

## Public-Private Partnership and Environmental Security in the Developing Countries

Chris O. Ikporukpo

Department of Geography, University of Ibadan, Ibadan, Nigeria.

*In spite of the fact that the environment had attracted attention in varying degrees, the United Nations Conference on the Human Environment, held in Stockholm, Sweden, in 1972, marked the formalization of environmental concern. Following this conference and subsequent Earth Summits, various jurisdictions, in varying degrees and in varying inceptions, have attempted to operationalize this concern. The approaches adopted have resulted in various degrees of success and have in many cases resulted in paradigm shift. The emergence of Public-Private Partnership (PPP) is one such example. This work analyzes the potentials of PPP as an environmental management strategy. As a conceptual basis, the concepts of PPP and environmental security are discussed. Based on formal PPP waste management examples from India, Sri Lanka, Ethiopia, Tanzania, Ghana and Nigeria, and national park management in Zambia, it is shown that PPP results in better operational efficiency and financial returns. This is largely because of more effective management, the injection of capital and improved technology. Examples of Environmental NGOs in India, Kenya and Nigeria also indicate that informal PPP also has considerable impact. However, for PPP to be much more effective in the developing countries challenges, such as weak laws, lack of political will and corruption, must be addressed.*

**Key words:** Public-Private Partnership, Environmental Security, Environmental NGOs, Waste Management, Forest Resources Management.

### Introduction

The formalization of the concern for the environment, though evident in various degrees over space and over time, could be traced to the United Nations Conference on the Human Environment held in Stockholm in 1972 and whose major achievement was the emergence of the United Nations Environmental Programme and the follow-up World Commission on Environment and Development, commonly christened the Brundtland

Commission. This concern was explicitly expressed by the Chairman of the Commission in her foreword to the Report, *Our Common Future: Report of the World Commission on Environment and Development*, (United Nations, 1987) thus:

... the “environment” is where we all live and “development” is what we all do in attempting to



improve our lot within that abode. The two are inseparable. Further, development issues must be seen as critical by the political leaders who feel their countries have reached a plateau towards which other nations must strive. Many of the development paths of the industrialized nations are clearly unsustainable. And the development decisions of these countries, because of their great economic and political power, will have a profound effect upon the ability of all people to sustain human progress for generations to come ... The downward spiral of poverty and environmental degradation is a waste of opportunities and of resources.

The subsequent Earth Summits, Rio (1992) and Johannesburg (2002) and other less inclusive ones, have all echoed this concern about the environment. This is particularly apparent in all the documents, viz: Rio Declaration, Convention on Climate Change, Convention on Biological Diversity, Agenda 21, The Earth Charter, and the Statement of Principles ... on ... Forests, that emerged from Rio.

The various jurisdictions of the world, in varying degrees and in varying inceptions, have attempted to operationalize this concern. Generally speaking, the approaches adopted have not been the same, as is the degree of success. In most cases, there is usually a paradigm shift, informed, as it were, by lessons from earlier attempts or from the experience of other countries or regions. The emergence of public private partnership (PPP) is one typical example of such a shift.

This paper analyzes PPP in the context of its merits and its potentials of serving as a model for

effective environmental management in the developing countries. In order to provide a theoretical basis for the analysis, the next section is a conceptual discussion of PPP in the context of environmental security. In other words, it discusses the theoretical dimension of the relationship between PPP and effective environmental security.

### **Conceptualizing PPP**

Public Private Partnership provides a link between the public sector and the private sector. This is obvious from the definitions indicated in Table 1. Although, the various definitions differ, one from another, in terms of the details, the thread of linkage between the public sector and other sectors is apparent. Some of the definitions in Table 1 also indicate that PPP is not a one-dimensional concept. Several types may be identified (see European Commission, 2003; Asian Development Bank, 2008). The basis of the categorization is the nature of the relationship between the public and the private sectors. The common types include concession; build, operate and transfer; joint venture; and build, own and operate.

Although there were rudiments of PPP earlier, the widespread adoption of PPP began from the 1970s when the public sector faced considerable economic pressure, particularly through an increasing public debt and economic stagnation; a situation that necessitated the introduction of *Perestroika*, i.e. economic restructuring towards a market economy, by the Socialist Soviet Union in the mid-1980s. Understandably, the attraction of private capital has been a fundamental focus of PPP arrangements.

