

WATER MANAGEMENT IN NIGERIA: AN INSIGHT AND LESSONS FROM BUDGETARY INSTRUMENT.

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ABSTRACT

Water is a public utility as well as an economic infrastructure essential for household (domestic), industrial and agricultural use. The specific objectives of this paper are among others – to examine the position of water resources in national economy, and to carryout analysis of the current budgetary allocation to the ministry of water resources in Nigeria. The introductory part looks at the country's water resources availability and its current state. The next section explores the existing institutional arrangement of Nigeria's water sector for service delivery. Furthermore, the next part looked at the budgets of federal ministry of water resources especially that of 2017 and 2018. The ministry's budget still maintained a high level of capital component. Capital vote to the ministry in the 2017 budget was N85.1 billion which represents 92% of the total allocation to the ministry. Also that of 2018 is having N95.11 billion. The size of the capital votes are in line with the trend in capital allocation of the ministry over the past years. Notwithstanding the agitation of non-state actors on the need to cut down on the size of frivolities in the budget of the ministry, the 2018 and even that of 2017 budgets of the ministry are still fraught with such frivolities. Additionally, like in the previous budgets, the ministry's headquarters got the highest capital allocation of 57% for 2017 and 52.2% for 2018. Finally, it was found out that the sector does not seem to lack adequate funding as such. However, more infrastructural resources are required toward improving the quality of distribution nationally. This will help to place water resources ministry in her proper position as it's among the key infrastructural sector in the year 2017 budget and that of 2018 as stated by the Federal government.

Key words: Water management, water effective, water demand, water limitations, water budgetary allocation

1.0 BACKGROUND INFORMATION

Water is a fundamental natural resource that underpins our global life support systems. The basic roles of any nation are to strive for studious planning, development and management of her resources (especially water) in order to meet the basic needs of the people, over time, to live and maintain a life which is decent, healthy and respectable. These needs are in the areas of calorie and protein intake, which is food in terms of quality and quantity wholesome water for domestic, industrial and other uses. The United Nations has defined the minimum levels of these basic requirements, which express decent, healthy and respectable life. A country's socio-economic development efforts particularly Nigeria could therefore be assessed against these minimum levels of basic requirements.

The provision of clean drinking water, it is generally agreed, falls within the purview of the government anywhere, with the likely support of many multinational institutions that see it as part of their corporate social responsibility. While the issue of water is not a problem in developed countries, the same cannot be said of a developing country like

Nigeria. Today in Nigeria, millions of people, both in rural and urban areas still do not have access to safe drinking water with its attendant repercussion of outbreak of water borne diseases.

Water is a vital commodity. Like electricity, water is usually regarded as a public good to be produced and distributed by a corporation or an agency with virtual or natural monopoly. Production of potable water on a large scale involves the acquisition of capital needed for the withdrawal and processing of raw water as well as for its distribution. The heavy investment involved normally makes government at all levels (especially federal and states) the only potential investor, particularly in a developing country. Water production and distribution account for a very small proportion of Nigeria's gross domestic products. It is pertinent to add that captive water as well as commercialised production of water account for not less than 50% of total daily consumption of water in the country.

2.0 CRITICAL REASONS FOR PUBLIC SPENDING IN WATER RESOURCES

In the developing nations like Nigeria, individuals have little incentive to build and maintain extensive water infrastructure due to the nature of the

commodity, but multinational institutions, communities and societies do. Individuals might invest in on-site facilities, such as wells or boreholes, but the expense and complexity of piped networks requires collective actions which in this part of the world are above individual capacity. Markets, therefore, fail to provide adequate water supply services on their own. In fact, targeting public spending to benefit households that otherwise would be unable to afford those services can be a component of a broader social policy agenda to redistribute resources to the poor as reported by Eboh, et.al (2010). Several market features call for government intervention in the Water supply sector as:

- ✚ water is a mixed public and private good; while services benefit individuals, they also have considerable public health and environmental benefits.
- ✚ water is a good example of a natural monopoly, as water network infrastructure cannot practically be duplicated.
- ✚ the sector is characterized by a high degree of sunk costs.
- ✚ the sector suffers from imperfect information, which can lead to less than desirable investment and consumption.

3.0 NIGERIA – WATER AVAILABILITY, COVERAGE AND DEVELOPMENTAL RELEVANCE

Nigeria is endowed with about 267 billion cubic metres of surface water and about 52 billion cubic metres of groundwater, annually. Nigeria, with a land area of approximately 924,000 sq.km, is located within the tropics where its climate is semi-arid in the North gradually becoming savannah and rain forest in the South. In the southern part of the country, where rainfall is high, surface water rivers and springs are often the most appropriate source of water, particularly where groundwater aquifers are deep. In the North, where rainfall is scarce and aquifers are shallow, groundwater is usually the only practical source. The geology is such that well yields are unpredictable; often the water can only be accessed using a hand pump in these areas. Nigeria's irrigation potential is about 3.14 million hectares but only 0.02% of it is currently used.

