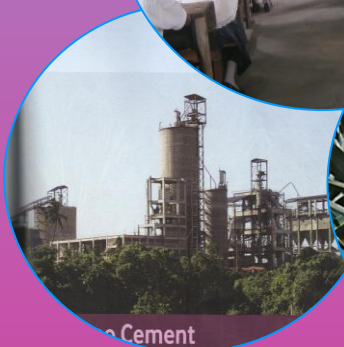




The United Republic of Tanzania

PWANI REGION

SOCIO-ECONOMIC PROFILE, 2013



November, 2014



The United Republic of Tanzania

PWANI REGION SOCIO-ECONOMIC PROFILE, 2013

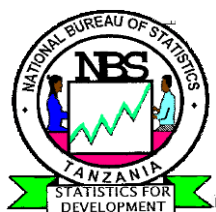
Jointly prepared

By

**Ministry of Finance,
National Bureau of Statistics**

and

Pwani Regional Secretariat



National Bureau of Statistics
Dar es Salaam

November, 2014

Foreword



The goals of Tanzania's Development Vision 2025 are in line with United Nation's Millennium Development Goals (MDGs) and are pursued through the National Strategy for Growth and Reduction of Poverty (NSGRP) or MKUKUTA II. The major goals are to achieve a high-quality livelihood for the people, attain good governance through the rule of law and develop a strong and competitive economy. To monitor the progress in achieving these goals, there is need for timely, accurate data and information at all levels.

Problems especially in rural areas are many and demanding. Social and economic services require sustainable improvement. The high primary school enrolment rates recently attained have to be maintained and so is the policy of making sure that all pupils who pass standard seven examinations join Form One. The food situation is still precarious; infant and maternal mortality rates continue to be high and unemployment triggers mass migration of youths from rural areas to the already overcrowded urban centres.

Added to the above problems, is the menace posed by HIV/AIDS, the prevalence of which hinders efforts to advance into the 21st century of science and technology. The pandemic has been quite severe among the economically active population leaving in its wake an increasing number of orphans, broken families and much suffering. AIDS together with environmental deterioration are the new problems which cannot be ignored.

Our efforts to meet both the new and old challenges are hampered by many factors including ill prepared rural development programs followed by weak implementation, monitoring and their supervision. The shortcomings in policy formulation, project identification, design and implementation due to the lack of reliable and adequate data and information on the rural development process have to be addressed. The availability of reliable, adequate and relevant qualitative and quantitative data and information at regional level is a prerequisite for the success of the formulating, planning, implementation, monitoring and evaluation of regions' development programs.

The publication of the Pwani Region Socio-Economic Profile series by the Prime Minister Office, Regional Administration and Local Government Authority (PMO-RALG) in collaboration with the National Bureau of Statistics and Pwani Regional Administration Management Team should be viewed as a modest attempt towards finding a solution to the existing problem of data and information gap at regional level.

The Regional Profile covers a wide range of statistics and information on geography, population, social-economic parameters, social services, economic infrastructure, productive sectors and cross cutting issues. Such data are vital to many policy makers, planners, researchers, donors and functional managers.

This Pwani Region Socio-Economic Profile has taken advantage of the experience gained in the production of other Region and District Council Socio-Economic Profiles in the country. It provides valuable information to our clients. Constructive views and criticisms are invited from readers to make a profile like this a better tool in the implementation of the country's policies.

I would like to take this opportunity to acknowledge with thanks, NBS for their technical support and staff of Pwani Regional Office who devoted their time to ensure the successful completion of this assignment.



Mgeni Baruani
Regional Administrative Secretary
November, 2014

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Acronyms

AIDS	Acquired Immune Deficiency Syndrome
ARI	Acute Respiratory Infections
ARV	Antiretroviral
CBO	Community Based Organization
CRDB	Cooperative Rural Development Bank
DC	District Council
DPT3/HB3	Diphtheria Pertusis Tetanus 3 rd doze/ Haemoglobin Level
ECF	East Cost Fiver
FAO	Food Agriculture Organization
GIS	Geographical Information Sytem
Govt	Government
Ha	Hectares
HIV	Human Immune Virus
IMR	Infant Mortality Rate
MVC	Most Vulnerable Children
NCD	New Castle Disease
NMB	National Microfinance Bank
NBC	National Bank of Commence
OPV3	Oral Polio Vaccine 3 rd Doze
PMTCT	Prevention Mother to Child Transmission
SACCOS	Savings and Credit Cooperative Societies
Sq. Km.	Square Kilometre
Std VII	Standard seven
STI	Sexual Transmitted Infection
TB	Tuberculosis
TBAAs	Traditional Birth Attendants
TC	Town Council

TPR	Toilet Pupil Ratio /Teacher Pupil Ratio
TT2	Tetanus Toxoid 2 nd doze
TPB	Tanzania Postal Bank
U5MR	Under Five Mortality Rate
UTI	Urinary Track Infection
VCT	Voluntary Counselling and Testing
VHC	Village Health Committee
VHWs	Village Health Workers
VWC	Village Water Committee
VWF	Village Water Fund
WUG	Water User Group

CHAPTER ONE

Land, Climate, Agro-Ecological Zones and People

1.0 An Overview

This chapter gives information about the geographical location, land area, administrative units, climate and agro-ecological zones of Pwani region. Moreover, information about ethnic groups, migration, population distribution, size and other demographic characteristics are also given in this chapter.

Geographically, Pwani region is found in the eastern part of Tanzania Mainland and its large part is situated along the Indian Ocean coastal belt. The region is very near to Dar es Salaam City which makes it easy to access the market of any product. Moreover, the region could still get raw materials from neighbouring regions which is an important factor on economic improvement.

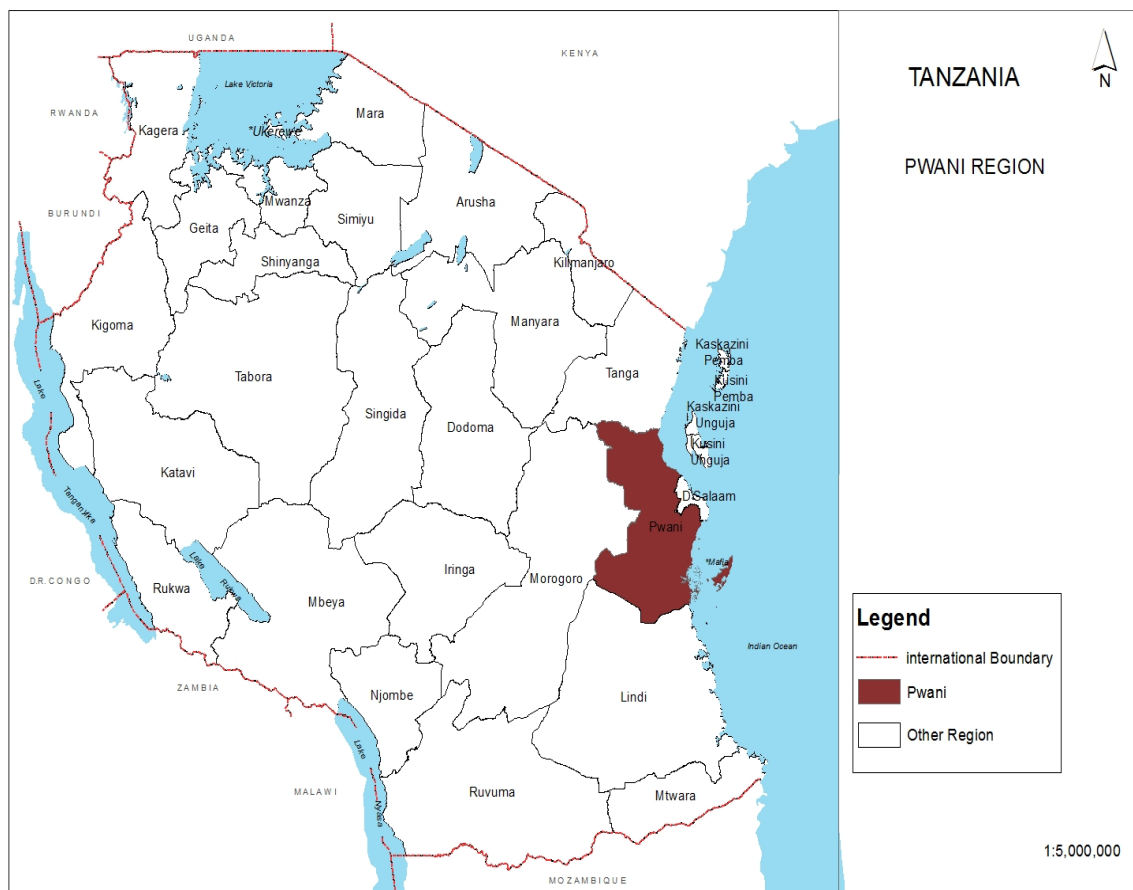
1.1 Geographical Location

The region was established officially in July 1972 after being split from the former Coast region (which included Dar es Salaam) whose headquarter was in Dar es Salaam. The headquarter of the region is at Kibaha, which is about 35 kilometers west of Dar es Salaam. The name “Pwani” in Kiswahili means “Coast”.

Pwani region covers an area of about 33,539 total sq. kms (about 3.8 percent of the Country’s total area) of which 32,407 sq. kms being dry land area and about 1,132 square kilometers water area. The region lies on the eastern part of Tanzania Mainland along the Indian Ocean coastal belt. It is located between latitudes 6° and 8° south of equator and between longitudes 37° 30’ and 40° east of Greenwich Meridian. Pwani region shares borders with Tanga region on the North, Morogoro region to the west, and Lindi region in the South. On the eastern part, the region shares borders with Dar-es-Salaam region and the Indian Ocean.

The region has six Administrative Districts namely Bagamoyo, Kibaha, Kisarawe, Mkuranga, Rufiji and Mafia. There are also seven local authorities of which six are district councils (Bagamoyo, Kibaha, Kisarawe, Mkuranga, Rufiji, and Mafia) and one is an urban council - Kibaha Town Council.

Map 1.1 : Map of Tanzania showing location of Pwani Region; 2012



Source: National Bureau of Statistics, Geographical Information System Unit, 2013

1.2 Land Area, Land Use Pattern and Administrative Units

As mentioned earlier, Pwani region has a total surface area of 33,539 sq. kms out of which 1,132 sq.kms or 3.4 percent is covered by water bodies and the remaining 32,407 sq kms or 96.6 percent sq.km is land area. Pwani region is deemed to be neither a small nor a big region. It is the 12th largest occupying about 3.8 percent of Tanzania Mainland's total area of 883,343 sq.km.

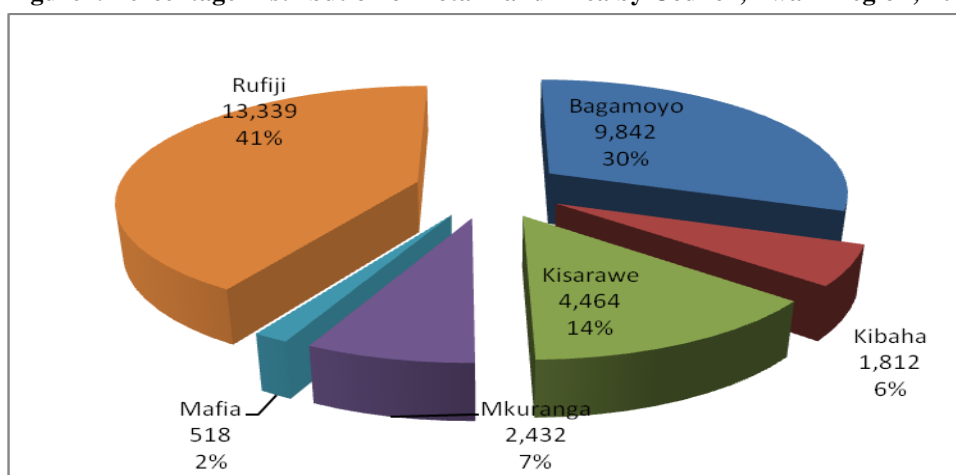
Table 1.1 and Figure 1 show that distribution of the region's area among the councils is largely in favour of Rufiji district council which covers 41 percent of total area of the region followed by Bagamoyo (30 percent), Kisarawe (14 percent), Mkuranga (7 percent), Kibaha (6 percent) while Mafia occupy 2 percent of total area.

Table 1. 1: Distribution of Land Area by Council, Pwani Region; 2012

Council	Land Area	Percent
Bagamoyo	9,842	30
Kibaha	1,812	6
Kisarawe	4,464	14
Mkuranga	2,432	7
Mafia	518	2
Rufiji	13,339	41
Total	32,407	100

Source: Pwani Regional Commissioner's Office, 2013

Figure1: Percentage Distribution of Total Land Area by Council, Pwani Region; 2012



Source: Pwani Regional Commissioner's Office, Land Natural Resources and Environment Department, 2013

Administratively, Pwani region is divided into six districts namely: Bagamoyo, Kibaha, Kisarawe, Mkuranga, Rufiji and Mafia, with seven councils namely: Bagamoyo District Council, Kibaha District Council, Kisarawe District Council, Mkuranga District Council, Rufiji District Council, Mafia District Council and Kibaha Town Council. Moreover, Pwani Region is further sub divided into divisions, wards, villages/streets and hamlets.

Table 1.2 shows that though the number of divisions and wards among councils differ slightly, the number of villages and hamlets differ very significantly, ranging from 23 to 121 for villages and 85 to 692 for hamlets.

Table 1.2: Area and Administrative Units by Council, Pwani Region, 2012

Council	Area (sq kms)	Divisions	No. of Wards	No. of Villages	No. of Streets	No. of Hamlets
Bagamoyo	9,842	7	22	97	0	692
Kibaha TC	750	1	11	0	53	0
Kibaha (DC)	1,062	2	11	33	0	85
Kisarawe	4,464	4	15	79	0	253
Mkuranga	2,432	4	18	121	0	463
Mafia	518	2	8	23	0	136
Rufiji	13,339	6	27	106	0	400
Total	32,407	26	112	459	53	2029

Source: Pwani Regional Commissioner's Office, 2013

Table 1.3 shows that the average area per ward in Pwani region is 289.3 sq. kms, ranging from 64.6 sq. kms. per ward in Mafia district council to 494 sq. kms in Rufiji district council. At village level, the average area per village in Pwani region is 63.3 sq. kms, but varying from 14.2 sq. kms per village/ street in Kibaha Rural to 125.8 sq. kms per village/ street in Rufiji district council.

In Pwani region, the average population per ward was 9,810 persons. The average population per ward varied from 5,805 in Mafia district council to 14,170 persons in Bagamoyo District Council. At the village/street level, the average population was 2,146 persons ranging from 1,286 persons per village/ street in Kisarawe District to 3,214 persons per village/ street in Bagamoyo district council.

Table 1.3: Distribution of Area and Population among Wards and Villages by Council, Pwani Region, 2012

Council	Area (sq. kms.)	Total Population	Wards			Villages/Streets		
			Number	Average Area per Ward (sq.kms.)	Average Population per Ward	Number	Average Area per Village/St (sq.kms.)	Average Population per Village/St
Bagamoyo	9,842	311,740	22	447.4	14,170	97	101.5	3,214
Kibaha TC	750	128,488	11	68.2	11,681	53	14.2	2,424
Kibaha (DC)	1,062	70,209	11	96.5	6,383	33	32.2	2,128
Kisarawe	4,464	101,598	15	297.6	6,773	79	56.5	1,286
Mkuranga	2,432	222,921	18	135.1	12,385	121	20.1	1,842
Mafia	518	46,438	8	64.8	5,805	23	22.5	2,019
Rufiji	13,339	217,274	27	494.0	8,047	106	125.8	2,050
Total	32,407	1,098,668	112	289.3	9,810	512	63.3	2,146

Source: Pwani Regional Commissioner's Office, and the 2012 Population and Housing Census, Vol.I Population Distribution by Administrative Units, 2013

1.3 Climate, Soil and Topography

1.3.1 Climate

Pwani Region is situated on the eastern part of Tanzania Mainland along the Indian Ocean coastal belt, where the weather is generally hot. The region experiences a typical tropical climate with an average temperature of 28 degree Celsius. There are two rain seasons with average rainfall of about 800 to 1,000mm per annum. The two rain seasons are.

- **The Main Rain Season**

This is the long rain season which lasts for rough 120 days between March and June every year. The rains are usually heavy and spread throughout the region.

This is also the main crop planting season for all crops, but especially so for the seasonal crops such as maize, paddy and cotton

- **The Short Rain Season**

This is the short rain season which lasts for about 60 days between October and December each year. The rains are not evenly distributed and they are not very much reliable. They are most suitable for short term crops such as pulses.

Altitude, topography and vegetation influence the climate greatly, resulting in micro climate in specific areas and macro climate in larger areas. The climate in Pwani is influenced by several factors resulting in the formation of three distinctive climatic zones. These are Zone I, Zone II and Zone III.

1.3.2 Soil

In Pwani region, two major superficial geological deposits are identified. These are the sandy loam and sandy clay soils in the highland areas. Sand loam soils and heavy clay waterlogged soils are found in the coastal belts and lowlands.

1.3.3 Topography

Pwani region occupies mostly the coastal area of Tanzania Mainland which has elevations ranging from 0 to just close to 500 meters above sea level. Surrounding the region in the northern and southern parts are the major rivers of Rufiji, Ruvu and Wami. A prominent feature of the coastal area is the Rufiji delta which pours water into the Indian Ocean. The southern part of the region is also dominated by the famous Selous National Park separating Pwani and Lindi region in the south. The permanent rivers are the Rufiji, Ruvu and the

Wami although there are small rivers like Mpiji separating Pwani and Dar es Salaam regions.

1.4 Vegetation

The vegetation of Pwani region varies from woodlands, savanna and a few natural forests. The eastern coastal areas are woodlands giving way to patches of grasslands and moist forest on the wetter eastern areas with rivers draining into the Rufiji and Wami.

1.5 Agro – Ecological zones (AEZ)

Climatic conditions as well as geological features have been the base of identifying different agro- ecological zones in Pwani region. Basically the region has three distinctive agro-ecological zones.

1.5.1 Coastal Belt Zone (Zone I)

Pwani region is dominated by the Indian Ocean which extends from northern border of Bagamoyo district with Tanga Region, to the southern border of Rufiji district council with Lindi region.

The Coastal area which rises from 0 metres to 100 metres above sea level is dominated by sandy loam soils except for lower land areas with heavy clay water logged soils suitable for paddy production and coconut trees.

1.5.2 River Basins and Lowlands Zone (Zone II)

There are three big rivers which traverse the region from west to east to discharge their waters into Indian Ocean. These are:-

- Rufiji river which crosses the region in southern parts passing through Rufiji district in a west-east direction
- Wami river which crosses the region in the northern parts passing through Bagamoyo district in a west-east direction
- Ruvu river which crosses the region through different parts of Kibaha and Bagamoyo districts in a southern west-north east direction

The lowlands and along the river valleys are fertile for planting varieties of various crops such as maize, paddy, pulses, vegetables and pineapples. This zone, together with other lowland areas are the main agricultural potential zone of the region, whose soils are mainly loamy clay, silt, loams, alluvial and light textured clay soils. Recently cattle are also kept in this area in large numbers leading to clashes between peasants and cattle keepers.

1.5.3 Highland Plateau Zone (Zone III)

These are coastal hills and highland areas which rise from 100 metres above sea level, mainly dominated by sandy loam, and sandy clay soils suitable for growing pulses and vegetables of different species.

1.6 Drainage System

In Pwani region the drainage system is based on rivers. Among them are Rufiji, Wami and Ruvu rivers. According to drainage system in Tanzania, these three rivers in Coastal region are among the largest rivers in the country. Location wise, Rufiji River is largely in Rufiji district, Wami river in Bagamoyo district while Ruvu is in Kibaha and Bagamoyo district councils.

In addition, these rivers are of significant economic value to the people in the region. They are used either as agricultural potential zones or as source of fishing industry, transportation and Sources of water for domestic uses. About 90 percent of water consumed in Dar es Salaam city is obtained from Ruvu river. With such features, it is evident that availability of drainage system in Pwani region could be a basic instrument in reducing rural poverty through utilization of rivers for irrigation and other necessary construction.

1.7 Population

1.7.1 Ethnic Groups

The main indigenous ethnic group is the Wazaramo. Others who form significant minorities are the Wazigua, Wakwere, Wadoe, Wamasai, Wamatumbi, Wangindo, Wayao, Wandengereko, Waluguru, Wanyamwezi, Wagogo, Wamakonde, Wanyangatwa, Washirazi, and the Wapokomo's (Table 1.4). The Wazaramo, Wakwere and Wandengereko are the majority in most of the councils while the Wamasai and Wadoe are found in Bagamoyo district council, Wapakomo and Washirazi are mainly found in Mafia. The rest of the ethnic groups Wazigua, Wamatumbi, Wangido, Waluguru, Wamakonde, Wanyangatwa and others are found in different councils.

Table 1. 4: Ethnicity of Indigenous people by Council, Pwani Region; 2012

Council	List of Five Major Ethnic Groups
Bagamoyo	Wazigua, Wakwere, Wadoe, Wazaramo and Wamasai
Kibaha TC	Wamatumbi, Wazaramo, Wangindo, Wayao and Wakwere.
Kibaha (R)	Wazaramo, Wakwere, Wandengereko, Wamasai and Waluguru
Kisarawe	Wazaramo, Wamakonde, Wandengereko, Wanyamwezi and Wagogo
Mkuranga	Wazaramo, Wandengereko, Wangindo, Wamakonde and Wanyagatwa.
Mafia	Wandengereko, Washirazi, Wamakonde, Wamatumbi and Wapokomo.
Rufiji	Wandengereko, Wamatumbi, Wangindo and Wanyagatwa

Kibaha TC= Kibaha Town, Kibaha (R)= Kibaha Rural

Source: Pwani Regional Commissioner's Office

1.7.2 Population Size and Growth

Like most regions in Tanzania Mainland, the population of Pwani region has experienced a significant growth. Table 1.5 shows that the region had 1,098,668 people in 2012 compared to 885,017 inhabitants counted in the 2002 Population Census, resulting in a significant increase of 213,651 people (24.1 percent) during the intercensal period. The region accounts for 2.5 percent of the total population of Tanzania Mainland.

When compared with other regions in the Mainland, Pwani Region comes out as the 5th least populous region followed by Iringa, Lindi, Njombe and Katavi at the bottom as can be seen in table 1.5.

Table 1.5. Distribution of Population and Growth Rates by Region; 2002 and 2012

Region	Population		Population Increase 2002 – 2012		
	2002	2012	Number	Percent	Annual Rate Of Growth(percent)
Pwani	885,017	1,098,668	213,651	24.1	2.2
Iringa	837,847	941,238	103,391	12.3	1.1
Dodoma	1,692,025	2,083,588	391,563	23.1	2.1
Arusha	1,288,088	1,694,310	406,222	31.5	2.7
Kilimanjaro	1,376,702	1,640,087	263,385	19.1	1.8
Tanga	1,636,280	2,045,205	408,925	25.0	2.2
Morogoro	1,753,362	2,218,492	465,130	26.5	2.4
Dar es salaam	2,487,288	4,364,541	1,877,253	75.5	5.6
Lindi	787,624	864,652	77,028	9.8	0.9
Mtwara	1,124,481	1,270,854	146,373	13.0	1.2
Ruvuma	1,113,715	1,376,891	263,176	23.6	2.1
Mbeya	2,063,328	2,707,410	644,082	31.2	2.7
Singida	1,086,748	1,370,637	283,889	26.1	2.3
Tabora	1,710,465	2,291,623	581,158	34.0	2.9
Rukwa	729,060	1,004,539	275,479	37.8	3.2
Kigoma	1,674,047	2,127,930	453,883	27.1	2.4
Shinyanga	1,249,226	1,534,808	285,582	22.9	2.1
Kagera	1,791,451	2,458,023	666,572	37.2	3.2
Mwanza	2,058,866	2,772,509	713,643	34.7	3
Mara	1,363,397	1,743,830	380,433	27.9	2.5
Manyara	1,037,605	1,425,131	387,526	37.3	3.2
Njombe	648,464	702,097	53,633	8.3	0.8
Katavi	408,609	564,604	155,995	38.2	3.2
Simiyu	1,317,879	1,584,157	266,278	20.2	1.8
Geita	1,337,718	1,739,530	401,812	30.0	2.6
Tanzania Mainland	33,461,849	43,625,354	10,163,505	30.4	2.7

Source: The United Republic of Tanzania Population and Housing Census, 2012 Vol. 1

Table 1.6 shows that Pwani region is among the regions with moderate growth rate. Pwani region has maintained a more moderate growth rate than the Mainland over the period 1978 – 2012. For example, in the intercensal period 1988 - 2002 the growth rate for Pwani region was 2.4 percent as compared to 2.8 percent for the Mainland. Pwani region which has a growth rate of 2.2 percent same as Tanga region, also has the tenth growth rate from the lowest growth rate of 0.8 percent after Dodoma, Ruvuma and Shinyanga both with 2.1 percent, then Simiyu and Kilimanjaro with 1.8 percent, Mtwara (1.2), Iringa (1.1 percent), Lindi (0.9 percent) and Njombe (0.8 percent).

Table 1.6: Average Annual Rates of Population Increase for the Inter-censal Periods 1978-1988, 1988-2002 and 2002-2012, by Region, Tanzania Mainland.

