

THE INFLUENCE OF DEVELOPMENT COMMUNICATION PARADIGMS ON SUSTAINABLE WATER SUPPLY IN LAGOS STATE

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Abstract

The global North has articulated a number of development communication paradigms to assist poorer countries in Africa, South America and Asia in terms of economic development. This followed the observed impact of the application of the Marshall Plan on the economic development of Western European countries destroyed during the Second World War. The major development paradigms are modernisation, dependency and structural economic adjustments. While the modernisation paradigm applies the top-down approach in communication with societies at the grassroots, dependency is that in which the economy of certain states is conditioned by the development of other economies on which the other states depend. On its part, the structural economic adjustment represents the neo-liberal and market-oriented development paradigm stimulated through the promotion of free markets, free trade, and the elimination of excessive government controls. This study explores the adoption of these paradigms in the development of water supply systems at Adiyon, Akute, Iju and Isashi communities in Ogun and Lagos States, from where raw water is pumped, treated, and distributed for consumption in Lagos State. It is anchored on two theories: the Participatory Communication Theory developed by Paulo Freire, and the Self-Reliance Theory, which owes its origins to the emergence of the United Nations' New International Economic Order (NIEO). A mixed methods design was adopted for the study, and this involved the quantitative technique of questionnaire administration and the qualitative technique of in-depth interviews with participants. The study found that the systems' developer adopted the pseudo-participation approach of consultation during the planning, thus inferring that it applied the top-down communication strategy. It recommends that a national development charter be enacted to compel water supply systems' developers or project donors to adopt bottom-up approaches, during the planning and execution of future development projects to enhance sustainability.

Keywords: *modernisation paradigm, dependency paradigm, structural adjustment paradigm, sustainable water supply, pseudo-participation approach, economic recovery.*

1. PARTICIPATORY DEVELOPMENT COMMUNICATION AND SUSTAINABLE WATER SUPPLY

Participatory development communication is a process through which stakeholders are brought together to identify and address problems associated with the development of their various communities. It is different from participation in development, which is defined by Srampickal (2006) as "an attempt at informing, creating awareness, educating, and enlightening the people so that they can better their lives in every way." The concept of 'development communication' was first articulated by Nora Quebral in a paper entitled "Development Communication in the Agricultural Context" that she presented at a symposium with the theme "In Search of Breakthroughs in Agricultural Development" at the College of Agriculture of the University of The Philippines, Los Banos, in 1971. In this paper, she sought to explain the process of transmitting information and new knowledge to residents of agricultural, and/or rural environments. Quebral (2012) notes that the initial definition of development communication at Los Banos was that it represented "the art and science of human communication applied to the speedy transformation of a country and the mass of its people from poverty to a dynamic state of economic growth that facilitates greater social equality and the larger fulfillment of the human potential."

However, nearly fifty years after its first definition, the term was redefined as “the science of human communication linked to the transitioning of communities from poverty in all its forms to a dynamic overall growth that fosters equity and the unfolding of individual potential” (Quebral, 2011). The new definition offers the realisation that development communication has progressively led to the transformation of rural communities and their people from all forms of poverty to overall economic growth. It also reinforces the desire for the much sought-after egalitarian society where equity is the watchword, as well as the enhancement of the greater human potential for the residents of such communities or societies. The change in definition is explained by the fact that the field of communication itself has experienced considerable changes.

On its part, sustainable water supply is considered a fundamental requirement for human existence. Over the ages, it has been analysed as one of the major factors that influenced human migrations and settlements. It is also one of the key resources that influence population density. For instance, human and animal settlements thrive in ecosystems with an abundant supply of water, and they migrate from arid and desert ecosystems with a lack of water supply. This explains why the United Nations General Assembly (UNGA) proclaimed at its 78th session on December 23, 2003, that the years 2005–2015 be marked as the International Decade for Action on Water for Life. The proclamation was to the effect that “the relevant United Nations bodies, specialised agencies, regional commissions, and other organisations of the United Nations system, deliver a coordinated response to make “Water for Life ‘a decade for action’ ” (WHO, 2005).

As a result, the World Health Organisation (WHO), in collaboration with the United Nations International Children’s Education Fund (UNICEF), strove to ensure that the target of the Millennium Development Goals (MDGs), which provided for access to safe and potable drinking water for all and the provision of appropriate sanitation to enable humanity to become free from diseases, was achieved. Moreover, by January 2015, the United Nations, at its annual *International Zaragoza Conference* in Rio de Janeiro, with the

theme “Water and Sustainable Development: From Vision to Action,” declared that by 2030, it plans to achieve universal and equitable access to safe and affordable drinking water for all. A report of the UN-Water Zaragoza conference (2015) recognises that water is not only at the heart of sustainable development but also a key determinant in all aspects of social, economic, and environmental development that should command a central focus of any framework for poverty eradication (UN.ORG, 2015). Goal 6 of the Sustainable Development Goals (SDGs) focuses on ensuring the availability and sustainable management of water and sanitation for all. Génevaux et al., (2017) observe that the goal consists of eight specific targets, including six on water and sanitation-related outcomes (targets 6.1 to 6.6), with the last two targets focusing on the implementation of outcomes (targets 6.a and b). Target 6 (b) states that the participation of local communities shall be supported and strengthened to improve water and sanitation management. Furthermore, the indicator (6.b.1) is concerned with established and operational policies and procedures for the participation of local communities in water and sanitation management.

