

ASSESSMENT OF WETLAND VALUATION PROCESSES FOR COMPENSATION IN THE NIGER DELTA, NIGERIA***AJIBOLA, M. O.¹ and AWODIRAN, O. O.²****Abstract**

The issue of compensation has been debated in various fora; however compensation on wetland resources has not been given the primary place. Wetland valuation like any other type of valuation requires going through stages, which may be more complex than real estate valuation for compensation. This study therefore examined the processes involved in the valuation of wetland resources for compensation purposes with a view to establishing whether or not Estate Surveyors and Valuers in the Niger Delta follow the appropriate steps in the conduct of wetland valuation. The study employed survey method in collecting primary data. A total of 120 questionnaires were administered on selected Estate Surveying and Valuation firms in Bayelsa, Delta and Rivers States, out of which 72 of them were retrieved. The data collected were analysed and presented using frequency distributions and percentages. The study showed that Estate Surveyors and Valuers in the study area follow all steps however with 3.6% involved in determining wetland area. This may affect the correct determination of the extent of damage done to wetland ecosystems. The study further revealed that that only 5.5% of the respondents took any course in environmental valuation during their undergraduate school days. They may not be able to properly appreciate of importance of wetland resources. The study therefore recommends that practicing Estate Surveyors and Valuers would need to update their knowledge since wetland valuation for compensation has become a serious issue in the Niger Delta.

Keywords: *Compensation, Curriculum, Niger Delta, Wetland, Valuation Process*

Introduction

Wetlands are invaluable ecosystems that require adequate care and preservation. Valuing the economic benefits of wetlands can help set priorities and allocate spending on conservation initiatives. Valuation can also be used to consider the values attached to wetland ecosystems by the public and thereby encourage their participation in certain initiatives. More specifically, valuation could assist Environmental Assessment (EA) decision-making by providing a reference value against which other economic factors could be compared in order to determine the significance of environmental effects – the bottom-line in most EAs. Many people seem not to be aware of the values of wetlands. Many think that they are no more than mosquito breeding areas. Wetland valuation is a way to estimate ecosystem benefits and it allows financial experts to carry out a Cost-Benefit analysis. It is therefore an important tool for environmental managers and decision makers to justify public spending on conservation activities and wetland management. By giving objective evidence of the monetary and non-monetary benefits of wetlands to

managers and the public, environmentalists will gain additional support.

Barbier, *et al.* (1997) note that wetland resources are particularly susceptible to misallocation decisions because of the nature of the values associated with them. Wetlands perform an unusually large number of ecological functions and services which support economic activities. Many of these services are not marketed. In the case of tropical wetlands, many of the subsistence uses of wetland resources are also not marketed and are thus often ignored in development decisions. To capture the value for these functions and services require that the Estate Surveyor and Valuer adopts the techniques that take into consideration both the use and nonuse values of wetland ecosystems.

Lambert (2003) posits that natural resources have values that call for serious consideration by both the individual and the government. Such values include; improvement of water quality, storing floodwaters, habitat for wildlife, wetlands contributes to the health of the planet and human wellbeing by ensuring food supply, regulating the atmosphere and providing raw materials for industry and medicine. Many natural products found in the economy come

from wetlands, including shellfish, cranberries and timber. Wetlands provide valuable open space and create wonderful recreational opportunities. They provide tremendous economic benefits such as water supply, fisheries, agriculture, etc. through the maintenance of water tables and nutrient retention in floodplains; timber production; energy resources such as peat and plant matter; wildlife resources; transport; and recreation and tourism opportunities. Translating these many values into economic terms is of primary importance to convince the policy makers of the importance of these ecosystems as life-supporting systems. Achieving this can only result with good valuation practice.

In the study conducted in Nigeria, Agbi, *et al.* (1995) identifies two major types of wetlands in Nigeria; they are freshwater wetlands and coastal wetlands. Freshwater wetlands include swamps, marshes, bogs and similar areas that are inundated or saturated by surface or groundwater at a frequency and for duration sufficient to support the ecosystem. Coastal wetlands means all tidal and sub-tidal lands, including all areas below any identifiable debris line left by tidal action; all areas with vegetation present that is tolerant of salt water and occurs primarily in a salt water or estuarine habitat; and any swamp, marsh, bog, beach, flat or other contiguous lowland which is subject to tidal action during the maximum spring tide level as identified in tide tables published by the National Ocean Service. Coastal wetlands may include portions of coastal sand dunes.