Meanwhile, notwithstanding the generous endowment of surface and groundwater, which are capable of meeting the water demands, the average

national water supply coverage is still below what is required when compared with other developed nations. This scenario may not be unconnected with the shortfall in the level of investment that is needed for the withdrawal and processing of the raw water as well as its eventual distribution, and uncoordinated and the haphazard implementation of policies and programmes. For instance, urban systems require treatment plants, distribution systems, elevated tanks, piped systems, house connections, yard taps and public standpipes. In semi-urban areas, water supplies are mainly based on mechanized boreholes and overhead tanks, as well as piping with yard taps and public standpipes. Each public standpipe is generally intended to serve 250 people or more in some cases. Rural water supplies generally involve boreholes with hand pumps, and protected wells, although rainwater harvesting and natural springs – streams and rivers are also being used in various communities.

In Nigeria, there was an improved water source (percentage of population with access) at the rate of 68.50 as of 2015. This was the highest value over the past 25 years hence it stood at 68.50 in 2015, while its lowest value was 39.90 in 1990 as reported by World Health Organisation (WHO) and United Nation International Children Emergency Fund (UNICEF), (2015).

According to WHO and UNICEF (2015), access to an improved water source refers to the percentage of the population using an improved drinking water source. The improved drinking water source includes piped water on premises (piped household water connection located inside the user's dwelling, plot or yard), and other improved drinking water sources (public taps or standpipes, tube wells or boreholes, protected dug wells, protected springs, and rainwater collection). The information in Table 3 below revealed that there was minimal increase over access to improved water supply in the country as shown in the table, does not convey any thought. This corresponding increase in the population demands that there is need for more access to water for the population of the country especially in the rural areas. Also from Table 2 below, it shows that Nigeria is ranked 10th position as at 2015 among the selected nations with water supply out of over 60 countries. But within the same period in the country population having access to water was still at lower level comparing to the national annual population growth rate which stood at 3.5%,.

Table 1: Nigeria - Improved water source % of population with access

Year	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Value	39.9	46	51.8	57.8	59	60.1	61.2	62.3	63.4	64.5	65.5	66.6	67.6	68.5

Source: WHO/UNICEF 2015

Table 2: Water Supply and its accessibility - Total Population served with Improved Water (x1000) - countries ranking

Year	2015	2012	2011	2010	2009	2008	2005	2000	1990
China	1,338,420.08	1,273,042.53	1,263,202.29	1,243,034.97	1,222,534.54	1,201,730.55	1,138,097.50	1,028,241.66	779,791.94
India	1,206,612.31	1,128,963.14	1,114,484.71	1,088,888.05	1,063,558.61	1,038,468.62	963,670.59	839,578.40	612,743.48
USA	322,441.39	314,729.47	312,150.00	309,433.00	306,625.58	303,738.70	295,087.15	281,232.33	250,318.23
Indonesia	223,422.51	210,316.47	207,387.40	203,274.87	199,119.48	194,938.81	182,493.05	162,803.62	124,121.40
Brazil	199,837.38	193,126.58	191,371.69	189,080.85	186,798.08	184,512.10	177,244.04	163,081.80	132,429.18
Pakistan	172,047.64	162,561.99	159,803.56	156,736.32	153,641.38	150,526.36	141,429.82	127,272.66	95,854.90
Bangladesh	139,323.13	130,210.86	128,642.86	126,123.27	123,708.11	121,375.01	114,240.51	100,567.43	73,085.99
Russia	137,748.73	138,152.66	138,404.90	138,368.12	138,226.52	138,003.07	137,611.24	139,244.64	138,441.66
Japan	126,818.02	127,249.70	127,319.21	127,352.83	127,352.87	127,319.43	126,978.75	125,714.67	122,249.29
** Nigeria	125,766.29	109,308.50	105,902.47	101,310.00	96,876.15	92,602.90	80,702.26	63,609.72	38,195.43

Source: www.knoema.com/altas/topics/water. Accessed March 28, 2018

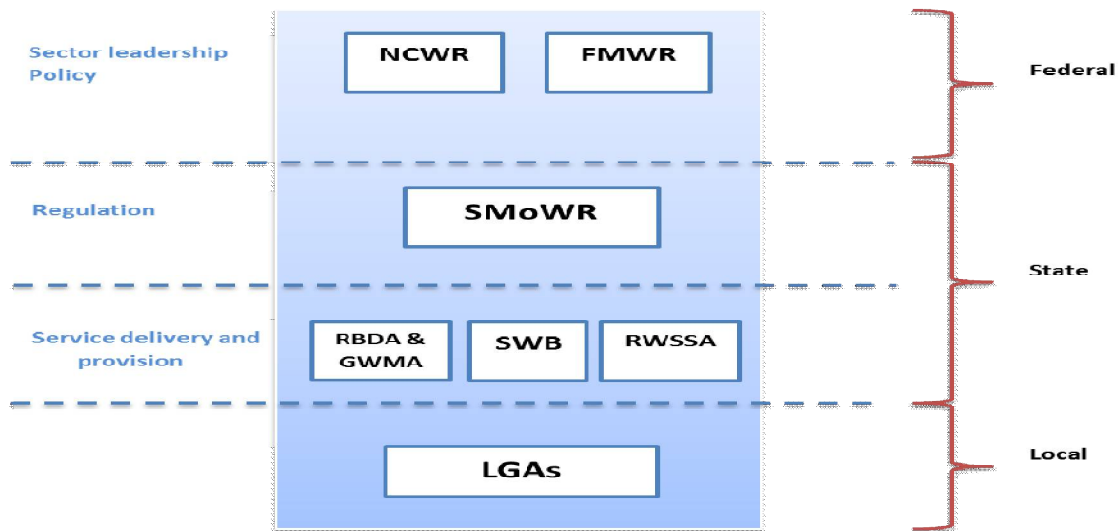
Meanwhile, recent research shows that there have been investments in the area of provision of access to portable drinking water. However, in spite of the investment and resources having gone into the provision of safe water by the governments in Nigeria and its development partners, this has not always translated into the availability of water that is safe, affordable, accessible and sustainable – particularly in rural areas.