**Table 1: Sample of Definitions of PPP**

<b>Serial No.</b>	<b>Definition</b>	<b>Source</b>
I	“A spectrum of possible relationships between the government (the public sector) and other organizations that are not government (the private sector) to carry out a project or provide a service”.	UNDP (2004) Toolkit for Pro-Poor Municipal PPPs.
II	“A partnership between the public sector and the private sector for the purpose of delivering a project or a service traditionally provided by the public sector”.	European Commission (2003) Guidelines for successful PPP.
III	“A range of possible relationships among public and private entities in the context of infrastructure and other services”.	Asian Development Bank (2008) PPP Handbook.
IV	A contract between a public sector authority and a private party, in which the private party provides a public service or project and assumes substantial financial, technical and operational risk in the project”.	Wikipedia.
V	“Investment through private sector participation in an infrastructure project or infrastructure facility”.	Zambia’s PPP Act, 2009.
VI	“A system of relationship between the State and the private partner ... for mutually profitable and long-lasting cooperation”.	Ukraine’s PPP Law, 2008.
VII	“Investment through private sector participation in a project”.	Tanzania’s PPP Act, 2010

Additionally, there is a growing realization that cooperation with the private sector in PPP projects, is able to offer a number of advantages, including, acceleration of infrastructure provision, ... faster implementation, ... reduced whole life costs, ... better risk

allocation, ... better incentives to perform, ... improved quality of service, ... generation of additional revenue, ... (and) enhanced public management ... (European Commission, 2003, p.15).



The basis of PPP and the expected responsibilities of the partners are appropriately and unambiguously stated in part II, section 5, of the PPP Act of Tanzania (United Republic of Tanzania, 2010). The private sector is expected to mobilize resources, carry out feasibility studies, share risk, provide technical expertise/managerial skills and monitor/evaluate projects. These responsibilities are the usually stated advantages of PPP. The same document indicated that the responsibility of the public sector shall be to identify projects, providing an enabling environment and monitoring/evaluating projects.

It may be justifiably argued that PPP need not be defined restrictively as in Table 1. This is particularly the case as the resources expected of the private sector need not always be financial, and the project need not be a physical one, such as transport facility and the service also must not always be, operating or managing a facility. There could be an intangible “project” or “service”. Thus, the definitions in Table 1 and the various models or types of PPP, earlier indicated, may be christened formal PPPs, and hence an informal group may be identified.

Two types of informal PPP relationships may be proposed. These are simple “popular participation” partnership (Ikporukpo, 1992) and monitoring partnership. These may not necessarily provide financial resources, or managerial know-how or even share risk but provide social capital that may be fundamental in the success of projects or services. In certain cases, these two types of partnership may provide a framework for financial resources flow into public - provided projects or those which ought to be provided by the public sector; particularly the latter.

The distinction between the two is fundamentally that, whereas popular participation involves the citizenry at large, the monitoring or informal regulatory partnership usually involves groups such as NGOs, particularly environmental NGOs. The significance of popular participation in the

environmental management process is succinctly put by UNEP (1999, p.231), thus:

Local people often know the causes and best remedies for such problems as desertification or soil erosion, how to find and use plants with unique properties and how to prevent animals from damaging their crops. Public participation enables this knowledge and these skills and resources to be mobilized and increases the effectiveness of government initiatives. Equally, when people are allowed to take part in assessing problems, resources and opportunities, they acquire information and enhance their awareness of factors affecting their lives.

As earlier implied, the monitoring or informal regulatory partnership serves essentially a watchdog function. In the context of the environment, it involves the promotion of environmental awareness and sensitization and ensuring that those who are likely to damage the environment are prevented from doing so. These functions are typically best performed by NGOs. The fact that such NGOs sometimes partner with the public sector to manage the environment and, in certain cases, provide facilities either independently or in concert with the public sector, is a manifestation of the characteristics of PPP.

Although informal PPP predates the formal, the latter currently attracts more attention both in developmental planning and academic discourse. In spite of the fact that current implementation of the PPP framework in many countries emphasizes transport, telecommunication and energy infrastructure, the environmental management/environmental security dimension is never neglected in the various PPP policies

and laws. This is also true in the case of the Infrastructure Concession Regulatory Commission, the agency responsible for the management of PPP in Nigeria, although the current practice emphasizes transport and energy infrastructure.

The preceding analysis has shown that there are obvious merits in managing the environment through PPP. The analysis largely provides the theoretical perspective. Employing concrete facts and figures, the next section examines the merit PPP has over public sector environmental management.

### **PPP and Environmental Security: Lessons of Experience**

This section is organized on the basis of the formal and the informal PPPs. As a prelude, the concept of environmental security is briefly examined.

Environmental security focuses on the complex relationship between environmental deterioration and security. The fact that, in many cases, environmental resources are a common asset whose mis-use could affect several jurisdictions underlies the concept. The mis-use of a resource by one jurisdiction could generate repercussion in another. This could result in conflict between the jurisdictions. Acid rain in Canada, largely due to emissions in the U.S., and environmental conflicts between Ethiopia and Somalia are examples. The conceptualization also includes environmental damage consequent on conflicts. Although, this fine distinction could be made, many assert that environmental insecurity is simply the threat posed to the environment, particularly by human action. In other words, in a broad sense, environmental security is simply the protection of the environment and environmental insecurity is, in this context, environmental deterioration.

