

# A Valuation Framework for Assessing Compensation Arising from Oil Spills in the Niger Delta Area of Nigeria

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## ABSTRACT

*Both empirical and anecdotal evidences suggest that valuers in the study area do not generally follow appropriate valuation procedure particularly when assessing compensation for environmental pollution arising from oil spills. This abuse of the valuation process, according to a number of extant studies, is largely responsible for widespread incoherent, inconsistent and controversial compensation assessment with its numerous potential socio-economic repercussions for a nation that oil revenue is her economic mainstay. This study is based exclusively on secondary data drawn from results of extant studies, valuation reports, relevant statutes and civil laws including several years of experience of one of the authors as expert witnesses in cases relating to compensation for oil spills in the study area. The paper is particularly written in response to Babawale (2013) which observed certain fundamental procedural deficiencies in valuation for compensation with “potentially grave repercussion for the integrity and the future of the valuation profession in the study area.” To redress the observed deficiencies and save the profession from further embarrassment, the study provides practitioners with an institutional perspective; a purpose-designed procedural framework that reflects and addresses the peculiarities of valuation for compensation for oil spills. Besides contributing to the recurrent debate on the vexed subject of compensation for oil spills and filling up part of the apparent wide gap presently existing in the body of knowledge particularly in Nigeria, the eight-step valuation process proffered is expected to boost valuers’ confidence and improve the reliability of valuation for compensation in the study area. The ultimate goal is overall improvement in the practice of valuation for compensation in the study area in particular, and Nigeria as a whole. This is expected to minimize the costs of protracted court cases including the contention and restiveness that is often associated with compensation matters in the study area.*

**Keywords:** compensation, oil spills, Nigeria, valuation process.

## INTRODUCTION

Nigeria is today the largest oil producer in Africa and the sixth largest in the world, and, according to the Oil and Gas Journal, the country as at January 2011 maintained an estimated 37.2 billion barrels of proven oil reserves (Achebe, Nneke & Asiniji, 2012). In addition to oil, Nigeria holds the largest gas reserves in Africa. Nigeria’s economy is largely dependent on the oil sector which contributes between 90% and 95% of her export earnings, 20% of GDP and about 40% of government revenues (Nwilo & Badejo, 2005). Nigeria’s oil and gas reserves exist largely along the coastal Niger River Delta area and offshore to the Bright of Bonny.

Nigeria’s fortune from the oil industry has not come without its costs particularly in massive environmental contamination. Since the discovery of oil in Nigeria in the 1950s, the oil-producing Niger Delta area has continuously suffered various environmental degradations as a result of oil spills resulting

from various oil prospecting, drilling, and transportation activities and particularly through one or a combination of corrosion of pipe and storage facilities, operation failure, mechanical failure, natural hazards, and third-party activities in forms of malicious incidents and acts of sabotage (Achebe *et al.*, 2012; Egbe & Thompson, 2010; Roddewig, 1999). Oil contamination creates problems that disrupt the lives of people living in close proximity to oil wells, pumping stations, camps and pipelines including contamination of drinking water, top soil, and various diseases affecting livestock, humans and aquatic lives.