In the area of developmental relevance, water is considered to be the most important resource for sustaining ecosystems, which provide life-supporting services for people, animals, and plants. Global access to safe water and proper hygiene education can reduce illness and death from disease, leading to improved health, poverty reduction, and socio-economic development. Added to these access to safe drinking water is also considered to be a human right, not a privilege, for every man, woman, and child.

4.0 INSTITUTIONAL ARRANGEMENT FOR SERVICE DELIVERY IN THE WATER MINISTRIES BY PUBLIC SECTOR IN NIGERIA

At the Federal level, Nigeria has a well-developed institutional framework for service delivery in the water supply sector when compared to other countries within

its economy's level of development. However, the situation is different at the state level where there is substantial need for further reforms in terms of developing state water policies, setting state level targets, building capacities, reviewing the edicts of state water utilities, among others—to guide sector development and drive sector progress.



The mandate for water supply is clear at the level of the Federal government. While some states have ministries dedicated solely to water or water and sanitation, others have combined water with other sectors portfolios like environment, agriculture, health community or rural development, or some states may only be operating with water board. Another common scenario is the lack of clarity in the responsibilities in the sector as such responsibilities may be spread over a number of institutions.

There is yet no effective regulation of service providers in Nigeria. To the extent that regulations occur, they are set by state ministries. Such tariffs in many cases are set without regard for the cost of providing the services. Service quality, particularly in urban utilities, has considerably reduced, with frequent supply interruptions, high levels of non-revenue water and poor customer engagement.

Meanwhile, the highest water resources policy formulating body, chaired by the Federal Minister of Water Resources including representatives from the Federal Ministry of Environment and all State Government Commissioners for Water Resources is National Council on Water Resources (NCWR).

In Nigeria, Federal Ministry of Water Resources (FMoWR) has overall responsibility for the management of water resources and is the custodian and implementer of the National Water Policy and water-related sanitation.

Other ministries that perform related functions in water activities are the Ministry of Environment (MoEnv) which is largely responsible for urban sanitation, mostly sewage. At state level, State Ministries of Environment oversee environmental sanitation. The Ministry of Health (MoH) and

Ministry of Education (MoE) have roles in formulating community sanitation and hygiene, and school hygiene programs, respectively. All these ministries help in making sure that there is good water for the greater populace of the country.

Added to this, National Water Resources Institute (NWRI) provides training and education, data collection, and dissemination services in the field of water resources development in the country.

Some key agencies like the River Basin Development Authorities/Boards and Gurara Water Management Authority (RBDA&GWMA) at the Federal level are charged with the development, operation, and management of reservoirs within their catchment area and provide bulk water supply for water utilities and for irrigation. In the past, some RBDA provided borehole water to communities. There are about twelve (12) RBDA whose operations cover all parts of the country. According to the River Basins Development Authorities Act, the RBDA are to carry out the following functions:

- ✚ to undertake comprehensive development of both surface and underground water resources for multipurpose use with particular emphasis on the provision of irrigation infrastructure and the control of floods and erosion and for water-shed management;
- ✚ to construct, operate and maintain dams, dykes, polders, wells, boreholes, irrigation and drainage systems, and other works necessary for the achievement of the Authority's functions and hand over all lands to be cultivated under the irrigation scheme to the farmers;

- ✚ to supply water from the Authority's completed storage schemes to all users for a fee to be determined by the Authority concerned, with the approval of the Minister;
- ✚ to construct, operate and maintain infrastructural services such as roads and bridges linking project sites: provided that such infrastructural services are included and form an integral part of the list of approved projects;
- ✚ to develop and keep up-to-date a comprehensive water resources master plan identifying all water resources requirements in the Authority's area of operation, through adequate collection and collation of water resources, water use, socio-economic and environmental data of the River Basin.

These responsibilities make the RBDAs the most important implementing agencies of the Federal government in the water sector.