So how does PPP, in reality, enhance environmental security?

### **The Case of Formal PPP**

Several studies (e.g. Kassim & Ali, 2006, in Dar es Salaam; Ababio, 2010, in Accra; Visvanathan & Tranker, 2003, in Colombo) reveal that the use of PPP is a much more effective method of solid waste management than public sector direct action. For instance, in 1991, the municipal authority in Dar es Salaam was able to dispose of only five percent of the 1,400 tons of solid waste generated daily. With the intervention of the private sector, although the generation increased to about 2,500 tons per day, about forty-eight percent was disposed.

Another study in Dar es Salaam (Kaseva & Mbuligwe, 2005) also indicated improvements in waste management consequent on PPP. In 1994, the public sector operators collected only 10% of the generated refuse. With the introduction of a PPP arrangement, this increased to 40% in 2001. A similar situation of improvement was recorded in Bahir Dar, Ethiopia. In 2008, the municipal authority in Bahir Dar outsourced the municipal waste management responsibility to a private company. The result was that the percentage of waste collected and disposed increased from about 50 before PPP to 67 in 2010 (Lohri, Camenzind & Zurbrugg, 2014). Drastic improvements were reported in the studies in Accra and Colombo.

PPP arrangements have also resulted in a better management of urban solid waste and hence less damage to the urban environment in Nigeria. One census of significant solid waste heaps in several Nigerian cities in the early 1980s (Abumere, 1983), indicated 118 in Lagos, 104 in Ibadan, 99 in Port-Harcourt, 92 in Kano, 83 in Aba, and 81 in Onitsha. The intervention of PPP in such cities as Lagos and Ibadan has resulted in a virtual disappearance of these heaps. For instance, in Ibadan the emergence of a PPP arrangement has resulted in a situation where the government refuse company, the Oyo State Waste Management Authority, performs mainly a coordination function. The refuse collection and disposal function is performed by private companies/contractors. Table



2 shows the distribution of these companies among the various local government areas of the metropolis.

Table 3, which displays the major challenges of solid waste management in Nigerian cities, indicates how amenable to PPP solid waste management in the country could be. Some of the fundamental reasons for the emergence of, and necessity for, PPP are the most significant challenges. The issue of funding is reported as the most significant in all the twenty-four cities covered. In the case of the lack of equipment, it is unimportant in only four cities. The implication is that the introduction of PPP in these cities will enhance the environmental management process; as, indeed, is evident in those cities where this has been effected.

**Table 2: Private Refuse Companies in Ibadan Metropolis as at November, 2013**

S/N	Local Government Areas	Number of Contractors
1	Ibadan North East	3
2	Ibadan North West	6
3	Ibadan South East	0
4	Ibadan South West	16
5	Ibadan North	13
6	Ona-ara	2
7	Oluyole	6
8	Akinyele	5
9	Lagelu	1
10	Egbeda	10
11	Iddo	3
<b>Total</b>		<b>65</b>

*Source: Oyo State Waste Management Authority*

There is also evidence that a PPP structure ensures improved quality of service and management with less financial resources compared with a public sector framework. For instance, a study in the city of Mumbai, India, (Rathi, 2006) showed that whereas the municipal authority (Municipal Corporation of Greater Mumbai) spent about 44 dollars to manage each ton of solid waste, the corresponding cost in the case of private sector intervention was about 41 dollars. Furthermore, a PPP arrangement generated more than three times the revenue from the re-use of a given volume of solid waste in comparison to the municipal authority.

The improvement in environmental management consequent on the introduction of a PPP scheme through the injection of capital and improved technology is evident from Visvanathan & Trankler's (2003) work involving some Asian cities. In Mumbai and Chennai, India, a PPP arrangement introduced effective mechanization in the solid waste management process. For instance, in the latter city, the operations by a French multinational corporation led to a drastic increase in the volume of waste disposed.

In spite of the fact that concrete evidence on the merit of employing a formal PPP framework for a more effective management of the environment is much more evident in the area of solid waste management, the idea of PPP is diffusing to other areas of environmental management. This is evident from a letter in 2010 to British Members of Parliament from the Department of Environment, Food and Rural Affairs on a new strategic approach to forestry management (downloaded from the Internet). It declared, in part:

Contrary to some beliefs, the Forestry Commission's estate covers only 18% of England's wooded areas. Nevertheless, it is of great importance in the provision of access, biodiversity, carbon storage and many other public benefits ... We are committed to shifting

the balance of power from 'Big Government' to 'Big Society' by giving individuals, businesses, civil society organizations and local authorities a much bigger role in protecting and enhancing the natural environment ...

