

PLANNING AND EXECUTION OF THE EUROPEAN UNION-ASSISTED WATER SUPPLY AND SANITATION PROJECTS IN IMO STATE, NIGERIA: CONSTRAINTS, LESSONS AND SUCCESS FACTORS

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ABSTRACT

This paper analyses constraints, lessons and success factors, in the planning and execution of the European-Union Micro-Projects Programme on water supply in Imo State, Nigeria. The questionnaire was employed for data collection. From the results, the constraints indicated by the respondents are inadequate community involvement, sourcing of funds, reliance on top-down approach to water project delivery, inadequate distribution of sufficient surface/ground water, inappropriate cost recovery system, irregular functioning of installed facility, and inadequate local built-up capacity. It was also observed that the lessons indicated by the respondents are community involvement process, project delivery process, knowledge of project outcomes/benefits, operation and maintenance of projects, sense of project ownership, process of building capacity, and new project identification. Whereas the success factors indicated by the respondents are; inclusiveness of all socioeconomic groups, equitable sharing of costs and responsibility, stimulated timely delivery of project services, sustained achievement of project objectives, guaranteed equitable distribution of project benefits to all socioeconomic groups, promoted sense of project ownership, and stimulated new project identification. The paper concludes that the above factors provide feedback on the effectiveness of the Eu-Mpp6 externally-funded projects and they also provide the basis for formulating strategies for improving development projects in the future.

Keywords: Constraints; water projects; European Union; planning

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1. INTRODUCTION

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In Nigeria, public water supply started early in the twentieth century in seven towns under the management of the lowest administrative level (Imo State Government, 2006). In 1950, maintenance of water supply schemes came under the Regional Governments. By 1966, State Water Boards/Corporations had begun to emerge. Today, all the 36 states of the federation and the Federal Capital Territory have Water Boards/Corporations or Public Utilities with their efforts being supplemented, in many cases, by the Local Governments. Federal Government got involved in the management of water resources in 1976 when the Ministry of Water Resources and the eleven River Basin Development Authorities (RBDAs) were created. The ministry's responsibilities are to: formulate national policies in the development and management of water resources in the country, coordinate the activities of the States in matters of water resources development and management as well as to act as a guarantor to States in matters of external borrowing to fund water projects. The RBDAs, on their part, are to provide bulk water primarily for irrigation (NEST, 1991). Shortly after in 1981, the United Nations Education Fund (UNICEF)-Assisted Programme in Rural Water Supply and Sanitation (RUWATSSAN) was initiated and implemented. As part of the continued efforts to improve the water supply and sanitation, the Federal Government of Nigeria, in January 2000, launched its National Policy on Water Supply and Sanitation. The main objective of the policy is to provide sufficient potable water and adequate sanitation to all Nigerians in an affordable and sustainable manner. The policy strategy emphasizes participatory investment by all actors: the government, the private sector and the beneficiary community in the provision of water and sanitation (Federal Republic of Nigeria, 2000).

With the creation of old Imo State in 1976, the defunct Imo State Water Corporation inherited forty-five water schemes from the East Central State Water Cooperation with an average production capacity of barely 20 litres daily per person (Imo State Government, 2006). In recognition of the inadequacy of water supply at that time, a master plan for Regional Water schemes for seven urban areas was proposed. Amongst the seven urban areas then, only three (Owerri, Orlu and Okigwe) are in the present Imo State. Of these three, only Owerri Regional Water scheme was successfully realized and commissioned in 1986. Though the scheme, not only covered communities within 10 kilometre radius from the centre of Owerri urban, it also operated at reduced installed capacity from the original master plan (Okereke et al, 2000). To date, Imo State Water Board manages 5 major water schemes namely; Owerri Regional Water Scheme, Orlu Township/Eluama Water Scheme, Oguta/Mgbidi Water Scheme, Mbaise/Obowo Water Scheme and Okigwe Urban Water Scheme. Other agencies that have made efforts in the water supply and sanitation sector in the State are; the State Ministry of Public Utilities and Rural Development (MPURD), Imo State Water Development Agency (IWADA) and the United Nations Education Fund (UNICEF). Between 2000 and 2005, the State Ministry of Public Utilities and Rural Development sank 60 boreholes while the Imo State Development Agency and the United Nations Education Fund, respectively, sank 25 and 123 boreholes (Okereke, et al 2000; Okereke, 2000; Imo State

Government, 2006). Further efforts in the State are the World Bank-Federal Government Water Rehabilitation Project launched in November 1992 (Okereke et al, 2000; Imo State Government, 2006) and the recent European Union-Assisted Micro Projects Programme (Eu-Mpp6) initiated in May 2003 (Federal Government of Nigeria-European Union, 2006; Imo State Government, 2006).

