

ENERGY AND WATER SUPPLY IN THE DEVELOPMENT OF THE NIGER DELTA REGION: POLICY ISSUES

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This Policy Brief is supported by the *Think Tank Initiative*
Programme initiated and managed by the *International*
Development Research Centre (IDRC)

Preface

CPED's Policy Brief is a short publication designed to inform policy makers and other stakeholders at the federal, state and local government levels in Nigeria on the key policy issues emanating from the action research and intervention programmes carried out by CPED and its collaborators. The Policy brief series for 2011 will focus largely on the challenges facing development in the Niger Delta region under CPED's research theme on growth and equity in development in Nigeria. This first number in the series is on Energy and Water Supply and the development of the Niger Delta region.

We are particularly grateful to the Niger Delta Development Commission (NDDC) and *Think Tank Initiative* of the IDRC for the support provided for CPED which has enabled the Centre to carry out the research that led to the production of this policy brief series.

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First produced in 2011

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Energy supplies and poverty reduction in Niger Delta region

While the link between power supply and economic development remains indisputable that between energy programmes and poverty alleviation is less well articulated in the development literature. This has led to the apparent neglect of the needs of the poor in most energy development programmes to date in Nigeria. Problems of poverty in all its dimensions can be addressed with the improved provision of energy services and it is significant that most of those without access to modern energy services live in the remote communities of the Niger Delta States, as the results of baseline line survey of the region show. The communities are also those in which the inhabitants are earning the lowest income levels. Poor households and communities in rural and urban areas of the Niger Delta States as in other parts of the Niger Delta region as the results of the survey shows typically rely on diverse sources of energy, using one fuel for cooking, another for lighting and yet another for agricultural or other productive activities. Often the real (per unit) costs of these alternative energy sources are high relative to those of electricity or gas delivered through networks to wealthier households. Moreover, these energy sources often have high non-monetary costs. When women and children spend many hours collecting firewood or dung for cooking, for example, they have less time for education or for developing other productive activities. And the use of traditional energy sources can have serious health and environmental consequences. In general, there is broad agreement,

supported by a degree of anecdotal evidence on the links between energy and poverty alleviation.

An underlying objective of many energy sector projects in the Niger Delta States is to give low-income households and rural communities better access to modern fuels-to allow them shift from biomes fuels to kerosene or gas for cooking, to put electric lighting in a school or power a refrigerator in a community health clinic, or to access electricity lighting or to power equipment for household businesses. Interventions of these kinds are expected to have important and direct effects on the welfare of the poor in the urban and rural communities of the Niger Delta States as reflected below.

Potential effects of improved energy services in alleviating poverty in Niger Delta Region

Direct Effects on Well-being	Direct Effects on health	Direct Effects on Education	Direct Effects on Economic Opportunities For the poor	Tickle-down Effects of increased Productivity	Fiscal space (coupled with pro-poor policies)
Improved access to lighting, heat, and refrigeration	Improved indoor air quality through cleaner fuel	Improved access to lighting, allowing more time to study	Easier establishment and greater productivity of businesses that employ the poor	Easier establishment and greater productivity of businesses in general (including through positive impact on the environment)	Smaller fiscal burden and higher fiscal returns from more efficient services
Savings in time and effort (due to reduced need to gather biomass and other fuels)	Reduced fire hazards, improved quality of health services (through better lighting, equipment,	Savings in time and efforts, releasing time and energy channel to education	Creation of employment in infrastructure service delivery		More benefits to the poor if government spending is effectively channelled to welfare-

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	and refrigeration)				enhancing services
Improved access to information (through radio, television and telecommunications)	Easier establishment of health centres and better education		Improved health and education and savings in time and effort, increasing individual productivity		Higher fiscal returns associated with higher growth coupled with pro-poor policies

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Greater use of energy services may deliver other benefits, particularly better health and education and, as a result, improved access and productivity in the labour market. Better service is also likely to reduce both the monetary and non-monetary costs of obtaining supply.

Users generally face tradeoffs between monetary and time costs as they progress from traditional to intermediate to modern fuels. Fuel wood may be the cheapest in monetary terms, but can be very time consuming to collect; as supplies become sparse, both the time costs to the collectors and the scarcity costs to the economy increase. Intermediate fuels are generally more expensive than traditional fuels but cheaper to access than modern fuels. Moving from one type of fuel to another also often entails investment in new equipment. But the time and energy saved in collecting fuel can be converted into better health and more time for education and for productive activity, increasing earning potential as well as providing direct benefits. In some circumstances a new source of energy may lead to improvements for the community as a whole but result in exclusion for those who do not participate. For example access to electricity for a small subset of households may enable these households to increase their productivity and wealth and to take advantage of improved opportunities through access to the Internet. There are also indirect effects of improved energy services on the poor. Improved energy services will also generally produce improvements in the economy as a whole, with benefits for the poor both as members of society and as consumers. Such indirect

benefits arise from two sources: improved efficiency of the sector and the economy, which increases total wealth, and, through cuts in subsidies, the release of more funds for other activities.

Water supply and poverty alleviation in Niger Delta region

Water is a fundamental social resource since it is basic to the support of human life and health. It is also a fundamental economic resource on which the livelihoods of farming populations depend. The main contribution of water and sanitation to human development is by improving health. Water-related diseases are the single largest cause of human sickness and death in the Niger Delta States and these disproportionately affect poor people.