This will be a new approach to ownership and management of woodlands and forests, with a reducing role for the State and a growing role for the private sector and civil society ...

**Table 3: Major Problems of Solid Waste Management in Nigerian Cities**

Towns	Personnel	Funding	Equipment	Poor Street Layout	Inadequate Public Cooperation	Inadequate Government Support
Aba		*	*	*		
Abeokuta	*	*	*		*	*
Abuja	*	*		*		
Akure		*	*		*	
Bauchi		*	*			*
Benin City		*	*	*		*
Calabar		*	*	*		*
Enugu		*	*	*		
Ibadan	*	*	*	*	*	
Ilorin		*	*	*		*
Jalingo	*	*	*			
Jos		*	*	*		*
Kaduna		*			*	
Kano		*	*	*		*
Lagos	*	*	*	*	*	*
Lokoja		*	*	*	*	*
Maiduguri	*	*	*	*	*	*
Makurdi		*				
Nnewi		*	*	*		*
Onitsha	*	*	*	*	*	*
Osogbo		*	*		*	
Port-Harcourt	*	*				
Sokoto		*	*			
Warri		*	*			*

Note: \* Means reported

Source: Lagos State (2004) P. 107

**Table 4: Models of PPP in Forest/Wildlife Environment Management in Developing Countries**

Serial No.	Type	Examples of Countries
1.	Transfer of Ownership to Private Concern	South Africa & Chile
2.	Restitution	South Africa
3.	Permits and Licenses	Cameroon, Ghana & Nigeria
4.	Transfer of Property Rights for a Period	Several African Countries
5.	Formal Management by Private Concern	Several Latin American Countries e.g. Honduras
6.	Private Concern-Community Participation	Indonesia, Ghana, Papua New Guinea, India, Zambia, Kenya & Cameroon
7.	Forest Trust Funding for Long Term Investment	India
8.	Agro-forestry Leases	Pakistan
9.	Annual Rent/Lease	Pakistan

Source: Modification of Shaheen and Khan (2008) P.15.

Indeed, as Table 4 indicates, many developing countries already have PPP arrangements for the management of forest and wildlife environments. The arrangements vary in terms of their complexity and the degree of involvement of the private sector. For instance, in some cases the private sector concern is leased the facility for either short or long term periods; in others, the private sector plays a management role. In extreme cases, there is an outright transfer of ownership to private concerns. As in the case of waste management, studies have indicated advantages. For instance, in Zambia the introduction of PPP in national

parks has resulted in better managerial response with consequent improved financial returns, more tourist flows and better community links, among others (Pope, 2006; Nsimbi & Vinya, 2014)

#### **The Case of Informal PPP**

Between the two types of informal PPPs, that involving NGOs better illustrates the effectiveness of PPP vis-à-vis the public sector.

Two illustrative examples are discussed. These are NGOs managing forest environments and those involved in oil-exploitation related environmental damage management. For the first type, the Chipko



Movement of India and the Green Belt Movement of Kenya are good examples while the environmental NGOs in the Niger Delta region of Nigeria typify the second type. The Chipko movement is a grassroots environmental movement of villagers with a focus on slowing down deforestation by logging companies which affect their livelihood. (Bandopadhyay & Shiva, 1986; Shiva, 1991; Peet & Watts, 1996). Its philosophy is largely based on a tribal song, which translated, means, "soil ours, water ours, ours are these forests. Our forefathers raised them, it's we who must protect them" and became famous through the process of hugging the trees to be cut-down and thus preventing same. This tree-hugging (chipko) approach, which usually involves the mass mobilization of villagers, including women, has emerged as a successful non-violent method of checking environmental deterioration.

Whereas the approach of the Chipko movement has been basically preventive, that of the Green Belt Movement, founded in 1977 by the nobel peace prize-winning environmentalist. Wangari Maathai, adopts a strategy of both afforestation and preventing deforestation. In terms of its afforestation programme, the Movement has over the years, through the mobilization of several individuals, planted several million trees; a feat the public sector was not capable of. It is its preventive activities that have brought it in conflict with the government. Three examples are outstanding. The Uhuru Park in Nairobi was to be replaced with a high-rise building complex but was prevented from being destroyed. An attempt to turn Jeevanjee Gardens into a parking lot was also stopped; so was the attempt to destroy part of the Karuna Forest. In all these and other instances, the reaction of the state was usually oppressive violence (Maathai, 2006; Boyer-Rechlin, 2010; Taylor, 2013).