By virtue of Decree No. 24 of 1975 (now Cap E13, Laws of Federation of Nigeria, 2004), the Estate Surveyors and Valuers (referred to as 'Valuers' or 'Appraisers' in other climes) are the sole professionals statutorily recognized in Nigeria to provide advice on the value of pecuniary interests in land or landed property for various purposes including compensation arising from oil spills. In compensation cases, the Estate Surveyor and Valuer is often required to prepare valuation upon which the claimant and/or the defendant seeks redress and/or prepares his/her/their defence, as the case may be. He may also be required to prepare a brief or proof of evidence for the claimant or the defendant solicitor; and may also appear as expert witness before a regular court or tribunal or any other jury. His role is to help the court or jury arrive at a just and fair decision on the quantum of compensation that is reasonable and adequate in the circumstance. Estate Surveyors and Valuers therefore play a pivotal role in adjudication involving compensation for oil spillage which claim often runs into billions of naira (N) (1US\$=N361). Where this function is performed creditably, objectively and transparently, the judicial process and costs to parties in dispute are minimized and the resultant judgment generates little or no controversies. On the other hand, where the Valuer performs below Generally Acceptable Standards, the controversies that ensue often prolong the judicial process, increase costs of litigation and contribute to relentlessness in the study area. It is on record that several cases of compensation for oil spills in the study area have lingered in the courts for several years, in some cases more than ten years, with attendant frustration and civil disturbance. A typical example was the *Ejamah-Ebube Community v. Royal Dutch/Shell* case, which was in court for over 33 years. While the contention generated by the valuation may not be the sole reason for such delays, experience and anecdotal evidences have shown that it is often the cause of majority of the cases because the valuer's assessment invariably forms the basis (or provides the actual sum) for the claim ultimately awarded by the court.

Extant empirical studies have identified, among other reasons, inappropriate valuation process as a major cause for unreliable and contentious compensation assessments as certain legitimate considerations and issues of consequences were wittingly or unwittingly omitted or compromised in the valuation process (Onugu, Iwu, Schopp, Czebiniak & Otegbulu, 2013; Kakulu, 2008; Babawale, 2013; Kakulu, Okorji, Mumeaya, Izebe & Wokoma, 2014). In particular, in a content analysis of 30 valuation reports on compensation for oil spillage prepared by Valuers operating in the study area, Babawale (2013) observed a number of misgivings, inconsistencies and abuse of the valuation process which this study primarily seeks to address. Among others, it was found that only a negligible proportion of the valuation reports made reference or reflect relevant provisions of the enabling statute or other legislations or civil laws; and in 57% of the cases, the valuation figures were unsupported with any data and it was not shown how the figures were computed. In a number of the reports, valuers attempted to use, or purportedly used, one or more of the three conventional methods namely: The Comparative, Cost, and Income Capitalization methods; howbeit, in a manner that lack transparency, objectivity, rationality, and consistency. For instance, while using the Cost method, Valuers failed to specify the exact physical state of the object of valuation such as the age, size, type, capacity, and construction materials (e.g. fish fences, fish traps, fish ponds, and hooks) that were valued. Thus, there were arbitrary adjustments and, in some cases, no adjustment at all, for accrued depreciation. Similarly, in calculating compensation for 'disturbance' and 'injurious affection', Valuers employed the income capitalization approach but failed to justify or substantiate the choice of the number of 'years of recovery'; the rationale behind the partitioning of the estimated period for recovery into tranches for purpose of the required calculations, the estimates of gross incomes from fishing, the proportion of the total loss that is recoverable per period, the estimates for outgoings, and the choice of both the remunerative and accumulative rates. None of the reports covered 'non-used value' and none employed any of the non-market valuation methods such as the contingent method which are particularly relevant to this category

of valuation. More disturbing is the finding that only 27% of the reports included or reflected the inputs of any technical specialists which, rendered such estimates suspect.

The goal of this paper is to address these fundamental procedural shortcomings by proffering an alternative valuation process that particularly has assessment of compensation for oil spills in view and that sufficiently demonstrates transparency, consistency, objectivity, and traceability which, are the universal hallmark of reliable valuations.

## **VALUATION PROCESS FOR ASSESSING COMPENSATION FOR ENVIRONMENTAL POLLUTION**

Real estate valuation is the art of developing an opinion of a defined value for real property. Valuation is a process; a step-by-step activity, beginning with valuation instruction up to and including the submission of the final valuation report. Both the Valuer training and valuation regulatory bodies generally prescribe a step-by-step process that Valuers are expected to follow through from valuation instruction to valuation reporting. Valuation process identifies the valuation problem, itemize the work necessary to get it solved; identifies the relevant information and data to be collected including their sources; verify, analyse and apply the data to estimate value (Appraisal Institute, 2013). While the process of determining all types of values (market value, mortgage value, insurable value, compensation value etc.) share a number of these steps or activities in common, the exact number of steps as well as the details of activities at each step vary with different value definitions.

