

# Assessment of Public Participation in Rural Water Management in Gombe State

AHMAD ABDULLAHI<sup>1</sup>, UMAR YUSUF ABDULLAHI<sup>2</sup>, GARBA MOHAMMED BANDI<sup>3</sup>, MASHKURA, MASHKURA AHMED USMAN<sup>4</sup>

<sup>1, 2, 3, 4</sup> Department of Geography, Federal University Kashere. Gombe State, Nigeria

**Abstract-** *The study was motivated by the lots of programmes put in place and the colossal sum of money spent by government and other service providers to meet safe water requirements of the rural people, yet, not much is being achieved in that direction. The objectives of this study, therefore, were to identify the institutional framework for rural water management and the contributions of rural water end users in managing their water supply points. The study utilized both primary and secondary data sources. Using a purposive sampling technique, fifty (50) rural communities were identified and administered with structured questionnaire which were complemented with personal interviews, focus group discussion, field observations and measurements. The study findings revealed that institutional arrangements for operation and maintenance of water issues have been top-bottom management strategy as against the supply driven norm where end users determine the outcome decision on water issues. The study recommends a framework for the improvement of public participation in rural water management and measures needed to operate and maintain the available water supply points efficiently in the state in line with the determination of the present and subsequent governments' drive to reduce poverty and enhance rural development. Above all, the study indicates that public participation in rural water resources management will not be successful without empowering the communities financially and educationally in order to become willing and informed participants in sustainable community development drive.*

**Indexed Terms-** *inventory public participation rural water*

## I. INTRODUCTION

The United Nations World Water Development Report, Leaving no one behind, launched 19 March 2019 during the 40th session of the United Nations Human Rights Council (UNHRC), and in conjunction to the World Water Day, demonstrates how improvements in water resources management and access to water supply and sanitation services are essential to addressing various social and economic inequities, such that 'no one is left behind' when it comes to enjoying the multiple benefits and opportunities that water provides. In this regard, Gombe State has put a lot of programmes and policies to improve water supply situation established by different political administrations, NGOs and other service providers. Despite this, complains from urban and rural areas is 'no water'. The rural areas worse hit. Gombe State is well endowed with water resource. As a state, it will not run out of water although many places in the state seem to lack the resources. The problem is not one of insufficient water resources but rather one of water resources management. Water resources management is described as the process of planning, developing, and managing water resources, in terms of the right quantity of water for a particular use at the right time and with the right quality. It includes the institutions, infrastructure, incentives, and information systems that support and guide water management (World bank, 2018).

Agencies such as Gombe State Agricultural Development Programme (GSADP), Gombe State Water Corporation (GSWC), Ministry of Water Resources (MWR), Water and Sanitation Agency (WATSAN), and Ministry for Rural Development (MRD) were established at different times of the state's creation to address various manifestation of inadequate water. While none of these agencies is completely without merit, they are yet to make

significant impact to the much-needed sustainable rural water supply. Two possible reasons for the little impact are: top-bottom and supply driven approach in managing water issues in many water projects in the state- This approach centralized power and decision making at the top without involving the targeted population-the end users; the government lacked the human capacity and financial resource to manage and maintain water points. There is therefore, a need for a shift to deviate from the top-bottom supply driven norm to a more pragmatic, decentralized and inclusive approach to the supply of water to settlements in the state. This includes a paradigm shift in the role of the government from a provider to that of a facilitator and priority be accorded to community-managed systems to promote, support and monitor community participation and community-based management in water.

The deviation from top-bottom approach leads to the bottom-top approach which recognizes the need to allow communities to identify their water needs, and prioritize the scheme. It also allows for the involvement of the public in decision making, implementation, monitoring, operation and maintenance of water project outputs. This management process is referred to as public participation in water resource management. Although the participation phenomenon may be worldwide, it's meaning, role, function, importance, vary from culture and political system to political system. Public participation can be any process that directly engages the public in decision-making and gives full consideration to public input in making that decision.