2. DEVELOPMENT COMMUNICATION PARADIGMS

The question of how to assist poorer countries in Africa, South America, and Asia to catch up with countries in Europe and North America in terms of economic development became a pressing challenge after the Second World War. This was because of the observed impact of the application of the Marshall Plan on the economic development of the Western European countries destroyed during the Second World War. The Marshall Plan, also called the European Recovery Programme (ERP), was set up by the United States Government in 1947 to assist in the economic recovery of the European countries destroyed during the war. Nhema & Zinyama (2016) list three major development paradigms that have been identified in development literature since the 1950s and 1960s. These are modernisation, dependency and structural economic adjustments.

The modernisation paradigm applies a top-down approach in communication with societies at the grassroots and consigns them to a position of subservience in relationships with national and transnational communication powers. Anaeto & Solo-Anaeto (2010) describe it as the "fundamental proposition that people in traditional societies should adopt the characteristics of the modern societies found in Europe and America to modernise their social, political, and economic institutions." Oso (2002) aligns with this and explains that the modernisation approach stresses that developing underdeveloped societies has to be "externally induced" since the assumption in developed countries is that these underdeveloped countries lack the capacities and resources for their self-directed development.

According to him, the basic assumption of Western theorists and of their counterparts in the Third World is that "the development of societies requires that modern economic and social organisations replace traditional structures." In describing how modernisation as a theory is used to explain the encouragement of the 'traditional societies' to aspire to the level of development associated with the First World, Anatory (1996) argues that modernisation was not only concerned with how to bring about the change but also with the response to that change. Furthermore, Reyes (2001) observes that one of the main applications of the modernisation paradigm has taken place in the economic field, where it relates effectively to public policy decisions. He asserts that this perspective is anchored on Rostow's five-stage model of development, which are as following: the traditional society, the precondition for take-off, the take-off process, the drive to maturity, and a high mass consumption society.

The Rostowian perspective is interpreted to mean that if Third World countries are underdeveloped because of a lack of productive investments, the solution would naturally lie in the West providing aid to them in the form of capital, expertise, or technology. In Rostow's (1959) classical economic growth model, the traditional society is captured as one that evolved within limited production functions that, however, did not lack inventiveness and

innovations. What it supposedly lacked were the tools and the outlook toward making inventions in its physical environment or world. Most traditional societies engage in the production of food, which absorbs about 75 percent of the working population, while spending most of their resources or income on the consumption of non-productive or low productive activities. The second stage or preconditions for take-off are described by Rostow as creations in Western Europe that featured "characteristics such as the gradual evolution of modern science and the modern scientific attitude ... converging with the impulse to create new technology at certain strategic points." The essence of these discoveries, both within Europe and on other continents, was the extension of trade and colonies, from where they could compete for influence and advantages in trade. The "take-off" constitutes the third stage in Rostow's classification and consists of the achievement of rapid growth in some sectors, especially in those that apply modern techniques. This involved agricultural processing, import substitution industries, and the rapid expansion of industrial establishments.

The fourth stage is the drive to maturity, which is defined as "the period when a society has effectively applied the range of modern technology to the bulk of its resources." This is a period when the industrial processes are differentiated, with new sectors seeking to supplant the older ones. The age of high mass consumption is the last stage in the Rostowian classification. This stage is described as one where a society strives to provide increased security and welfare for its workers, thereby enabling the enhanced consumption of its products. Modernisation scholars, however, came under severe criticism because the paradigm was considered by many as an ethnocentric argument that sought to transfer the developmental patterns of Europe and America, and viewed development through unidirectional prisms. Bernstein (1971), for instance, rejects the modernisation notion on the ground that "empirical investigation has shown that there are traditional societies that, among others, have an achievement orientation in important areas of social life, just as ascription plays a major role in the organisation of modern societies." The

inference from Bernstein's view is that modern societies and traditional types share common motivations for development, yet they cannot develop at the same pace.

The second paradigm of development, identified as dependency, is considered a direct challenge to modernisation. This paradigm of development first appeared in the writings of Baran in 1957, but became popularised by Raul Prebisch, Director of the United Nations Economic Commission for Latin America in 1971, following his concerns that the economic growth of the industrialised countries, described as the 'core' did not translate into meaningful growth in the poorer countries that he identified as the 'periphery.' Prebisch's studies found that while economic activities in richer countries led to wealth and improved conditions of life for nationals of such countries, these activities in turn inversely created difficulties in the economies of peripheral or poor countries. Dos Santos (1970) is of the view that dependency is a "situation in which the economy of certain states is conditioned by the development of other economies on which the other states depend."

This implies an initial economic relationship or interdependence between dominant states or countries and that peripheral states' resources were used to develop, with such peripheral states being persuaded to rely on the growing dominant states. In most cases, the economies of the dominant or core states expanded or became self-sustaining, whereas the economies of the peripheral states are experiencing difficulties and continue to rely on the dominant states. Apart from the issue of a common definition of the dependency paradigm, there are common features that are shared by several definitions. The first is that dependency is concerned with the global system, where two sets of states are involved. These are classified as dominant or dependent, in the center or on the periphery, and as metropolitan or satellite (Ferraro, 1996). While the dominant or industrialised states operate under the umbrella of the Organisation for Economic Cooperation and Development (OECD), the dependent or satellite states are found in Latin America, Africa, and Asia and are labelled either as Least Developed Countries (LDCs) or as countries of the Global South.