The ultimate goal of most valuation assignments is to provide an opinion of market value. The valuation process depicted in Fig.1 represents the outline of the valuation process as it has become generally accepted in valuation literature and taught in various academic institutions over the years. Essentially, a typical comprehensive or narrative valuation report follows this order. The seven-steps model which is also prescribed by the International Valuation Standards Council involves definition of problem, scope of work, data collection and property description, data analysis, land value opinion, application of the approaches to the value, reconciliation of the value indication and final opinion, and report of the defined value (IVSC, 2013). The model is recognized by most valuation users and facilitates their understanding of valuation process and conclusions. The process is essentially normative as it suggests that valuers will proceed step-by-step from valuation instruction up to arriving at the final valuation and thereafter, the valuation report.

Though the model is tailored primarily towards arriving at the 'market value', it also presents a generalized pattern that "can be adopted to perform market research and data analysis, to apply valuation techniques, and to integrate the results of these activities into opinion of any defined value" (Appraisal Institute, 2013). That is, the model provides a generalized framework capable of necessary modification and which, indeed is expected to be modified when a valuer is considering a valuation opinion based on any of the other value definitions such as compensation, insurance, property taxation etc. According to May (1953), "given the manifold nature of valuation problems which such a framework must embrace and because of the differences in the valuation procedures, this framework must of necessity have to permit maximum flexibility in procedure and results." What the valuer requires in any valuation assignment other than 'market value' is certain modifications to this basic model to reflect and accommodate the peculiarities and requirements of the value sought.

Similar empirical studies have observed the tendency for Valuers in the study area to stick religiously and unreservedly to the valuation process depicted in Fig. 1 even when they are seeking to arrive at other value definition besides market value thereby failing, wittingly or unwittingly, to address or reflect the peculiarities of such value definition and which invariably leads to avoidable omission and/or compromise of vital information and essential steps in the valuation process. The result is a valuation process that lacks transparency, objectivity and consistency and therefore controversial. According to Ifediora (2009), Nigerian valuation practice has not emphasized sufficiently, as a developing practice should, on the issues of methodology and framework for valuation procedure. This

paper provides a modified version of the 'generalized' model depicted in Fig. 1 with particular focus on valuation for compensation for environmental contamination (oil spills) by making due and appropriate allowances for all issues, incidental specialized investigations, inventories, scientific tests and other specialists' inputs, among others, as prescribed by the valuation regulatory bodies for this this highly-specialized valuation assignment (see Figure 2). The suggested eight-step process reflects the multi-faceted, multi-dimensional and multi-disciplinary nature of valuation for compensation arising from environmental impairment.

