

Impact of Displacements Arising from Climate Induced Erosion Disasters in West Africa – A Case Study of Anambra State Southeastern Nigeria

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ABSTRACT

Climate change has become a challenge in modern history with no part of the World spared. In Nigeria, the impact of Climate Change includes torrential rainfall in the South leading to erosion and flooding and aridity in the North leading to droughts and desertification. Anambra State Nigeria has been at the receiving end on the issue of gully erosion with around 1000 geo-referenced erosion sites. This erosion menace attracted World Bank funded intervention under Nigeria Erosion and Watershed Management project in which series of gullies were remediated and studies carried out on the impact of displacements and resettlements arising from this climate induced erosion disasters. Data used were from the Nigeria Erosion and Watershed Management Project which includes 13 Resettlement Action Plans, Environmental and Social Management Plans and Baseline Survey Reports respectively. Analysis of the result shows that a total of 33,881 people benefited directly and indirectly from this remediation. A total of 36,959 houses which would have collapsed were saved, a total of 4,255.4 hectares of land reclaimed, 350,677 people living in erosion corridors have their homes rescued and were saved from permanent displacement. Another 959 suffered loss of either land, crops and or houses as a result of this erosion. A total of 13 high profile erosion sites were intervened on. The paper concludes that even with all these done, climate induced erosion and flooding remains a challenge as more actions yet to be done. Recommendations were advanced for adaptation and mitigation of climate change induced gully erosion in Anambra State of Nigeria.

Keywords: Displacement, Erosion, Resettlement, Disasters, Compensation, PAPs – Project Affected Persons.

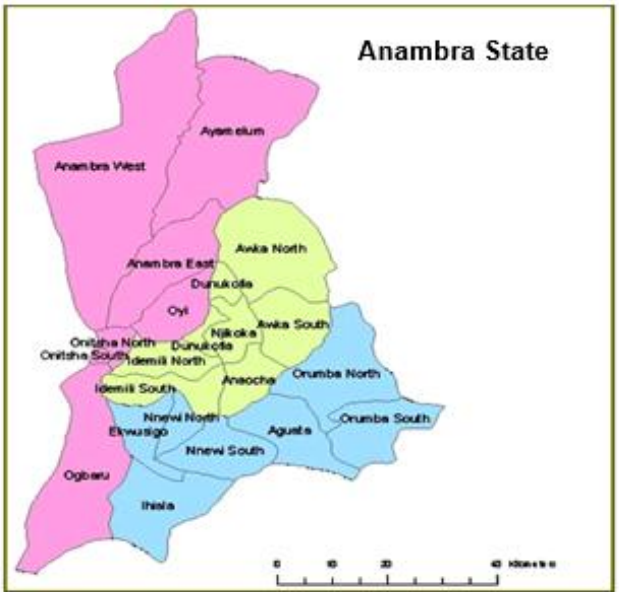
INTRODUCTION

Gully erosion is a critical climate induced hazard particularly in south Eastern Nigeria. Climate change affects different part of The Nigeria Erosion and Watershed Management Project (NEWMAP), initiated by the Federal Government of Nigeria (FGN) and funded by the World Bank (WB) and International Development Fund (IDF), is being implemented in Anambra State, Nigeria and other participating states to help reduce soil erosion vulnerability in the States and to develop the States' watersheds. The State acutely being degraded and destroyed by active gully erosion and perennially suffer huge losses resulting from the impacts of the gully erosion. With each passing year, uncontrolled stormwater flow threatens lives and properties as the existing gullies become widened and more menacing. The Anambra State Government is spending millions of Naira to remedy and rehabilitate the existing gullies.

PROJECT LOCATION

The study on the displacement impacts of gully erosion on human settlements and living conditions was conducted using data from the Nigeria Erosion and Watershed Management Project, Anambra State Nigeria. There are total of twenty-two sites where Anambra NEWMAP had some kind of engineering presence. In sixteen of those, the Project had carried out one or more pre-intervention studies such as the M&E Baseline Studies, Resettlement Action Plans (RAPs), Environmental and Social Management Plans (ESMPs), Environmental and

Fig. 1.1: Map of Nigeria Showing Anambra State & Map of Anambra State, South Eastern Nigeria.