In the various states in Nigeria, State Ministries of Water Resources (SMoWRs) or water boards as is obtainable in some areas are responsible for drinking water supply at the state level. In some states these ministries have been engaged in actual implementation. While the responsibility for the water sector is dedicated to a single ministry in a few states in others it is combined with that of other sectors. In such cases water supply has less visibility and some projects have made the establishment of ministries responsible for water one of their goals, for instance, the European Union's (EU's) Water Supply and Sanitation Sector Reform Programme (WSSSRP).

5.0 THE 2018 PROPOSED BUDGET ALLOCATION TO WATER RESOURCES

5.01 The 2017 and 2018 Ministry of Water

Resources Budgetary Allocation at a glance

The proposed allocation of N103,061,481,688 One hundred and three billion, sixty-one million, four hundred and eighty-one thousand, six hundred and eighty-eight naira which represent 1.19% of the proposed aggregate expenditure of N8.61 trillion of the Federal Government of Nigeria in the 2018 fiscal year according to Buhari, (2017) is for Federal Ministry of Water Resources. This is against the sum of N92, 447,482,389 (Ninety-two billion, four-hundred and forty-seven million, four-hundred and eighty-two thousand, three-hundred and eighty-nine naira only) which represents 1.26% of the proposed

aggregate expenditure (N7.298 trillion) of the Federal Government of Nigeria in the 2017 fiscal year for the same water resources ministry as stated by Buhari, (2016). The allocation to water resources is composed of N95,111,700,681 (Ninety-five billion, One hundred and one Million, Seven hundred thousand, Six hundred and Eighty-one naira) allocation to capital expenditure and a N7,949,781,007 (Seven billion, Nine-Hundred & Forty-nine million, Seven hundred and Eighty-one thousand, seven naira) allocation to recurrent spending of the ministry. The capital allocation to the ministry is about 92.2% of the total allocation while recurrent vote is about 7.7% of the entire allocation to the ministry for the 2018 budget. But in the year 2017, it was 92.1% for the capital allocation as against 7.9% for the recurrent.

The 2018 budget allocation was spread across the key implementing agencies of the ministry and the headquarters. These agencies include the ministry's headquarters, the twelve (12) River Basin development Authorities, the Gurara Water Management Authority, the Nigeria Integrated Water Management Commission, the National Water Resources Institute-Kaduna and the Nigeria Hydrological Service Agency (NIHSA). The headquarters of Ministry of Water Resources received a total allocation of N53.8 billion which constitutes 52% of the entire allocation to the ministry. The 12 River Basin Development Authorities (RBDA) received a total sum of N45.02 billion which represents 43.6% of the entire allocation to the ministry. A total sum of N4.2 billion which represents 4.0% of the whole ministry's budget was allocated to the other four (4) that is Gurara Water Management Authority, the Nigeria Integrated Water Management Commission, the National Water Resources Institute- Kaduna and the Nigeria Hydrological Service Agency (NIHSA). In the geographical analysis of the spread of the projects in the ministry, one can see that whereas southern parts of the country got five RBDAs, northern parts of the country got seven of them.

Meanwhile, it is on record that deeper analysis of the ministry's budget shows a lot of frivolous expenditure items. Despite agitations and recommendations from non-state actors and many think-thank institutions about wasteful and frivolous items in the national budget that need to be cut down, the ministry's 2018 budget is still fraught with such items just like that of 2017.

Table 3: FEDERAL GOVERNMENT BUDGET ALLOCATION TO WATER RESOURCES IN 2018 AT A GLANCE WITH ITS AGENCIES

Source: Authors' computation from 2018 budget proposal to NASSS

MDA	PERSONNEL 2018	OVERHEAD 2018	RECURRENT 2018	CAPITAL 2018	TOTAL ALLOCATION 2018	%age of Total allocation 2018 for agencies in it
FEDERAL MINISTRY OF WATER RESOURCES –HQTRS	1,520,598,085	278,665,581	1,799,263,666	52,016,586,900	53,815,850,566	52.22
NIGERIA HYDROLOGICAL SERVICE AGENCY(NIHS)	205,105,385	38,935,101	244,040,486	810,700,000	1,054,740,486	1.02
ANAMBRA/ IMO RBDA	433,194,574	51,935,100	485,129,674	4,914,045,427	5,399,175,101	5.24
BENIN/ OWENARBDA	319,224,406	40,605,255	359,829,661	960,000,000	1,319,829,661	1.28
CHAD BASIN RBDA	374,414,627	45,576,963	419,991,590	1,882,545,395	2,302,536,985	2.23
CROSS RIVER RBDA	350,887,625	43,388,663	394,276,288	4,308,893,067	4,703,169,355	4.56
HADEJIA-JAMAIARERBDA	362,993,334	45,285,000	408,278,334	3,665,824,294	4,074,102,628	3.95
LOWER BENUE RBDA	363,198,030	37,233,558	400,431,588	1,420,800,000	1,821,231,588	1.77
LOWER NIGER RBDA	501,715,047	37,127,744	538,842,791	7,991,358,264	8,530,201,055	8.28
NIGER DELTA RBDA	529,545,775	43,441,662	572,987,437	1,771,000,000	2,343,987,437	2.27
OGUN/ OSUNRBDA	351,227,849	44,471,585	395,699,434	1,460,259,350	1,855,958,784	1.80
SOKOTO RIMA RBDA	431,558,956	51,736,791	483,295,747	4,545,303,592	5,028,599,339	4.88
UPPER BENUE RBDA	293,775,455	36,296,591	330,072,046	3,781,692,000	4,111,764,046	3.99
UPPER NIGER RBDA	383,203,007	35,902,342	419,105,349	3,114,103,335	3,533,208,684	3.43
NATIONAL WATER RESOURCES INSTITUTE- KADUNA	411,670,508	37,657,000	449,327,508	1,477,676,751	1,927,004,259	1.87
NIGERIA INTEGRATED WATER MANAGEMENT COMMISSION	154,153,124	52,193,750	206,346,874	423,000,000	629,346,874	0.61
GURARA WATER MANAGEMENT AUTHORITY	12,054,616	30,807,918	42,862,534	567,912,306	610,774,840	0.59
TOTAL	6,998,520,403	951,260,604	7,949,781,007	95,111,700,681	103,061,481,688	100

