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Editorial Note

Volume 2, Number 2 of Journal of African Development Studies has selected four articles. They were selected after we had gone thorough a stringent evaluation. The selected papers capture topical issues of interest to scholars, practicing managers and policy makers in Africa.

The first article of the volume is written by Isaac. M. Nyamweno and Jeremiah N. Ayonga. It is mounted to assess the status of Addis Ababa City with regard to accessibility of workplace and other public places to persons with physical disabilities, with a view to influencing change in the built environment. Public buildings transport and telecommunication sector, learning institutions and hospitality industry were the target of this research. The article has found out that Addis Ababa is home to about 273,825 persons with disabilities and most (70%) of work and public places are inaccessible despite high degree of awareness among the service providers. Anti-exclusion policies and proclamations are scattered in various official documents but there is no comprehensive national policy on disability. On-going disability programs focus mainly on rehabilitation and little attention is paid to physical accessibility. This article proposes innovative options to achieve accessibility including: formulation of national policy on disability, zoning of storey buildings, review of curricula for professionals, attitude change, budgeting, mainstreaming disability, benchmarking.

Mr. Ujoh, Infatimehin & Alaci, in the second article of this volume have discussed about features characterizing most urban centers in developing countries. The existence of a dual settlement pattern; the main city, and slum settlements are some of the futures. The article explains that expansion of slum settlements create ecological and environmental problems which include poor hygienic conditions due to lack of proper waste disposal infrastructure, inaccessibility to safe drinking water, susceptibility to diseases outbreak due largely to poor ventilation and hygiene, regular floods, rapid deforestation within and around the settlements, land degradation, excessive air, surface and ground water pollution. This study examined the expansion of slum settlements along the north-eastern entry/exit route of Abuja in Nigeria. The area represents a sprawling 'conurbation' of slum settlements stretching (rather

continuously) along either sides of the entry/exit route. The analysis showed a rapid expansion of slum area from 31.52 km² to 104.51 km² in 2000 and 2006, respectively. In view of the environmental problems noticed in the study area vis-à-vis the observed pattern of expansion, recommendations were made to ensure environmental sustainability in this part of the world.

Ignatius A. Madu, in the third article analyzed the pattern of rural household access to improved water supply in Nigeria. The article, with relevant data obtained from the Core Welfare indicator Questionnaire Survey Nigeria, 2006, analyzed by both descriptive statistics and cluster analysis. Access to water supply was calculated as the percentages of households with less than 30 minutes to reach the nearest drinking water supply while the states were grouped according to the magnitude of access using hierarchical cluster analysis. The results show lower access to water supply. The article has also highlighted a policy implication which includes the need for the involvement of rural communities in water supply development.

In the fourth article of this volume, Yinebeb Tizazu, has investigated whether HIV/AIDS education is incorporated in the secondary school curriculum. The author analyzed critically selected textbooks as part of curriculum analysis. Textbooks were analyzed against the elements of HIV/AIDS education set by WHO (2000). Furthermore, classroom observation was made to analyze the mode of delivery of HIV/AIDS education by the existing contents. The result revealed that the textbooks of secondary school curriculum were ill-equipped with the essential elements of HIV/AIDS education in a way they can bring about the necessary behavioral changes on the part of the learners. Moreover, the existing contents have been geared towards more of the cognitive aspect than that of affective one. The article has indicated that the delivery of the contents of HIV/AIDS education in the curriculum was leading students to recall pieces of information than creating meaningful interaction or learning about HIV/AIDS in the classroom. Yinebeb emphasized in his article that there needs to be an integrated effort among HIV/AIDS clubs, Medias and classroom learning so as to make HIV/AIDS education attractive and exciting to the students.

Finally we continue to appreciate the help of the Ethiopian Civil Service College for the financial support, and the many peer reviewers and editors who have helped evaluate manuscript and make sure they are of the highest possible quality.

The Editor-in-Chief

Disability and the Built Environment: Innovative Options for Promoting Accessibility in Addis Ababa City

Isaac. M. Nyamweno[*] *& Jeremiah N. Ayonga*[**]

Abstract *:This study was mounted to assess the status of Addis Ababa City with regard to accessibility of workplace and other public places to persons with physical disabilities, with a view to influencing change in the built environment. Public buildings transport and telecommunication sector, learning institutions and hospitality industry were the target of this research. A total of 24 public and private service providers were sampled for assessment using a combination of random and purposeful sampling methods. Primary data was collected with the aid of questionnaires, actual measurements, observation method, focus group discussion and in-depth discussions with resource persons. Government policy and legal documents were consulted too. It was found out that Addis Ababa is home to about 273,825 persons with disabilities and most (70%) of work and public places are inaccessible despite high degree of awareness among the service providers. Anti-exclusion policies and proclamations are scattered in various official documents but there is no comprehensive national policy on disability. On-going disability programmes focus mainly on rehabilitation and little attention is paid to physical accessibility. This paper proposes innovative options to achieve accessibility including: formulation of national policy on disability, zoning of storey buildings, review of curricula for professionals, attitude change, budgeting, mainstreaming disability, benchmarking.*

Key words *– Accessibility, Addis Ababa, Built environment, Disability, Exclusion, Integration*

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Introduction

Disability is truly an issue of global concern and indeed we are all potentially disabled. The World Health Organization estimates that 10 percent of the world's population (over 650 million people) comprise of persons with disabili-

ties (PWDs) and about 80 % of this population lives in developing countries (WHO cited in UN-Enable). WHO also estimates that only 5.8 % of the persons with disabilities need to be provided with services (The Republic of (Uganda, 2006). Persons with disabilities account for the highest percentage of the minority groups worldwide. PWDs are also among the poorest in th world since disability and poverty are interlinked. Poverty is both a cause and consequence of disability. It is against this backdrop that the United Nations declared the period 1983 to1992 the International Decade for Disability. It is also because of the high prevalence of disability in Africa that the African Union declared 1999-2009 the African Decade of Persons with Disabilities (AU, 1999).

Ethiopia was estimated to have about 7.7 million persons with disabilities in 2005 based on the country's total population of 77, 431,000 (UNICEF 2006 cited in World Vision 2008). Addis Ababa is eastern Africa's largest city according to UN-Habitat ranking (UN-Habitat 2008). The city is home to 2,738,248 people (Central Statistics Agency 2007). The population of persons with disabilities is high and still growing-hence the need to overcome their exclusion in the built environment. While towns and cities all over the world are home to a significant proportion of persons with disabilities, it is in the towns and cities of developing countries that they continue to experience acute suffering associated with physical, economic as well as social exclusion.

The Word Disability Report of 1999 illustrates that persons with disabilities face the barriers of discrimination daily and that exclusion from society stems from ignorance of their needs as fellow human beings (IDF 1999). The report says that exclusion can also be deliberate. Although much has been documented and said about the issue of disability since 1970s, the situation in most developing countries is quite irritating. The biggest change is how to convince private investors to integrate needs of persons with disabilities into their investment plans since this translates into heavy costs. This study was, therefore, mounted to provide greater insights into the issue of disability in Addis Ababa city and provide innovative options for promoting accessibility in the city.

Objectives

The overall objective is to achieve friendlier built environments for all city dwellers and this research seeks to

inform policy and practice in Addis Ababa city. The specific objectives are:

1) To assess the extent to which public buildings are accessible/ not accessible to persons with disabilities.
2) To assess the degree of awareness of the needs of persons with disa-bilities among service providers and professional in the built environment
3) To critically analyze government interventions in terms of policies, pro-clamations, institutions with regard to disability and the built environment
4) To proffer innovative options for achieving inclusion and accessibility in the built environment

Research Methodology

This study benefited from existing literature on disability including UN agreements and national policies in Ethiopia. An assessment of the existing situation regarding accessibility was done with the aid of questionnaires, observation, photographs, actual measurements, focus group discussion and in-depth discussions with resource persons. The study targeted private and public service providers including government ministries, city administration, City transport service, telecommunications sector, hospitality industry, learning institutions and religious institutions. More public institutions were consulted because the public sector is required to play a leading role in mainstreaming disability in the built environment.

A total of 12 ministries were randomly selected while three leading universities in the city including Addis Ababa, Unity and Ethiopian Civil Service College were purposefully selected to ensure adequate representation from institutions of higher learning. The City Council of Addis Ababa was also selected purposely because of its critical role in service provision. The main government-owned public transport service bus company (*Anbessa*) was also purposefully selected since it takes 35 % of the market share. Three social infrastructure facilities (church, school and hospital) were consulted too. The study targeted institutions rather than individuals and only one senior representative of each organization completed a questionnaire based on his/ her knowledge of the accessibility within the organization's premises. 30 public telephone booths along the major roads and commercial areas (Meri, Kasanchis, Merkato, Piassa, Stadium, Magnanga and Gurde Shola, Bole) were inspected to determine whether they were convenient

to persons with disabilities or not. The major bus stages in the city (Bole, Kazanchis, Stadium, Merkato, Piassa, Magnagna, Haya Huret, Mexico, Gurde Shola and CMC) were assessed to determine whether they were convenient for persons with physical disabilities or not.

In-depth discussions were held with key resource persons including Dr. Mengistu Legesse, Mr. Wabebe Medhin and the Chief Librarian at the National Library (Ministry of Culture and Tourism). Addis Ababa University's students with Disability (SWDs) participated in a focus group discussion. One National Rehabilitation Centre at the Black Lion Hospital was visited because it is a model centre with all the necessary facilities. Government policy and legal documents were critically analyzed in the context of disability and built environment. Primary data was analyzed with the help of frequency tables and percentages in order to generate useful information for decision making.

Brief Review of literature Key Concepts Explained

• Built environment

According to Babylon Dictionary, built environment refers to the man-made surroundings that provide the setting for human activity ranging from the large scale civic surroundings to the personal places. Addis Ababa city is, therefore, a built environment.

• Disability

The United Nations Convention on the Rights of Persons with Disabilities (2006) does not explicitly define disability but states in its preamble that disability is an evolving concept, and that disability results from the interaction between persons with impairments and attitudinal and environmental barriers that hinders full and effective participation in society on an equal basis with others. The World Health Organization (WHO) defines disability as:

- "Any restriction or lack (resulting from impairment) of ability to perform an activity in the manner or within the range considered normal for a human being" (WHO, 1980 cited in Beal 1997).
- On the other hand the Disabled People's International (DPI) defines disability as: "disadvantage or restriction in the organization of society, which prevents an individual with a functional limitation or impairment from fully participating" (DPI, 1992b cited in Beal 1997).

It is worthy to observe that disability

can be permanent or temporary.

- **Accessibility**

Accessibility is the ease and convenience with which a property can be entered by customers, tenants and other users, particularly related to access via automobile. Also, building design and alterations that enable people with physical disabilities to enter and maneuver in the building. Accessibility is a general term used to describe the degree to which a system is usable by as many people as possible without modification. Accessibility is strongly related to universal design. Universal design is the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design. Article 9 of the Convention on the Rights of Persons with Disabilities deals with accessibility and reads in part that:

> *"To enable persons with disabilities to live independently and participate fully in all aspects of life, States Parties shall take appropriate measures to ensure to persons with disabilities access, on an equal basis with others, to the physical environment, to transportation, to information and communications, including information and communications technologies and systems, and to other facilities and services open or provided to the public, both in urban and rural areas"*

- **Integration**

Integration is the assimilation of the anticipated direct, indirect and interactive effects of activities when those activities are developed, implemented, monitored and evaluated (Lowe. K, Fitzsimons. J, Straker, A and Gleeson. T, 2003). Integration is concerned with activities/processes/ outputs at all level from conception of an idea to the point of realizing the beneficial change arising from conception. The concept of integration as applied in this context is to do with factoring the needs of persons with disabilities into the spatial, socio-economic, technical and institutional aspects of the built environment.

International Treaties on Disability

This research paper is informed by various international treaties on disability including the World Programme of Action on Disability (WPA) (1983) which advocates for full participation of PWDs in the

development process, UN Standard Rules on Equalization of Opportunities for Persons with Disabilities (1993) which guides policy making. Rule No.5 of the United Nations Standard Rules on Equalization of Opportunities for Persons with Disabilities. The Rule reads in part thus:

> *"States should initiate measures to remove the obstacles to participation in the physical environment. Such measure should be to develop standards and guidelines and to consider enacting legislation to ensure accessibility to various areas in society, such as housing, buildings, public transport services, and other means of transport, streets, and other outdoor environments".*

The study is also consistent with the UN Convention on the Rights of Persons with Disabilities (2006) and African Union's Continental Plan of Action for the African Decade of persons with Disabilities (1999-2009) whose goal is the full participation, equality and empowerment of people with disabilities. Part V of Objective 6 of the Continental Plan of Action reads that implementing partners should "develop and implement regulations to promote universal design and physical accessibility; promote accessible information in alternative formats, including large print, Braile electronic and audio formats; and promote the availability of sign language interpretation at public meetings and in the media" (African Union, 1999)

Government of Ethiopia's Response to Disability

Efforts by successful governments in Ethiopia to meet the needs persons with disabilities can be traced to early 1970s. For instance Order No 1 of 1971 (Emperor Haile Selassie's reign) established a Rehabilitation Agency for persons with disabilities and Order No 101 of 1994 by the Transitional Government of Ethiopia (TGE) was passed to assist PWDs in society (JICA and FDRE, 2002). Higher Education Proclamation No 351/2003 declares that students with disabilities (SWD) shall get special support in order to accommodate their special educational needs (World Vision, 2008). Article 41 of the Constitution of the Federal Democratic Republic of Ethiopia on Economic, Social and Cultural Rights recognizes the rights of persons with physical, mental disabilities, the aged and children without parents or guardian (FDRE, 1994). Article 5.6 of the Developmental Social Welfare Policy of the Ministry of Labour and

Social Affairs (MoLSA) also emphasizes the welfare of Persons with Physical and Mental Impairment and states in sub-section 5.6.8 that "all efforts shall be made to gradually remove all physical impediments and make residential, work and other public places more physically accessible to persons with disability" (FDRE, 1996 p.75). In 1999 a National Programme of Action for the Rehabilitation of Persons with Disabilities was prepared based on the UN Standard Rules on Equalization of Opportunities for Persons with Disabilities (MoLSA, 1999).

In the year 2008 Proclamation No. 568/2008 on the Rights to Employment of PWDs was passed. The proclamation requires employers not to discriminate against PWDs and also requires them to provide appropriate working and training conditions, and working and training materials for PWDs. The Federal Democratic Republic of Ethiopia, through the Ministry of Works and Urban Development (MoWUD) developed the Ethiopian Building Proclamation No.624/2009. Part Four (article 36) of the proclamation states clearly that "any public building shall have means of access suitable for use by physically impaired persons, including those who are obliged to use wheelchairs and those who are able to walk but unable to negotiate steps. Where toilet facilities are required in any building, as adequate number of such facilities shall be made suitable for use by physically impaired persons and shall be assessable to them".

