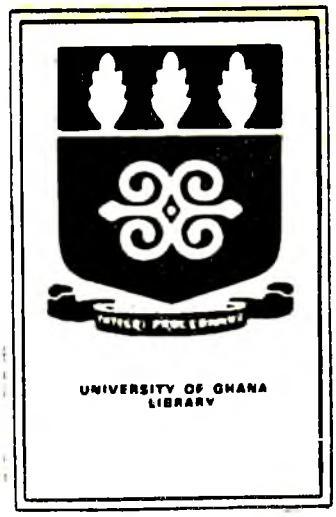


COMMUNITY PARTICIPATION IN SANITATION PROGRAMMES AT ASHAIMAN

BY

ADDO KWASI NYARKO

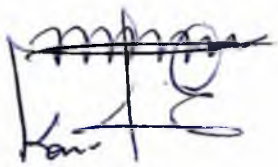
THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE MASTER OF ARTS IN ADULT EDUCATION

DECEMBER, 2004

DECLARATION

I hereby certify that this dissertation is my original research work conducted between September 2003 and December 2004 under the guidance of my supervisor.

Except for literature cited which served as information, this dissertation has never been presented in part or in whole to any other university for an award of a degree.



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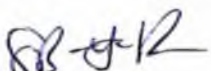

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Albert K. D. Amedzro

(Supervisor)

DEDICATION

This dissertation is dedicated to my wife Hannah Afua Danquah and children Paa Yaw, Awurakua and Brother for their patience and understanding inspite of the inconvenience of not physically always being available during the course of the study.

Special dedications also goes to my late mother, Beatrice Nyarko at Nkwatia-Kwahu who gave me sound financial and moral support when I was at University of Ghana, but departed before my graduation from the University.

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I cannot forget sister Caroline Asiedu-Danquah of Distance Education (I.A.E) for typing my proposals and Mrs. Irene Boakye-Yiadom also of Distance Education who meticulously typed this dissertation. I am thankful to my family for creating peaceful atmosphere at home for this work to be executed.

Finally, my thanks go to all the numerous course mates for their moral support and encouragement. I am however singularly taking responsibility for any deficiencies of this study.

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ABSTRACT

The study was set to find out community participation of sanitation programmes at Ashaiman. A sample of 98 community members were selected through systematic random sampling technique from three out of eleven electoral areas and questionnaires were administered to five and officials from TMA sub-zonal office at Ashaiman.

The major findings were that:

1. Most of the respondents were youth below 30 years who were mostly single.
2. The youth in the communities were not involved in any decision-making in terms of planning of sanitation programmes.
3. Structures had not been put in place to facilitate community participation in sanitation activities.
4. There were a lot challenges in terms of how to mobilize members of the community for communal labour.
5. Absence of number of Non-Governmental organizations and other civil society in organization of sanitation programmes.

The study concluded that in most communities in Ashaiman, there were no defined on-going sanitation programmes. Finally, it is recommended community members and civil society organization should be mobilized to participate in sanitation programmes at Ashaiman while sanitary sites in the hands of private individuals must have permanent structures to establish small recycling plants to recycle waste dumped in the sites.

CHAPTER ONE

INTRODUCTION

1.1 Background Information

The most immediate environmental problems in the world are the ill-health and premature death caused by biological agents in the human environment; in water, food, air and soil.

Each year, they contribute to the premature death of millions of people (mostly infants and children) and to the ill-health or disability of hundreds of millions more.

The problems are more acute in low and middle income nations where;

1. Four million infants or children die every year from diarrhea diseases largely through contaminated food or water.
2. Two million people die from malaria every years and 267 million are infected.
3. Hundreds of millions of people suffer from debilitating intestinal parasite infections.

In addition, all countries have serious environmental health problems affecting them;

1. Hundreds of millions of people suffer from respiratory and other diseases caused or exacerbated by biological and chemical agents in air, both indoor and outdoor.
2. Hundred of millions are exposed to unnecessary chemical and physical hazards in their workplace, home or wider environment (WHO, 1992).

In most urban centres in developing countries people live and work in unsanitary conditions. Between one-third and two-thirds of the population live in housing units that are poor in quality. Houses often constitute temporary structures which provide inadequate protection against excessive high temperatures.

Moreover, urban communities are characterized by insufficient space (relatively to the number of people living there) and inadequate provision for pipe-borne water supplies, the removal of excreta, household liquid, solid waste and all-weathered roads and footpaths.

There is the presence of disease causing agents (pathogens) in the immediate surroundings because of lack of basic infrastructure and services – sewers, inadequate provision of drainage and irregular or no services to the disposal and collection of solid waste. Inadequate supplies of water, overcrowding and cram living conditions increase the transmission of airborne infections and those passed by human contact, and increase the risk of accidents.

In Accra, Ghana, an interview with 1000 households undertaken in 1991 found out that only 35 percent of residents had pipe borne water in their houses. Most of the rest relied on private or community standpipes or vendors although a small percent have to rely on open waterways, rainwater collections and wells. Over 80 percent of the lowest quartile had to fetch water compared with 10 percent of wealthiest group (Songsore and McGranahan 1998).

Vater distribution system to low-income areas is more vulnerable to contamination and uality of water in low income earning brackets is generally worse than areas with indoor lumbing (Amuzu and Leitman 1994).

'or sanitation, 36 percent of the 1000 households interviewed in 1991 had flush toilets vith 41 percent using pit latrines, 20 percent using pan, or bucket latrines and four ›ercent do not have access to toilet. Nearly three-quarters of the lowest income quartile ;hare toilet facilities with more than 10 people in Accra (Songsore and McGrahanan 1998). Open defecation is a common practice with people using various means, including the wrapping of human excreta in polythene bags (commonly referred to as "precious package") for disposal of waste.

Many residents in Accra resort to defecating along beaches, water courses and gutters (Bogrebon 1997). The vice President Aliu Mahama since his inception into office in 2001 had launched a campaign and education with numerous adverts on radio, television and print media for people to develop positive attitude towards the management of sanitary conditions in Ghana.

Since he was sworn into office as the new Mayor of Accra Metropolitan Assembly, Mr. Adjiri Blackson has promised to use voluntary clean-up campaign as one of his major strategies to get Accra clean. Similarly in Kumasi, the planning committee of 5th anniversary celebration of Otumfuo Osei Tutu ascention to the throne announced the institution of weekly clean-ups throughout Ashanti Region as part of the anniversary celebration. President Kuffour also tasked engineers in the country to come up with

practical solutions to address the numerous problems associated with waste generation and management in the country (Editorial Daily Graphic, 18th March 2004).

Daily Graphic publication of March 29, 2004 also featured an editorial on the spirit of voluntarism as means of mass clean-up in our cities and towns engulfed with filth. Similarly, GTV commentary on Saturday 10th July 2004 also featured how solid waste can be recycled in Ghana of which composting of organic component of the waste had been recommended.

In Ghana, various attempts had been made by various district assemblies to incorporate and implement proper sanitary laws. These laws are in statutory books which can be found in Tema Municipal Assembly and Tema Development Corporation which have oversight responsibility of Ashaiman, the study area.

The study area Ashaiman do not have enough sanitary site in most of the suburbs, this because they lack space to construct these sites.

Most of the street are also not accessible hence they could not create sanitary sites. Ashaiman have 28 suburbs. Each of the suburb is suppose to have at least two refuse containers making total of 56. As at the time of the research Ashaiman had only six provided by the Assembly.

There were only two institutions which were participating in sanitation programs in the whole Ashaiman. These were Tema Municipal Assembly and IBIS

An estimated distance between sanitary sites were beyond 3 kilometers. The Tema Municipal Assembly did not have cesspit emptiers for whole of Ashaiman Township and

therefore have to rely on other Assemblies. With regard to how refuse was collected in Ashaiman, the authority said they had given the collection of refuse exercise to one private contractor who used only three vehicles instead of nine for the collection of refuse for both house to house and the refuse dump sites.

Addo, (1995) realized that the rate at which the waste were disposed at Ashaiman do not match its effectiveness of management, resulting in excess accumulating of waste which poses health hazards and several diseases like diarrhoea, cholera and infectious hepatitis.

Moreover, the accumulative of refuse serves as receptacle for dogs, rats, mosquitoes, mice and cockroaches which are often a nuisance and carriers of various deadly disease.

Human excreta accumulated for a very long time and also scattered in open spaces poses a threat to health. Some of these excreta gets in broken pipes and can result into the outbreak of typhoid fever. Cholera is also a common disease where toilets are left unmanaged in the open, as is happening in Ashaiman. According to Addo (1995) liquid waste were also thrown into the ditches, streets and potholes which causes breeding of mosquitoes and frogs which causes diseases and nuisance.

Carbon monoxide which result from incomplete combustion of fossils fuels and emission of smoke by vehicles and other machinery virtually also affect the atmosphere.

There is problem of visual impairment resulting from accumulation of incomplete combustion of refuse. Before refuse is burnt, wind and rain and carry these pieces of paper, polythene bags and peels, scattering them over a wide area. Structures like buildings which are always around the refuse dump point within Ashaiman face various gangs of colours on building due to carbon concentration from the smoke of the burning

refuse. Closer houses usually have grey colours and turn to reduce varying shades of grey color as distance increases from the refuse points. Defecating in unbuilt sites within the town creates an eye sore when it rains.

Moreover regular stagnant of liquid waste in major gutters are very bad. Most of these gutters contain carcasses of various domestic animals. The gutters do not have slabs so everything is seen by the pedestrians as he/she goes about. There are also the problems of olfactory disturbances resulting from irregular emptying of septic tanks due to high cost, delay in emptying and with continual use of toilets leads to overflow of tanks, excreta then spill out producing offensive smells. This issue is very acute in the periods when taps are not flowing and there are no existence of water reserviours.

In Ashaiman, a lot of people patronize the free range (bush) defecating, therefore such areas produce stink scent which is very serious at dawn and late evenings. The situation worsens when it drizzles. Inability to close chambers of household latrines and irregular use of lime in KVIP's also produce such offensive smells.

1.2 Historical Perspective of Ashaiman

The name Ashaiman had been derived from Nee Ashai who became popular because his village used to be the resting place for those who plied between Tema and Dodowa on market days. In the 1960 Census, present Ashaiman listed as Tema junction consisted of mostly Gas. The growth of the town had been rapid due to the construction of Tema in 1951 (Addo, 1995).

The development of Ashaiman is the responsibility of Tema Development Corporation (TDC). Since in 1952, the corporation is supposed to provide housing and other related

facilities like Tema. However, TDC outright negligence and inadequate planning process has allowed Ashaiman to grow out of control.

This was evident by the committee of enquiry into alleged irregularities and malpractices in the affairs of TDC in 1970. It was realized that the corporation was not in control of number of allocated plots, and the number of authorized and unauthorized structures in Ashaiman from which TDC derived revenue.

It was realized that most building plots were haphazardly allocated by different people within and outside the corporation. In most cases, records were not kept. Where records were kept too, they were not adequate. In 1965, the Board of Directors of TDC decided to react to this negligence of duties. They, therefore, built 192 housing units in 1966. They also established a sub-office of its estate development department at Ashaiman as a means of checking further development, but in reality, it was meant to intensify the collection rates.

Evidence on planning and implementation of those programmes proved that there was not much thought given to the balance and integrated policy to lay proper foundation upon which future developments of Ashaiman could be based. Already, migrants in search of jobs during the construction of Tema township and habour were attracted to Ashaiman due to relatively cheap accommodation. Landlords, therefore, built dwellings in a haphazard manner, not bounded by any building regulation. This action continued up to 1966 when TDC realized these unauthorized houses would be subjected to demolition without compensation.