## II. AIM AND OBJECTIVES OF THE STUDY

For rural water system to be effective there is need for a decision making based on shared knowledge between the service providers and the water users (public). The problem posed by this study is therefore to ascertain the level of public participation in managing available water supply points in rural areas of Gombe state. This can be achieved through the following objectives:

1. To examine the institutional framework for rural water management in Gombe State.

2. To develop an appropriate method for assessing public participation for rural water management in Gombe State.
3. To assess, based on the criteria outlined in (2) above, the level of public participation in rural water management in Gombe State.
4. To develop a framework for the improvement of public participation in rural water provision and management in Gombe State.

It is hoped that the recommendations to be proffered at the end of this study will be implemented by service providers and the communities in order to bring the problem of water supply and its management in Gombe State to the barest minimum.

## III. METHODOLOGY

### 3.1 Description of the study area

Gombe State is located in the north-east region of Nigeria between latitudes  $9^{\circ} 30''$  and  $12^{\circ} 30''$  North and Longitudes  $8^{\circ} 45''$  and  $11^{\circ} 45''$  East (Figure 1). The state lies in the centre of the North-East geopolitical zone of Nigeria. It covers a total land area of only 17, 258.6 km<sup>2</sup> representing 6.3% of the 272, 395 km<sup>2</sup> of the total land area of the northeast geopolitical zone. It shares boundary with all the other states in the Zone, namely Adamawa, Taraba, Bauchi, Borno and Yobe. The 1991 census returned a population of 1, 489, 122 people for Gombe State. By 1998 and 2004 using 3.0 growth rate, it was projected to 1, 895,597 and 2, 174,118 people respectively (Abbas, 2006). By 2013, the population was projected to 3,433,593, Comprising 1,786,521 males and 1,647,072 females (NPC, 2013). The climate of Gombe is controlled by its location in the guinea savanna and its position across the seasonal migration of ITCZ. The people of Gombe are primarily farmers producing food and cash crops. In terms of trade and commerce, the state has a lot of markets that operate weekly, bi-weekly and on daily basis.

### 3.2 Research Design

The data required for this study involved the collection of the following sets of data:

Data describing the institutional framework for rural water management in the state: Information on this was obtained from the organization charts of the ministry of water resource, the state MDG office,

WATSAN, the state FMWR, and the Local Governments water departments: Data describing the appropriate criteria for assessing public participation for rural water management and the core values needed for effective participation that leads to a better management practice for sustainable rural water supply. Information on this was obtained from the literature and Focus Group Discussions: Variables describing the level of public participation in rural water management in the study area. Information on this was obtained from questionnaire administration, FGD, and interviews held with respondents and other stakeholders in rural water management in the study area.

Since it is not possible to collect data on all communities in the state, selection was made from rural communities in each of the 10 local government areas. Therefore, sampling frame covered 5 selected communities (figure 1) from each local government area in Gombe state. Since this study dwell on rural settlements, sample frames include all the LGAs except Gombe LGA which does not have rural characteristics, and purposive sampling technique was used where interview and questionnaire were administered. The choice of this technique was made bearing in mind that not all localities in the state engaged in water management. It is therefore waste of time and resources to attempt to collect data where none exists.