Nigeria's wetlands fall into two major categories to wit; the Coastal Wetlands (Mangrove Swamps), and the Freshwater Wetlands (Floodplains). Eregba and Irughe (2009), note that the mangrove swamps covers an area of 9,000km² in the coastal States of Akwa Ibom, Cross River, Delta, Edo, Lagos, Ondo and Rivers while floodplains covers an area of 2,585 km² mostly along Niger/Benue River system.

The foregoing suggests that there is no consistent method for classifying wetland resources. However, for the purpose of this study, the classification developed by Agbi *et al.* (1995) is adopted. This approach is easy to understand and also avoids the confusion arising from the complex nature of wetland ecosystems.

Significance of Wetland

For millions of people "swamps" long suited only for draining have become "wetlands"

worth conserving. (McNeill, 2000). Wetlands, historically considered as worthless wasteland, are now considered among the most important natural resources throughout the world (Xu 2007). McCartney, *et al.* (2004), states that throughout history, wetlands have played an important role in human development. McCartney, *et al.* (2004) opines that in recent years, greater insight into the ecological processes that occur in wetlands has brought about a radical change in perception. According to them, wetlands are now widely viewed as valuable ecosystems that play an important role in maintaining environmental quality, sustaining livelihoods and supporting biodiversity. Schuyt and Brander (2004) estimate the global economic value of to be US\$70 billion a year. People also gain nonphysical benefits from wetland functions.

These are associated with spiritual enrichment, cognitive development and aesthetic experience. de Groot, (2007) opine that wetlands are among the most precious natural resources on earth. These highly varied ecosystems are natural areas where water accumulates for at least part of the year. Wetlands offer sanctuary to a wide variety of plants, invertebrates, fishes, amphibians, reptiles and mammals, as well as to millions of both migratory and sedentary waterbirds. Wetlands are an integral part of the hydrological cycle, playing a key role in the provision and maintenance of water quality and quantity as the basis of all life on earth. They are often interconnected with other wetlands, and they frequently constitute rich and diverse transition zones between aquatic ecosystems and terrestrial ecosystems such as forests and grasslands. In the light of varied significances of wetland that call for valuation, it is therefore not out of place to assess the processes involved in wetland valuation.

Wetland Valuation Processes for Compensation

The valuation process, generally, is a systematic procedure a Valuer follows to provide answers to a client's questions about real property value. It is an amalgam of the step-by-step approach adopted by a Valuer in the determination of the value of a property. Various researchers had identified the stages required in the conduct of wetland valuation. Barbier, *et al.* (1997) identify three (3) major steps for wetland valuation process which include definition of problem and choosing the correct economic assessment approach, defining the scope and limits of the analysis and the information

required for the chosen assessment approach and defining data collection methods and valuation techniques required for the economic appraisal. In India, Ramachandra and Rajinikanth (2000) identify the stages involved in wetland valuation process as choosing the appropriate assessment approach, defining the wetland area, identifying and prioritising wetland resources, relating wetland resources to use value and gathering information required for assessment, quantifying economic values and implementing appropriate appraisal method.

Nhuan *et al.* (2003) opine that in wetland valuation, the steps should include: deciding on valuation methods to be adopted, delineation of the boundaries wetland area as accurately as possible, identify the key resources and assets offered by the wetland, investigate whether each of the different functions and services offered by the wetland has a direct, indirect or non- use benefit associated with it, identify the f information required to value each category of use value being investigated and plan how to source this data, estimate the wetland's economic value and implement an appropriate appraisal method. In Switzerland, de Goot, *et al.* (2007) identifies five (5) steps in the valuation process for wetland valuation. These steps are: analysis of policy processes and management objectives, stakeholder analysis and involvement, function analysis, valuation of wetland services and communicating wetland values. Ajibola (2012) grouped wetland valuation processes into problem definition, scope and limit of the analysis and information and data/information collection.