A committee of enquiry that visited Ashaiman township in 1970 had this to say: "Our visit to the township confirmed beyond doubt that Ashaiman has been grossly neglected. We were even surprised that no epidemic of communicable diseases has broken out yet having regards to unsanitary conditions under which the people lived" (Amarteifio, 1996). It was also important to note that Ashaiman was considered a temporary settlement for non-indigenes like Ewes, Adangbes, Mole-Dagbani, Malians, Denkyiras, Nzemas and Asantes. Therefore, it is not surprising that no solid foundation had been laid for the future development of the township by way of basic public and social facilities.

1.3 Statement of problem

Ashaiman is located at the Tema municipality and worse hit by urbanization problems. The rapid growth of the population in Ashaiman is very significant. Between 1948 to 1984 the population rose from 185 to 49, 427 (Pop. Census 1948, 1984). The town recorded an increase of 1124 percent in its population between the period 1984 to 1960. In 1948 the population constituted 7.2 percent of total Tema district, but by 1984 its percentage share had increased to 26 percent. In relative terms, the population of Ashaiman was increasing at faster rate than that of the whole Tema district (Addo, 1995). Between 1960 and 1970 the population growth rate was 31.7 percent and the town ranked second among 20 urban towns in Ghana. The number of migrants kept on increasing as reflected on the room occupancy rate. Houses of five rooms which were occupied by six people before 1980 had increased to 16 people before 1995. The number of migrants in Ashaiman reflected on 1984 population census where Ashaiman ran forth among five regional capitals. The situation was not different from the 2000 population census. According to the 2000 census report, population of the whole Tema district was 506, 400

and Ashaiman alone was 150,312 constituting 30% of the whole population of Tema district. Urbanization is a phenomenon with implications such as overcrowding in houses, social vices, traffic congestions, slum development, pollution and waste generation. Ashaiman which experiences urbanization at very fast rate also grapples with the problem of waste management and indiscriminate disposal of waste.

Looking at the history of the town as temporary settlement, most facilities were not put in place both by public and private interest to take care of waste produced. It is for this reason that the study is being conducted to find out to what extent the people in Ashaiman are participating in sanitation programmes?

1.4 Purpose of the Study

The purpose of the study is to find out if there are sanitation programmes in Ashaiman. The role the community plays in disposing of such sanitation programmes and the institutional arrangement for mobilizing members of the community would be found out and the state of the environmental sanitation would be discharged.

It tends to determine and assess the management procedures and community participation strategies of sanitation in Ashaiman.

1.5 Research Objectives

1. To determine the state of environmental sanitation in Ashaiman,
2. To determine the types of environmental sanitation activities the residents participate in,

3. To find out the challenges the community face in terms of environmental sanitation program planning,

4. To assess the institutional arrangements for environmental sanitation programming in Ashaiman;

5. To find out how the youth are involved in sanitation programmes;

1.6 Research Questions

1. What is the state of environmental sanitation in Ashaiman?

2. What forms of environmental sanitation programmes are taking place in Ashaiman?

3. How are the community members mobilized for sanitation programme planning?

4. What problems are the residents facing in terms of sanitation programme planning?

5. What are the contributions of identifiable groups or institutions towards sanitation programmes in Ashaiman?

6. Is there a committee constituted to oversee sanitation programmes?

1.7 Significance of the Study

It is hoped that the study would address numerous problems the residents face in terms of participating in community sanitation programmes. The findings of the research are pertinent for health planners and for the mass media in the dissemination of information

towards improvement of sanitation in Tema Municipality. Furthermore, it is hoped the study would enable policy makers, donors and program planners to create awareness about sanitation programmes and how they should be implemented in communities.

The research findings would also encourage researchers to carry out similar studies on community participation in sanitation programmes in similar communities in Ghana. The study will also throw light on the role played by the Tema Municipal Assembly in the prevention of water and excreta related diseases in Ashaiman.

1.8 Theoritical Framework

The theatrical framework adopted for the study was participatory democratic theory which was propounded by Rousseau and Mill (1931). The theory gives power equally to all manner of people when they have been empowered.

Through participatory democratic theory social goals could be set by the members of the society so as to minimize benefits to all members of the society and to meet their needs and aspirations. Community participation in community programmes first serves as a means of mobilizing under-utilized resources, and secondly it is a source of knowledge, both corrective and affirmative of democratic development and social justice (UN/ESA 1975).

Thus, this theory routed in the belief that there is a great human potential for dealing with problems in their own social environment. The people, therefore, have capacity to be responsible for their own lives and were prepared to demonstrate this if they given opportunity to employ their capabilities.

Therefore, where members of the community are able to identify programmes that are beneficial to their lives and intended to improve their welfare, they willingly come out in their numbers to participate fully.

1.9 Presentation and Analysis of Data

The study is organized into six chapters; the introduction; review of literature; research methodology; presentation and analysis of data findings; discussion of findings; summary, conclusions and recommendation.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Literature is reviewed under the following themes:

1. Participation
2. Community participation
3. Environmental sanitation
4. Methodologies of participating in environmental sanitation programmes in selected countries

2.2 Participation

The term participation has different meanings for different people. In some cases, participation is promoted to build local capacity and self-reliance. But in others, it is used to justify the intention of control of state. It has also been used to devolve power and decision making away from external agencies as well as to justify external decisions. But more often than not, people are asked or dragged into participating in operations of interest to them in the very name of participation (Rahnema 1992).

"Participation" and "participatory" however appeared as development jargons in the late 1950s by social activities and filed workers who joined the development bandwagon in

he bid to help the oppressed" unfold like a flower from the bud. To them they attribute nost failures in development projects and programmes to the fact that the population :oncerned in such programmes were often kept out of the processes relating to the lesign, formulation and implementation. These activists, therefore, advocated the end of top-down approach to community development projects and programmes and rather the inclusion of participation and participatory methods of interaction as essential components of any development project or programme.

However, it has been found out that, where local people were actively involved and actively participated in projects and programmes much more was achieved. Field workers, planners and non-governmental organization had, therefore, reached the consensus to adopt "participation" as a basic policy measure in international development strategies.

Participation is, therefore, the most accepted concept which even Third World repressive leaders such as Pinochet and Mobutu had tried to promote as one of their pillars or policy objectives in their governance.

2.3 Community Participation

Midgley (1986) points out that community participation denotes the involvement of people in community affairs. However, Diaw (1992) views it as giving equal opportunity to groups and movement to increase and have greater resources.

Schubeler (1996), however, emphasized on infrastructure, the process where people as consumers and producers of infrastructure services and as citizen influence the flow and quality of infrastructure services available to them.

Diaw (1992) defines community participation as process of action by local people to reflect their own interest or to contribute their energies and resources to the system, which governs their lives. Samuel (1987) said local people should influence the direction and execution of development and execution of development and not merely receiving benefit of projects. Lisk (1981) and Diaw (1992) see community participation as successful partipatory package, which enables people to plan, select, implement, and monitor programmes, which will give people a sense of pride, confidence and responsibility (Lisk, 1981).

The common elements that often occur in write up of authors are involvement of local people in decision making, voluntary services, sharing benefits of labour, sustainability and equitable growth and development. The "Beneficiary Communities" are, therefore, responsible for the programme or project such as community water and sanitation designing, implementation, maintenance of projects, monitoring and evaluating of projects or programmes.

It is, therefore, gratifying that community participation is one of the basic development goals (Dunkan, 1970 cited in Amoah, 2001). Advocates of community development have, therefore, put forward the following arguments as the merits of community participation.

Hay Jr. et al (1990) stated that it helps to bring about the voluntary mobilization and application of previously untapped local resources, skills and energies for the purpose of improving the quality of life of the entire community.

Community participation allows people to express their needs, problems, priorities and allows technocrats to obtain information about a community, their needs and attitudes without which development programmes are likely to fail in a given community.

Community participation had also been argued out to respond to the need for governments. For instance, to bring about effective decentralization in order to facilitate local decision-making, introduce effective production at local level and establish local level planning mechanisms in which people can freely and effectively participate in community programmes.

2.4 Environmental Sanitation

Sanitation refers to the maintenance of safe and easily accessible means of disposing of human excreta, garbage and waste related disease. A WHO committee at its first meeting on environmental sanitation in 1990 defines environmental sanitation to include control of community water supply, excreta, waste water disposal, refuse disposal, vectors of disease, housing conditions, food supplies and handling, atmospheric condition and the safety of working environment (Ofosu-Mensah, 2004).

Evans (1953) cited in Ofosu-Mensah (2004) also defined sanitation as an art by which laws of health are applied to a hundred of people in the same place, that is to the community. This dealt with public health-usually "government undertaking". Sanitation, therefore, involves techniques of making people, living in the same place, abide by rules and regulations relating to their health.

Monney (1988) reviewed waste management in Ghana and discussed the possible areas recycling could be possible. He described solid waste and its management within the

country. Goals of recycling and reasons why these have not been realized were also highlighted. Stock exchange for waste was introduce and the conditions for efficient recycling of materials were mentioned.

Ofosu-Mensah (2004) also reported that findings, after visiting various web sites of some developing countries like Ghana, indicated that waste stock exchange has not caught up very well. However, many of such countries have developed and are implementing solid management programmes.

Malaysia in 1994 initiated the privatization of the country's waste management by issuing a call for proposals. This decision was made as part of the Malaysia Vision 2020 initiative which focuses on having the country evolve into a fully industrialized one by year 2020 while protecting public health, environment and sustainable utilization of natural resources. This concept identifies industries and institutions producing various types of waste (solid, gas and liquid) and industries which can use the waste as primary and secondary material.

Ofosu-Mensah (2004) stated that in Ghana, the same concept had been discovered by a consultancy firm in Accra called WAMSCO, adopted by Ghana government as environmentally sound technology. The project Gulf Current Large Marine Eco-system (GCLME) is expected to set up a pilot demonstration project, a waste oil treatment plan in Tema to make use of large quantities of oil waste from vessels that dock in Tema port and land based source of waste oil. The project would also set up other treatment plants such as sawdust to briquette, (waste plastics recycling, waste paper and waste gypsum).

The project is expected to minimize industrial wastes by using them in other industries as raw materials to reduce pressure of our limited land fill site and refuse dumps.

Similarly Ghana's Environmental Action Plan (EAP, 1998) had put environmental issues on priority agenda of which an estimated amount of 41.7 billion cedis ($21m) which is equivalent of 4 percent Ghana Gross Domestic Product had been estimated to be the cost imposed on Ghanaian economy as a result of environmental degradation in sectors such as agriculture, forestry, hunting industry and mining. The plan is expected to adopt a strategy relating to protection of the environment and better management renewable resources (Ofosu-manu, 2004).

Many countries throughout the world have also embarked on the principle of 4R's – Reduce, Rescue, Recycle Recovered in waste management.

According to (Ofosu-Mensah, 2004) the principle aims at reducing, avoiding or eliminating processes that generate hazardous waste rather than controlling, treating or managing them. One of the best known examples of household waste recycling and disposal that can be applied to other places in the world is that of "Ontario's bluebox" programme which served more than 22 million household in Ontario province. According to the programme, household in participating municipalities were given blue plastic boxes in which to collect recyclable waste. Once per week special recycling crew collected these recyclable materials from the blueboxes. Participation in Ontario's bluebox has been very good and been able to divert 200,000 tones or more in 1989 recycled.

Armah (1987) pointed out that as far back as 1976, refuse accumulation was in Accra metropolis and the problem was acute in low income, high population density areas like Chorkor, Korle Gonno and Accra New Town. The problem was, however, low in high income, low population density areas like Cantonments, East Legon, Airport Residential area and some communities in Tema. Doe and Peprah (1988) also revealed that urban areas have been the main sources of waste production in recent times which have been major problems of city authorities.

Donkor (1991) added that, apart from population explosion contributing to waste management problems, issues like absence of cost recovery, tariffs, poor participation of houses to house collection and non-payment of waste collection fees by household in cities also contributed to waste management problems.