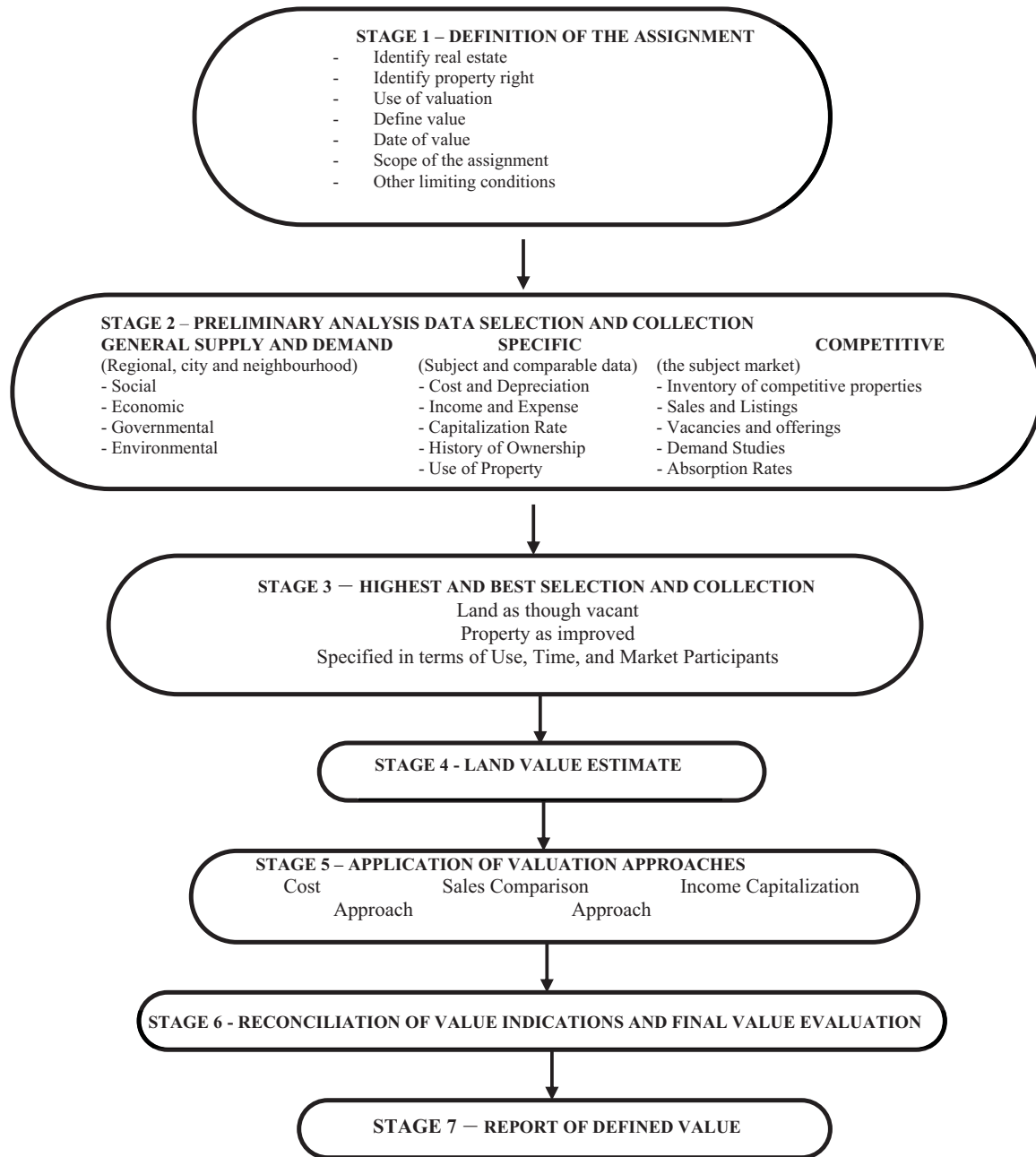


Figure 1: The Diagrammatic Representation of the ‘Generalized’ Valuation Process  
Source: Adopted from IVSC (2003:206)

Issues and activities often covered in each of the eight-step process include:

**1<sup>st</sup> step – Client’s brief: Identifying the Client and User, Object of Valuation, Purpose of Valuation, Type of Value Sought etc.**

The first step in any valuation process is the development of a clear understanding of the problem the valuation seeks to solve or for which the valuation is required as the answer. A proper identification of the problem sets the parameters for the valuation assignment. For instance, the valuer must, from the onset, obtain a clear and unambiguous instruction regarding the identity of the real estate in question; the of interests involved; purpose of the valuation; definition of the value sought; effective date of the valuation; scope of the assignment and other limiting conditions. Others preliminary information include identification of claimants and/or end users of report which may be individuals, families, cooperatives, or communities or any combination of these. During this initial interaction with the client and the impacted area, the Valuer is able to provide answers to these enquiries and also come up with the appropriate definition of value and set out relevant limiting conditions and contingent assumptions.