According to Tryon and Cookson (2000), project is the use of one or more resources (e.g. money, labour, material, and equipment) during a specified period for the purpose of producing some economic return or output at a later time. Chadenet and King (2007) viewed project as an optimum set of investment-oriented actions by means of which a defined combination of human and material resources is expected to cause a determined amount of economic and social development. Project therefore, involves the use of resources (e.g. money, labour, material and equipment) during a specified period to develop a facility for the production of goods and services over a longer period of time. In any project undertaking, according to Valadez and Bamberger (2007), is an input-output-effect relationship. Inputs are resources (financial, human and material) necessary to perform project activities with the expectation of producing outputs (goods and services) and achieving the effects of the project. Outputs are specific goods and services which the project is expected to produce from its inputs to achieve the effects. Effects are the outcomes of the use of the output (goods or services) of the project or expressions of the results actually produced as a result of the project, which has been undertaken. Effects may be short-or long-term. Short-term effects usually begin to emerge during the implementation period of a project, while the long-term effects defined as the ultimate changes in the conditions of beneficiaries resulting from the project, emerge some years after project completion.

As observed by Okereke (2010), within three years of construction, most rural water projects faced one problem or the other resulting in less than 30 percent performance as against installed capacity, nearly all the water schemes from 10 years old were found to have collapsed, necessitating the construction of new ones. It is a well known fact that the planning of projects heavily rely on quantitative data which may not be available under certain circumstances. Furthermore, they depend on estimates and forecasts which are subject to human error. In addition, projects rely heavily on external advisers with little knowledge of the local environment under which projects will operate (Baldwin, 2009). Salmen (2006) also observed that local communities are rarely invited to play constructive roles in the project design. According to Ezeigbo (2005), Oyebande (2006), Onugba and Yaya (2008), Nwankwoala (2009), Okeke and Uzoh (2009), rural water and sanitation projects in Nigeria have proceeded inconsistently, suffered from poor co-ordination, poor maintenance culture, poor technical/institutional structure, multiple programmes, lack of data/information for planning, over bearing bureaucratic control by various supervising ministries, lack of professional inputs on projects, lack of community participation, inadequate funding, irregular disbursements of subventions, inappropriate infrastructures as well as lack of adequate quality monitoring and evaluation, lack of clear policy direction, lack of focus in terms of goals and objectives which results in the country's inability to achieve full coverage of the rural population with safe water and improved sanitation services. However, there is the

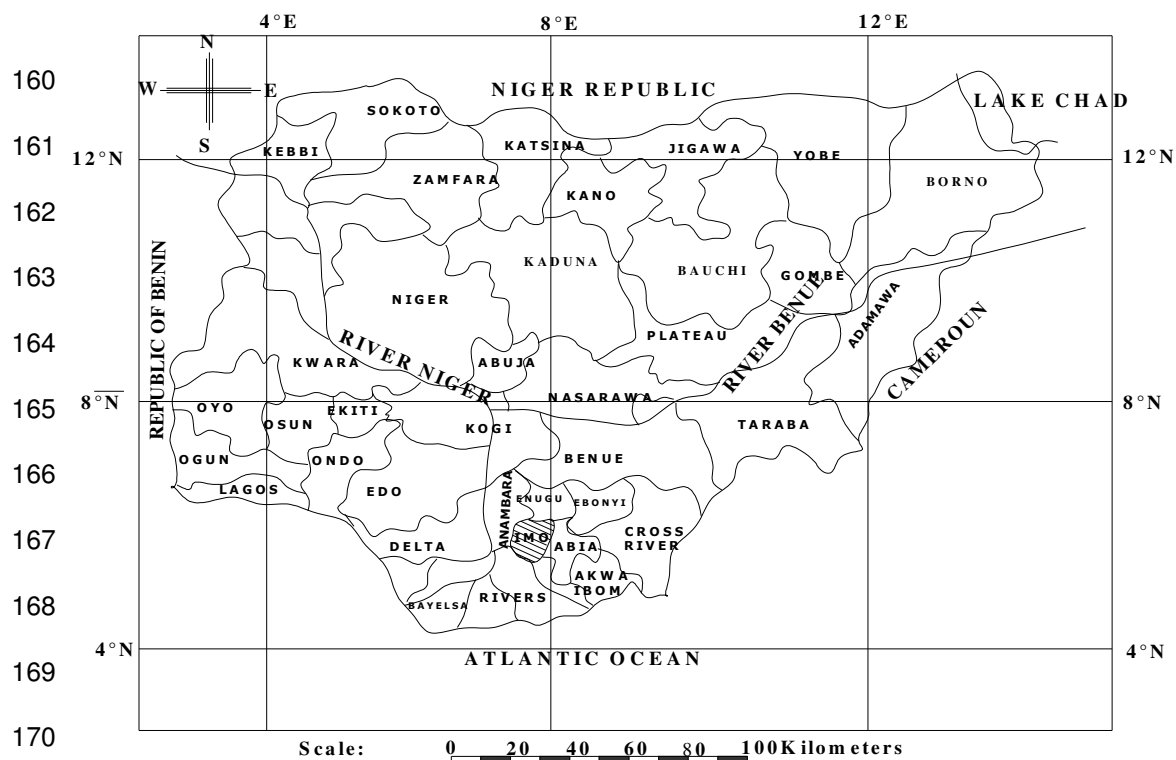
recently planned and executed Eu-Mpp6 water supply and sanitation projects in Imo State, Nigeria for which there may be constraints and lessons learnt or even the revelation of success factors for planning, executing and sustaining similar projects in the future. Thus, this study seeks answers to the following questions:

- a) What constraints featured in the planning and execution of the EU-MPP6 water supply and sanitation projects in Imo State?
- b) What lessons are learnt from planning and executing of the EU-MPP6 water supply and sanitation projects in Imo State?
- c) What success factors are revealed for planning, executing and sustaining similar projects in the future?

2. MATERIALS AND METHODS

2.1 The study area

The study area is Imo State, Nigeria. It lies between latitude 4° 45'N and 7°15' North and longitude 6° 50'E and 7° 25' E. It is bordered on the East by Abia State, on the West by Delta State and River Niger, on the North by Anambra State, and on the South by Rivers State. See Figures 1 and 2. The study area comprises an area of 5,289.48 square kilometers. The hydromorphic soil occupies 3,845 square kilometers (31 per cent) of the total land area while the alluvial soil occupies 1,066 square kilometers (8 per cent) of the total land area (Federal Ministry of Mines and Power, 2001; NEST, 1991). It has a total population of 3,003,653 inhabitants (National Population Census Figures, 2006). It contains 27 Local Government Areas and 306 autonomous communities and has a population density of 568 people per square kilometer.



LEGEND

International Boundaries

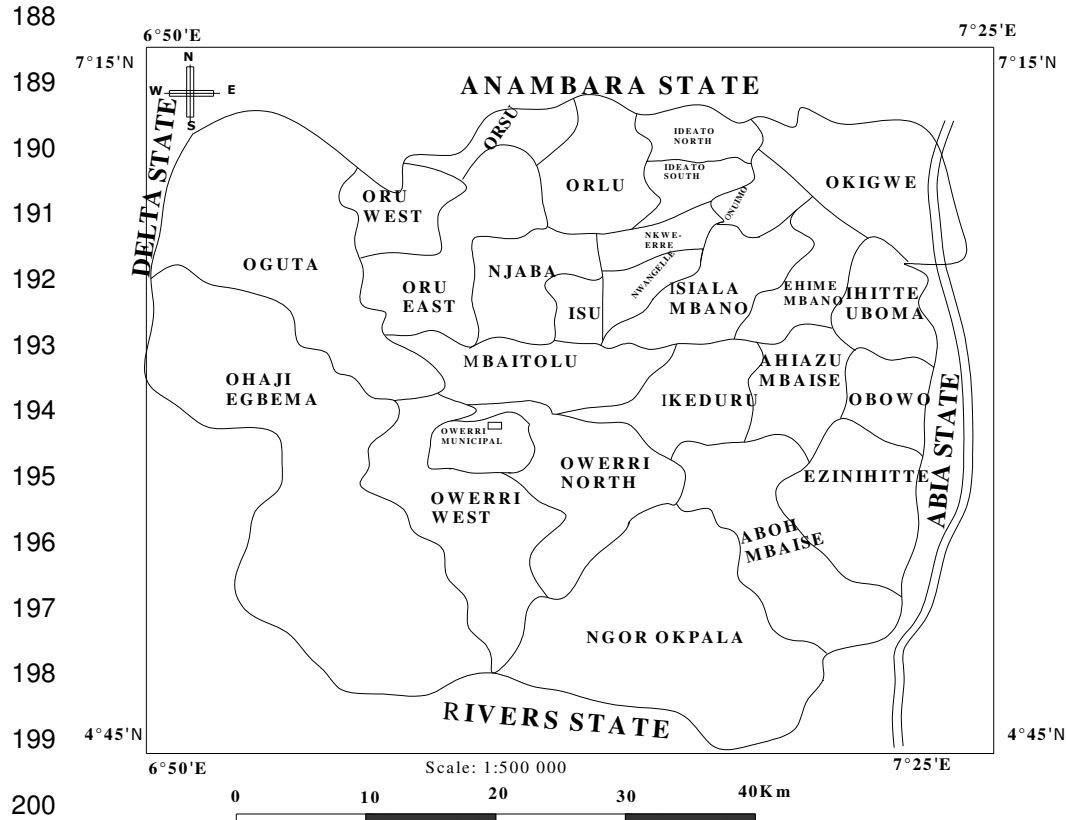
State Boundaries

River

Study Area

Source: www.googlemaps.com

Figure 1: MAP OF NIGERIA SHOWING THE STUDY AREA IN ITS NATIONAL CONTEXT



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State Boundary

L.G.A. Boundary

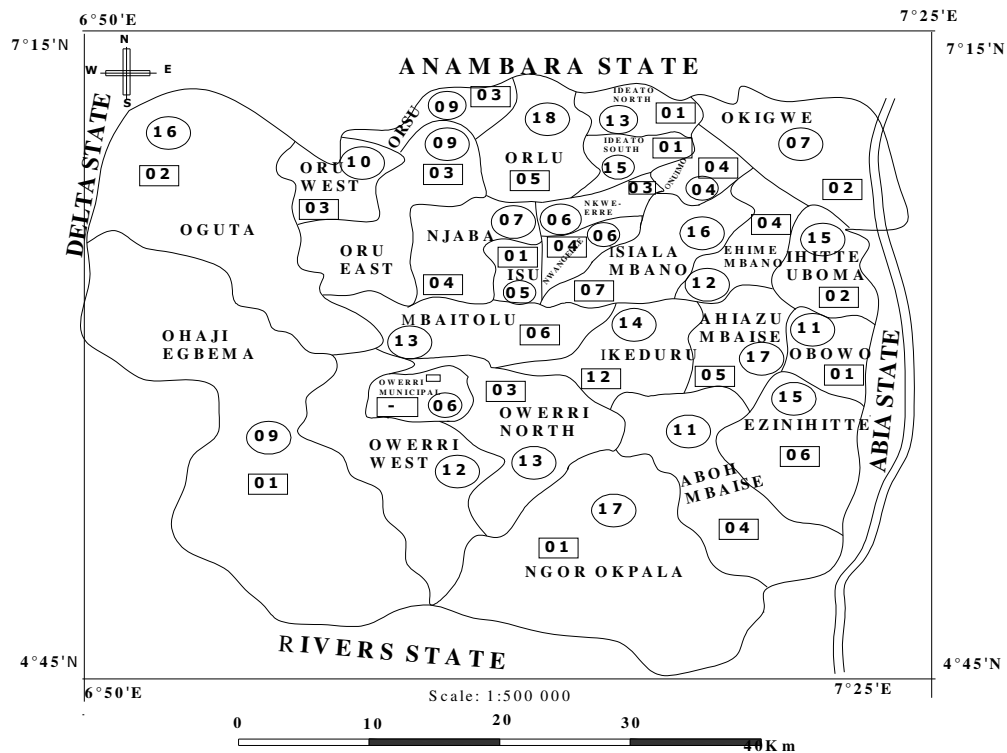
State Capital

Express Way

Source: www.googlemaps.com

Figure 1.2: MAP OF IMO STATE SHOWING THE LOCAL GOVERNMENT AREAS