Region	Average Annual Growth Rate (Percent)			Difference in Annual Rates	
	1978-1988	1988-2002	2002-2012	1	2
Pwani	2.1	2.4	2.2	0.3	-0.2
Iringa	2.5	1.6	1.1	-0.9	-0.5
Dodoma	2.4	2.2	2.1	-0.2	-0.1
Arusha	3.8	3.9	2.7	0.1	-1.2
Kilimanjaro	2.0	1.6	1.8	-0.4	0.2
Tanga	2.1	1.8	2.2	-0.3	0.4
Morogoro	2.6	2.6	2.4	0	-0.2
Dar es salaam	4.8	4.3	5.6	-0.5	1.3
Lindi	2.0	1.4	0.9	-0.6	-0.5
Mtwara	1.4	1.7	1.2	0.3	-0.5
Ruvuma	3.3	2.5	2.1	-0.8	-0.4
Mbeya	3.1	2.4	2.7	-0.7	0.3
Singida	2.6	2.3	2.3	-0.3	0
Tabora	2.4	3.6	2.9	1.2	-0.7
Rukwa	4.4	3.5	3.2	-0.9	-0.3
Kigoma	2.8	4.8	2.4	2.0	-2.4
Shinyanga	2.9	3.3	2.1	0.4	-1.2
Kagera	2.6	3.1	3.2	0.5	0.1
Mwanza	2.6	3.2	3.0	0.6	-0.2
Mara	2.7	2.6	2.5	-0.1	-0.1
Manyara	n.a	3.9	3.2	n.a	-0.7
Njombe	n.a	n.a	0.8	n.a	n.a
Katavi	n.a	n.a	3.2	n.a	n.a
Simiyu	n.a	n.a	1.8	n.a	n.a
Geita	n.a	n.a	2.6	n.a	n.a
Tanzania Mainland	2.8	2.8	2.7	0	-0.1

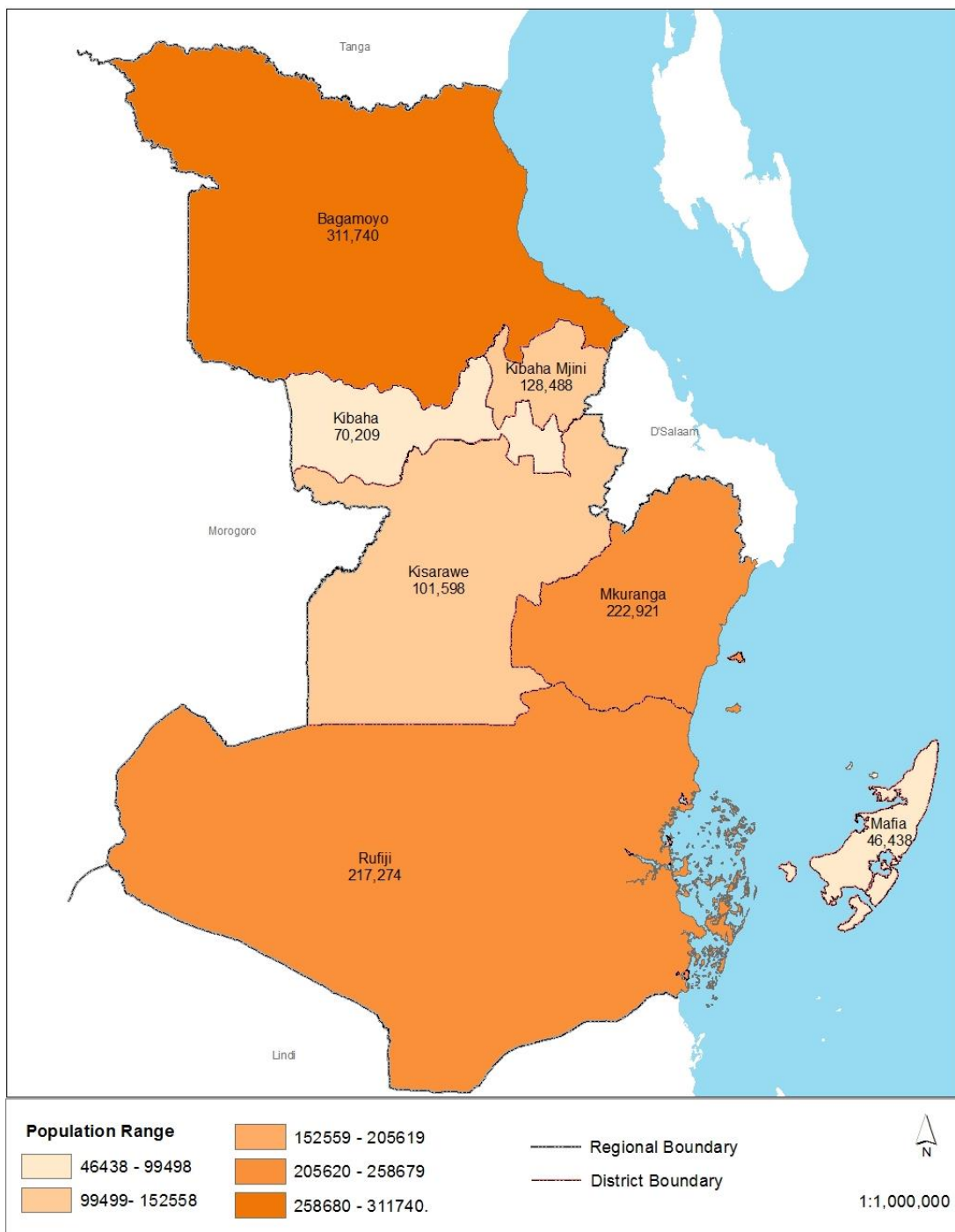
(1) Is difference in growth rates from the period 1988-2002 and that of 1978-1988.

(2) Is difference in growth rates from the period 2002-2012 and that of 1988-2002.

Source: Computed from the Tanzania Population and Housing Census 1988, 2002 and 2012, Population Distribution by Administrative Units Volume 1

Table 1.7 shows population size and growth of Pwani region by council according to the 1988, 2002 and 2012 censuses. It may be observed from the two past censuses data that the population was uneven among the councils in the region. Bagamoyo was the most populous council in the two intercensal periods and Mafia was the least populous council.

Map 1. 2: Showing Population Distribution by Council; 2012 Census



Source: National Bureau of Statistics, Geographical Information System Unit, 2013

Table 1.7: Population Size and Growth by Council, Pwani Region; 2002 and 2012 Censuses

Council	2002 Pop. Census				2012 Pop. Census				Growth Rate	
	M	F	T	Percent	M	F	T	Percent	1988	2002
									-	-
									2002	2012
Bagamoyo	113,991	114,976	228,967	25.9	154,198	157,542	311,740	28.4	2.0	na
Kibaha TC	38,954	38,537	77,491	8.8	62,653	65,835	128,488	11.7	3.4	na
Kibaha (DC)	26,843	26,908	53,751	6.1	34,515	35,694	70,209	6.4	3.4	na
Kisarawe	48,152	47,171	95,323	10.8	50,631	50,967	101,598	9.2	ND	na
Mkuranga	91,411	95,516	186,927	21.1	108,024	114,897	222,921	20.3	ND	na
Mafia	20,564	19,993	40,557	4.6	22,954	23,484	46,438	4.2	1.5	na
Rufiji	97,735	104,266	202,001	22.8	104,851	112,423	217,274	19.8	1.9	na
Total	437,650	447,367	885,017	100	537,826	560,842	1,098,668	100.0	2.4	2.2

M=Male, F=Female, T=Total, ND= No data, na= computation is underway

Source: National Bureau of Statistics, Census District Profiles, 1988, 2002 and 2012 Population Census Reports.

Pwani region's population grew at an average of 2.4 percent per annum between 1988 and 2002. From 2002 and the year 2012 the growth rate decreased to an average of 2.2 percent per annum.

Table 1.8 shows that the population of Pwani region reached 1,098,668 in 2012 from 885,017 in 2002. This is an increase of about 24 percent in ten years. Bagamoyo district council continues to lead followed by Mkuranga district council while Mafia remains the least populous council in the 2002 and 2012 censuses.

Table 1. 8: Population Distribution by Council, Pwani Region, 1988, 2002 and 2012 Censuses

Council	1988	2002	2012
Bagamoyo	173,871	228,967	311,740
Kibaha DC	n.a	n.a	70,209
Kisarawe	78,290	95,323	101,598
Mkuranga	114,973	186,927	222,921
Rufiji	153,938	202,001	217,274
Mafia	33,079	40,557	46,438
Kibaha TC	n.a	n.a	128,488
Total	636,103	885,017	1,098,668

Kibaha DC: Kibaha District Council, Kibaha TC: Kibaha Town council

Source: compiled from 1988, 2002 and 2012 Censuses.

Table 1.9 shows percentage share of population among districts in Pwani region. In all three censuses shown in Table 1.9, Bagamoyo had the largest share of the Pwani region's population while Mafia had the lowest share. Kibaha DC and Kibaha TC existed as one district (Kibaha) in 1988 and 2002. This is the reason why there is no data for the two councils separately in table 1.9.

Table 1. 9: Percentage Share of Regional Population by Council, Pwani Region; 1988, 2002 and 2012 Censuses

Council	Percentage share of regional population during censuses of		
	1988	2002	2012
Bagamoyo	27.3	25.9	28.4
Kibaha DC	n.a	n.a	6.4
Kisarawe	12.3	10.8	9.2
Mkuranga	18.1	21.1	20.3
Rufiji	24.2	22.8	19.8
Mafia	5.2	4.6	4.2
Kibaha TC	n.a	n.a	11.7
Total	100.0	100.0	100.0

Note: na: Not available

Source: computed data from 1988, 2002 and 2012 Censuses.

Compared to other regions of Tanzania Mainland, Pwani region is neither the biggest nor smallest in terms of either land area or population according to the 2002 Census results. In fact it was one of the five least populous regions of Tanzania Mainland. However, according to the 2012 Population and Housing Census, Pwani region was among the four least populous regions in the country and contributed only 2.5 percent of the Mainland population. Between 2002 and 2012 the region was the 21st in average annual rate of increase and had an average annual growth rate of 2.2 percent compared to the Mainland growth rate of 2.7 percent. Nevertheless, Table 1.10 shows that the share of the region has been on the decline and reached about 2.5 percent in the year 2012 while in comparison; Pwani region occupies 3.8 percent of total area of Tanzania Mainland.

Table 1.10: Pwani Region's Percentage Share of Tanzania Mainland Population in 1988, 2002 and 2012 Censuses

Year	Total population		
	1988	2002	2012
Mainland	22,455,207	33,461,849	43,625,354
Pwani	636,103	885,017	1,098,668
Percent Share	2.8	2.6	2.5

Source: Compiled from the 1988, 2002 and 2012 Censuses Data.

1.7.3 Population Density

Pwani region, with an average population density of 27 persons per sq. km. in 2002 was considered to be a moderate densely populated region compared to other regions of Tanzania Mainland. In 2012, the region had a total population of 1,098,668 and a population density of 34 people per square kilometer. The region did not reflect any sort of land pressure compared to regions like Kilimanjaro or Dar es Salaam.

The Mainland population density in 2002 was 38 people per sq. km. Pwani Region was placed at number 13 in terms of population density among other Mainland regions. Dar es Salaam led with 1,786 people per sq. km followed by Mwanza 150 and Kilimanjaro (103). The least densely populated regions were Lindi (12), Rukwa (17) and Ruvuma (18 people per sq. km).

The national average population densities as presented in table 1.11 were 1978 (19), 1988 (26), and 2002 (38) and 2012 (50). The table also compares the Mainland regions' population densities. Pwani region's population density is low compared to many of the other regions. In 2012, Pwani Region ranked 12 out of the former 21 regions of Tanzania Mainland and in 2002 it ranked thirteen.

Table 1. 11: Population Density by Region and Ranking, Tanzania Mainland, 1978, 1988, 2002 and 2012 Censuses.

Region	Land Area (sq. kms.)	Density (Persons per Sq. Km.)				Rank	
		1978	1988	2002	2012	2002	2012
Pwani	32,407	16	20	27	34	13	12
Iringa	33,039	16	21	26	26	14	18
Dodoma	41,311	24	30	41	50	10	9
Arusha	34,516	13	20	35	49	11	10
Kilimanjaro	13,309	68	83	103	123	3	3
Tanga	26,808	39	48	61	76	7	6
Morogoro	70,799	13	17	25	31	15	13
Dar es salaam	1,393	605	977	1786	3133	1	1
Lindi	66,046	8	10	12	13	21	21
Mtwara	16,707	46	53	67	76	6	7
Ruvuma	63,498	9	12	18	22	19	19
Mbeya	60,350	18	24	34	45	12	11
Singida	49,341	12	16	22	28	18	17

Table 1.11 (ctd): Population Density by Region and Ranking, Tanzania Mainland, 1978, 1988, 2002 and 2012 Censuses.

Region	Land Area (sq. kms.)	Density (Persons per Sq. Km.)				Rank	
		1978	1988	2002	2012	2002	2012
Tabora	76,151	7	14	22	30	20	16
Rukwa	68,635	11	10	17	15	16	20
Kigoma	37,037	18	23	45	57	9	8
Shinyanga	50,781	26	35	55	30	8	15
Kagera	28,388	36	46	71	87	4	5
Mwanza	19,592	74	96	150	142	2	2
Mara	19,566	37	48	70	89	5	4
Manyara	45,820	11	13	23	31	16	14
Njombe	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Katavi	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Simiyu	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Geita	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Total Mainland	855,494	19	26	38	50		

Source: 2002 Population and Housing Census General Report and Population Projections

Table 1.12 gives the population density at council level for the censuses of 1988, 2002 and 2012. In 1988 and 2002 censuses, Mafia district council with a population density of 64 and 78 persons per sq. km, was the most densely populated district council, but in 2012 Kibaha TC was the most densely populated district council followed by Mkuranga district council which accounting for 92 persons per sq. km.

Table 1.12: Population Density by Council, Pwani Region, 1988, 2002 and 2012 Censuses

Council	Land Area (sq. km.)	Population			Population Density (Persons per Sq. Km)		
		1988	2002	2012	1988	2002	2012
Bagamoyo	9,842	173,871	228,967	311,740	18	23	32
Kibaha DC	1,062	na	na	70,209	na	na	66
Kisarawe	4,464	78,290	95,323	101,598	18	21	23
Mkuranga	2,432	114,973	186,927	222,921	47	77	92
Rufiji	13,339	153,938	202,001	217,274	12	15	16
Mafia	518	33,079	40,557	46,438	64	78	90
Kibaha TC	750	na	na	128,488	na	na	171
Total	32,407	636,103	885,017	1,098,668	20	27	34

Source: National Bureau of Statistics, Computed Data from 1988, 2002 and 2012 Population Censuses Reports.

1.7.4 Population Change

Table 1.13 shows that from 2002 to 2012 the region's population increased from 837,847 in 2002 to 941,238 in 2012. However, at council level there were significant differences in the level of population change with one council registering a population increase of nearly 40 percent while in another the population increase was only 6.6 percent. No council showed a decline in the population.

Table 1.13: Population by Council, Pwani Region; 2002 and 2012 Censuses

Council	Land Area (sq. km.)	2002	2012	Population Increase: 2002 to 2012	
				Number	Percent
Bagamoyo	9,842	228,967	311,740	82,773	36.2
Kibaha DC	1,062	n.a	70,209	n.a	n.a
Kisarawe	4,464	95,323	101,598	6,275	6.6
Mkuranga	2,432	186,927	222,921	35,994	19.3
Rufiji	13,339	202,001	217,274	15,273	7.6
Mafia	518	40,557	46,438	5,881	14.5
Kibaha TC	750	na	128,488	n.a	n.a
Total	32,407	885,017	1,098,668	213,651	24.1

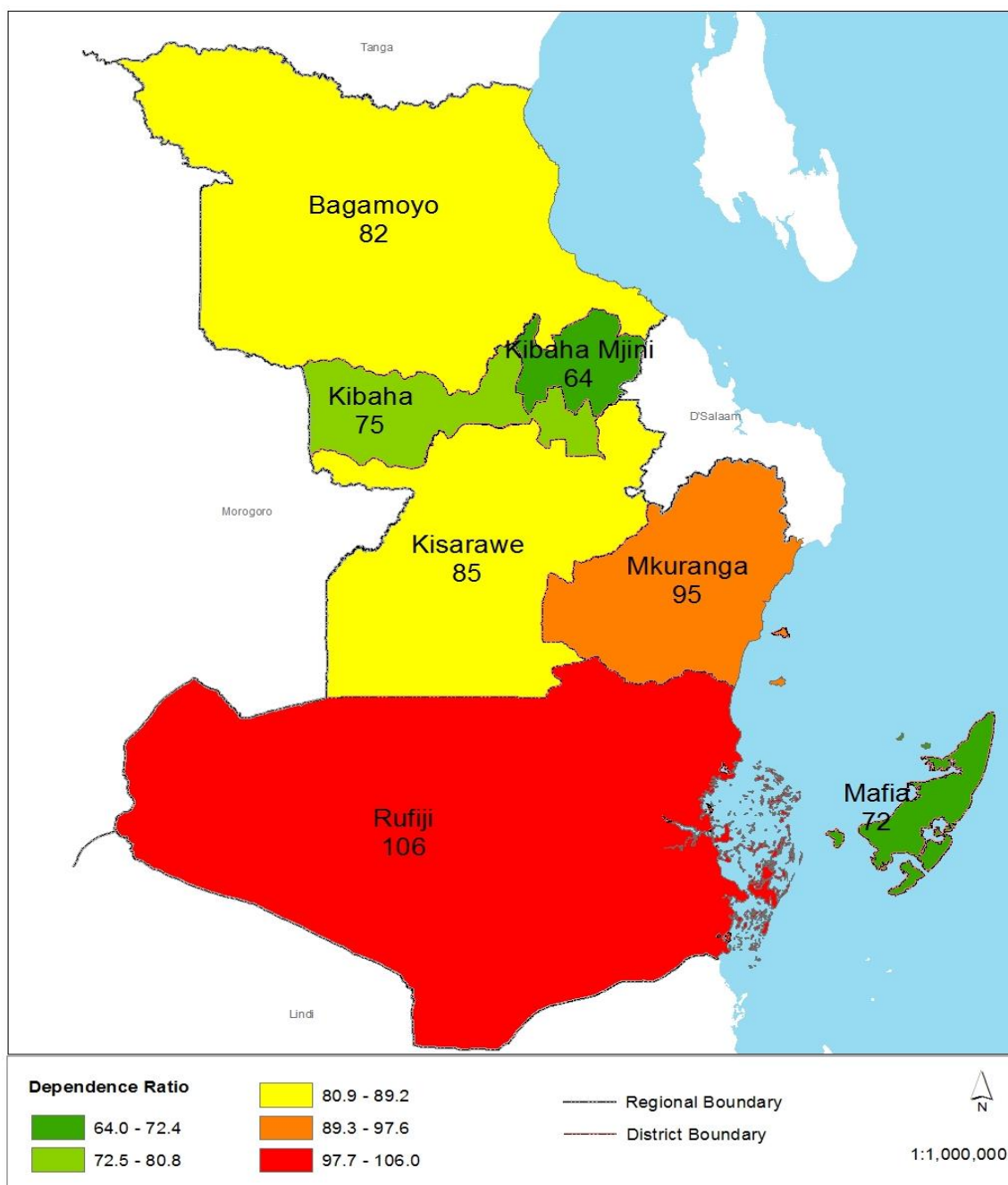
na: No data

Source: Computed Data from 2002 and 2012 Population Censuses Reports.

1.7.5 Dependency Ratio

The Dependency Ratio is a measure which shows the load the economically active population has in supporting the young and the old populations who are termed as dependants. The Age Dependency Ratio therefore gives the number of persons aged 0 – 14 years and those aged 65 years and above who are the dependants to every 100 persons aged 15 – 64 years. Table 1.14 shows that number of dependants in Pwani region increased by 18.1 percent from 429,129 in 2002 to 506,693 in 2012. In both censuses, dependency ratio was highest in Rufiji district council at 101 and 106 dependants per 100 of the active population. Dependency ratio of Kibaha Town Council (64) was the lowest in 2012. Moreover, high dependency ratios above the regional average counted in Rufiji and Mkuranga during 2012 census is still a challenge to the region.

Map 1. 3: Showing Dependence Ratio by Council, Pwani Region; 2012



Source: National Bureau of Statistics, Geographical Information System Unit, 2013

Table 1.14 : The Dependency Ratios by Council, Pwani Region, 2002 and 2012 Censuses

Council	2002 Population census			2012 Population census		
	Number of		Dependency Ratio	Number of		Dependency Ratio
	Dependants	Economically Active		Dependants	Economically Active	
Bagamoyo	116,931	128,234	91	140,093	171,647	82
Kibaha	54,541	76,701	71	30,066	40,143	75
Kisarawe	43,480	51,843	84	46,812	54,786	85
Mkuranga	91,952	94,975	97	108,329	114,592	95
Rufiji	101,651	100,350	101	111,748	105,526	106
Mafia	20,574	23,737	87	19,471	26,967	72
Kibaha TC	na	na	na	50,174	78,314	64
Total Region	429,129	475,840	90	506,693	591,975	86

Source: Computed Data from 1988 and 2002 Population Censuses Reports.

1.7.6 Population Distribution by Sex and Age

The 2012 Population Census showed that females were more than males in Pwani region and all its councils. At regional level, in 2012, for every 100 females there were 96 males (Table 1.15). In 2012, the district with the highest sex ratio of 99 males for every 100 females was Kisarawe district council (Table 1.15).

Table 1. 15 : Population Distribution by Sex and Sex Ratio by Council, Pwani Region; 2002 and 2012 Censuses

Council	2002				2012			
	Males	Females	Total	Sex ratio	Males	Females	Total	Sex Ratio
Bagamoyo	113,991	114,976	228,967	99.1	154,198	157,542	311,740	98
Kibaha DC	26,637	26,774	53,411	99.5	34,515	35,694	70,209	97
Kisarawe	48,152	47,171	95,323	102.1	50,631	50,967	101,598	99
Mkuranga	91,411	95,516	186,927	95.7	108,024	114,897	222,921	94
Rufiji	97,735	104,266	202,001	93.7	104,851	112,423	217,274	93
Mafia	20,564	19,993	40,557	102.9	22,954	23,484	46,438	98
Kibaha TC	39,160	38,671	77,831	101.3	62,653	65,835	128,488	95
Total	437,650	447,367	885,017	97.8	537,826	560,842	1,098,668	96

Source: Calculations based on data from the 2002 and 2012 Censuses

1.7.7 Migration

Factors affecting change in the population of an area are births, deaths and migration. Migration is one of the most complex demographic variables. Migration can affect the growth of population directly, and by influencing fertility and mortality of the area of origin and destination. The measurement and analysis of migration are important in the preparation

of population estimates and projections of a region. Furthermore, it is of particular significance for manpower and regional planning.

Table 1.16 shows that Pwani is one of the regions in the country that experience persistent negative net migration. Other regions are Dodoma, Kilimanjaro, Tanga, Iringa, Lindi, Mtwara, Ruvuma, Singida, Kigoma, Mwanza and Mara. There are several reasons that cause negative net migration to these regions. Among them are lack of strong industrial and commercial base, large scale plantations and looking for greener pastures.

The 1988 Population Census reveal among many things that Pwani region had the third highest negative net life time migration of -103,912 but the 2012 Population Census revealed a great change in negative net life time migration to second less negative net life time migration of -49,904. Nevertheless, this means that the number of people who came to live in Pwani region were less than those who left the region. The high negative net migration figure is a testimony to the fact that more people out-migrated.

Table 1. 16: Migration Status and Net migration by Region, Tanzania Mainland, 1988 and 2002 Censuses

Region	1988			2002		
	In migration	Out migration	Net migration	In migration	Out migration	Net migration
Pwani	103,804	207,716	-103,912	189,286	239,190	-49,904
Iringa	49,282	169,480	-120,198	80,129	303,395	-223,266
Dodoma	89,900	190,985	-101,085	139,978	324,088	-184,110
Arusha	218,427	76,703	141,724	267,747	184,014	83,733
Kilimanjaro	93,040	217,423	-124,383	148,016	416,038	-268,022
Tanga	98,747	150,915	-52,168	131,961	299,142	-167,181
Morogoro	172,393	141,956	30,437	288,492	212,553	75,939
Dar es salaam	651,246	150,625	500,621	1,229,839	238,423	991,416
Lindi	95,200	145,031	-49,831	100,545	177,785	-77,240
Mtwara	46,299	144,988	-98,689	53,727	189,172	-135,445
Ruvuma	66,442	81,661	-15,219	86,637	138,794	-52,157
Mbeya	160,377	113,378	46,999	238,624	173,247	65,377
Singida	86,651	130,531	-43,880	104,699	256,643	-151,944
Tabora	241,729	175,359	66,370	351,712	244,767	106,945
Rukwa	87,599	49,294	38,305	114,210	74,938	39,272
Kigoma	26,795	129,718	-102,923	84,721	239,344	-154,623
Shinyanga	288,210	281,447	6,763	449,512	64,966	384,546
Kagera	103,713	109,693	-5,980	203,623	177,014	26,609
Mwanza	270,142	303,646	-33,504	420,113	437,666	-17,553
Mara	75,982	115,865	-39,883	108,531	301,583	-193,052
Manyara	*	*	*	276,222	55,872	220,350
Total Mainland	3,025,978	3,086,414	-60,436	5,068,324	4,748,634	319,690

Source: 1988 and 2002 Population and Housing Censuses, Tanzania National Profile Volume V

CHAPTER TWO

The Regional Economy

2.0 Introduction

This Chapter describes the economy of Pwani region. The economic indicators used include Gross Domestic Product (GDP), Per Capita Gross Domestic Product and main source of income for the residents. The non-income poverty indicators cover demographic characteristics, health, and education status, access to drinking water, food security and housing condition.

Pwani region's economy continues to be dominated by the agriculture sector. Both commercial and peasantry farming are carried out, with the latter dominating. According to the results of the 2007/08 Pwani Region Agriculture Sample Census Report, the crop farming engaged 82 percent of economically active population followed by livestock keeping (2 percent) and fishing (4 percent). The remaining percentage (12) was involved in other off farm economic activities such as trade and repairs. Agriculture contributes most of the region's cash income mainly from scale of coconuts, oranges, mango and cassava.

2.1 Regional Gross Domestic Product

Pwani region's economic performance from 2000 to 2012 is shown in Table 2.1. The Pwani region's GDP stood at TShs 826,409 million at current prices in 2012. In terms of GDP, the regional economy grew by 18.7 percent between 2011 and 2012. Remarkable GDP growth rate of 19.4 percent was observed over the period of 2009 to 2010 while the smallest growth rate of 3.9 percent was over the period of 2003 to 2004. In 2012 Pwani region's share of the national GDP was 1.8 percent which is equivalent to TShs. 826,409 million (Table 2.1). With this percentage contribution/share to the national Gross Domestic Product, Pwani region ranked eighteen (18) among Mainland regions (Table 2.2).

Table 2. 1: GDP and Per Capita GDP at Current Prices, Pwani Region; 2000 – 2012

Year	GDP at Current Prices in (TShs million)	Percent Change of GDP over the Previous Year	Average Percent Contribution to National GDP	Per Capita GDP at Current Prices in TShs. and USD			
				Exchange Rate			USD
				TShs.	TShs. to 1 USD	Percent Change over Previous year	
2000	171,096	...	2.1	206,432	808	...	255
2001	185,014	8.1	2.0	216,547	876	8.4	247
2002	208,972	12.9	2.0	235,022	979	11.8	240
2003	279,342	33.7	2.3	309,379	1050	7.2	295
2004	290,324	3.9	2.1	313,918	1101	4.9	285
2005	310,330	6.9	1.9	328,688	1139	3.4	289
2006	349,136	12.5	1.9	360,441	1252	9.9	288
2007	396,021	13.4	1.9	399,381	1233	-1.5	324
2008	464,536	17.3	1.9	457,685	1196	-3	383
2009	509,481	9.7	1.8	490,521	1320	10.4	372
2010	608,288	19.4	1.9	572,466	1409	6.7	406
2011r	696,332	14.5	1.9	640,801	1557	10.5	412
2012p	826,409	18.7	1.8	752,192	1600	1.1	470

r= revised, p= provisional

Source: NBS, National Accounts of Tanzania 2000- 2012, Statistical Abstract (2011) and Tanzania in Figures (2012)

2.2 Regional Per Capita GDP

The per capita income of the residents of Pwani region was TShs. 752,192 (equivalent to US \$ 470) in 2012. This amount was lower than that of Tanzania Mainland which was estimated at Tshs. 1,025,038 (equivalent to US\$ 640) in 2012. The average annual per capita income of the residents of Pwani region increased from TShs 640,801 in 2011 to TShs 752,192 in 2012. This is an increase of 17.4 percent. However, in terms of US Dollars the increase was from US\$ 412 in 2011 to US\$ 470 in 2012 an increase of 14.2 per cent (Table 2.1).