Another issue that appears to be common to the concept of dependency is that economic discourse in the field is often made along global lines. This means that economic analysis often takes off from a global perspective and trickles down to the national level. Therefore, when viewed from this perspective, the assertion made by some economists that poor countries can catch up with rich ones if they adopt correct or appropriate policies appears to have ignored the global perspectives and tendencies that dominate discourse in this paradigm. Ake (2002) aligns with this notion as he posits that "an economy is dependent to the extent that its position and relations to other economies in the international system and the articulation of its internal structure make it incapable of auto-centric development."

The third development paradigm is structural economic adjustment, and is often described as the neo-liberal and market-oriented development paradigm. This developmental path was promoted by the United Kingdom and the United States of America in the 1980s. According to Nhema and Zinyama (2016), the main argument of the neo-liberals is that economic growth and efficiency in the market can only be stimulated through the promotion of free markets, free trade, and the elimination of excessive government controls. The former British Prime Minister, Margaret Thatcher, adopted a principle known as 'There Is No Alternative' (TINA), which suggested that the only path leading to greater quality of life and freedom for citizens of the less developed countries was the Western European and American monetarist reform path. Both the International Monetary Fund (IMF) and the World Bank, commonly referred to as the International Financial Institutions (IFIs), bought into this neo-liberal paradigm and sought to restructure the economies of poorer countries by suggesting that they liberalise and encourage the greater openness of their markets to international trade. One of the outcomes of the neoliberal paradigm of development was the introduction of the Structural Adjustment Programme by the International Monetary Fund for the enactment of tighter fiscal control and liberal economic reforms in poorer countries. Sachs (2005) observes that the structural adjustment programme was

ushered in by the former United States President, Ronald Reagan, and British Prime Minister, Margaret Thatcher, to address maladies assumed to underlie all economic ills. These are poor governance, excessive government intervention in the markets, excessive government spending, and too much state ownership of resources. He argues that the philosophy of the programme was based on a simplistic view of the challenge of poverty, with the rich countries telling the poor: "Poverty is your own fault. Be like us (or what we imagine ourselves to be - free market oriented, entrepreneurial, and fiscally responsible) and you, too, can enjoy the riches of private sector-led economic development."

It is noteworthy that communication was at the heart of these theoretical paradigms, as they focused on the diffusion processes where individuals were encouraged to move from traditional lifestyles to the rapidly changing western lifestyles. Servaes (1987), for instance, explains that mass media's role in the modernisation paradigm was to "stimulate, in direct and indirect ways, mobility and economic development," even as they serve "as 'motivators' and 'movers' for change and modernisation." In the dependency perspective, however, the Third World or dependent countries alleged that the assumption that mass media would serve as change agents proved to be farcical. Hlatshwayo (1992) argues that Africa was deluded into thinking that the introduction of satellite and electronic media would contribute to national development, but that this turned out to be wishful thinking. Instead, he asserts that Africa has become the periphery of the USA and the West, given the fact that it relies on them for the importation of communication technology, among other issues. Communication also played a significant role in the structural adjustment paradigm. As Chinsinga (2001) observes, communication approaches such as advocacy, social mobilisation and other communication programme activities were embarked upon to educate people about the objectives of the structural adjustment programme. Communication was used by beneficiaries or government agencies to deepen support for the structural adjustment policy. It was applied to identify priority issues such as support for

poverty reduction and even private sector development support.

3. THEORETICAL UNDERPINNINGS

This study is anchored on two theories, which are the Participatory Communication Theory and the Self-Reliance Theory. The beneficial effect of these theories is that they enable the researcher to understand and explain, with a high degree of accuracy, the concept of horizontal dialogue and local ownership of projects by the host communities, following the adoption of participatory development communication approaches.

Theory of Participatory Communication: The theory was developed by Paulo Freire in 1970 and emphasises dialogue or two-way communication as a means of providing consensus for sustainable action in development activities. Freire, in his classic work, *Pedagogy of the Oppressed* (1970), describes dialogue as an existential necessity, because of his reasoning that it is one of the ways that people use to achieve significance as human beings. Freire (1970) explains that for the dialogue to be able to transform the world, it must not be the privilege of a few people but a right which is available to everyone. Thus, participatory communication or dialogue is "not carried out by 'A' for 'B' or by 'A' about 'B,' but rather by 'A' with 'B,' mediated by the world, which impresses and challenges both parties, giving rise to views or opinions about it." Furthermore, Freire believes that such encounters should not represent "a gift or an imposition - bits of information to be deposited in the students' (or community stakeholders') heads - but rather an organized, systematized, and developed "re-presentation" to individuals of the things about which they want to learn more." Freire explains that the top-down and bottom-up models are the two major communication strategies that guide community development. The top-down, which is also called the 'banking style' of communication, amounts to depositing ideas or projects into other people or their environment for their consumption, without having respect for their views. Communication in the 'banking style' category

is observed to be such that it resists dialogue, while those in the bottom-up style, which is also described as the 'problem-posing' style, regard dialogue as indispensable to the act of knowing and have the capacity to unveil reality.