Environmental NGOs have been active in the Niger Delta. The region is the main centre of oil exploitation in Nigeria. The oil resources ownership, production and control structure is such that the public

sector, is in varying degrees, involved. By Law, all petroleum resources belong to the federal government which is also in charge of regulating the industry. The central government also has an oil production company, Nigerian National Petroleum Corporation, which has a joint venture agreement with all the oil companies. Thus, the government cannot effectively check the environmental damage consequent on oil production (Ikporukpo, 2011). Furthermore, in spite of the fact that there are appropriate laws and regulations for managing environmental damage from oil pollution, the government is rather unwilling to effectively enforce these laws because of the concern for rapid economic development (Ikporukpo, 1985; 2011). As the federal government once declared: this lack of effective environment security,

could be (due to) the overriding concern at the early stages of development for the quantitative aspects of human requirements; more food, more water, more energy, etc. as opposed to the qualitative aspects which some opinions hold to be of secondary importance (Federal Republic of Nigeria, 1981, p.357).

The implication has been that the oil companies have inflicted a lot of environmental damage on the Niger Delta Region (Ikporukpo, 1983; Greenpeace, 1994; Ashton-Jones, 1998; UNEP, 2011).

It is the international environmental NGOs, such as Greenpeace and Human Rights Watch, and local ones, usually collaborating with international ones, that have attempted to check the activities of the oil companies, which themselves sometimes accept that there are such damages (Ikporukpo, 2011). Apart from the activities of ethnic-based organizations that have been in the forefront of attempts to protect the environment from oil production activities, such as Movement for the Survival of Ogoni People (MOSOP),

Ijaw Youth Council (IYC) and Ijaw National Congress (see Saro-Wiwa, 1992; 1995; Ikporukpo, 1996; 2004), a number of environmental organizations have emerged.

Table 5 displays the indigenous environmental NGOs in the Niger Delta (in the late 1990s). These usually adopt strategies of advocacy, protest march, legal action and obstruction (see Ikporukpo, 2000). Environmental Rights Action (ERA), Niger Delta Human and Environmental Rescue Organisation (ND-HERO) and Save Earth Nigeria have been particularly active. For instance, in the mid-1990s, ERA successfully checked Shell Petroleum Development Company (SPDC) from damaging the environment of Okoroba, Bayelsa State, as the company took urgent remediation action on dredging spoils. Similarly, ND-HERO succeeded in ensuring a proper clean-up by SPDC/NNPC of oil spill in Otuegwe (Bayelsa State) in the late 1990s.

NGO Coalition for the Environment also achieved remarkable success in stopping WEMPCO from unsustainable exploitation of forests in Cross River State.

Through the collective action of the various NGOs, the issue of unsustainable petroleum exploitation in the Niger Delta has been firmly placed in the international and local public space. Consequently, the various oil companies are beginning to adopt better technologies that minimally damage the environment. There is no doubt that it was pressure from these organizations that necessitated the Federal Government's invitation to UNEP to assess the extent of oil-induced environmental damage in Ogoni region, Rivers State (UNEP, 2011). The foreword of the Report declared thus:

The history of oil exploration and production in Ogoniland is a long,

**Table 5: Environmental NGOs in the Niger Delta Region and its Borderlands.**

SerialNo.	Name	Location
1	Environmental Rights Action	13 Agudaina St., D/Line, Port-Harcourt (P.H).
2	Save Earth Nigeria	20 Jinkrama St., Mile 1, Diobu, P.H.
3	Watch The Niger Delta	13 Agudama St., D/Line, P.H.
4	Centre for Environmental and Social Awareness in the Niger Delta	29 Ikwere Rd., Mile 1, Diobu, P.H.
5	Niger Delta Wetlands Centre	Plot 100, Elelewom St., G.R.A., Phase 2, P.H.
6	Niger Delta Human and Environmental Rescue Organization	Flat 3, Road 10, Agip Housing Estate, P.H.
7	Citizens for Environmental Safety	29 Mekenge Layout, Calabar.
8	Niger Delta Network for Environmental Management	4C Okorodo St., Port-Harcourt.
9	Egi Peoples Environmental Action Group	Egiland, River State.
10	Niger Delta Environmental Forum	18 Orogbum Crescent, G.R.A. II, P.H.
11	N.G.O. Coalition for Environmental	18, Orok Ita Rd., Calabar.
12	Centre for Social Action & Environmental Awareness in the Niger Delta	29, Ikwerre Rd., P.H.
13	Akpabuyo/Bakassi Green Movement	23 Etinyin Abasi St., Calabar.
14	Elimotu Movement	Otuega Town.
15	Friends for Preservation of Niger Delta Environment	45B, Evo Rd., G.R.A. II, P.H.
16	Living Earth Nigeria Foundation	11, Orogbum Crescent, G.R.A. II, P.H.