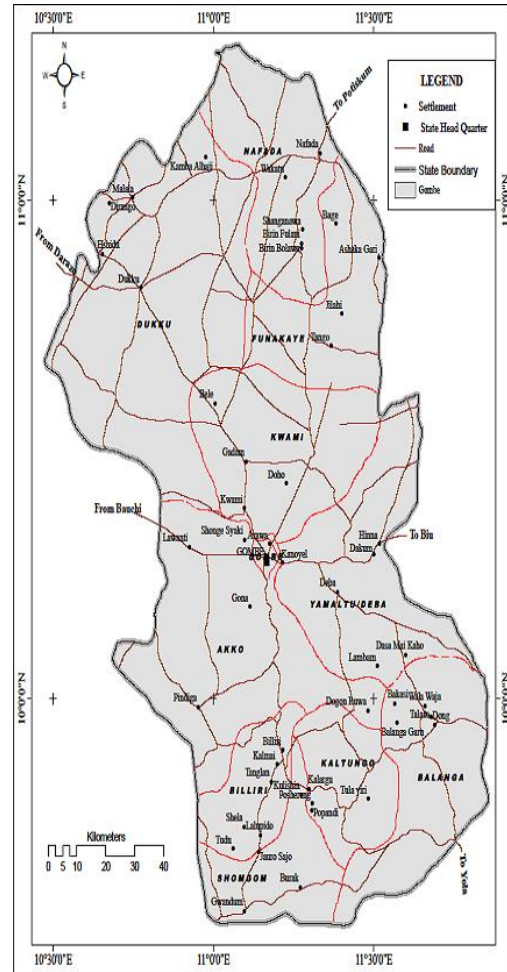


Figure 1: Gombe State showing sampled localities, 2020

The collection of data for the research was carried out using a variety of tools. All the tools used were validated prior to use in the field. In each of the 50 sampled settlements, one field assistant at a time who can read and write in indigenous knowledge was employed for translation of questionnaire into indigenous language where necessary and also to help the researcher locate water facilities, sources of water available to the inhabitants, e.g. rivers, wells, hand pumps, etc. The field assistants were also very useful in building confidence and acceptance among study participants being indigenes of the locality. The map of settlements within the study area and hand-held GPS was used to determine the geographic location of sampled settlements (figure 1).

Four kinds of field operations were undertaken in collecting the relevant data for the study. These include: observation and measurement, interview schedule and administration, and focus group discussion.

#### IV. DATA ANALYSIS

##### 4.1 Institutional Framework for rural water management in Gombe State.

This work hinges on institutional arrangement of water management such that effective arrangement backed by good policies and a robust legal and legislative backing will enhance, if not solve the problem of incessant water shortage in Gombe state. The state government rationalized and aligned its institutional framework to reflect that presented in the national water policy of 2019 as follows:

- a. Federal Government: the responsibility in rural water management of this sector is to define national policy and ensure that all relevant agencies work efficiently and harmoniously toward attainment of its objectives. It has the responsibility to provide leadership, direction, support coordination and ensure water supply to all users nation-wide. It also develops and maintains rural water infrastructure facilities in conjunction with the state, LGAs and the communities. It provides forum for bringing together all stakeholders in rural water management in order to ensure dialogue, cooperation and coordination among them.
- b. The role of the state government in rural water development is placed under the purview of Ministry for rural development. Its related functions in rural water management include: coordination, monitoring, and review of rural water issues at the state level; provision of technical advice and support and guiding all relevant water agencies in the state/LGAs/communities as well as NGOs; it also gives training and provides professional support to local communities in their effort to manage water, among other functions.
- c. The local governments constitute the most basic level of water governance. The traditional line department of rural development provides adequate institutional framework for mobilizing, leasing and working with the communities in promoting rural water development. The LGAs

provides the administrative and logistics support for dialogue, coordination and collaboration with NGOs and private sector; it also provides information on technology choice and design that suit the local environment; the department helps in capacity building in the water area of water procurement, operation and maintenance.

- d. Legislative provisions: adequate and enforceable legislative backing is provided by the state house of assembly to the framework for proper implementation.
- e. Communities: the communities carry the following activities: identifying and articulating rural water needs and preferences; implementing rural water projects; promoting group formation and establishment of relevant committees for planning and implementation, managing and maintenance of community water project; investing energy, time and resources in protecting community water assets and projects; designing tariff and collection of water fees to regain project and maintenance cost of water facilities.
- f. NGOs and Others: these are development partners working in collaboration with various stakeholders in rural water supply. Their roles include: manufacturing and marketing of appropriate rural water tools and equipments; rehabilitation and construction of water infrastructural facilities; participating in rural water work and maintenance; assisting in funding community water projects and building capacity in rural water sector. Development partners in rural water development are external agencies. These comprise of WHO, Worldbank, UN, WaterAid and lots more.