**2<sup>nd</sup> Step – Ascertaining the nature, extent and degree of impact and resultant liabilities.**

The second step is to ascertain the nature, extent and the degree of the impact of the oil spills including the nature and incidence of the ensuing liabilities including the authentic claimants. With the aid of survey map prepared by professional land surveyor, the valuer obtains the required information by carrying out reconnaissance survey of the impacted area to obtain first-hand information on the nature and characteristics of the impacted area including the type of property affected, the type and nature of the contaminants, the degree and scope and severity of initial contamination etc. Considering all these in the light of what the relevant statutes and other legislations provide, the Valuer comes up with the categories of liability or ‘heads of claim’, and their respective claimants, among others. The laws and regulations applicable to a given valuation assignment, often create additional requirements in terms of data, investigations, methodology, object of valuation and the mode of report presentation. It is the responsibility of the valuer, in the light of all these, to determine the appropriate scope of work for the valuation assignment. The scope of work for a given valuation assignment will be acceptable if it leads to credible results, and consistent with expectations of parties who are regularly intended users for similar assignments and is consistent with what the actions of the valuer’s peers would be in the same or a similar assignment (Appraisal Institute, 2008).

The degree or severity of contamination, and consequently, the required compensation will vary from one location to another depending on the type of contaminant, the characteristics of the impacted area (nature of human settlements and activities, nature and variety of vegetation and crops etc.) the time or season that the spill occur, what the relevant statutes and/or civil laws prescribes which may include what qualifies for claim or the ‘heads of claim’, liability, beneficiaries and the basis and method of valuation, among others.