1. Abagana,
2. St. Thomas Aquinas/Neros Plaza Awka,
3. Amachalla Awka,
4. Omagba Onitsha,
5. Ekwueme Square/Federal High Court Awka,
6. Ikenga-Ogidi,
7. Ugamuma-Obosi,
8. Abidi-Umuoji,
9. Enugwu-Ukwu,
10. Nnewichi,
11. Ojoto,
12. Ire-Obosi,
13. Nkpor-Flyover,
14. Omagba Down Stream Onitsha,
15. Agulu/Nanka/Okoko and
16. Umuagu-Ufuma erosion sites.

MATERIALS AND METHODOLOGIES FOR IMPACT DETERMINATION

Eligibility

The only persons who will be considered as qualified for compensation must be pre-identified PAPs. These people will directly or indirectly be subjected to the following losses:

- Loss of Land as a result of erosion
- Loss of Lives as a result of erosion
- Loss of structures as a result of erosion
- Loss of business and/or other source of livelihood
- Other associated sources due to erosion.

Loss of Assets

Compensation will be for assets on the land, as well as other assistance in order to mitigate the adverse consequences that affect people and communities when they give up property for public good. In this project, there is loss of mainly agricultural lands resulting from the project. The process of mitigating the project impacts on PAPs will involve only cash compensation. The project does not envisage permanent destruction of any structural assets. Consequently, there will not be any physical permanent relocation of the PAPs. All persons who own economic trees/crops on the affected lands proposed for permanent acquisition regardless of their legal status are considered eligible for compensation as described.

Loss of Livelihood

It is noteworthy that some PAPs have grown economic trees and crops within the land required as Setback for gully side slope stabilization, particularly at the deep sections of the gully corridor. Consequently, these PAPs will not only suffer loss of income from the trees and crops but may also suffer permanent loss of livelihood. Thus, the project may consider livelihood compensations to these PAPs.

Entitlement Matrix

Acquisition of land for the project will adversely affect the livelihood of persons, who live, work or earn their living on the land that will be acquired for the project. Before the commencement of the project, a mechanism for compensation of PAPs should be in place to avoid household economic difficulties that will result due to loss of land and/or economic trees/crops.

Basis of ownership for the purpose of impact Determination

For the purpose of this report and bearing in mind that land ownership is statutorily vested in government, the entitlement list will include persons appropriately defined as follows:-

- Persons who have a right to the needed land;
- Persons who use and cultivate the needed land on any form of arrangements; or
- Persons whose standards of living are adversely affected as a consequence of the project activities.

The Entitlement Matrix for Various Identified Categories of PAPs

Table 1 - Table Showing the Entitlement Matrix

Type of Loss	Entitled Person	Description of Entitlement
1. Permanent loss of land 1.1 Cultivable/residential/commercial land	1.1 (a) Legal owners of land (b) Occupancy/Hereditary tenant	1.1 (a) Land for land compensation is neither practicable nor desirable due to nature of project. Cash compensation at replacement value based on market rate plus 10% compulsory acquisition surcharge as second option (b) Compensation will be paid as a one-time lump sum grant for restoration of livelihood and assistance for relocation. .
2. Damage to land (such as abutting sub-project site) 2.1. By excavation from borrows for earth for construction use. 2.2 By severance of agricultural holding	2.1. (a) Legal owner/s (b) Village/s or clan/s with customary ownership 2.2. No project impact is envisaged	2.1 (a) & (b) Restoration of land to pre-construction condition or cash compensation at prevailing rates for necessary bulldozer/tractor hours to restoring level and/or truckloads of earth for fill.
3. Loss of income and livelihood 3.1. Temporary loss of access to land for cultivation	3.1 Cultivator occupying land	3.1. Estimated net income for each lost cropping season, based on land record averages of crops and area planted in the previous four years
3.2. Loss of agricultural crops, and fruit and wood trees. 3.3 Loss of income by agricultural tenants because of permanent loss of land they were cultivating	3.2 (a) Owner/s of crops or trees. Includes crops/trees owned by encroachers/squatters (b) Tenant 3.3 Persons working on the affected lands	3.2 (a) Cash compensation for loss of agricultural crops at current market value of mature crops, based on average production. Compensation for loss of fruit trees for average fruit production years to be computed at current market value. Compensation for loss of wood-trees at current market value of wood (timber or firewood, as the case may be). 3.2 (b) Partial compensation to tenants for loss of their crops/trees as per due share or agreement (verbal or written) 3.3 One-time lump sum grant to agricultural tenants (permanent, short-term or long-term agricultural labor (this will be in addition to their shares in crop/tree compensation) a) Tree/perennial crops: Harvesting of the crops will be given a first priority but where harvesting is not possible, counting of the affected crops will be done in the presence of the owner. Computation of the costs will be done according to market rates b) Annual crops: Crops will be harvested by the owner and therefore no compensation will be paid for crops. Where crops cannot be harvested, compensation at the market rate will be paid