Table 4: FEDERAL GOVERNMENT BUDGET ALLOCATION TO WATER RESOURCES IN 2017 AND 2018 AT A GLANCE WITH ITS AGENCIES

MDA	PERSONNEL 2017	PERSONNEL 2018	OVERHEAD 2017	OVERHEAD 2018	RECURRENT 2017	RECURRENT 2018	CAPITAL 2017	CAPITAL 2018	TOTAL ALLOCATION 2017	TOTAL ALLOCATION 2018	%age of Total allocation 2018 for agencies in it
FEDERAL MINISTRY OF WATER RESOURCES –HQTRS	1,291,677,344	1,520,598,085	237,665,578	278,665,581	1,565,342,922	1,799,263,666	51,153,246,901	52,016,586,900	52,718,589,824	53,815,850,566	52.22
NIGERIA HYDROLOGICAL SERVICE AGENCY(NIHSA)	215,688,828	205,105,385	38,935,101	38,935,101	254,623,929	244,040,486	817,700,000	810,700,000	1,072,323,929	1,054,740,486	1.02
ANAMBRA/ IMO RBDA	383,777,823	433,194,574	38,935,100	51,935,100	422,712,923	485,129,674	2,619,045,426	4,914,045,427	3,041,758,349	5,399,175,101	5.24
BENIN/ OWENARBDA	308,405,540	319,224,406	30,605,254	40,605,255	339,010,794	359,829,661	755,000,000	960,000,000	1,094,010,794	1,319,829,661	1.28
CHAD BASIN RBDA	340,647,380	374,414,627	35,576,963	45,576,963	376,224,343	419,991,590	1,672,545,395	1,882,545,395	2,048,769,738	2,302,536,985	2.23
CROSS RIVER RBDA	338,376,690	350,887,625	38,388,662	43,388,663	376,765,352	394,276,288	4,589,999,067	4,308,893,067	4,966,764,419	4,703,169,355	4.56
HADEJIA-JAMAIARERBDA	332,564,227	362,993,334	42,285,000	45,285,000	374,849,227	408,278,334	3,066,340,349	3,665,824,294	3,441,189,576	4,074,102,628	3.95
LOWER BENUE RBDA	347,775,559	363,198,030	27,233,559	37,233,558	375,009,118	400,431,588	1,400,800,000	1,420,800,000	1,775,809,118	1,821,231,588	1.77
LOWER NIGER RBDA	492,627,244	501,715,047	37,127,743	37,127,744	529,754,987	538,842,791	4,991,667,925	7,991,358,264	5,521,422,913	8,530,201,055	8.28
NIGER DELTA RBDA	517,412,412	529,545,775	43,441,662	43,441,662	560,854,074	572,987,437	1,003,000,000	1,771,000,000	1,563,854,074	2,343,987,437	2.27
OGUN/ OSUNRBDA	338,994,481	351,227,849	44,471,584	44,471,585	383,466,065	395,699,434	860,259,350	1,460,259,350	1,243,725,415	1,855,958,784	1.80
SOKOTO RIMA RBDA	416,819,417	431,558,956	46,736,791	51,736,791	463,556,208	483,295,747	3,450,303,591	4,545,303,592	3,913,859,799	5,028,599,339	4.88
UPPER BENUE RBDA	293,775,455	293,775,455	28,296,592	36,296,591	322,072,047	330,072,046	3,301,692,000	3,781,692,000	3,623,764,047	4,111,764,046	3.99
UPPER NIGER RBDA	311,268,823	383,203,007	25,902,342	35,902,342	337,171,165	419,105,349	2,998,116,380	3,114,103,335	3,335,287,545	3,533,208,684	3.43
NATIONAL WATER RESOURCES INSTITUTE- KADUNA	350,736,786	411,670,508	22,657,000	37,657,000	373,396,786	449,327,508	1,377,676,751	1,477,676,751	1,751,073,537	1,927,004,259	1.87
NIGERIA INTEGRATED WATER MANAGEMENT COMMISSION	119,457,046	154,153,124	69,193,750	52,193,750	188,650,796	206,346,874	423,000,000	423,000,000	611,650,796	629,346,874	0.61
GURARA WATER MANAGEMENT AUTHORITY	14,908,286	12,054,616	42,807,918	30,807,918	57,716,204	42,862,534	665,912,306	567,912,306	723,628,510	610,774,840	0.59
TOTAL	6,414,916,341	6,998,520,403	886,260,603	951,260,604	7,301,176,944	7,949,781,007	85,146,305,445	95,111,700,681	92,447,482,389	103,061,481,688	100