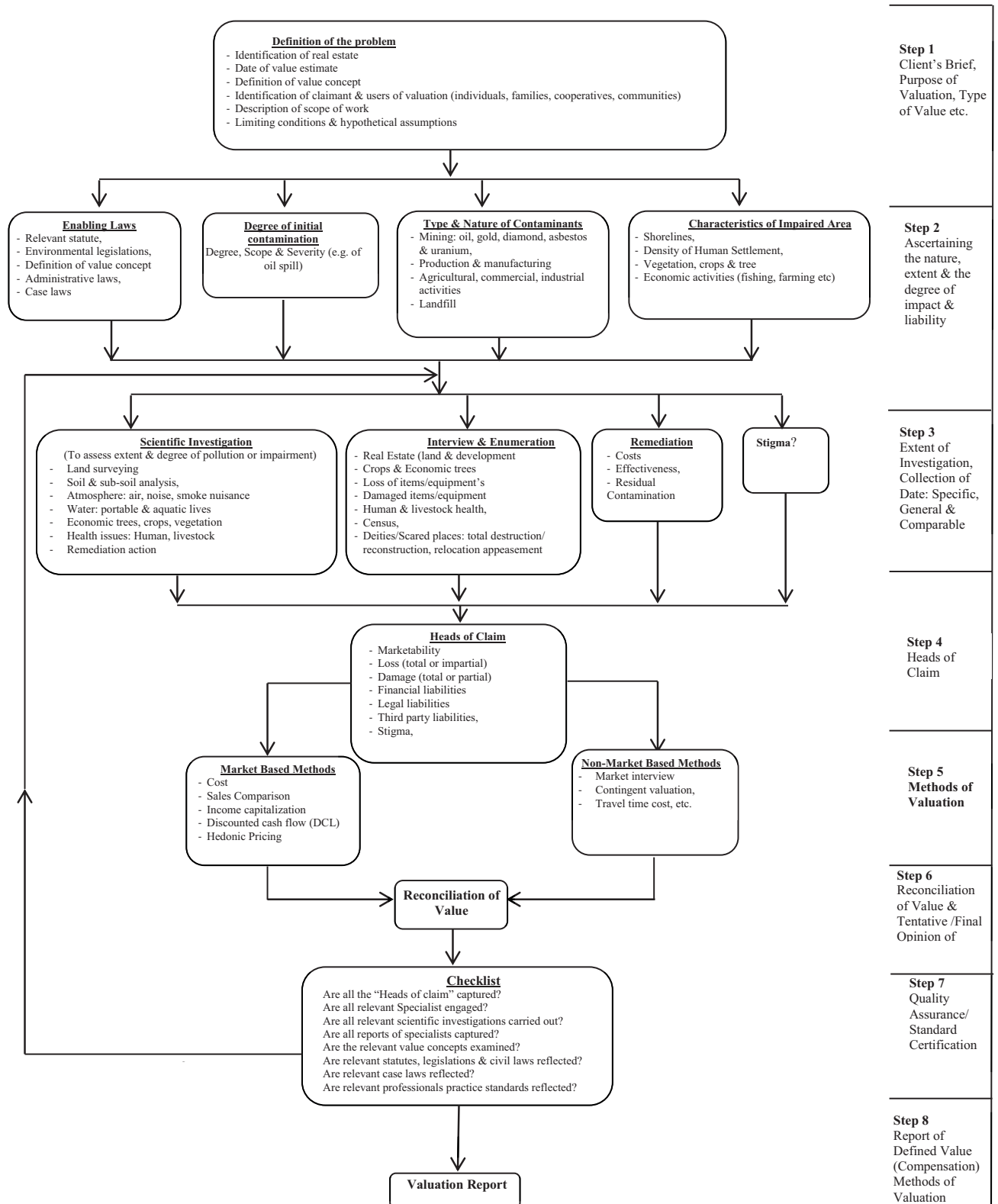


Figure 2: A Procedural Framework for Assessing Compensation for Environmental Impairment (e.g. Oil Spill)

### **3<sup>rd</sup> Step –Determining the extent of the required scientific investigations, inventories and enumerations - collection of required data.**

Step three covers actual collection of relevant data. Valuation is data driven. And the quality and reliability of any valuation opinion depends primarily of the quality of the underlying data. Valuation for compensation for oil spills requires data that goes beyond the general, regional and site data usually required for some other valuations. The ultimate goal of the valuation process is a well-supported value estimate that reflects all the pertinent factors and considerations influencing the required values of the property given the intended use and users. A thorough analysis of the relevant market and industry would help the valuer to understand the interrelationships among the relevant statutes, regulations, valuation principles, market and industry forces and factors, and local circumstances that are germane to arriving at an adequate compensation that will not generate much controversies.

Given its sensitivity, valuation for compensation involves careful and extensive interviews various stakeholders especially occupants of impacted area and enumeration of such items as crops and economic trees, lost or damaged farming and fishing equipment, livestock, buildings or sacred structures or places which may require reconstruction or relocation with or without appeasement, as the case may be. More often than not, a number of scientific investigations are required covering soil and vegetation, air and water; aquatic lives, humans and livestock health. There may also be the need to ascertain remediation measures and their costs, the determination of residual contamination; and stigma effect. The stigma effect arises because potential purchasers or tenants may not believe that the property is completely free from contamination even after the clean-up; a market bias that invariably lower the property's value.

The present practice whereby real estate Valuers purport to provide estimates or assessment for these items instead of consulting relevant experts is questionable. The required scientific investigations are evidently outside the purview of a real estate Valuer's training and expertise. Many compensations claim in the study area, according to Babawale (2013), ran into a ditch during court proceedings because Valuers erroneously take on these functions thereby rendering their evidences (reports) inadmissible before the courts for lack of competence. The assessment and costing of the impact of oil spills on the eco-system, vegetation, microbes, aquatic lives, and human health requires the involvement of relevant specialists. The relevant technical specialists in this case include the Marine Biologists, Soil Scientists, Health and Safety experts, and Micro Biologists who undertake scientific investigations to ascertain the degree of pollution; loss of aquatic lives; loss of economic trees, crops; predict possible recovery period and remediation actions and the cost implications. The results of these laboratory/scientific investigations and/or medical examination provide the valuer authentic data for his valuation. In the absence of such specialists' reports or inputs, the Valuers' assessments would be nothing but speculative and superfluous. It has therefore become an accepted practice in the market place to hire trained and experienced professionals to conduct the required environmental investigation and scientific tests including the stigma effect.



