

INTERNATIONAL WORK SHOP IN FACULTY OF AGRICULTURE, EHIME UNIVERSITY

THEME: "PROMOTING INTERNATIONAL EXCHANGE THROUGH ACTIVE RESEARCH WORK"

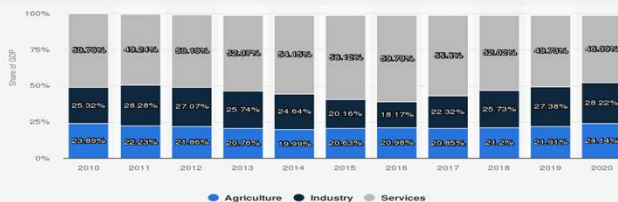
SOCIOECONOMIC IMPACT ASSESSMENT OF IRRIGATION DEVELOPMENT IN NIGERIA; A CRITICAL APPROACH.

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INTRODUCTION

OVERVIEW

The inadequacy of rural infrastructure contributes to the dwindling agricultural growth and sustained food insecurity in Nigeria. The agricultural sector employs 70% of its population, with 80% of agricultural produce from small scale rural farmers. Agriculture still remains one of the key contributors to Nigeria's economy after oil, it accounts for 22.41% GDP in 2020 as represented in Figure 1 below.



NIGERIA IRRIGATION DEVELOPMENT

Traditional methods of irrigation have long been practiced in Nigeria before the severe drought in 1972-74, that resulted in government investing largely on irrigation schemes. The Ministry of water resources and River Basin Development Authorities (RBDAs) were created between 1975-1985 to manage water resources and irrigation schemes throughout the country.

Irrigation policies and projects were focused on large-scale public irrigation schemes (dams), managed by RBDAs, but the initial success could not be replicated and continued as a result of poor management, high cost of maintenance and lack of ownership by intended beneficiaries. Nigeria's irrigation projects and policies shifted towards small-scale irrigation development by late 1980s, providing and financing the construction of boreholes, tube wells and motor pumps to small scale farmers and private irrigation owners. Evidence as shown in Table 1.

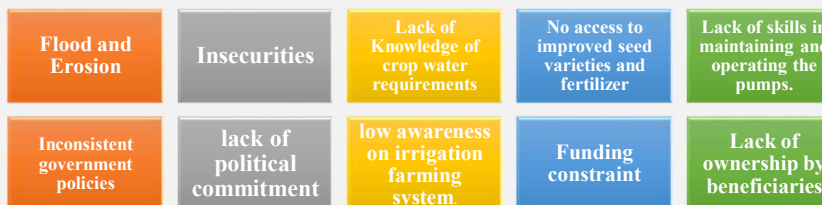
Scheme type	Equipped area (ha)	Actual irrigated area (ha)	Actual irrigated as percentage (%) of equipped area
River basin development authorities	92,317	29,140	32
State schemes	12,200	6,700	55
Private sector- sugar schemes	5,600	0	0
Private small scale schemes	128,000	128,000	100
Improved FADAMA/equipped low land	55,000	55,000	100
Total	293,117	218,840	75

Success was recorded in small-scale irrigation interventions between 1993-1999. Encouraged by the positive result, the government took commendable measures to increase irrigation institutions via pragmatic approaches and innovations, recognizing the vital role of small-scale irrigation deployment and beneficiaries' ownership to food security and sufficiency.

SOCIOECONOMIC IMPACT

SMALL-SCALE IRRIGATION EXPANSION PATHWAYS IN NIGERIA

Recent irrigation projects and deployments have been geared towards the development and promotion of small-scale and private irrigation schemes throughout the country, yet the irrigation potentials in Nigeria remains underexplored due to the reasons shown in Figure 2 below.



POLICY AND PROGRAMMATIC INTERVENTIONS

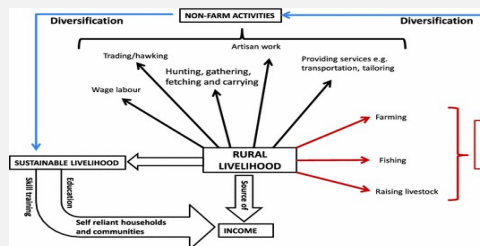
Irrigation development and infrastructures in Nigeria is managed by units within the Federal Ministry of Agriculture and Rural Development (FMARD) and the Federal Ministry of Water Resources (FMWR). The present administration via the Agricultural Transformation Agenda (2015), is keen on developing new and rehabilitating irrigation facilities to curb food insecurities in the country. Many interventions have been implemented such as FADAMA I-III, but the most recent being the TRIMING project by the current administration. Water User Associations (WUAs) have been recognized as the link to reviving the irrigation sector in Nigeria through effective water management, as represented in the flow chart below.



RURAL IRRIGATION DEVELOPMENT



Formulates and implement policies, projects that fosters sustainable food security to meet the needs of all Nigerians. The mandate of FMARD is represented in Figure 3 below.



The regulatory body has overseen the provisions and deployment of rural infrastructures to alleviate the poverty in rural and easy access to farm markets by providing

- Over 200,000km of rural roads
- Over 6000 boreholes and 5000 motor pumps
- Over 1000 green houses and rural markets etc.
- Dams and water treatment plants

CONCLUSION

The irrigation potential is huge, currently only about 1% of arable land is been irrigated in Nigeria meaning 90% of agricultural practice is rainfed. Farmers rely on traditional methods with low use of improved input seedlings or irrigation technologies.

The deployment of irrigation facilities under proper management of (WUAs), coupled with training will help farmers achieve higher crop yields as shown in Table 2.

Crop	Yield	
	Rainfed (tonnes/ha)	Irrigated (tonnes/ha)
Rice	2.51	3.58
Maize	2.97	3.87
Tomato	6.41	8.42
Pepper	4.25	5.76
Onions	6.10	6.60
Sugarcane	6.50	26.00
Wheat	-	2.80

Table 2. Comparative yield (tonnes/ha) of selected crops in rainfed and irrigated farms (2014) under small-scale irrigation.

The mandate to rehabilitate and provide irrigation services for small-scale and private irrigation farmers will boost the countries agricultural productivity and also help to tackle the effects of climate changes.



Figure 4. Depicts an estimate of small-scale irrigation potentials in Nigeria (2010).

Water users association (WUAs) is an integral part of governments current irrigation plans to reduce the gap between water providers and users, taking into account proper water management practices and fees. To boost irrigation agriculture, access to improved seed varieties and fertilizers is needed to boost yields, encouraging mechanize farming and using low cost improved irrigation technologies, coupled with sustainable water management approaches.

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