4. Permanent loss of Structures 4.1 Residential and commercial structures	4.1. 29 structures to be structurally stabilized during the project are identified or envisaged	Compensation is expected for the owners of these structures
4.2. Cultural, Religious, and community structures /facilities School, church, water channels, pathways, and other community structures/installations	4.2 Persons officially responsible for the up keep of the identified facility	Compensation will be paid as a one-time lump sum grant for restoration of livelihood and assistance for relocation.
5. Special provision for vulnerable APs 5.1. Re-establishing and/or enhancing livelihood	5.1 Women headed households, disabled or elderly persons and the landless	5. Needs-based special assistance to be provided either in cash or in kind.
5.2 Change in Livelihood for women and other vulnerable Affected Persons (APs) that need to substitute their income because of adverse impact	5.2 (a) Vulnerable APs, particularly Women enrolled in a vocational training facility 5.2. (b) owner/s whose landholding has been reduced to less than 5 acres	5.2 (a) &(b). Restoration of livelihood (vocational training) and subsistence allowance @ agreed rate per day for a total of 6 months while enrolled in a vocational training facility
Unanticipated adverse impact due to project intervention or associated activity	The Project team will deal with any unanticipated consequences of the Project during and after project implementation in the light and spirit of the principle of the entitlement matrix.	

RESULTS AND DISCUSSIONS

Compensation for Losses and Other Assistance

Cash compensation is adopted as the mitigation measure for the needed agricultural land and the economic trees/crops which will be affected. Necessary assistance will also be provided to PAPs for temporary relocation to prevent unhealthy exposures to potential environmental health issues arising from the project.

Compensation for Land Losses

The total land size estimated for acquisition is approximately 57084m². This is calculated as a product of the total length of the Setback required for gully wall stabilization and the width of land required (12meters) as Setback. Appropriate compensation will be paid for the Setback land marked for permanent acquisition. The WB Policy OP4.12 requires that appropriate compensation be paid to involuntarily displaced persons to a level that improves or at least restores their income and living standards after displacement. In accordance with this policy, all persons whose lands shall be acquired for the purpose of establishing the Setback for gully side slope stabilization in the project shall be compensated according to the Entitlement Matrix for various categories of PAPs.

Compensation for Displacements

The names and contact details of all persons whose health may be affected by activities of the project have been documented as part of this ARAP. The ARAP data sheet spells out how each person is affected and indicates how much compensation will be paid for relocation and for what periods of time. The Anambra NEWMAP/ANSO is expected to pay the relocation costs of these PAPs and also provide the transportation means of moving these persons to the new locations and back to their homes when the health risk elements have been completely removed.

Compensation for Loss of Economic Trees/crops

Harvesting of the crops by the owners will be given a first priority. However, to assure safety of the people, such trees/crops shall be considered lost to the project. Consequently, compensation will be paid to owners for their trees/crops. Compensation will be based on the size of cultivated land by the PAP and the computed unit cost of the cultivated crops. Payments will be made either at ANSG offices or through an SPMU-identified NGO or CBO with the office of the Traditional Ruler and President General of the Obosi Town serving as facilitators for effectiveness.