In the study area, rainfall generally commences in March or April. The peak of the rainy season is in July and September, with a short, slightly drier spell called the "August break" or little dry season, occurring in the intervening period. The spell is usually associated with the presence of temperature inversion at an altitude of 1,500 to 2000 meters, lasting for 2 to 3 weeks, and characterized by intermittent rainfall rather than the regular tropical downpour. The rainfall in this period is consequently lower than in June, July and September. Mean annual rainfall ranges from 2,000-2,500 millimetres/year, while the mean annual temperature over most of the study area is about 27⁰ C. The greater part of the study area is flat and low-lying. The main streams draining the state are Imo, Otamiri, Njaba and Urasi rivers. Four main geological regions can be distinguished in the study area. These are the Niger River Plain and Delta, the Coastal Plain, the Plateau Escarpment, and the Cross River Basin. In the study area there is a heavy reliance on both surface water and ground water. Between 2003 and 2008, a total of 88 EU-MPP6 water borehole projects were initiated and completed in the state as shown in Figure 3.



LEGEND

State Boundary
L.G.A. Boundary

Capital

Express W ay

Number of Project in Local Government Areas.....

Number of Communities in Local Government Areas.....

Source: www.googlemaps.com and Author's Survey, July- September, 2011

Figure1.2: MAP OF IMO STATE SHOWING THE LOCAL GOVERNMENT AREAS

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268 **2.2 Data collection and data analysis**

269 The survey method was employed in this study to select the target population and to
270 get the desired responses on the Eu-Mpp6 water supply and sanitation projects.
271 The research population included households where the Eu-Mpp6 water supply and
272 sanitation projects were initiated and completed, members of staff of the Eu-Mpp6
273 water supply and sanitation projects; and the Eu-Mpp6 project managers. Data for
274 the study were collected from the primary sources.