Self-Reliance Theory: The theory, developed in 1973 following the United Nations' desire to establish a New International Economic Order (NIEO), is associated with sustainable economic development, which Nwokoye (2009), describes as a developmental quality, that can be ascribed to a nation, a people, or a person. It simply means, being fully equipped and functional to provide an individual with life-sustaining materials. Oso (2002) is of the view that self-reliance represents the leading theory in the alternative development communication model that gives power or independence and autonomy to rural dwellers to determine their affairs. He opines that through self-reliance, "rural dwellers could own a radio station, they make their own programmes based on their own daily experiences and interests." This means that, with its application, community stakeholders can make maximum use of available resources in their environments with little or no external support. Anaeto and Solo-Anaeto (2010) agree with Oso and remark that the theory of self-reliance provides a platform for community stakeholders to "define their development problems, set goals, devise strategies, and make decisions independently and in accordance with their own social and cultural needs."

White (1981) defines the application of self-reliance along three distinct lines. These are: self-reliance in ideas and initiatives ('endogenous'), self-reliance in funding and control ('autonomy') and self-reliance in materials and manpower ('self-sufficiency'). Endogenous development is evident when local people decide what they want or require support in their efforts to achieve the same. In the second characterisation of self-reliance, realised as autonomy, the community controls the process of development, rather than the nature of the project. The argument in favour of this approach is that community stakeholders can organise funds for their project and thus remove the tendency for dependence on external sources. The third sense of self-reliance is described as

'maximum self-sufficiency.' White (1981) explains that this approach entails a community's use of its own "manpower and materials as far as possible to meet its needs in each respect, rather than either receiving them as help from elsewhere, or buying them after collecting funds." This type of self-reliance is not only generally found to be cheap, but it also makes use of indigenous labour.

4. METHODOLOGY

This study adopted a mixed-methods design. The methodology entails the application of both quantitative and qualitative techniques in data gathering. A mixed method of research is a procedure for collecting, analysing and 'mixing' both quantitative and qualitative research methods in one study, to be able to have a better understanding of the research problem. The reason for the adoption of the mixed method design is the fact that the quantitative approach to research hints mainly at the use and application of mathematical and statistical procedures/ techniques for data gathering and analysis, but lacks the ability to provide in-depth views, outlooks, or experiences of participants. The integration of quantitative and qualitative methods, therefore, leads to the aggregated use of their areas of strength for the solution of research problems.

The host communities of the 52 water supply systems developed by the Lagos State Water Corporation (LSWC) are made up of four major, 31 mini, and 16 micro waterworks, with Akute Intake Works constituting the population of this study. From this number, the host communities of three major and functioning water installations at Adiyen, Iju, and Isashi, were purposefully selected for this study. A fourth location, the Akute water intake and power plant, was also selected because of its strategic importance as the source of the raw water that is pumped for production at Adiyen and Iju. The snowball sampling method was adopted in the selection of in-depth interview participants. The snowball sampling technique is a non-probabilistic method that encourages research participants to recruit other acquaintances as participants in

the study. Furthermore, a purposive sampling method was adopted in the administration of the survey questionnaire.

5. RESULT

To what extent have participatory development communication approaches enhanced community involvement in the

sustainability of the water supply systems at Adiyen, Akute, Iju and Isashi communities in Ogun and Lagos states?

The purpose of the research question is to determine the extent to which community involvement in sustainability was enhanced by the participatory development communication approaches in the water supply systems at Adiyen, Akute, Iju, and Isashi communities.

Table 1. Participants’ responses regarding the sustainability of water supply systems in host communities

S/N	Statement	Always Freq. (%)	Freq- uently Freq. (%)	Some times Freq. (%)	Once in a while Freq. (%)	Never Freq. (%)	Total valid responses Freq. (%)	Mean	Std. Dev
1	Developer provides infrastructure to meet development challenges in the community	28 (6.9)	66 (16.1)	118 (28.9)	119 (29.0)	77 19.0	408 (100%)	2.63	1.16
2	Developer dialogues with community leaders to improve understanding of its engagements in the local community	28 (6.9)	45 (11.1)	114 (28.7)	104 (25.4)	102 (25.3)	393 (100%)	2.50	1.14
3	We have built partnerships with the developer to limit cases of vandalism of water supply systems	34 (8.3)	55 (13.4)	114 (27.9)	104 (25.4)	102 (24.9)	409 (100%)	2.55	1.23
4	Developer collaborates with the community on the prevention of alienation of project land for construction of residential quarters	23 (5.6)	68 (16.6)	95 (23.2)	110 (26.9)	113 27.6	409 (100%)	2.50	1.21
5	Some community members were trained and employed for the purpose of maintaining the water supply systems	25 (6.1)	71 (17.4)	118 (28.9)	101 (24.8)	93 (22.8)	408 (100%)	2.60	1.20

Note: Figures in parentheses are percentage distributions (ii). Figures outside the parentheses are frequency distributions. Source: Field Survey Data (April-May, 2021)

The results from Table 1 show that of the three aspects of sustainability, partnerships to limit cases of vandalism of water supply systems had the highest total variance of 8.3 per cent. This was followed by the provision of socially integrative community programmes or policies that accounted for 6.1 percent of the total variance, and the hiring of community stakeholders for the protective maintenance of the water supply systems (6.1 per cent). Thus, the least significant contributor to community involvement in sustainability is the approach of collaborating with community stakeholders to prevent the alienation of project land for the construction of residential quarters, which accounted for 5.6 percent. Also noticeable is the approach of dialogue by the water supply system's developer with community leaders to improve the understanding of its engagement in the local communities, which had a total variance of 6.9 per cent. This variable pairs with the approach of providing socially integrative programmes or policies.