Relocation Times

The PAPs to be temporarily relocated will be given a relocation time of at least two weeks and will be assisted in the process. This process and timing will be properly chosen to minimize transfer disturbances.

Livelihood Restoration

The main objective of the ARAP is to develop programmes that aim to improve the livelihoods of PAPs or restore them to the pre-displacement levels. In this project, the impact on land with economic trees/crops is such that sustainability of livelihoods will be affected hence cash-for-land compensation is adopted. This will apply to people who are not necessarily physically displaced but are affected by a land loss.

Dispute Over Land Matters arising from Climate Induced Erosion disasters

During community consultation process, it was understood from the Communities that each community has established traditional mechanisms by which land ownership disputes are resolved. This mechanism borders on the community's historical knowledge of every family within each village and the family's ancestral land heritage. Consequently, all land ownership disputes are normally resolved along the lines of known family heritage and the well established and entrenched traditional norms. In the event of multiple land ownership disputes, the matter should be referred to the Community Traditional Leadership which will facilitate a speedy resolution of the matter.

Results of Land Impact

Table 3: Status of Land Reclamation

SITE	TOTAL AREA RECLAIMED/ STABILIZED (Ha) JUNE. 2022	PERCENTAGE COMPLETION AS AT JUNE 2022	REMARKS
Abagana	320	71	Uncompleted
St. Thomas Neros Plaza	16.80	100	Completed
Amachalla	47.50	100	Completed
Omagba	79.50	100	Completed
Ekwueme Square/Federal High Court – Palliative	26.60	100	The achieved progress is seriously threatened & will be wiped out in no time if the phase 2 is not commenced & completed
Ikenga Ogidi	112	67	Uncompleted
Ugamuma Obosi	127	54.4	Uncompleted
Abidi-Umoji	710	100	Completed
Enugu-Ukwu	108	100	Completed
Nnewi-ichi	1141	100	Completed
Ojoto	936	100	Completed
Ire-Obosi	125	76	Uncompleted
Nkpor-Flyover	83	58	Uncompleted

Pictures Showing How Erosion Impacts the Landscape and Negatively Impacts Settlements Within the Project Area and The Positive Impacts of Remediation Erosion Projects

Emergency Intervention @ Alex Ekwueme Square/Fed. High Court Erosion Site (Before And After)



New Heritage Omgaba Site (Before And After)



SUMMARY AND CONCLUSIONS - FUTURE IMPLICATIONS OF EROSION ON SETTLEMENTS IN SOUTH EASTERN NIGERIA

The study after an evaluation of the displacement impacts of Climate related disasters in Anambra State concludes as follows –

- That the incidences of gully erosion affect virtually all Communities in Anambra State South Eastern Nigeria and is an existential threat to lives and livelihoods in Anambra State.
- That the erosion control efforts led by the combined efforts of the World Bank and the Federal Government in Anambra State intervened successfully in 13 erosion sites in Anambra State.
- That the project produced a total of 33,881 direct beneficiaries according to the results at a glance spread sheet and data available after project closure.

- d. That a total of 36,959 houses under the sphere of active erosion which otherwise would have been destroyed by erosion was saved through the intervention of the project.
- e. That a population of 350,677 lives living within erosion ravage communities which otherwise would have been displaced were spared involuntary displacement through the intervention.
- f. A total of 6,267 personnel were trained in rain water harvesting thereby helping to reduce the impact of erosion within the State by scaling up erosion prevention knowledge.
- g. Total land reclaimed and saved from erosion stood at 4,225.4 hectares which is a very significant positive impact in restoring erosion ravaged landscapes.
- h. The study shows that a total of 959 persons were compensated for losses arising from erosion control related damages.
- i. The project tarred a total of 5.61km of road supporting rural mobility and uplifting the total standard of life in these previously erosion ravaged communities.
- j. The project supported 6,298 people in tree planting advisory services.

The study summarily concludes that with Anambra State having close to 900 erosion sites and the World Bank intervening in only 13 of them, representing 1.44%, nothing significant have been done in addressing the lingering challenge of climate induced erosion in Anambra State.

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