Administratively, the Ministry of Labour and Social Affairs is the Federal Ministry in charge of persons with disabilities while Regional Council and Labour Social Affairs Bureau are responsible for disability issues at regional level. The ministry is currently running a number of rehabilitation programmes on disability in partnership with other stakeholders including Ministry of Health, Ministry of Education, non-governmental organizations and associations of persons with disabilities and the international community.

Types and Prevalence of Disabilities in Ethiopia

The actual population of persons with disabilities in Ethiopia is not known because disability is a condition which is poorly understood. At the least estimation, in 2003, there were over 5 million children, adults and elderly persons with disabilities in Ethiopia, representing 7.6 per cent of the population (Behailu, 2007). There

Table 1: Types of disabilities and prevalence in Ethiopia

Type of Disability	Percentage
Disability on legs	23.34
Partial blindness	20.37
Blindness	11.91
Deaf/Mute	13.28
Hand disability	8.8
Mental impairness	6.48
Leprosy	3.48
Multiple disabilities	3.33
Other disabilities	3.22

Source: Ministry of Labour and Social Affairs- Awareness Creation Manual of 2000.

were 73, 918,505 people in Ethiopia in 2007 estimated to be 82,544,840 in 2008 (CSA, 2007). This translates into about 7.4 million persons with disabilities in 2007 and about 8.3 million PWDs in 2008. This is a significant population which must be taken into consideration in national development planning as per the UN Standard Rules on Equalization of Opportunities for Persons with Disabilities.

Twenty-three (23) types of disabilities have been identified in Ethiopia, the major ones being disability on legs, partial blindness, total blindness, leprosy, deaf/mute, hand disability, mental impairments and multiple disabilities. Currently, the number of persons with visual impairment in Ethiopia is estimated to be over 1.5 million (The Daily Monitor, 2009). Blindness comes early in Ethiopia mainly due to poor hygienic and sanitary conditions as well as malnutrition and insufficient medical care (The Daily Monitor, 2009).

Research Findings and Discussion

Government of Ethiopia's Response to Disability

Part 1.3.3 of this paper details the government response to the issue of disability. It can be concluded that there is a positive response from the government. However, disability issues are fragmented in various government policy and legal documents and there is no National Policy on Disability, like the case is in Uganda. While there is evidence of educational and health rehabilitation programmes in partnership with the international community, the issue of accessibility in residential, work and public places has not received adequate attention, save for the Rehabilitation Centre at Black Lion

Hospital and the National Library in the Ministry of Culture and Tourism.

Prevalence of Disabilities in Addis Ababa City

The current population of Addis Ababa city is 2,738,248 (CSA, 2007) but other sources estimate the city's population to be over 4 Million. The World Health Organization estimates that 10 % of the population in developing countries comprise of persons with disabilities (WHO cited in UN-Enable). It therefore follows that about 273,825 people (10 % of 2,738,248) in Addis Ababa city are PWDs. Addis Ababa Univerity alone is home to 410 students with disabilities (SWDs). This is a significant proportion which professionals, policy and decision makers in the built environment cannot afford to ignore.

Accessibility and provision of services

The study established that all the organizations consulted do offer services to persons with disabilities at least once in a while and 63.4 % of them confirmed presence of at least one member of staff with a disability. There is, adequate justification therefore, to improve accessibility and mainstream disability at workplace and public places. Despite this scenario, most organizations (70%) confirmed that their buildings are not easily accessible to persons with disabilities. The factors considered in this case are presence or absence of facilities such as ramps, lifts/elevators, handrails, lifts fitted with Braille numbers, talking lifts, and convenience rooms designed for persons with disabilities. The Ethiopian Building Proclamation requires all buildings that are 20 meters tall to be fitted with lifts but it is common to find buildings in the city that are more than this height that have no lifts. The survey revealed that the hospitality industry is slowly but surely responding well to the needs of persons with disabilities.

- *Awareness among service providers about needs of persons with disabilities*

Majority of respondents (73 %) are aware of the needs of persons with disabilities. However, despite such high degree of awareness, most (70%) of work and public places are largely inaccessible to persons with disabilities. This means therefore, that awareness does not automatically lead to action but is certainly a first and important step towards implementation

- *Challenges associated with Public transport and telecommunication*

Fig 1: Shows passengers scrambling for public transport in Addis Ababa city. Persons with disabilities can not access such bus with ease due to design factors and competition.

Source: Field survey, January, 2009

Actual measurement of 30 public telephone booths in various locations in the city revealed that receivers and dialing facilities are positioned at least 5ft above the ground and therefore not convenient to persons with hand and or leg disabilities. The blind too cannot use them since the dialing facilities are not written in Braille. Persons with disabilities are among the poorest in society (Anita and Jones 1997) and therefore most of them cannot afford alternative means of communication such as mobiles and they hardly have access to internet services.

The management of the main government public transport company (Anbessa City Bus) confirmed that their buses are not easily accessible to persons with disabilities and the company has no policy on persons with disabilities. Public transport is truly a nightmare to persons with disabilities. Even if they find employment, they may not manage to reach their places of work in time. They are therefore excluded to means of income by lack of convenient public transport. Poverty is their fate. The carriage ways are poorly designed and this makes it difficult to embark and disembark from vehicles. All bus stops in the city lack the basic facilities that enable persons with disabilities to board vehicles with ease and

this amounts to exclusion.

- *Convenience rooms for persons with disabilities in work places and learning institutions.*

Most (87%) of the organizations including universities do not have convenience rooms (toilets and bathrooms) that are designed for persons with disabilities and only 13% have the facilities, mainly hotels and hospitals. This scenario makes life unbearable for persons with disabilities. Discussions with students with disabilities at the Centre for Disability Studies revealed that some of them take several months to the take a bath- hence predisposing themselves to health problems such as skin and eye infections.

Fig 2: Students of Addis Ababa University expressing their views during focus group discussion. Source: Field survey, January, 2009

- *Learning environment in Universities and Colleges*

The learning environment in universities and colleges promote exclusion. For instance, all buildings in Addis Ababa University including the New Complex at the main Campus have no lifts and those with disabilities find it a nightmare to access lecture halls. Appropriate furniture for students with disabilities is conspicuously lacking. The situation is worse during examination time since the blind take their examinations from the corridors away from other examinees. Examination questions are read out for them since the Examination papers are not printed in Braille.

Blind examinees are not able to concentrate well due to all kinds of distractions and this may lead to minimal performance. Discussions with the students of Addis Ababa University revealed that persons with disabilities feel neglected and their voices go unheard by both policy and decision makers. They argue that research findings about persons with disabilities are *"an end"* in themselves since no action is taken. They further correctly observed that hostile living conditions in learning institutions militate against access to

education. According to Mengistu Legesse, the biggest problem is that "Universities have no policy on persons with disabilities and decision makers lack interest on persons with disabilities". Buildings at Ethiopian Civil Service College and Unity University were also found inappropriately designed to accommodate those with disabilities.

These findings are consistent with experiences from other cities in developing countries (Malombe, 1997; Beal 1997; Anita and Jones 1997; International Disability Foundation 1999 and Lindqvist 1999). In her paper titled "*Experiencing Disability in the City*" Malombe (1997) detailed the problems persons with disabilities face in the city of Nairobi. She observed that people with physical disabilities suffer physical and social exclusion in the city of Nairobi including institutions of higher learning such as universities because the authorities are insensitive to the cry of persons with disabilities. Most of the public buildings lack facilities for persons with disabilities who are then not able to participate effectively. There are physical barriers in transport sector, public buildings, and even Airports (Malombe, 1997). Lindqvist (1999) observed that exclusion is the most important single problem facing persons with disabilities. Anita and Jones (1997) observed that historically, urban and state planning has tended to reflect the interests of politically powerful interest groups. Urban and state planners generally failed to allocate resources on the basis of fairness and equality, often militating against the interests of weaker and less powerful social stakeholders.

- *Attitude of Urbanites towards persons with disabilities*

The urban society is characterized by very weak social cohesion and hardly do persons with disabilities receive the necessary support from fellow urbanites. While collecting data for this research paper, the authors witnessed blind people knocking against stationary and moving objects and even stumbling to the ground as they tried to find their way. Meanwhile their colleagues watched, least bothered

The rights of persons with disabilities are enshrined in the Constitution of the Federal Democratic Republic of Ethiopia and other government policy documents and proclamations. However programmes to achieve accessibility cab at best be described as being at their infancy stage. While the policy response by the government appears promising, physical exclu-

sion is likely to persist for long since no radical plan of action has been developed yet. The Draft Ethiopian Building Proclamation of 2008 is a major milestone towards enhancing accessibility in public buildings but standards are yet to be developed for effective implementation of the proclamation. A review of ongoing programmes by the Ministry of Labour and Social Affairs (MoLSA) shows that disability programmes are biased towards educational and health rehabilitation and little attention is paid on removal of physical barriers in residential, workplaces and public places.

Conclusion

- There is a significant proportion of persons with disabilities in Addis Ababa city, and hence a justification for necessary and immediate intervention measures to achieve a friendlier built environment
- The built environment tends to promote exclusion and this situation is likely to persist for many years to come unless radical intervention measures are initiated immediately.
- While most of the service providers are aware of the needs of persons with disabilities, negligible efforts have been made to make their services accessible to all.
- Government response on disability is encouraging but there is a lot of room for improvement.
- Despite the sad picture painted about disability and the built environment in Addis Ababa, there are unlimited opportunities to ameliorate the existing situation through combined efforts of the state, private sector, non-governmental organizations and the international community.

The way forward

The following mechanisms are considered effective for integration of the needs of persons with disabilities into the built environment. They are categorized into four broad settings including; institutional (policies and legislation), technical (urban planning, approval of building plans, urban design, public transport), economic/financial and social.

- *Institutional instruments*

This study recommends formulation of a national policy on disability in order to ensure a more coordinated approach to the issue of disability. This will give provision for a comprehensive national institutional framework for implementation of UN Standard Rules on Disability. Each

sector of the economy should have a policy on disability and effort should be made to implement such policy. Perhaps Ethiopia can borrow a leaf from Uganda in this case. The government of Uganda has not only come up with a national policy on disability but major achievements have been realized since public places and workplaces in Kampala city are now more accessible to persons with physical disabilities.

Technical instruments

- *Development control*

Since developers in towns and cities are required to seek development permission from relevant authorities, the authorities should ensure that proposed public buildings meet the needs of persons with disabilities. These include handrails, lifts, talking lifts, appropriately designed toilets and bathrooms, ramps, among others. Due to cost implications, the concept of zoning may be applied whereby the lower floors of public buildings are designed to accommodate persons with physical disabilities.

- *Urban design and planning*

Needs of persons with disabilities should be integrated into all urban plans and designs including buildings meant for use by the public, carriage ways, parking spots, Bus stops, recreational facilities.

- *Annual auditing of the built environment*

There is need for annual auditing of residential, work and public places to ensure that developers and property owners cater for the needs of persons with disabilities. This, however, requires a legal backing. Where possible, necessary modifications should be made to the existing built environment to make it friendlier to persons with disabilities

- *Public transport and telecommunications*

Public transport and telecommunications services should be more responsive to the needs of persons with disabilities. This can be achieved through acquiring a few municipal buses that are convenient to persons with disabilities. At least one seat in every public transport bus should bear the reading "*Please give up this seat for a person with disability*" and the seat should bear the *international symbol of disability*. Universities and colleges should provide students with disabilities with transport to and from lecture halls.

- *Economic/financial planning instruments*

Integrating needs of persons with disabilities into the built environment translates into heavy financial impli-

cations. Financial integration in this case involves factoring the cost of integrating needs of persons with disabilities in federal and regional budgets and giving tax rebates to private developers who may develop buildings that are friendly to persons with disabilities.

Education and training instruments

- *Curriculum review*-professionals in the built environment should be trained and sensitized about the needs of persons with disabilities. This can be realized through revision of curricula for training professionals in universities and colleges, and continuous education programmes for practicing professionals
- *Learning facilities*
  Learning institutions country wide should be equipped with facilities that enable students with disabilities to access education and knowledge with ease. These should include computer-aided. A case in point is the computer software JAWS that enables blind people to read (available at the Center for Disability Studies, Addis Ababa University).

Attitude Change through sensitization workshops/ awareness creation

Physical and social exclusion is mainly a state of mind and therefore this paper strongly recommends for attitude change in society and especially the service providers

Need for Benchmarking

It is important to set certain standards to be achieved with regard to the needs of persons with disabilities in Ethiopia and these should be consistent with the internationally accepted standards. Experiences from other countries can be used as benchmarks. Many countries in the developed world and those in transition have elaborate plans for persons with disabilities and the built environment is quite friendly to them. These include France, Germany, America, Britain, Canada, Japan, Finland, Australia, Korea, Malaysia, China, Singapore, New Zealand, the Philippines, and the Islamic Republic of Iran; among others. This therefore calls for regular review of progress on the basis of set guidelines.

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Remote Sensing and GIS for Estimating Slum Expansion on the North-Eastern Fringes of Abuja, Nigeria

Ujoh, F. * Ifatimehin, O. & Alaci, D*****

Abstract *A major feature that characterizes most urban centres, especially in developing countries, is the existence of a dual settlement pattern; the main city, and slum settlements. The expansion of slum settlements create ecological and environmental problems which include poor hygienic conditions due to lack of proper waste disposal infrastructure, inaccessibility to safe drinking water, susceptibility to diseases outbreak due largely to poor ventilation and hygiene, regular floods, rapid deforestation within and around the settlements, land degradation, excessive air, surface and ground water pollution, etc. This study examined the expansion of slum settlements Abuja in Nigeria. The area represents a sprawling 'conurbation' of slum settlements stretching (rather continuously) along either sides of the entry/exit route. Landsat ETM+ (2000) and NigeriaSat-1 (2006) images were integrated with field-collected data within ILWIS GIS environment. The analysis showed a rapid expansion of slum area from 31.52 km² to 104.51 km² in 2000 and 2006, respectively. In view of the environmental problems noticed in the study area vis-à-vis the observed pattern of expansion, recommendations were made to ensure environmental sustainability in this part of the world.*

Keywords: Slum Settlements, Sprawl, Ecological and Environmental Consequences, Remote Sensing and GIS

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Introduction

Urban population has been growing more rapidly than rural population worldwide, particularly in developing countries (Lambin et al, 2003). According to the United Nations Population Division (2002), by the year 2000, towns and cities sheltered

nearly half of the world's population (over 2.9 billion people), the majority of which are in developing countries. Most of this urban population is however, poor and lives under compromised conditions (Balogun, 1995). A major landmark that characterizes most urban centres especially in developing countries is the existence of a dual settlement pattern; the main city, and squatter settlements (shanty towns or slums). The settlement patterns have very distinct features such as quality and spacing of houses, type of waste generated, and methods of disposal and management, availability of infrastructure such as road networks, electricity, sewers and drainages, piped water network, and so on (Balogun, 1995).