Provision of infrastructure to meet development challenges in the communities by the systems' developer had the highest mean score of 2.63, followed by training and employment of community stakeholders for the purpose of maintaining the water supply systems with a mean score of 2.59. Building partnerships to limit the cases of vandalism, with a mean score of 2.55, was the third variable with a high mean score, while the variables of the developer's dialogue with community leaders to improve understanding of its engagements in the local community (2.49 mean score) and collaboration with the host community to prevent alienation of land for construction of residential quarters had the least mean score of 2.46. The research question is, thus, clarified as the developer of the systems is apprised of the participatory development communication approaches to adopt to ensure the sustainability of the systems.

6. QUALITATIVE DATA

In-depth interview responses on the sustainability of water supply systems in the host communities of Adiyon, Akute, Iju and Isashi.

In the analysis of responses to the in-depth interviews, the dominant approach is that there was dialogue about the sustainability of the water supply systems in the four host communities. Among the 15 traditional rulers, six said that there was no community involvement in the sustainability of the water supply systems, while nine said they had some dialogue regarding the sustainability of the systems in their communities. All four production managers/deputies said they engaged in dialogues with community stakeholders on the sustainability of the water supply systems. However, among the 31 CDAs/CDCs chairmen, 20 said they did not dialogue about the sustainability of the systems, while 11 said they engaged in dialogues about their sustainability. However, in terms of the feelings of local ownership of the systems, this was low, as interview responses suggested that community involvement in the sustainability of the systems was dismal in the four communities. To answer the research question, the views of the production managers/deputies are presented first. But their responses show that there is no way community stakeholders will have feelings of local ownership of the water supply systems because they were not considered during the planning and execution of the systems. A production manager responded:

None. As far as I know. Yes, even though what is going on here is one of the biggest water projects around. I will tell you that it is the Lagos State government that owns it. Even the community knows little because it is the Lagos State that is funding it.

In Akute, there were such feelings in the past, but not anymore, as one of the production managers said:

In the past, we had some things that really made them feel that sense of belonging, but because of the economic challenges that every sector of life is facing in this country, that challenge is getting to everybody.

However, the situation in Isashi was different, as there were incentives put in place by the management to give the community a sense of belonging. According to one of the managers:

Apart from employment, most government primary schools are given water free of charge. Any government school in Isashi is supplied with water free of charge.

The traditional rulers in Adiyán had a different opinion. They feel that the community is not enjoying anything, and therefore they have no feelings of local ownership.

One of the Baales said:

No. They did not give us anything. They have not given us water or even a road that is so bad that vehicles cannot pass. We have been doing the repairs to the roads ourselves.

In a feeling of helplessness, a traditional ruler in Akute felt there was nothing for the community and nothing that they could do. According to him:

It is not my project; it is a government project. They should have said: 'Let us talk to the community about this project so that if they have anything, there should be a meeting to discuss what they need.' But when there was nothing like that, what do you think we should do?

Similar scenarios prevailed at Iju. The community stakeholders said they gained nothing from being hosts to the water supply systems. Only some traditional rulers were connected to the free water supply, not the community, as a traditional ruler said:

They have not done anything here. Do you know what happened? Before I could collect this free water that I am using now, one man in the water corporation said the Lagos State governor had directed that any Baale in the neighbourhood should be given water for free. It is not for the whole community, but solely for the palace of the Baale.

Apart from the traditional rulers and the production managers/deputies, the CDAs and CDC chairmen in Adiyán, Akute, Iju, and Isashi corroborated what has been said: that there are no feelings of local ownership and the government has not provided amenities to the communities.

According to the chairman of one of the CDAs in Adiyán:

I have not seen anything. I don't need to tell lies.

To another CDA chairman:

They don't encourage anyone here. No facilities, no encouragement, no enjoyment of the water. What they do is for their workers. We are for ourselves, and they are for themselves.

Sometimes in the past, officials of the water supply systems even demanded money from stakeholders in these water bearing communities, with promise of supplying water to them. After such payments, no water was served. This is the experience of one of the CDA chairmen in Adiyán:

Nothing. They ran a pipe here just to do 419 games or fake water supply to us. The water was not supplied for up to two weeks. At that time, the community paid a token for the water. Each house paid either N5,000 or N10,000. They took that money from them and did nothing.

Rather than generating feelings of local ownership of the water supply systems among community stakeholders, and encouraging them to become involved in their sustainability, the government appears to have become a pain in their necks. This is because it has been accused of not only forcefully taking over the communities' land for the water supply systems, but also refusing to pay compensation to such landowners. In order to ward off protests by the communities, the developer's contractors often come to the site with policemen and soldiers. One of the Baales in Akute lamented:

They have not done anything for us. They took my family's land without compensation. I am in court in Ibadan now because they have not done anything. This is a person's property, which they came to beg us to collect but refused to give us compensation for. They took phase one, then phase two, and now that is the third phase. They are now coming to demolish people's homes.