Source: Authors' computation from 2018 and 2017 budgets proposal to NASSS

5.02 CAPITAL AND RECURRENT ALLOCATION FOR 2018 AND ITS TRENDS TO WATER RESOURCES

Total allocation to the ministry, though erratic in the past, has continued to increase over the period of 2016-2018. Similarly, both the capital and recurrent allocation of the ministry has also over the same period continued to grow. From the analysis of 2018 water resources budget, one can see that the average total allocation to ministry for this period is N239.7billion while average capital and recurrent allocation are N217.6billion and N22.45billion respectively. In all, it is important to point that the 2017 allocation was exceptionally higher than that of 2016 allocation with a total allocation of

N48.2billion as that of 2018 was higher than 2017 allocation with a total of N10.62billion.

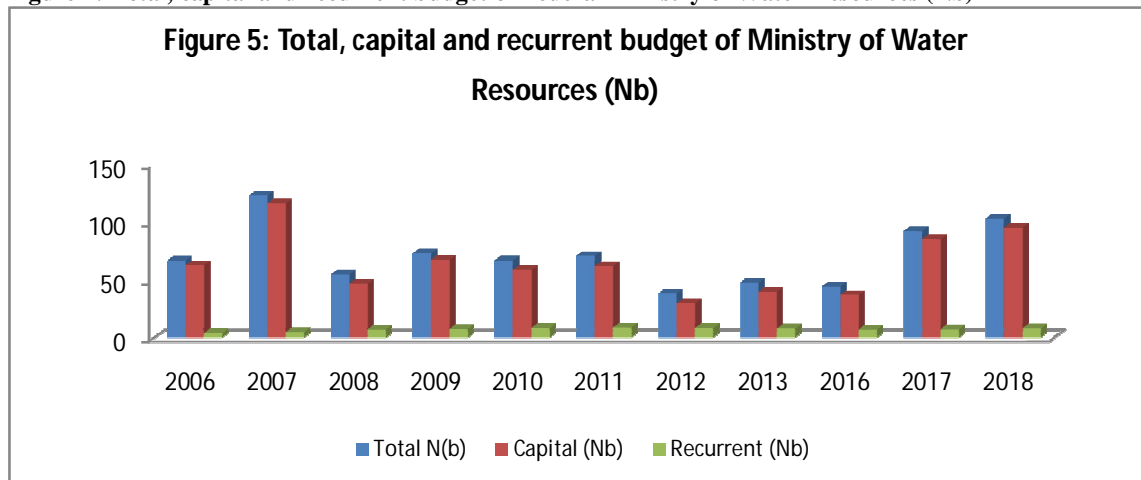
Meanwhile, it is vital to say that the average capital allocation to the ministry as a percentage of the total ministry budget within the period 2016-2017 is 89.3% as that of 2017-2018 period stood at 92.3%. The ministry’s capital allocation over the years did not go below 80% of the total budget for the ministry for the period. Therefore, there is increase in the total allocation to the ministry in the year 2018, and even the same trend was obtainable even in the year 2017 in the capital expenditure, but reduction in recurrent allocation much is expected in terms of serious turn around activities of the ministry and its agencies.

Table 5: Total, capital and recurrent allocation of the ministry of Water Resources (percentage and absolute), 2006-2013 and budget proposal with percentages 2016-2018

	2006	2007	2008	2009	2010	2011	2012	2013	2016	2017	2018
Total N(b)	66.8	123.09	54.7	73.10	67.00	70.88	38.24	47.81	44.21	92.44	103.06
Capital (Nb)	62.78	116.39	46.79	67.54	58.76	62.05	29.85	39.87	37.00	85.15	95.11
Recurrent (Nb)	4.02	4.9	7.19	7.53	8.29	8.83	8.38	7.93	7.21	7.30	7.94
Cap%Total (%)	93.98	94.56	85.54	92.39	87.70	87.54	78.06	83.39	83.70	89.30	92.2
Rec%Total(%)	6.02	3.98	13.14	10.30	12.37	12.46	21.91	16.59	16.31	7.89	7.71

Source: Budget office of the Federation www.budgetoffice.gov.ng, <http://placng.org/wp/wp-content/uploads/2016/12/2017/2018-Budget-Proposal-to-NASS> and author’s computation

Figure 1: Total, capital and recurrent budget of Federal Ministry of Water Resources (Nb)