**Source: Ikporukpo (2000): 6**

Movement of India and the Green Belt Movement of Kenya are good examples while the environmental NGOs in the Niger Delta region of Nigeria typify the second type. The Chipko movement is a grassroots environmental movement of villagers with a focus on slowing down deforestation by logging companies which affect their livelihood. (Bandopadhyay & Shiva, 1986; Shiva, 1991; Peet & Watts, 1996). Its philosophy is largely based on a tribal song, which translated, means, "soil ours, water ours, ours are these forests. Our forefathers raised them, it's we who must protect them" and became famous through the process of hugging the trees to be cut-down and thus preventing same. This tree-hugging (chipko) approach, which usually involves the mass mobilization of villagers, including women, has emerged as a successful non-violent method of checking environmental deterioration.

Whereas the approach of the Chipko movement has been basically preventive, that of the Green Belt Movement, founded in 1977 by the nobel peace prize-winning environmentalist. Wangari Maathai, adopts a strategy of both afforestation and preventing deforestation. In terms of its afforestation programme, the Movement has over the years, through the mobilization of several individuals, planted several million trees; a feat the public sector was not capable of. It is its preventive activities that have brought it in conflict with the government. Three examples are outstanding. The Uhuru Park in Nairobi was to be replaced with a high-rise building complex but was prevented from being destroyed. An attempt to turn Jeevanjee Gardens into a parking lot was also stopped; so was the attempt to destroy part of the Karuna Forest. In all these and other instances, the reaction of the state was usually oppressive violence (Maathai, 2006; Boyer-Rechlin, 2010; Taylor, 2013).

Environmental NGOs have been active in the Niger Delta. The region is the main centre of oil exploitation in Nigeria. The oil resources ownership, production and control structure is such that the public

sector, is in varying degrees, involved. By Law, all petroleum resources belong to the federal government which is also in charge of regulating the industry. The central government also has an oil production company, Nigerian National Petroleum Corporation, which has a joint venture agreement with all the oil companies. Thus, the government cannot effectively check the environmental damage consequent on oil production (Ikporukpo, 2011). Furthermore, in spite of the fact that there are appropriate laws and regulations for managing environmental damage from oil pollution, the government is rather unwilling to effectively enforce these laws because of the concern for rapid economic development (Ikporukpo, 1985; 2011). As the federal government once declared: this lack of effective environment security,

could be (due to) the overriding concern at the early stages of development for the quantitative aspects of human requirements; more food, more water, more energy, etc. as opposed to the qualitative aspects which some opinions hold to be of secondary importance (Federal Republic of Nigeria, 1981, p.357).

The implication has been that the oil companies have inflicted a lot of environmental damage on the Niger Delta Region (Ikporukpo, 1983; Greenpeace, 1994; Ashton-Jones, 1998; UNEP, 2011).

It is the international environmental NGOs, such as Greenpeace and Human Rights Watch, and local ones, usually collaborating with international ones, that have attempted to check the activities of the oil companies, which themselves sometimes accept that there are such damages (Ikporukpo, 2011). Apart from the activities of ethnic-based organizations that have been in the forefront of attempts to protect the environment from oil production activities, such as Movement for the Survival of Ogoni People (MOSOP),



Ijaw Youth Council (IYC) and Ijaw National Congress (see Saro-Wiwa, 1992; 1995; Ikporukpo, 1996; 2004), a number of environmental organizations have emerged.

Table 5 displays the indigenous environmental NGOs in the Niger Delta (in the late 1990s). These usually adopt strategies of advocacy, protest march, legal action and obstruction (see Ikporukpo, 2000). Environmental Rights Action (ERA), Niger Delta Human and Environmental Rescue Organisation (ND-HERO) and Save Earth Nigeria have been particularly active. For instance, in the mid-1990s, ERA successfully checked Shell Petroleum Development Company (SPDC) from damaging the environment of Okoroba, Bayelsa State, as the company took urgent remediation action on dredging spoils. Similarly, ND-HERO succeeded in ensuring a proper clean-up by SPDC/NNPC of oil spill in Otuegwe (Bayelsa State) in the late 1990s.

NGO Coalition for the Environment also achieved remarkable success in stopping WEMPCO from unsustainable exploitation of forests in Cross River State.