Slum settlements are generally inadequate housing units found around major cities where the poor population lives. A slum is a settlement or part of a settlement portraying sub standard housing and squalor, lacking in tenure security among others. According to the UN-Habitat (2005), a slum area is one lacking in any of the following basic conditions; access to improved water; access to improved sanitation; security of tenure; structural quality and durability of dwellings and sufficient – living area. However, the poorly built housing units provide cheap housing to large populations who cannot afford the cost of living within the main city. From Bogota and Rio de Janeiro in South America, to Mumbai and Jakarta in Asia, and Johannesburg, Cairo and Lagos in Africa, the story of squatter settlements is replicated: Squatter settlements are developed to inhabit poor, low income city dwellers whose services are needed in the city and who in turn irk a living from city jobs (Cunnigham and Cunnigham, 2004).

Due to poorly planned human interference, many African cities have experienced untold environmental degradation and ecological deterioration in the past century, with little or no real solution to alleviate many of these concerns. Adequate information and appropriate technology are limiting factors for effective environmental management (Eedy, 1997; Eedy, 1999; Arimoro *et al*, 2002). Hence, efforts to improve, conserve and protect the environment will include not only the resolution of political policies but also the application of a state-of-the-art scientific approach to planning and implementation. The collection of remotely sensed data facilitates the synoptic analyses of earth-system function, patterning, and change at local,

regional and global scales over time (Rajeshwari, 2006).

Objectives

Given the importance of scientific data for informed decision making, the aim of this study therefore, is to map the rate of slum expansion within the study area using Remote Sensing (RS) data and Geographic Information Systems (GIS) techniques. The need for intensified and accelerated efforts towards acquiring accurate data that provide the estimates of the rate at which squatter settlements are growing would provide a basis for and aid in planning to ensure sustainable urban expansion in Nigeria and the developing world. These, in essence, constitute the need for and aim of this study. Cognizance to the realization of the broad objective are the following specific objectives; to estimate the rate of land use and cover change in the slum areas northeast of Abuja and highlight the policy implications. Therefore, it is hoped that this study would provide an estimate of the rate of slum expansion in the study area. The information would aid further research and for planning purposes.

The Particular Need for Estimating Slum Settlements Expansion in Nigeria

The United Nations estimates that at least 1 billion people (or 20% of the world's population) live in the vast, crowded, unsanitary slums, shanty town and squatter settlements that ring the outskirts of most Third World cities (Cunningham and Cunningham, 2004). Nigeria has, not unexpectedly, a very large number of its population living in slums and shanty towns. This is due largely to the very high rate of urbanization in the country resulting from rural-urban influx. According to the Thematic Committee (2001), in 1950, less than 15% of the total population of Nigeria was dwelling in urban centres; by 1975 and 2000, it had risen to 23.4% and 43.5%, respectively, and is projected to rise above 50% by 2010.

The accelerated degradation of the environment and associated negative effects is one of the greatest attribute of sprawling slum development (Orebanjo, 1996; Mabogunje, 2005; Alaci and Amujabi 2009), as studies from several regions have shown (Doos, 2002; Rajeshwari, 2006; Ifatimehin and Musa, 2008; Ujoh *et al.* 2008). The UN Millennium De-

velopment Goals (MDG No. 7) which is concerned with ensuring environmental sustainability aims at achieving the integration of the principles of sustainable development into country policies and programmes; reverse loss of environmental resources; reduce by half the proportion of people without sustainable access to safe drinking water; and achieve significant improvement in lives of at least 100 million slum dwellers, by 2015.This rather ambitious goal would perhaps remain utopian if concerted efforts are not made to generate environmentally-scientific data to aid decision making, especially in policy based issues.

Description of the Study Area

The study area is located between latitude $9^{0}03'02"N$ and $7^{0}33'30"E$ and Longitude $8^{0}58'08"N$ and $7^{0}39'10"E$, within parts of the Fed-

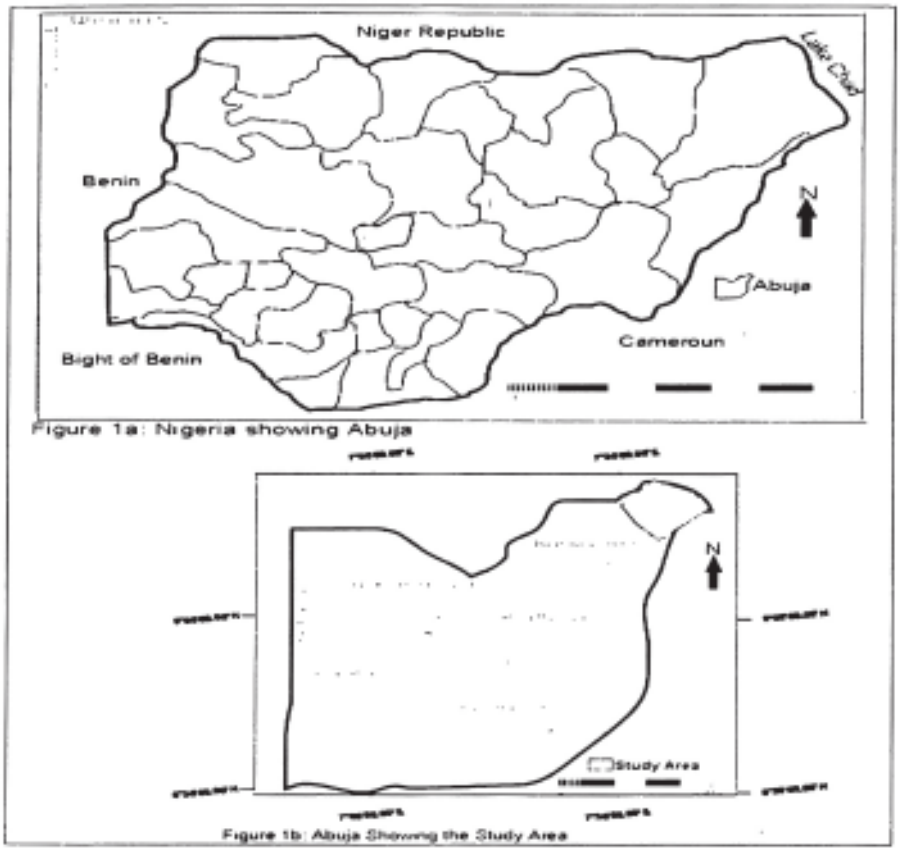


Figure 1a: Nigeria showing Abuja

Figure 1b: Abuja Showing the Study Area

eral Capital Territory and parts of the bordering Nassarawa state (Figure 1). The settlements that form the study area include Nyanya, Karu, Mararaba, 'One-Man' Village, Ado, New Karu, New Nyanya, Masaka, and Auta Balefi. These settlements are found occurring rather continuously along the major north-eastern entry/ exit route to and from Abuja, Nigeria's Federal Capital City.

The area is characterized by undulating (with some hilly dissected) terrain with several peaks above 760 meters above sea level. The area stretches rather continuously from the surrounding Aso-Bwari hill ranges into the Agwai-Karu plains (Balogun, 2001). The geology of the area is underlain by basement complex rocks. The area receives very high average amount of rainfall which is about 1,631.7mm. The annual mean temperature ranges between 25.8°C and 35.2°C (Adakayi, 2000). Abuja is, by far, the most developed city in the country; hence it has experienced rapid expansion and population concentration in recent years (Mashi and Alhassan, 2004).

Materials and Methods

The main data for this study were 2 satellite images of the study area for two epochs acquired from Landsat ETM^{+} (2000) and Nigeriasat-1 (2006). The 2 images were already corrected for geometrical and radiometric errors before they were acquired for this study. A hand-held Garmin III GPS was used in the ground truthing exercise. This was to ensure that features appearing on the images were in their appropriate planimetric positions. Reconnaissance and field survey combined to assist in the development of a classification scheme. Five land use classes were developed following Ifatimehin and Musa (2008). The maximum likelihood classifier algorithm was used within the ILWIS GIS image classification software environment to classify the satellite images. Statistics generated from the classified images showed the estimated rate of expansion of the slum settlements within the study area.

Results, Discussions and Policy Implications

Land use/ Land cover Change Distribution

The classification and quantification of the images of the study area was necessary in the detection of changes in the various LULC categories. Thus, the static LULC distributions for 2000 and 2006 (Table 1 and Fig-

Table 1. Static land use land cover distribution of the study area

CODE	LULC CATEGORIES	2000		2006	
		AREA (Km^2)	AREA (%)	AREA (Km^2)	AREA (%)
BUA	Built-up Area	31.52	18.42	104.51	61.07
CL	Cultivated Land	37.66	22.01	1.03	0.60
VL	Vacant Land	14.20	8.30	51.83	30.29
VEG	Vegetation Cover	82.09	47.97	10.59	6.19
WB	Water Bodies	5.65	3.30	3.16	1.85
TOTAL		**171.13**	**100**	**171.13**	**100**

Source: Derived from Classified Satellite Images of Study Area

ure 2) were derived. The table reveals that as at 2000, vegetation cover constituted the largest land cover category in the study area with 82.09 km^2, representing 47.97% of the total area under study. Built-up area covered 31.52 km^2 (or 18.42%) of the total area while the least land cover category at 2000 was water bodies with 5.65 km^2 or 3.3%.

However, by 2006 there were significant changes in the land use and land cover of the study area as built-up area expanded from 31.52 km^2 in 2000 to 104.51 km^2 in 2006. Similarly, vacant land increased from

Figure 2. Distribution of Land use land cover in the study area by km^2

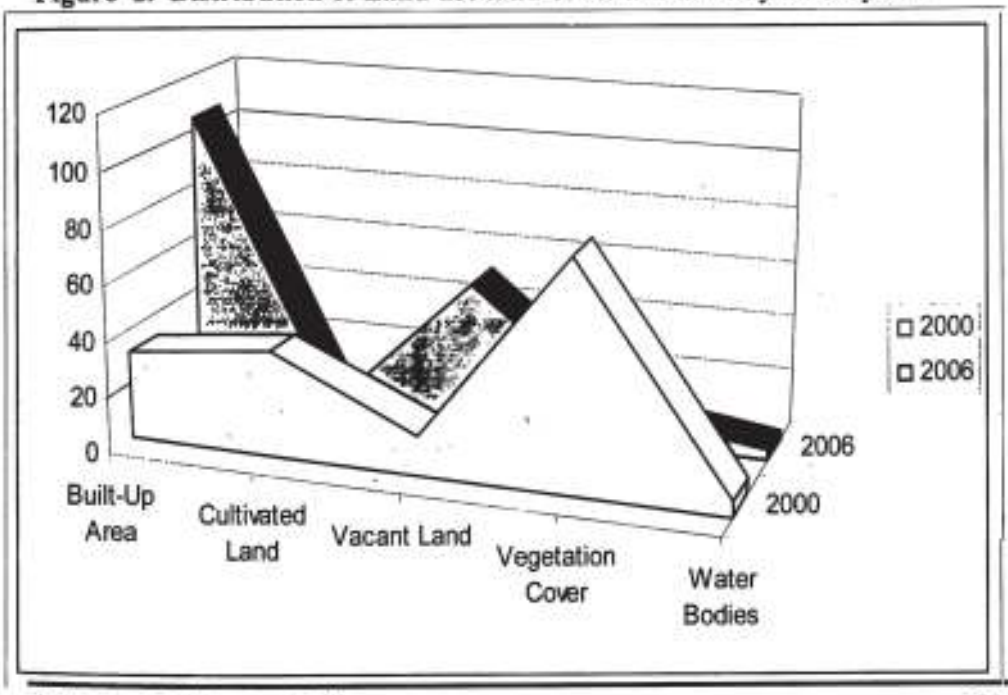


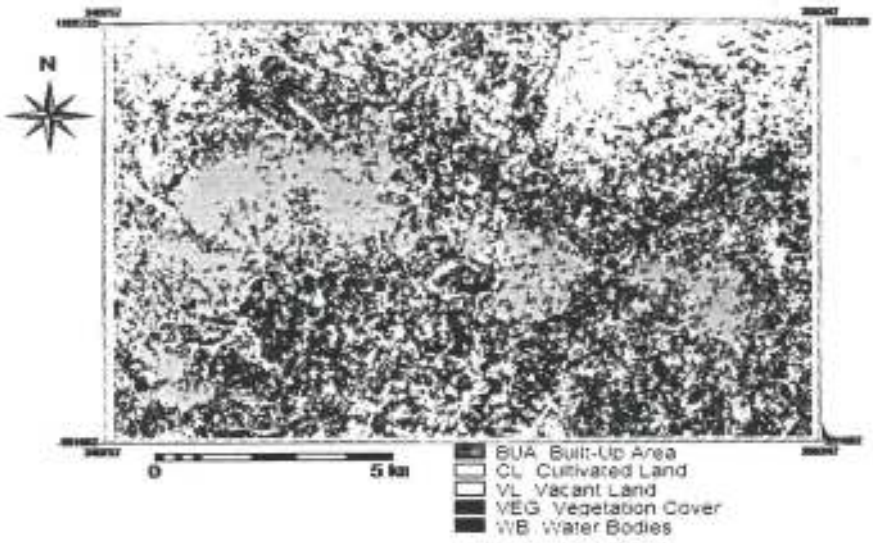
Table 2. Land Use Transformation in the Study Area 2000-2006

LULC Categories	2000					2006
	Built-up Area	Cultivated Land	Vacant Land	Vegetation Cover	Water Bodies	
Built-up Area	**31.52 km²**	21.03 km²		62.03 km²		**104.51k m²**
Cultivated Land		**37.66 km²**				**1.03 km²**
Vacant Land	10.07km²	15.60 km²	**14.20 km²**	9.47 km²	2.49 km²	**51.83 km²**
Vegetation Cover				**82.09 km²**		**10.59 km²**
Water Bodies					**5.65 km²**	**3.16 km²**

Source: Derived from Classified Satellite Images of Study Area

Note: Figures in bold (diagonally) represent area under that particular landuse in 2000, while figures in the same column represent the shift in area to other landuses. Similarly, figures in the same row are increase in area captured from the landuses.