Community/LGA

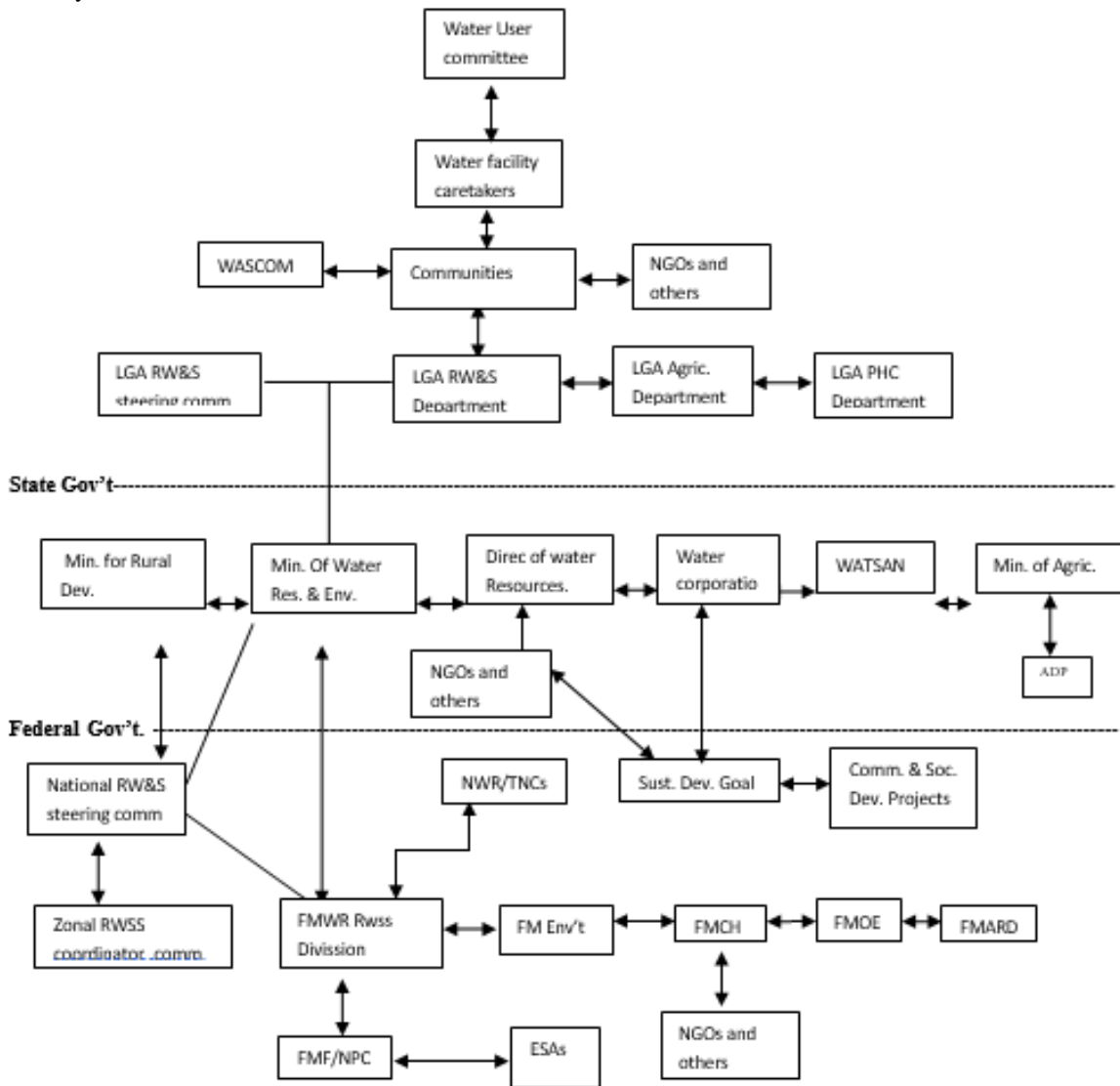


Figure 2: Institutional framework for rural water supply in Gombe State.

Source: Ministry of Water Resources, Gombe State

#### 4.2 Criteria for assessing public participation

This section responds to the second objective of this work which forms the bases of our judgment on the management practice being used in rural water management in the study area. There cannot be a single definition of effective criteria for public participation design (Babbio, 2019). Different criterion has been proposed and applied in rural water management. The concept of what is a good, successful or effective public participation process depends both on whose perspective is being considered and what that perspective entails. Participants and public participation organizers may

not agree on what constitutes a “good” process if they have different underlying goals and expectations for that process (Abelson & Gauvin, 2006).