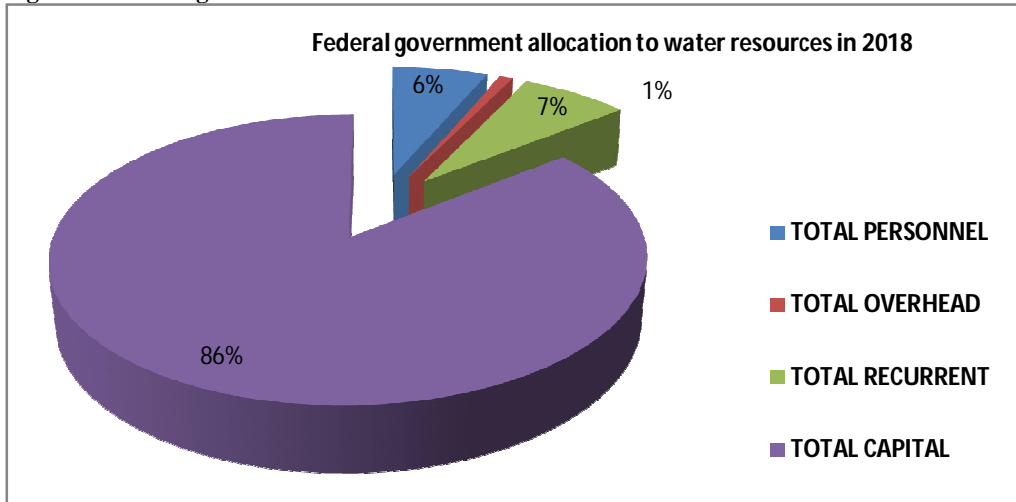


Source: Authors’ computation from 2018 budget proposal to NASSS

The percentage of capital vote to the total allocation for the ministry has consistently declined between 2006 and 2013 while a corresponding up and down movement was experienced in recurrent votes for the same period. From analysis on the ministry, the percentage decline in the share of capital allocation of the ministry between 2006 and 2013 is about 10% while the same 10% was gained as increase in the recurrent votes. Meanwhile, for the period of 2016

and 2017, there was an increase in the capital allocation as there was also decline in recurrent vote. Growth in recurrent spending of the ministry witnessed its greatest leap between 2011 and 2012 when it grew by about 9.45% from 12.46% in 2011 to 21.91% in 2012, then reduced in 2013 to 16.59%, again reduced to 16.31% in 2016 but more reduction to 7.89% in 2017 and even 7.71% in 2018.

Figure 2: Federal government allocation to water resources in 2018



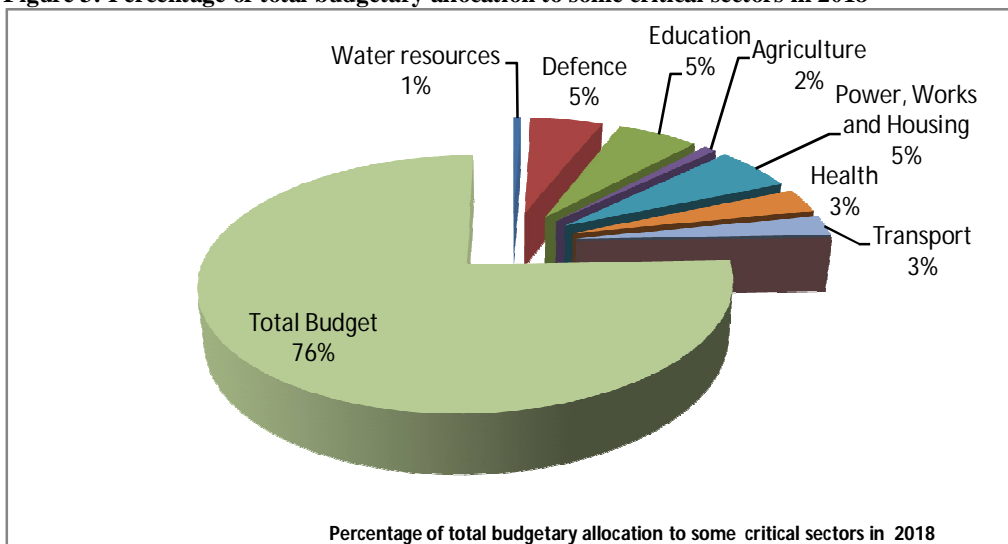
Source: Authors' computation from 2018 budget proposal to NASSS

It is vital to state that characteristics feature of budget in Nigeria is the structural and persistent separation of the recurrent expenditure from the capital budget. This was founded in the wide-spread perspective that an important role of government capital expenditure is to stimulate developmental projects. As a result, it becomes imperative that governments systematically seek to minimize items on the recurrent expenditures which is generally a welcome development. Thus, surpluses generated from the recurrent expenditures are sometimes transferred to the capital budget for

developmental projects. From analysis, the 2018 budget allocation to Water Resources disaggregated into total personnel, overheads, recurrent and capital (developmental) expenditures. Evidence from the figure reveals that more than 80 percent of the allocation goes to capital expenditure with 7% went to recurrent and 6% to personnel costs but overheads expenditure got 1%. It is also worthy to note that the same trend of higher capital over recurrent, overheads and personnel expenditures has been maintained for many years since 2016 till date.