Benneh (1993) also came up with the results of study of household environmental problems in Accra. These were water, sanitation, solid waste and household air pollution. He said that serious sanitation problems of Accra were as a result of overcrowding. He asserted that communal toilet facilities were inadequate, so open defecation was common in density populated areas such as Mamobi, Sukura, Alajo and Nima.

He said that solid waste has become one of the most intractable environmental management problems which posed health risk for children most especially. He, therefore, viewed the problems as interrelated and that only an integrated approach could effectively deal with them. He recommended and effective co-ordination among key governmental and non-governmental institutions.

University of Ghana and Stockholm Environmental Institute (1995) identified problems from household environment in Greater Accra Metropolitan Assembly (GAMA) and discussed them from marine to air pollution. According to them, poverty, demographic growth, economic fluctuations and fiscal austerity were placing a considerable strain on household environment in Ghana. Problem considered include water, sanitation, solid waste, pest and pesticides, food contamination and household air pollution . Attention was, however, given to health and environment. They also summarized the institutional context within which household environmental management took place. Some of the policies were discussed briefly.

Lack of readily available water, of sewers or other systems, of safety disposal of human waste, of drainage system, rubbish collection and basic measure to prevent diseases and provide health care resulted in very large health burdens.

Many health problems were linked to water, its quality, the quantity available, the case with which could be obtained and the provisions made for its removal were highlighted by Jorge et al (2001). Aboagyewaa (2004) reported technical discussions at the 44th World Health Assembly that environmental conditions were favourable for the spread of communicable diseases which included insufficient and unsafe water supplies, poor sanitation and inadequate damage of surface water, poor personal and domestic hygiene, inadequate housing and overcrowding.

She said many of these were not due to lack of facilities and services but bad human behavior, often culturally based as very important factor. For example, new migrants

might persist in unhygienic traditional practices such as using of surface water or dealing with faeces in ways that were unsuitable to towns and cities.

WHO report (1992) discussed that unsanitary disposal of infected human feaces leads to the contamination of ground and sources of water. It further stated that the situation provided the sites with opportunity of certain species of flies and mosquitoes to lay their eggs breeds to feed on the exposed materials and carry infectious.

A number of diseases relating to excreta and waste water affected a lot of people in developing countries and these could be communicable and non-communicable. She stated that those diseases which its incidence could be reduce by the introduction of safe excreta disposal causing intestinal infections and helwith infections which include infection on typhoid, dysentery, diarrhoea, hookworm infections, filarises and schistosomiases are the commutable diseases from chemical composition of waste water and pathogen content that affect crop growth and consumers of such crops. The accumulation of nitrate in both ground water and surface waters affect human health. (Methaemoglobinaenia in infants Thompson . 2004).

5 Methodologies of Participating in Environmental Sanitation Programmes in Selected Countries

5.1 *Tanzania*

Tanzania, Biogas technology had been introduced by the Central Government to vern the small scale industrial organizations in early 1970s. According to Thompson 004), the main objective was to promote Reversible energy sources in response to crisis sulting from increase in Fossil fuel. Furthermore biolatrine had been introduced in 1987 improve health through better sanitation hygienic as well as to provide effluents to be sed as fertilizers in their agricultural sector.

adequate facilities for disposal of waste were a major threat to health. The threat clude the spread of infections diseases which often resulted in the death potential labor orce and loss of productive capacity due to illness of such labor force. This therefore varranted for the biogas technology by the Tanzania government..

Furthermore, African Development Foundation (1996) took research in the context of environmental sanitation and co-ordinated biolatrine technology with that of biogas. The method used included seminars, symposiums, newspapers, radio programmes and discussions with stakeholders mostly livestock and agriculture officers.

The foundation had written several project proposals to prospective donor agencies on biolatrine for private organizations, churches and governmental institutions. The selection of beneficiaries was made taking into consideration the institutional needs, safe handling of waste and the extent to which they might serve as demonstrations to others.

Government officials were involved in the programmes as a means of providing financial assistance for the sustenance of programmes.

2.5.2 Dhaka Bangladesh

Dhaka is one of the urban cities in the world with an estimated population of over six million and produces over 3000 tones of household waste.

Less than half of the waste are collected by Dhaka city corporation while the rest remains on road sides, open drains and low lying areas. "Tokai" known as scavengers search for materials which can be recycled or reused and sell them to enterprising local people who arranged for the material to be sorted out, cleaned and then sold to recycling factories. The process demonstrates that waste has value in Dhaka.

Since 1995, "Waste Concern" a local non-governmental organization embarked on community-based composting project, to promote the concept of the 4 Rs' Reduce, Reuse, Recycling and Recover waste in the city. "Waste Concern" later on realized that household waste accounted over 70 percent of total waste which they realized could be effectively converted into valuable compost in order to prolong the land fill sites and reduce cost of disposal of waste.

The project involved setting up of numerous small-scale enterprises in different neighborhoods to go round house to house to collect waste, compost the waste collected and then market the compost and the recyclable materials.

The success of the project permitted the Central Government to promote the "waste concern" to extend their activities to other five cities in Bangladesh with an external

funding from United Development Programme. The central government on her part provided them with land, water and electrical connections to set up more community based composting plants. The plant had been able to convert more than 70 percent of household waste into valuable compost. The success of the Programme required the partnership of the public sector, private sector and civil society organizations.

The "Waste Concern" therefore, set up community waste management committees and provide them with technical assistance to help them manage, operate and maintain services. The members, mostly women, were trained in collection, waste separation, composting and marketing. After one year of community mobilization and training the projects were then handed over to the local community while Waste Concern monitored the project for three years (Footsteps 2004).

The process involved each household paying between 20-35 cents per month which covered the salaries of waste collectors, part-time drivers who drove the van which collected the rubbish, operations and maintenance cost. Once the waste has been collected it was taken to the nearby composting plant. The organic waste was then converted into compost using methods that reduced bad smells, since the composed plants were located in residential rather than industrial locations.

The compost was then separated into fine and coarse grades and packed into 50kg bags which were sold between $2.50-4.50 while rejected materials after sorting the waste were dumped into land fill sites by Dhaka City Corporation.

The project has influenced people to rent their houses and excess display of dustbins which often became full and became environmental nuisance. These were reduced drastically by the activities of the "waste concern" (Footsteps, 2004).

2.5.3 The Orangi Pilot Project (OPP) – Karachi-Pakistan

Orangi is made up of 1.2 million inhabitants, in an unauthorized settlement. There was no public provision for sanitation. Therefore, most of its residents used bucket latrines whose contents were emptied into unpaved lanes running between houses. More affluent households had however, constructed pit latrines but were filled up after few years in use while others living near creeks had constructed their own sewage pipes which were emptied into these creeks.

Hassan (1999) noted that residents had little incentive to improve their situation and the effort of getting local government agencies to lay sewage pipes in the community was too much for them, for they felt these were the duties of the central government to be provided free of charge for the them.

Through community participation a local organization. Orangi Pilot Project (OPP) was established in 1980 spearheaded by Dr. Akhtar Hammeed Khan who realized that, if all local people were fully involved, more appropriate sanitation could be installed in Orangi. Through research effort by OPP it came to light that most of the residents were aware appropriate sanitation on property and health. They, however, could neither adopt conventional systems nor have the technical organizational skills to adopt any alternative options available to them.

Several meetings were, therefore, held for 10-15 houses which were adjacent to each other on the side of the lanes in the community to sensitize them on the importance of keeping improved sanitation in the community. Where the community came into consensus they elected their own leaders on pilot basis. These leaders then applied for technical assistance. With the support of the community's own contribute in monetary from sewers were installed in the community for proper management of waste at minimal cost to the beneficiaries, who were mostly low income earners who could not single-handedly pay for the construction of their own sanitary latrines and sewerage lines.

Hassan continued to explain that through community participation, people adopted simplified designs and used standardized steel mould of sanitary latrines and manholes which cost them only one-third of the private contractors rate or one-sixth the cost of the state's construction. With time residents on the other lanes after seeing the results achieved at the pilot sites or communities also sought OPP's support to develop their own sewers. Sanitation committees were formed where women were very active and many were elected as leaders who encourage their colleagues to sustain the sanitation programme (Hassan, 1999 in Jorge, 2001).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter gives information on the research methodology adopted for the study. It comprises, population, sample frame, sample design, electoral areas, study sample, research design, research instrument, pilot study, administration of questionnaire and interviewed schedules, sources of data, organization, presentation and analysis.

3.2 Population

The target population of the study consisted all residents in the Ashaiman for the past one year. Adults of both sexes and both literate and non-literate in the all electoral areas form the population of the study.

3.3 Sample Frame

A map of Ashaiman consisting all suburbs were obtained from Tema Development Corporation and Statististical Services Department for the purpose of the study. Area site plans for each suburb in each electoral area were obtained from the TDC. This assisted in identifying respondents easily. The names of all the electoral areas were obtained from the zonal council office of Ashaiman – sub zonal office of TMA. This assisted the researcher to identify respondents easily by going to the right suburb in the electoral areas in Ashaiman.

3.4 Sample Design

Probability sampling design was used for the study. The study area was made up of 28 suburbs under eleven electoral areas. In order to make the study more meaningful the electoral areas were classified into 3 groups according to the sanitation facilities they have in each electoral area.

ELECTORAL AREAS

GOOD	AVERAGE	BAD / POOR
1. OBAKATSE	4. MAN MOMO	8. TSENA GBE
2. NIGHT MARKET	5. MANKYE MAN	9. TABOO
3. NII MAN	6. TULAKU	10. ZONGO LAKA
	7. ASENSU	11. MARKET SQUARE

Through simple random sampling, three of the electoral areas were chosen, one from each of the categories, that is Obakatse, Asensu and Market Square. Thirty three houses each were selected from Asensu and Market Square while thirty two was selected from Obakatse. The first house in each electoral area was randomly selected using the house numbers.

Through systematic sampling technique a caretaker or landlord is selected from the tenth house in each electoral area to constitute the respondents. A draft map of the town was used to ensure wider coverage.

3.5 Study Sample

In all 98 residents were sampled from three electoral areas.

Asensu – 33

Market Square – 33

Obakatse - 32

The smallness of the number selected was based on the homogeneity of the suburbs in these electoral areas sharing similar environmental problems. Moreover four officials from environmental sanitation unit of Ashaiman sub-zonal office of Tema Municipal Assembly and one officer from the zonal council office were among those who participated in the study.

3.6 Research Design

The survey research design was used. This was appropriate method since the unit of analysis under study was the individual but results were to analyze in groups. It was also the best method available to the researcher as was interested in original data for describing the population which was too large to be observed as a case for this study.

According to Smith (1975) this method is extremely efficient in terms of processing large data at relatively cheap cost at the shortest possible time in addition to the high standardization it provides. Cross-sectional survey was used because of the homogeneity of the population who shared common environmental problems.

3.7 Research Instrument

The research instrument consisted of structured questionnaires and interview schedules.

The questionnaire which consisted of both open-ended and close-ended questions were designed for officials in-charge of environmental units of Ashaiman sub-zonal office under Tema Municipal Assembly (TMA) since they were literate. The questions were to assess institutional arrangement for environmental sanitation programmes in Ashaiman and how sustainable these arrangements were.

The interview schedules were however designed for respondents who were mostly not literate to address issues like the level of community participation in terms of sanitation or communal activities, the state of environmental sanitation in Ashaiman, demographic characteristics of the respondents, forms of sanitation programmes and Sanitation challenges communities faced.

3.8 Pilot Study

To test the level of community participation in sanitation programmes, five people were interviewed in the community and one official from TMA.

3.9 Administration of Questionnaires and Interview Schedules

In all three people administered the interview schedule, the researcher and two trained research assistants. Pilot test was done, hence some words were worded to suit the research objectives. Procedure for selection of houses were discussed as well as the respondents needed to answer questions. They were resourced with area map of the electoral area assigned to the three persons, pens, pencil eraser and umbrella.