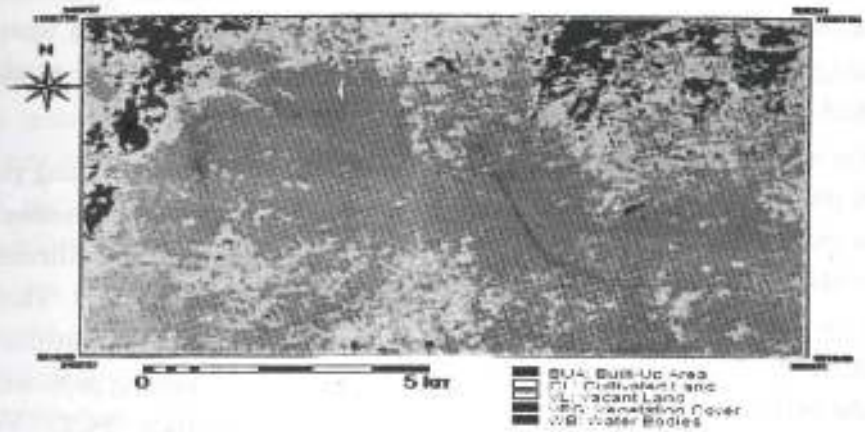
Figure 3. Land Use Land Cover Map of the Study Area in 2000



Source: Classified Landsat ETM Image of Makurdi for Year 2000

The False Color Composite (FCC) of the study area is presented in Figures 3 and 4. The FCC is a map that provides visual distribution of the land use land cover of the study area.

Figure 4. Land Use and Land Cover Map of the Study Area in 2006



Source: Classified Nigeriasat-1Image of Makurdi for Year 2006

14.20 km^2 in 2000 to 51.83 km^2 in 2006. Cultivated land, vegetation cover and water bodies declined from 37.66 km^2 to 1.03 km^2, 82.09 km^2 to 10.59 km^2 and 5.65 km^2 to 3.16 km^2, respectively.

The land use transformation matrix is shown on Table 2. The purpose and significance of the matrix is in its ability to reveal the direction of gain and loss, clearly stating the amount of land area gained and lost among the various land uses. Table 2 reveals that built-up area lost about 10.07 km^2 to vacant land while it gained

Table 3. Gain in Built-up Area of the Study Area between 2000 and 2006

Year	Built-up Area (Km^2)	Gain in Built-up Area (Km^2)		Time in Years	Arithmetic Mean Gain (Per Year)
		Km^2	%		
2000	31.52	72.99	70.00	6	12.17km^2
2006	104.51				

Source: Derived from Classified Satellite Images of Study Area

21.03 km^2 and 62.03 km^2 from cultivated land and vegetation, respectively.

Policy Implications

The findings of this study show that there has been rapid increase in slum area along the Abuja-Keffi expressway which constitutes the study area. This is as a result of the urban development policies embarked upon by Mallam Nasir el-Rufai who was appointed Minister of the Federal Capital Territory Administration (FCTA) in 2003. From that period up to May 2007, the FCTA pursued policies that led to mass movement of people from within and around the city centre outwardly, particularly towards the conurbation of slum settlement at the north-eastern fringes of the Federal City Centre, Abuja. The policies of the FCT administration, although quite laudable in terms of enforcing the master plan of the FCC, it led to the demolition of thousands of homes, thereby rendering hundreds of thousands homeless, and seeking for alternative housing elsewhere. The choice of most parts of the area under study as a preferred location for acquiring housing is due to two factors; first is the fact that it is under the authority of Nassarawa State Government, out of the FCT's jurisdiction, and therefore not subject to the strict urban planning laws in practice at the FCC and satellite towns within Abuja Municipal Area Council (AMAC). Second is the cost of acquiring or renting houses which is very low when compared to what is obtainable in the FCC and satellite settlements within AMAC.

The result of the strict planning policies by the FCT administration is rapid expansion of slum settlements as show in figures 3 and 4. This is because the houses are affordable to the low incoming earning populations of Abuja, Nigeria's FCT. Very noticeable within the study area are ecological problems and environmental degradation in the form of surface water pollution, poor hygienic conditions, and air pollution from fumes produced by thousands of mini-power generating sets as electricity is near absent in these slum settlements. Other environmental problems associated with slums and noticeable in the study area include rapid loss of agricultural land, erosion, loss of vegetation, and the creation of an urban heat island, as shown from other relevant studies (Doos, 2002; Olaniran, 2002; Mabogunje, 2005; Ujoh *et al*, 2008), not to mention other socio-economic problems such as crime, prostitution

and poverty (Olaniyan, 2000; Osinubi, 2003).

Conclusion and Recommendation

This study achieved the primary aim of estimating the rate of slum expansion on the north-eastern fringes of Abuja using remote sensing data and GIS technique. The estimates show the key role that remote sensing and GIS plays in providing the needed geo-information that is required for planning to ensure sustainability in resource exploitation especially as it relates to slum expansion in rapidly growing cities. The target of the Millennium Development Goal 7 is to achieve environmental sustainability and to ensure that the lives of, at least, 100 million slum dwellers is improved by 2020. This can only be achieved if studies of this nature are carried out to draw the attention of policy makers toward such vulnerable areas such as the study area. Although expansion of these settlements can hardly be stopped owing to rapid population increase, it can be directed toward a sustainable pattern through proper management and planning. The study therefore, recommends:

.i. Mass high-rise buildings should be developed to reduce the rate of land consumption caused by single-unit bungalows;

ii The provision of basic infrastructure and amenities such as drainages, roads, water and power at these settlements;

iii. The enforcement of simple layout (by town planning authorities) that can serve as a guide for housing construction so as to ensure that houses are well spaced for proper ventilation and hygiene;

iv. Governments at all levels should understand that policies are made for people and not vice versa. Hence, policies with human face should be developed at all times to avoid situations that would lead to the lumping of a certain class/group of people in a particular place;

v. Environmental sanitation and health officials should be tasked with monitoring and ensuring that slum are kept as clean as possible knowing how vulnerable these settlements are;

vi. Taking into consideration the important role that trees play in terms of providing a carbon sink, accelerated tree-planting should be encouraged within the study area.

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Spatial Patterns of Rural Households Access to Water Supply In Nigeria

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Abstract: *The aim of the paper is to analyse the pattern of rural household access to improved water supply in Nigeria. This is necessary in order to provide a comprehensive spatial picture of rural households' access to water supply in the country since existing studies are centred on few selected localities. To achieve the aim, relevant data were obtained from the Core Welfare indicator Questionnaire Survey Nigeria, 2006 and analysed by both descriptive statistics and cluster analysis. Specifically, access to water supply was calculated as the percentages of households with less than 30 minutes to reach the nearest drinking water supply while the states were grouped according to the magnitude of access using hierarchical cluster analysis. The results show that the national average of rural household access to water supply is 40% while 14 out of the 36 states and Federal Capital Territory (FCT), have access bellow the national average. The cluster analysis shows 4 groups of states on the basis of similarities on levels of access to water supply. The policy implications of the findings for water supply development in the country are highlighted including the need for the involvement of rural communities in water supply development.*

Key words: Access to improved water supply, cluster analysis, inclusive rural development, rural household and Nigeria,

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Introduction

Water is one of the earth's most vital resources and is central to everyday life. (UNESCO 2003; Welsh, 2006) It is the most basic of human needs, used for hydration, hygiene and sanitation (Bonilla et al. 2004). Water is also the most common substance on earth covering more than 70 per cent of the earth's surface. It is critical to nourishing and fostering life and is also vital to human existence and social and economic development (Chowdhury 2005).

Water fills the oceans, rivers, and lakes, and is in the ground and in the air we breathe. Although water

covers three quarters of the earth, only a small fraction is accessible to human beings as fresh water.Thus, despite the abundance of water and in spite of the fact that regardless of language or culture, all humans share this basic need that is essential for survival, access to water particularly in developing countries, is a luxury. For instance it has been shown that more than half of Africa's villages lack access to a clean water supply (Liswaniso, 2007). While water is taken for granted in many parts of the world and often wasted, 1.4 million children die each year from lack of access to safe drinking water (Chowdhury 2005).

Access to safe water therefore, remains a major concern in many countries of the world and in Africa, in particular. About two thirds of the African population lives in rural areas, where water supply and sanitation services coverage is the poorest (Economic Commission for Africa, 2006). For most of the rural poor, access to clean drinking water is as far removed as it can be from the western context of simply turning on a tap (Polak, Adhikari, Nanes, Salter and Surywanshi 2003) .For instance it has been shown that safe water supply coverage in rural areas of Ethiopia is very marginal because of limited progress in water supply activities in these areas.(Admassu, Kumie and Fantahun, 2003). Similarly, in Benin Republic only 23% of the populations have access to improved drinking water within the residence (Arouna and Dabbert (2008) while in Nigeria , research has shown that only about 35% of the rural population have access to safe and reliable water supply (Federal Republic of Nigeria , 2000; WaterAid 2006).

Access to an improved water supply means that the home or compound is connected directly to a piped system or that a public fountain, well, or stand post is located within 200 meters of the home status (Billig, Bendahmane, and Swindale, 1999; Polak, Adhikari, Nanes, Salter and Surywanshi 2003).National Bureau of Statistics (2006) on the other hand defines access to water in terms of household being located less than 30 minutes away from drinking water source.

It is recognized that access to sufficient, safe and affordable water is vital for socio economic development (Economic Commission for Africa, 2006). This is because in addition to immediate domestic use, many poor households use water to earn an income through, for example, preparing

and cooking food, laundry work, cleaning car windows or turning water into ice for sale. In rural areas, water is also used for livestock, for growing vegetables and for making bricks (Water Aid & Rights and Humanity, 2009).

In recognition of this importance, a National Water Supply and Sanitation Policy were adopted in Nigeria in January 2000. The policy makes the supply of adequate water supply and sanitation a right of all Nigerians, and gives responsibility to the three tiers of government, the private sector and the beneficiary (Federal Republic of Nigeria, 2000) The NWSSP targets for water supply are as follows: improve service coverage from assumed 40% to 60% by the year 2003; extend service coverage to 80% by the year 2007; achieve 100% coverage by the year 2011. In 2003 the "Presidential Water Initiative (PWI): "Water for people, Water for life", was launched. By 2007, the PWI aims to provide: 100% water and sanitation access in state capitals 75% water and sanitation access in other urban and periurban areas and 66% water and sanitation access in rural areas (Federal Republic of Nigeria, 2003; 2004, WaterAid, 2006)

Despite the policy statements, low access to improved water has remained a serious problem in the country as in other developing countries (WaterAid, 2006). The failure results from the fact that the Nigerian Government has long considered the provision of water supply to be the domain of the federal, state and local governments and as a result, the public sector has not been successful in meeting more than a small portion of the demand of water for residential and commercial users. Also the high cost of imported equipment especially in terms of a depreciating currency, and inadequate cost recovery policies have contributed to large financial deficits in many State Water Authorities (SWAs) (Federal Republic of Nigeria 2000).

Furthermore, the failure can be attributed to the fragmented focusing on water resources development on a sub-sectoral basis but neglecting to manage it strategically as a national resource by past governments (WaterAid 2006).According to Obeta (2009) there are also the problems of lack of grass root support for local based rural water supply programme and inability of rural communities to mobilize enough resources and other logistics needed for water supply development.

As a result of the low access to water

supply there exist a number of linkages between water supply problems and a cluster of key sectors, including health, education, agriculture and environment in the country (Federal republic of Nigeria 2000).For instance Uzomah, (2009) has shown that about 80% of the households in Taraba state, Nigeria have access to less than 30 liters of water per person per day, and because of low water availability, there is a prevalence of water-related diseases .This supports earlier findings elsewhere which show that lack of access to water increases sickness and morbidity, decreases available time and resources for productive activities, and thereby reduces population welfare in developing countries (UN/WWAP, 2003; Jong-wook, 2004).In addition, lack of access to adequate clean water is one of the most devastating effects of poverty (Häusermann 2002; Water Aid & Rights and Humanity, 2009).

Specifically, Alaci and Alehegn (2009) have shown that when access to water is disrupted, people face acute human security risks transmitted through poor health and the disruption of livelihood. In their view water front is where the war of poverty and by implication attainment of the MDGs would be won or lost. With focus on Africa, AWDR (2006) posit that sustainable development in Africa concerns universal access to safe drinking water, sanitation and food security, the lack of which is both a primary indicator and cause of poverty.

Against this background, information on the water consumption pattern of a population is essential as it can be used to estimate the risk of adverse health effects attributable to any water contaminants. It is also crucial in developing a safe water supply programme for a population (Milton, Rahman, Smith, Shrestha and Dear, 2006). More over it is only through such an analysis can the imbalance between the constituent states be understood and addressed (Madu, 2003; 2007).

In spite of the importance of the analysis of the pattern of access to water supply there is no study in Nigeria that provides a comprehensive picture of access to water supply in rural areas of the country. Rather what exist are pockets of community studies in some states. Therefore the purpose of this study is to fill up the research gap by analysing the spatial patterns of rural household access to water supply using all the states and the Federal Capital Territory (FCT).This will not only make com-

parison across the states possible but will provide at a glance the spatial picture on the performance of the states in the implementation of the National Policy on rural water supply programme.

Methods

The data for the study were obtained from the 2006 Nigerian Core Welfare indicator Questionnaire (CWIQ) Survey published by National Bureau of Statistics (2006). The CWIQ was a national survey covering all the states of the federation and the Federal Capital Territory (FCT).Three main instruments used for the survey were CWIQ questionnaire, interviewer's manual and supervisor's manual. However, the questionnaire served as the main data collection instrument .The survey was designed with the Local Government Area (LGA) serving as the reporting domain. Data were aggregated to derive estimates at Federal Constituency (FC), Senatorial, State, Zonal (geo-political) and national levels. Two-stage cluster sample design was adopted in each LGA namely Enumeration Areas (EAs) or the Primary Sampling Units (PSUs) and Housing Units (HUs) which formed the Ultimate Sampling Units (USUs).The overall sample size of the survey was 77,400 Housing Units (HUs) (National Bureau of Statistics 2006).