According to table 2.2, among 21 regions of Tanzania Mainland in 2012, Pwani region had the lowest contribution to the National GDP at 1.8 percent. The first, second and third regions with biggest contribution to the national GDP were Dar es Salaam, Mwanza and Mbeya (Table 2.2).

Table 2. 2: Regional GDP at Current Prices, Percentage and Ranking among the Regions, Tanzania Mainland, 2012

Region	GDP (TShs. million)	Percentage	Rank
Dodoma	1,385,962	3.1	14
Arusha	2,132,007	4.8	7
Kilimanjaro	2,030,035	4.5	8
Tanga	2,099,264	4.7	6
Morogoro	2,184,518	4.9	5
Pwani	826,409	1.8	18
Dar -es salaam	7,571,790	16.9	1
Lindi	844,067	1.9	17
Mtwara	1,182,990	2.6	16
Ruvuma	1,704,552	3.8	11
Iringa	2,347,081	5.2	4
Mbeya	3,276,141	7.3	3
Singida	857,983	1.9	17
Tabora	1,766,533	4.0	9
Rukwa	1,529,289	3.4	12
Kigoma	1,295,169	2.9	15
Shinyanga	2,688,809	6.0	3
Kagera	1,760,458	3.9	10
Mwanza	4,090,594	9.1	2
Mara	1,649,850	3.7	12
Manyara	1,494,161	3.3	13
Total Mainland	44,717,663	100.0	

Source: National Accounts of Tanzania, National Bureau of Statistics, Dar es Salaam

Table 2.3 shows that Pwani region with per capita income of TShs. 235,022 in 2002 and TShs. 752,192 in 2012 ranked 17th in the country. The first region was Dar es Salaam.

Table 2.3: Regional Per Capita Incomes at current prices and their Ranking among the Regions , Tanzania Mainland, 2002 and 2012

Region	2002		2012	
	Per Capita Income (TShs)	Rank	Per Capita Income (TShs)	Rank
Dodoma	214,743	18	665,180	19
Arusha	364,950	3	1,258,334	3
Kilimanjaro	306,221	7	1,237,761	5
Tanga	279,362	13	1,026,432	8
Morogoro	282,353	12	984,686	9
Pwani	235,022	17	752,192	17
Dar -es salaam	708,047	1	1,734,842	1
Lindi	270,559	14	976,192	11
Mtwara	354,934	4	930,862	13
Ruvuma	294,210	9	1,237,972	4
Iringa	390,261	2	1,428,243	2
Mbeya	290,861	10	1,210,065	6
Singida	247,783	16	625,974	20
Tabora	207,270	19	770,866	16
Rukwa	295,298	8	974,601	10
Kigoma	152,249	21	608,652	21
Shinyanga	289,934	11	856,333	15
Kagera	193,399	20	716,209	18
Mwanza	345,713	5	910,824	14
14Mara	253,501	15	946,107	12
Manyara	319,682	6	1,048,437	7
Total Mainland	310,991		1,025,038	

Source: National Accounts of Tanzania, National Bureau of Statistics, Dar es Salaam

2.3 Poverty Indicators

Besides GDP and per capita GDP, there are a number of indicators that indicate poverty levels in the region. These indicators include gini coefficient, poverty gap, and percent of households below basic needs poverty line, main source of cash income, food security, food consumption patterns, net enrolment, adult literacy rate, health indicators, and access to safe drinking water. They also include housing conditions in terms of type of toilet, roofing material, and source of energy for lighting as well as for cooking.

2.3.1 Income Poverty Rate, Poverty Gap and Gini Coefficient

According to the 2005 Poverty and Human Development Report, the number of poor people per square kilometer in Mafia was the highest (29) among councils of Pwani region. It was followed by Mkuranga district council (27), Kibaha (23), Bagamoyo (11), Kisarawe (10) and Rufiji had the smallest number at 5. Regarding the poverty line, the report shows that Kisarawe district council had the highest percentage of households living below the basic needs poverty line at 51. It was followed by Mafia (43), Bagamoyo and Mkuranga each with 40 percent, Rufiji (34) and Kibaha with 32 percent had the smallest proportion of households living below the basic needs poverty line as shown in table 2.4.

With respect to poverty gap, table 2.4 shows that Kisarawe was the worst district council at 16 followed by Mafia (14), Bagamoyo and Mkuranga each with poverty gap of 11 percent. The smallest proportion of poverty gap was observed in Kibaha and Rufiji district councils each with 9.

Regarding the Gini Coefficient, the results in table 2.4 portray that five councils in Pwani region had the same level at 30. At 34 percent, Mafia district council had the highest Gini Coefficient.

Table 2.4 : Selected Poverty Indicators by Council, Pwani Region, 2005

Council	Percentage of Households Living below Basic Needs Poverty Line	Percentage of Poverty Gap	Gini Coefficient	Number of Poor per Sq. Km
Bagamoyo	40	11	30	11
Kibaha	32	9	30	23
Kisarawe	51	16	30	10
Mkuranga	40	11	30	27
Rufiji	34	9	30	5
Mafia	43	14	34	29

Source: Poverty and Human Development Report, 2005

Table 2.5 shows the selected health indicators by councils in Pwani region. The orphanage rate according to the 2002 Census was 1.2 percent. Kibaha and Kisarawe district councils had the highest rate of 1.6 percent each; followed by Bagamoyo district council (1.4 percent), Mkuranga (1.3 percent), Mafia (1 percent) and Rufiji District Council had the least rate of 0.72 percent. Infant mortality rate was highest in Mafia district council at 107 and lowest in Kisarawe district council (94).

Table 2. 5 : Selected Health Indicators by Council, Pwani Region, 2002 and 2012

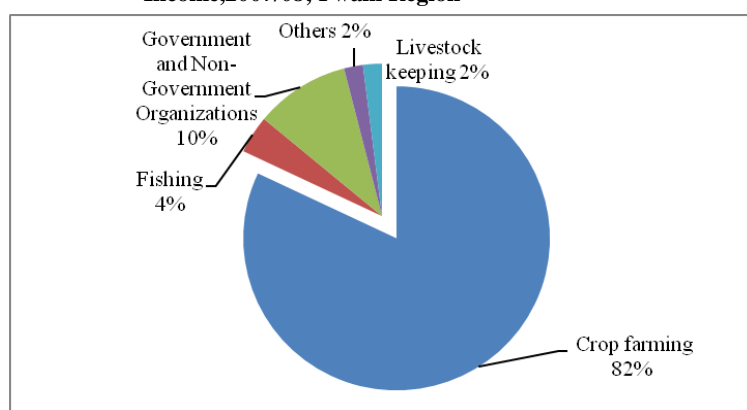
Indicator	Bagamoyo	Kibaha	Kisarawe	Mkuranga	Rufiji	Mafia
Orphaned Rate (percent) (Census 2002)	1.4	1.6	1.6	1.3	0.72	1.0
Widowed Rate (percent) (Census 2002)	4.2	4.31	6.31	4.59	4.09	3.50
Infant Mortality Rate (IMR) (Census 2002)	105	98	94	105	97	107
Children Under Five Mortality Rate (U5MR) (Census 2002)	174	160	152	173	158	176
HIV/AIDS Prevalence Rate (percent) (THMIS 2011/12)	5.9	5.9	5.9	5.9	5.9	5.9
Doctor/Population Ratio(2012)	1:2,051	1: 1,325	1:1,224	1:2,477	1:2,979	1:2,322
Hospital Bed/Population Ratio (2012)	1:1,792	1:576	1:364	1:1,351	1:869	1:516

Source: NBS, Pwani Region Population Census Reports, 2002, District Socio-Economic Profiles

2.3.2 Main Source of Cash Income

The 2007/08 National Sample Census of Agriculture Report shows that the main occupation/source of income for the households in Pwani region was crop farming (82 percent of small holder households). Other sources were followed by fishing (4 percent). Livestock keeping and herding (2 percent) also employed in the government and non-governmental organizations (NGO) (10 percent) and other activities (2 percent).

Figure 2. 1: Percentage Distribution of Households by Main Source of Income, 2007/08; Pwani Region



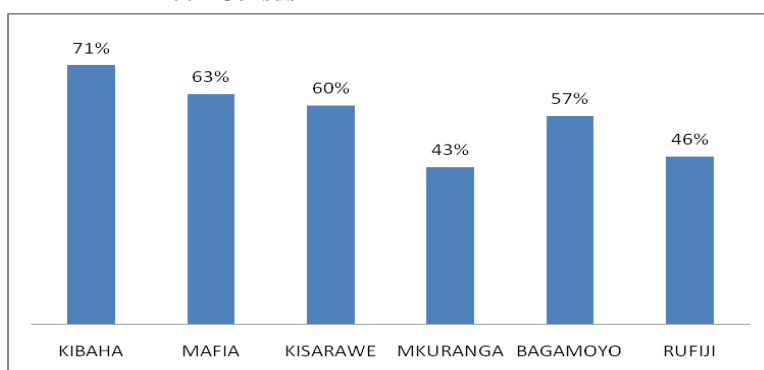
Source: National Sample Census of Agriculture 2007/08 Volume Vn: Regional Report Pwani Region

2.3.3 Literacy Rate and Level of Education

According to the 2002 Population and Housing Census Pwani Regional Report, Pwani region had a literacy rate of 54 percent for a population of age five years and above. The highest literacy rate was found in Kibaha district council (71 percent), followed by Mafia district council (63 percent), Kisarawe (60 percent), Bagamoyo (57 percent), Rufiji (46 percent) and Mkuranga (43 percent) was the last. The literacy was 55 percent for males and 45 percent for females.

The extent of literacy was much higher in urban areas (69 percent) than in the rural areas (50 percent). Comparison between 1988 and 2002 results show that, the status of literacy has improved quite substantially from 44 percent in 1988 to 54 percent in 2002. Literacy rates among males and among females have also increased from 51 percent to 61 percent for males and from 37 percent to 48 percent for females.

Figure 2. 2: Percentage Literacy Rate by Council, Pwani Region, 2002 Census



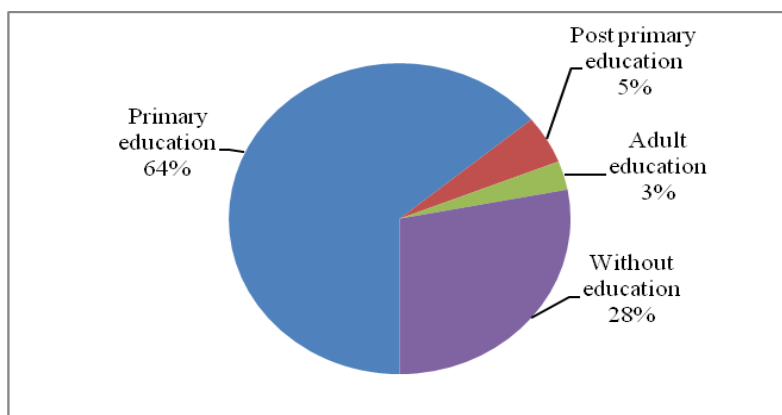
Source: 2002 Population and Housing Census Volume IV, Districts/Councils Reports Pwani Region

The National Sample Census of Agriculture 2007/08 collected information from individual agricultural households. The results show that 42 percent of the regional population of age 5 years and above had completed different levels of education and 34 percent were still attending school. Those who had never attended school were 24 percent.

Agricultural households in Mafia district council had the highest percentage (47 percent) of population of age 5 years and above who had completed different levels of education while the lowest percentage was in Mkuranga (37 percent).

The majority of heads of agricultural households (64 percent) in Pwani region had primary level education, five percent had post primary education; three percent had adult education whereas only 28 percent of agricultural households in 2007/08 had no education.

Figure 2. 3: Percentage Distribution of Heads of Households by Education Attainment, Pwani Region, 2007/08



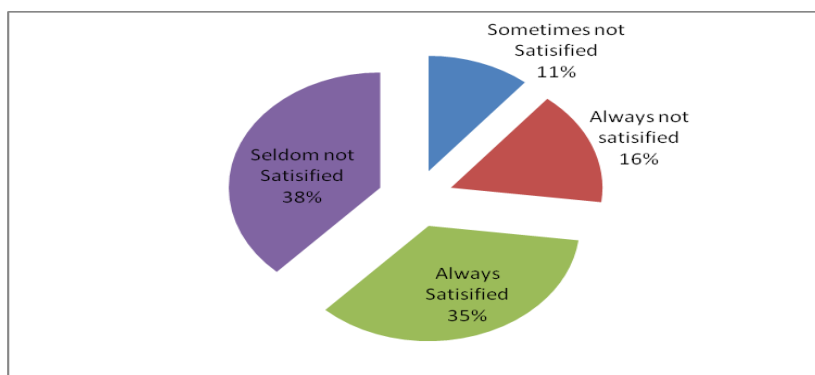
Source: National Sample Census of Agriculture 2007/08 Volume Vn: Regional Report: Pwani Region

2.3.4 Food Security and Food Consumption Patterns

Food security and level of food consumption is also an indicator of poverty level of the household. The number of meals consumed in a day and the frequencies of protein intake per week particularly meat and fish are most superior in measuring poverty levels of the households in the country.

2.3.4.1 Food Security

According to the 2007/08 National Sample Census of Agriculture, in Pwani region, 66,337 households (38 percent of the total agricultural households in the region) said they seldom had problem with food satisfaction. However, 35 percent of all agricultural households said that they never experienced any problem with food satisfaction while 19,075 (11 percent) households said that they sometimes had a problem. Only 27,652 households (16 percent of the agricultural households) said that they always had a problem of food satisfaction.

Figure 2. 4: Food satisfaction Status of Households, Pwani Region; 2007/08

Source: NBS, National Sample Census of Agriculture, Pwani Regional Report, 2007/08.

2.3.4.2 Number of Meals per Day

The National Sample Census of Agriculture 2007/08 reveals that the majority of rural agricultural households in Pwani region normally had three meals per day (65.3 percent). This was followed by two meals per day (32.4 percent) and one meal per day (2.3 percent). None of the households had 4 meals per day.

Kibaha district council had the largest percentage of households eating one meal per day (5.7 Percent) whilst Bagamoyo district council had the highest percentage of households eating three meals per day as indicated in table 2.6.

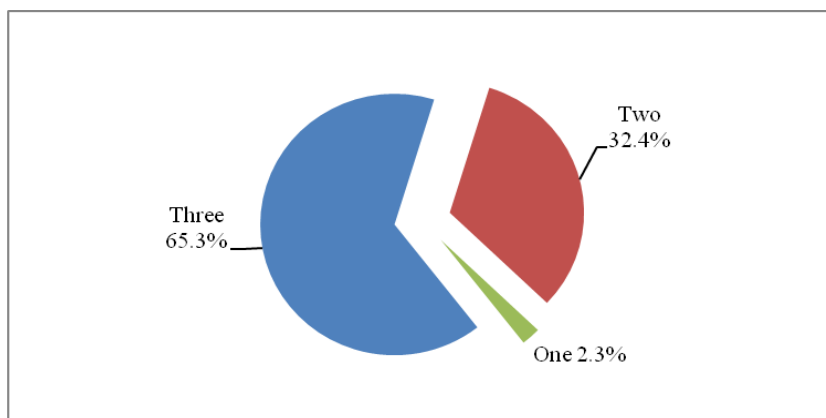
Table 2. 6: Number of Households by Number of Meals Consumed per Day, Pwani Region, 2007/08

Council	One		Two		Three		Total
	Number	Percent	Number	Percent	Number	Percent	
Bagamoyo	332	0.7	11,743	26.2	32,792	73.1	44,867
Kibaha	1,038	5.7	6,814	37.3	10,424	57.0	18,276
Kisarawe	750	3.2	7,785	33.3	14,821	63.5	23,356
Mkuranga	1,519	3.5	17,790	40.5	24,624	56.0	43,933
Rufiji	262	0.7	9,782	27.7	25,328	71.6	35,372
Mafia	87	1.0	2,702	31.0	5,928	68.0	8,717
Total	3,988	2.3	56,616	32.4	113,917	65.3	174,521

Note: Kibaha includes Kibaha Town Council and Kibaha Rural

Source: NBS, National Sample Census of Agriculture, Pwani Region, 2007/08

Figure 2. 5: Percentage of Households by Number of Meals the Household Consumed per Day, Pwani Region, 2007/08



Source: NBS, National Sample Census of Agriculture, Pwani Regional Report, 2007/08

2.3.4.3 Protein (Meat and Fish) Consumption Frequencies

The National Sample Census of Agriculture 2007/08 further reveals that the number of agricultural households that consumed meat during the week preceding the census. The frequency of eating meat was as follows: once a week (35.6 percent of the households) twice a week (15.6 percent) and three or more times a week (6.8 percent). The household that did not eat meat were 41.9 percent.

The observation was different regarding fish consumption and the frequencies were as follows; once a week (18.5 percent of the households) twice a week (19.5 percent), three times a week (12.7 percent) and four or more times a week (35.3 percent). However, 14.0 percent of the households did not eat fish at all during the week.

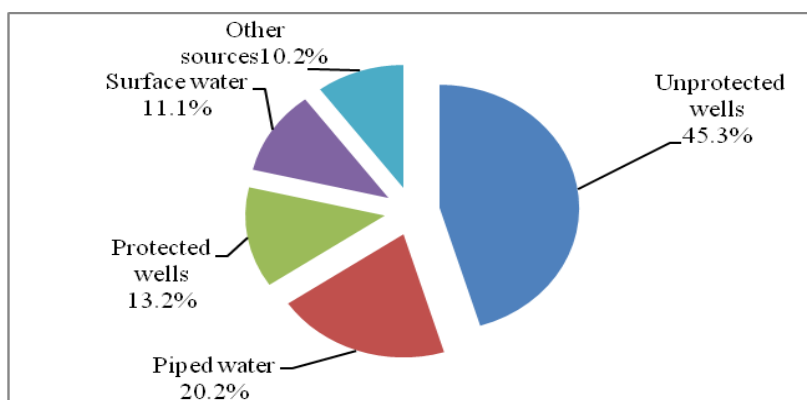
2.3.5 Access to Drinking Clean Water

According to the National Sample Census of Agriculture 2007/08 results, the main source of drinking water for rural agricultural households in Pwani region was unprotected wells. About 45.3 percent of households used this source during the dry seasons followed by piped water (20.2 percent). About 13.2 percent used protected wells while 11.1 percent of the households use surface water. Other water sources were used by 10.2 percent of the total households in Pwani region.

The results of the 2002 Population and Housing Census at council level show that piped water was the main source of drinking water in Kibaha district council (58 percent) while in

the remaining councils, Rufiji, Mafia, Mkuranga, Bagamoyo and Kisarawe unprotected wells were the main source of drinking water. Mkuranga was leading in the use of unprotected wells as 91 percent of its households used that water source. It was followed by Mafia (76 percent), Kisarawe (70 percent), Rufiji (62 percent) and Bagamoyo had the lowest proportion of households at 32 percent. 43 percent of rural households and one percent in urban areas used unprotected wells in Kibaha district council. In Mkuranga district council unprotected wells were used by 93 percent of the households in the rural areas while in the urban areas they used by 76 percent. In Mafia district council, unprotected wells were the main source of drinking water for 88 percent of the households in the rural areas while in the urban areas it was the main source for 37 percent of the households. In Kisarawe district council, unprotected wells were used by 76 percent of the households in the rural areas while in the urban areas they were used by 34 percent of the households. Rufiji district council had 73 percent of rural households who depended on unprotected wells where as in urban areas it was 25 percent of the households. Furthermore, 38 percent of rural households in Bagamoyo district council used unprotected wells as their main source of drinking water while urban areas were better as only 7 percent of households depended on unprotected wells as their main source of drinking water.

Figure 2. 6: Percentage of Households by Type of Water Source during the Dry Season, Pwani Region; 2007/08



Source: NBS, National Sample Census of Agriculture Pwani Regional Report, 2007/08

2.3.6 Types of Toilets

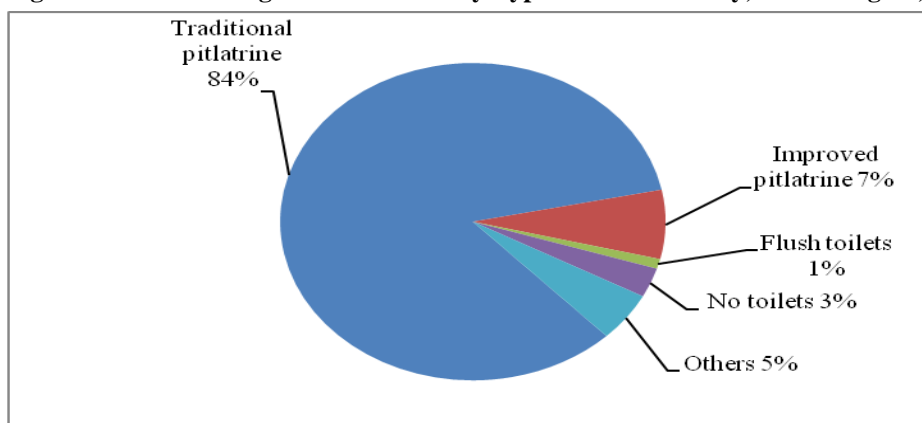
With respect to availability of toilets, the 2007/08 National Sample Census of Agriculture show that large number of rural agricultural households (145,668 households, 84 percent of all households) used traditional pit latrines followed by improved pit latrine (20,148 households, 7 percent) and flush toilets (1,979 households, 1 percent). About 15,665

households (three percent of the households) had no toilet facilities in Pwani region and the remaining 5 percent used other types of toilet facilities.

The distribution of the households without toilets within the region indicates that 40.04 percent were found in Mafia district council, Bagamoyo district council (13.55 percent), Rufiji district council (12.68), Mkuranga district council (10.82 percent), Kisarawe district council (4.44 percent) and Kibaha district council had the lowest proportion of households without toilets at 2.78 percent.

At the district council level, according to the 2002 Population and Housing Census, the picture is almost the same. The results show that in the districts the most common toilet facility was the traditional pit latrine which was used as follows: Kisarawe district council (94 percent of the households), Kibaha district council (92 percent), Mkuranga district council (89 percent), Rufiji (87 percent), Bagamoyo (85 percent) and Mafia (58 percent).

Figure 2. 7: Percentage of Households by Type of Toilet Facility, Pwani Region; 2007/08

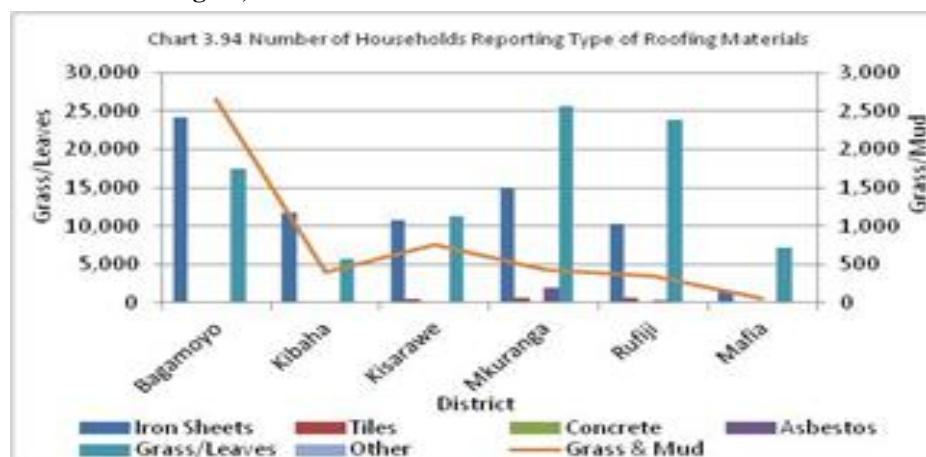


Source: NBS, National Sample Census of Agriculture, Pwani Regional Report, 2007/08.

2.3.7 Roofing Materials

The National Sample Census of Agriculture 2007/08 showed that grass or leaves were the most common roofing materials in Pwani region. They were used in all districts (Figure 2.8) by between 6.3 and 82.7 percent of the households. Kibaha district council had the lowest proportion of houses roofed using grasses or leaves (6.3 percent). The highest proportion of households roofed with grass or leaves was in Mafia (82.7 percent of all houses in the district). In other districts, grasses or leaves were used for roofing by 58.5 percent of the households in Mkuranga, 67.2 percent in Rufiji, 48.4 percent in Kisarawe and 39.0 percent in Bagamoyo.

Figure 2. 8: Number of Households Reporting Type of Roofing Materials, Pwani Region, 2007/08



Source: NBS, National Sample Census of Agriculture, Pwani Regional Report, 2007/08

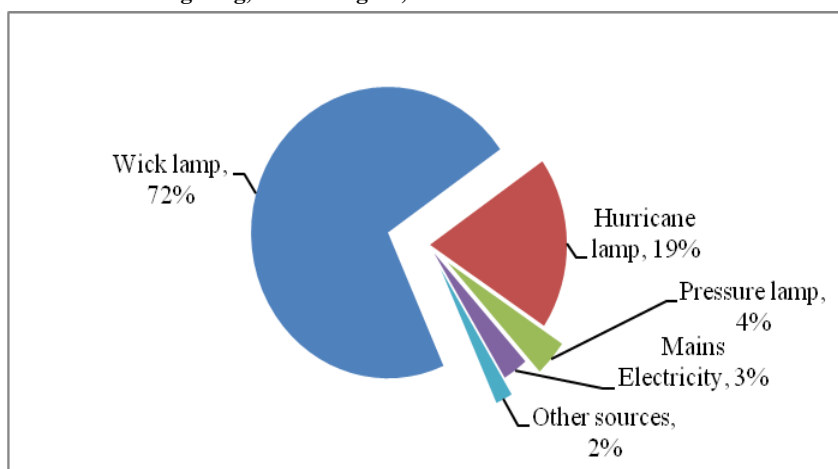
2.3.8 Source of Lighting Energy

According to the 2007/08 Agriculture Sample Census, Wick lamp was the most common source of lighting energy in Pwani region with 125,453 (72 percent of agricultural households) using this source of lighting energy. This was followed by hurricane lamps (33,772, 19 percent), pressure lamp (4 percent), mains electricity (4,855, 3 percent) and other sources (2 Percent).

According to the 2002 Population and Housing Census the main source of lighting was wick lamp with a share of 79 percent of the total private households. In urban areas, the main source was wick lamp (50 percent) followed by hurricane lamp (24 percent). In rural areas, the main source was also wick lamp (79 percent) followed by hurricane lamp (12 percent) and firewood (3 percent).

At council level, the report shows that wick lamp was the main source of lighting in Mkuranga district council (87 percent), Rufiji district council (86 percent), Kisarawe district council (82 percent), Bagamoyo district council (77 percent), Mafia district council (70 percent) and Kibaha district council (58 percent).

Figure 2. 9: Percentage of Households by Main Source of Energy Used for Lighting, Pwani Region; 2007/08



Source: NBS, National Sample Census of Agriculture, Pwani Regional Report, 2007/08

2.3.9 Source of Energy for Cooking

The 2002 Population and Housing census results show that for the most of the private households, the main source of energy for cooking was firewood (83 percent). In urban areas, firewood was the most used source (46 percent), in the rural areas the main source was also firewood (93 percent) followed by charcoal (6 percent). At the district level, the main source of energy for cooking was firewood for all districts.