Materials and Methods

The study employed survey method in collecting primary data. Both descriptive and exploratory approaches were used for literature review, while explanatory approach was used in analysing the data collected. Furthermore, interview was conducted on village heads to elicit information on the cause of hostility from

the villagers. Finally, the researcher extended his work to include the NIESV with a view to ascertaining the inclusion of environmental valuation in the curriculum for professional examinations. Questionnaire was administered on the 120 Estate Surveying and Valuation firms in Bayelsa, Delta and Rivers States (as contained in the lists made available by the NIESV's Branch Secretaries in the three States). Personal/telephone interviews were conducted on Heads of Department of all the Universities offering Estate Management in the Southern part of Nigeria. The data collected were analysed and presented using tools such as frequency distributions and percentages.

Results and Discussions

The data collected were collated, analysed and the results are as presented in Tables 1 – 6. Table 1 reveals that 68.0% of the respondents held B. Sc Degree, 15.3% held Higher National Diploma (HND), 1.4% held Ordinary National Diploma (OND) all in Estate Management, while only 13.9% and 1.4% held higher degrees, that is, M.Sc. and PhD respectively. In the past, the fewer number of respondents with higher degrees might not be unconnected with high demand for Estate Surveyors and Valuers in both State and Federal Ministries, Local Government Council Offices, banks, insurance companies and in other areas of businesses, coupled with good remunerations. However, situation has changed now as Estate Surveyors and Valuers now find solace in engaging in academic pursuits with job security and good remuneration. An indepth interview conducted among the respondents with higher qualifications indicated that pursuing higher degrees is a recent development, especially among those who have the focus of going into academic in later years. It can therefore be inferred that majority of the respondents, in the study area, have the required academic qualifications for registering and practicing as Estate Surveyors and Valuers.

Table 1 Respondents' Academic Qualifications

Academic Qualification	Frequency	Percentage
OND	1	1.4
HND	11	15.3
B. Sc.	49	68.0
M. Sc.	10	13.9
PhD	1	1.4
Total	72	100.0

Table 2 shows that 43.1% of the respondents are Principal Partners, 20.8% are Managing Partners and Associate Partners respectively, Senior Partners (6.9%) and Senior Surveyors (8.4%). Approximately 91.6% of respondents are Principal Partner, Managing Partners, Associate Partners or Senior Partners. This is in consonance with the Nigerian mentality in the identity structure among professionals. The variations in the title given to professionals are

common among professionals in practice. Within the Estate Surveying and Valuation profession, the choice of Principal, Managing, Associate or Senior Partner depends on the organisational structure of the firm in relation to the number of branches, geographical spread and departmentalisation by each firm. It can be deduced from Table 2 that a larger proportion of the respondents constitute the decision making authority in their respective firms.

Table 2 Respondents' Status in the Firm

Status	Frequency	Percentage
Principal Partner	31	43.1
Managing Partner	15	20.8
Associate Partner	15	20.8
Senior Partner	5	6.9
Senior Surveyor	6	8.4
Total	72	100.0

Table 3 shows that all (100%) the respondent Estate Surveying and Valuation firms are affiliated to NIESV while only 81.9% are affiliated with Estate Surveyors and Valuers Registration Board of Nigeria (ESVARBON). This situation could arise from the fact that an Estate Surveyor and Valuer can be in practice pending the time his firm's registration is approved by ESVARBON. It is also evident that

one of the respondent firms is affiliated to professional bodies outside Nigeria. The conclusion therefore is that all the firms are recognised by the two bodies regulating real estate profession in Nigeria and by implication; they are competent to engage in the practice of Estate Surveying and Valuation anywhere in the country.