Descriptive statistics and hierarchical cluster analysis was employed to analyse the data. Specifically, the distribution of households by main sources of drinking water supply was analysed by percentages. The main sources of drinking water supply considered are pipe borne water treated, pipe borne water untreated, bore hole/hand pump, protected well, rain water, river/lake/pond and vendor / truck Similarly, access to improved source was calculated as percentage of sample households by time(less than 30minutes) to reach nearest drinking water supply by states and FCT. Finally, Ward agglomeration method of hierarchical cluster analysis was used to group the states and FCT on the basis of the magnitude of their access to water supply and the pattern mapped accordingly. The cluster analysis was done using SPSS package version 10.0

Results

The study reveals that there are diverse sources of domestic water supply in rural areas in the country. These include pipe borne water, boreholes, wells, river, stream, and pond water, and rainwater. Households tend to use multiple water sources

across seasons and for different purposes. The households however tend to depend on one major source, which is supplemented by additional sources.

In majority of the rural households, river is the main water supply source. Accordingly, it has a mean of 20.49 while rain water with a mean of 0.49 offers the least source of domestic water supply to rural households in the country. Table 1 which is the results of the descriptive statistics indicates that there is a wide variation in the distribution of households by main sources of drinking water supply in Nigeria. The highest difference however occurs in the distribution of households by use of river source with a range of 49.94. This is understandable since this is a natural source which human beings do not contribute in their creation and distribution. However, the ubiquitous nature of rain which is also a natural phenomenon makes the range of distribution of households' use of rain water the lowest.

The distribution of the rural households according to water supply sources is shown in table 2.The table indicates that Osun (5.08%), FCT (4.85%), Kwara (4.44%) Ekiti (4.39%) and Lagos (4.00%) fair better in the use of treated pipe borne water. The lowest distribution of households in terms of use of treated pipe water occurs in Rivers (0.05%),

Table 1: Descriptive Statistics of the distribution of households according to water sources.

	Range	Minimum	Maximum	Sum	Mean	Std. Deviation	Variance
Treated pipe water	5.03	.05	5.08	69.36	1.8746	1.4925	2.227
Un-treated pipe water	2.44	06	2.50	18.26	.4936	.5396	.291
Borehole	22.31	1.25	23.56	292.58	7.9075	5.6169	31.549
Protected well	21.32	.20	21.52	268.58	7.2589	5.7809	33.419
Un-protected well	44.08	.16	44.24	517.14	13.9769	13.3470	178.143
Rain	3.20	.00	3.20	17.93	.4847	.7548	.570
River	49.94	.17	50.11	758.24	20.4929	13.1516	172.964
Vendor	12.35	.03	12.38	83.48	2.2561	3.0187	9.113

Source: Author's calculation

Cross River (0.11%), Adamawa (0.13%), Abia (0.25%), and Akwa Ibom (0.25%).The table also indicates that only very few rural households in the country drink treated piped water. The distribution pattern further shows that generally the south west geo-political zones is better of in this regard while the south- south is the worst.

With respect to borehole water source, rural households in Abia, Jigawa, Edo and Lagos are better of with 23.56%, 20.27%, 18.45%and 18.18% respectively. On the other hand Kaduna, Plateau, Sokoto and Osun have the least values of (1.25%), (1.78%), (1.78%) and (2.23%) respectively.

The results of the analysis of access to improved source calculated as percentage of sample households by time (less than 30minutes) to reach nearest drinking water supply show that rural areas in the country generally have low access to water supply (table 3). The national average is approximately 40%, although majority of the states have population of the rural households with access to water supply above the average. On state level, Zamfara ranks first with 51.07% of the rural households having access to water. This is followed by FCT and Lagos respectively with 46.79% and 43.97 % respectively. The states with the lowest access to water supply are Enugu (27.76%), Imo (28.33%), Akwa Ibom (31.15%), Cross River (31.89%), Anambra (32.35%) and Ebonyi (33.13%) and all are located in the south east. The pattern support earlier findings by WaterAid (2006) in which Global Imaging Satellite (GIS) mapping of water and sanitation infrastructures in some local governments was used to show that water points are not equitably distributed between enumeration areas of similar population sizes and that new investments tend to reinforce rather than rectify these inequities.

A number of reasons account for the low access to water supply in rural areas of Nigeria. They include the fact that despite the existence of legal water institutions in Nigeria prior to independence, the whole thrust of the legal instruments appear to be on urban water supply (Blench, 2005). Although, the institutional basis for service delivery including a formal water management programme in the rural sector was introduced with the coming of independence, the sector is still bedeviled by the dominance of government in the management of rural water supply facilities (Alaci and Alehegn, 2009). Consequently,

the provision of water supply and services in Nigeria is perceived as a social responsibility of the Government. One effect of this is the apparent lack of grass root support for local based water supply programmes. Also the development of rural supply infrastructure in the country has been adversely affected by insufficient and erratic funding (Obeta, 2009).

Again, the national water supply and sanitation policy in Nigeria although provides an articulated approach to the systematic development of potable water over a defined period of time and to adopt a cost sharing formula for construction of water facilities by the federal, state and local government and the beneficiary communities (FGN, 2003), a major missing link is the procedure that guarantees effective delivery.

At the moment there is no policy document or instrument anywhere in Nigeria that bound Local councils to specific annual investment in infrastructure. Similarly at both the state and federal level, water investment decision (including amount and location) is at the benevolence of political office holders (Alaci and Alehegn (2009).

The grouping of the states on the basis of rural household access to improved water supply using Hierarchical cluster analysis further confirms the pattern. It shows that there are four basic clusters with the first group or cluster consisting of 21 states (fig1). The group has an average access of 42.59 and a Standard Deviation of 0.77. Fourteen of the states are in the north while 6 of them are in south west and 1 in the south-south .The second group with an average access of 48.93 and a Standard Deviation of 3.03 has only Zamfara state and the FCT. It is the group that has the highest access to rural water supply in the country. The third group or cluster has 8 states namely Abia in the south east , two South- south states of Edo and Rivers , the North central states of Benue, Kogi, Nassarawa and Plateau and Taraba in the north east geopolitical zone. The average access to rural water supply of this group is 36.76 while the Standard Deviation 1.29. The last cluster comprising 4 out of the 5 states of South east Geopolitical zone namely Anambra, Ebonyi, Enugu, and Imo and 2 South-south states of Akwa Ibom and Cross River have the least acleast access to rural water supply in the country. It has an average access of 30.77 and Standard Deviation of 2.21.

Table 2: Percentage distribution of rural household by means of water source

S/no	State/FCT	Pipe water treated	Pipe water treated	Bore hole	Protected well	Un-protected well	Rain	River	Vendor
1	Abia	.25	.12	23.56	.25	.16	.47	26.48	.40
2	Adamawa	.13	.18	6.40	4.36	21.59	.20	27.32	4.17
3	Akwa bom	.25	.15	15.76	.20	25.88	.13	38.04	.03
4	Anambra	.49	.06	7.23	4.26	.73	1.73	18.60	9.83
5	Bauchi	1.59	.21	5.00	5.34	44.24	.07	7.63	.53
6	Bayelsa	.85	.65	8.90	.88	7.52	1.87	44.24	.53
7	Benue	1.30	.15	2.69	13.97	5.10	.27	36.28	1.99
8	Borno	1.95	1.03	5.95	3.33	33.89	.07	2.18	4.83
9	Cross R.	.11	.15	9.89	2.11	.97	.00	26.23	.10
10	Delta	.46	.68	11.14	6.91	23.05	1.73	15.59	.40
11	Ebonyi	2.07	.12	11.25	.74	5.01	.13	36.62	.03
12	Edo	1.25	.38	18.45	1.91	3.88	1.87	17.01	3.48
13	Ekiti	4.39	.32	3.60	12.55	3.32	.00	17.93	1.23
14	Enugu	2.84	.26	3.33	1.37	2.10	3.20	29.49	7.78
15	Gombe	.72	.32	4.36	3.92	39.63	.47	16.34	1.85
16	Imo	.82	.24	12.23	.98	.49	1.67	23.96	8.21
17	Jigawa	.66	.62	20.27	3.48	23.78	.20	1.34	.66
18	Kaduna	3.97	.26	1.25	21.52	16.98	.00	4.61	.30
19	Kano	1.51	1.38	6.10	7.40	32.19	.13	3.02	3.58
20	Katsina	1.54	.35	4.17	11.13	29.84	.13	12.82	.83
21	Kebbi	.89	.24	2.69	12.84	38.34	.33	9.55	.43
22	Kogi	1.16	.32	5.87	6.57	4.12	.07	25.64	6.75
23	Kwara	4.44	.26	9.73	9.46	4.29	.07	13.66	1.09
24	Lagos	4.00	1.97	18.18	5.39	1.21	.00	.17	1.82
25	Nassarawa	2.02	.53	2.92	9.12	16.01	.07	29.75	.33
26	Niger	3.84	.59	8.48	8.24	8.01	.07	20.36	.36
27	Ogun	3.28	.59	13.45	4.75	4.12	.07	19.86	1.19
28	Ondo	1.82	.24	6.89	15.98	2.67	.07	25.89	.83
29	Osun	5.08	.21	2.23	16.62	1.70	.20	17.68	1.13
30	Oyo	2.79	.35	6.82	20.78	4.21	.00	9.22	1.39
31	Plateau	3.08	.09	1.78	9.75	14.80	.07	27.48	.66
32	Rivers	.85	2.50	10.95	7.11	18.60	.27	15.42	.30
33	Sokoto	2.48	.50	1.78	15.59	35.91	.07	.92	.23
34	Taraba	.05	.15	3.71	4.46	11.48	1.07	50.11	1.52
35	Yobe	.49	1.56	3.71	4.46	11.48	1.07	50.11	1.52
36	Zamfara	1.11	.26	7.69	10.05	19.65	.07	20.78	.76
37	FCT	4.85	.29	4.17	.78	.16	.07	15.92	12.38

Source: Computed from NBS (2006)

Table 3: Access to water source in rural areas

S/no	State/FCT	Access (%)
1	Zamfara	51.07
2	FCT	46.79
3	Lagos	43.97
4	Kebbi	43.63
5	Niger	43.49
6	Kano	43.41
7	Jigawa	43.23
8	Bayelsa	42.95
9	Kaduna	42.89
10	Sokoto	42.85
11	Ogun	42.81
12	Ondo	42.72
13	Osun	42.67
14	Katsina	42.63
15	Oyo	42.50
16	Bauchi	42.45
17	Adamawa	42.26
18	Gombe	42.24
19	Delta	42.17
20	Borno	41.86
21	Yobe	41.53
22	Kwara	41.12
23	Ekiti	41.08
24	Edo	38.27
25	Rivers	38.16
26	Taraba	38.04
27	Plateau	36.76
28	Abia	36.53
29	Nassarawa	35.86
30	Benue	35.38
31	Kogi	35.04
32	Ebonyi	33.13
33	Anambra	32.35
34	Cross River	31.89
35	Akwa Ibom	31.15
36	Imo	28.33
37	Enugu	27.76
	National mean	**39.75**

Source: Computed from NBS (2006)

The pattern of access to water supply in rural areas of Nigeria is however better appreciated by examining figure 2 in which the groups are mapped as very low, low, average and moderate with access values ranging from 27.76-33.66, 34.66-40.66, 41.56-47.46 and 48.45-54.36 respectively. Figure 2 at a glance shows that majority of the states in the country have above average access while the south eastern states of Anambra, Ebonyi, Enugu, Akwa Ibom and Cross River have access far below the national average. Other states with low access to improved water supply include Benue, Kogi, Nassarawa and Taraba.

A number of reasons have also been adduced for the pattern of access to water supply in the country particularly the higher access to water supply in the north. In the first place the massive water resources development in the north by the both the Federal and State Governments, International Organizations and NGOs following the Sahelian droughts of the 1970s and 1980s, as well as a long standing tradition of developing, maintaining and living close to community wells in the north, favoured rural water development in the region (Akpoborie, 1995; Agada, 1998 and Ofoezie, 2003). Further more, there are indications that there is a strong political

influence on the provision of water facilities as the allocation of government boreholes is mainly left to the inclination of political leaders and

Conclusion and Policy Recommendations

The analyses have shown that access

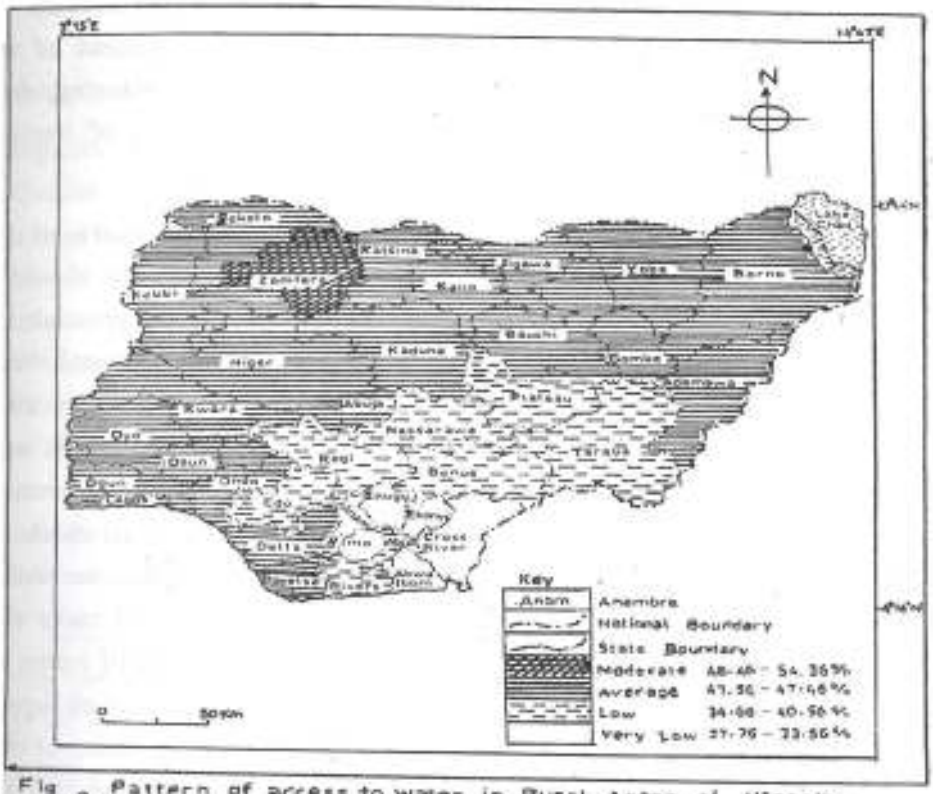

Fig 2 Pattern of access to water in Rural Areas of Nigeria

state patronage (WaterAid, 2006).In this regard there has been low level of state patronage by governments in the middle belt and south east states. This low patronage coupled with the effects of damages to the water supply infrastructure facilities during the Nigeria Civil of 1967-1970 which has remained un-repaired to date has been the root cause of low level of access to rural water supply in south eastern (Obeta, 2009).

to water in rural households in Nigeria is generally low. The results show that on the average only 40% of rural households in the country has access to improved water and that no state in the country has reached the projected 66% of access to water supply in rural areas as targeted by the Presidential Water Initiative in 2007. However the states in the north and south west are comparatively better

of than the south eastern states and some states in the middle belt of the country. The reasons for the greater access to water supply in rural areas particularly in the north include massive rural water supply development by various tiers of government to combat drought and more involvement of international organizations and other stake holders in rural water supply programmes. In the south east, the effect of the Nigerian civil war is still being felt 39 years after the end of the war as the major rural water supply projects damaged during the war are yet to be repaired. In addition both the southeastern states and the middle belt states of the country experience poor development of rural water supply because of government neglect of water development facilities.