Thirty five interview schedule forms were given to each three people for administration. Friday evening and Saturday were set aside for the exercise. This is because most the respondents had closed from their place of work and started enjoying their week-ends.

Those who administered the interviewed were able to speak the English language and two other languages identifiable to the electoral area assigned to them. Some of the respondents however reluctant to answer the question but they were made to understand that it was for research purposes.

Accessibility to some houses was difficult because the area map and what was on the ground did not tally with some of houses in the suburbs. This was so partly because unapproved extension workers in some houses and illegally and unauthorized structures. Those who administered the questionnaire were assisted by some of the opinion leaders who gave direction as to the numbering of the houses and co-operation from the residents. In terms of the officers, the questionnaires were given to them and was collected after three days.

3.10 Sources of Data

Data were collected from both primary and secondary sources, the later including libraries and internets, statistical service department, editorials of some newspapers related to area of study was read as those related to the research. Some of the opinion leaders also helped in terms of their experience and suggestions on the research.

3.11 Data Organization, Presentation and Analysis

Data organization involves the various ways through which information is gathered from the field is put into meaningful way for easy comprehension. The data was organized using structured interview schedules and questionnaires.

Each interview schedule and questionnaire was edited to determine the validity or otherwise of information provided before it was analyzed. In editing for consistency, comparison was done in respect to answers required to the one respondents gave. Those with faulty responses were cross-checked with other related details to ascertain the validity of questions asked by the researcher. Certain detailed information left out by the respondents were filled by the researcher, for completeness.

In editing for accuracy, correctness to answers were checked in terms of wording language and arrangement of thoughts from the respondents. After editing, coding was done. This is the most convenient way of representing information so as to facilitate enumeration. In coding numbers and letters were used in place of words. With respect to closed ended question to facilitate coding, coding scheme was used. In the case of open ended questions however, first, respondents view became primary view while like and unlike responses were grouped accordingly.

After coding, the responses were then classified and tabulated through the use of statistical tables and graphs as means of data presentation. Each table was then given suitable heading which appeared at the top with concise description of content. Each table and figures are numbered consecutively.

Sample bar graphs and pie chart were also used to give pictorial view of the data collected from the field survey.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

4.1 Introduction

This chapter focuses on the presentation and analysis of data collected from randomly selected three electoral areas in Ashaiman, the study area. The data is analyzed under the following variables;

1. Demographic characteristics
2. Determination of state environmental sanitation in Ashaiman
3. Forms of environmental sanitation programmes and challenges the communities faced.
4. Cross tabulation of demographic characteristics with level of participation in communal sanitation activities by respondents.
5. Assessment of the institutional arrangements and the sustainability of these arrangement.

4.2 Demographic Characteristics

This section tries to solicit information on sex, age, marital status, occupation and educational level of the respondents.

4.3 Sex

This was to help us know the gender situation in the community in terms of community participation in the sanitation programmes.

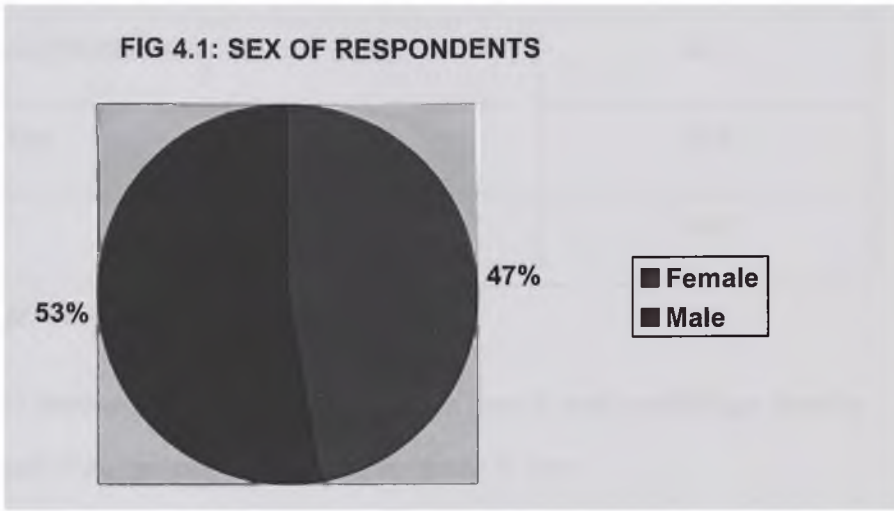


Figure 4.1 **Source: field Survey, 2004**

Figure 4.1 shows that out of 98 respondents who were randomly selected 53 percent were males while 47 percent were females.

4.4 Age Distribution

This section was to solicit the ages of respondents

Table 4.1: Age Distribution

Age - Group	Frequency	Percentage
Below 30 years (Youth)	58	59.1
30 – 49 years (Middle age)	30	30.7
50 + (Old age)	10	10.2
Total	98	100.0

Source: field Survey, 2004

As Table 4.1 above shows, most of the respondents were in their youthful age, forming more than half of the total respondents. They are below 30 years.

4.5 Marital Status

Married couples have the domestic role of taking care of home, which often prevent them from engaging in a lot of communal activities.

Table 4.2 Marital Status

Married Status	Frequency	Percentage
Married	36	36.7
Single	54	55.1
Divorced	5	5.2
Widowed	3	3.0
Total	98	100.0

Source: field Survey, 2004

Table 4.2 explains that most of the respondents were single forming more than half of the total responses (55.1 percent). This shows the eagerness of this category of people to respond to communal call.

The married represented 36.7 percent, divorced 5.2 percent and widowed 3.0 percent all falling in the minority group.

4.6 Occupation

Occupation plays a crucial role in any community development. The type of occupation of people would somehow determine their level of participation in any sanitation programme. For this reason, the occupation of respondents was sought.

Table 4.3: Occupation

Types	Frequency	Percentage
Factory hand	20	20.4
Public servant	13	13.3
Unemployed	44	45.0
Self employed	21	21.4
Total	98	100.0

Source: field Survey, 2004

Table 4.3 shows that almost half of the respondents were unemployed (45.0%) while those employed represented 55 percent). Those who were factory hands (20.4%) may earned low incomes, likewise the public servants representing 13.2 percent.

4.7 Educational Background

The level of education would assist the researcher to determine how conscious people were and ready to involve themselves in any communal activities.

Table 4.4 Educational Level

Educational Level	Frequency	Percentage
Tertiary	10	10.2
Secondary / Commercial	20	20.4
Basic Education	38	38.8
No. Formal Education	30	30.6
Total	98	100.0

Source: field Survey, 2004

According to Table 4.4 those who had Schooled up to secondary and Commercial levels represent 20.4%. Those with tertiary education accounted for 10.2 percent while those who schooled but could not reach the secondary/Commercial level basic education also represented 38 percent. However 30 percent did not have any formal education. The area studied therefore had persons with low educational levels. (69.4%).

4.8 Determination Of State Of Environment Sanitation In Ashaiman

4.8.1 Source of Water

Sources of water and its availability to consumers play crucial role so far as environmental sanitation of an area is concerned. It was for these reasons that sources of water of respondents were sought.

Table 4.5 Source of Water

Source of Water	Frequency	Percentage (%)
Pipe	83	84.7
Well	4	4.1
Dam	7	7.1
Rain	4	4.1
Total	98	100

Source: Field Survey, 2004

Table 4.5 illustrates that the majority of respondents' main source of water was pipe borne, accounting for 84.7 percent. Other sources of water, well, dam and rain accounted for only 15.3 per cent of the total. Most of the people interviewed, however, did not have pipe borne water in their own residents but patronized the services of water vendors.

4.8.2 Type of Toilet Available

Accessibility to toilet facilities is very important when assessing the sanitary conditions of a community of which Ashaiman is not an exception. Respondents were, therefore, asked to state the type of toilet they have access to in the community.

Table 4.6 Types of Toilet Facilities Available to Household

Toilet Facilities Available to House hold	Frequency	Percentage (%)
Kumasi Ventilated Improved Pit (KVIP)	21	21.4
Water Closset (WC)	19	19.4
Pit	13	13.3
Bush	16	16.3
Other	29	29.6
Total	98	100

Source: Field Survey, 2004

About twenty-one per cent of the respondents had Kumasi Ventilated Improved Pit (KVIP) whilst 19% of the respondents had water closets in their houses. Thirteen percent of respondents stated that they use the pit latrine type of toilet. Those who patronized "Bush" and other type of toilet facilities available came up to 45.9 per cent of respondent. Out of the 45.9%, most of the respondents patronized public toilets.

In probing further, some of the respondents who said they had KVIP and WC said they often did not patronize their own toilet facilities in their houses. Most of them said their toilet facilities were faulty while others said they often experienced unfamiliar odour that compelled them not to use the facilities in their own houses. Most of these toilet facilities faced frequent closures because they were not regularly emptied when full.

4.8.3 Waste Disposal

The problem of solid and liquid waste generation and management is a very big issue. The views of respondents were solicited on the way they disposed of their solid waste. This was to determine the state of environmental sanitation in Ashaiman.

Table 4.7 Disposal of Waste

Disposal of Waste	Frequency	Percentage (%)
Bush/Outskirts	16	16.3
Rubbish dump	22	22.4
Front of house	7	7.1
Mobile refuse trucks	39	39.9
Others	9	9.2
No response	5	5.1
Total	98	100

Source: Field Survey, 2004

Table 4.7 shows that most of the respondents used mobile refuse trucks to dispose their garbage. Almost 39 per cent have to keep the refuse till they are collected by the mobile trucks. About a quarter of the total respondents always sent their children to the refuse

dump point to dump refuse. A third method of waste disposal in Ashaiman was in the bush or the outskirts of the town.

4.9 Form of Environmental Sanitation Programmes and Challenges Communities Face

4.9.1 Organized Sanitation Programme

The question on organized sanitation programme was designed to determine forms of environmental sanitation programmes going on at Ashaiman.

Table 4.8 Is there any sanitation programme in Ashaiman

Is there any Organized sanitation Programme?	**Frequency**	**Percentage (%)**
Yes	22	22.4
No	75	76.6
No Response	1	1.0
Total	**98**	**100**

Source: Field Survey, 2004

According to Table 4.8, 75 of the residents representing 76.6 confirmed that there were no organized sanitation programmes going on in their suburbs; while a very few of them, representing 22.4 per cent, said there were some forms of sanitation programmes going on.

4.9.2 The Stage at which they Participated

Adarkwa and Diaw (1999) stated that community participation plays an important role in needs assessment in project design and implementation which are done usually through labour contributions in some cases. It is in this view that respondents were asked to state the stage at which they participated in sanitation programmes.

Table 4.9 Stages of Participation

Stages of Participation	**Frequency**	**Percentage (%)**
Needs assessment	11	11.2
Implementation	10	10.2
Monitoring	8	8.2
Not applicable	69	70.4
Total	**98**	**100**

Source: Field Survey, 2004

Table 4.9 indicated that a greater number of the respondents could not state the stage they participated in any sanitation programmes in Ashaiman. These respondents accounted for more than three-quarters of the total respondents. Those who really participated at various stages accounted for only 29.6 percent. However, at the needs assessment level which is very crucial in promoting and sustaining most programmes and projects in our communities could only account for 11.2 percent.

4.9.3 Why there are no Sanitation Programmes Going-on

In order to determine challenges respondents face in terms of sanitation programmes, most of them said there were no sanitation programmes. This question was to elicit why there were no sanitation programmes going on in the community.

