and poor. In particular, environmental protection approaches based on restricting access to and use of natural resources can impose major livelihood costs and reversing the burden of proof can involve the imposition of unfeasible technical burdens on poor communities. This is a major challenge in Nigeria where majority of the populations is grappling with poverty.

REFERENCES


