

# OPPORTUNITIES AND CONSTRAINTS OF MINING PONDS FOR ECONOMIC REHABILITATION AND SELF RELIANCE ON THE JOS-PLATEAU

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## **Abstract**

Ordinarily, mining - the excavation of valuable minerals from the earth's crust- is often viewed as one of the causes of damage to land and loss of associated flora, fauna, micro and macro nutrients valuable to agriculture. However, on the Jos - Plateau, one of the by-products of years of mineral exploration are the mining ponds created by excavation exercises. They have caused controversies between environmentalists interested in land reclamation and the people whose lands are devastated, but now benefit from the ponds, making land reclamation not attractive. In spite of loss of valuable land for agricultural production by the people there are immense economic benefits derivable from the ponds due to their potentials for individuals, the state, and national self-reliance. The paper provides an overview of mining on the Jos- Plateau vis-a-vis the potentials and otherwise of mining ponds for economic rehabilitation and self reliance.

## **Introduction**

In this new millennium, there is optimism that world poverty can be reduced significantly by the year 2015, if developing and industrialized countries implement their commitments to attack root causes of poverty. The challenge of which lies in working towards sustainable growth that favours the poor and provides more resources for health, education, gender equality and environmental sustainability (Lavima, 2000).

The concept of sustainable development recognizes that economic growth and environmental protection are linked and that the quality of present and future life rests on meeting basic human needs without destroying the environment on which all life depends. That implies sustainable environmental management (Tolba, 1993)

Agriculture has been a prominent vocation of the people on the Jos-Plateau prior to the advent of mining industry. And in agriculture, land is the most vital resource to the farmer (Kaze, 2001) The prominent agricultural enterprises on the plateau are: - cabbage, lettuce, carrot, Irish potato, sweet potato, apple, olive, cowpea, rice and maize production. Sheep and Goat and Cattle rearing, Piggery and Poultry.

The advent of Tin mining industry resulted in loss of land due to excavation exercises. The land loss was associated with loss of flora, fauna, micro and macronutrients valuable to agriculture. In spite of attendant economic gains of the mining industry at the time, the people had reservations over their land loss. The reservations over land loss became significant due to the economic recession in the mining industry as a result of fall in price of tin in the world market (Chimezie, 1996)

The hope for economic rehabilitation now lies in the numerous mining ponds created by the search for minerals, through mining.

Mining is the excavation of valuable minerals from the earth's crust, and it includes minerals of organic origin such as coal, tin, columbite. The mineral so extracted cannot be replaced after extraction and the quantity will eventually decrease, (Bunnet, 1982). The foremost mineral so mined on the Jos Plateau was tin, from where the state capital - Jos derived its appellation of "Tin City".

## **Objectives of the Paper**

- (1) To provide information on the potentials of mining ponds for economic rehabilitation and self-reliance.
- (2) To highlight constraints associated with the utilization of mining ponds, with a view to provide basis for effective policy formulation for sustainable management of the resource.

## **The Jos Plateau and History of Tin Mining Industry**

The Jos-Plateau, situated in the Guinea savannah vegetation is a pear shaped upland, which stretches for approximately 104Km from North to South and 80Km from East to West, covering an area of about 8,600Km<sup>2</sup> (860,000 hectares). It is characterized by impressive ridges and isolated rocky -hills separated by extensive plains. The plateau exhibits a variety of landforms, which provides excellent picnics. It maintains an average height of 1,700m (4,000ft) above sea level and reaches its highest peak in the Shere hills where it stands at 1,766m (5,829ft). The land formation is categorized into two: - upper plateau (rocky hills) and lower plateau (sandy). The landforms have been defaced as a result of tin mining (one of the major exports in the 1960s), which created numerous mining ponds that are now potential economic benefits to the people (Daniel, 2002).