Table 4.10 Why no Sanitation Programmes are Ongoing

Why no Sanitation Programmes Ongoing?	**Frequency**	**Percentage (%)**
Lack of individual interest	33	33.7
Lack of finance	15	15.3
Ignorance about the programme	25	25.5
No devoted opinion leaders	12	12.2
Not applicable	13	13.3
Total	**98**	**100**

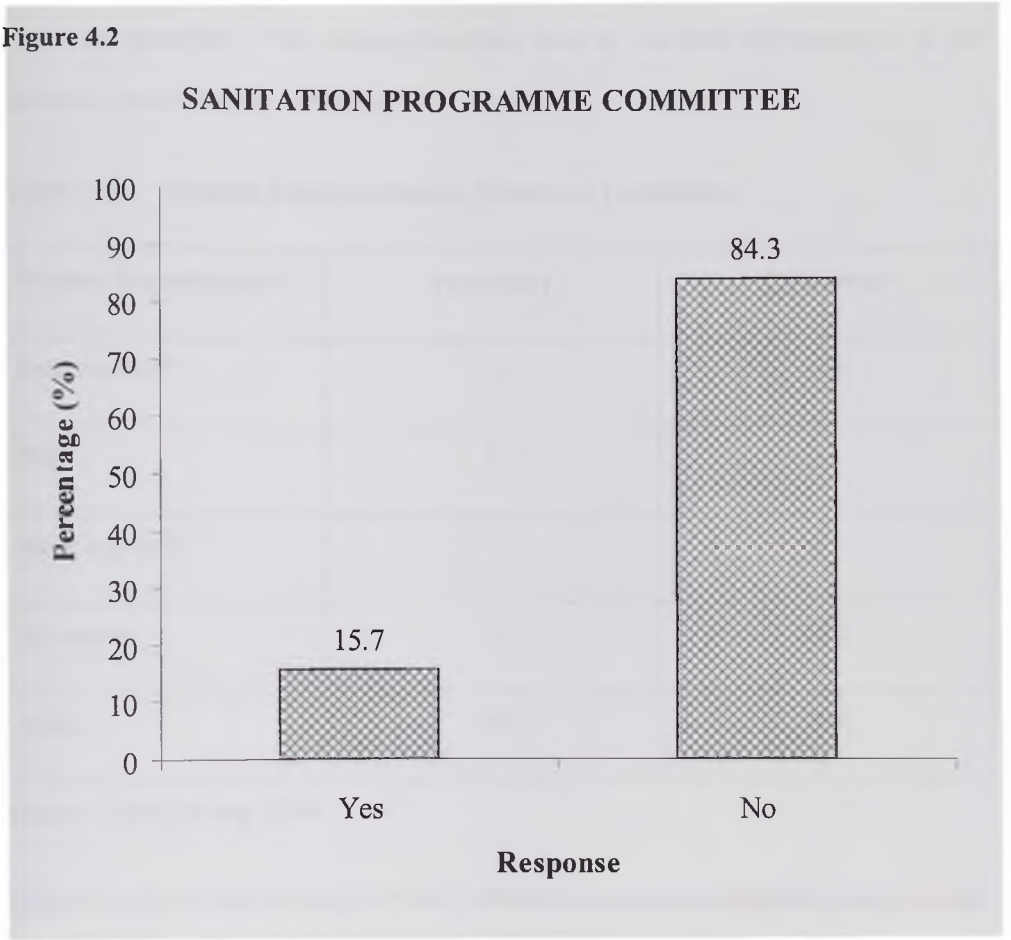
Source: Field Survey, 2004

Various reasons were given for non-participation in sanitation programmes. Predominant views of most of the respondents shown in Table 4.10 were lack of individual interest, followed by ignorance, lack of finance and devoted opinion leaders who would mobilize people to organize sanitation programmes in Ashaiman.

4.9.4 Presence of Sanitation Programme Committee

Committees established in communities help in the smooth implementation of developmental programmes and projects. The study solicited respondents' view as to whether there were any of such sanitation committees in the community

Figure 4.2



As figure 4.2 shows many of the respondents said there were no sanitation committees set up in the community to oversee sanitation in Ashaiman. There were however,

identifiable groups such as the youth associations, keep fit clubs, market women and churches.

4.9.5 Women Representation

Most women had played tremendous roles in sanitation programme committees in which they were involved. This section, therefore, tries to see their representation in the sanitation committees in Ashaiman.

Table 4.11 Women Representation in Sanitation Committee

Women Representation	Frequency	Percentage
Less than half	11	11.2
Half	4	4.1
More than half	4	4.1
No woman	79	80.6
Total	**98**	**100**

Source: Field Survey, 2004

Table 4.11 shows that as many as 79 out of the 98 respondents confirmed there were no women in the existing sanitation committees.

4.9. Days set aside for Communal Labour

The researcher was interested to know how often the people were able to engage in sanitation activities on communal basis. Table 4.13 below illustrates the responses.

Table 4.12 Days set aside for Communal Labour

Responses	Frequency	Percentage
When the occasion demands it	41	41.8
Not at all	12	12.2
Monthly basis	14	14.3
Weekly basis	14	14.3
No response	17	17.4
Total	**98**	**100**

Source: Field Survey, 2004

Table 4.13 shows that most of the respondents did not specify the exact period for communal activities (41.8 per cent). About 14 per cent of respondents said communal labour was organized on monthly basis whilst another 14 per cent also responded it was organized on weekly basis. About 12.2 per cent said no days were set aside for communal labour.

4.9.7 Community Organization

For any community sanitation programme to be very effective, the way it is organized plays important role in its successful implementation. The table below shows the responses

Table 4.13 Community Organization

Organization	**Frequency**	**Percentage**
In Groups	20	20.4
In Zones	31	31.6
On Gender	6	6.1
In Lanes	21	21.4
No Definite Plan	17	17.3
No Response	3	2.2
Total	**98**	**100**

Source: Field Survey, 2004

Table 4.13 shows a variety of responses as indicated below: In zones, 31.6 percent, in lanes 21.4 percent, in groups 20.4 percent, no definite plan 17.3 percent and on gender 6.1 percent, while 3.2 percent of respondents did not respond at all.

4.9.8 Sex Composition in Terms of Decision Making

Respondents were asked to state sex composition of community members in terms of decision making in sanitation programmes. This was to assist the researcher to know contributions of community members along gender roles towards communal development.

Table 4.14 Sex Composition In Terms of Decision Making

Sex composition in terms of decision making	Frequency	Percentage
Only the men	11	11.2
Both men and women	45	45.9
Only the male opinion leaders	21	21.4
Others	14	14.3
No response	7	7.2
Total	**98**	**100**

Source: Field Survey, 2004

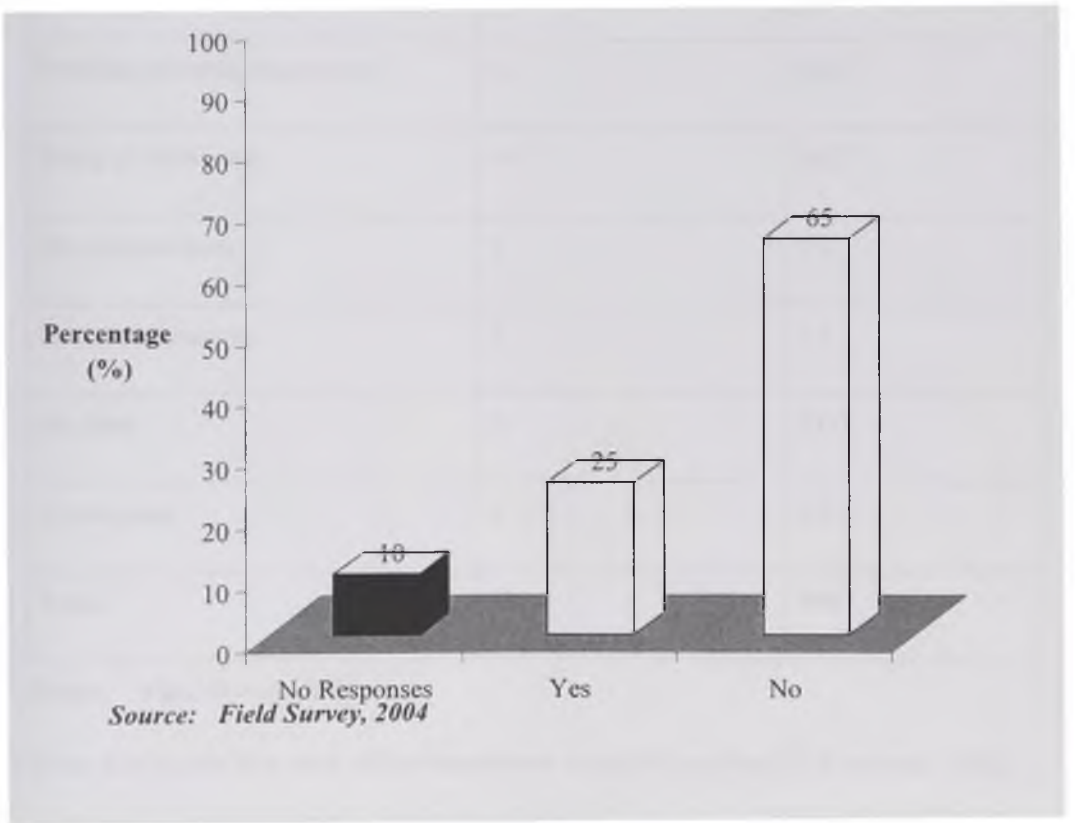
More than half of the total respondents confirmed that, if any sanitation programmes took place, both men and women were actively involved in taking decisions on the programme representing 45.9 per cent. However, others were of the view that in decision-making, only the opinion leaders such as the Assemblymen, landlords, zonal leaders were

involved representing 21.4 per cent. About 11.2% also said only the men were involved in decision making.

4.9 Involvement of Youth in Decision Making

In determining the challenges in terms of youth participation in sanitation programmes, respondents were asked if they involved the youth in any decision-making in executing any communal work. These were the responses.

Figure 4.3 Youths in Decision-Making



As figure 4.3 shows 65 percent of the total respondents who were asked whether the youth took part in the decision-making in terms of any programmes said "No." However, 25 percent said "Yes" while 10 percent did not respond.

4.10 Active Role Played by the Youth

Respondents were asked to state any active role the youth played in the community.

Table 4.15 Active Role Played by the Youth in the Community

Active role played by the youth in the community	**Frequency**	**Percentage**
Desilting sweeping and gutters	16	16.3
Doing all hard work	14	14.3
Provision of tools	7	7.1
Financial donations	7	7.1
No roles	50	51.0
No response	4	4.2
Total	**98**	**100**

Source: Field Survey, 2004

Table 4.16 shows that most of the respondents indicated no roles (51.0 percent). This confirms the previous question which demanded the roles the youth played, in terms of decision making, "No" – response was 65.0 percent. However, 4.2 percent of the

respondents did not respond while those who stated various roles the youth played came up to 28.6 percent.

4.11 Level of Participation in Communal Sanitation Activities by Respondents

Respondents were asked to state how often individuals engaged themselves in any sanitation communal activities. These were the responses.