Alejandro, et al, 2019, observed that participation is meant to enable a wider representation in decision-making, and to generate decisions that are better anchored among different groups in society, in particular those that are directly affected by the decisions being made. They further opined that unless certain conditions are in place, participation will neither be useful nor meaningful (Alejandro, et al, 2019). More over Cogan (1986), states that a successful citizen participation program must be

integral to the planning process and focus on its unique needs, designed to function within available resources of time, personnel, and money and responsive to citizens' aspirations. The "Guide to Public Participation under the Protocol on Water and Health" highlights as core principles of public participation: equity and inclusivity, accountability and transparency, flexibility, effectiveness and speed, and responsiveness (UNECE, 2013). Similarly, Chilvers, 2009 identify seven effectiveness criteria present in participatory processes in the environmental sector: representativeness and inclusivity, fair deliberation, access to resources, transparency and accountability, learning, independence, and efficiency.

This study however, focused on addressing the shortcoming observed and what it identifies as setbacks in managing the available water resources in the study area to achieve an optimal level of service that would ameliorate the problem of water shortage in Gombe state. A framework that will guarantee functional water supply system that is accessible, affordable and timely. Such management practice is made possible with a well-articulated legal and institutional framework, which has a functional water user committee (WUC) and proactive caretaker (CT) which together ensures a transparent operation and maintenance system with minimal external support. The interplay of the above system together with the following criteria is here proposed to assess public participation in rural water management in Gombe state: A functional legal framework which clearly defines the roles and responsibilities of various stakeholders without overlap; an articulate institutional framework that addresses the particular nature of the area; and that which commands social and political support of the state and identifies with the affected public by making them an integral part of decision making: capacity building and enlightenment to be able to make meaningful contribution, take responsibility, authority and deliver on mandate: economic empowerment to be able to fund system operation and maintenance: and finally a criteria that upholds inclusiveness, transparency and project influence.

#### V. ASSESSING THE LEVEL OF PUBLIC PARTICIPATION IN RURAL WATER MANAGEMENT IN GOMBE STATE.

The above five criteria have been outline to gauge the peoples' participation in this research. On legal framework, study findings revealed that 87% of respondents not are aware of water and sanitation policies and legislation. Many of these, due to illiteracy do not know the content of the human right to water or how to influence and utilize relevant national and international mechanisms. Government on its parts is not honoring these rights either due to lack of political will or shortage of human and financial resources. Public participation in this aspect is low.

On matters concerning institutional framework, the study has established that water management practice in the area provides a supply driven approach to water management that centralizes power and decision making at the top without involving the targeted population- the end users. Public participation in rural water management has officially been relegated to the background. A compelling argument for evaluating public participation is one of capacity building. Study findings indicated that in 46% of respondents have been trained on matters that relates to managing their water points. The remaining 54% however said they have never been train on managing their water supply system. A community that is not enlightened or educated is less likely to make informed choices on matters of rural water management. In terms of decision making on how, when, and where water projects are going to be cited, research findings indicated that of all the stages of development planning, from project design for instance to maintenance of water project, 40.8% of respondents said their participation was only sought when water systems brake down and WUC wants to embark on repairs or maintenance. This negates the tenets upon which public participation is built.

Looking at the value that recognizes decision of all stakeholders, regardless of class or gender, is not being considered here, since those who are supposed to be involved in decision making are not being contacted. It is pertinent to note therefore that 'partnership', 'delegated power', and 'citizen control' levels of the

Sherry Arnstein’s ladder and the ‘engage’, ‘collaborate’, and ‘empower’ levels of IAP2’s spectrum are not existence in the Gombe state rural water management. Judging from a situation where there is less functional legal and institutional framework, a management practice that centralizes power and decision making at the top, low citizen capacity building, and inconsistent public involvement in water projects, and base on the understanding that sustained rural water supply depends on user participation, one is therefore safe to conclude that public participation in Gombe State is below optimum.