It is most probable that, nowhere is the cry for human centred sustainable economic development more urgent in Nigeria than on the Jos-Plateau where the socio-economic fabric of the people has been dislocated as a result of the ethno-politico-religious crises which consumed a significant economic pivot of the people - the ultramodern Jos main market as well as other numerous business outlets on the Jos-Plateau. The incident which has left a vast majority of the people, now living in the shadows of their past, psychologically socially and economically. In spite of the current peace/reconciliation effort towards socio-economic recovery, the balance between population, resources, environment and development is still far from the situation obtained before the crises. Now, the basic reality is that average quality of life has worsened, resources have been destroyed, and environmental and economic deterioration has become widespread. As people are caught up in this precarious sympathetic circumstance more and more people are forced to compete for dwindling resources and ultimately survival is threatened.

Amidst all these, economic hope rests on the effective development and management of the numerous mining ponds abound all over the Jos - Plateau. It is imperative to focus on them because it will address economic sustainability and responsibility through local actions by harnessing the carrying capacity of the planet earth and the carrying capacity of humanity.

Historically, commercial tin mining began on the Jos Plateau in 1902. And at the peak of exploration Nigeria was the 6<sup>th</sup> largest tin producer in the world. (Kaze, 2001). Consequently, land devastation for mineral exploration lasted for about 90 years. The major areas affected are Foron, Heipang, Ropp, Tenti, Gindi-Akwati, Makafo, Barkin Ladi, Dogoruwa, Kasa, Gashishi. And the size of land affected is estimated at 325sqkm out of 8,600sqkm, landmass of plateau state. The number of pond created is not less than 1000. There was apprehension among the people over loss of land to mineral exploration. In fact, available record indicates that:

friction arose between the mining companies and the local population principally over loss of agricultural land because areas with the richest alluvial deposits were almost the better agricultural land (Akerekoro, 1999:4)

It is documented that at least 90% of the Jos-Plateau land is adversely affected by open cast mining system, leaving behind numerous pits of varying degrees of depth, which are now significant valuable resources.

Reclamation effort began in 1946 by Mining Laru'. Reclamation Unit (MLRU) using variety of cover crops such as: - *Tephrosia*, *vogelli*, *scsbama SL'sh.m*, *Andropogon*, *gayana* and *pennisetum posureum*. Other tree specie used includes *Eucalyptus* spp. *Pines* spp., and *Acaciespp*. (Akerekoro, 1999). However, somehow, the people discovered that the ponds have immediate economic benefits than a reclaimed land, which requires soil treatment, and often long gestation period before any meaningful crop production practice is undertaking. In view of this discovery the people reject reclamation, rather they prefer the ponds. A development that baffled environmentalist interested in land reclamation in the spirit of environmental conservation. While environmentalists focus on long-term benefits of conservation, the people are concerned about how to survive particularly when viewed against the background of economic recession, which makes the small holder economic unit the hardest hit. The peoples' effort to alleviate pain of economic recession is unrelenting. This is because the characteristics of underdeveloped economy are attributed not so much to lack of natural resources or capital rather to the inhabitants of such regions. This means it is the human capacity and performance, which determines the development of an economy (Essien-Obot, 199-). In view of this, it becomes imperative to harness the potentials of the mining

ponds in the spin of solidarity and respect for human dignity through genuine economic rehabilitation for self-reliance. and concern for sustainable environmental management.

### **Highlights of opportunities and constraints of mining ponds on the Jos-Plateau**

#### **A. Opportunities:**

1. Availability of water for the folio wings: -
  - Irrigation Agriculture
  - Fisheries
  - Livestock husbandry
  - Domestic and Industrial uses
2. Development of Tourism and recreation
3. Generation of employment
4. Foreign exchange earnings.
5. Improvement in the living standard of the local community.
6. Attracts attention of Governmental and non-Governmental Organizations (NGOs) to local community.
7. A potential tool for successive elemental economic development strategy (SEED), which has water as one of the vital components of its phar.es (Water, Earth, Light, Air).
8. Development of mining pond water surface farming system as in Malaysia.

#### **B. Constraints**

1. Breeding ground for water borne diseases.
2. Flooding and erosion
3. Death trap to the community
4. Water pollution
5. Conflict among pond users.

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