6.0 ALLOCATION TO MAJOR SECTORS IN 2018 FEDERAL GOVERNMENT BUDGET

Figure 3: Percentage of total budgetary allocation to some critical sectors in 2018



Source: Authors' computation from different years of budget proposal to NASSS

An analysis of 2018 budget for some critical sectors of the economy reveals that on average, Ministry of Power, Works and Housing; Ministry of Transport;

Ministry of Defence; Ministry of Water Resources; Ministry of Education; Ministry of Health and Ministry of Agriculture in that order were the key

infrastructural sectors for the budget 2018. It is quite disheartening to note that on average for the period 2018, only water resources was allocated 1% budget among the key infrastructural sectors. This situation to an extent contradicts the philosophy and thrust behind the 2018 budget as water resources sector is among the major sector that help other ministries like agriculture, health and even education to achieve their optimal objectives.

7.0 SUGGESTIONS TOWARD MAKING WATER RESOURCES ACCESSIBLE AND EFFICIENCY FOR SUSTAINABLE FOOD PRODUCTION

Nigeria is endowed with vast water resources, but its unequal distribution and high cost of development are responsible for scarcity in many states. Despite the endowment, “natural phenomena such as erratic rainfall patterns as well as human factors such as population growth, competition over water, increasingly threaten the sustainability of resource use, and hence the livelihoods of poor people” especially as it regards to food sustainability. It is widely recognized that a radical change in approach is required to adequately address these threats so that available water resources do not become a constraint to sustainable food production but serve as an instrument for accomplishing NWSSP’s development agenda.

From this research study, both those as touching comparisons on Nigeria water resources sector and others sectors; the clear trend is that Nigeria’s gross expenditure on water has been significant notwithstanding how minimal it might be. And in comparison with some years and even 2018, it is obvious that what is needed is a demand for more access to water for the money that has been spent already and not just more money to increased access. This is not to say that the country has been able to spend sufficiently enough to achieve total access to water, but the fact remains that as far as expenditure over the years is concerned, the country is yet to gain her much improvement in access as corresponds to size of investment.

One very critical issue confronting efforts to provide access to improved water sources include cost and health considerations. The majority of the population are still not connected to publicly subsidise piped water notwithstanding policy issues put in place by various levels of government. Those who are not connected must buy water from vendors, usually at very high prices. Health issues include the need to ensure adequate standards of water quality for both piped water and vendor water.

Though the operations in the water sector of the country seems to guide by the National Water Supply and Sanitation Policy (NWSSP), which was approved by the federal government with aim is to

improve access to water there are many other fragmented and uncoordinated water resources development policies and programmes in the country. There are actually about many more of such policies and programmes both approved and unapproved at both levels of government and they need to be well coordinated. Their coordination can be guided by these:-

- ✚ Devolution of responsibility for water supply infrastructure to state level implementing agencies of the federal government. The continued huge spending of the headquarters of the water resources ministry will not allow for better accountability and smother execution of investment projects in the sector. The implementing agencies of the ministry like the RBDAs should be given greater spending powers for projects in their domain as this will result into more water been accessed by the greater citizenry of the country thereby leading to sustainable food production.
- ✚ Better targeting of water sector investment on distribution facilities. The huge drop in the size of people accessing improved water sources through piped means to the premises clearly tells the story of the decay in the quality, size and capacity of water distribution facilities round the country. More investment should be made to improve the capacity and quality of our distribution infrastructure in the country. Particular attention should be placed on maintenance of already existing facilities rather than embarking on new constructions. This will help the populaces to have quality water and will also reduce cost on the parts of the government especially now the country is recovering from her economic recession.
- ✚ Better prioritization of expenditures in the sector. There are certainly many budgeted items in the regular annual federal government allocations that don’t contribute anything to the realization of the objectives of better access to improved water sources for the country.
- ✚ Better coordination of the activities of the tiers of government in the sector. Since the objective and principal beneficiaries of the investments of all the tiers of government are the same there is need to coordinate spending and investment operations of these tiers with a view to avoiding conflicts and duplications in responsibilities and projects

especially in water sector that help for massive food production.

- ✚ Harmonize all policies, plans and programmes related to the water sector. There is need to reconcile the contents and provisions of the various policy documents and plans to suit the current challenge in the sector both on the supply and demand sides by all tiers of the government .
- ✚ Developing integrated best practices programmes and manuals of management, operation and maintenance for Urban, Small Town and Rural water and sanitation supply schemes and services. This initiative considering the perceived increasing significance of individual private providers of on-site water facilities in the country.
- ✚ Deliberate effort must be made at ensuring that adequate and reliable data on the situation of the sector is provided. Progress or challenges facing the sector can hardly be ascertained without a deliberate effort at collecting data relevant to the sector. More attention should be placed on getting up-to-date data and information on the sector in order to more efficiently target spending and policies or programmes in the sector.
- ✚ Better capital budget implementation. The quality of project management staff in the ministry needs to be improved so there can be better budget implementation in the budget allocation. This implementation can be better with improved and well trained staff at M&E unit of the ministry and even budget office of the federation.

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