#### **4<sup>th</sup> Step – Collating the ‘Heads of Claim’ and corresponding claimants.**

Step four is concerned with collating liabilities usually referred to as the ‘heads of claims’ following the various enumerations, inventories, scientific investigations, and whatever remediation measures that might have been carried out in step three above. With these results and in the light of relevant statutes and civil laws, the Valuer is in a position to ascertain both total and partial loss; financial, legal and third-party liabilities; residual contamination, stigma etc. which he requires to ascertain ‘heads of claim’ and the distribution of liabilities and claims.

#### **5<sup>th</sup> Step – Choosing the appropriate method(s) of valuation.**

Step five is where the actual valuation takes place. The universal basis of valuation for compensation is obtaining a cash payment that would reasonably restore the claimant to status quo; that is, put the claimant virtually in the same position as before the incidence. The Valuer prepares his valuation estimate based on the data already gathered and in line with the professional standards and ethics; enabling statute and relevant professional standards. The major decision at the stage is the choice of appropriate method (s) of valuation. Options include direct market-based methods (cost, income capitalization or comparative) or the non-market methods comprising of ‘stated preferences’ which use statements about intended future behaviour to draw conclusions about total economic values such as the contingent valuation and conjoint analysis or, ‘revealed preferences’ such as hedonic pricing, which measures the value of an environmental asset by the estimated change in the value of a traded good as a result of the provision of the environmental asset, and, the travel cost method, whereby the value of an environmental asset is approximated by the willingness to pay of individuals to use the asset expressed in the costs incurred in travelling to the asset, or as is often the case, a combination of these. The ultimate choice of appropriate method or combination of methods is dictated by the nature of the valuation assignment, the intended use of the valuation results, the nature of the property, the nature and impact of contamination, education levels of respondents and particularly, the quality and quantity of available data, among others.

#### **6<sup>th</sup> Step – Reconciliation of value indications and obtaining tentative final opinion of value.**

Step six is the reconciliation of value where the Valuer has used alternative or varieties of methods to improve the reliability of his final value estimates. Each of the valuation methods used will most likely provide different indications of value; which need to be reconciled. The valuer uses reconciliation criteria to form a meaningful, defensible, and credible final value conclusion (The Appraisal Institute, 2008). Reconciliation does not suggest finding an ‘average’; as an average, in this instance, has no meaning or relevance as far as the market perception is concerned. Reconciliation actually implies that the Valuer sits back and reflect on the valuation assignment, the data used, the various circumstances surrounding the valuation; and then decide on which of the method or combination of method (s) best represents the situation and perception of the local market. The valuer considers the appropriateness of the approaches, the accuracy of the data and calculations, and the quantity or sufficiency of the evidence presented relative to specific valuation problem under consideration. The ultimate goal of the reconciliation exercise is to ensure the accuracy, consistency, and the logic leading to the value indications. Appropriateness, accuracy, and quantity and quality of evidence are the criteria with which a valuer forms a meaningful, defensible final opinion of value (The Appraisal Institute, 2008). The effectiveness of integrating all the elements in the valuation process and coming up with a reliable value estimate depends on the analytical skill, experience, integrity, and judgment of the valuer.