It was also identified that the perception of the people on the provision of water supply and services in Nigeria as a social responsibility of the Government alone is a major reason for the apparent lack of grass root support for rural water supply programmes .Yet experience throughout the world has shown that the most successful rural water supply programmes are those that rely heavily on community responsibility, initiative and self help. The implication is that providing safe water services to rural dwellers in the country should be the goal not just of governments but also of rural dwellers that use water the supply services. This calls for the involvement of rural communities in the planning, development and provision of improved water supply.

To achieve this, individual rural communities in the country should be enabled to pursue the principles incorporated in the National Water Supply and Sanitation Policy aimed at community participation in water supply. Accordingly rural communities must be allowed to (i) choose the level of service that they are willing and able to pay for and make their own rules as to the use of water; (ii) take full responsibility for all aspects of maintenance and operation of their water supply systems; and (iii) pay the full price for maintenance and operation of their systems and a part of the capital investment.

The study also notes that access to water is important to socio-economic development and poverty eradication. The importance of water to development is well recognized in the Millennium Development Goals (MDGs).Therefore by including water supply in the MDGs the world

community has acknowledged the importance of its promotion as development intervention. It is thus necessary that Nigeria pursues vigorously rural water supply programmes in order to meet the MDGs targets in water supply.

It is suggested here that the target can be achieved if the government of Nigeria imbibes the strategy of inclusive rural development. In a broad term, inclusive rural development is about improving the quality of life of all members of rural society (Lucas, 2008).This will entail making the fruits of rural development including rural water supply available and accessible to all, particularly the poor.

Thus inclusive rural development will not only ensure adequate availability of rural infrastructure including water supply but will also help reduce disparity between rural communities in their provision. In this regard the government should pursue vigorously the development of dynamic agricultural sector, improvement in access to rural services, development of rural non farm enterprises, establishment of effective rural development institutions, rural infrastructure development and effective land reform.

In addition it was noted that the development of rural water supply infrastructure in the country has been adversely affected by insufficient and erratic funding. To ensure that substantial funds are available to implement a nationwide rural water supply investment programme, the Federal Government should take the lead in mobilizing domestic funds and external assistance for implementation of the programme. Furthermore, the federal government should provide special grants for rehabilitation of the damaged rural water projects during the civil war as well as the provision of new ones in southeastern Nigeria. Similarly, states in the middle belt should be targeted for special intervention by the federal government.

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Incorporation of HIV/AIDS Education in the Secondary School Curriculum in Addis Ababa

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Abstract: *The main purpose of this study was to investigate whether HIV/AIDS education is incorporated in the secondary school curriculum. To this end, the contents of selected textbooks were critically analyzed as part of curriculum analysis. Classroom observation was also made to analyze the mode of delivery of HIV/AIDS education. Textbooks of secondary school curriculum were found ill-equipped with the essential elements of HIV/AIDS education. The existing contents have been geared towards more of the cognitive aspect than that of affective one. It also deals more on explaining the severity of HIV/AIDS than focusing on the prevention and mechanism of controlling it. No link or integration between mini-medias, HIV/AIDS clubs and classroom learning of HIV/AIDS as a result the lesson on HIV/AIDS is becoming boring and redundant. HIV/AIDS education needs to be comprehensive that leads learners to interact meaningfully in the classroom than encouraging merely retrieval of pieces of information.*

Key words: *Curriculum integration, HIV/AIDS education, secondary school curriculum, vulnerable groups, Addis Ababa.*

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Introduction

The world faces an unprecedented and accelerating crisis, 20 million lives already obliterate by AIDS, 40 million people live with HIV/AIDS, and development achievements seriously undermined in many countries. Recently, it has significantly affected most African countries including Ethiopia. Although the problem has been well documented, the measure taken has not limited the spread. Due to these circumstances, education is recommended to reduce the spread of HIV/AIDS.

Among the various age groups, the youth are highly vulnerable to HIV/AIDS and need great attention in the work of preventing the spread of the disease. Besides, recent surveys have revealed that three–quarter or more of all teenagers', males and females, have had sexual intercourse before their twentieth birthday and

much of this sexual activity is risky (UNAIDS, 2005). So that, preventing this disease through AIDS education in the secondary school curriculum is indispensable. For instance (Alcamo, 1983); UNAIDS, (2005) underline education as the most imperative and valuable component for preventing the spread of HIV. They further explain the reason for AIDS education on the following points:

1. to improve quality of life for HIV positive people.
2. to reduce stigma and discrimination
3. to reduce the number of new infected people. This includes giving information about HIV, teaching people to put this information to use and act on it practically, and recognizing and addressing gender relation as a key component in HIV/AIDS prevention.
4. to achieve the millennium development goals

Moreover, Alcamo (1993) notice, that when students reach junior and senior high school level the breadth of AIDS education can be considered in attempting to give students clear understanding about HIV status. Therefore, by reducing fragmented lesson and by making variety connection; relationships among the concept of school subject, it is possible to incorporate AIDS education and to facilitate meaningful learning (Cline, et. al, 1996).

For the same reason, Windal (2004) explained HIV/AIDS curriculum is often relegated to health class; however; it should come into life in art class, English class, in Math's and in Geography. The thought was that if students missed the message in one course, an activity in another course might capture their imagination and begin the learning process. This could be explained for instance:

Social studies/geography- students could study HIV/AIDS distribution maps and talk about the needs of people with HIV/AIDS in rural Vs urban settings.

Science - students tested different brands of condoms of their ability to protect and they tested the benefit of water based over petroleum-based lubricant.

English - one activity involved a study of the correct use of AIDS.... Spoke to students responded by writing poems to describe their feeling or responses to spoken to question such as: How did it feel to have some one living with HIV/AIDS here in class? Do you have different feeling or

understanding about people who are living with HIV/AIDS than you had before you m et and heard the speakers?

Math- an activity to solve problem using AIDS related statistics

Art- Students designed panels for the AIDS Memorial Quilt for people they knew or, if they didn't know anyone who has died of HIV/AIDS, they designed a panel for one of several "make-believe" people based on personality profiles provided.

Cooking- Students planned a diet for HIV/AIDS patients based on information about their health needs.

Physical Education- Students used the "Now That You Know" series to learn about the physical limitations of people with HIV/AIDS. They ran up and down the basketball court with ten pound weights strapped to their ankles to simulate how tired a person with HIV/AIDS might feel.

Therefore, textbooks should be connected or interwoven HIV/AIDS education in all area of the curriculum to guide practical application of HIV/AIDS education. As to UNAIDS (2005:28) the overwhelming majority of people with HIV, 95 percent of the global total, live in the developing world. The most rapid increase and new infected are being observed in Africa particularly in sub-Saharan countries.

An increase number of death due to AIDS reported 15 to 24 years old (UNICEF, 2006:17) that seems similar to the document data AIDS in the ministry of health, which portrays school age students are highly infected with HIV.

According to MOH (2005), the most rapid increase being observed in the age 15-49, which school age-young people predominant. About 91% of HIV infections occur among economically functional adults between 15 and 49 years and the number of new infections is highest among youth aged 15 to 24 (UNAIDS,

Table, The spread of HIV/AIDS in Ethiopia

• 0-15 age who live with HIV/AIDS15	350,0000
• 15-25 age who live with HIV/AIDS	2.400,000
• 25-49 age who live with HIV/AIDS	1.500,000
• Females who live with HIV/AIDS	1,900,000

Source: Ministry of Health (2005)

2008). Besides, from the total number of people infected with HIV/AIDS females take the highest number. Sub- Saharan Africa remains most heavily affected by HIV, accounting for 67% of all people living with HIV and for 72% of AIDS deaths in 2007. Globally, there were an estimated 40 million [30million—40 million] people living with HIV in 2007(UNAIDS, 2008). All the above report clearly indicates if the current situation continues, it is impossible to achieve the millennium development goal by 2015.

Besides, to alleviate such serious and critical problem, secondary school curriculum needs to incorporate AIDS education. As to Pelssis (1996), school subjects should be interwoven towards health education to address the society at large. Therefore, to see how far it is incorporated or infused into the text books of secondary school is essential to analyze behavior of students about AIDS. This calls for subject matters to be featured not as a system of ideas or concepts, but as ideas that have relevance to practical problem. It is worthy, therefore, to see how HIV/AIDS education incorporated in the secondary school curriculum. The main purpose of this study was to investigate the incorporation of HIV/AIDS education in the secondary school curriculum. More specifically, the study was designed to achieve the following specific objectives:

1. To examine the incorporation of HIV/AIDS education in various syllabi of secondary school curriculum in Addis Ababa.
2. To observe how HIV/AIDS education delivered in the classroom.
3. To analyze how HIV/AIDS education in the classroom lesson integrated with mini-media and Anti-AIDS clubs in the school.
4. To suggest possible practical solutions to the problems pertinent to the incorporation of HIV/AIDS education in the curriculum.

Research Methods of the Study

This paper was designed to investigate whether HIV/AIDS education is incorporated in the secondary school curriculum. The method of this study was "content analysis". It is a research tool used to determine the presence of certain words or concepts with in the text or set of texts (Amare, 1998). Therefore, content analyses of secondary school textbooks were conducted to check the inclusion/incorporation of HIV/AIDS education. Besides, observation was made to check the mode of delivery of HIV/AIDS education in Minilik

Secondary school in 2008-9 academic years in Addis Ababa.

Data Sources

Grade 9 & 10 textbooks of Biology, Geography and English were selected from natural science, social science, and language respectively by using a lottery method to check the incorporation of HIV/AIDS education in the curriculum. Classrooms of Minilik Secondary schools were observed to check the mode of delivery of HIV/AIDS education.

Data Gathering Instrument and Procedure

Content analysis of secondary school curriculum was conducted to check the inclusion / incorporation of HIV/AIDS education. The units of analysis were chapters. Thus, each chapter of the textbooks for secondary school curriculum was critically analyzed using the appropriate instruction of HIV/AIDS: HIV/AIDS & its relation with Gender, Stigma and Discrimination, Mode of Transmission, and Method of Prevention and Control are appropriate content area to place instruction on HIV/AIDS (WHO, 2002).

The above categories were rated using "✓" mark if each chapter of the textbooks treated the content of HIV/AIDS education and "x" if each is not treated the content of HIV/AIDS education.

Then, the investigator and the other external investigator from member of general secretariat of HIV/AIDS were engaged in undertaking the coding purpose. The other investigator is selected due to the fact that he currently engaged in teaching the severity of AIDS in city government of Addis Ababa.

Classrooms were observed in order to see the mode of delivery of HIV/AIDS education as well as to check the integrated effort of mini-medias, classrooms and HIV/AIDS club in the secondary school.

Data Analysis

Findings of the content analysis were analyzed by using percentage. Similarly, each topic of HIV/AIDS in the textbooks together with the implication of the result was discussed through qualitative analysis. Qualitative analysis was supplemented by quantitative analysis.

Result and Discussion

Result

The results analyzed based on the selected textbooks and the investigator would like to present the data or areas where the necessary informa-

tion of HIV/AIDS is found in the textbooks.

Table II portrays that English Textbook of Grade 10 has fourteen units and each unit of the textbook organized based on the four skills of language: reading, listening, writing and speaking skills.

Table II. Areas of the contents of HIV/AIDS found in the textbook of English

Contents of Instructions	English for Grade 10 Chapters/Units													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
HIV/AIDS, & its relation with Gender	x	x	x	✓	x	x	✓	x	✓	✓	x	x	x	x
Mode of Transmissions	x	x	x	✓	x	x	x	x	x	x	x	x	✓	x
Method of Prevention and Control	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Stigma & Discrimination	x	x	x	✓	x	x	x	x	✓	x	x	x	x	x

From these units/chapters, there is one reading text that refers to women in relation to HIV/AIDS. The reading passage has a topic called "Women and HIV/AIDS", it is about the vulnerability of women, severity of the diseases and how to care for HIV/AIDS patients. They must struggle for the life of other people who are not infected. HIV/AIDS patients need social care from the society on doing that it is possible to encourage them to become strong on how to teach and explain the facts about HIV/AIDS, and bring behavioral changes on the parts of the students.

Besides, the reading passage demands students to discuss HIV/AIDS related issues using different exercises or questions. There are some pre-reading and post reading questions pertinent to the topic. The passage makes students to practice the skill of reading and through that students' can broaden their ideas concept on HIV/AIDS using different activities such as, discussions, role-plays and exercises.

In line with this, different related topics can provide to include the content of HIV/AIDS. For instance, in unit - 10 there is a topic entitled

"*Overcoming Social Problems Involving the Young: Life skills for the young*". In this topic, different problems related to health and how to cure them are explicitly discussed. However, HIV/AIDS was not mentioned and even, the mode of transmission on how to protect or fight against HIV/AIDS forgotten. At least it is possible to mention some related topics about the prevention mechanism and how to develop skills to protect young individuals from HIV/AIDS.

Similarly, table II indicates that HIV/AIDS aspects on how to care for HIV patients is clearly emphasized in the given exercises, and students might understand how the social care or social support could take place for HIV/AIDS patients. In doing this, the passage reminds students to understand social care about AIDS. However, the contents of HIV/AIDS are not organized in a way to enhance students' to understand prevention mechanisms of HIV/AIDS.

Furthermore, effective teaching about HIV education should not be limited in focusing on telling students a single aspect of HIV/AIDS (Hedgepeth and Helmich (1996)). Focus of attention need to be given for students to became away from risky situation by teaching prevention as well as reminding them the mode of transmission. This shall be using different activities in the classroom focusing on the prevention and mode of transmission. Otherwise, it is impossible to have the necessary behavioral changes on the parts of students. Besides, so as to make the lesson comprehensive, more attention needs to be given on the prevention and transmission aspects of HIV/AIDS

There are 14 units 290 pages in the textbook of English for Grade 9. In unit two, there is a title" HIV/AIDS". The passage has six paragraphs that deal with HIV/AIDS, stigma and discrimination, and about mode of transmission. However, most of the paragraphs deal about definitions of HIV/AIDS.