Table 3 Firm's Affiliation with Professional Bodies

Firm's Affiliation	Responses	
	No	Yes
NIESV	0 (0.0%)	72 (100.0%)
ESVARBON	13 (18.1%)	59 (81.9.0%)
RICS	71 (98.6%)	1 (1.4%)
IVCS	71 (98.6%)	1 (1.4%)
FIABCI	71 (98.6%)	1 (1.4%)

Results as contained in Table 4 show that majority of the respondent Estate Surveyors and Valuers (76.4%) have at one time or the other participated in wetland valuation. This situation is not unexpected since a chunk of the Niger Delta land is made of wetlands and a high proportion of these have either been acquired by multinational oil companies or their activities have resulted in the pollution of wetland

ecosystems and valuation is usually required to determine the compensation payable to the affected people or community as the case may be. The high rate (76.4%) of involvement in wetland valuation by Estate Surveyors and Valuers in the study area could be due to incessant oil spillages and physical development resulting from continuous expansion of companies involved in oil exploration.

Table 4 Respondents' Involvement in Wetland Valuation Exercises

Wetland Valuation Exercise	Frequency	Percentage
No	17	23.6
Yes	55	76.4
Total	72	100.0

The result as contained in Table 5 shows that only (5.5%) of the respondents took any course in environmental valuation during their undergraduate school days. In depth interviews with respondents who claimed that environmental valuation was part of school curriculum in their higher institutions revealed that they trained in institutions outside Nigeria. Personal and telephone interviews held with the Heads of Department of Estate Management in institutions offering Estate Management courses revealed that environmental valuation has been included, as a topic, in the valuation curriculum either or both at M. Sc. and final year undergraduate classes in some Universities. On the other hand, environmental valuation is being taught as a course, at undergraduate level in only

one University. However, it is yet to be so included in the valuation curriculum of other institutions. The interview further revealed that the teaching of environmental valuation is a development that started about five years ago. Also the personal interview conducted on the research department of NIESV revealed that environmental valuation is yet to be included in the Institution's curriculum for professional examinations. The import of all the above therefore is that Estate Management graduates are yet to be fully armed with adequate training in environmental valuation and by implication, wetland valuation and this may affect their perception and the choice of method used in wetland valuation.

Table 5 Environmental Valuation as part of School Curriculum in Higher Institution

Curriculum	Frequency	Percentage
Yes	3	5.5
No	52	94.5
Total	55	100.0

Table 6 reveals that all the respondents (100.0%) quantify economic value, 76.4% identify wetland resources, 72.7% communicate wetland values, 70.9% collected data for wetland valuation, 69.1% considered choosing appropriate wetland valuation method, 58.2% relate wetland resources to use values and only 3.6% were involved in defining wetland area. It is obvious from Table 6 that all steps identified in literature were adopted by respondent Estate Surveyors

and Valuers, in varying proportions. The proportion of respondents (3.4%) involved in defining wetland area might be due to the fact that it is the responsibility of clients to define the scope of valuation exercise which the Estate Surveyors and Valuers are expected to work upon. It can therefore be concluded from the Table 6 that Estate Surveyors and Valuers, in the Niger Delta follow the appropriate steps in assessing wetland resources.

Table 6 Wetland Valuation Process for Compensation

Process	Responses	
	No	Yes
Choosing Appropriate Valuation Method	17 (30.9%)	38 (69.1%)
Define Wetland Area	53 (96.4%)	2 (3.6%)
Identify Wetland Resources	13 (23.6%)	42 (76.4%)
Relate Wetland Resources to Use Value	23 (41.8%)	32 (58.2%)
Data/Information Collection	16 (29.1%)	39 (70.9%)
Quantify Economic Values	0 (0.0%)	55 (100.0%)
Communicate Wetland Values	15 (27.3%)	40 (72.7%)

Conclusion and Recommendations

From literature, the study identified seven steps involved in wetland valuation process for compensation purposes. The study showed that Estate Surveyors and Valuers in the study area follow all steps. However their involvement in defining wetland area was limited because the respective clients determine the scope of work and only request the services of Estate Surveyors

and Valuers in determining the compensation payable/receivable.

The study showed that only 5.5% of the respondents took any course in environmental valuation during their undergraduate school days. Also environmental valuation has not been included in NIESV Professional valuation curriculum. In depth interview conducted on Heads of Department of the universities offering Estate Management courses in the Southern part

of the country showed that the teachings on environmental valuation, generally, is a recent development and is yet to cut across all Universities offering Estate Management courses. The interview further revealed that while graduates from some institutions already have an understanding of environmental valuation, those from other institutions are yet to have any understanding of environmental valuation and this may affect their perception of wetland resources and eventually the choice of method(s) for their valuation.