None of our indigenes who seek work there are employed. They don't even ask the qualified candidates to come with a letter from the Baale for recognition and employment, yet they continue to employ people from outside. If they want to come in with anything, they can come with police or soldiers, nobody can face them. Sometimes they come to cut off our power supply, and if we protest, they push us away by saying they are doing government work. We are not enjoying any water at all.

There is no doubt that the situation can frustrate the stakeholders and lead to agitations in the communities. However, rather than protesting the non-involvement and claiming no benefit to the communities, the stakeholders said they have been peaceful in their demands.

A CDA chairman in Iju said:

Even though we have written several letters to them, the water corporation has not provided any benefit to this community. They provide public water supplies, but for many years, water has not been coming out. For many years, many of us have been drilling boreholes to get water, even from where the water comes from.

What are the specific needs of the water supply systems' host communities? A member of the Ogundimu family, the ancestral owners of the Iju land where the pioneer water supply system is stationed, mentioned some of the things they expected the water supply system's developer to do for the community. According to him:

When you talk about socially integrative programmes, there is more to it than just giving water to the villagers. There is land here. They should build a school for us. They have been using this land and water free of charge for centuries. They ought to build a technical school, a university, or whatever, because we still have enough land there for it. The Lagos State government could also do it for us. We are not saying they should give us land to go and sell to people, but build something. Nothing is wrong if we have a mini stadium around

here. The submissions of the traditional rulers, CDAs and CDC chairmen, and production managers/deputies in the water supply systems have answered the research question raised to investigate the ways that participatory development communication approaches of community involvement and feelings of local ownership influenced the sustainability of water supply in Adiyen, Akute, Iju, and Isashi communities. As the interviewees opined, the developer of the water supply systems in the host communities under investigation had not provided sufficient amenities that could create feelings of local ownership among the stakeholders and thus enhance the sustainability of the water supply systems in their host communities.

It can be said that it is not the prevalence of feelings of local ownership that is sustaining the water supply systems in the Adiyen, Akute, Iju, and Isashi communities. What is sustaining the water supply is a mix of a show of force by the government, whereby policemen and soldiers are drafted in whenever major engineering work is to be carried out, as well as the peaceful nature of the stakeholders. Therefore, it has been established that there was no community involvement in sustainability or feelings of local ownership among the stakeholders of the Adiyen, Akute, Iju, and Isashi communities. It is equally important to assert that it is not the presence of these approaches that is sustaining the water supply systems. The water supply systems are sustained by force from the government and by the peaceful nature of stakeholders in these communities.

7. DISCUSSION

Community involvement in the sustainability of the water supply systems

A summary of the responses from the survey shows, however, that two of the approaches did not contribute significantly. These were the training and employment of stakeholders for the maintenance of the water supply systems, and

the provision of socially integrative programmes for the host communities. The low total variance on these variables represented evidence that the developer of the water supply systems did not meet the expectations of community stakeholders in its response to their yearnings.

The quantitative survey data analysis shows that responses were skewed in the direction of inadequacy of benefits or socially-integrative policies and programmes by the water supply systems' developer in these communities. This suggests that sustainability is more likely to have negative social or economic impacts. The assertion flows from the findings in a study by Cernea (1992) that projects that focus on generating economic benefits, but do not encourage local participation, are less likely to provide measurable community benefits. While it can be argued that organisations that engage local communities actively in their planning and operations management would most likely achieve sustainable development, it is also necessary to assert that bottom-up planning and execution come with costs.

These costs involve empowerment and building beneficiary capacity. However, to generate feelings of local ownership, community stakeholders must be allowed to assume more responsibilities in the planning and execution of the water supply systems. As Thwala (2010) explains, special components of such projects must include the recruitment of community stakeholders "in all phases of designing, implementing, maintaining, supervising, and evaluating new water supply and sanitation systems." Moreover, such projects stand the chance of becoming sustainable if "the time, effort, and money are spent to do it right." The developer is required to pay special attention to and dialogue with the community development associations since these associations serve as local governance structures. Their buy-in to the project will readily lead to the generation of feelings of local-ownership of the water supply systems. This is similar to the involvement of local community stakeholders in decision-making processes, especially at the planning stage. Cernea (1992) supports this view as he remarks that "if people's involvement in public programmes is to be expanded, these specific

costs must be recognised and assumed, otherwise the approach will be vulnerable to ... short-sighted cost-benefit arguments or to expediency counter-arguments."

Without community involvement and the attendant feelings of local ownership to which it gives rise, community stakeholders will be psychologically averse to seeking to protect such systems. A CDA chairman in Adiyin remarked on the paucity of community involvement in sustainability and the associated feelings of local ownership of the water supply systems, as captured below:

Nothing pertaining to the water is mentioned here, nobody has anything to say about it. The water belongs to the people who are working there or to those who are using it in Lagos State. In Ogun State, nobody can say anything about the water project.

Another CDA chairman in Akute said:

The former governor of Lagos State, Babatunde Fashola, gave us six or ten taps for water supply. The people used the pumps for two or three years, but when Fashola left power, the corporation blocked the taps and said the indigenes should pay for the water. From there, the people left the water taps and moved on to drill their boreholes. Personally, I dug my own borehole.

