

***IMPACTS OF OIL SPILLAGE AND GAS FLARING ON THE
POPULATION AND DISTRIBUTION OF BIRDS IN NIGER
DELTA REGION OF NIGERIA***

A BRIEF INTERIM REPORT PREPARED

BY

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SUBMITTED TO

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Above all, to God be the glory.

INTRODUCTION

The Niger Delta is Nigeria's largest wetland region and is the third largest wetland in the world. It covers over 70,000 square kilometres between latitude 4°15'N and 4°50'N and longitude 5°25'E and 7°37'. It is characterized by extensive interconnectivity of creeks, deltaic tributaries, flood plains, mangrove swamps and other coastal features. The Niger Delta has been declared a key zone for the conservation of the Western Coast of Africa on the basis of its extraordinary biodiversity. It harbors a large family and species of wildlife, especially important and fascinating variety of birds, some of which are endemic to Nigeria. Birds species recorded in Nigeria include about 940 species, of which 4 are endemic and 5 are rare or accidental (Wikipedia, 2007).

The production of oil, discovered in the Niger Delta 40 years ago, is having a devastating effect on Nigeria's largest wetland region. Oil production began in the Niger Delta about 45 years ago and so did the practice of flaring associated gas. The development of the oil industry continued during the 16 years Nigeria spent under military rule, and Nigeria has become a major source of oil for the developed world.

Today, Nigeria is Africa's largest oil producer and 11th world largest. Oil exploration and exploitation activities has resulted to frequent oil leaks in the Niger delta, amounting to thousands of barrels of oil been spilled into the environment. Petroleum products released into the environment have an enormous impact on everything from animals to plants to people.

Flaring natural gas from oil fields as a by-product of crude oil production is also a common sight that dominates the skyline in the Niger Delta. It is the most visible impact of the oil industry on daily life. More gas is flared in Niger delta Nigeria than anywhere else in the world and this placed Nigeria as the world's biggest gas flarer. Currently, there are more than 100 gas flaring sites," wrote Mr. G.G. Darah, a Nigerian commentator, in the Lagos-based *Guardian* newspaper, some of them have been burning ceaselessly for 40 years. The flares have contributed more greenhouse gases than all of sub-Saharan Africa combined (Friends

of the Earth, 2004). This has contributed to climate change, the impacts of which are already being felt in the region with food insecurity, increasing risk of disease and the rising costs of extreme weather damage. The flares also contain widely-recognized toxins, such as benzene, which pollute the air. Local people complain of respiratory problems such as asthma and bronchitis. According to the US government, the flares contribute to acid rain and villagers complain of the rain corroding their buildings. The particles from the flares fill the air, covering everything with a fine layer of soot. Local people also complain about the roaring noise and the intense heat from the flares.

No comprehensive study is known to have been carried out into the impacts of gas flaring and oil spillage on wildlife in the Niger Delta. However, communities firmly believe that the flaring and oil spills has led to very serious pollution of air and drinkable water, destruction of flora and fauna, destruction of properties and lives and has also caused regional crisis in the area.

Even in the absence of such a study, however, it is clear that flaring and oil spills harms people, wildlife and the environment. Whether intentional or accidental, large or small, oil spill and gas flaring have the potential to cause tremendous and far-reaching damage to wildlife, especially birds. Some may experience subtle changes in behaviors or short-term health problems; some may suffer immediate acute toxic effects and even die, whilst others may show the effects in the long-term depending on the route, duration and concentration of exposure.

This project is a 34-week work aimed at assessing the impacts of oil spillage and gas flaring on the population and distribution of birds in the Niger Delta region of Nigeria.

The Specific Objectives;

- To harmonize data on the known bird types and species in the area.
- To identify bird types and species still present in the area.
- To observe their habitat and how it is affected by oil spillages and gas flaring.
- To observe how oil spillage and gas flaring has affected their population, distribution and characteristic behaviors such as nesting, feeding, frying, and singing and so on.
- To generate awareness on the need and pragmatic solution to protect and conserve birds in the area.

BRIEF ON PROJECT ACTIVITIES

The project is ongoing and activities 1 to 5 as outlined below have been completed. This interim report is activity 6. Activities 7 to 12 are next steps to embark on as soon as the second installment is made available by ABC.

Pre-assessment

Activity 1: Gathering of secondary data.

- Relevant secondary data/literatures were sourced for and reviewed. Information useful for validating field data or supporting conclusions were gotten from publications, consultations, journals, newsletters, and websites of relevant governmental and non-governmental organizations.

Activity 2: Preliminary visit to the study area

- The team leader (project initiator) and two other field officers visited the proposed study area to familiarize the team to the area, identify possible challenges/constraints to successful project implementation and further strengthen relationship with the community dwellers.
- The Niger Delta, the delta of the Niger River in Nigeria is a densely populated region sometimes called the Oil Rivers. It is Nigeria's largest wetland region and the third largest wetland in the world that extends over about 70,000Km² and makes up 7.5% of Nigeria's land mass. Historically and cartographically, it consists of present day Bayelsa, Delta and River States (as considered by this study). However, the Obasanjo regime in 2000 expanded its definition to include, Akwa Ibom, Cross River, Edo, Imo and Ondo States. Some 20 million people of more than 40 ethnic groups, speaking some 250 dialects live in the Delta; the Ijaw being in the majority. Their livelihoods are primarily based on fishing and farming.
- There are 606 oil and gas fields in the Delta, 355 onshore and 251 offshore, of which 193 are producing.
- During the visit, many forms of oil-generated environmental pollution were evident throughout the region, farming and fishing have become impossible or extremely difficult in oil-affected areas, damage to flora and fauna, drinking water has become

scarce, malnourishment and disease appear common. The remains of dead birds were found close to oil spills and polluted surface water. Burnt bird habitat and nest were also seen.