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276 There are 301 communities in 27 Local Government Areas of Imo State. Between
277 2003 and 2008, a total of 88 Eu-Mpp6 water supply and sanitation projects were
278 executed in various communities across the 27 Local Government Areas of Imo
279 State (Federal Government of Nigeria-European Union, 2006). The study adopted a
280 multi-stage stratified random sampling approach in selecting subjects for the study.
281 The 27 Local Government Areas are taken as clusters. The 27 Local Government
282 Areas form the first sample frame from which 44 percent of the Local Government
283 Areas, representing 12 Local Government Areas of Imo State were randomly
284 selected. In each of the randomly selected 12 Local Government Areas,
285 communities where the Eu-Mpp6 water supply and sanitation projects were initiated
286 and completed were identified. The list of these communities formed the second
287 sample frame from which 50 percent of the communities, representing 29
288 communities were randomly selected.

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290 The technique of the random sampling method employed is the fish-bowl technique
291 (Denga and Ali, 1998). The names of the 27 Local Government Areas are written on
292 pieces of paper, rolled into paper balls and mixed thoroughly in a container from
293 where the 44 percent of the Local Government Areas are blindly drawn. The same
294 procedure was employed in selecting the 50 percent of the communities. In terms of
295 the selection of the respondents, the randomly selected 29 communities served as
296 the third sampling frame from which stratified sampling method was employed to
297 draw out 20 households from each of the communities. Stratified sampling method
298 was adopted to take care of the heterogeneous and the amorphous nature of the
299 population of study. In terms of geographical spread, the study covered randomly
300 selected 580 households from randomly selected 29 communities which benefited
301 from the Eu-Mpp6 water supply and sanitation intervention in of Imo State.

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303 Two sets of questionnaire were designed and utilized. The first set of questionnaire
304 was designed for households in the study communities. The second set was
305 designed for key staff of the European Union Micro Projects Program. The first set
306 of questionnaire contained question items relating to socio-economic characteristics
307 of the households. The questionnaire also contained question items relating to the
308 involvement of the communities in the planning and execution of the Eu-Mpp6 water
309 supply and sanitation projects, constraints associated with the planning and
310 execution of the projects, lessons learnt in planning and executing the projects in
311 the communities, as well as the success factors attributed to the process of planning
312 and executing the projects. The second set of questionnaire contained question
313 items relating to project rules of the Eu-Mpp6 water supply and sanitation projects.
314 The study was conducted from 2005 to 2011. This period covered the gestation and

the manifestation period of the intervention (the project). Descriptive statistics such as frequency distribution, percentages, category scores and rank scores were used to analyze the data from the field survey.

3. RESULTS AND DISCUSSION

3.1 Constraints in the Planning and Execution of the Eu-Mpp6 Water Supply and Sanitation Projects

The respondents were asked to indicate the constraints which featured in the planning and execution of the Eu-Mpp6 water supply and sanitation project in the communities. The constraints indicated by the respondents were inadequate community involvement, sourcing of funds, reliance on top-down approach to water project delivery, inadequate distribution of sufficient surface/ground water, inadequate consensus building, inappropriate cost recovery system, irregular functioning of installed facility, inadequate local built-up capacity, and lack of project maintenance structure. See Table 1.

From the Table, 74.7 percent of the respondents rate inadequate community involvement as a high constraint, 16.6 percent of the respondents rates it as an average constraint, while 8.8 percent of the respondents rate it as a low constraint. On inadequate funding as a constraint, 80.3 percent of the respondents indicates high rating, 8 percent indicates average rating, while 11.7 percent of the respondents rates inadequate funding as a low constraint. Responses of respondents on high rating with respect to reliance on top-down approach to water project delivery account for 26 percent, responses of respondents on average rating account for 63.5 percent while 10.5 percent of the respondents indicates low rating for reliance on top-down approach to water project delivery. On the inadequate distribution of sufficient surface/ground water, 19.8 percent of the respondents indicates high rating, 64.7 percent indicates average rating while 12.5 percent of the respondents rates inadequate distribution of sufficient surface/ground water as a low constraint. Responses of respondents on high rating with respect to inadequate consensus building account for 79 percent, responses of respondents on average rating accounted for 16.4 percent while 4.6 percent of the respondents rates inadequate consensus building as a low constraint. On inappropriate cost recovery system, 43.7 percent of the respondents indicates high rating, 21 percent indicated average rating while 35.3 percent of the respondents indicates low rating constraint for inappropriate cost recovery system. Responses of respondents on high rating with respect to irregular functioning of installed facility accounts for 71.7 percent, responses of respondents on average rating of its effectiveness account for 14.5 percent, while 13.8 percent of the respondents indicates irregular functioning of installed facility as a low constraint. On inadequate local built-up capacity, 76.7 percent of the respondents indicated high rating, 16.6 percent indicates average rating, while 6.7 percent of the respondents indicates inadequate local built-up capacity as a low constraint. Responses of respondents on high rating with respect to lack of project maintenance structure account for 77.6 percent, responses of respondents on average rating account for 16.9 percent while, 5.5 percent of the respondents indicates lack of project maintenance structure as a low constraint.