These responses portend negative reactions to the issue of sustainability. They suggest that stakeholders were neither empowered nor encouraged to feel that they could lay claim to local ownership of the water supply systems in these communities. Social integration is a process by which minority or socially-disadvantaged groups are brought together into the mainstream of society, so that they can agree on a shared system of meanings and, to a large extent, feel that they form part of the larger community. Ferguson (2008) describes social integration as the process of making societies more equitable, especially in promoting values, relations, and institutions that enable all people to participate in the social, economic, and political life on the

basis of equal rights and dignity. Socially integrative programmes or projects required in the host communities were in the areas of potable water and the construction of major roads. It was found, however, that the developer of the water supply systems had constructed at least one major road in each of the host communities of Isashi, Iju, and Akute, but the reverse was the case in Adiyari, where even the access roads to the water installation were in poor shape.

On its part, the concept of sustainability is concerned with the processes and actions through which humanity is able to avoid depleting its current natural resources and ensure that the quality of life of generations to come does not decrease. The term owes its origin to the United Nations General Assembly (1987), which defines sustainability as “meeting the needs of the present without compromising the ability of future generations to meet their own needs and aspirations.” Klarin (2018) associates the concept of sustainable development with environmental sustainability, social sustainability, and economic sustainability. While environmental sustainability focuses on maintaining the quality of the environment, social sustainability is involved with ensuring human rights, equality, and respect for cultural diversity. Economic sustainability strives to ensure that the natural, social, and human capital for income and living standards are maintained. The bottom line is that complete sustainable development is achieved through a balance between the environmental, social and economic pillars, though the “required condition is not easy to achieve” because each of these pillars has to respect the interests of the other pillars.

Ensuring long-term impact and project continuity is not only a big challenge but also an important issue of concern that dominates discourse in development communication. To achieve this requires a combination of factors which Acunzo et al., (2014) list as technical, institutional, political, economic, and financial challenges. Technical challenges refer to abilities such as training for operations and maintenance of the equipment, while institutional challenges involve policy implementation, recurrent budgets, and staffing. Political challenges are concerned with the commitments of the

government, an enabling policy environment, stakeholder interests, and lobbying or political influence, whereas economic and financial challenges refer to financial viability, resilience to economic shocks, and the ability to cope with risks. In evaluating a sustainable project, Mwanyalo & Mberia (2017) explain that it must be one that has not only survived two years after its completion, but has also been in continuous use and undergone sound maintenance five years after its completion. However, Wheeler (2004) advises that long-term planning of 50 to 100 years or more is required to create the necessary impact. He argues that to be able to do this, “planners may need to more specifically assess how near-term actions can lead to long-term goals.” These water supply systems have been operating in the four communities for periods ranging from 30 to 110 years, meaning that they have met part of the sustainability requirements. However, ensuring that the water supply systems continue to pump raw water, refine it, and reticulate it for the public in Lagos State and even parts of Ogun State over the coming decades or centuries, represents the major challenge of sustainability.

From the participatory development communication perspective, sustainability of these water supply systems can be achieved through three main strategies of developing local capacity, institutional support, and partnerships. A step-by-step approach to ensuring sustainability offered by Acunzo et al (2014) thus involves “obtaining institutional support and buy-in for communication as a public service, and creating a solid ground to encourage local partners to replicate and scale-up” participatory development communication activities. Moreover, Paul (1987) is of the view that certain strategies can lead to the sustainable development of water supply systems. At the top of these strategies, which are anchored on community participation, is the instrument of empowerment. While observing that empowerment can lead to an equitable sharing of power, he explains that “any project or development activity is then a means of empowering people so that they are able to initiate actions on their own and thus influence the processes and outcomes of development.” Responses from the in-depth interviews were

skewed in the direction of a lack of interest in or aversion to the sustainability of the water supply systems. This was an apparent outflow from the lack of empowerment of community stakeholders by the water supply system's developer. For instance, CDA/CDC chairmen in Adiyari, Akute, and Iju expressed their angst about the lack of empowerment and its resultant effects on the sustainability of the water supply systems in their communities.

One of the CDAs/CDCs chairmen in Adiyari said:

How do we dialogue about the sustainability of the water supply systems? The thing that you are not involved in, that you don't have any plans, they don't call you? How do you plan for the sustainability of something you don't know anything about?

In a similar vein, a CDA chairman in Akute added:

Why do I care whether water collapses or not when the villagers are not given water to drink?

A CDA chairman in Iju spoke in the same manner, thus:

Which kind of dialogue would you like to discuss again after writing a series of letters to the water corporation without receiving a reply?

It was equally difficult to persuade a traditional ruler in Akute about the need for protection or sustainability of the water supply systems in his community, as he said:

How do we protect what they have not shown me that they are doing here? It is dangerous. Have they given us information before? They can accuse you of sending someone to poison the water they are producing for people to drink.

However, one of the traditional rulers in Adiyari was receptive to the idea of sustainability, as he emphasised that his community has been protecting the water supply systems. He responded:

Community leaders do not allow hoodlums to go to the area to disturb the workers. The government and the community signed a Memorandum of Understanding (MoU) that, by the time the next phase of the project would commence, the indigenes would be engaged. The signing of the MoU is a current development, and it provides that not all the workers would be hired from outside, but that the corporation would still engage some indigenous people in the host communities.