Also, practicing Estate Surveyors and Valuers would need to update their knowledge since wetland valuation for compensation has become a serious issue in the Niger Delta, due to the activities of the oil companies that has continued to impact on this natural ecosystem. Estate Surveyors and Valuers should, individually and collectively endeavour to be current through embarking on further readings, attending professional courses within and outside Nigeria, to broaden the professional base and by making Internet searches on topical issues such as environmental valuation.

NIESV should include environmental valuation in the curriculum for professional examinations. Also, ESVARBON should mandate Institutions offering Estate Management courses to include environmental valuation as a Course, rather than treating it as just a topic under valuation as a course, as is currently done in majority of the universities. This is to ensure a detailed coverage of the various aspects of environmental valuation. NIESV and ESVARBON should begin to think about specialisation in the field of valuation. Environmental valuation is an aspect of valuation that requires skills that go beyond the ones used for general valuation. Hence, for a Valuer to adequately handle such assignment he must have acquired the required expertise for it. In other words, the Valuer must understand the components of the environment (attributes, functions and services), the appropriate methods for their valuation and the various multidisciplinary skills required for such valuation.

References

Agbi, J. A., Abang, S. O. and Animashaun, A. I. (1995) *Nigerian Environment* Nigerian Conservation, Module 2. Macmillan Nigeria, Lagos.

Ajibola, M. O. (2012) A Study of Wetland Valuation Practice for Compensation in The Niger Delta, Nigeria A PhD Thesis Submitted to the Department of Estate Management, School of Environmental Sciences, College of Science and Technology in Partial Fulfilment of the Requirements for the Award of Doctor of Philosophy (PhD) in Estate Management of Covenant University, Ota, Nigeria

Barbier, E.B., Acreman, M. and Knowler, D. (1997). *Economic Valuation of Wetlands: A Guide for Policy Makers and Planners*. Ramsar Convention Bureau, Gland, Switzerland.

de Groot, R. S. (2007) Workbook Module 2 on Wetland Valuation. *Wetlands International*.

Eregha, P. B. and Irughe, I. R. (2009) Oil Induced Environmental Degradation in the Nigeria's Niger-Delta: The Multiplier Effects *Journal of Sustainable Development in Africa* Vol. 11, No. 4, pp 160 – 175

Lambert, A. (2003) Economic Valuation of Wetlands: An Important Component of Wetland Management Strategies at the River Basin Scale. A Discussion Paper of Ramsar Convention Bureau. Gland, Switzerland.

McCartney, M., Masiyandima, M. and Houghton-Carr, H. (2004) Working Wetlands: Classifying Wetland Potentials for Agriculture *International Water Management Institute (IWMI) Draft Research Report*, 35 pp.

McNeill, J. R. (2000) *Something New Under the Sun: An Environmental History of the Twentieth Century*. London: Penguin Books. 421. pp.

Nhuan, M. T., Ninh, N. H., Huy, L. Q., Sam, D. D., Ha, T. H., Thanh, N. C., Oanh, B. K., Nga, D. T., Son, N. N. and Du, N. Q. (2003). Vietnam Wetland Component Report: Economic Valuation of Demonstration Wetland Sites in Vietnam. United Nations Environmental Programme/Global Environment Facility and UNEP/GEF South China Sea Project. Report Number: Hanoi 4/2003.

Ramachandra, T. V. and Rajinikanth, R. (2000) Economic Valuation of Wetlands Technical Report: 101 submitted to Energy and Wetlands Research Group, Center for Ecological Sciences, Indian Institute of Science, Bangalore.

Schuyt, K., and Brander, L. (2004) *The Economic Values of the World's Wetlands*. Gland, Switzerland: WWF.

Xu, B. (2007) An Hedonic Analysis of Southwestern Louisiana Wetland Prices Using GIS: A Thesis Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in Partial Fulfillment of the Requirements for the Degree of Master of Science In The Department of Agricultural Economics and Agribusiness.