On the other hand, the National Sample Census of Agriculture 2007/08 results revealed that the most prevalent source of energy for cooking was fuel wood which was used by 91 percent of all agricultural households in Pwani region. This is followed by charcoal (8 percent). The rest of energy sources accounted for one percent. These were solar, crop residues, bottled gas, biogas and paraffin.

2.3.10 Land Development

The demand for surveyed land plots increased in recent years in Pwani region. Affordable price of surveyed plots in Pwani region compared to Dar es Salaam region resulted in many residents from Dar es Salaam seeking for plots in this region. Overcrowded population in Dar es Salaam is also another factor for people migrating to Pwani region and look for surveyed residential plots and thus, increasing demand of surveyed plots. In addition to that, high increase in social and commercial activities in Pwani region is another cause for the increase in demand for surveyed plots.

According to Table 2.7, out of 77,312 plots which were available in urban areas of the region in 2012, 34.6 percent (26,716 plots) were surveyed. Bagamoyo district council managed to survey all its urban plots and was number one district in having largest number of surveyed plots. Mkuranga district council had the smallest number of surveyed plots (1,592). On the other hand, Mafia district council was leading in number of surveyed plots offered certificates at 62.3 percent while Kibaha (DC) Mkuranga and Rufiji no certificates were offered to surveyed plots.

Table 2. 7: Urban Land Planning by Council, Pwani Region; 2012

Council	Number of Plots Available	Number of Plots Surveyed	Percentage of Plots Surveyed	Villages/Plotss With Land Certificates	Customary Certificate of Right Occupancy	Percentage of Plots Offered Certificate
Bagamoyo	11,750	11,750	100	0	6,536	55.6
Kibaha TC	7,774	1,706	21.9	359	0	21.0
Kibaha (DC)	14,508	2,820	19.4	0	0	0
Kisarawe	28,325	3,383	11.9	0	1,048	31.0
Mkuranga	6,874	1,592	23.2	0	0	0
Mafia	2,280	1,781	78.1	1,041	69	62.3
Rufiji	5,801	3,684	63.5	0	0	0
Total	77,312	26,716	34.6	1,400	7,653	33.9

Note: Kibaha TC: Kibaha Town Council

Kibaha R: Kibaha Rural

Source: District Executive Directors Offices –Land, Natural Resources and Environment Department, 2013

2.3.10.1 Village Land Use Planning

In the planning of farms, grazing areas and human settlements in rural areas, village is the first step. At regional level, 52.3 percent of a total of 459 villages in Pwanir region were surveyed and demarcated (Table 2.7a). Rufiji district council was leading with 93 of its villages having been surveyed and demarcated. It was followed by Bagamoyo (74 Villages) and Kisarawe district council (28 Villages). Mkuranga district council has the smallest number of surveyed and demarcated villages (7). Moreover, among 240 surveyed villages in the region, only 86 were offered certificates. Kisarawe district council had the largest number of surveyed and demarcated villages that were offered certificates at 28. It was followed by Kibaha district council (26) and Bagamoyo (20). Kibaha Town Council has only streets hence no villages were offered certificates.

Table 2.7 a: Rural Land Planning by Council in Pwani Region; 2012

Council	Number of Villages	Number of Villages Surveyed	Percentage of Villages Surveyed	Villages/Plots With Land Certificates	Customary Certificate of Right Occupancy	Percentage of Villages Offered Certificate
Bagamoyo	97	74	76.3	20	9	30.0
Kibaha TC	0	0	0.0	0	0	0
Kibaha (DC)	33	18	54.5	26	0	0
Kisarawe	79	28	35.4	28	35	33.1
Mkuranga	121	7	5.8	0	0	0
Mafia	23	20	87.0	3	7	13.04
Rufiji	106	93	87.7	9	0	8.5
Total	459	240	52.3	86	51	35.8

Source: District Executive Directors Offices –Land, Natural Resources and Environment Department, 2013

2.3.11 Government Employees in Key sectors of the Economy

Table 2.8 reveals government employees in key sectors of economy in Pwani region in 2012. In 2012 the region had 10,794 government employees in four key sectors of economy namely education, health, agriculture and natural resources sectors. Education Sector with 8,053 employees had the largest share of government employees in Pwani region at 74.6 percent. Health Sector was the second with a share of 18.7 percent, Agriculture Sector was third (5.7 percent) and Natural Resources Sector had the smallest share (one percent) (Table 2.8).

Distribution of government employees in key sectors of economy among seven councils shown in table 2.8 was not even and was in favour of Bagamoyo district council. According to the table, Bagamoyo was leading in number and share of government employees in all four key sectors of economy. The district council had 28.0 percent of all regional employees in education sector, 22.4 percent (in health sector), 24.3 percent in agriculture sector and 29.7 percent in natural resources sector. Mafia was the most disadvantaged district council as it had the smallest number and percentage of employees in each sector (Table 2.8).

Table 2. 8: Number of Government Employees in Key Sectors of Economy by Council, Pwani Region; 2008-2012

Sector/ Council/Year	2008	2009	2010	2011	2012	
Education sector					Number	Percent
Bagamoyo	1,522	1,700	1,817	1,983	2,257	28.0
Kibaha TC	597	627	839	895	872	10.8
Kibaha Rural	404	716	720	731	778	9.7
Kisarawe	667	647	653	776	932	11.6
Mkuranga	1,206	1,326	1,356	1,366	1,328	16.5
Mafia	271	295	300	281	285	3.5
Rufiji	920	978	950	1,220	1,597	19.8
RS	4	4	4	4	4	0.0
Sub Total	5,591	6,293	6,639	7,256	8,053	100.0
Health Sector						
Bagamoyo	382	377	368	376	452	22.4
Kibaha TC	129	160	167	152	175	8.7
Kibaha Rural	148	153	167	189	221	10.9
Kisarawe	269	265	268	273	286	14.2
Mkuranga	259	269	282	293	287	14.2
Mafia	89	115	120	148	165	8.2
Rufiji	337	363	369	382	425	21.0
RS	6	6	6	10	9	0.4
Sub Total	1619	1708	1747	1823	2020	100.0
Agriculture and Livestock sector						
Bagamoyo	98	92	97	102	148	24.3
Kibaha T C	35	36	46	43	53	8.7
Kibaha Rural	47	46	52	61	67	11.0
Kisarawe	83	74	70	75	94	15.4
Mkuranga	50	62	83	99	119	19.5
Mafia	20	21	24	19	28	4.6
Rufiji	43	56	58	79	96	15.7
RS	3	3	3	5	5	0.8
Sub Total	379	390	433	483	610	100.0
Natural Resource sector						
Bagamoyo	22	30	29	31	33	29.7
Kibaha TC	2	2	2	2	2	1.8
Kibaha Rural	7	8	10	10	11	9.9
Kisarawe	13	13	13	12	11	9.9
Mkuranga	16	16	14	17	17	15.3
Mafia	4	4	7	7	7	6.3
Rufiji	28	33	33	32	29	26.1
RS	1	1	1	1	1	0.9
Sub Total	93	107	109	112	111	100.0
Regional Total	7,682	8,498	8,928	9,674	10,794	

Kibaha TC: Kibaha Town Council

RS: Regional Secretariat

Source: District Executive Directors-Administrative Offices

CHAPTER THREE

Productive Sectors

3.0 Overview

This Chapter presents the performance of productive sectors in the Region. These sectors include agriculture, livestock, natural resources, mining, industrial development and the land sector development.

3.1 Agriculture

3.1.1 Introduction

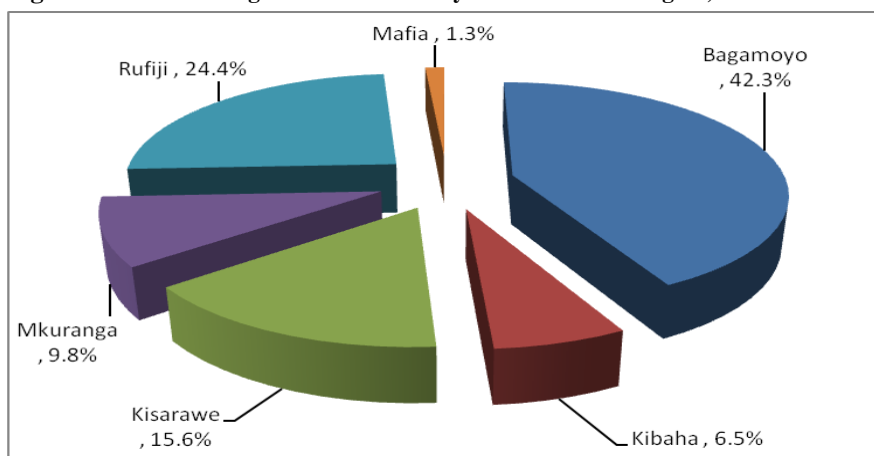
In the Population and Housing Census of 2012, Pwani region had a total of 1,098,668 people with 61.1 percent of the economically active population in the region depending on agriculture, livestock and fishing for subsistence and income. The agricultural sector generates much of the region's GDP. However, this sector has been declining in its performance in the region due to several factors such as frequent use of inferior agricultural implements, the application of outdated agricultural methods, pest problems, soil exhaustion in some parts of the region and sometimes low purchasing power of the people tends to discourage the use of modern agricultural inputs or implements. In addition, marketing arrangements for most crops are inadequate coupled with poor transport system and lack of credit facilities for peasant farmers.

3.1.2 Distribution of Arable Land

Out of the region's total land area of 3,240,700 ha, about 1,976,518 ha (61.0 percent of total area) are suitable for agricultural production and livestock rearing (Table 3.1). However, the land currently under cultivation is only 495,389 ha, which is almost 25.1 percent of the arable land in the whole region. The remaining arable land which is 1,481,129 ha or 74.9 percent of the region's total arable land is still idle or used for other activities such as human settlements, natural forests, etc. Moreover, by utilizing less than half (25.1 percent) of its total arable land, agriculture land in the region is not under pressure and still there is adequate arable land for crop farming. Table 3.1 further shows that Bagamoyo district council had the largest share of region's total arable land at 42.3 percent, followed by Rufiji district council (24.4 percent), Kisarawe (15.6 percent), Mkuranga (9.8 percent), Kibaha (6.5 percent) and Mafia district council (1.3 percent). Likewise, arable land already under crops cultivation, Mkuranga district council had the biggest share (36.8 percent of the

region's total arable land under cultivation). It was followed was Kisarawe district council (22.5 Percent), Rufiji (18.3 percent), Bagamoyo (11.3 percent), Kibaha (6.8 percent), and Mafia (4.4 percent).

Figure 3. 1: Percentage of Arable Land by Council Pwani Region; 2012



Source: Pwani Region, Compiled Data from Councils (Agriculture Departments), 2013

Table 3.1: Distribution of Total Arable Land by Council, Pwani Region; 2012

Council	Total Land Area (ha)	Arable Land Area (ha)	Percent	Land under Cultivation	
				Area (ha)	Percent
Bagamoyo	984,200	836,570	42.3	55,963	11.3
Kibaha	181,200	129,082	6.5	33,646	6.8
Kisarawe	446,400	309,000	15.6	111,355	22.5
Mkuranga	243,200	193,400	9.8	182,072	36.5
Rufiji	1,333,900	482,466	24.4	90,503	18.3
Mafia	51,800	26,000	1.3	21,850	4.4
Regional Total	3,240,700	1,976,518	100	495,389	100.0
Percent of Regional Land Area		61.0		15.3	

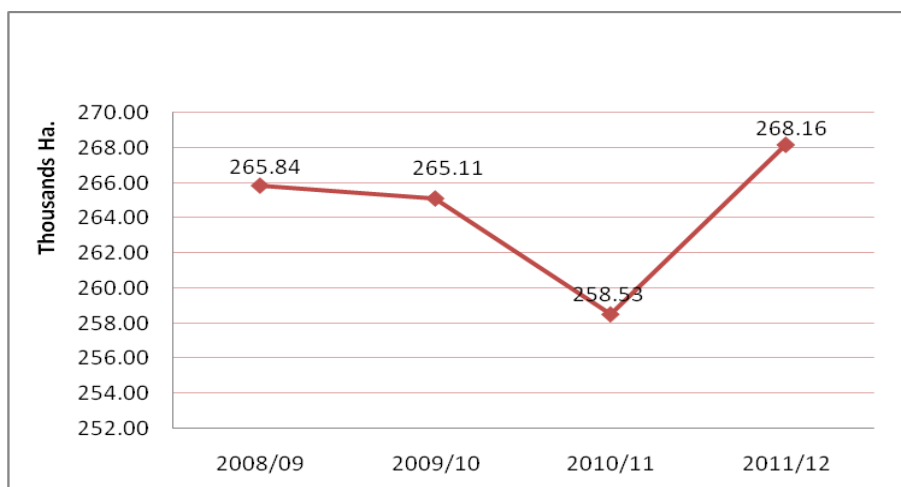
Source: Pwani Region, Compiled Data from Councils (Agriculture Departments), 2013

3.1.3 Land under Crops

i) Area under Major Food Crops Cultivation

Table 3.2 shows major food crops grown in Pwani region. Over the four years period, area planted with major food crops showed a down and up trend. The total area decreased by 0.3 percent (763.2 ha.) from 265,873.2 in 2008/09 to 265,110.0 ha in 2009/10 and then decreased further by 2.5 percent (6,576.2 ha) from 265,110.0 ha in 2009/10 to 258,533.8 ha in 2010/11. It then increased by 3.7 percent (9,584.4 ha.) from 258,533.8 ha in 2010/11 to 268,118.2 ha in 2011/12. Area planted with food crops averaged annually to 264,408.7. With an annual average area of 105,095.5 ha (39.7 percent), cassava was the dominant food crop, followed by maize (64,273.1 ha, 24.3 percent), paddy (56,117.8 ha, 21.2 percent) and legumes (12,121.9 ha, 4.6 percent). Other food crops with their average annual planted areas are as shown in table 3.2. Figure 3.2 shows trend of area under major food crops cultivation with the lowest planted area of 258,533.8 ha in 2010/11.

Figure 3. 2: Trend of Area (ha) under Major Food Crops, Pwani Region; 2008/09-2011/12



Source: Pwani Region, Compiled Data from Councils (Agriculture Departments), 2013

Table 3. 2: Estimated Area (ha) under Major Food Crops; Pwani Region; 2008/09 – 2011/12

Crop	2008/09	2009/10	2010/11	2011/12	Yearly Average	Percent	Rank
Maize	68,956.1	73,742.6	60,004.5	54,389.3	64,273.1	24.3	2
Paddy	55,360.6	52,369.8	56,350.0	60,391.0	56,117.8	21.2	3
Sorghum	10,195.0	10,260.6	12,501.4	13,559.4	11,629.1	4.4	5
Cassava	106,277.0	102,426.9	100,828.7	110,849.3	105,095.5	39.7	1
Sweet potatoes	4,656.5	4,893.0	3,865.0	3,984.0	4,349.6	1.6	7
Legumes	11,077.0	11,846.1	12,794.2	12,770.2	12,121.9	4.6	4
Bananas	330.0	332.0	346.0	331.0	334.7	0.2	8
Cowpeas	9,021.0	9,239.0	11,844.0	11,844.0	10,487.0	4.0	6
Regional Total	265,873.2	265,110.0	258,533.8	268,118.2	264,408.7	100.0	

Source: Pwani Region, Compiled Data from Councils (Agriculture Departments), 2013

Cassava

This is the main food crop produced in Pwani region. Table 3.2 shows that from 2008/09 – 2011/12 cassavas was planted on an average area of 105,095.5 ha annually. This was equivalent to 39.7 percent of the average annual area planted with major food crops. Area planted with cassava was largest in 2011/12 at 110,849.3 ha and smallest (100,828.7 ha) in 2010/11.



Maize

In terms of planted area, maize is the second dominant food crop after cassava. Over the period, 2008/09 - 2011/12, the average planted area per year was 64,273.1 ha (24.3 percent of the average areas planted with major food crops in the region. Maize is grown in all councils but mostly in Bagamoyo DC, Rufiji DC and Kibaha DC.

Paddy

Paddy is the third staple food after maize but is also taken as a cash crop which people produce for selling. It is rain dependent crop grown entirely in low lying lands. Also, it is a labour intensive crop and needs high moisture regime during the entire growth period. The crop is normally transplanted in December and March. In Pwani region, paddy is grown to a large extent in Rufiji DC, Bagamoyo DC and Mkuranga DC. Table 3.2 shows that on average, the area cultivated annually is 56,117.8 ha. (21.2 percent of the total area planted with food crops).

Legumes

Leguminous crops accounts for 4.6 percent of the total area under food crops. On average, 12,121.9ha are cultivated annually. Leguminous crops are produced largely in Mkuranga DC, Kisarawe DC and some parts of Kibaha TC.

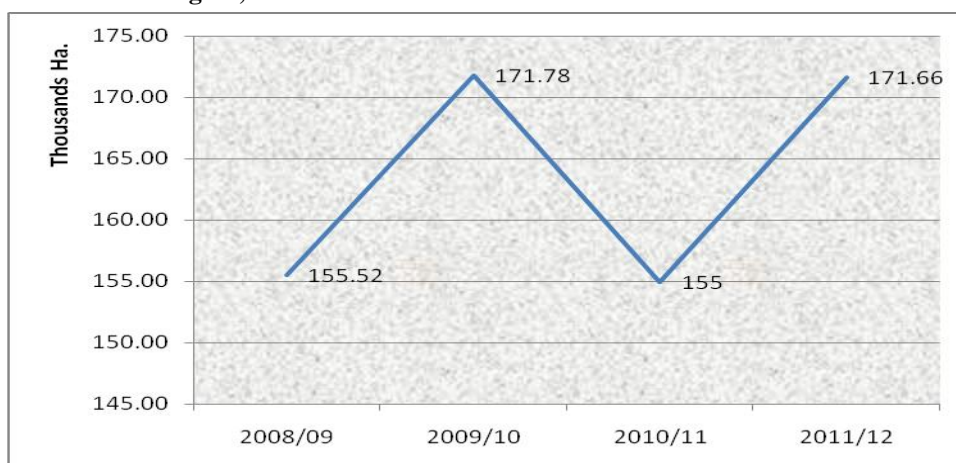
Sorghum

It is the fifth crop after Legumes. This crop is grown in Bagamoyo DC, Kisarawe DC and Rufiji DC. The average area planted per annum is 11,629.1 ha. (4.4 percent of the area under major food crops). Other major food crops grown in Pwani region with their respective planted areas and rank are shown in table 3.2.

ii) Area under Major Cash Crops Cultivation

In Pwani region the main cash crops grown are cashewnuts, coconut, mangoes, pineapples, oranges, and cotton. Others are passion fruits, tomatoes, sesame, watermelon, okra, sunflower, cucumber and vegetables. Table 3.3 shows the average area planted with major cash crops per year was 162,696.5 ha. This average area is equivalent to 8.2 percent of the region's total arable land of 1,976,518 ha and also equivalent to 32.9 percent of the region's total area under cultivation of 495,235 ha. In addition, table 3.3 further reveals that the season of 2011/12 was the best year as the region had the largest area of 171,660.5 ha planted with all major cash crops while 2010/11 was the worst as it had the lowest planted area of 154,973.7 ha.

Figure 3. 3: Trend of Area (ha) under Major Cash Crops Cultivation, Pwani Region; 2008/09-2011/12



Source: Pwani Region, Compiled Data from Councils (Agriculture Departments), 2013

Table 3. 3: Estimated Area (ha) Under Major Cash Crops, Pwani Region; 2008/09 – 2011/12

Crop	2008/2009	2009/10	2010/11	2011/12	Total	Yearly Average	Percent	Rank
Cashewnuts	37,987.8	41,671.0	44,617.0	46,726.2	171,002.0	42,750.5	26.3	1
Coconuts	35,014.2	36,642.6	37,509.07	39,034.5	148,200.4	37,050.1	22.8	2
Cotton	14,159.0	14,143.1	697.6	298.0	28,253.1	7,063.3	4.3	7
Sesame	33,729.0	37,990.2	30,379.3	36,855.9	138,954.4	34,738.6	21.4	3
Pineapples	8,171.0	10,404.0	10,532.0	10,679.0	39,786.0	9,946.5	6.1	4
Mangoes	6,207.8	6,804.0	7,018.3	9,259.7	29,289.8	7,322.4	4.5	6
Oranges	7,518.0	7,988.6	7,519.2	7,938.2	30,964.0	7,741.0	4.8	5
Water melon	1,985.0	2,712.0	2,876.0	3,157.0	10,730.0	2,683.0	1.6	10
Cucumber	1,464.0	1,599.0	1,811.0	1,951.0	6,825.0	1,706.2	1.0	11
Okra	77.0	117.0	268.0	237.0	699.0	174.7	0.1	12
Tomatoes	129.0	251.0	118.0	135.0	633.0	158.2	0.1	13
Passions	3,137.0	5,170.0	8,330.0	9,045.0	25,682.0	6,420.5	3.9	8
Sunflowers	5,921.0	6,260.0	1,147.0	6,286.0	19,614.0	4,903.5	3.0	9
Vegetables	22.0	30.0	42.0	58.0	152.0	38.0	0.0	14
Regional	155,521.8	171,782.5	154,973.67	171,660.5	650,784.7	162,696.5	100	

Source: Pwani Region, Compiled Data from Councils (Agriculture Departments), 2013

Cashewnuts

Cashewnut is the major cash crop in Pwani region. It has the largest planted area for cash crops (Table 3.3). From 2008/09-2011/12, the average area planted per year was 42,750.5 ha which was equivalent to 26.3 percent of the region's average annual area planted with major cash crops of 162,696.5 ha. The largest annual area planted with this crop for the period under consideration was 46,726.2 ha in 2011/12 and the smallest was 37,987.8 ha in 2008/09. The planted area



increased annually from 2008/09-2011/12. Cashewnuts is grown in all seven councils of the region but with varying planted areas. Large cashewnuts plantations are found in Mkuranga DC, Kisarawe DC, Rufiji DC and Bagamoyo DC. However, Kibaha Town Council being an urban area, its area under cultivation has been decreasing year after year.

Coconuts

In terms of planted area, coconut is the second important cash crop. The crop accounted for 22.8 percent of the region's annual average area of 162,696.5 ha under cash crops (Table 3.3). The smallest planted area was 35,014.2 ha of 2008/09. Coconuts are grown mainly in Mkuranga DC, Mafia DC and Bagamoyo DC councils; however, the crop is undermined by diseases.

Sesame

This is the third most cultivated cash crop in the region in terms of planted area (Table 3.3). The area cultivated was on average 34,738.6 ha representing 21.3 per cent of the regional average annual area planted with the crop over the four-year period 2008/09-2011/12. This crop is grown in three district councils which are Bagamoyo DC, Kibaha DC and Rufiji DC.

Pineapples

Over the past four years, pineapples have showed a positive trend in terms of the hectares cultivated (Table 3.3). The area increased from 8,171.0 ha in 2008/09 to 10,679.0 ha in 2011/12. The leading council for cultivation of this crop is Bagamoyo DC and they are to a large extent planted in Kiwangwa. The average area planted with this crop annually, was 6.1 percent of the average total area planted with major cash crops in the region from 2008/09-2011/12.

Oranges

This is the fifth important cash crop in terms planted area over the period of 2008/09-2011/12. Its share of the area planted with major cash crops was 4.8 Percent and it is found in all councils of Pwani region. It had an average annual planted area of 7,741 hectares from 2008/09-2011/12.

Mangoes

Mango is another cash crop grown in the region. It is grown in all 7 councils though the planted area differs from council to council. Table 3.3 shows that there was an increasing trend of planted areas from 2008/09-2011/12. The planted area increased from 6,207.8 ha in 2008/09 to 6,804.0 ha in 2009/10, 7,018.3 ha in 2010/11 and 9,259.7 ha in 2011/12..

Cotton

This cash crop is grown in Bagamoyo DC and Rufiji DC. However, there is a downward trend in the area under cotton cultivation. The area planted with cotton decreased from 14,159.0ha in 2008/09 to 14,143.1 ha in 2009/10 and then dropped further to reach 697.6

ha in 2010/11 and 298 in 2011/12. The reason for this downward trend attributed by low market price of the cotton which resulted into demoralization farmers.

Passion

Passion fruit are another cash crop which showed a positive trend. This crop is grown in two District Councils namely Kisarawe DC and Mkuranga DC. The average annual planted area was 6,420.5 ha equivalent to 3.9 percent of the total average area under major cash crops. Like other fruits (pineapples, oranges and mangoes) it is one of the raw materials for fruit processing industries in the region.

Sunflower

It is both food and cash crop. The average annual planted area for this crop over the period 2008/09-2011/12 was 4,903.5 ha. (3.0 percent of the total average area under major cash crops).

Water melon

This is a cash crop which has gained interest of the inhabitants of Mkuranga DC, Bagamoyo DC and to some extent Kibaha DC. The cultivated area increased from 1,985.0 ha in 2008/09 to 2,712.0ha in 2009/10. In 2010/11, cultivated land was 2876.0 ha while in 2011/12 was 3,157.0 ha.

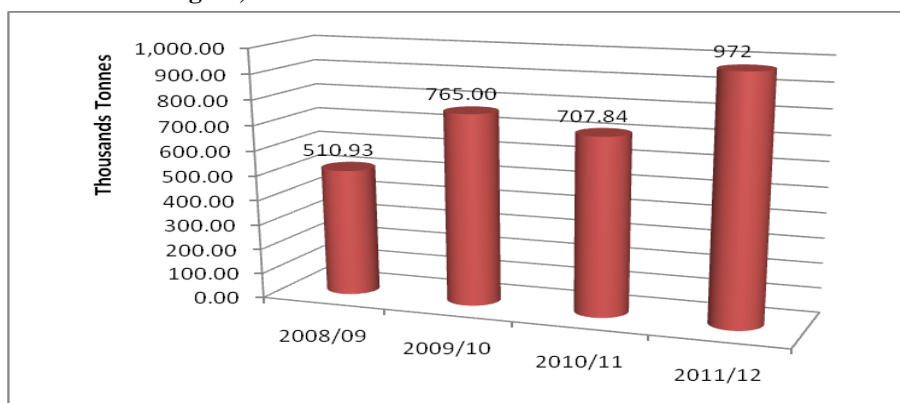
Other cash crops

Table 3.3 shows that other crops grown in the region for the period of 2008/09-2011/12 were cucumber which its planted area averaged annually at 1,706.2 ha, okra (174.7 ha) and tomatoes(158.2 ha).

3.1.4 Crop Production

(i) Major Food Crops Production

For four years, 2008/09-2011/12, the region produced a total of 2,955,622.4 tonnes of major food crops (Table 3.4). The average annual tonnage was 738,905.6. Production increased from 510,933.9 tonnes in 2008/09 to 765,001.7 tonnes in 2009/10. It then dropped to 707,839.8 tonnes in 2010/11 before it picked up to 971,847.0 tonnes in 2011/12. From Table 3.4, it is evident that cassava was the leading food crop in terms of tonnes produced in the region and had a share of 63.7 percent in the average yearly production over 2008/09-2011/12.