Table 4.16 Level of Participation in Communal Sanitations by Respondents

Level of Participation in Communal sanitation Activities by Respondents	**Frequency**	**Percentage**
No often	69	70.4
Often	14	14.3
Very often	15	15.3
Total	**98**	**100**

Source: Field Survey, 2004

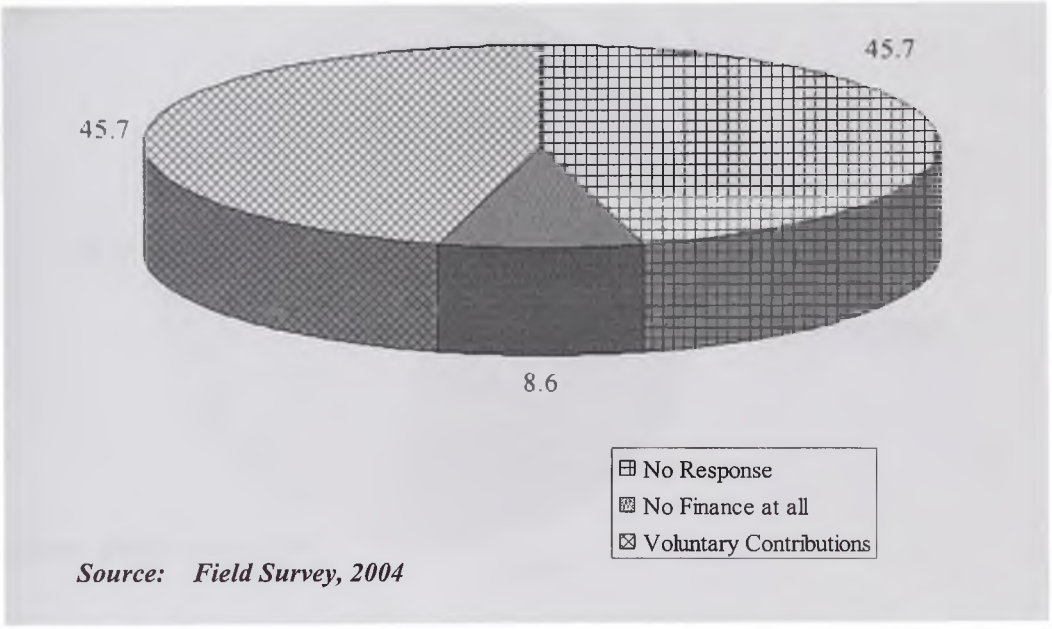
The responses in Table 4.1 percent confirm that if communal cleaning activities took place in the various communities at all they were "not often." "Often" and "Very often" responses were 14.3% and 15.3% respectively.

4.12 How Sanitation Programmes are Financed

To know the financial constraints or challenges faced by the residents in terms of sanitation activities, they were asked to state how these programmes were financed.

The pie chart below shows the responses.

Figure 4.4 HOW SANITATION PROGRAMMES WERE FINANCE



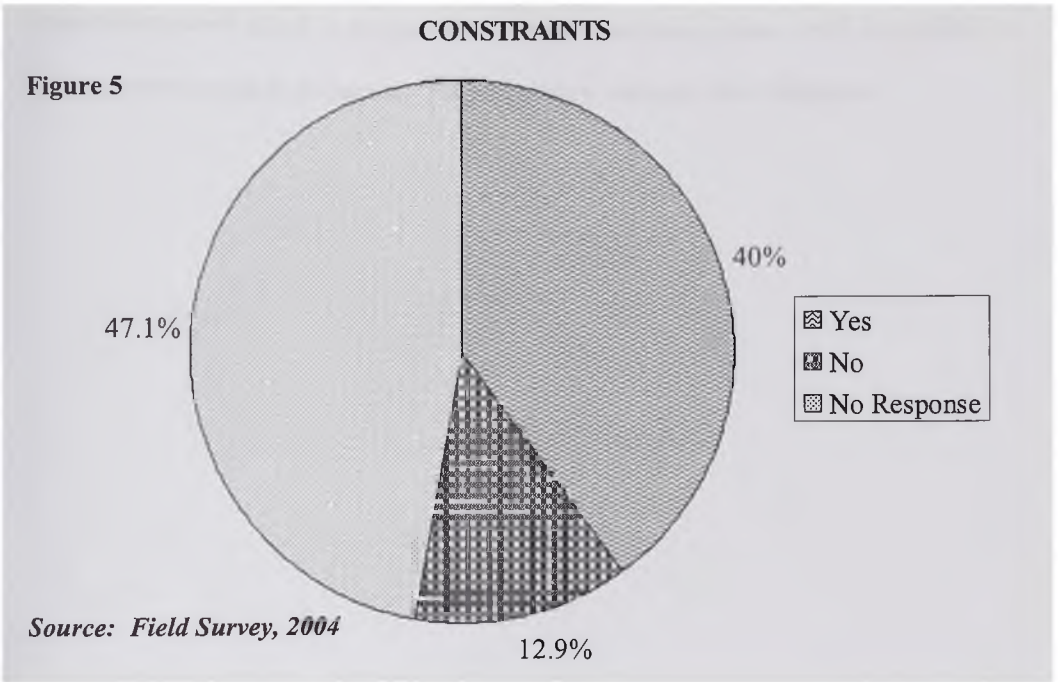
Source: Field Survey, 2004

Figure 4.4 illustrates that almost half of the total respondents said community sanitation programmes were financed through voluntary contributions. This represented 45.7 per cent on the pie chart while few respondents said there were "No" financing at all.

4.13 Constraints in Terms of Financing

To further know the other challenges respondents faced they were asked again to indicate whether there were constraints in terms of undertaking and financing any community sanitation programmes.

Figure 5



Source: Field Survey, 2004

As figure 5 explains, the respondents who stated that there were constraints constituted 40 percent of the total responses while those who could not respond to the question came up to 47.1 percent and the "No" response was 12.9 per cent. Those with "no" response who were further asked why they did not respond said there was no sanitation programmes hence they would not be in a position to mention constraints. Some of the "Yes" respondents further stated some of the constraints as;

i. donations were not regular,

ii. Youth clubs were wrongfully using their financial contribution for sanitation activities which were not their priority

iii. Opinion leader financial decision was not forthcoming.

4.14 How Sanitation could be Tackled in Ashaiman

Respondents were asked to suggest how general sanitation issues could be tackled in various communities in Ashaiman. The table below indicates their responses.

Table 4.17 How Sanitation Programmes could be Tackled

Responses	Frequency	Percentage (%)
Mobilization of the youth	27	27.6
Providing education	28	28.6
Provision of more financial investment	12	12.2
Sanitation programme should be compulsory	8	8.2
Formation of committees of opinion leaders	3	3.1
Municipal Assembly to be effective and provide logistics	9	9.2
Re-planning of the town	2	2.0
No sanitation programme can take place in Ashaiman	2	2.0
Provision of incentives	4	4.1
No response	3	3.0
Total	**98**	**100**

Source: ***Field Survey, 2004***

Table 4.17 shows that provision of education for the residences was the best way to tackle sanitation programmes (28.6%). This was followed by mobilizing the youth for communal work (27.6%). Provision of financial investment and incentives accounted for 12.2 per cent. Others suggested that Municipal Assembly should be effective and re-plan the town (11.2%). Lastly, 20% of the total respondents said no sanitation programme can take place in Ashaiman.

4.15 Cross Tabulation of Demographic Characteristics with Level of Participation in Communal Sanitation Activities

Table 4.18: Educational Level and Participation in Communal Sanitation Activities

Participation in Communal Activities				
Educational Level	**Not Often**	**Often**	**Very Often**	**Total**
Tertiary	4 (5.8%)	3 (21.4%)	3 (20%)	10
Secondary/Commercial	6 (8.7%)	7 (50.0%)	7 (46.7%)	20
Basic	31 (44.9%)	3 (21.4%)	4 (26.6%)	38
No Formal Education	28 (40.6%)	1 (7.2%)	1 (6.7%)	30
Total	**69 (100%)**	**14 (100%)**	**15 (100%)**	**98**

Source: Field Survey, 2004

According to the table, respondents with high educational levels most often participate in communal activities. Participants with lower educational background hardly participate in sanitation and communal activities (85.5%)

Table 14.19: Occupation and Participation in Communal Activities

Occupation	Participation in Communal Activities			Total
	Not Often	Often	Very Often	
Factory hand	15 (21.7%)	3 (21.4%)	2 (13.3%)	20
Public Servant	5 (7.3%)	5 (35.7%)	3 (20%)	13
Unemployed	35 (50.8%)	6 (42.9%)	3 (20%)	44
Self Employed	14 (20.3)%	0	7 (46.7)	21
Total	**69 (100)**	**14 (100)**	**15 (100)**	**98**

Source: Field Survey, 2004

According to the table, respondents who said they "very often" participate in communal activities constitute 15 out of 98. The table shows that the majority unemployed 35 out of 44 hardly participate in communal labour than the gainfully employed. A greater percentage those who very often participate were the self employed.

Table 14.20: Age (Years) and Participation in Communal Activities

Participation In Communal Activities				
Age /Years	**Not Often**	**Often**	**Very Often**	**Total**
Below 30yrs (Youth)	34 (49.3%)	10 (71.4%)	14 (93.3%)	58 (59.2%)
30 – 49yrs (Middle Age)	26 (37.7%)	3 (21.4%)	1 (6.7%)	30 (30.6%)
50+ yrs (Old Age)	9 (13.0%)	1 (7.1%)	0 (0%)	10 (10.2%)
Total	**69 (100%)**	**14 (100%)**	**15 (100%)**	**98 (100%)**

Source: Field Survey, 2004

According to the table, Respondents who often participate are the youth who form the majority (71.4%). In terms of respondents who do not often participate are those who are 30 years and above (50.7%).

Table 14.21: Electoral Area and Participation Communal Activities

Electoral Area	Participation in Communal Activities			
	Not Often	**Often**	**Very Often**	**Total**
ASENSU	12 (17.4%)	8 (57.1%)	13 (86.7%)	33 (33.7%)
OBAKATSE	27 (39.1%)	3 (21.4%)	2 (13.3%)	32 (32.7%)
MARKET SQUARE	30 (45.5%)	3 (21.4%)	0 (0%)	33 (33.7%)
TOTAL	**69 (100%)**	**14 (100%)**	**15 (100%)**	**(98 100%)**

Source: Field Survey, 2004

Participation in communal activities in the various electoral areas shows that respondents in Asensu participate regularly in such activities than any of the other areas. The worst affected in terms of participation was market square.

Table 14.22: Sex and Participation in Communal Activities

Sex	Participation In Communal Activities			
	Not Often	**Often**	**Very Often**	**Total**
Male	36 (52.2%)	(7(50%)	(9(60%)	52 (53.1%)
Female	33 (47.8%)	7 (50%)	6 (40%)	46 (46.9%)
Total	**69 (100%)**	**14 (100%)**	**15 (100%)**	**98 (100%)**

Source: Field Survey, 2004

Out of 15 respondents who said they very often participate in communal activities 9 (60%) were male while 6 (40%) were female. According to the data neither of the sexes participate in sanitation activities than the other.

Table 14.23: Marital Status: Participation in Communal Activities Cross Tabulation

Marital Status	Participation In Communal Activities			
	Not Often	**Often**	**Very Often**	**Total**
Married	28 (40.6%)	5 (35.7%)	3 (20%)	36 (36.7%)
Single	33 (47.8%)	9 (64.3%)	12 (80%)	54 (55.1%)
Divorced	5 (7.2%)	0 (0%)	0 (0%)	5 (5.1%)
Widowed	3 4. (3%)	0 (0%)	0 (0%)	3 (3.1%)
Total	**69 (100%)**	**14 (100%)**	**15 (100%)**	**98 (100%)**

Source: Field Survey, 2004

According to the table, the respondents who very often participate in communal activities are single constituting 80% of the total respondents. The other respondents 20% regularly participate.

4.16 Assessing Institutional Arrangements for Environmental Sanitation Programmes in Ashaiman and How Sustainable these Arrangements Were

The authorities were asked to name institutions which participate in sanitation programmes in Ashaiman. Two institutions were mentioned. These were Tema Municipal Assembly and IBIS.

4.17 Tema Municipal Assembly

Tema Municipal Assembly organized clean-up campaigns and also helped in environmental education. When they were asked the form clean-up campaigns took, their response was periodic clean-ups and house-to-house education.