Generally, for the overall average percentage responses on constraints to all the factors in the planning and execution of the EU-MPP6 water supply and sanitation projects, responses to high constraints account for 61percent, responses to average constraints account for the 27 percent while responses to low constraints account for 12 percent. From the foregoing, the planning and execution of the Eu-Mpp6 water supply and sanitation projects was constrained by the factors of inadequate community involvement, sourcing of funds, irregular functioning of installed facility, inadequate local built-up capacity, and lack of project maintenance structure. The average 61 percent responses on high constraints of these factors indicate their importance in the planning and execution of the water supply and sanitation projects. This agrees with the report of Bamberger (2004; 2007) that the involvement of beneficiary population in the planning and execution of water supply and sanitation projects is a necessity which provides a dimension which goes beyond project execution, access, benefit sharing, smoother flows of project services, and minimized costs and delays to the ultimate goal of guaranteeing project effectiveness and sustainability.

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TABLE 1: Constraints in the Planning and Execution of the Eu-Mpp6 Water Supply and Sanitation Projects

CONSTRAINTS	PERCENTAGE RESPONSE		
	HIGH	AVERAGE	LOW
Inadequate Community Involvement	74.4	16.8	8.8
Inadequate Funding	80.3	8	11.7
Reliance on Top-Down Water Project Delivery	26	63.5	10.5
Inadequate Distribution of Sufficient Surface/ Groundwater	19.8	67.7	12.5
Inadequate Consensus Building	79	16.4	4.6
Inappropriate Cost Recovery System	43.7	21	35.3
Irregular Functioning of Installed Facility	71.7	14.5	13.8
Inadequate Local Built-Up Capacity	76.7	16.6	6.7
Lack of Project Maintenance Maintenance	77.6	16.9	5.5

	Overall Average Percentage Response	61	27	12
383	Number of Sampled Household =580			
384	Source: Field Survey, July-September, 2011			
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387	3.2 Lessons from the Planning and Execution of the Eu-Mpp6 Water Supply and			
388	Sanitation Projects			
389	The respondents were asked to indicate the lessons learnt in the planning and			
390	execution of the Eu-Mpp6 water supply and sanitation project in the communities.			
391	The lessons indicated by the respondents were community involvement process,			
392	consensus building process, process of sharing costs and responsibility, project			
393	delivery process, knowledge of project outcomes/benefits, operation and			
394	maintenance of projects, sense of project ownership, process of building capacity,			
395	and new project identification. The distribution of the responses of respondents is			
396	shown on Table 2.			
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398	From the Table, 28.6 percent of the respondents indicate high rating for involvement			
399	process as a lesson learnt in the planning and execution of the Eu-Mpp6 projects,			
400	60.4 percent of the respondents rates it as a lesson learnt on the average, while 11			
401	percent of the respondents rates the lesson on the involvement process low. On			
402	consensus building process lesson, 29.7 percent of the respondents indicates high			
403	rating on it, 59.1 percent of the respondents indicates average rating on the lesson,			
404	while 11.2 percent of the respondents rates the lesson on consensus building			
405	process low. Responses of respondents on high rating with respect to lesson on			
406	process of sharing costs and responsibility account for 78.1 percent, responses of			
407	respondents on average rating for the lesson account for 15.5 percent, while 6.4			
408	percent of the respondent rates the lesson on the process of sharing costs and			
409	responsibility low. 21.6 percent of the respondents indicate high rating for project			
410	delivery process as a lesson learnt in the planning and execution of the Eu-Mpp6			
411	projects, 11.9 percent of the respondents rates it as a lesson learnt on the			
412	average, while 66.5 percent of the respondents rates the lesson on the project			
413	delivery process low. On the knowledge of project outcomes/benefits lesson, 51			
414	percent of the respondents indicates high rating on it, 35.4 percent of the			
415	respondents indicates average rating on the lesson, while 13.6 percent of the			
416	respondents rates the lesson on knowledge of project outcomes/benefits low.			
417	Responses of respondents on high rating with respect to lesson on operation and			
418	maintenance of projects account for 35.2 percent, responses of respondents on			
419	average rating for the lesson account for 36 percent, while 28.8 percent of the			
420	respondent rate the lesson on operation and maintenance of projects low. 21.6			
421	percent of the respondents indicate high rating for sense of project ownership as a			
422	lesson learnt in the planning and execution of the Eu-Mpp6 projects, 7 percent of			
423	the respondents rates it as a lesson learnt on the average, while 71.4 percent of			
424	the respondents rates the lesson on sense of project ownership low. On the process			
425	of building capacity lesson, 16.9 percent of the respondents indicates high rating on			
426	it, 33.6 percent of the respondents indicates average rating on the lesson, while			
427	49.5 percent of the respondents rates the lesson on process of building capacity			
428	low. Responses of respondents on high rating with respect to lesson on new project			
429	identification account for 3.1 percent, responses of respondents on average rating			

430 for the lesson account for 14 percent, while 82.9 percent of the respondent rates the
 431 lesson on new project identification low.