But a CDC chairman in Akute and a CDA chairman in Isashi were in support of the bid to ensure sustainability of the water supply systems in their domains. The CDC chairman in Akute said:

You know that this water is for public use. We cannot allow people to go there and do what is not good. We encourage ourselves in this community not to go to the water to defecate or put something bad or a dead body there. If, however, someone went to the river to bathe and died there, we would immediately call the police or report it to the elderly people in the community to find a solution to it. We don't allow anything that damages the water, like poison, which is not good. We try to detect such efforts all the time.

The lack of empowerment brings into focus the self-reliance theory adopted for this study. Fonchingong & Fonjong (2003) hold the view that self-help and mutual-help are related to self-reliance, and remark that self-help enables community stakeholders to exploit to their advantage the resources that would otherwise have remained idle. They explain that the harnessing of related skills and attitudes has the potential to enable stakeholders to "satisfy their basic needs to grow self-reliant, and to minimise precarious dependence on agencies external to their communities." Stakeholders in these communities exercised their sense of responsibility by developing water boreholes to satisfy not only their own needs but also the needs of other members of their communities.

Although self-reliance panders towards the “do it yourself” axiom, this is an errant interpretation of the situation, as no individual or community is in a position to completely undertake any project without the support of others. Kim & Ismail (2013) align with this view in their postulation that the self-reliance concept connotes a ‘helper-doer’ relationship where the principles of self-help are adhered to. These principles are listed as: “(a) the outsider must make a positive difference in the living conditions of the doer, (b) the doer (the helped) must own and implement the programme or plan of assistance; (c) the help or support must not undercut the autonomy of the doer - too much help can make the helped lazy; (d) the help must be for a limited period of time - long term charity corrupts self-help and undercuts the capacity for development; and (e) the doer should be able to sustain or continue with the development process if and when the assistance stops or is even terminated abruptly. This strategy is reinforced by the building of beneficiary capacity in relation to the project. Capacity building, which is related to empowerment, refers to strengthening the knowledge and skill-sets of members of the community, particularly its youth. The benefit of this is that they can take responsibility for managing selected aspects of the project according to the skills they have acquired.

Communication is applied in development in two major ways. These are classified as either communication to access or communication to empower. Communication for access is often applied as a research and analytical tool to investigate both communication and non-communication situations. According to Mefalopulos (2008), communication to empower is a dialogic feature that “enhances the capacity of all groups, especially the most marginalised ones, to address the issue of poverty.” The outcomes of these communication applications are also viewed in two directions: (a) providing technical information about development problems and possibilities, as well as appropriate innovations in response to local requests; and (b) disseminating information about local groups’ self-development accomplishments so that other groups can benefit from the experience of others (Coldevin, 2008).

Moreover, three forms of participation can be observed in every community. These are active, passive, or interactive populations. Mikkelson (2005) explains that active participation refers to members of the community that are always prepared to take part in all stages of the project, while the passive population comprises those members of the community that maintain their distance and never participate in project development activities. The interactive population is made up of community stakeholders that take part in collective analysis and project planning processes in their bid to improve structures in their communities. A development programme or project cannot become sustainable if it is not backed by appropriate communication for empowerment. Esiere & Obot (2014) in canvassing this position, describe communication as the lifeblood of any strategy and, therefore, an integral part of the process of development. They postulate that “a media strategy is an essential prerequisite to intelligent planning and implementation of sustainable development.”

The lack of community involvement in sustainability and the paucity of socially integrative programmes or projects in these host communities have generated apathy among the stakeholders towards the sustainability of the water supply systems. It evinces the general absence of the influence of genuine participatory development communication approaches in these communities. The scenario can, however, be reversed through the adoption of interactive communication approaches by the stakeholders and the system’s developer. A number of factors need to be taken into account to ensure that the water supply systems are sustainable in these host communities. The first is that there must be interactive participation with the host community stakeholders. Interactive participation is a function of the dialogic mode of communication that is applied in two major ways to create a constructive environment where stakeholders can participate to find solutions to their development problems. Interactive participation offers several positives for communities, among which we speak about teaching the community stakeholders some ways in which they can solve conflicts and foster capacity building. It is, therefore, the panacea for the achievement of the

goal of creating feelings of local ownership of projects and involvement of the host communities in the sustainability of the water supply systems.

8. CONCLUSIONS

There was a paucity of sustainable socially-integrative programmes or amenities, such as potable water supply or road construction, provided by the developer of the water supply systems for the benefit of the host communities. This infuriated some stakeholders in the host communities, with many angrily demanding the removal of the water supply systems from their communities.

Recommendations

The government should encourage the water supply systems' developers to provide socially-integrative programmes or amenities such as potable water supply, road construction, or other relevant projects for the benefit of their host communities. It can do so by granting tax rebates or holidays to the developers or donor organisations.

- i. As part of its corporate social responsibility, the developer of the water supply systems should work with the governments of Ogun and Lagos to build reservoirs and public water points, as well as dedicate an agreed amount of potable water for the daily delivery to its host communities.
- ii. The developer of the water supply systems should provide pipe-borne water to the Iju community, given its pioneer status as a pipe-borne water host community in Lagos. The cancelled Sakamori Company water supply project, which was almost completed and awaiting connection to the water trunk line, should be resuscitated and connected for use by the community.
- iii. To ensure the sustainability of its water supply systems, the developer of the water supply systems should collaborate with Original Equipment Manufacturers (OEMs) to establish an engineering manufacturing center charged with the production or fabrication of needed water pumping machines and critical spare parts.

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