The textbook, in addition, contains comprehension questions that lead students to practice exercises that emanates from the passage. The exercises also geared towards more of understanding of the severity of the cases. However, how of prevention and mechanism of controlling it need to be incorporated in the lesson. It is believed that such exercises will lead students to realize the satiation in their real life situations. It is clear that this Unit might have understood that HIV/AIDS is caused by a virus and the severity of the cases; never-

Table III. Areas of the contents of HIV/AIDS found in the text English for Grade 9

Contents of Instructions	English for Grade 9													
	Chapters/Units													
	Book I													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
HIV/AIDS, & its relation with Gender	x	✓	x	x	✓	x	x	x	x	x	x	x	✓	x
Mode of Transmissions	x	✓	x	x	x	x	x	x	x	x	x	x	x	x
Method of Prevention and Control	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Stigma & Discrimination	x	✓	x	x	x	x	x	x	x	x	x	x	x	x

theless, how it is transmitted, mechanisms of prevention and controlling it need to be thoroughly incorporated in the textbooks.

But, the definition of AIDS as well as its severity gets a faire chance to be explained in different exercises and activities in the textbook of English for Grade 9. Table III also indicates HIV/AIDS definitions, mode of transmission, and stigma and discrimination are included in the passage. However, there is no content or paragraph that deal with prevention and care for HIV/AIDS patients. Such a lesson believed to be crucial for students at this level so as to help them to realize and protect themselves against the diseases and as secondary school students are risky groups for the diseases. Thus, it is impossible to explain that the text book is well equipped with the necessary contents of HIV/AIDS so as to bring behavioral changes on the part the students.

Table IV portrays that biology textbook for Grade 9 has seven chapters and 220 pages. There are no titles about HIV/AIDS in the outline of the content. There is also a related topic called "Microorganisms and Disease" even under this title there is no any subtitle which indicates clearly about HIV/AIDS. However, on page 110-114 there are topics which deal about HIV/AIDS in relation to white blood cells; and about voluntary HIV counseling and testing. These topics deal about how can bring responsible sexual behavior to impact their quality of life in the future. From this it is pos-

Table IV. Areas of the contents of HIV/AIDS found in the textbook of Biology for Grade 9

Contents of Instructions	Biology for Grade 9						
	Chapters/Units						
	1	2	3	4	5	6	7
HIV/AIDS, & its relation with Gender	x	x	x	x	✓	✓	x
Mode of Transmissions	x	x	x	x	x	✓	x
Method of Prevention and Control	x	x	x	x	x	✓	x
Stigma & Discrimination	x	x	x	x	x	✓	x

sible to understand that HIV/AIDS education is given in a title in the contents of the textbook in which students explicitly examine thoroughly about their sexual behavior. This will lead them to understand about testing, counseling and about good sexual behaviors.

In unit 6, page 162, a topic called "The Discovery of viruses" indicates AIDS as an example which is caused by virus. In page 164, there is also a sub topic called "HIV and AIDS in Ethiopia". The severity of the problem is stated explicitly in the textbook. HIV risk groups and impact of HIV and AIDS are some of topics explain about its severity in Ethiopia. In addition, in Page 166, the mode of transmission like sexual contact, blood contact given as an example without clarifying other means of transmission and explaining the above mode of transmission in relation to HIV/AIDS.

In addition, the prevention mechanism like abstinence, faithfulness, avoid unsafe injection and skin piercing practices given as an example to show areas of prevention of HIV/AIDS. The mode of prevention addresses the use of condom as an example for the prevention of HIV/AIDS. However, how of using condoms and other prevention mechanisms aren't explicitly stated in a way students to practice the prevention and control mechanisms.

The topic organized to explain about disease caused by viruses. However, HIV/AIDS mentioned here using a few sentences. The topic discussed a lot about eight diseases mentioned as

an example in which caused by viruses. When compare each of them, AIDS has got the eighth position and it is not as such explicitly explained like the others common cold, influenza, small pox and measles. In line with this, in Page 167, there is a sentence that attempts to compare AIDS and malaria in Ethiopia; however, it doesn't give comprehensive explanation about the how of protecting them.

Generally, this textbook emphasis and presented HIV/AIDS in the expense of teaching microorganism, but, in addition to this, it is possible to focus on teaching the severity and the spread of HIV/AIDS clearly in which students to correlate realities of HIV/AIDS with the physical and biological development of students.

Moreover, some areas for method of prevention and ways of transmission are not explicitly explained in a way that students to practice the lesson. However, the definition of HIV/AIDS and its severity explained well. When we see their adequacy to promote HIV/AIDS education, it is not organized based on the content areas proposed by WHO. This means the inclusion of HIV/AIDS in the content area is unsatisfactory. This leads someone to understand students didn't get the opportunity to take part in searching knowledge, information through the texts.

Table V reveals that there are eight units and from the total units a few units have a topic related to HIV/AIDS. For instance, in unit 5 a title called "Reproduction"; this has a subtitle called "responsible sexual behavior" the focus of this title in teaching students about sexual organs, menstruation, Ovulation & development of sexual behavior. HIV/AIDS encompassed here to show risk of unprotected premarital and teenage sexual relation and it is given as an example of this concept.

Page 139 -144, on the other hand, has

Table V. Areas of the contents of HIV/AIDS found in the textbook of Biology

Contents of Instructions	Biology for Grade 10							
	Chapters/Units							
	1	2	3	4	5	6	7	8
HIV/AIDS, & its relation with Gender	x	x	x	x	✓	x	x	x
Mode of Transmissions	x	x	x	x	✓	x	x	x
Method of Prevention and Control	x	x	x	x	x	x	x	x
Stigma & Discrimination	x	x	x	x	✓	x	x	x

subtitles called "STDs" , "HIV and immunity", Early Symptoms", "Later Symptoms", "HIV/AIDS treatment" and "living with HIV and AIDS positively" which describes regarding sexuality transmitted disease, such as, Gonorrhea, Syphilis, Cancroids & AIDS,- here HIV/AIDS has a faire-chance to be explained in a wider sense. Especially in Page 142-144, the definition of AIDS (the severity), the mode of transmission explained clearly. In addition, AIDS in Ethiopia and the effects of HIV are clearly described in the textbook in which students to understand the problem, and to behave accordingly and actively to participate in avoiding the risky behaviors.

Much of the prevention mechanisms for HIV/AIDS are not clearly shown in which students will be able to behave for their sexual characters. This means, it doesn't give clear and detail explanation about abstinence, faithfulness, and the use of condom. However, the text book underlines the importance of further discussion with in the family, peers and to break the cultural barriers of HIV/AIDS.

Be this as it is the inclusion of contents of HIV/AIDS in its mode of transmission given clearly in which students to understand HIV/AIDS. Whereas, the prevention mechanisms not stated clearly using different examples in a way that leads students to behave accordingly.

Similarly, the textbook ignored the issue of social care or social support for HIV/AIDS patients. Although the contents of HIV/AIDS are not fully mentioned, the textbook emphasizes the severity and the mode of transmission clearly and when I compare to Grade 9 Biology textbook, it is better in infusing the issue of AIDS adequately in the related area of the contents of the textbook. Nonetheless, it is difficult to say that the education of HIV/AIDS is included in comprehensive manner in grade 9 and 10 biology textbooks.

There are five units, different titles, and subtitles that are included in the textbook of Geography Grade 9. There is HIV/AIDS and related contents on page 213 under the title "*Individual group responsibility to fight against the spread of HIV/AIDS in Ethiopia*". This topic discus about the severity of HIV/AIDS in Africa and Ethiopia. The social as well as the economic impact of HIV/AIDS discussed thoroughly. In addition to its severity, mechanisms of prevention and control are stated in the content. However, there is no detail explanation and no direction how students could prevent themselves

Table VI. Areas of the contents of HIV/AIDS found in the textbook of Geography for Grade 9

Contents of Instructions	Geography for Grade 9 Chapters/Units				
	1	2	3	4	5
HIV/AIDS, & its relation with Gender	x	x	x	x	✓
Mode of Transmissions	x	x	x	x	x
Method of Prevention and Control	x	x	x	x	✓
Stigma & Discrimination	x	x	x	x	x

against the deadly diseases are forgotten.

The title *"Human and Environment"* is a bit related to social factor and it is possible to verify HIV/AIDS thoroughly in connection to its severity in human being, mode of transmission and mechanisms for prevention and control but it doesn't refer too much about AIDS. Thus, the contents presented seems shallow and it doesn't give rooms for discussion or unable to create meaningful interaction in the classroom.

The textbook of Geography for Grade 10, on its part, deals about the general concept of human beings in relation to geographical environmental. However, among the different issues of HIV/AIDS focus had been given only on the severity case of HIV/AIDS in relation to morality. It explains that morality has been increased from time to time because

Table VII. Areas of the contents of HIV/AIDS found in the textbook of Geography for Grade 10

Contents of Instructions	Geography for Grade 10 Chapters/Units					
	1	2	3	4	5	6
HIV/AIDS, & its relation with Gender	x	x	x	✓	x	x
Mode of Transmissions	x	x	x	x	x	x
Method of Prevention and Control	x	x	x	✓	x	x
Stigma & Discrimination	x	x	x	x	x	x

of HIV/AIDS. Furthermore, here the severity of HIV and AIDS explained well; however, it is not enough or adequate to explain how to decrease mortality due to AIDS.

Generally, the severities of the problem of HIV/AIDS concepts addressed in the textbook; however, issues related with decreasing mortality due to AIDS and prevention and control mechanisms were not treated in which students able to examine the situation thoroughly. In addition, table VII portrays that the severity of HIV/AIDS described in the textbook of Geography for Grade 10. Thus, HIV/AIDS education is not included to warn students to behave in the area of prevention, transmission of the disease at all

Table VIII portrays that the percentage results of the contents of HIV/AIDS in the textbooks of Geography, Biology, and English. The inclusion of contents which demand student's general understanding about HIV/AIDS is found sufficient in the textbook of Geography, English and Biology for grade 9. That means it is clearly shown at paragraph level in which students to understand the severity of the problem at all. However,

Table VIII. Contents of HIV/AIDS which is Included at a paragraph Level in the Textbooks of Geography, English & Biology

Subject	Grade	Total paragraph of the text books	HIV/AIDS& related issues.	Mode of Transmission	Method of prevention	Stigma & discriminations	Total
Geography	9	483	9(1.865)	—	1(0.20%)	—	10
	10	858	17(2%)	—	1(0.11%)	—	18
English	9	545	6(1.1%)	1(0.18%)	—	1 (1.18%)	8
	10	710	(0.98%)	2(0.28%)	2(0.28%)	—	11
Biology	9	558	30(5. 3%)	2(0.4%)	3(0.5%)	2(0.4%)	37
	10	598	(1.55%)	4(0.665%)	1(0.17%)	5(0.83%)	19

there is no sufficient concept which refers about the mode of transmission, prevention and care for HIV/AIDS patients.

Having this crucial issue in mind, it is possible to generalize that the textbooks of Biology, Geography and English for Grade 9 incorporate HIV/AIDS education in their content areas; however, much emphasis is given for the severity of the cases than the how of prevention and controlling of the deadly diseases. Besides, the textbook of English for Grade 10 includes a reading passage which clearly emphases about HIV/AIDS and Women. Thus, from the total paragraph it has 2% in which it included in the skill of reading. Grade 10 Biology textbook address this social phenomenon by infusing to the different concepts of biological terms in which students to understand clearly. For instance, there are nine paragraphs which show the problem or the severity of the situation in Ethiopia.

In addition, there is one paragraph of the textbook dealt about prevention of HIV/AIDS, by stating the concepts of secondary sexual characteristics. Similarly, four paragraphs of the textbook puts examples for the mode of transmission condition for HIV/AIDS. Nevertheless, this doesn't mean that the textbook of Biology implies effective in which to allow students' understand, search out the causes by themselves. Table VIII also indicates that biology textbook contains five paragraphs about the social care or support for HIV/AIDS patients.

To sum up, the inclusion rate of HIV/AIDS in the textbook of biology is found to be better in the contents areas of HIV/AIDS, such as, the severity of the problem, the mode of prevention and transmission of HIV/AIDS. That means the textbook of Biology for grade 10 has 1.55% for the general concepts of HIV/AIDS, 0.17% for the mode of prevention, 0.66% for the mode of transmission and 0.83% for the stigma and discrimination from the total paragraph of the textbook.

In contrast, the passage for grade 10 English and the textbook of Geography for grade 10 has nil for social care or support. Hence, there is no significant inclusion of the contents of HIV/AIDS in the related topics of the textbooks of Biology, Geography, and English for grade 10. In addition, Grade 10 textbooks are likely to suffer from giving opportunity to inquire and discover knowledge and meaning through an active involvement of students. So that, the textbooks of both

grade level are not treated in which students to behave in the area of the contents.

Result Obtained from the Observation

Classrooms were observed to analyze the mode of delivery of HIV/AIDS education in Minilik secondary school. Observation was made during HIV/AIDS lesson being conducted. Grade 9 and 10 Biology, English and Geography classes were observed against the check list prepared. The result of the observation clearly shows that there is no room for discussion for students to interpret or meaningfully interact with each other on the issue. Teachers made an attempt to attain the expected behavior only through telling or spoon fed lesson about the danger of the disease; however, it can't be attained the desired behavior focusing only on one shot learning. Rather it has to be comprehensive and students shall be given opportunity to exercise and interpret the lesson to the real life situation. The result of the observation also shows that students and teachers couldn't communicate well and speak out freely about sex education due to cultural barriers. Biology for grade 10 classrooms is the case in point that teachers couldn't utter words and phrases related to the lesson, STDs and HIV/AIDS. What is more, the lesson on HIV/AIDS was more of teacher directed methods and there was no participatory. Consequently, the lesson on HIV/AIDS depended on teachers' capability and experience in AIDS or Sex education. What is more, it is observed that HIV/AIDS lessons in the classroom were similar with what had been given in the extra curricular activities. As a result, the lesson was more of redundant and the approach to deliver HIV/AIDS education was not attractive, fresh and exciting.

Discussion

Sexual behavior is the most intensive private domain. Therefore, HIV/AIDS education must operate on assumption that learners' will make their own decision abo-ut the areas of sexuality (Hedgiest and Helmich, 1996). In addition, learners need access to information to understand the cause and consequence of HIV/AIDS. So, the information about HIV/AIDS should be incorporated into the relevant curriculum. Thus, the inclusion of HIV/AIDS education in the textbooks of the secondary school curriculum is indispensable.