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433 Generally, for the overall average percentage responses on lessons learnt to all the
 434 factors in the planning and execution of the Eu-Mpp6 water supply and sanitation
 435 projects, responses to high account for 32 percent, responses to average account
 436 for the 30 percent while responses to low account for 38 percent. By implication,
 437 the planning and execution of the Eu-Mpp6 water supply and sanitation projects
 438 introduced a learning process approach where involvement process, consensus
 439 building process and process of sharing cost and responsibility played major roles.
 440 In other words the involvement of the communities in the planning and execution of
 441 the projects through consensus building and sharing of costs and responsibilities
 442 are activities connected to the achievement of the objectives of the Eu-Mpp6
 443 projects (Bamberger 2004; 2007).

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445 Table 2: Lessons from the Planning and Execution of the Eu-Mpp6 Water Supply
 446 and Sanitation Projects

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LESSONS	PERCENTAGE RESPONSE		
	HIGH	AVERAGE	LOW
Community Involvement	28.6	60.4	11
Consensus Building Process	29.7	59.1	11.2
Sharing of Cost and Responsibility	78.1	15.5	6.4
Project Delivery Process	21.6	11.9	66.5
Knowledge of Project Outcomes/Benefits	51	35.4	13.6
Operation/Maintenance of Projects	35.2	36	28.8
Sense of Project Ownership	21.6	7	71.4
Local Capacity Building Process	16.9	33.6	49.5
New Project Identification	3.1	14	82.9

Overall Average Percentage			
Response	32	30	38
Number of Sampled Household =580			
Source: Field Survey, July-September, 2011			

3.3 Success Factors in the Planning and Execution of the Eu-Mpp6 Water Supply and Sanitation Projects

The respondents were asked to indicate the success factors attributed to the planning and execution of the Eu-Mpp6 water supply and sanitation projects in the communities. The success factors indicated by the respondents were; involvement of all socioeconomic groups, equitable sharing of costs and responsibility, guaranteed built-up capacity, stimulated timely delivery of project services, sustained achievement of project objectives, guaranteed equitable distribution of project benefits to all socioeconomic groups, delivery of sustainable water supply and sanitation project, promoted sense of project ownership, and stimulated new project identification. The distribution of the responses of respondents is shown on Table 3.

From the Table, 30.4 percent of the respondents indicates high rating for involvement of all socio-economic groups as a success factor in the process of planning and executing the Eu-Mpp6 water supply and sanitation projects in the sampled communities, 40.3 percent of the respondents rates it as an average success factor in the projects while 29.3 percent of the respondents rates the factor low. On equitable sharing of costs and responsibility, 76.6 percent of the respondents indicates high rating on it as a success factor in the process of planning and executing the Eu-Mpp6 projects, 15.9 percent of the respondents indicates average rating on the factor, while 7.5 percent of the respondents rates the equitable sharing of cost and responsibility as a low success factor. Responses of respondents on high rating with respect to the guaranteed built-up capacity factor account for 19.3 percent, responses of respondents on average rating for the factor account for 33.6 percent, while 47.1 percent of the respondents rate the factor of guaranteed built-up capacity low. 36.9 percent of the respondents indicate high rating for stimulated timely delivery of project services as a success factor in the process of planning and executing the Eu-Mpp6 projects, 42.4 percent of the respondents rate it as an average success factor in the projects, while 20.7 percent of the respondents rate the factor low. On sustained achievement of project objectives, 31.9 percent of the respondents indicate high rating on it as a success factor in the process of planning and executing the Eu-Mpp6 projects, 46.2 percent of the respondents indicate average rating on the factor, while 21.9 percent of the respondents rate the sustained achievement of project objectives as a low success factor. Responses of respondents on high rating with respect to guaranteed equitable distribution of project benefits to all socio-economic groups factor account for 19.5 percent, responses of respondents on average rating for the factor account for 42.8 percent, while 37.7 percent of the respondents rate the factor of guaranteed equitable distribution of project benefits to all socio-economic groups low. 31.4 percent of the respondents indicate high rating for delivery of sustainable water

supply and sanitation projects as a success factor in the process of planning and executing the Eu-Mpp6 projects, 39.6 percent of the respondents rate it as an average success factor in the projects, while 29 percent of the respondents rate the factor low. On promoted sense of project ownership, 3.7 percent of the respondents indicate high rating on it as a success factor in the process of planning and executing the Eu-Mpp6 projects, 11 percent of the respondents indicate average rating on the factor, while 85.3 percent of the respondents rated the promoted sense of project ownership as a low success factor. Responses of respondents on high rating with respect to stimulated new project identification factor account for 2.4 percent, responses of respondents on average rating for the factor account for 65.7 percent, while 31.9 percent of the respondents rate the factor of stimulated new project identification low.