Figure 3. 4: Production Trend (in tonnes) of Major Food Crops, Pwani Region;2008/09-2011/12

Source: Pwani Region, Compiled Data from Councils (Agriculture Departments), 2013

Table 3. 4: Estimated Production (tones) of Major Food Crops, Pwani Region; 2008/09 – 2011/12

Crop	2008/09	2009/10	2010/11	2011/12	Total	Yearly Average	Percent	Rank
Maize	105,467.4	126,404.2	85,297.2	129,234.1	446,402.9	111,600.7	15.1	2
Paddy	67,481.4	66,372.1	69,930.1	68,024.2	271,807.8	67,951.9	9.2	3
Sorghum	6,748.1	8,074.5	10,876.6	18,897.9	44,597.1	11,149.3	1.5	7
Cassava	265,711	494,144.0	468,126.0	656,306.0	1,884,287.0	471,071.7	63.7	1
S/ Potatoes	27,260.0	31,891.0	31,765.0	47,251.0	138,167.0	34,541.7	4.7	4
Legumes	20,577.6	20,973.0	21,664.3	22,817.5	86,032.4	21,508.1	2.9	5
Bananas	6,306.0	4,488.0	4,406.0	4,750.0	19,950.0	4,987.5	0.7	8
Simsim	470.4	3,415.9	3,930.6	877.6	8,694.5	2,173.6	0.3	9
Cow peas	10,912.0	9,239.0	11,844.0	23,688.7	55,683.7	13,920.9	1.9	6
Regional/Total	510,933.9	765,001.7	707,839.8	971,847.0	2,955,622.4	738,905.6	100.0	

Source: Pwani Region, Compiled Data from Councils (Agriculture Departments), 2013

Cassava

Is a root and tuber crop; the leading crop in the region as far as production of food crops is concerned. As per table 3.4, from 2008/09 to 2011/12, the region produced 1,884,287 tonnes of cassava at an average of 471,071.7 tonnes annually. The table also shows that there was an increase in production. However, cassava is not only produced for consumption but also for selling hence a source of income to the people of Pwani region. The big market for cassava is Dar-es-Salaam region. Cassava is produced in all councils mostly in Kisarawe, Rufiji and Bagamoyo district councils.

Maize

Maize is the second most important staple food produced in the region after cassava. Over the past four years (2008/09-2011/12) a total of 446,402.9 tonnes were produced. Maize is mostly produced in Bagamoyo DC, Rufiji DC, Kisarawe DC, Mkuranga DC and Kibaha DC. The highest production of 129,234.1 tonnes was achieved in 2011/12 while the lowest production was 85,297.2 tonnes in the season of 2010/11.

Paddy

Is the third dominant food crop after maize in the region and is mainly grown in lowland areas along river basins of Rufiji, Ruvu and Wami. There are also irrigation schemes which support this crop. Those irrigation schemes are BIDP, CHAURU, Kiwangwa and Kidogozero (Bagamoyo DC); Kwala (Kibaha DC); Kisere and Yavayava (Mkuranga DC) and Segeni (Rufiji DC). Table 3.4 shows that over the period of four years, 2008/09 to 2011/12, a total of 271,807.8 tonnes of paddy were produced in the region. The highest production was in 2010/11 (69,930.1 tonnes) which was slightly above annual average production of 67,951.9 tonnes.

Sweet potatoes

It is a root tuber crop mainly cultivated in Bagamoyo DC, Kibaha TC, Mkuranga DC and Mafia DC. The share to the region's average total tonnage of major food crops produced was 4.7 percent and ranked fourth in terms of production (Table 3.4). In four seasons 2008/09-2011/12, the production of potatoes was 138,167.0 tonnes.

Legumes

These include beans and other leguminous crops. They accounted for 2.9 per cent of the total average food crops produced over the period of four years i.e 2008/09-2011/12. The quantity of legumes produced in that period consideration was 86,032.4 tonnes. The annual average production was 21,508.1 tonnes.

Cowpeas

Are another cash crop grown in Bagamoyo DC. In the four years period shown in table 3.5, cowpeas produced were 55,683.7 tonnes at an average production of 13,920.9 tonnes per year. The table also shows that this crop gains popularity as time passes. From 2008/09 to 2011/12, production had been increasing and from 2008/09 to 2011/12 production increased by 117.1 percent from 10,912.0 tonnes in 2008/09 to 23,688.7 tonnes in 2011/12.

Sorghum

Sorghum is a drought resistant crop like cassava. According to table 3.4, its share of the regional total production was 1.5 percent. The crop ranked seventh in terms of quantity produced. The region's sorghum production over the period of four years shows an upward trend. It increased from 6,748.1 tonnes in 2008/09 to 18,817.9 tonnes in 2011/12.

3.1.5 Production per Hectare of Major Food Crops

Productions per hectare for major crops are shown in table 3.5. Generally, production per hectare is low in most of food crops. This could be attributed to the poor agricultural tools, inputs and insufficient extension services provided to farmers. The highest yield was found in banana crop which is mainly cultivated in Mafia DC. In three years period, this crop's yield was 13.5 t/ha in 2009/10; 12.7 t/ha in 2010/11 and 14.3 t/ha in 2011/12. The second crop in terms of high yields was sweet potatoes with 8.2 tonnes per hectare in 2010/11. The third crop was cassava for which the highest yield was in 2011/12 (5.9/ ha).

Maize which is the important staple food in the region, had the yield that was far below the standard yield of 6.5 tonnes per hectare and paddy which is also important staple food in the region had a yield below the standard yield of 8 tonnes/ha. This is according to the data produced by the councils in table 3.5.

Table 3. 5: Production per Hectare of Major Food Crops, Pwani Region; 2009/10 – 2011/12

Crop	2009/10			2010/11			2011/12		
	Planted Area (ha)	Production (tonnes)	Yield (t/ha)	Planted Area (ha)	Production (tonnes)	Yield (t/ha)	Planted Area (ha)	Production (tonnes)	Yield (ton/ha)
Maize	73,742.6	126,404.2	1.7	60,004.5	85,297.2	1.4	54,389.3	129,234.1	2.4
Paddy	52,369.8	66,372.1	1.3	56,350	69,930.1	1.2	60,391	68,024.2	1.1
Sorghum	10,260.6	8,074.5	0.8	12,501.4	10,876.6	0.9	13,559.4	18,897.9	1.4
Cassava	102,426.9	494,144	4.8	100,828.7	468,126	4.6	110,849.3	656,306	5.9
S/ Potatoes	4,893	31,973	6.5	3,865	3,765.8	8.2	3,984	47,251	5.9
Legumes	11,846.1	20,973	1.8	12,794.2	21,664.3	1.7	12,770.2	22,817.5	1.8
Bananas	332	4,488	13.5	346	4,406	12.7	331	4,750	14.3
Cow peas	9,239	9,239	1.0	11,844	11,844	1.0	11,844	23,688.7	2.0
Regional Total	265,110.0	635,263.6		258,533.80	675,910.0		268,118.20	970,969.4	

Source: Pwani Region, Compiled Data from Councils (Agriculture Departments), 2013

3.1.6 Food Satisfaction/Adequacy

Majority of the population in Pwani region depends largely on grains for their staple food. Grains account for about 85 percent of starch foods available for consumption. Bananas, root crops such as sweet potatoes and cassava cover the remaining 15 percent. Food crops are

also sold as cash crops in different proportions. Food adequacy according to FAO means access to sufficient food (both in terms of quantity and quality) for all people at all times to support an active and healthy life. Undernourishment significantly lowers physical ability, cognitive development and learning achievement, resulting in lower productivity.

Food Security

All councils experienced periods of food insufficiency of variable magnitude. On the basis of data available, the most food secure district was Mafia which had the highest proportion of the households reporting that they have never experienced food insufficiency (43 percent) and the most food insecure district in the region was Kisarawe where about 8 percent of the households reported that they always experience food insufficiency.

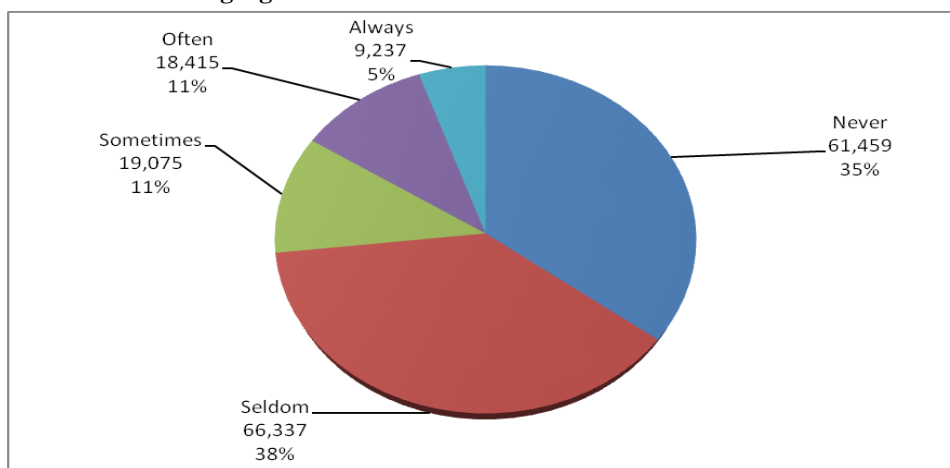
In Pwani region, 66,337 or 38 percent of all agricultural households seldom had the problem of food insufficiency and 61,459 households or 35 percent had never experienced the problem of food insufficiency. Households who said they sometimes had food problem were 19,075.

Table 3. 6: Number of Agricultural Households Reporting the Status of Food Insufficiency during Agriculture Censuses of 2007/08

Status	Number	Percent
Never	61,459	35
Seldom	66,337	38
Sometimes	19,075	11
Often	18,415	11
Always	9,237	5

Source: National Sample Census of Agriculture, Pwani Regional Report; 2007/2008

Figure 3. 5: Number of Agricultural Households Reporting Satus of Food Satisfaction during Agriculture Census of 2007/08

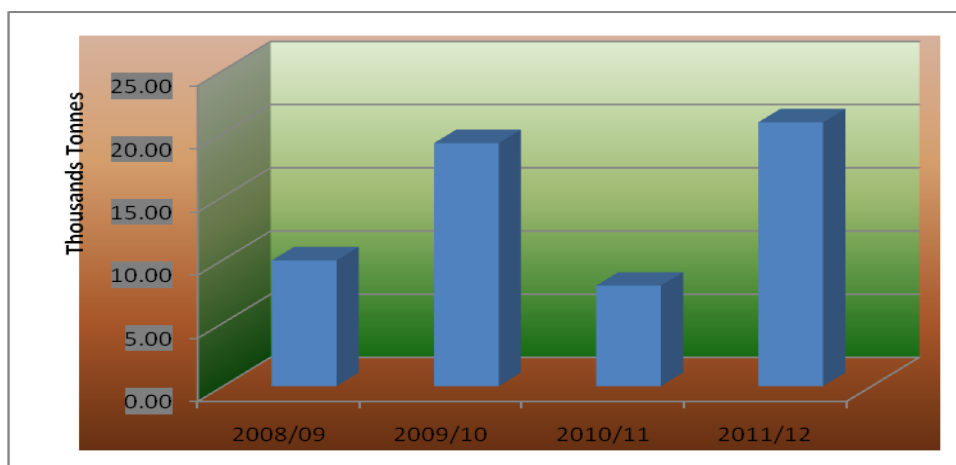


Source: National Sample Census of Agriculture, Pwani Regional Report; 2007/2008

3.1.7 Major Cash Crops Production

Table 3.7 gives production in tonnes of major cash crops over a four year period from 2008/09 - 2011/12. A total of 2,176,952.8 tonnes were produced at the average of 544,238.2 tonnes annually. Table 3.7 also shows that the production increased by 9.4 percent from 2008/09 to 2009/10 then remained constant in 2009/10 and 2010/11 before increasing again by 7.0 percent from 2010/11 to 2011/12.

Figure 3. 6: Production Trend (in tonnes) of Major Cash Crops, Pwani Region; 2008/09-2011/12



Source: Pwani Region, Compiled Data from Councils (Agriculture Departments), 2013

Table 3. 7: Estimated Production (in tonnes) of Major Cash Crops, Pwani Region; 2008/09 – 2011/12

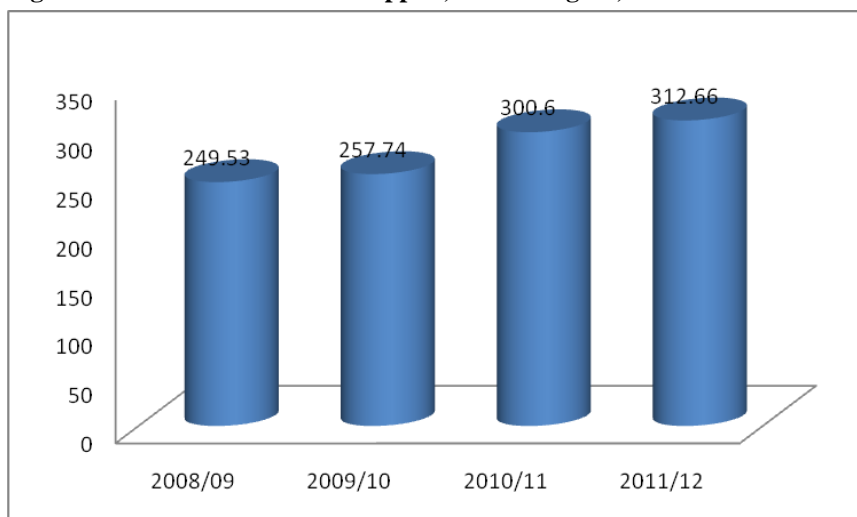
Crop	2008/09	2009/10	2010/11	2011/12	Total	Yearly Average	Percent	Rank
Cashewnuts	28,351.9	20,923.9	20,297.4	21,113.4	90,686.6	22,671.6	4.2	6
Coconuts	61,348.0	62,380.0	61,575.8	62,640.0	247,943.8	61,986.0	11.4	3
Cotton	13,072.2	15,686.1	792.5	447.0	29,997.8	7,499.5	1.4	8
Sesame	22,168.7	34,352.0	27,136.2	31,809.7	115,466.6	28,866.7	5.3	5
Pineapples	249,530	257,737.7	300,596.0	312,664.0	1,120,527.7	280,131.9	51.5	1
Mangoes	47,124.8	56,732.0	49,136.0	52,098.0	205,090.8	51,272.7	9.4	4
Oranges	61,664.0	75,019.0	75,158.0	79,061.0	290,902.0	72,725.5	13.4	2
Water Melon	1,967.0	2,368.0	3,280.0	3,841.0	11,456.0	2,864.0	0.5	9
Cucumber	1,214.0	1,335.0	1,620.0	1,850.0	6,019.0	1,504.8	0.3	12
Okra	564.0	382.0	452.0	201.0	1,599.0	399.8	0.1	14
Tomatoes	1,290.0	2,510.0	1,180.0	1,350.0	6,330.0	1,582.5	0.3	11
Passions	1,738.0	1,990.0	1,950.0	1,900.0	7,578.0	1,894.5	0.3	10
Sunflower	8,902.0	14,375.0	2,587.5	14,891.0	40,755.5	10,188.9	1.9	7
Vegetables	440.0	600.0	840.0	1,160.0	2,600.0	650.0	0.1	13
Regional Total	499,374.6	546,390.7	546,601.4	585,026.1	2,176,952.8	544,238.2	100	
Percent	22.9	25.1	25.1	26.9	100			

Source: Pwani Region, Compiled Data from Councils (Agriculture Departments), 2013

Pineapples

This crop is a fruit. In quantity term it is the leading cash crop in the region. From 2008/09 to 2011/12, a total of 1,120,527.7 tonnes of pineapples were harvested at an average of 280,131.9 tonnes per year. Production over four year period shows an upward trend (Figure 3.7).

Figure 3. 7: Production of Pineapples, Pwani Region; 2008/09-2011/12



Source: Councils in Pwani Region, 2013

Oranges

It is another fruit crop grown in the region. A total of 290,902.0 tonnes were produced from 2008/09 to 2011/12. The average production was 72,725.5 tonnes annually. The crop is grown in all councils except Mafia DC. However, the main producers of oranges are Mkuranga DC, Rufiji DC, Kisarawe DC and Bagamoyo DC. This is the second cash crop in the region in terms of quantity.

Coconut

This is the third important cash crop produced in the region. The dominant producers of this crop are Mafia (51 percent) followed by Mkuranga (40 percent). Coconut accounted for 11.4 percent of the total production of cash crops in the region.

Mangoes

Mangoes contributed 9.4 percent of the average annual production of cash crops in the region. On average, 51,272.7 tonnes of mangoes were produced per year from 2008/09-2011/12. The councils which produced most mangoes were Kisarawe DC, Kibaha DC, Bagamoyo DC and Kibaha TC. The highest harvest was achieved in 2009/10 when 56,732.0 tonnes were harvested. The lowest was in 2008/09 when 47,124.8 tonnes were produced.

Sesame

It is an oil seed crop grown in the region. It accounted for 5.3 percent of the average annual production of cash crops in the 2008/09 to 2011/12 period. The crop is grown largely in Bagamoyo DC and Rufiji DC.

Cashewnuts

Cashewnuts ranked sixth among major cash crops harvested in terms of quantity. Over the four year period from 2008/09 to 2011/12 a total of 90,686.6 tonnes were produced with the highest production being 2008/09 (28,351.9 tonnes) and the lowest being in 2010/11 (20,297.4 tonnes). The leading councils in the production of cashewnuts were Mkuranga DC, Kasarawe DC and Bagamoyo DC.

Sunflower

It is the seventh crop in importance. This crop contributed 1.9 percent of the total production of major cash crops from 2008/09-2011/12. In this period of four years, average production per year was 10,188.9 tonnes. Production above average was achieved in 2009/10 and 2011/12.

Other cash crops

Production of other cash crops is as shown in Table 3.8. These crops are cotton, water melon, passion, tomatoes, cucumber and vegetables.

3.1.8 Production per Hectare of Major Cash Crops

Table 3.8 shows yields of major cash crops in tonnes per hectare in the region. The highest yield attained was 29.3 tonnes/ha for pineapples in 2011/12. On the other hand, the lowest yield was that of passion fruits 0.21 tonnes per hectare in 2011/12.

Table 3. 8: Production (per hectare) of Major Cash Crops, Pwani Region; 2009/10 – 2011/12

Crop	2009/10			2010/11			2011/12		
	Planted Area (ha)	Production (tonnes)	Yield (t/ha)	Planted Area (ha)	Production (tonnes)	Yield (t/ha)	Planted Area (ha)	Production (tonnes)	Yield (t/ha)
Cashewnuts	41,671.0	20,923.9	0.50	44,617.0	20,297.4	0.45	46,726.2	21,113.4	0.45
Coconut	36,642.6	62,380.0	1.70	37,509.1	61,575.8	1.64	39,034.5	62,640.0	1.60
Cotton	14,143.1	15,686.1	1.11	697.6	792.5	1.14	298.0	447.0	1.50
Sesame	37,990.2	34,352.0	0.90	30,379.3	27,136.2	0.89	36,855.9	31,809.7	0.86
Pineapples	10,404.0	257,737.7	24.80	10,532.0	300,596.0	28.54	10,679.0	312,664.0	29.28
Mangoes	6,804.0	56,732.0	8.34	7,018.3	49,136.0	7.0	9,259.7	52,098.0	5.63
Oranges	7,988.6	75,019.0	9.39	7,519.2	75,158.0	10.0	7,938.2	79,061.0	9.96
Water Melon	2,712.0	2,368.0	0.87	2,876.0	3,280.0	1.14	3,157.0	3,841.0	1.22
Cucumber	1,599.0	1,335.0	0.83	1,811.0	1,620.0	0.89	1,951.0	1,850.0	0.95
Okra	117.0	382.0	3.26	268.0	452.0	1.69	237.0	201.0	0.85
Tomatoes	251.0	2,510.0	10.1	118.0	1,180.0	10.0	135.0	1,350.0	10.0
Passions	5,170.0	1,990.0	0.38	8,330.0	1,950.0	0.23	9,045.0	1,900.0	0.21
Sunflower	6,260.0	14,375.0	2.30	1,147.0	2,587.5	2.26	6,286.0	14,891.0	2.37
Vegetables	30.0	440.0	14.67	42.0	600.0	14.29	58.0	1,160.0	20.0
Regional Total	171,782.5	546,230.7	79.15	152,864.5	546,601.4	80.16	171,660.5	585,026.1	84.88

Source: Pwani Region, Compiled Data from Councils (Agriculture Departments), 2013

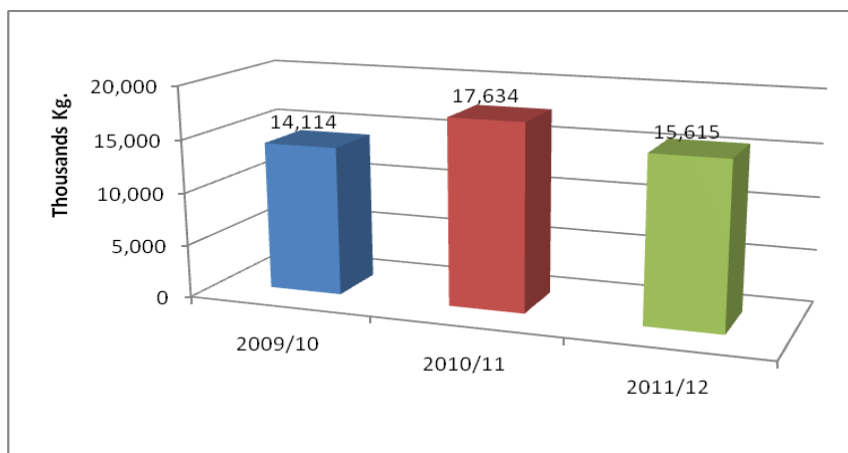
Cashewnuts Sold

From 2009/10 the cashewnuts were sold using the voucher system. However, this resulted in a downward trend in the quantity of cashewnuts sold due to the fact that banks did not release funds to facilitate the sale of cashewnuts. Table 3.9 shows the quantity of cashewnuts sold and the average price per kilogram from 2009/10 to 2011/12.

Table 3. 9: Quantity and Value of Cashewnuts Sold; Pwani Region, 2009/10-2011/12

Period	Quantity of Cashewnuts sold (kgs)	Average Price (TShs/kg).	Total Value in Billion TShs.
2009/10	14,114,103	900	12.702
2010/11	17,634,142	1,100	19.397
2011/12	15,615,117	1,200	18.738

Source: Pwani Region, Compiled Data from Councils (Agriculture Departments), 2013

Figure 3. 8: Quantity of Cashewnuts Sold, Pwani Region, 2009/10-2011/12

Source: Pwani Region, Compiled Data from Councils (Agriculture Departments), 2013

3.1.9 Agricultural Inputs

i) Introduction

Reducing rural poverty by delivering appropriate agricultural inputs and improving output markets for Tanzanian farmers are among the objectives of "Kilimo Kwanza" (Agriculture First) policy in Tanzania. In Kilimo Kwanza, priority is given to transforming traditional agriculture which depends on hand hoe to mechanized agriculture and improving agriculture extension services by employing more extension officers. Moreover, distribution of chemical fertilizers as well as establishing credit facilities for farmers, and setting up storage through a warehouse receipt system were introduced to reinforce crop production.

Since there is no tangible evidence (statistical data) that show the impact of 'Kilimo Kwanza' policy in improving availability of agricultural inputs/implements and increasing crop yields in the region, hypothetically, 'Kilimo Kwanza' policy adds significantly to the availability of agricultural inputs/implements in the region. Moreover, this is an opportunity for researchers to investigate the extent to which the said policy has improved inputs/implements availability and also how the yields have increased.

ii) Organic /Inorganic Fertilizers

Soil infertility, plant pests and diseases are among factors which limit agricultural production in Pwani region. As time passes the region's soil loses fertility and becomes dependant on chemical fertilizers to boost its quality and enhancement of optimum crop harvests. Food crops demand the use of chemical fertilizers for optimum harvests. Likewise,

horticultural crops such as tomatoes require the use of pesticides for control of insect infestation and plant diseases.

The largest area planted with organic fertilizers (628 ha, 23.9 percent of the total planted area applied with organic fertilizers in the region) was in Kibaha followed by Mkuranga (616 ha, 23.4 percent) and the smallest planted area applied with organic fertilizers (222 ha, 8.4 percent) was in Mafia. The largest planted area applied with inorganic fertilizers was in Bagamoyo and Rufiji district councils (each 482 ha, 26 percent) followed by Kibaha (422 ha, 22.8 percent), while the smallest planted area applied with inorganic fertilizers was in Mafia (21 ha, 1.1 percent). Inorganic fertilizers were not applied during masika rains in Kisarawe district council. The agricultural households mostly purchase fertilizers from local markets/trade stores. UREA, DAP and CAN are the most used chemical fertilizers in the region.

The demand, supply and distribution of fertilizers, in the period of 2010/11 and 2011/12 showed big variations. While demand of some fertilizers was high, its supply was limited or there was no supply at all and this lowered the yield. Demand, supply and distribution of fertilizers in Pwani region are shown in Table 3.10.

Table 3. 10: Demand, Supply and Distribution of Fertilizers, Pwani Region, 2010/11 and 2011/12

Type of Fertilizer	2010/11			2011/12		
	Demanded	Supplied	Distributed	Demanded	Supplied	Distributed
UREA (tonnes)	3,545	2,224	2,214	4,348	1,223	1,215
DAP (tonnes)	568	285.2	285.2	603	289	289
CAN (tonnes)	1,166	826	620	2,316	676	671
NPK (tonnes)	57	14.7	10.9	65	20	16.5
SA (tonnes)	65	0	0	68	0	0
TSP	30	2.5	2.5	45	7.5	7.5
Ninja	5	2	2	0	0	0

Source: Pwani Region, Compiled Data from Councils (Agriculture Departments), 2013

Fungicides, Pesticide and Herbicides

Fungicides prevent crops from being damaged by fungi. Pesticides are chemicals used to control insects and diseases, while herbicides are used to control weeds.

Fungicides

According to Agriculture Sample Survey 2007/2008, the largest planted area applied with fungicides in Pwani region was in Rufiji (42.7 percent of the total area applied with fungicides) followed by Mkuranga district council (328 ha, 24.3 percent). Fungicides were

not applied in Mafia district council. Herbicides were mostly used in Rufiji (389 ha, 58 percent of the total area applied with herbicides in the Region) followed by Mkuranga (198 ha, 29.7 percent). Smaller areas were applied with the pesticides in Kibaha and the smallest area was in Kisarawe (12 ha, 1.8 percent). Herbicides were not applied in Bagamoyo and Mafia district councils.

The demand, supply and distribution of fungicides in 2010/11 and 2011/12 are shown in table 3.11. The table shows that the highly demanded fungicide was Bayfidan for which the demand was 10,288 litres in 2010/11 but the supply and distribution were 1,200 litres each. In 2011/12 demand was 3,638 litres while the supply and distribution were 814 litres each. The second fungicide in terms of demand was Bayleton for which the demand was 1,304.19 litres in 2010/11 while the supply and distribution were the same 564.19 litres. In 2011/12, demand was 1,673 litres while the amounts supplied and distributed were both 1,493 litres. The third fungicide in importance was Powershot for which 1,089 litres were demanded but the supply and distribution were 90 litres in 2010/11. In 2011/12 the demand was 11,100 litres and the supply and distribution were both 4,028 litres.