The inclusion of HIV/AIDS education demands to incorporate different perspectives of HIV/AIDS contents across several subject areas. Hence, it

is possible to help students meaningfully understand HIV/AIDS education included in different textbooks. In addition, including the topic HIV/AIDS education into various disciplinary components at relevant places will make students to understand HIV/AIDS clearly. Besides, to approach AIDS education in a multi disciplinary way has potential for making the curriculum fun, more importantly. If students missed the message in one course, an activity in another course might capture their imagination and begin the learning process.

The result of this study; however, revealed that the textbooks of Biology, English and Geography of grades 9 and 10 are ill-equipped with the essential elements in developing the necessary behavioral changes on the part of the learners.

Text books have to provide the necessary contents pertaining to HIV/AIDS by the use which students would be able to tackle risky sexual behavior, and to give them opportunity to come up with their own solutions for the problems associated with HIV/AIDS. Thus, if there is no meaningful interaction given in the classroom more on the prevention of HIV/AIDS education , students will not get the opportunity to be involved in learning, and thus, it is impossible to get the necessary changes on the part of the learners.

Moreover, it is impossible to attain the expected behavior only through telling or spoon fed lesson about the danger of the disease, but it has also to focus on preventing and controlling the severity of the problem. In line with this, Hedgepth and Helmich(1996) stated that effective teaching about HIV/AIDS should not be limited to focusing only on one shot learning. Rather it has to be comprehensive. The results of this study, however, revealed that the textbooks of Biology, Geography, and English are not comprehensive in fusing contents of HIV/AIDS into the related issue of AIDS. This means, the areas of prevention, transmission, and social care for HIV patients are not well treated in the related issues of AIDS. Students weren't experienced the practical application academics to HIV/AIDS. Learning about HIV/AIDS through its connection to all areas of the curriculum needed to translate then to the students' personal life.

There are different possible areas to discuss the prevention and control mechanism of HIV/AIDS in the textbooks. For instance, English for Grade 10, Unit 7 "Problems *of life in*

Town" and Unit 10 "*Overcoming Social problems involving the young: life skills for the young*" In addition, in Geography Textbook for Grade 9, "Human and Environment" is related to the issue of AIDS, but, the method of prevention and control of HIV/AIDS education is not mention in this regard.

Moreover, there are some areas in which the word "AIDS" is simply given as an example in the textbooks. For instance, In Grade 10 English textbook under the topic "Pollution", and Grade 10 Biology such topics are included: "Microorganisms", "Virus", and "Malaria". However, no detail and sufficient description or explanation has been presented inline with HIV/AIDS in these textbooks.

Furthermore, Biology for Grade 10 textbook describes the severity of HIV/AIDS, but, it is poorly concerned with facilitating the behavior outcome of students. This means, it is not well organized to give enough information for students to help them realize the situation about AIDS. In the same token, students should have received information about fewer sexual partners, the use of condom and engage less often in sexual intercourse in order to prevent themselves from diverse sexual behavior- behavior that leads to risky sexual activities.

Hedgepth and Helmich(1996) indicated that HIV/AIDS education program has an impact on students behavior. On the other hand, Tonks(1996) described the cognitive knowledge alone is not sufficient to influence behavior. With respect with these ideas, it can be inferred that in the cognitive aspect students may know about HIV/AIDS but they may not necessarily act in accordance with their knowledge. In line with this, the contents of the text books don't only address HIV/AIDS education sufficiently, but the existing contents are also geared towards cognitive aspects of learning. Differently stated, behavioral change or affective domain is scarcely indicated in the contents of textbook under consideration. For instance, the textbook of Biology for Grade 10,(page139-144) overemphasizes a single domain – cognitive aspect-intended to enable students to understand the severity of HIV/AIDS in Ethiopia, STDs and symptoms of HIV/AIDS without thoroughly considering the means of prevention, i.e. abstinence, faithfulness, and the use of condom.

To sum up, the text books, in question, don't provide students with ample information and classroom experience so as to make them aware

and to develop the sense of responsbility through participatory HIV/AIDS education using activities such as: role plays, drama and the like. Besides this, much of AIDS prevention and transmission education is not transparently indicated in the textbooks to warn students to limit the number of sexual partners, avoid risky behaviors and the use of condoms. In other words, the textbooks are not well developed to give the meaningful learning about AIDS, and hence, they are inadequately prepared to change the behavior of students.

Conclusion

The main purpose of this study was to investigate the incorporation of HIV/AIDS education in the secondary school curriculum. More specifically, the study was designed to achieve the following specific objectives: to examine the incorporation of HIV/AIDS education in various syllabi of secondary school curriculum in Addis Ababa; to observe how HIV/AIDS education delivered in the classroom; to analyze how HIV/AIDS education in the classroom lesson integrated with mini-media and Anti-AIDS clubs in the school & and to suggest possible practical solutions to the problems pertinent to the incorporation of HIV/AIDS education in the curriculum.

Different related literatures reviewed which approved that learners need access to information in which to understand HIV/AIDS. For instance, Hedegepth and Helmich(1996) indicate that inserting the topic HIV/AIDS education into various disciplinary components and at relevant place made students to recognize HIV/AIDS clearly. Furthermore, (UNAIDS, 2008: SAFAIDS, (2009)) underline that infusing or mainstreaming HIV/AIDS education across the curricula with in several subject areas is indispensable for enriching available information for the majority of the students.

The results of the study, therefore, concluded that the textbook are not well equipped with the necessary knowledge of the contents of HIV/AIDS, which means, they suffer from giving sufficient and adequate information on the area of HIV/AIDS prevention mechanisms, stigma and discrimination, HIV/AIDS & gender, and HIV/AIDS & poverty. Similarly, teachers made an attempt to attain the expected behavior only through telling or spoon fed lesson about the danger of the disease; however, it

can't be attained the desired behavior focusing only on one shot learning. Rather it has to be comprehensive and students shall be given opportunity to exercise and interpret the lesson to the real life situation. HIV/AIDS lessons in the classroom were also similar with what had been given in the extra curricular activities. As a result, the lesson was more of redundant and the approach to deliver HIV/AIDS education was not attractive, fresh and exciting. Besides, the textbooks did not provide the necessary information in the related issues of HIV/AIDS in which students would be able to tackle the risky sexual behavior, and to come up with their own solution and to be responsible decision makers.

Recommendation

Based on the results of this study the following recommendations are made

- The textbook shouldn't be focusing only on telling the danger of the diseases, rather they should be organized on the basis of admonishing students to limited number of sexual partners, to receive information about the use of condom engaged less often in sexual intercourse in order to realize the situation, and prevent them selves from risky sexual behavioral actions.
- HIV/AIDS education should be incorporated in the textbooks of the secondary school curriculum, by realizing information that is available about what is really needed, and what really works, in other words, they should be acknowledged, and address the true needs, concerns and realities of students.
- AIDS education should be incorporated in the secondary school curriculum so as to give a clear picture and comprehensive understanding about HIV/AIDS.
- The existing textbooks are not organized to give adequate load of information about the prevention and mode of transmission of HIV/AIDS, therefore, the textbooks need to adequate and cover many topics in the area of diverse sexual behavior, abstinence, the use of condom, be faithfulness and support or social care for HIV/AIDS.
- Effort should be made by MOH and MOE for the provision of HIV/AIDS education in the secondary school curriculum to provide the necessary behavioral changes on the parts of students

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Journal of African Development Studies

Submission Guidelines

Refereed Articles

A typical issue of *JADS* contains refereed articles on a broad range of topics relevant to the field of developments in Africa. Manuscripts are reviewed by a minimum of two qualified academics/professionals by invitation of the Editor-in-Chief. To ensure fairness, the review process is anonymous. Based on the comments of the referees, the Editor-in-Chief makes the final decision as to whether a paper will be published, returned to the author for revision and resubmission, or declined. *Prospective contributors should note that the review process for a peer-reviewed article may be lengthy.* Initial responses from referees are normally not available for a minimum of eight weeks after submission.

- All manuscripts must be original works not previously published elsewhere in any format including electronic production nor be under consideration for publication elsewhere. AJDS does not publish reprints, or articles containing large passages of material published elsewhere.
- Style: Refereed Articles Refereed articles will ordinarily not exceed 6000 words in length, subject to the discretion of the Principal Editor.

Manuscripts should be typed, double spaced, on 8½" x 11" white bond, with a 1" margin on all sides. Articles in either French or English are acceptable. Double Spacing: Double space between all lines of the manuscript including headings, notes, references, quotations, and figure captions. Single spacing is acceptable only on tables.

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Title Page: The title page includes 6 elements: (1) title and subtitle, if any; (2) author(s); (3) abbreviated title to be used as a running head consisting of a maximum of 70 characters, which includes all letters, punctuation, and spaces; (4) complete mailing address, phone, fax numbers, and e-mail of the author; (5) list of acknowledgments

and grants; and (6) the total word count of your manuscript.

Abstract Page: Provide two abstracts: one in English and one in French, about 150 words in length. Include 4 or 5 keywords in both French and English that identify article content.

Text: Begin the text on a new page headed by the title only. Headings and subheadings in the text indicate the organization of the content. Keep the text of your manuscript anonymous for peer reviewers.

Appendices: Begin each Appendix on a separate page, with the word "Appendix" and identifying capital letters centered at the top of the page. If there is only one Appendix, it is not necessary to use an identifying letter.

Acknowledgments: Place acknowledgments at the end of the text, immediately preceding the notes and/or references. Acknowledgements should not exceed 100 words in length.

References: References cited in the text must appear in the reference list; conversely, each entry in the reference list must be cited in text. It is the author's responsibility to be sure that the text citation and reference list are identical. References should be as per *The Chicago Manual of Style.*

Tables: There is a limit of four to five tables per article. Table size must be no longer than one 4" x 6" page. Tables are numbered consecutively in the order in which they are first mentioned in text. Begin each table on a separate page. Do not write "table above/below" or "the table on p.32" because the position and page number of a table cannot be determined until the page is typeset.

Figures: Figures are also numbered consecutively in the order in which they are first mentioned in the text. All figures must be submitted in a form suitable for reproduction by the commercial printer without redrawing, resizing or retouching.

Note: Poor quality or unacceptable tables, maps, graphics or any other type of illustration will be returned to the author for revision to conform to JADS requirements. Please, do not use bitmaps or nonstandard fonts.

Other article specifications:

1) Authors should use gender-inclusive language.
2) Camera-ready black-and-white graphs, tables and figures, and photographs, should accompany a manuscript.
3) Authors should submit one electronic copy along with two hard-

copies of manuscripts to: Editor-in-Chief, *Journal of African Development Studies*, Ethiopian Civil Service College, P.o.Box 5648, Addis Ababa Ethiopia.

4) Articles accepted for publication will be published on a "first-come, first-served" basis.

5) Prior to publication, authors of refereed articles will be sent a proof of their articles for proof-reading. These must be reviewed and returned *as soon as possible*. Proofs not returned within a reasonable time period (to be determined by the Editor-in-Chief on a case-by-case basis) may not be published in the issue anticipated.

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7) Use a word processing program that is able to create an IBM compatible file on a windows platform. ECSC does not use the Macintosh system and does not accept Macintosh files.

8) Use 3½ inch high density disks or CD ROM.

9) Structure the manuscript according to the Guidelines. Print one (1) copy for copy-editing and styling purposes. Be sure to double space this copy, including the notes and references.

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17) It is the responsibility of au- thors to submit their final paper and electronic copies free of gram-

matical and typographical errors.

Critical and Research Notes, Review Essays

The *Journal of African Development Studies* also publishes Critical Notes on recent developments in Africa; Research Notes on current development research being carried out across Africa; and Review Essays of recent books on related themes within the development studies. *Submissions of this kind should follow the guidelines for contributors set out above, but should not exceed 2000 words.* One copy of Notes and Review Essays should be sent to the Editor-in-Chief, at whose discretion these submissions will be published. Submissions may be in English or French.

Book Reviews

JADS publishes reviews of books relevant to the development. If a seminal work is deemed to merit special attention, Book Review Essays will be considered but must be approved by the Book Review Editor. A list of Books Received is published in each issue of the journal, and those interested in reviewing specific titles should contact the Book Review Editor to ensure their availability. Review suggestions are encouraged and may be forwarded for consideration.

Format

Book reviews should cover three major themes— a description of the contents and organization, a substantive analysis of the work and they should endeavor to provide a critique. If considered relevant, reviews may note applicability for academic use in the classroom. Book reviews should not contain references or lengthy direct quotations. Citations are permissible in *Review Essays*. Book reviews will not be returned to the author for proofing, however, they may be subject to editing for style, clarity and length. Suggestions and titles can be forwarded to the Book Review Editor. Submissions should be 250-500 words.

Note

All material printed in *JADS* is subject to minor changes in spelling, grammar, syntax and format. Authors are advised to make every effort to ensure that the manuscripts they submit conform to these guidelines and are in their final form.

Acknowledgement

We are indebted to the hard work and considerable time & efforts invested by our editorial board members and many peer reviewers who have helped evaluate manuscripts submitted to JADS and make sure that they are of the highest possible standard. Regardless of whether manuscript submissions have ended up being published or await further revisions and re-submissions, we would like to particularly thank and acknowledge the following reviewers:

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The Ethiopian Journal of Public Management and Development (EJPMD) seeks to advance the knowledge and philosophy of the new public management (NPM), good governance, and development processes. It will serve as a vehicle for discovering and disseminating knowledge that has practical relevance in solving pressing problems of public sectors at local, regional and international levels. The journal will also foster exchange of information and new ideas between scholars in universities, research and development institutions.

Submission Guidelines

Ethiopian Journal of Public Management and Development is a fully referred journal dedicated to publishing the finest scholarship. It invites the submission of original manuscripts on a full range of topics related to public management and development. To qualify for consideration, submissions must meet the scholarship standards within the appropriate discipline.

Submissions accepted for consideration will be evaluated by at least two external reviewers. EJPMD expects that the contents of all manuscripts are original and that the article has not been published or accepted for publication anywhere else. Therefore, authors should include a statement in their submission declaring that the manuscript has not been published and is not under consideration for publication by another journal.

Articles should include a brief (150 words or less) Abstract with author's full name, title and current affiliation. The main text should contain the title of the article but no name(s), address or institutional affiliation. Three to five key words should be written below the abstract to highlight the main features of the study.

All references in the text should conform to the American Psychological Association's (APA) referencing style. All in all, articles should not be more than 25 pages (or 8000 words) while book review should not exceed 6 pages. Manuscripts should be typed in Times New Roman, 12 point font, with double line spacing. All data must be given in metric system using SI units of measurement. Non standard units of measurement should be defined. Scientific names should be italicized. Acronyms, where used, should be defined.

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