VI. A FRAMEWORK FOR IMPROVEMENT IN PUBLIC PARTICIPATION IN RURAL WATER MANAGEMENT

Looking at the peculiar nature of the study area and its water needs with agood service level that goes beyond laying of water infrastructure this study recommends an interaction of a combination of factors that recognizes water user participation with emphasis on inclusivity of functional water caretaker committee supported by water user committee. These initiate water investment through user contribution. The amount will be used to design, conduct perceived

environmental impact assessment and implement water projects in their community. When water is made available, water tariff will be collected. Part of the money collected goes to water facility caretaker committee saddled with the responsibility of operation and maintenance of community water.

Along with user participation is minimal but necessary external support from government and development partners. This support may come in form of policy formulation and fiscal allocation backed by legislation. Other supports may come in form of education and public enlightenment, technical support and provision and/supply of spare parts.

It is the fervent view of this work that when the aforementioned framework is implemented in the study area, a sustainable functional water supply that is accessible, affordable and timely will be assured. In order to have a close look at the interplay of these factors, we have adopted and modified an institutional framework from UN WaterAid sustainability framework, 2011 for sustainable rural water services for Gombe State in Figure 3 below.

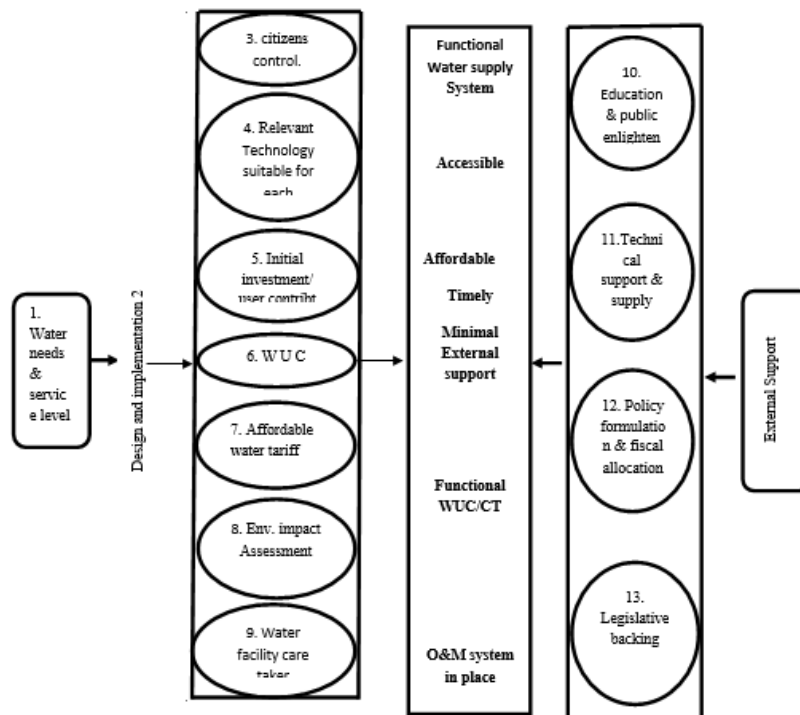


Figure 3: Proposed Framework for Sustainable Rural Water Management for Gombe State  
 Source: Adopted and Modified from WaterAid Sustainability Framework, (2020)

## CONCLUSION

This work sought to assess the existing legal and institutional framework put in place to manage water supply. To answer these questions, the research came up with five criteria from literature on how to assess public participation. Essentially, the study assessed the legal framework, institutional framework, capacity building, public contributions in water projects, and end-user's engagement in decision making process.

It is considered views of this work that improving rural water supply for everyone over the long-term rests upon all stakeholders knowing, and fulfilling their roles and responsibilities. As such, a bottom-top management strategy as against the current top-bottom management strategy in rural water management should be imbibed. The later strategy could be made possible if the public capacity to contribute is enhanced. This could be done by empowering them educationally and financially. When these are done, the views, suggestions and contributions of all stakeholders regardless of class, or gender should be considered.

From this study, it can be concluded that little attention was given to the community involvement at different stages of projects implementation. Hence there was ineffective public participation in most of the communities in the study area. Attaining sustainability of rural water supply may not be possible unless there is effective community organization arrangement to coordinate participation and management efforts of all community members.

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