Through the collective action of the various NGOs, the issue of unsustainable petroleum exploitation in the Niger Delta has been firmly placed in the international and local public space. Consequently, the various oil companies are beginning to adopt better technologies that minimally damage the environment. There is no doubt that it was pressure from these organizations that necessitated the Federal Government's invitation to UNEP to assess the extent of oil-induced environmental damage in Ogoni region, Rivers State (UNEP, 2011). The foreword of the Report declared thus:

The history of oil exploration and production in Ogoniland is a long,

**Table 5: Environmental NGOs in the Niger Delta Region and its Borderlands.**

SerialNo.	Name	Location
1	Environmental Rights Action	13 Agudaina St., D/Line, Port-Harcourt (P.H).
2	Save Earth Nigeria	20 Jinkrama St., Mile 1, Diobu, P.H.
3	Watch The Niger Delta	13 Agudama St., D/Line, P.H.
4	Centre for Environmental and Social Awareness in the Niger Delta	29 Ikwere Rd., Mile 1, Diobu, P.H.
5	Niger Delta Wetlands Centre	Plot 100, Elelewom St., G.R.A., Phase 2, P.H.
6	Niger Delta Human and Environmental Rescue Organization	Flat 3, Road 10, Agip Housing Estate, P.H.
7	Citizens for Environmental Safety	29 Mekenge Layout, Calabar.
8	Niger Delta Network for Environmental Management	4C Okorodo St., Port-Harcourt.
9	Egi Peoples Environmental Action Group	Egiland, River State.
10	Niger Delta Environmental Forum	18 Orogbum Crescent, G.R.A. II, P.H.
11	N.G.O. Coalition for Environmental	18, Orok Ita Rd., Calabar.
12	Centre for Social Action & Environmental Awareness in the Niger Delta	29, Ikwerre Rd., P.H.
13	Akpabuyo/Bakassi Green Movement	23 Etinyin Abasi St., Calabar.
14	Elimotu Movement	Otuega Town.
15	Friends for Preservation of Niger Delta Environment	45B, Evo Rd., G.R.A. II, P.H.
16	Living Earth Nigeria Foundation	11, Orogbum Crescent, G.R.A. II, P.H.

**Source: Ikporukpo (2000): 6**

complex and often painful one that to date has become seemingly intractable in terms of its resolution and future direction. It is also a history that has put people and politics and the oil industry at loggerheads rendering a landscape characterized by a lack of trust, paralysis and blame, set against a worsening situation for the communities concerned. The reality is that decades of negotiations, initiatives and protests have ultimately failed to deliver a solution that meets the expectations and responsibilities of all sides. In an attempt to navigate from stalemate to action, the Government of Nigeria, in consultation with many of the relevant actors, invited UNEP to consider undertaking an assessment of oil pollution in Ogoniland.

### **Conclusion: Visualizing the Future**

There is considerable evidence that PPP, in its various forms, is a much more effective approach to ensuring environmental security. The need for private sector participation and partnership is evident in all the Rio documents.

The fact that the jurisdictions of the world have all appreciated the relevance of PPP and are adopting it, is an indication that PPP is the future of an effective environmental security. This is particularly the case because there is no reason to imagine that the public sector will in the future be more efficient than the private or that the public sector will in the future have unlimited financial resources.

However, for PPP to continue to be relevant, its inherent challenges must always be addressed. These include mainly:

- weak laws, particularly in the less developed world;
- the lack of political will in some countries;

- corruption at various levels in some countries; and
- the lack of private capital in some countries.

There are also challenges peculiar to some localities. The PPP arrangement in the management of solid waste in the city of Ibadan, Nigeria, is a good example. Information obtained from the government refuse company, Oyo State Solid Waste Management Authority, indicates a number of challenges. These include, among others, the inability and, in some cases, the unwillingness of many individuals to pay for the service and unplanned streets in the traditional areas with resultant inaccessibility.

### **References**

- Ababio, M.O. (2010) Private sector involvement in solid waste management in the Greater Accra Metropolitan Area in Ghana. *Waste Management and Research* 28: 322-329.
- Abumere, S.I. (1983) City surface solid waste in Nigerian cities. *Environment International* 19: 391-396.
- Ashton-Jones, N. (1998) *The human ecosystem of the Niger Delta: An ERA handbook*. Benin City, ERA.
- Asian Development Bank (2008) *Public-Private Partnership Handbook*. Manila, ADB.
- Bandopadhyay, J. & V. Shiva (1986) *Chipko: India's Civilisational Response to the Forest Crisis* Indian National Trust for Art and Cultural Heritage
- Boyer-Rechlin, B. (2010) Women in Forestry: A study of Kenya's Green Belt Movement and Nepal's Community Forestry *Scandinavian Journal of Forest Research*, 25, PP. 69-72.
- European Commission (2003) *Guidelines for Successful Public-Private Partnership*. Bruxelles, EC.
- Federal Republic of Nigeria (1981) *Fourth National Development Plan, 1981-85*. Lagos: National Planning Office.
- Greenpeace (1994) *Shell-shocked: The environmental and social costs of living with Shell in Nigeria*. London, Greenpeace International.
- Ikporukpo, C.O. (1983) Petroleum exploitation and the socio-economic environment in Nigeria. *International Journal of Environmental Studies* 21: 193-203.