- The spectrum of rising sea levels due to global warming is more ominous for the Niger Delta that is a naturally subsidence-prone territory. Although scientists generally dispute the warning that sea levels will rise by 2 metres by the year 2100, it is strongly believed that at the rate of subsidence of the Niger delta, that net rise in sea level will be exceeded. Measurements at the site of a tank farm showed a subsidence rate of more than 2.5 cm/year. A one-metre rise in sea level could flood a land area as large as 18,000 sq. km and force millions of people to relocate. It is estimated that up to 80% of the population would have to relocate if/when this scenario plays itself out.
- The oil spill and gas flaring problem was discovered to be more severe in Bayelsa and River State where local communities are subjected to constant heat, light and noise from gas flaring and pollution from oil spills. 17 on-shore flow stations were identified in Bayelsa state alone.

Activity 3: Preliminary report

- As an outcome of the preliminary visit, a report was written to highlight the prospects and problems envisaged in the study area towards making adequate provision for an effective field work.

Problems that were discovered include:

1. Accessibility: less than 20% of the region is accessible by road, so the need to also go on a boat was necessary.

2. Social unrest: a growing anger among local inhabitants at the damage caused to their health and ecosystem by oil production activities, especially gas flaring and crude oil spillage has made the Niger Delta a danger zone of major confrontations between the inhabitants and the multinational oil companies. The area is now characterized by militancy, hostage-taking, unjustified killing, pipeline vandalization, extra judicial executions, arbitrary detentions, and draconian restrictions.

- Most recent was in August 2007, when the region experienced seven days of shooting by unidentified gun men. It leads to heavy presence of soldiers patrolling the Niger Delta and its environs. Crisis in this region has lead to some foreign companies

been moved out of the area and the oil and gas companies threatened to withdraw from the Niger Delta if the current spate of killings in the region continues. There is also a current threat by the community militant group to blow-off the oil fields.

- All these have restricted free movement and safety of life and property, hence affected this field work in most part of the Niger Delta.

3. The existence of physical and legal constraints to free passage and free circulation of information from government agencies and the multinational oil companies was a major challenge.

Activity 4: Pre-testing

- The objective of the pre-testing was to see the relevance of the research instrument to collect adequate data to answer research aims. Well structured questionnaires, Data sheet and the species identification manual were pre-tested and found to be adequate and capable of addressing the study objectives.

Activity 5: Assessment

The assessment involved the use of different, but complementary data collection methods. These are: desktop study, consultation, questionnaire administration, physical (site) inspection, and photo documentation (pictorial illustration). These methods are briefly described below.

Desktop Study: Existing data on known bird types and species in the area, those still present and those that are becoming rare or no longer found in the area was obtained from related literature and previous works from different sources.

Consultations: Primary focus was on gathering existing data on birds of Niger Delta Nigeria, their present status and existing policies, regulations or decree to protect and conserve birds of the Niger Delta. This was done by means of consultations with different units of the Ministry of Environment, Ministry of Agriculture, Ministry of Forestry, Research and Academic Institutions, and Conservation groups among other relevant organizations.

Questionnaire Administration: Questionnaires were used to extract anecdotal and traditional knowledge on bird life in the area, possible threats affecting bird population, distribution and

characteristic behaviours such as nesting, feeding, flying, singing and so on. It was helpful in obtaining first hand information from respondents that are conversant with the study area. The questionnaires were administered on a minimum of 150 respondents.

Site Diagnosis/Physical Inspection: Bird abundance and distribution was studied. Oil spills and gas flaring and its effects on birds in the area was investigated. Habitat type was selected and defined, and observations were confined to the habitat type. Ocular estimate was used for the observation of presence – absence data and in estimating approximate distances of about 100m radius on each of the sites selected so as to have an unbiased work.

The Mackinnon method was employed to determine the abundance of bird species. The method is a specie/area method, with an area equivalent to bird finding success. The advantage of this technique is that; similar results can be obtained by observers of widely different ability. It also requires no standardization of time spent looking, distance covered; weather conditions e.g. Bird species that occur in over 25% specie list for a given habitat can be taken to characterize the avifauna. The method requires that bird specie seen should be listed. A specie cannot occur more than once on any one list. Sites of study were approached quietly and about 2 minutes lapse was allowed for the disturbed fauna species to settle before commencement of counting.

Photo-Documentation (Pictorial Illustration): Photo shots of some birds and relevant sites were taken during the assessment for pictorial illustration. The photo shots will be presented in the final report.

Next Step: Post assessment

Post Assessment

This is the next step of action. The post assessment will involve collation and validation of data/responses from the field, data entry, coding, analysis and interpretations. Analyzed data will be presented using descriptive statistics (maps, matrices, diagrams and photographs).

A final project report will be prepared and ABC will be well acknowledged in the report. The report will be submitted to ABC and also use for advocacy and public enlightenment. Attempt

will also be made to use documented findings, photographs and recommendations to sensitize and lobby relevant authorities for necessary pragmatic solutions to conserve birds of the Niger Delta.

Award Payment Plan

Total Budget: **£780**

1st Installment: **£400** (paid by ABC in April, 2007).

2nd Installment: **£380** (expected from ABC).