When they were asked if their outfit carried out any follow-up activities, they said they organized bi-monthly fora. When the officers were asked to mention constraints on the part of activities of other organizations or institutions that organized sanitation programmes in Ashaiman, two major constraints were given:

1. Lack of vehicles to convey wastes
2. Lack of interest by the majority of institutions
3. They (TMA) were then asked to list three major constraints in their own establishments in terms of their duties. These were :
4. Lack of sanitary vehicles;
5. Lack of sanitary tools; and

- Lack of funding for sanitary programme

4.18: IBIS - NGO

This is the second institution that engaged in sanitation programmes in Ashaiman. IBIS is a Danish Non-Government Organization which is interested in the new decentralization system in Ghana by helping in building sub-structures at the assembly level. They are currently operating in Gonja East, Berekum and Ashaiman.

IBIS contributed in sanitation programmes in Ashaiman because of the peculiar nature of problems related to environmental sanitation. Their main contribution was the establishment of tools bank in Ashaiman Zonal Council.

According to Mr. S. K. Wayo, Officer-In-Charge of Logistic at the Ashaiman Zonal Council, 100 Yamaha motorbikes had been donated by the IBIS to the council to facilitate their operations in Ashaiman. IBIS has also provided the council with various tools ranging from wheel barrows, shovels, spades, rakes, brooms and safety gadgets like nose mask.

CHAPTER FIVE

DISCUSSION OF RESULTS

5.1 Introduction

This chapter deals with the discussion of results that were made in chapter four. The discussions were organized to address research objectives and questions.

5.2 Age Distribution

According to the research, most of the respondents were in their early adulthood. Table 4.1 indicated that 59.1 percent of the total respondents were below 30 years. These people were ready to support any community programmes that would be implemented. It confirms Havisghurt's (1972) assertion that adults within early adult stage would be involved in active work.

Bischof (1976) in his analysis of developmental task also emphasized that adults achieve civic and social responsibility at the ages 20 and 29 compared to those who were above 50 years who would like to identify themselves with social organizations such as churches, welfare groups, voluntary organizations as a means of coming into contact with other adults with whom they could work, and whose company they could enjoy.

5.3 Occupation

Quite majority of the respondents were employed represented 55 percent according to Table 4.3 while 45 percent were unemployed. Most of those who were employed constituted the "self-employed" who complained they did not earn enough income. This

supported Safo-Boakye's (1991) assertion that most of the residents in Ashaiman were low-income earners. This means they could not contribute financially towards any sanitation programmes or activities in Ashaiman.

5.4 Educational Background

The research showed that considerable number of respondents had had up to secondary/commercial education. This was contrary to Peil's (1970) assertion that 42 percent of total respondents (1,004) in Ashaiman had no formal education at all.

According to the research, those who had secondary/commercial education represented 20.4 percent of the total respondents (Table 4.4) and those who had experienced tertiary education were 10.2 percent while 30.6 percent had no formal education at all considering the age brackets of the respondents.

5.5 Determination of the State of Environmental Sanitation in Ashaiman

Issues discussed here were:

1. sources of water
2. toilet facilities
3. disposal of waste (solid)

5.6 Sources of Water

The survey showed that the main sources of water to the residents in Ashaiman were pipe borne water representing 84.7 percent of the total respondents as appeared in Table 4.5.

Caincross (1990) made the assertion that the quality of water available to a household can be important to a family health as its quality. A lot of underground pipes had not been laid down before the settlements sprang in Ashaiman. When one wanted to lay pipe, the cost might be so exorbitant since many houses and stores had to be demolished before this could be done.

This had therefore, affected the drainage facilities for disposal of liquid waste and provision of water for individual household, since underground soak-away could not be constructed for waste water, human faces, and proper large pipes had not been constructed for potable water.

There were few individuals who had been able to construct such pipes on their own to their houses and were selling water to the residents at very high cost.

This had culminated in deplorable environmental sanitation in most communities in Ashaiman as there were not enough good quality pipe borne water to individual homes although they claimed that was their major source. Most of the residents had to purchase water from vendors who often stored them over long periods, of time and often after the quality as most storage facilities were not very good.

Most of the concrete storage tanks did not have good covers which often allowed foreign objects into the water or at times the negligence of the children who were sent to fetch water allowed tattered rags to fall inside the water unnoticed especially in the night and early dawn. The situation was, however, better in the new settlements but worst in the old settlements.

5.7 Types of Toilet Facilities

Toilet facilities available to the residents were mostly KVIP, WC and pit latrines. According to the research, all those who responded had various forms of these toilet facilities.

Addo (1995) confirmed that the whole of Ashaiman had only 24 public toilet facilities out of which 18 were built in late 1960s and six in 1990s under Urban II Project. Interview with the officers in-charge of environmental sanitation in Ashaiman sub zonal office on 20/11/04 also confirmed the same story but added they had difficulty in running these toilet facilities hence they temporarily privatized them.

5.8 Disposal of Waste

According to the research, 39.9 percent of the total respondents patronized the use of mobile trucks for disposal of refuse as appeared in Table 4.7. Others patronized refuse dump (22.4 percent), bush, and outskirts of their communities (16.3 percent).

Addo (1995) stated that estimated sludge accumulation alone was $695m^3$ per month in Ashaiman. This confirms the current state of unsanitary conditions in Ashaiman coupled with fact that there were no defined organized communal activities going on.

5.9 Forms of Environmental Sanitation Programmes and Challenges Communities Face

This section discusses forms of sanitation programmes taking place in Ashaiman and challenges they faced. These were discussed under the following themes:

1. Organized sanitation programmes;
2. The stage at which they participated;
3. Reason why there were no sanitation programmes ongoing;
4. Presence of sanitation programme committees;
5. Women representation in the sanitation committee;

5.10 Organized Sanitation Programmes

The survey showed that in most communities in Ashaiman there were no properly organized community sanitation programmes going on. Most respondents (76.6 percent) confirmed this when they categorically stated that there were no such programmes going on to clear filth in their communities though the Tema Municipal Assembly was unable alone to address the issue of filth in the town.

However, those who responded that there were some forms of such programmes represented only 22.4 percent according to Table 4.8. Even then, they stated that this was not on regular basis. Respondents said most times youths from keep-fit clubs organized themselves periodically to desilt main gutters in their communities, dig trenches to direct some stagnant liquid waste, but this was not regular.

Some members of Christian fellowships also organized periodically to sweep the main streets in Ashaiman, weed around their premises and at times visit urban health centre to sweep and weed the place. Occasionally, schools also organized themselves during their

annual anniversary celebrations to visit major roads and public institutions to sweep and burn collected rubbish.

5.11 Stages at which they Participated

The findings indicated that as high as 70.4 percent did not know the stages they participated in. However, those who responded noted various options such as needs assessment (11.2%) implementation stage (10.2%) and monitoring (8.2%).

This contravened Adarkwa and Diaw (1999) assertions that for any meaningful community participation, it was very important that the beneficiaries participated in stages such as needs assessment, project design and implementation. This was why there were no sustained sanitation community participation programmes in Ashaiman, because there had not been any effort to find out the needs of the residents let alone encourage them to participate in them.

5.12 The Reasons Why There Were No Sanitation Programme

The research indicated that some individuals lacked interest in participating in sanitation activities in Ashaiman, as 33.7 percent indicated in Table 4.10. Quite a number of respondents also had their own views as to why there were no sanitation activities going on. While some said they were ignorant about such programmes (25.5%), others mentioned that lack of finance and devoted opinion leaders.

Sarfo-Boakye (1991) indicated that levels of income affected people's participation in environmental sanitation programmes. Eighty per cent of people in Ashaiman were low income earners, 20 per cent were medium income earners and there were no high income

earners. This situation indicated the state at which residents were and they were thus interested in looking for money, neglecting their surroundings. They would even care less about their negative impact on their immediate surroundings let alone participate in any activities that would promote community participation in sanitation activities.

5.13 Presence of Sanitation Committee

Sanitation committees were regarded as mouth pieces of communities to address any sanitation programmes in the community. The research indicated that the majority of the respondents (84.3%) stated that there were no such committees in their respective communities. With the exception of few identifiable groups such as the keep-fit clubs, Market Women Association, ethnic welfare associations and Christian Youth associations, there were no other committees in the Ashaiman township. Hence, residents showed apathy towards programmes, which were related to their sanitation. This contravenes power in participation given to the community through these committees to mobilize their own members.

5.14 Women Representation in the Sanitation Committees

According to the research findings, only 15.7 per cent responded positively to whether there were sanitation committees in Ashaiman (Table 4.11).

This supported Galtung (1980) assertion which identifies certain characteristics of underdevelopment, which resemble typical social consequences caused by lack of involvement of women in decision making process at committee levels in any country.

5.15 Days Set Aside for Communal Labour

The research indicated that there were no specific days set aside for communal labour in most communities in Ashiman. According to (Table 4.12,) 41.8 percent of the respondents stated that, when the occasion demanded, such communal labours were organized in their surroundings.

Only few of the respondents stated communal activities were organized on 'weekly' and 'monthly' basis in their respective communities. This did not promote proper community participation in community development as suggested by Lisk (1981) and Diaw (1992). They regarded well-planned community participation as successful participatory package which enables people to plan, select, implement and monitor programmes which give people a sense of pride, confidence and responsibility.

5.16 Community Organization

Organization in any communal work is very important. Where beneficiaries of any programme have been organized very well, sustainability is assured. The minority of respondents indicated that communities were mostly organized in 'zones' for any communal work to take place (31.6 percent in Table 4.13).

Twenty percent of the respondents further indicated that some communities formed groups before any communal labour was organized. In the same way, others responded that clusters of houses were brought together for undertaking sanitation programmes in their communities. If all these organizations had been well patronized, there would not be any environmental sanitation problems in Ashaiman. At times when such programmes were organized, the turnout was not very encouraging.

5.17 Sex Composition in Terms of Decision-Making

The level of involvement in decision-making enhances community participation. Where members of a community actively participated in decision-making relating to their welfare, development goals had been achieved.

Most of the respondents according to the research (45.9 percent) indicated that both men and women had been involved in decision-making which is related to sanitation programmes in their respective communities.

In some other communities, they indicated that only the opinion leaders such as the Assemblymen, Zonal leaders and representatives of youth groups had actively participated in decision-making. Only few people said that it was only the men (11.2 percent) who actively took decisions that related to sanitation programmes without considering the womenfolk.

5.18 Youth's Role in Decision-Making

The research indicated that youth participation in most communities was quite high. However, they were not involved in decision-making relating to planning of any sanitation programmes in their communities.

Most of the respondents (65%) said the youth were not in any way involved in decision-making that related to communal activities organized in their respective communities. Figure 4.3 however shows that 25 percent responded that the youth were always called upon in times of decision-making. This had, therefore, affected their role played in any sanitation activities in their communities.

This was because where youth were actively involved in decision-making, they voluntarily came out in their numbers to support a worthy cause. Notwithstanding these shortcomings where the youths had been involved in decision-making they actively participated in communal development. The research indicated that these were some of the roles youth were actively involved in, in their respective community

1. Desilting and sweeping of gutters,
2. Organization and doing all the hard work,
3. Provision of tools

5.19 Level of Participation in Communal Sanitation Activities

Responses from the research have shown that, in most communities in Ashaiman, communal clean up activities were not often organized as 70.4 percent of total respondents indicated in Table 4.16. This confirmed the state of unsanitary conditions in Ashaiman as the Municipal authorities could no longer contain the rate at which waste was generated with correspondingly unavailable logistics and resources to finance most of these sanitation activities in Ashaiman.

This confirmed Doe and Peprah's (1988) research, which revealed that urban areas had main sources of waste production in recent times and coping with this had been a major problem of city authorities.

It had, therefore, become imperative for various communities in urban centres to realize the need for communal labour to improve upon environmental sanitation in their respective neighbourhoods.

5.20 How Sanitation Programmes are Financed

How programmes were financed could help us to know their sustainability and challenges in terms of planning and execution of any sanitation activities in any place. The research indicated that there were a lot of challenges the residents in Ashaiman were facing in terms of who to finance their activities.