Studies have shown that provision of safe water and basic sanitation can reduce the incidence of diarrhoeal disease by as much as 25%. Even greater benefits can be achieved if that water and sanitation provision is accompanied by changes in hygiene behaviour. Sanitation can also dramatically reduce the spread of intestinal parasites. Both diarrhoea reduction and parasite reduction also improve people's uptake of nutrients and hence their growth and fitness. Water supply, sanitation and hygiene are at least as effective as medical care in preventing deaths among poor people. Although deaths from diarrhoeal disease have decreased over the last decade in Niger Delta States, the findings of the baseline survey shows that it is still responsible for over 10 per cent of illness in most

communities in the Niger Delta region. Besides reducing the risk of disease transmission, better sanitation provides real personal benefits in the form of greater privacy, convenience, safety and dignity. Many people are willing to pay for sanitation improvements for these reasons. These aspects are particularly important for women. The use of a latrine at home reduces women and girls' vulnerability, while the availability of a latrine at school can be a strong factor in encouraging girls to attend.

Children suffer disproportionately from poor water supplies and lack of adequate basic sanitation. They suffer from unsafe hygiene practices in the home, and for their recreation they play in open sewers and heavily polluted ponds and rivers. For this they pay a heavy price. Most of the ill health, impaired development and death, which is preventable through water and sanitation, is of children. They also miss important opportunities for education, spending many hours a day on long journeys to water sources, often in hazardous conditions.

It can therefore be stated that, increasing ease and security of access to water supply and sanitation in the communities of Niger Delta States can save large amounts of people's time. For example, fetching even the minimum amount of water to survive can be both time-consuming and physically exhausting, a burden, which falls disproportionately on women and children. Seeking privacy for open defecation can also be very time-consuming, typically causing many women to wake an hour early every day of their lives. Being ill with a water-

related disease, or caring for an ill family member, also consumes a lot of time. The time (and energy) that people save by having closer water sources, closer latrines and decreased illness can improve their well-being in many ways: through growing more and better food for themselves, through a vast range of economically productive activities, and through releasing children to attend school.

Furthermore, if people have access to greater quantities of water they can use that water to improve their livelihood security and reduce their vulnerability. Water can be used for horticulture (e.g. cash and food crop cultivation), improving household livestock production, and in supporting micro-enterprise such as brick making and pottery. Building up secure livelihoods for poor households is the only effective long-term way of eliminating poverty.

Finally, and particularly relevant in urban areas, improved water supplies can be much cheaper than existing supplies. In many urban centres in Niger Delta States, the vast majority of the people, as the results of the survey shows, have no access to piped water supplies and so they must buy water from vendors or collect from streams. They typically pay ten times the unit price paid by their richer neighbours who have connections to the piped supply. Even using as little water as possible, the cost of water can amount to over one-fifth of the income of a typical poor household. Poor people normally spend most of their income on food budget, resulting in decreased nutrition.

Cutting the cost of vended water, or removing the need to buy it, is a well-targeted intervention to improve the economic well being of the poorest people.

Policy Options and Issues

Policies to promote the implementation of sustainable energy and water supply system in the context of poverty reduction in the Niger Delta must be sufficiently resourceful and yet adaptable to local situations in different parts of the region. Some of these are outlined below.

- The role of government at all levels and in all contexts of energy and water provision in Nigeria needs to be reviewed especially in the context of the present democratic government and the agitation for what has been called true federalism in the country. This suggests that responsibilities for energy and water management and programme articulation need to be decentralised to the lowest appropriate administrative level according to the concept of subsidiarity; this allows the contributions of the various parties to be maximised. Decentralising authority to lower levels of government can help to involve the poor in decision-making and improve accountability of energy and water and sanitation services.
- The past preoccupation with monopolies in energy and water provision must be changed in the context of the contemporary privatisation in the country so

as to take advantage of opportunities for competition in energy and water provision.

- Energy and water provision prices should reflect the full cost of supply. In addition to promoting the efficient use of scarce resource, this approach gives service providers an incentive to respond to all categories of consumers-including those in remote or difficult to serve areas especially rural areas.
- Subsidies should be clearly targeted to the intended beneficiaries and delivered in a manner consistent with competitive provision. For example, budget-funded subsidies might be delivered to targeted households through a welfare-type system. In Nigeria where a welfare system is not yet in place it should be possible to award subsidies to suppliers based on the number of new households they connect and serve, creating strong incentives for service expansion without erecting or sustaining monopolies that is subsidising connections, not consumption.
- Finally, tax arrangement need to take into consideration their impact on energy and water markets. For example, fuel and water taxes often distort the relative prices of alternative energy source or remove certain fuels from markets accessible to low-income households or communities.

- Implicit in the discussion in the preceding paragraphs is the fact that the role of the non-governmental sector in water and energy provision must increase in the coming years in Nigeria. The private sector readily comes to mind. One effective way of getting the private sector to be involved in energy and water supply is to establish partnership between the public and private sectors in the execution of energy and water supply programmes. In many countries civil society groups, especially NGOs, are themselves valuable service providers, enabling poor and excluded people to access essential and appropriate services. If properly encouraged civil society organisations can form a communication channel from the government to the rural population about choices of service level and the roles of the different players, including the private sector and the government itself. Thus civil society organisations need good relationships with the federal, state and local governments.
- Gender implications need to be taken into account at all stages of the planning and implementation of water-related activities, with consideration given to the different social, economic and cultural roles assigned to men and women in a given setting. Not only do gender implications of proposed interventions have to be considered, but ways need to be identified whereby women users and beneficiaries of services can themselves help define those implications and take part in the community

consultation process so that their specific voice be heard.

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