In general, the table shows that while demand was high for most of the fungicides, the supply and distribution were low. This necessitates the regional and districts authorities to adopt strategies that will make sure that supply and distribution channels are enhanced so as to boost agriculture production.

Table 3. 11: Demand, Supply and Distribution of Fungicides; Pwani Region; 2010/11 and 2011/12.

Type of Fungicide	2010/11			2011/12		
	Demanded	Supplied	Distributed	Demanded	Supplied	Distributed
Bayfidan (lts)	10,288	1,200	1,200	3,638	814	814
Bayleton (lts)	1,304.19	564.19	564.19	1,673	1,493	1,493
Powershot (lts)	1,089	90	90	11,100	4,028	4,028
Sulphur (lts)	1,029	430	430	1,110.6	446.3	336.6
Profit (lts)	1,000	300	300	1,000	268	268
Mupatiden (lts)	540	250	250	0	0	0
Mupacron (lts)	430	350	350	0	0	0
Salacron (lts)	320	200	200	0	0	0
Ivory 75 WP (lts)	24	20	20	24	22.5	22.5
Boosters (lts)	15	8	8	15	8	8
Thiovit Jet (lts)	10	2	2	10	3	3

Source: Pwani Region, Compiled Data from Councils (Agriculture Departments), 2013

Pesticides: According to the Agriculture Sample Survey 2007/08, the level of use of pesticides in all districts in Pwani region was generally low. Overall, however, Bagamoyo

district council had the largest area applied with pesticides (2,176 ha, 33.4 percent of the total area applied with pesticides in the region) followed by Kibaha, Rufiji and Mkuranga with between 1,236 and 1,481 ha applied with pesticides. Kisarawe had the smallest planted area applied with pesticides (304 ha, 4.7 percent).

In all applying districts except Rufiji, the planted area applied with insecticides was larger than any other pesticide. The planted area applied with insecticides was largest in Bagamoyo (1,974 ha, 43.9 percent of the total area applied with insecticides in the region) followed by Kibaha (993 ha, 22.1percent) and Mkuranga (956 ha, 21.3 percent). Insecticides were applied on smaller planted areas in Rufiji and Kisarawe district councils.

High demand associated with low supply and distribution of insecticides in 2010/11 and 2011/12 are shown in table 3.12. Probably, the low use of insecticides is due to low supply and distribution of the chemicals.

Table 3. 12: Demand, Supply and Distribution of Insecticides, Pwani Region, 2010/11 and 2011/12

Type of Insecticide	2010/11			2011/12		
	Demanded	Supplied	Distributed	Demanded	Supplied	Distributed
Selecron	7,320	1,450	1,450	7,320	1,980	1,980
Ninja	5,323	653	653	5,320	1,163	1,163
Karate	1,661.7	579.7	579.7	1,781.7	689.7	689.7
Bromodionize	150	50	50	100	83	83
Flint	100	22	22	0	0	0
Amarate	78.3	78.3	78.3	78.3	78.3	78.3
Zinc Phosphate	50	50	50	150	50	27.4
Diphacionone	50	50	50	0	0	0
Degor	25	13.5	13.5	51	6	6

Source: Pwani Region, Compiled Data from Councils (Agriculture Departments), 2013

Herbicides: According to Agriculture Sample Survey 2007/08 herbicides were applied on a total of 6,511 ha, equivalent to 4.6 percent of the total planted area in Pwani Region. According to the Survey, insecticides were the most dominant pesticide used on 69 percent (4,490 ha) of the planted area applied with pesticides followed by fungicides 1,351 ha (21 percent) and herbicides were the least used 666 ha or (10 percent).

3.1.10 Improved Seeds

The Agriculture Sample Survey 2007/08 in Pwani region the use of improved seeds for planting in both seasons (short and long rain seasons) was limited to 18,350 ha (13 percent of the total planted area of 142,740 ha). This implies that most of the area is planted using

either local landraces and/or seed of unknown quality. The variation in the use or non-use of improved seed between seasons was small.

However, there were variations in the extent of use of improved seed between districts and the general trends were maintained in both seasons. Kibaha District had the largest proportion of land planted with improved seed in both seasons (24.9 percent during Masika and 42.1 percent during Vuli) followed by Mkuranga, Kisarawe and Bagamoyo districts, in that order. The use of improved seed in Rufiji and Mafia district councils was consistently low in both seasons.

The situation with regard to use of improved seed in 2007/08 indicates that the proportion of crop producing households using improved seeds had increased slightly compared to 2002/03 (Agriculture Census data) but there were large variations between districts. In 2002/03, the planted area using improved seeds was estimated 12 percent of the total area planted with the annual crops and vegetables. Cereals had the largest planted area with improved seeds (14,868 ha, 70 percent of the area planted with improved seeds) compared to other crop types.

Table 3. 13: Demand, Supply and Distribution of Improved Seeds (in tonnes), Pwani Region, 2010/11 and 2011/12

Type of Improved Seeds	2010/11			2011/12		
	Demanded	Supplied	Distributed	Demanded	Supplied	Distributed
Maize	643.6	44.5	39.87	616.9	40.89	40.89
Paddy	215.4	30	30	237	50	50
Cassava	150	94	94	150.7	104	104
Sunflower	900	200	200	500	300	300
Millet	1,000	300	300	1,500	500	500
SARO	668.4	72.5	50	668.1	50	50
Sorghum	19.7	9	9	21.6	9	9
Cowpeas	5.2	0.52	0.52	5.25	0.02	0.02
Pegion Peas	5	5	0.01	5.13	0.075	0.075
Tomato	0.06	0	0	0.07	0	0
Okra	0.22	0	0	0.14	0	0
Water melon	0.12	0	0	0.17	0	0
Total	3,607.7	755.52	723.4	3,705.06	1053.985	1053.985

Source: Pwani Region, Compiled Data from Councils (Agriculture Departments), 2013

3.1.11 Agro- Mechanisation

Agricultural implements are necessary for efficient production. Table 3.14 shows the status of agriculture implements by district/town council in Pwani region 2011/12. The table

shows that the demand for Agriculture implements is high while the supply is very low and in some cases there was no supply at all.

Table 3. 14: Availability of Agriculture Implements by Council, Pwani Region; 2011/12

No.	Type/Council	Number of Farm Implements		Shortfall/Excess
		Demanded	Supplied	
1	Ox-plough			
	Kibaha DC	45	41	-4
	Kisarawe DC	158	26	-132
	Mkuranga DC	20	8	-12
	Rufiji DC	250	142	-108
	Mafia DC	80	51	-29
	Kibaha TC	0	0	0
	Regional Total	593	268	-325
2	Ox harrow			
	Bagamoyo DC	40	0	-40
	Kibaha DC	45	0	-45
	Kisarawe DC	0	0	0
	Mkuranga DC	20	0	-20
	Rufiji DC	250	0	-250
	Mafia DC	40	2	-38
	Kibaha TC	0	0	0
	Regional Total	395	2	-393
3	Oxridger			
	Bagamoyo DC	40	0	-40
	Kibaha DC	45	0	-45
	Kisarawe DC	0	0	0
	Mkuranga DC	20	0	-20
	Rufiji DC	75	18	-57
	Mafia DC	6	0	-6
	Kibaha TC	0	0	0
	Regional Total	186	18	-168
4	Oxcart			
	Bagamoyo DC	40	0	-40
	Kibaha DC	45	41	-4
	Kisarawe DC	158	15	-143
	Mkuranga DC	10	3	-7
	Rufiji DC	50	22	-28

No.	Type/Council	Number of Farm Implements		Shortfall/Excess
		Demanded	Supplied	
	Mafia DC	40	13	-27
	Kibaha TC	0	0	0
	Regional Total	343	94	-249

Table 3. 14 (ctd): Availability of Agriculture Implements by Council; Pwani Region, 2011/12

5	Ox cultivator			
	Bagamoyo DC	40	0	-40
	Kibaha DC	45	0	-45
	Kisarawe DC	0	0	0
	Mkuranga DC	10	0	-10
	Rufiji DC	0	0	0
	Mafia DC	1	0	-1
	Kibaha TC	0	0	0
	Regional Total	96	0	-96
6	Ox chain			
	Bagamoyo DC	80	0	-80
	Kibaha DC	45	41	-4
	Kisarawe DC	0	0	0
	Mkuranga DC	20	0	-20
	Rufiji DC	250	142	-108
	Mafia DC	0	0	0
	Kibaha TC	0	0	0
	Regional Total	395	183	-212
7	Ox shares			
	Bagamoyo DC	80	0	-80
	Kibaha DC	3	41	-38
	Kisarawe DC	0	0	0
	Mkuranga DC	20	0	-20
	Rufiji DC	0	0	0
	Mafia DC	0	0	0
	Kibaha TC	0	0	0
	Regional Total	103	41	-138
8	Tractors			
	Bagamoyo DC	36	13	-23
	Kibaha DC	31	42	11
	Kisarawe DC	15	6	-9

Table 3. 14 (ctd): Availability of Agriculture Implements by Council; Pwani Region, 2011/12

	Mkuranga DC	69	29	-40
	Rufiji DC	130	122	-8
	Mafia DC	4	1	-3
	Kibaha TC	30	22	-8
	Regional Total	315	235	-80
9	Power tillers			
	Bagamoyo DC	50	2	-48
	Kibaha DC	0	6	6
	Kisarawe DC	79	20	-59
	Mkuranga DC	30	22	-8
	Rufiji DC	50	24	-26
	Mafia DC	40	10	-30
	Kibaha TC	15	7	-8
	Regional Total	264	91	-173
10	Blowers			
	Kibaha TC	28	18	10
	Regional Total	18	10	

Source: Pwani Region, Compiled Data from Councils (Agriculture Departments), 2013

3.1.12 Access to Crop Extension Services

Basing on the Agriculture Sample Survey of 2007/08, the households that received extension service in the form of expert advice and technical backup were an average 60 percent of the crops-only growing households. Extension services were provided most extensively in Bagamoyo district council (99 percent received extension services), down to 56.3 percent in Kisarawe DC and was at the lowest level in Mafia where an average 25 percent of the households were reached.

The main source of extension services was the government which provided services to 105,346 respondents; equivalent to 61 percent of all households interviewed. This is a 35 percent drop as compared to the figure reported in 2002/3 census. This was followed by the mass media (radio, television and newspapers - 25,902, 15 percent), neighbours (20,575, 12 percent), NGOs and development projects (9,877, 6 percent), large scale farms (5,464, 3 percent), co-operatives (2,877, 2 percent) and other sources (1 percent).

Council differences exist with the proportion of the households receiving advice from the government services ranging from 59 to 84 percent in Kibaha and Mafia district councils,

respectively. However, it is also interesting to note that there is a wide range of other sources providing extension services alongside the government. Generally, much of the extension services were available in easily accessible district councils (Mkuranga, Kibaha, Bagamoyo and Kisarawe) as compared to the ones that are accessible with difficulties due to their geographical areas (Rufiji and Mafia). The crop extension services that was received by the largest number of households was on crop spacing (16 percent) followed by use of improved seeds (13 percent),

3.1.13 Availability of Oxnazation

In Pwani region there were 172 oxnization. Most of them were found in Kibaha DC (102). Other councils had a small number e.g Rufiji DC which had one oxnization only. Councils which had no oxnization were Kibaha TC and Mafia DC.

Table 3. 15: Availability of Oxnazation by Council in Pwani Region; 2011/12.

Council	No. of Wards	No. of villages	No. of Mitaa	No. of Oxnazation
Bagamoyo DC	22	97	-	18
Kibaha DC	11	33	-	102
Kisarawe DC	15	79	-	26
Mkuranga DC	18	121	-	25
Rufiji DC	27	106	-	01
Mafia DC	8	23	-	0
Kibaha TC	11	0	53	0
Regional Total	112	459	53	172

Source: Pwani Region, Compiled Data from Councils (Agriculture Departments), 2013

3.1.14 Irrigation

A total of 3,113 ha (2.2 percent of the total planted area in the region) was planted using irrigation. This is as per the National Agriculture Census of 2007/2008. Most of the irrigated land was in Rufiji district council (1,137 ha, 36.5 percent of the irrigated land in the region) and Mkuranga district council (972 ha, 31.2 percent). This represents a decline in the planted area under irrigation. In 2002/03 the area of annual crops under irrigation in the region was 58,870 ha representing 33.1 percent of the total area planted in the region.

In other districts, the planted areas under irrigation were equivalent to 11.4 percent in Bagamoyo, 10.8 percent in Kisarawe and 9.4 percent in Kibaha. Irrigation farming was negligible in Mafia where the land applied was less than one percent of the total irrigated land in the region.

The main sources of water for irrigation were rivers which were used by 63 percent of the households applying irrigation (2,869 households). The main rivers in Pwani region are Rufiji, Ruvu and Wami rivers.

Table 3. 16: Irrigation Prospects by Council, Pwani Region; 2011/12

Council	Potential Area		Irrigated Area (ha)	Irrigated Potential (Percent)	Unutilized Potential Area	
	(ha)	Percentage Share			(ha)	Percent Share
Bagamoyo DC	24,475	15.1	1,260	5.2	23,206	14.6
Kibaha DC	10,750	6.7	200	1.9	10,397	6.6
Kisarawe DC	27,999	17.3	196.75	0.7	27,802	17.5
Mkuranga DC	18,089	11.2	297	1.6	17,002	10.7
Rufiji DC	80,000	49.5	127.5	0.2	79,873	50.4
Mafia DC	84	0.1	0	0.0	84	0.1
Kibaha TC	250	0.2	10	4.0	240	0.2
Regional Total	161,647	100.0	2,091.25	1.3	158,604	100.0

Source: Pwani Region, Compiled Data from Councils (Agriculture Departments), 2013

Table 3. 17: Irrigation Schemes operating in Pwani Region in 2012.

Council	Name of Scheme	Irrigated Area (Ha)
Bagamoyo DC	CHAURU	750
	Eco Energy	200
	BIDP	72
	Kidogozero	38
	Kiwangwa	8
	Matipwili	8
	Bwilingu	8
	Individual farmers	176
	Sub-Total	1260
Kibaha DC	Kwala	200
Sub-Total		200
Kisarawe DC	Individual Farmers	196.75
Sub-Total		196.75
Mkuranga DC	Kisere	200
	Yavayava	54
	Changanyikeni	26
	Individual farmers	17
	Sub-Total	297
Rufiji DC	Segeni	120
	Individual farmers	7.5
	Sub-Total	127.5
Kibaha TC	Individual farmers	10
Sub-Total		10
Grand Total		2,091.25

Source: Pwani Region, Compiled Data from Councils (Agriculture Departments), 2013

3.1.15 Crop Marketing

According to National Agriculture Sample Census of 2007/08, Sale of crops in Pwani region was conducted in all councils with varying proportions of the household participating. Rufiji district council had the highest proportion of households (67.7 percent) selling crops while Mafia had the lowest proportion (44.7 percent) of households participating in selling crops. In the other remaining districts, household participation in the sale of crops was in the range of 54 to 58 percent.

However, the main challenges faced by households that participated in the sale of crops were varied. The single most challenging problem cited by the largest proportion of households (31.9 percent, 87,050 households) was the low price in the open market. Other marketing problems included government regulation problems, trade union problems, the crop market

being too far, high transport costs, lack of transport, lack of market information, and lack of buyers.

Apart from cash crops, food crops are also sold in significant quantities. Cereal crops especially paddy and also cassava are the leading food crops sold. In addition to that fruits and vegetables add significantly to the income of the people of Pwani region.

3.2 Livestock

3.2.1 Introduction

Pwani region population also relies on livestock economy with the major source of income being local zebu cattle. Improved dairy cattle are also reared in all councils especially in the peri-urban areas. Other domestic animals which support population livelihood are goats, sheep, donkeys, pigs and poultry.

3.2.2 Livestock Population

Table 3.18 gives estimated livestock population by council in Pwani region in 2012. Among the livestock, indigenous and improved chicken are the largest in number (2,070,747) followed by cattle (469,386), goats (145,059) and sheep (71,938). Others are ducks (26,085), pigs (13,417) and donkeys (1,412). Bagamoyo DC had the largest number of cattle, goats, sheep and ducks whereas Mafia DC had the smallest number of cattle, goats, sheep, pigs, poultry and indigeneous chicken.

Table 3. 18: Estimated Livestock Population by Type and Council, Pwani Region; 2011/12

Council	Cattle	Goats	Sheep	Donkeys	Pigs	Improved Chicken	Indigenous Chicken	Ducks
Bagamoyo DC	241,954	84,998	38,694	315	3,825	26,163	372,758	19,406
Kibaha DC	54,004	19,325	9,888	511	1,416	30,859	56,238	582
Kisarawe DC	34,824	9,937	1,239	0	425	40,348	158,527	0
Mkuranga DC	12,401	7,129	2,567	13	986	372,442	233,313	3,711
Rufiji DC	106,734	16,980	18,357	171	1,488	0	450,548	0
Mafia DC	12,469	901	34	387	0	350	44,049	1,500
Kibaha TC	7,000	5,789	1,159	15	5,277	212,129	73,023	886
Regional Total	469,386	145,059	71,938	1,412	13,417	682,291	1,388,456	26,085

Source: Pwani Region, Compiled Data from Councils (Livestock Departments), 2013

3.2.3 Cattle Population

Cattle population in Pwani region increased from 122,308 in 2002/3 to 469,386 in 2011/12 which was equivalent to 283.8 percent increase. The major reason for increased cattle population may be due to incoming pastoral communities from other regions searching for pasture and water for livestock. The indigenous cattle population was largest (434,353) equivalent to 92.5 percent of the total number of cattle in the region) followed by 17,723 dairy cattle (3.8 percent) and 17,310 beef cattle (3.7 percent).



Bagamoyo DC have the largest number of cattle (51.5 percent) followed by Rufiji DC (22.7 percent), Kibaha DC (11.5 percent), Kisarawe DC (7.4 percent), Mafia DC (2.7 percent), Mkuranga DC (2.6 percent) and Kibaha TC (1.5 percent). The largest number of improved dairy cattle was found in Kibaha TC (4,667) followed by Kibaha DC (4,164), Kisarawe DC (2,753), Bagamoyo DC (2,147), Mafia DC (1,800) Mkuranga DC (1,778) and Rufiji (414).

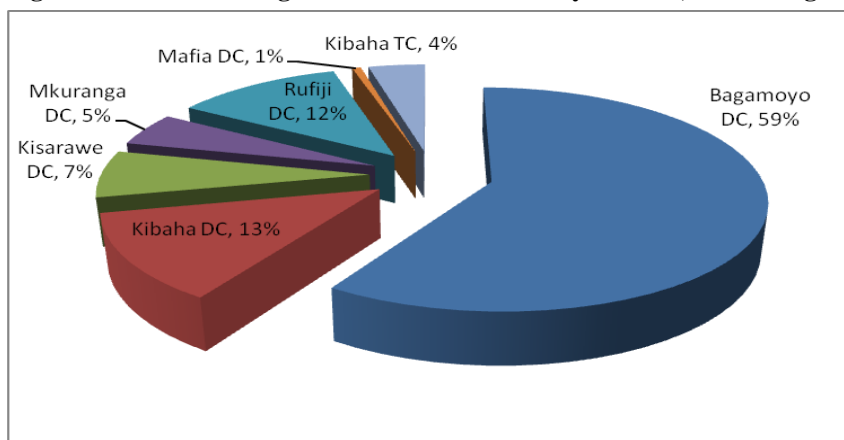
Table 3. 19: Distribution of Cattle Population by Type and Council; Pwani Region; 2012

Council	Indigenous Cattle	Improved Dairy Cattle	Improved Beef Cattle	Total cattle	Percent
Bagamoyo DC	223,976	2,147	15,831	241,954	51.5
Kibaha DC	49,840	4,164	0	54,004	11.5
Kisarawe DC	30,592	2,753	1,479	34,824	7.4
Mkuranga DC	10,623	1,778	0	12,401	2.6
Rufiji DC	106,320	414	0	106,734	22.7
Mafia DC	10,669	1,800	0	12,469	2.7
Kibaha TC	2,333	4,667	0	7,000	1.5
Total	434,353	17,723	17,310	469,386	100.0
Per cent	92.5	3.8	3.7	100.0	

Source: Pwani Region, Compiled Data from Councils (Livestock Departments), 2013

3.2.4 Goat population

Figure 3. 9: Percentage Distribution of Goats by Council, Pwani Region, 2012



Source: Pwani Region, Compiled Data from Councils (Livestock Departments), 2013

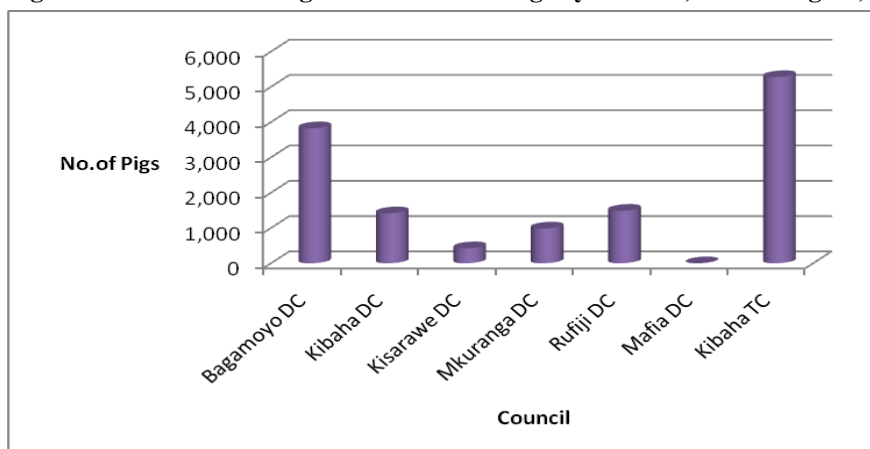
According to Agriculture Sample Survey of 2007/08 the total goat population in the region was 172,769 distributed in all districts in varying proportions. Most of the goats were of the indigenous type. An exceptionally large goat population was found in Bagamoyo (111,782, 64.7 percent of total goat population in the region) compared to all other districts. The district with the second largest population was Kibaha (20,984, 12.1percent) while Mafia had the lowest goat population in the region (872 goats, 0.5 percent). The average number of goats per household was 12 with Bagamoyo having the largest herd size of 15 goats per household and Mafia having the smallest number of 4 goats per household.

In the period of 2011/12 there were 145,059 goats in Pwani region. The leading council for goat rearing was Bagamoyo DC 84,998 (59 per cent), followed by Kibaha DC 19,325 (13 per cent), Rufiji DC 16,980 (12 per cent), Kisarawe DC 9,937 (7 per cent), Mkuranga DC 7,129 (5 per cent), Kibaha TC 5,789 (4 per cent) and lastly Mafia DC with 901 which had one percent of the total goat population.

3.2.5 Pig Production

Pigs were the seventh most important livestock in the Pwani region. The council with the largest number of pigs was Kibaha TC with 39 percent of the total pig's population in the region, followed by Bagamoyo DC 29 percent, Rufiji DC (11 percent), and Kibaha DC (11 percent) (Table 3.18 and Figure 3.10).

Figure 3. 10 : Percentage Distribution of Pigs by Council; Pwani Region; 2012



Source: Pwani Region, Compiled Data from Councils (Livestock Departments), 2013

3.2.6 Poultry farming

Poultry is by far the largest livestock group and they are estimated to be about 14 000 million in the World, consisting mainly of chickens, ducks and turkeys in the world (FAO 1999). In total, poultry products (eggs and meat) constitute 30 percent of all animal protein consumed worldwide. Within the last 10 years, this proportion has increased from 20 percent to 30 percent of all animal protein and is predicted to increase to 40 percent before the year 2015 (IFPRI 2000).



In Pwani region, poultry farming is an emerging industry and hygienic poultry production can pave way to better income and sustainable development. Poultry farming plays a significant role in rural and urban people's life and contributes significantly to poverty alleviation and improvement of food security with high nutrition. Moreover, growth of this industry involves a lot of women and thus provides a strong base for women empowerment in this area. Due to poverty, high population density and many landless people, special effort is required to reach the poor and landless. Simple changes in the management of villages, poultry can significantly improve production and the living conditions of many rural families in terms of enhanced nutrition and income generation through the sale of

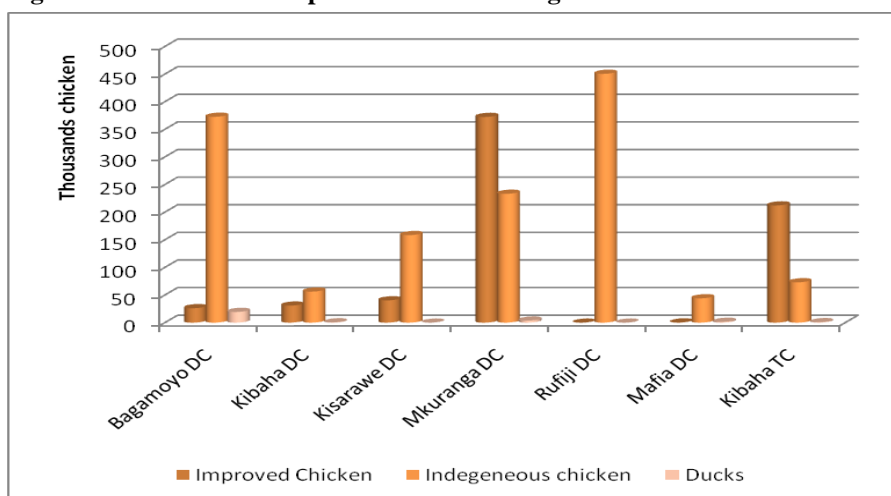
surplus chicken or eggs. The poultry sector in Pwani Region was dominated by chicken production as the livestock having the largest population.

In 2011/12, the council with largest number of indigenous chicken was Rufiji DC with 450,548 chickens (32 percent of the total chicken in the Region) followed by Bagamoyo DC (372,758 chickens, 27 percent), Mkuranga DC (233,313 chickens, 17 percent), Kisarawe DC (158,527 chicken, 11 percent), Kibaha TC (73,023 chickens, 5 percent), Kibaha DC (56,238 chicken 4 per cent) and Mafia DC (44,049 chicken, 3 per cent) as shown (Table 3.18 and Figure 12).

Concerning the improved chicken in 2011/12, the council with largest number of improved chicken was Mkuranga DC with 372,442 chickens (55 percent of the total chicken in the region) followed by Kibaha TC (212,129 chickens, 31 percent), Kisarawe DC (40,348 chickens, percent), Kibaha DC (30,859 chicken, 5 percent), Bagamoyo DC (26,163 chickens, 4 percent), and Mafia DC (350 chicken) (Table 3.12 and Figure 21). Rufiji DC did not report any data on this.

On the side of ducks, there were 26,085 ducks in Pwani Region mostly found in Bagamoyo DC and Mkuranga DC.

Figure 3. 11: Chicken Population in Pwani Region 2011/12



Source: Pwani Region, Compiled Data from Councils (Livestock Departments), 2013

3.2.7 Sheep Production

The total number of sheep in Pwani region was 71,938 in 2011/12. The council with the largest number was Bagamoyo DC with 38,694 or 54 percent of the total population. The second council was Rufiji DC with 18,357 sheep or 26 percent. The third was Kibaha DC with 9,888 or 14 percent. The rest of the councils had a small number of sheep (table 3.18).