Generally, for the overall average percentage responses on success factors in the planning and execution of the Eu-Mpp6 water supply and sanitation projects, responses to high account for 28 percent, responses to average account for the 38 percent while responses to low account for 34 percent. From the foregoing, equitable sharing of cost and responsibility with a high response rate of 76.6 percent is the most preponderant factor in the success of the project. This is followed by the involvement of all socioeconomic groups, guaranteed built-up capacity, stimulated timely delivery of project services, sustained achievement of project objectives, guaranteed equitable distribution of project benefits to all socio-economic groups and delivery of sustainable water supply and sanitation project. This in turn promoted the sense of project ownership and stimulated new project identification. Invariably, the sharing of costs and responsibilities is a strong success factor in the planning and execution of the Eu-Mpp6 projects. More so, because of the averagely built-capacity of the communities as a result of the presence of projects, new people-oriented projects have emerged. In other words, the Eu-Mpp6 projects stimulated the communities in embarking on new projects with full sense of ownership.

Table 3: Success Factors in the Planning and Execution of the EU-MPP6 Water Supply and Sanitation Projects

SUCCESS FACTOR	PERCENTAGE RESPONSE		
	HIGH	AVERAGE	LOW
Inclusive of all Socioeconomic Groups	30.4	40.3	29.3
Equitable Sharing of Cost /Responsibility	76.6	15.9	7.5
Guaranteed Built-Up Capacity	19.3	33.6	47.1
Stimulated Timely Delivery of Project Services	36.9	42.4	20.7
Sustained Achievement of Project Objectives	31.9	46.2	21.9

Guaranteed Equitable Distribution of Project Benefits	19.5	42.8	37.7
Delivery of Sustainable Water And Sanitation Projects	31.4	39.6	29
Promoted Sense of Project Ownership	3.7	11	85.3
Stimulated New Project Identification	2.4	65.7	31.9
Overall Average Percentage Response	28	38	34

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Number of Sampled Household =580
Source: Field Survey, July-September, 2011

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4. CONCLUSION

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The constraints, lessons, and success factors provide the feedback on the effectiveness of the Eu-Mpp6 water projects. Before the intervention of the Eu-Mpp6 projects in Imo State, large numbers of communities have been without access to functional facilities which promote hygienic disposal of human waste. In addition, many communities witnessed incessant breakdown of water pumping machines and maintenance of such facilities by the implementing agencies was rarely done. At the household level, women and children were the first to suffer when systems break down as they spent much time every day in search of water. The attendant socio-economic effects of this condition loomed over many communities, as water remained hardly adequate to meet the ever-increasing demand for sanitation.

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However, the situation in Imo State in the aftermath of the Eu-Mpp6 water supply and sanitation projects reveals improvements. This is because results of the study imply that the planning and execution of the Eu-Mpp6 water supply and sanitation projects was characterized by flexible community-involvement approach, built-up capacities of the communities, strong sense of community ownership of the projects, efficiency in operation, functioning and maintenance of the project facilities, and the integration of community-based organizations.

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On the other hand the success factors indicated in this study provide the basis for formulating strategies for improving similar water and sanitation projects in the future. The community-involvement strategy and the built-up capacities of the communities create opportunities in funding and provision of the water supply and sanitation services to keep pace with the rapid growth in communities. In addition, the utilization of community-based organizations by the project further improves and facilitates collective and individual efforts in delivering sustainable water supply and sanitation projects and improved services in communities.

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Based on the planning and execution of these Eu-Mpp6 water projects, the operation, functioning and maintenance of the installed Eu-Mpp6 water supply and sanitation facilities in the benefitting communities will not be at great risk overtime,

564 because a practical, functional and holistic framework is imperative for an enduring
565 and sustainable water and sanitation future for rural people.

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570

571 **COMPETING INTERESTS**

572 There are no competing interests.

573

574 **AUTHORS' CONTRIBUTIONS**

575 This work was carried out in collaboration between both authors. Author Ezirim,
576 Onyekwere N. designed the study, performed the statistical analysis, and wrote the
577 first draft of the manuscript. Author Onyenechere, Emmanuella C. assisted in the
578 study design, supervised the analyses, reviewed the first draft of the manuscript and
579 helped with the revisions. Both authors read and approved the final manuscript.

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