- Ikporukpo, C.O. (1985) The management of oil pollution of natural resources in Nigeria. *Journal of Environmental Management* 20: 199-206.
- Ikporukpo, C.O. (1992) Popular participation and regional development: A conceptual and theoretical analysis. *Annals of the Social Science Council of Nigeria* 4: 22-35.
- Ikporukpo, C.O. (1996) Federalism, political power and the economic power game: Conflict over access to petroleum resources in Nigeria. *Environment and Planning C* 14: 159-177.
- Ikporukpo, C.O. (2000) *Environmental Movements in the Niger Delta region and the Nigerian State*. Centre for Research and Documentation/Ford Foundation Research Report, 68pp.
- Ikporukpo, C.O. (2004) Petroleum, fiscal federalism and environmental justice in Nigeria. *Space and Polity* 8: 321-354.
- Ikporukpo, C.O. (2011) *Debating Petroleum and environmental justice in Nigeria: Stakeholders' Perspectives*. A publication of the Centre for Ethnic and Conflict Studies, University of Port-Harcourt (Monograph Series).
- Kassim, S.M. & M. Ali (2006) Solid waste collection by the private sector: Households' perspective-findings from a study in Dar es Salaam City, Tanzania. *Habitat International* 30: 769-780.
- Kaseva, M.E. & Mbuligwe, S.E. (2005) Appraisal of Solid Waste Collection Following Private Sector Involvement in Dar es Salaam City, Tanzania *Habitat International* 29, 353-366.
- Lagos State (2004) *State of Lagos Megacity and other Nigerian Cities*. Lagos: Lagos State government.
- Lohri, C. R; Camenzind, E.J. & Zurbrugg C. (2014) Financial Sustainability in Municipal Solid Waste Management – Costs and Revenues in Bahir Dar, Ethiopia *Waste Management* 34(2), PP. 542-552.
- Maathai, W. (2006) *Unbowed: A Memoir* New York: Knopf.
- Nshimbi, M. & Vinya, R. (2014) Impact of Public Private Partnership on Local Livelihoods and Natural Resources Dynamics: Perceptions from Eastern Zambia. *Resources* 3, PP.471-487.
- Peet, R. & Watts, M. (1996) *Liberation Ecologies, Environment, Development, Social Movement* Routledge
- Pope, A (2006) *A Preliminary Examination of Public Private Partnership in National Park Management in Zambia* ZAWA, Lusaka
- Rathi, S. (2006) Alternative approaches for better municipal solid waste management in Mumbai, India. *Waste Management* 26;1192-1200.
- Saro-Wiwa, K. (1992) *Genocide in Nigeria: The Ogoni Tragedy*. London: Saros International Publishers.
- Saro-Wiwa, K. (1995) *A month and a day: A detention diary*. Ibadan: Spectrum Books.
- Shaheen, F.H. & Khan, S.R. (2008) *Public-Private Partnership (PPP) in Forestry: Implementing Strategy Sustainable Development Policy Institute, Islamabad, Pakistan, Project Report Series, No. 12*
- Shiva, V. (1991) *Ecology and the Politics of Survival: Conflicts Over Natural Resources in India* Sage Publications
- Taylor, B. (2013) Kenya's Green Belt Movement "Contributions, Conflict, Contradictions, and Complications in a Prominent Environmental Non-Governmental Organization in L.
- Tragardh, N. Wiloszek, & B. Taylor (eds) *Civil Society in the Age of Monitory Democracy*. Berghahn Books PP. 180-207.
- UNEP (1999) *Global Environmental Outlook, 2000*. London: Earthscan Publications Ltd.
- UNEP (2011) *Environmental Assessment of Ogoniland*, Nairobi: UNEP.
- United Nations (1987) *Report of the World Commission on Environment and Development*. New York: United Nations.
- United Republic of Tanzania (2010) *PPP Act*. Dar es Salaam, Government Printer.
- Visvanathan, C. & J. Trankler (2003) *Municipal solid waste management in Asia: A comparative analysis*. Chennai, India: Workshop on sustainable landfill management.

### Acknowledgements

An earlier version of this work was presented as an invited paper in a National Conference on Environmental Health organized by the Department of Environmental Health Sciences, Faculty of Public Health, College of Medicine, University of Ibadan, Ibadan, Nigeria, in November 2013. The assistance of the organizers of the conference and useful comments by participants are gratefully acknowledged. I am also grateful to anonymous assessors of this journal for their useful comments.

### Biographical Sketch

Chris O. Ikporukpo is a Professor of Geography, University of Ibadan, Ibadan, Nigeria, with considerable teaching and research experience in the areas of Transport, Environment and Regional Development.

He belongs to several professional and academic Associations. He is a fellow of the Association of Nigerian Geographers and a Chartered Member of the Chartered Institute of Logistics and Transport.