3.2.8 Donkeys Population

The total number of donkeys in Pwani region was 1,412 in 2011/12. The district council with the largest number was Kibaha DC with 511 donkeys or 36 per cent of the total population. The second council was Mafia DC with 387 donkeys or 27 percent. The third was Bagamoyo DC with 315 or 22 per cent and Rufiji DC was fourth with 171 donkeys or 12 per cent (table 3.18).

3.2.9 Grazing Land Area

Grazing land is defined as the land that is available for the grazing needs of livestock. It excludes all tsetse fly infested areas, all wildlife and forest reserves also tree plantations, but it includes game controlled areas. In many cases it overlaps arable land and areas for 'other use'. Pwani region had a total of 474,432.0 hectares of land fit for grazing. Out of that area, 295,341.0 hectares (62.3 percent) were in use. However, Kibaha TC has no grazing land hence zero grazing is the only way of keeping livestock.

Table 3. 20 : Estimated Area for Grazing by Council; Pwani Region; 2012

Council	Land Fit for Grazing (ha)	Land Used for Grazing (ha)	Proportion of Grazing land in Use (Percent)	Tsetse Fly Infected Area (ha)
Bagamoyo DC	314,056.87	190,000.5	60.5	9,596.5
Kibaha DC	22,415.0	22,415.0	100.0	0
Kisarawe DC	52,067.92	28,732.0	55.2	21,061.44
Mkuranga DC	11,718.6	11,718.6	100.0	0
Rufiji DC	48,173.64	24,474.9	50.8	48,173.64
Mafia DC	26,000.0	18,000.0	69.2	611
Kibaha TC	0	0	0	0
Total	474,432.03	295,341	62.3	79,442.58

Source: Pwani Region, Compiled Data from Councils (Livestock Departments), 2013

3.2.10 Livestock Infrastructure

Improvement of Livestock quality is limited due to difficulties in accessing facilities capable of controlling or preventing animal diseases. Diseases affect animal health and reduce both meat and milk production in terms of quality and quantity and in some cases causes death to the animals affected. Delivery of livestock health services depends on facilities such as dips, veterinary health centres and water sources. Table 3.21 shows livestock infrastructure in Pwani region in 2012. Dips were the most common infrastructure available in the region with Bagamoyo DC having the largest number (47) and Mkuranga DC the smallest number (3).

Table 3. 21: Distribution of Livestock Infrastructure by Council, Pwani Region; 2012

Council	Total Dips	Working Dips	Crushes	Hides/Skins Sheds	Abattoir s	Livestoc k Markets	Total Veterinary Centres	Working Veterinary Centres	Milk Collection Centres
Bagamoyo DC	47	23	2	2	6	3	3	1	14
Kibaha DC	13	10	14	1	1	3	1	1	1
Kisarawe DC	7	6	0	1	1	2	0	0	1
Mkuranga DC	3	3	3	0	3	1	0	0	0
Rufiji DC	4	4	4	0	0	2	0	0	0
Mafia DC	6	0	0	0	1	0	1	0	0
Kibaha TC	7	2	2	0	1	0	0	0	1
Total	87	48	25	4	13	11	5	2	17

Source: Pwani Region, Compiled Data from Councils (Livestock Departments), 2013

3.2.11 Marketing Livestock and their Products

Increased private sector participation in marketing of livestock and their products in recent years have increased marketing channels for the livestock sub-sector. Due to high demand and good transportation infrastructure, urban areas provide reliable marketing place for livestock and their products than rural areas.

Table 3.22 gives number and value of livestock marketed in the region from 2010 to 2012. The region earned a total of TShs. 40,751.2 million from selling of cattle, goats, pigs and poultry in the period of three years, 2010 to 2012. Indigenous cattle earned about 83.0 percent of the total regional income followed by poultry (12.3 per cent) and goats (3.4 per cent).

Concerning skins and hides, the region earned TShs. 744.9 million from sales of those products from 2010 to 2012. The leading skin type was of cattle which accounted for 95.62 percent of the total revenue (Table 3.22a).

Table 3. 22 : Marketed Livestock by Type (Official Markets) and Revenue Earned; Pwani Region; 2010 to 2012.

Type	Total Number of Livestock Marketed				Revenue Collected in TShs. Million				Percentage
	2010	2011	2012	Total	2010	2011	2012	Total	
Indig.Cattle	11,741	15,415	36,252	63,408	8,795.1	7,931.4	17,108.9	33,835.4	83.0
Dairy Cattle	193	107	80	380	154.4	85.6	80.0	320.0	0.8
Goats	1,485	2,391	13,331	17,207	277.7	314.0	792.4	1,384.1	3.4
Poultry	230,813	476,049	474,068	1,180,930	899.5	2,159.4	1,938.6	4,997.5	12.3
Pig	324	447	551	1,322	25.9	49.2	48.5	123.6	0.3
Sheep	494	372	985	1,851	22.9	17.2	50.5	90.6	0.2
Total	245,050	494,781	525,267	1,265,098	10,175.5	10,556.8	20,018.9	40,751.2	100

Source: Pwani Region, Compiled Data from Councils (Livestock Departments), 2013

Table 3.22 a: Marketing of Livestock Hides/ Skins, Pwani Region; 2010-2012

Type	Total Number of Livestock Products Marketed				Revenue Collected in TShs. Million				Percent
	2010	2011	2012	Total	2010	2011	2012	Total	
Cattle Hides/Skins	33,673	40,566	40,712	114,951	157.4	274.3	280.6	712.3	95.62
Goat Skins	3,500	3,511	1,154	8,165	9.1	11.2	11.1	31.4	4.22
Sheep Skins	627	246	243	1116	0.5	0.4	0.3	1.2	0.16
Total	37,800	44,323	42,109	124,232	167.0	285.9	292.0	744.9	100

Source: Pwani Region, Compiled Data from Councils (Livestock Departments), 2013

3.2.12 Milk Production

Milk is an important livestock product which contributes significantly to the income of both urban and rural population. It is by knowing the contribution of milk to health improvement and reduction of poverty, that the Government of Tanzania always emphasizes the keeping of dairy cattle for increased milk production. According to Table 3.23, Bagamoyo DC was the major producer of milk as almost 55 per cent of all milk produced from 2010 to 2012 came from this council. The second council was Rufiji DC with 21 per cent and the third DC was Kibaha DC with 10 per cent. . The table shows that there has been a growing trend in

milk production in the region from year 2010 to year 2012. A total of 24.0 million litres valued TShs. 21.9 billion were produced.

Table 3. 23: Number of Litres of Milk Produced and Marketed and Value by Council, Pwani Region; 2010 -2012.

Council	Litres Produced			Total Value (TShs)		
	2010	2011	2012	2010	2011	2012
Bagamoyo DC	4,012,78	4,355,73	4,549,65	2,006,437,50	4,355,730,00	4,549,656,00
Kibaha DC	398,54	770,97	1,254,96	318,836,80	616,780,10	1,254,963,00
Kisarawe DC						
Mkuranga DC	69,23	73,12	81,87	55,387,20	58,501,60	65,500,00
Rufiji DC	1,598,07	1,698,07	1,698,07	1,598,076,00	1,698,076,00	1,698,076,00
Mafia DC						
Kibaha TC	51	63	1,33	408,00	504,00	1,338,00
Sub Total	6,079,151	6,898,539	7,585,908	3,979,145,500	6,729,591,700	7,569,533,000
Diary Cattle						
Bagamoyo DC	75,23	80,79	82,86	37,617,00	82,864,00	82,864,00
Kibaha DC						
Kisarawe DC	627,36	769,44	793,20	627,360,00	846,389,50	951,849,60
Mkuranga DC	235,53	231,34	180,06	235,533,00	231,340,00	180,069,00
Rufiji DC						
Mafia DC	40,01	163,40	131,92	24,007,20	144,174,40	131,921,00
Kibaha TC	8,96	9,30	9,16	7,172,00	7,444,00	9,162,00
Sub Total	987,104	1,254,280	1,197,224	931,689,200	1,312,211,900	1,355,865,600
Dairy Goats						
Bagamoyo DC						
Kibaha DC			1,00			1,003,00
Kisarawe DC		0	0		0	0
Mkuranga DC		0	0		0	0
Rufiji DC		0	0		0	0
Mafia DC		0	0		0	0
Kibaha TC	72	58	60	720,00	581,00	600,00
Sub Total	720	581	1,603	720,000	581,000	1,603,000
Grand Total	7,066,975	8,153,400	8,784,735	4,911,554,700	8,042,384,600	8,927,001,600

Source: District/ Town Councils (Livestock Departments), Pwani Region, 2013

3.2.13 Eggs Production

From 2010 to 2012, the total number trays of eggs produced were 4,309,554 with a value of TShs. 23,129,876,432 (Table 3.24). The council which led in the production of eggs was Kibaha TC (42.0 percent of the total trays produced). Mkuranga DC followed with 25.2 per cent. Rufiji DC was third with 18.1 percent and Kisarawe DC was the fourth with 10.6 per

cent. Other district councils with their regional contribution of eggs in brackets were Kibaha DC (1.8 per cent), Bagamoyo DC (1.3 per cent) and Mafia DC (1.0 per cent).

Table 3. 24: Production of Eggs by Council in Pwani Region; 2010-2012

Council	Total Trays			Total Value in TShs.		
	2010	2011	2012	2010	2011	2012
Bagamoyo DC	17,98	18,43	19,83	107,910,00	129,024,00	138,873,00
Kibaha DC	24,24	25,52	28,69	96,976,00	127,640,00	194,108,93
Kisarawe DC	151,56	152,37	153,61	727,480,00	757,800,00	844,904,00
Mkuranga DC	67,80	642,07	374,73	339,000,00	3,210,370,00	2,248,386,00
Rufiji DC		390,42	390,12		2,342,532,00	2,925,901,50
Mafia DC	1,95	5,43	34,01	17,550,00	48,888,00	306,090,00
Kibaha TC	70,93	832,71	907,09	283,774,00	3,747,204,00	4,535,465,00
Total	334,47	2,066,97	1,908,10	1,572,690,00	10,363,458,00	11,193,728,43

Source: Pwani Region, Compiled Data from Councils (Livestock Departments), 2013

3.2.14 Major Livestock Diseases

Among the important sectors in the economy of Pwani region is the livestock sector. It includes not only commercial producers of meat or milk, but also small producers with a few animals. The success of any type of livestock operation in any area is closely related to the disease level of the animals.

i) Cattle Diseases

The main diseases that caused illness and death to cattle in the region were Trypanosomiasis, Anaplasmosis, East Coast Fever (ECF), CBPP and Mestitis. According to table 3.25, morbidity cases reported out of those major diseases were 43,917 which caused death of 617 cattle equivalent to 1.4 percent of the reported morbidity cases. In the three years from 2010 to 2012 morbidity and mortality cases were highest in 2010 at 20,448 and 313 respectively. They then dropped to 6,030 and 160 in 2011 respectively. This was probably due to the intervention taken by the councils though it seemed to be of a short run as morbidity shot up to 17,439 morbidity and 144 mortality cases in 2012. From table 3.25 it could be said that, Trypanosomiasis was the main source of cattle illnesses in six district councils and therefore to the region. The main cause of illness in Mafia DC was East Coast Fever.

Table 3. 25: Five Major Cattle Diseases which Caused Morbidity and Mortality by Council, Pwani Region; 2010 to 2012

Council/Disease	Morbidity Reported				Mortality Reported			
	2010	2011	2012	Total	2010	2011	2012	Total
Bagamoyo DC								
Trypanosomiasis	689	643	690	2,022	16	14	12	42
Anaplasmosis	690	597	623	1,910	12	8	7	27
East Coast Fever (ECF)	441	432	321	1,194	24	16	13	53
CBPP	372	328	93	793	4	0	0	4
Babesiosis	4	5	3	12	3	1	0	4
Sub-Total	2196	2,005	1,730	5,931	59	39	32	130
Kibaha DC								
Trypanosomiasis	3,986	341	271	4,598	21	2	2	25
Anaplasmosis	3,472	22	60	3,554	12	0	3	15
East Coast Fever (ECF)	1,761	12	44	1,817	53	1	2	56
CBPP	0	0	36	36	0	0	7	7
Babesiosis	0	0	102	102	0	0	3	3
Sub-Total	9,219	375	513	10,107	86	3	17	106
Kisarawe DC								
Trypanosomiasis	3,018	238	121	3,377	54	8	1	63
Anaplasmosis	1,853	153	185	2,191	15	4	6	25
East Coast Fever (ECF)	627	91	125	843	25	13	12	50
Mastitis	36	26	16	78	0	0	0	0
Pneumonia	0	70	23	93	0	7	0	7
Sub-Total	6,699	663	406	7,768	133	36	14	183
Mkuranga DC								
Trypanosomiasis	35	11	28	74	7	2	9	18
Anaplasmosis	23	19	17	59	3	3	0	6
Theireliosis	41	32	19	92	23	14	11	48
Lumpy Skin	3	0	4	7	0	0	0	0
Sub-Total	102	62	68	232	33	19	20	72
Rufiji DC								
Trypanosomiasis	290	211	208	709	4	0	2	6
Anaplasmosis	32	38	24	94	0	0	0	0
East Coast Fever (ECF)	121	221	198	540	8	7	4	19
FMD	0	18,754	0	18,754	0	28	0	28
Sub-Total	443	19,224	430	20,097	12	35	6	53

Table 3. 25 (ctd): Five Major Cattle Diseases which Caused Morbidity and Mortality by Council, Pwani Region; 2010 to 2012

Council/Disease	Morbidity Reported				Mortality Reported			
	2010	2011	2012	Total	2010	2011	2012	Total
Bagamoyo DC								
Trypanosomiasis	689	643	690	2,022	16	14	12	42
Anaplasmosis	690	597	623	1,910	12	8	7	27
East Coast Fever (ECF)	441	432	321	1,194	24	16	13	53
CBPP	372	328	93	793	4	0	0	4
Babesiosis	4	5	3	12	3	1	0	4
Sub-Total	2196	2,005	1,730	5,931	59	39	32	130
Kibaha DC								
Trypanosomiasis	3,986	341	271	4,598	21	2	2	25
Anaplasmosis	3,472	22	60	3,554	12	0	3	15
East Coast Fever (ECF)	1,761	12	44	1,817	53	1	2	56
CBPP	0	0	36	36	0	0	7	7
Babesiosis	0	0	102	102	0	0	3	3
Sub-Total	9,219	375	513	10,107	86	3	17	106
Kisarawe DC								
Trypanosomiasis	3,018	238	121	3,377	54	8	1	63
Anaplasmosis	1,853	153	185	2,191	15	4	6	25
East Coast Fever (ECF)	627	91	125	843	25	13	12	50
Mastitis	36	26	16	78	0	0	0	0
Pneumonia	0	70	23	93	0	7	0	7
Sub-Total	6,699	663	406	7,768	133	36	14	183
Mkuranga DC								
Trypanosomiasis	35	11	28	74	7	2	9	18
Anaplasmosis	23	19	17	59	3	3	0	6
Theireliosis	41	32	19	92	23	14	11	48
Lumpy Skin	3	0	4	7	0	0	0	0
Sub-Total	102	62	68	232	33	19	20	72
Rufiji DC								
Trypanosomiasis	290	211	208	709	4	0	2	6
Anaplasmosis	32	38	24	94	0	0	0	0
East Coast Fever (ECF)	121	221	198	540	8	7	4	19
FMD	0	18,754	0	18,754	0	28	0	28
Sub-Total	443	19,224	430	20,097	12	35	6	53

Table 3. 25 (ctd): Five Major Cattle Diseases which Caused Morbidity and Mortality by Council, Pwani Region; 2010 to 2012

Mafia DC								
Anaplasmosis	22	68	95	185	3	6	6	15
East Coast Fever (ECF)	34	184	132	350	5	10	21	36
Skin Diseases	9	24	50	83	3	7	8	18
Heat Water	0	12	0	12	0	3	0	3
Sub-Total	65	288	277	630	11	26	35	72
Kibaha TC								
Trypanosomiasis	987	805	742	2,534	9	12	8	29
Anaplasmosis	1,188	903	916	3,007	12	08	10	30
East Coast Fever (ECF)	301	249	183	733	21	33	17	71
CBPP	280	291	173	744	3	5	2	10
Mestitis	190	147	159	496	2	1	0	3
Sub-Total	2,946	2,395	2,173	7,514	47	59	37	143
Regional Summary								
Trypanosomiasis	9,005	2,249	2,060	13,314	111	38	34	183
Anaplasmosis	7,280	1,800	1,920	11,000	57	29	32	118
East Coast Fever (ECF)	3,285	1,189	1,003	5,477	136	80	69	285
CBPP	652	619	302	1,573	7	5	9	21
Mesiisis	226	173	175	574	2	8	0	10
Grand Total	20,448	6,030	17,439	43,917	313	160	144	617

Source: Pwani Region, Compiled Data from Councils (Livestock Departments), 2013

ii) Goat Diseases

According to table 3.26, Helminthiasis, Worm Infection and CCPP were the main cause of illnesses and deaths to goats in Pwani region in period of 2010 to 2012. A total of 35,890 morbidity and 1,438 mortality cases were reported. This implies that in every 24 morbidity cases of goats, one goat died as far as the three major diseases were concerned.

Other major goat diseases with their morbidity and mortality in brackets were worm Infection (Morbidity 10,327, Mortality 984) and CCPP (Morbidity 2,365, Mortality 342).

Table 3. 26: Three Major Goat Diseases which Caused Morbidity and Mortality by Council; Pwani Region; 2010-2012

Council/Disease	Morbidity Reported				Mortality Reported			
	2010	2011	2012	Total	2010	2011	2012	Total
Bagamoyo DC								
Helminthiasis	900	857	789	2,546	0	0	0	0
CCPP	2	3	1	6	3	1	0	4
Heat Water	1	0	0	1	0	0	0	0
Sub-Total	903	860	790	2,553	3	1	0	4
Kibaha DC								
Helminthiasis	3,213	0	0	3,213	102	0	0	102
CCPP	0	0	1,698	1,698	0	0	294	294
Footrot	0	21	0	21	0	0	0	0
Sub-Total	3,213	21	1,698	4,932	102	0	294	396
Kisarawe DC								
Trypanosomiasis	240	0	62	302	128	0	17	145
Pneumonia	0	0	127	127	0	0	1	1
Worm Infection	0	3,085	7,199	10,284	0	172	802	974
Sub-Total	240	3,085	7,388	10,713	128	172	820	1,120
Mkuranga DC								
Helminthiasis	467	840	255	1,562	0	0	0	0
Collibacillosis	126	95	134	355	21	6	23	50
Pneumonia	0	0	5	5	0	0	2	2
Sub-Total	593	935	394	1,922	21	6	25	52
Rufiji DC								
Helminthiasis	5,600	4,540	5,330	15,470	0	0	0	0
Pneumonia	460	410	340	1,210	6	5	10	21
Trypanosomosis	32	12	10	54	2	1	0	3
Sub-Total	6,092	4,962	5,680	16,734	8	6	10	24
Mafia DC								
Worms infection	14	12	17	43	4	0	6	10
Heat water	11	2	9	22	6	2	1	9
Sub-Total	25	14	26	65	10	2	7	19
Kibaha TC								
Helminthiasis	349	327	201	877	7	3	0	10
Pneumonia	201	191	193	585	21	9	13	43

Table 3.26 (ctd): Three Major Goat Diseases which Caused Morbidity and Mortality by Council; Pwani Region; 2010-2012

CCPP	188	209	264	661	15	13	16	44
Sub-Total	738	727	658	2,123	43	25	29	97
Regional Summary								
Helminthiasis	10,529	6,564	6,575	23,668	109	3	0	112
Worm Infection	14	3,097	7,216	10,327	4	172	808	984
CCPP	190	212	1,963	2,365	18	14	310	342
Grand Total	10,733	9,873	15,754	36,360	131	189	1,118	1,438

Source: Pwani Region, Compiled Data from Councils (Livestock Departments), 2013

iii) Sheep Diseases

Table 3.27 shows that Helminthiasis, Pneumonia and Myasis were the three major diseases for sheep in Pwani region. Morbidity cases which reached 12,617 caused 43 among sheep in the three years period (2010 – 2012). The highest frequencies of the sheep illnesses were due to Helminthiasis which however did not cause any death. Instead, the highest mortality was due to Pneumonia in the whole period of three years which stood at 34 deaths. The highest mortality due to pneumonia was experienced in Rufiji DC.

Table 3. 27: Three Major Sheep Diseases which Caused Morbidity and Mortality; Pwani Region; 2010/11 to 2011/12

Council/Disease	Morbidity Reported				Mortality Reported			
	2010	2011	2012	Total	2010	2011	2012	Total
Bgamoyo DC								
Helminthiasis	121	210	245	576	0	0	0	0
Heat water	1	0	0	1	0	0	1	1
Sub Total	0	210	245	577	0	0	1	1
Kibaha DC								
Helminthiasis	208	122	307	637	0	0	0	0
Foot rot	6	13	9	28	0	0	0	0
Sub Total	214	135	316	665	0	0	0	0
Kisarawe DC-ND								
Mkuranga DC								
Helminthiasis	80	58	35	173	0	0	0	0
Pneumonia	40	32	20	92	3	2	1	6
Myasis	67	50	32	149	4	3	2	9
Sub Total	187	140	87	414	7	5	3	15

Table 3. 27 (ctd): Three Major Sheep Diseases which Caused Morbidity and Mortality; Pwani Region; 2010/11 to 2011/12

Council/Disease	Morbidity Reported				Mortality Reported			
	2010	2011	2012	Total	2010	2011	2012	Total
Bgamoyo DC								
Helminthiasis	121	210	245	576	0	0	0	0
Heat water	1	0	0	1	0	0	1	1
Sub Total	0	210	245	577	0	0	1	1
Kibaha DC								
Helminthiasis	208	122	307	637	0	0	0	0
Foot rot	6	13	9	28	0	0	0	0
Sub Total	214	135	316	665	0	0	0	0
Kisarawe DC-ND								
Mkuranga DC								
Helminthiasis	80	58	35	173	0	0	0	0
Pneumonia	40	32	20	92	3	2	1	6
Myasis	67	50	32	149	4	3	2	9
Sub Total	187	140	87	414	7	5	3	15
Rufiji DC								
Helminthiasis	3,400	2,335	3,720	9,455	0	0	0	0
Pneumonia	224	315	420	959	3	10	15	28
Sub-Total	3,624	2,650	4,140	10,414	3	10	15	28
Mafia DC								
Feed Poisoning	0	0	0	0	0	3	0	3
Sub-Total	0	0	0	0	0	3	0	3
Kibaha TC								
Helminthiasis	151	143	150	444	0	0	0	0
Pneumonia	47	52	33	132	0	0	0	0
Sub-Total	198	195	183	576	0	0	0	0
Regional Summary (Three major Diseases)								
Helminthiasis	3,960	2,868	4,457	11,285	0	0	0	0
Pneumonia	311	399	473	1183	6	12	16	34
Myasis	67	50	32	149	4	3	2	9
Grand Total	4,338	3,317	4,962	12,617	10	15	18	43

ND: No data

Source: Pwani Region, Compiled Data from Councils (Livestock Departments), 2013

iv) Poultry Diseases

Poultry diseases seemed to retard the development and sustainability of poultry industry in Pwani region. Among the reasons hindering the development of poultry as table 3.28 shows is the New Castle disease which accounted for 91 percent of the total death of poultry in three years time (2010-2012) caused by the three major poultry diseases which were New Castle Disease, Infectious Coryza (Morbidity 8,047, Mortality 774) and Fowl Typhoid (Morbidity 4,843, Mortality 568). The data shows that out of the seven councils in the region, Bagamoyo DC, Kibaha DC, Kisarawe DC and Kibaha TC were the most affected councils. The least affected council was Mafia DC.

Table 3. 28: Major Poultry Diseases which Caused Morbidity and Mortality, Pwani region; 2012

Council/Disease	Morbidity Reported				Mortality Reported			
	2010	2011	2012	Total	2010	2011	2012	Total
Bagamoyo DC								
New Castle	2,044	2,155	2,358	6,557	1,250	1,675	2,154	5,079
Infectious Coryza	168	112	132	412	42	54	65	161
Fowl Typhoid	156	122	106	384	16	23	24	63
Sub-Total	2,368	2,389	2,596	7,353	1,308	1,752	2,243	5,303
Kibaha DC								
New Castle	2,456	261	789	3,506	2,456	261	785	3,502
Coccidiosis	0	570	288	858	0	4	160	164
Fowl Typhoid	0	180	0	180	68	0	0	68
Sub-Total	2,456	1,011	1,077	4,544	2,524	265	945	3,734
Kisarawe DC								
New Castle	2,800	2,430	1,261	6,491	970	1,370	226	2,566
Fowl Typhoid	2,760	1,170	1,150	5,080	206	97	85	388
Infectious Coryza	0	2,840	348	3,188	0	489	71	560
Sub-Total	5,560	6,440	2,759	14,759	1,176	1,956	382	3,514
Mkuranga DC								
New Castle	356	320	200	876	70	80	50	200
Gumboro	100	90	87	277	30	20	17	67
Fowl Pox	82	70	52	204	20	30	16	66
Sub-Total	538	480	339	1,357	120	130	83	333
Rufiji DC								
New Castle	532	532	670	1734	420	520	630	1570
Sub Total	532	532	670	1,734	420	520	630	1,570

Table 3.28 (ctd): Major Poultry Diseases which Caused Morbidity and Mortality, Pwani region; 2012

Mafia DC								
New Castle	4	12	11	27	22	120	0	142
Samonellosis	0	2	5	7	7	13	34	54
Fowl Typhoid	1	0	0	1	9	0	16	25
Sub-Total	5	14	16	35	38	133	50	221
Kibaha TC								
New Castle	603	640	500	1743	400	431	310	1141
Coccidiosis	720	683	809	2212	22	37	18	77
Infectious Coryza	168	112	132	412	42	54	65	161
Sub-Total	1,491	1,435	1,441	4,367	464	522	393	1,379
Regional Summary (Three Major Diseases)								
New Castle	8,795	6,350	5,789	20,934	5,588	4,457	4,155	14,200
Infectious Coryza	4,023	3,343	681	8,047	63	562	149	774
Fowl Typhoid	2,917	1,472	454	4,843	299	120	149	568
Grand Total	15,735	11,165	6,924	33,824	5,950	5,139	4,453	15,542

Source: Pwani Region, Compiled Data from Councils (Livestock Departments), 2013

Staff in livestock sector

Pwani region had 175 staff in livestock sector (Table 3.29). Majority of the staffs were livestock field officers (159, 90.8 percent of the region's total staff in livestock sector). Livestock auxiliary officers were in smallest number (1, 0.6 percent). Mkuranga district council was leading in number of staff (56) equivalent to 32 percent of the region's total staffs in livestock sector. Regional secretariat had the smallest number of staff (2, 1.1 percent).