As figure 4.4 shows, 45.7 per cent of the total respondents said in their communities they did voluntary contribution before any communal activities could be done, while the same per cent (45.7) could not respond. This shows the level of apathy on the part of the residents. The research also indicated that most of these voluntary contributions were mostly from the dues paid by the youth clubs in Ashaiman which in actual sense were not meant for carrying out sanitation programmes. Thus, although there were over a hundred youth clubs in Ashaiman, they were not ready to contribute voluntarily for such programmes.

Other sources of voluntary contributions were from few assembly members, landlords, landladies, leaders of identifiable groups and institutions which usually provided money, and provision of alcoholic drinks like 'akpeteshie' depending on the will of the contributors when communal activities were taking place.

5.21 Constraints in Terms of Financing

The majority of the respondents did not respond to the question on constraints of financing. Asked why there were no constraints, most of the respondents were of the view that if sanitation programmes were going on, they would be in the position to identify constraints but, there were no such programmes on-going hence they could not

identify any constraints. Those who said there were constraints in terms of financing listed some of the following as their constraints:

1. Members (youth clubs) were not often ready to pay dues.
2. People often felt reluctant to donate money when they went round collecting them during communal activities.
3. There was lack of support from opinion leaders.
4. People did not avail themselves at all for communal works.

5.22 Assessment of Institutional Arrangement for Environmental Sanitation Programmes in Ashaiman and how Sustainable the Arrangements were

The research indicated that there were only two institutions which organized sanitation programmes in Ashaiman. These were Tema Municipal Assembly and Danish Non-governmental Organization, IBIS. IBIS had contributed a lot of logistics for smooth running of the Ashaiman zonal council and provision of tools bank for the office, where most youth groups in Ashaiman through Assemblymen and women came to the zonal council to borrow these tools for communal activities. Most of these tools were shovels, spades, brooms, brushes, and nose mask. Tema Municipal Assembly on the other hand, provided containers for refuse before truck came and picked their contents for disposal. The Assembly also looked for one private contractor, Stanley Owusu to run public toilets and collect house-to-house refuse.

The research indicated that although these two institutions were making efforts in terms of sanitation programmes, their participation was not the best as a result of lack of

sanitary vehicles, lack of sanitary tools, lack of funding for sanitary programmes, and lack of interest by the majority of other institutions to assist in sanitation programmes in Ashaiman.

The research further discovered that there were sustained plans being put in place to improve on community participation in sanitation programmes as there were not enough personnel in the field to enforce laws and regulations regarding proper sanitation practices.

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter discusses the summary, conclusion and recommendations for the research.

6.2 Summary

This study looked at community participation in sanitation programmes in Ashaiman. The purpose of the study was to find out if there were sanitation programmes in Ashaiman, the role the youth played in the programmes, institutional arrangements for mobilizing members of the community and the state of environmental sanitation in Ashaiman. A cross-sectional survey research design was used because of homogeneity of the population who showed common environmental problems peculiar to them. The research instrument used consisted of structured questionnaires and interview schedules.

The questionnaires consisted of both open-ended and close-ended questions. The sample size comprised 98 residents and five officials from Tema Municipal assembly, Sub-Zonal official, Ashaiman. The study was limited to suburbs under three out of eleven electoral areas in Ashaiman because of time and financial constraints.

6.3 Research Objectives

1. To determine the state of environmental sanitation in Ashaiman,
2. To determine the types of environmental sanitation activities the residents participate in,

3. To find out the challenges the community face in terms of environmental sanitation program planning,

4. To assess the institutional arrangements for environmental sanitation programming in Ashaiman;

5. To find out how the youth are involved in sanitation programmes;

6.4 Major Findings

These are some of the major findings. There were more male respondents than females. Most of the respondents were in their youthful ages below 30 years and were mostly single. The youth who were in the majority were often not involved in decision making in terms of planning sanitation programmes. Structures had not been put in place to facilitate community participation in sanitation activities in most communities as there were no organized sanitation committees and mobilized youth groups on sanitation issues. Community participation in sanitation programmes are high among high income earners and those who's level of education are higher and living in good suburbs in Ashaiman.

There were many challenges in terms of how to mobilize the community members. Generally, loss of interest by individuals, opinion leaders, inadequate collaborations from the municipal assembly and the problems of how to finance sanitation activities were constraints in the community sanitation programme. However, responses from the respondents indicated good suggestions as to how sanitation programmes should be holistically tackled in Ashaiman.

6.5 Conclusions

The research indicated that in most communities in Ashaiman, there was no defined sanitation going on programme. Where there were such programmes they were in the form of desilling of gutters, sweeping of streets and clearing of weeds around. These activities were not regularly carried out but occasionally youth groups such as "keep-fit clubs" organized them.

The research however, indicated that when the communities were well organized through the setting up of appropriate structures such as formation of sanitation committees, empowerment of women and children through education, community participation in sanitation programmes would be at its best in Ashaiman.

6.6 Recommendations

The following recommendations have become necessary, from the result of the study:

1. Environmental sanitation policy should be enforced by the Assembly by institutionalizing public participation mechanisms and establishing Environmental Sanitation Days (ENSADA)

2. There should be proper coordination and harmonization of sanitation plans by the assembly with the involvement of the communities in partnership with their unit committees, assembly members, government agencies and departments. The participation should entail symposia on environmental health.

3. Participation could also take the form of raffles with the assembly to raise revenue to meet community members' obligations on sanitation activities and awareness creation.

4. Community participation should moreover, take a form of visual screening of hygiene and sanitary status of all manner of people of school going age from nursery to junior secondary schools.

5. TMA in conjunction with zonal councils should strictly claim back all the sanitary sites in the hands of private individuals who have not put up permanent structures to establish small recycling plants at these sites to recycle waste that are dumped in the sites.

6. The citizenry must be encouraged on the corrective ways of recycling materials such as old newspapers into bags, old clothes into dolls, cardboards into puzzles, mineral bottle tops into curtains, lorry tyres into doormats and swings under trees and plants.

7. The Tema Municipal Assembly should rigorously engaged the services of health inspectors in order to help communities cultivate the habit of community participation in sanitation activities. In the same way, courts should be set up to prosecute offenders who do not participate effectively in programmes which are related to environmental sanitation in their communities.

8. The Assembly should set up "toilet committees" to develop toilet facilities in Ashaiman and intensify efforts to bring a lot of Non-Governmental Organizations

and factories in Tema into sanitation programmes as a means of re-enforcing institutional arrangements for participation in sanitation activities.

9. Identifiable groups like the Muslims' Youth Association, the Christians Youth Associations, Ghana Private Road and Transport Union, Market Women Associations, ethnic welfare unions, Old boys and Girls' Associations should all incorporate sanitation education in their activities in order to conscientize people about the need to keep proper environmental hygiene as a form of participation in the community sanitation activities.

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APPENDIX 'A'

INTERVIEW SCHEDULE

Respondent should be a resident in Ashaiman for the past year. The interview schedule is designed for Research on Community Participation in Sanitation Programmes at Ashaiman.

SECTION 'A'

This section of the interview schedule seeks to solicit the state of environmental sanitation in Ashaiman, forms of sanitation activities residents participate and the challenges they face in term of programme planning and implementation.

BIO DATA

1. What is your sex?

   (a) Male [ ] (b) Female[ ]

2. What is your age?

   (a) Below 20 years [ ] (d) 20 – 49 [ ]

   (b) 20 – 29 [ ] (e) 50 – 59 [ ]

   (c) 30 – 39 [ ] (f) 60+ [ ]

3. What is your marital status?

   (a) Married [ ] (c) Divorced [ ]

   (b) Single [ ] (d) Widow[ ]

4. What is your occupation?

   (a) Factory man [ ]

   (b) Public servant [ ]

(c) Civil Servant [ ]

(d) Unemployed [ ]

(e) Self-employed [ ]

(f) Student [ ]

5. What is your source of water supply?

(a) Pipe [ ] (d) Rain [ ]

(b) Well [ ] (e) Other, specify.....

(c) Dam [ ]

6. Do you have toilet in your house?

(a) Yes [ ] No [ ]

7. If yes, what type

(a) KVIP [ ] (d) Bush [ ]

(b) WC [ ] (e) Other, specify.....

(c) Pit [ ]

8. Where do you dispose your waste products?

(a) In bush, outskirts [ ]

(b) Rubbish dump [ ]

(c) In front of house/compound [ ]

(d) Mobile refuse trucks [ ]

(e) Other, specify.....

9. Is there any organized sanitation programme going on in the community?

(a) Yes [ ] No [ ]

If no skip to question 10.

10. Do you take part in the programme?

(a) Yes [ ] No [ ]

11. At what stage(s) in the programme do you get involved?

(a) Needs assessment [ ]

(b) Implementation [ ]

(c) Monitoring [ ]

(d) Evaluation [ ]

12. Why is it that there are no organized sanitation programme ongoing in the community?.....

.....

13. Is there any sanitation programme committee in the community?

(a) Yes [ ] No [ ]

14. If yes, what is women representation?

(a) Less than half [ ]

(b) Half [ ]

(c) More than half[ ]

(d) Other specify.....

15. How many days do you set aside for community labour?

.....

16. How is the community organized?

(a) In groups [ ]

(b) In zones [ ]

(c) In lanes [ ]

(d) In gender [ ]

(e) No definite Plan [ ]

(f) Other, specify.....

17. What is the sex composition of the community members in terms of decision-making on the sanitation programme?

(a) Only on the men [ ]

(b) Only on women [ ]

(c) Both men and women [ ]

(d) Only the opinion leaders [ ]

(e) Others, specify.....

18. What are the youth components in the community?

(a) Form about less than ¼ of the community [ ]

(b) Form about ½ of the community [ ]

(c) Form more than ½ of the community [ ]

(d) Form about ½ of the community [ ]

(e) Other, specify.....

19. Are the youth involved in the decision taking in terms of programming?

(a) Yes [ ] No [ ]

20. If yes, what active role do they play in the sanitation programmes?

.....

.....

21. How often do you join hands in communal Sanitation activities?

(a) Not often [ ]

(b) Often [ ]

(c) Very often [ ]

(D) Other, specify.....

22. How are such sanitation programmes financed?

.....

.....

23. Do you see any constraints in terms of findings?

.....

.....

24. Suggest how sanitation programme should be tacked in Ashaiman.

.....

.....

APPENDIX 'B'

QUESTIONNAIRE

This questionnaire is designed for officials of Tema Municipal Assembly and Address: Institutional arrangements for environmental sanitation programme planning and how sustainable are the programmes on the Topic Community Participation in Sanitation programmes at Ashaiman.

1. Name institution(s) which are involved in sanitation programmes in Ashaiman.....

2. Is there any local collaborative groups in sanitation programme planning?

   (a) Yes [ ] No [ ]

   If No, which local collaborative group(s) can you identify?

   .....

3. If yes, involve the community in discharge of your duties in environmental sanitation programme?

   .....

   .....

4. Do you involve the community in discharge of your duties in environmental sanitation programme?

   (a) Yes [ ] No [ ]

5. If No, state two reasons for not involving them.

   (a) .....

   (b) .....

6. If yes, what role do they play?.....

.....

7. Who are the participants?

(a) Market women [ ]

(b) Churches [ ]

(c) Youth clubs [ ]

(d) Schools [ ]

(e) Other, specify.....

8. Do the institution(s) carry out fellow-up activities after the programmes?

(a) Yes [ ] No [ ]

9. What is the nature of the follow-up activities?.....

10. Suggest any other means how organization(s) or institution(s) can help to carry environmental sanitation programmes.

.....

.....

11. What has been the constraints on the part of activities of other organizations or institutions?.....

.....

12. What do you suggest about how environmental sanitation programme should be carried out in Ashaiman?.....

.....

FIG. A MAP SHOWING THE STUDY AREA: ASHAIMAN