### **7<sup>th</sup> Step – Quality assurance or quality control.**

Step seven has to do with quality control which refers to a system that ensures that only proven and diligently prepared valuations pass through the system. Quality control, for instance, answers the questions:

- i) was the valuation carried out by qualified and experienced Valuer?
- ii) was the valuation peer reviewed?
- iii) was the valuation report was discussed on the floor of the valuation unit or department before they are sent out of the system?
- iv) did the valuations pass through the desk of senior Valuers with several years of experience before they are finally sent out?
- v) were technical specialists brought in at the appropriate steps to assist the Valuer in certain specialized area of a valuation assignment. Does the valuation report cover the reputation, competence, and the degree of independence of such specialists, including how the contribution of the specialists has influenced his valuation opinion?
- vi) does the report fulfil its purpose?
- vii) does the report answer and communicate the value question the Valuer is trying to establish convincingly, objectively, transparently, and precisely?
- viii) are all the illustration/figures/charts etc. clearly labelled, have appropriate/precise titles?
- ix) is the link between the main report and the diagrams, figures etc. clear?
- x) Can tables be easily interpreted?
- xi) Are graphs, pictures, layout, drawings and the likes correctly and appropriately labelled as e.g. Figure 1 (or Fig. 1); Figure 2 (or Fig. 2).

Step seven includes a loop generated to reconnect with step three. The purpose of the searching questions at this step is to ascertain that all relevant issues have been appropriately addressed, necessary investigations have been carried out, all required data collected, or to discover if any issues or steps in the valuation process have been wittingly or unwittingly compromised or somehow deficient and need to be rectified to improve the reliability of the ultimate assessment.

### **8<sup>th</sup> Step – Final report of defined value (compensation).**

The last step, the eighth step, is to effectively communicate the report to the client or end-user. According to International Valuation Standard Committee, the style, form, contents and length of valuation reports are dictated primarily by the combination of client's and legal requirements, property type, and the nature and complexity of the valuation job (IVSC, 2003). In any case, all materials included in the report, either in the descriptive part or as appendix/addenda, must be relevant to the valuation assignment and properly mentioned and appropriately referenced in the report. The report must not be speculative but conclusive; not hypothetical or presumptuous but based on concrete facts. The report should demonstrate a transparent process of reasoning which shows that the opinion expressed is wholly or substantially based on specialized knowledge as applied to the facts (assumed or observed); and with due regard to intended use and user.

## CONCLUSION AND RECOMMENDATION

The study proffers alternative valuation process for assessing compensation for oil spillage to what is presently available and employed by real estate valuers in the Niger Delta areas of Nigeria. Extant empirical studies have associated the spade of inaccurate and unreliable assessment of compensation for oil spills by valuers in the study area, in part, to procedural deficiency leading to compensation that are controversial. The underlying goals of the proffered valuation process include transparency, objectivity, consistency and traceability, which are regarded as the universal hallmark of reliable pricing (valuation). The process ensures that relevant issues together with their cost implications are adequately considered and accommodated. The resultant valuation or assessment is expected to prove more reliable and less controversial and therefore enjoy wider acceptability among the key stakeholders with its social and economic implications. The study also clearly revealed that valuation for compensation for environmental pollution, particularly, oil spills, is multi-faceted, multi-dimensional and multi-disciplinary in nature.

By proffering a valuation process that particularly has the assessment of compensation for oil spills as the basis, the research helps to address a fundamental procedural problem in valuation for compensation in the study area. This is expected to go a long way to enhancing valuers' skill, confidence and professionalism; restore the integrity and reputation of the valuation profession in the study area; foster the development of local standards and benchmarking; and incorporate new insights into valuers' professional practice particularly in this specialized aspect of the valuers' professional calling. This will ultimately ensure that victims of oil spills obtain reasonable and fair judicial redress and compensation in as short a time as is possible and at minimum cost. Though old habits die hard, but as Baum and Crosby (1998) posited "Valuers will change in their attitudes and techniques if a long substantial argument is put forward from a logical platform".

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