Table 3. 29: Availability of Livestock Personnel by Council in Pwani Region; 2012

Council	Vetinary Officers	Livestock Officers	Livestock Field Officers	Livestock Auxiliaries	District	
					Total	Percent
Bagamoyo DC	0	0	28	0	28	16
Kibaha DC	0	0	17	0	17	9.7
Kisarawe DC	0	1	16	0	17	9.7
Mkuranga DC	0	2	54	0	56	32
Rufiji DC	3	2	20	0	25	14.3
Mafia DC	0	2	5	0	7	4
Kibaha TC	1	2	19	1	23	13.1
RS	0	2	0	0	2	1.1
Regional Total	4	11	159	1	175	100
Percent	2.9	6.3	90.8	0.6	100	

Source: Pwani Region, Compiled Data from Councils (Livestock Departments), 2013

3.3 Natural Resources

Land and forest resources are the main natural endowments of Pwani region hence economic activities comprise of forestry, hunting, beekeeping, fishing, mining and wildlife. Among others, forestry sub- sector plays an important role in maintaining ecological balance, protect soils from erosion and conserve water and wildlife. Forests are also a source of domestic energy over 90 percent and industrial raw materials and provide useful non-wood products mainly honey and bee-wax. Unfortunately though, since the government imposed protection measures against forest depletion, the region suffers from illegal harvesting of wood trees driven by market availability in Dar es Salaam and encroachment due to land demand for agricultural activities. Concerted and determined efforts of afforestation are the only way to save these forests, lives of wildlife species and ensure sustainable supply of fuel wood.

3.3.1 Forestry

Pwani region like other regions, used to have a large forest cover. Due to human economic activities the present forests are in greater risk of being depleted due to the demand for firewood, timber and other human activities such as agricultural expansion as the population increases. As table 3.30 shows, Pwani region has a total forest area of 2,500,000 ha. Out of which 380,514.02 ha are reserved and the remaining 2,119,485.98 ha falls under general public forests. Although the status of encroachment was fair in most of the forest reserves, it was severe in some reserves such as Uzigua Forest Reserve, Kikoka, Mangrove, Kibindu

and Ngubura-Kidomole Forest Reserves in Bagamoyo DC; in Kisarawe DC forest reserves with severe encroachment were Kisanga, Ruvu and Kazimzumbwi Forest Reserves; in Mkuranga DC forest reserves with severe encroachment were Masanganya, Vikindu and Marenda Forest Reserves; in Rufiji DC those with severe encroachment were Mangrove Forest Reserve and Ruhoi Forest Reserve. Measures should be taken to rectify the situation.

Table 3. 30: Status of Forest Reserves and Percentage of Encroachment by Council, Pwani Region; 2012

Council	Land Area (ha)	No. of Forest Reserves	Area (Ha)	Percentage of Area	Status of Illegal Harvesting	Size of Encroached Area (ha)	Percent Encroached
Bagamoyo DC	984,200	22	77,880.68	7.91	Fair	ND	0
Kibaha DC	124,870	01	232.78	0.19	Insignificant	0	0
Kisarawe DC	446,400	12	54,470.86	12.20	Fair	161.2	0.29
Mkuranga DC	243,200	19	11,949.70	4.91	Severe	1,718.0	14.4
Rufiji DC	1,333,900	25	197,981.00	14.84	Fair	7,090.0	3.58
Mafia DC	51,800	01	6,069.00	11.72	Fair	2.0	0.03
Kibaha TC	56,330	01	31,930.00	56.68	Severe	1,600.0	5.0
Total	3,240,700	81	380,514.02			10,571.2	

ND: No data

Source: Pwani Region, Compiled Data from Councils (Natural resources Departments), 2013

Apart from natural forests, the region has forest plantation at North Ruvu Forest Reserve. The people of Pwani region have developed a habit of planting trees and institutions like Central Government, district councils, village governments, individuals, schools, defense forces, Non-Government Organizations are also involved in planting trees. Table 3.31 shows that, for three years, 2009/10-2011/12 Pwani region raised a total of 6,684,989 tree seedlings. 34 percent of the region's total seedlings were raised in Bagamoyo and was the leading district. Kibaha district council planted only 5 percent (313,410).

Table 3. 31: Number of Tree Seedlings Raised by Councils, Pwani Region; 2009/10 – 2011/12

Council	2009/10	2010/11	2011/12	Total	Percent
Bagamoyo DC	441,200	986,990	850,000	2,278,190	34
Kibaha DC	103,290	60,120	150,000	313,410	5
Kisarawe DC	282,000	322,500	378,000	982,500	15
Mkuranga DC	282,603	154,000	452,000	888,603	13
Rufiji DC	173,780	37,800	260,935	472,515	7
Mafia DC	76,600	126,000	356,000	558,600	8
Kibaha TC	561	510,960	679,650	1,191,171	18
Total	1,360,034	2,198,370	3,126,585	6,684,989	100

Source: Pwani Region, Compiled Data from Councils (Natural resources Departments), 2013

Tree seedlings raised need to be taken care for proper growing. Table 3.32 shows the survival rate per council. However, no data was provided for Kibaha DC. The table also shows that survival rate was highest in Kibaha TC and lowest in Mkuranga DC.

Table 3. 32: Survival Rate of Tree Seedlings by Council; Pwani Region; 2009 -2012

Council	2009/2010	2010/2011	2011/2012
Bagamoyo DC	72.4	77.8	75.3
Kibaha DC	ND	ND	ND
Kisarawe DC	65	68	66
Mkuranga DC	55	60	60
Rufiji DC	72	75	80
Mafia DC	72.6	71.6	70.6
Kibaha TC	81.1	81.0	81.2

ND: No data

Source: Pwani Region, Compiled Data from Councils (Natural resources Departments), 2013

In the region there were 161 Non Governmental Organizations (NGOs) dealing with environmental conservation. As table 3.33 shows, Rufiji DC was the council with the highest number of 96. It was followed by Bagamoyo DC with 27 NGOs.

Table 3. 33: Number of NGOs and Development Partners Involved in Environmental Conservation by Council in Pwani Region; 2012

Council	NGOs	Development Partners
Bagamoyo DC	27	2
Kibaha DC	9	1
Kisarawe DC	4	-
Mkuranga DC	4	-
Rufiji DC	96	3
Mafia DC	9	39
Kibaha TC	12	-
Total	161	45

Source: Pwani Region, Compiled Data from Councils (Natural resources Departments), 2013

i) Forest Products

Forest reserves in Pwani region are for conservation and sustainable production. The forests on public land are estimated to have an average stock of 80 cubic metres of wood products on every cubic hectare of land. The main wood products produced from Pwani region forests are timber, firewood, building poles, logs and charcoal. A big portion of these forest products are sold in Dar-es-salaam and in the respective councils.

Table 3. 34: Charcoal Bags Sold and their Respective Value by Council; Pwani Region, 2012

Council	Number of Charcoal Bags Sold	Total Value (TShs)
Bagamoyo DC	80,970	850,191,500
Kibaha DC	38,971	311,768,000
Kisarawe DC	107,000	1,123,500,000
Mkuranga DC	63,777	669,658,500
Rufiji DC	123,233	897,547,150
Mafia DC	10,000	6,000,000
Kibaha TC	2,118	2,118,000
Total	426,069	3,860,783,150

Source: Pwani Region, Compiled Data from Councils (Natural resources Departments), 2013

ii) Beekeeping



Traditional beehives



Modern beehives

Pwani region is endowed with a good potential for beekeeping due to the availability of forests which cover an estimated area of 2,500,000 ha. Miombo woodlands are also very suitable for beekeeping. Beekeeping activities are a direct result of the presence of these forests, bush lands and agricultural tree crops whose flowers serve as a source of raw materials for honey making.

Table 3.35 shows that there was an increase in the number of beehives from 2010 to 2012. Traditional beehives increased by 12 percent from 2010 to 2011 and by 14 percent from 2011 to 2012. Modern beehives increased by 5 percent from 2010 to 2011 and by 12 percent from 2011 to 2012. The table shows further that Rufiji DC and Bagamoyo DC were the leading district councils in promoting the use of beehives.

Table 3. 35: Number of Traditional and Modern Beehives by Council; Pwani Region; 2011 and 2012

Council	Traditional			Modern		
	2010	2011	2012	2010	2011	2012
Bagamoyo DC	1,725	1,762	1,927	908	988	1,038
Kibaha DC	450	700	1,500	80	100	300
Kisarawe DC	113	113	113	364	364	364
Mkuranga DC	86	80	80	419	544	586
Rufiji DC	3,360	3,807	3,825	2,644	2,793	3,187
Mafia DC	480	480	480	920	850	800
Kibaha TC	63	65	66	590	590	707
Total	6,277	7,007	7,991	5,925	6,229	6,984

Source: Pwani Region, Compiled Data from Councils (Natural resources Departments), 2013

Table 3.36 indicates that over a three year period from 2010 to 2012, beekeeping subsector produced a total of 96,580 litres of honey valued at TShs. 965,800,000 and 16,065 kilograms of bee-wax, valued at a total of Tshs. 240,967,500. Data given in the table is evidence that bee-keeping industry could contribute significantly to the regional economy if initiatives are taken to promote this sub-sector. Moreover, bee-keeping production levels could be raised if bee-keepers are given assistance to enable them move from traditional to modern beehives through provision of micro-credits and extension services.

Table 3.36 shows that production of honey and bee wax have been increasing in the last three years due to mass campaigns done by Government and private sectors on the importance of beekeeping in the region and country as whole, usage of modern beehives and community awareness towards beekeeping as a potential economic venture for their livelihood.

Table 3. 36: Production of Beekeeping Products and Revenue Received (TShs), Pwani Region; 2010-2012

Year	Honey			Bee-wax			Total Revenue collected
	Litres	TShs.	Percentage Increase (litres)	Kgs	TShs.	Percent Increase (kgs)	
2010	29,712	297,120,000	-	4,820	72,300,000	-	369,420,000
2011	30,273	302,730,000	1.9	5,422	81,337,500	12.5	384,067,500
2012	36,595	365,950,000	20.9	5,822	87,330,000	7.4	453,280,000
Total	96,580	965,800,000	-	16,065	240,967,500	-	1,206,767,500

Source: Pwani Region, Compiled Data from Councils (Natural resources Departments), 2013

Table 3. 37 : Production of Beekeeping Products (Honey and Bee-Wax) by Council, Pwani Region; 2010 – 2012

Council	Honey (litres)			Bee-Wax (kgs)			Total (2010-2012)	
	2010	2011	2012	2010	2011	2012	Honey (litres)	Bee-Wax (kgs)
Bagamoyo DC	12,075	11,400	13,800	20	18	13	37,275	51
Kibaha DC	3,375	4,000	4,500	280	300	325	11,875	905
Kisarawe DC	78	490	272	2	14.5	9	840	25.5
Mkuranga DC	1,972	2,236	2,379	823	925	980	6,587	2,728
Rufiji DC	11,560	11,300	14,760	3,500	3,865	4,002	37,620	11,367
Mafia DC	200	350	450	150	250	450	1,000	850
Kibaha TC	452	497	434	45	50	43	1,383	138
Total	29,712	30,273	36,595	4,820	5,422.5	5,822	96,580	16,065

Source: Pwani Region, Compiled Data from Councils (Natural resources Departments), 2013

3.3.2 Fishing activities

Pwani region has an area of 1,132 square kilometers covered by water area. The greater part of this water area lies along the Coastal strip of the Indian Ocean which extends from the northern border of Bagamoyo District to the southern border of Rufiji District.

The entire coastal area of Bagamoyo, Mkuranga, Rufiji and Mafia districts are suitable for fishing activities. Moreover, the three big rivers of Rufiji, Ruvu and Wami also are potential areas for fishing.

The ocean area is also a fishing ground for industrial fishermen employing powered vessels which are mainly purseivers and trawlers. Commercial fishing lands a good catch of pelagic fin fish and prawns which contribute greatly to the regional and national economy.

The fish resources found are inshore pelagic which include species like herrings, sardines, small mackerel, anchovies, tuna, king fish and sail fish. The off shore pelagic includes species such as the skip jack and yellow fish. The fun fish includes mullets, milkfish and lethrimides while the common species of shrimps are the penaeid. The shell fish covers Oysters, Mussels and Clams.

Table 3.38 shows the fishery resources and the estimated fish harvested. Except Kisarawe DC and Kibaha TC, all the five councils harvested fish though in different capacities. A big number of fishermen are found in Rufiji DC, Mkuranga DC and Mafia DC. The council which showed the highest harvest was Rufiji DC followed by Mafia DC.

The region had 146 fish ponds the largest number being in Mkuranga DC (51 ponds, 34.9 percent) followed by Mafia DC (36 ponds, 24.7 percent) and Bagamoyo DC had 28 ponds (19.2 percent). The council without any pond is Kisarawe DC probably due to scarcity of water in this council. The ponds produced a total of 21,486 kilograms of fish in 2012. This amount is not included in the total weight shown in table 3.38.

Table 3. 38: Fishery Resources and Production by Council, Pwani Region; 2012

Council	No. of Fishermen	No. of Fishing Licenses	No. of Registered Fishing Vessels	Fish Harvested		No. of Fish Ponds
				Weight (kg)	Value (TShs)	
Bagamoyo DC	1,577	320	173	ND	ND	28
Kibaha DC	103	0	40	7,020	17,550,000	12
Kisarawe DC	na	na	na	na	na	0
Mkuranga DC	2,000	325	59	43,700	218,500,000	51
Rufiji DC	5,197	604	256	1,009,200	1,513,800,000	13
Mafia DC	846	846	151	515,067	746,892,581	36
Kibaha TC	na	na	na	na	na	6
Total	9,723	2,095	679	1,574,987	2,496,742,581	146

Source: Pwani Region, Compiled Data from Councils, 2013

Concerning the revenue collected from fishermen, Bagamoyo and Rufiji district councils received bigger amounts compared to other councils where fishing is practiced. In the period of 2010 to 2012, Mkuranga DC was the one which received the smallest amount of revenue.

Table 3. 39: Revenue Collected from Fishermen (TShs) by Town Council;Pwani Region; 2010 - 2012

Council	2010	2011	2012	Total
Bagamoyo DC	45,868,300	56,550,000	45,868,300	148,286,600
Kibaha DC	0	0	0	0
Kisarawe DC	NA	NA	NA	NA
Mkuranga DC	975,300	4,000,000	4,876,000	9,851,300
Rufiji DC	45,775,825	47,300,981	37,357,200	130,434,006
Mafia DC	1,769,000	42,855,043	40,288,150	84,912,193
Kibaha TC	NA	NA	NA	NA
Total	94,390,435	150,708,035	128,391,662	373,484,099

NA: Not available or Not applicable

Source: Pwani Region, Compiled Data from Councils, 2013

3.3.3 Wildlife Tourism

The presence of forests and bushes in the region enables some species of animals to be found in the region. Pwani region owns one national park (Saadani National Park), one game reserve (Selous Game Reserve), two wildlife management areas (Wami-Mbiki & Ngarambe/Tapika WMAs) and an island marine park (Mafia Island Marine Park).



Saadani National Park is located at the centre of the historic triangle of Bagamoyo, Pangani and Zanzibar. It has an area of 1100 square kilometers. It is the only wildlife sanctuary in Tanzania bordering the sea. The climate is coastal, hot and humid. It offers a unique combination of both marine and mainland flora and fauna in a culturally fascinating setting. About 30 species of larger mammals are present as well as numerous reptiles and birds. Besides, many species of fish (over 40), green turtle, Humpback whale and dolphins are also found in the nearby ocean.

Seleous Game Reserve is found in southern part of Pwani region and it covers a greater portion of the southern parts of Rufiji District and a small part in Kisarawe District. It covers an area of 6,258 square kilometers in Rufiji district and 255 square kilometers in Kisarawe district. Animals found in this Game Reserve include lions, giraffes, buffalos, zebras, antelopes, rhinos and hippos which are found in Rufiji River.

This Game Reserve is an important attraction for tourists and generates foreign exchange. The most common tourist attractions available in Selous Game Reserve include: camping sites such as the Stigglers Gorge, Mbuyu Camp, Mloka Camping site, etc. Other attractions are game viewing at various other tourist centres.

Mafia Island Marine Park covers an area of 212 square kilometers and this park is a purely marine in nature with different marine species such as coral, tropical fish and sea shells. This park also is an important attraction to the tourists as white sands which covers 85 percent and artisan and sport fishing are found. Concerning sport fishing, whale shark is in Kilindoni and Chunguruma and fish bank is found in Utende.

In the region, there are two Wildlife Management Areas (WMA) namely WAMIMBIKI which covers Bagamoyo, Morogoro and Mvomero districts. Another Wildlife Management Area is Ngarambe/ Tapika which is found in Rufiji district council.

Wami-Mbiki WMA covers an area of 2,500 square kilometers with a 1,500 square kilometers village land buffer zone area. The area is found within three districts of Bagamoyo, Morogoro and Mvomero. The area is formed by 24 village land that has come together to form a Wildlife Management Area. Wami Mbiki is a game corridor between Selous, Mikumi, Saadani, Pangani and Kilindi, and has resident populations of lion, leopard, elephant, buffalo, giraffe, kudu, hippos, Lichtenstein Hartebeest, crocodile, zebra, water buck, bush buck, warthog, impala, Sunni, duiker, eland, sable, hyena, baboons and an assortment of monkeys. Some rare animals seen are African wild dog and cheetah. And at night civet, jennet, bush baby and wild cat can be seen.

The sustainability of wildlife is endangered by the poaching activities in the region. These poachers always kill animals such as elephants and giraffes.

3.3.4 Historical Site potential for Tourism



German Boma built in 1897 in Bagamoyo



Roman Catholic Monument built in 1887

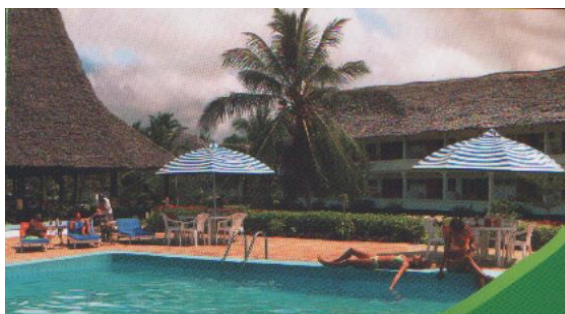
Arabs and Germans form the basis of historical sites in Pwani region. Table 3.40 highlights historical sites in Pwani region.

Table 3. 40: Historical Sites for Tourism by Council in Pwani Region; 2012

Council	Type of Historical Heritage	Village/Mtaa	Ward	Division
Bagamoyo DC	Kaole Ruins	Kaole	Dunda	Mwambao
	Caravan Serai	Dunda	Dunda	Mwambao
	Old Stone Town	Dunda	Dunda	Mwambao
	Catholic Museum	Magomeni	Magomeni	Mwambao
Kisarawe DC	Pugu Forest	Kisarawe	Kisarawe	Sungwi
	Boma la Kisangile	Kisangire	Chole	Chole
	Ruvu	Kola	Kisarawe	Sungwi
	Kazimzumbwi	Kazimzumbwi	Kisarawe	Sungwi
	Selous	Kitonga	Vikumburu	Chole
	Kaolin Caves	Kisarawe	Kisarawe	Sungwi
	Minaki	Kisarawe	Kisarawe	Sungwi
	Kinyanyiko Hill	Kisarawe	Kisarawe	Sungwi.
Mkuranga DC	Old Revenue Office	Kwale	Kisiju	Kisiju
	Old Mosque	Mdimni	Magawa	Kisiju
	Large Stone of Shungu	Shungubweni	Shungubweni	Shungubweni
	Mapanya Island	Kwale	Kisiju	Kisiju
Rufiji DC	German Built Fort	Kiwili	Utete	Mkongo
	Selous Grave	Mloka	Mwaseni	Mkongo
	Stream Engine Car Used by Innocensea	Mloka	Mwaseni	Mkongo
	German sinking Warship (Llnish bery)	Kikale	Mtunda	Kikale
			Kiongoroni	
	Rufiji Delta	Delta	Maparoni Salale Mbuchi	Mbwera
	Utunge ya Ngwenda	Kipugira	Mwaseni	Mkongo
Mafia DC	Chole Ruins	Chole Village	Jibondo	South
	Kua Ruins	Juani Village	Jibondo	South
	Ship Tower 1913	Bweni Village	Kanga	North
	Sukari Mawe sinked ship	Bweni Village	Kanga	North
	Historical Domestic Utensils used by Arabs	Bweni Village	Kanga	North
	Deep wells used by Portugues	Kanga Village	Kanga	North
	Sharifu Cementry during Portuguese Era	Baleni Village	Baleni	North
	Sinked Settlement in Kisimani Mafia	Kilindoni Village	Kilindoni	South
	Remains of living Creatures	Kiegeani Village	Kiegeani	South
Kibaha TC	Kisima Baridi	Kilangare	Kongowe	Kibaha
	Mnyererengunge/Munene	Vikawe Bondeni	Pangani	Kibaha
	Mti miaka 300			
	Matambiko-Wakwere/Zaramo	Kongowe	Kongowe	Kibaha

Source: Pwani Region, Compiled Data from Councils, 2013

3.3.5 Eco Tourism



Paradise Holiday Resort Hotel-Bagamoyo

Availability of good infrastructure such as accommodation facilities, telecommunication services, roads, banking/bureau de change services and tour operators is an important tool for the development of competitive tourism industry. Accommodation facilities are important in attracting tourists. Therefore, regional authorities should continue to encourage private sector to build more hotels, camp sites and lodges to accommodate ever increasing tourists in Pwani region. By the end of 2012, there were 217 guest houses and 49 hotels in Pwani region (Table 3.41).

Apart from accommodation facilities, banking services together with telecommunication services especially mobile phone coverage are also very important for development of tourism industry in Pwani region. Banks which are found in the region are CRDB and NMB. Likewise, all roads towards tourist's attractions are good and passable in greater part of the year.

Table 3. 41: Accommodation Facilities by Council in Pwani Region; 2012

Council	Number of Guest Houses	Number of Restaurants	Number of Hotels
Bagamoyo DC	18	10	12
Kibaha DC	28	2	3
Kisarawe DC	26	0	0
Mkuranga DC	26	6	3
Rufiji DC	51	11	15
Mafia DC	12	3	11
Kibaha TC	56	3	5
Total	217	35	49

Source: Pwani Region, Compiled Data from Councils, 2013

3.3.6 Natural Resources Personnel

As regards to the allocation of natural resource staff, in 2012, Pwani region had a total of 95 staff. Among them, 82 were males and 13 females. Most of staff were in Rufiji district council (30) followed by Mkuranga (17) and Bagamoyo (16). Regional office had smallest number of staff in natural resources sector (1) (Table 3.42).

Table 3. 42: Availability of Natural Resource Staff by Sex and Council, Pwani Region; 2012

Council	Forest		Beekeeping		Fishery		Wildlife		Environment		District Total		
	M	F	M	F	M	F	M	F	M	F	M	F	Total
Bagamoyo DC	4	0	1	0	3	3	5	0	0	0	13	3	16
Kibaha DC	1	0	2	0	1	0	0	1	0	0	4	1	5
Kisarawe DC	5	0	1	0	0	0	4	0	1	0	11	0	11
Mkuranga DC	7	2	0	0	1	2	4	1	0	0	12	5	17
Rufiji DC	7	0	2	0	10	1	9	1	0	0	28	2	30
Mafia DC	1	0	1	0	6	2	0	0	2	0	10	2	12
Kibaha TC	2	0	1	0	0	0	0	0	0	0	3	0	3
RS	1	0	0	0	0	0	0	0	0	0	1	0	1
Total	28	2	8	0	21	8	22	3	3	0	82	13	95

Source: Pwani Region, Compiled Data from Councils, (Natural resources Departments, 2013)

3.4 Mining Sector

Pwani region has yet to play a significant role in mineral production, though there are number of mineral deposits. Sand is the main mineral found in large quantity in Pwani region. There are 26 deposits of sand as follows: Bagamoyo DC (8), Kibaha DC (6), Mkuranga DC (4) and Kibaha TC (7). However, sand mining is sometimes not environment friendly. Environmental Policy and Strategy should be adhered to. Other minerals found are salt (Bagamoyo DC and Mkuranga DC), Gravel (Bagamoyo DC, Kibaha DC and Mafia DC), Limestone (Bagamoyo DC), Titanium (Mkuranga DC) and Silcon (Mkuranga DC). Since the minerals found in Pwani region are not in large scale, their contribution to the Regional Economy is minimal. Expolaration of new mineral deposits should be done in the region as the region could be endowed with other important minerals such as gas, Uranium, etc.

3.5 Industrial Sector



There is significant increase in number of industries in Pwani Region

Industrial sector is very paramount in the economy. It is a foreign exchange earner and the main source of employment, especially in urban areas. Table 3.43 shows that in 2012 the region had a total of 1,308 small scale industries in operation. Bagamoyo DC had the largest number of industries (502) followed by Rufiji DC (227), Mkuranga DC (197), Kisarawe DC (144), Kibaha TC (141), Kibaha DC (66), and Mafia DC (31).

Table 3. 43: Number of Small Scale Industries by Council and Type of Industry, Pwani Region; 2012

Type of Industry/Council	Sunflower oil Pressing	Garage	Carpentry	Food Processing	Grain Milling	Electricity	Welding	Timber Processing	Others	Total
Bagamoyo DC	0	81	190	3	149	0	60	19	0	502
Kibaha DC	0	16	17	0	8	0	16	8	1	66
Kisarawe DC	0	0	72	2	60	0	5	1	4	144
Mkuranga DC	0	11	119	5	50	1	7	4	0	197
Rufiji DC	2	5	90	5	84	0	19	22	0	227
Mafia DC	0	8	10	2	9	0	1	1	0	31
Kibaha TC	1	12	36	21	29	0	29	13	0	141
Total	3	133	534	38	389	1	137	68	5	1,308

Source: Pwani Region, Compiled Data from Councils, (Trade Department), 2013

Apart from small-scale industries, Pwani region also had a few medium-scale industries as follows: Two fish processing industries (Mafia DC) and bricks making industries (Mkuranga DC), printing of books and newspapers and sisal processing of fibres (Bagamoyo DC). In Kibaha TC there are skin and hides, fruit processing, agro-chemical industry (Mancozeb 80 percent) and nails and timber industries.

In 2012 Pwani region had 22 large scale industries distributed as follows: Kibaha TC (12 industries), Mkuranga DC (8 industries) and Bagamoyo DC (2 industries).

Table 3. 44: Number of Large Scale Industries by Council, Pwani Region, 2012

Council	Type of Industry	Ward
Bagamoyo DC	Plastic Products (gallons)	Dunda
	Packing Materials	Kerege
Mkuranga DC	Bevarages	Vikindu
	Meat Processing	Vikindu
	Cement	Vikindu
	Gypsum	Vikindu
	Shoe Products	Tambani
	Plastic Products (Sulphate Sacks)	Tambani
	Blanket	Mkuranga
	Glass materials	Vianzi
Kibaha TC	Insecticides (Mosquitoes)	Mailimoja
	Cosmetics	Mailimoja
	Coagurated Sheets	Mkuza
	Honey Processing	Visiga
	Nondo	Visiga
	Gypsum	Visiga
	Mineral industry	Visiga
	Salt processing	Visiga
	Toilet Paper	Picha ya Ndege
	Food Processing	Picha ya Ndege
	Unga (Sembe)	Kongowe
	Cars and Spare Parts	Visiga

Source: Pwani Region, Compiled Data from Councils, (Trade Department), 2013

Industries which were still under construction were Kisarawe Cement Company (Kisarawe DC); Ng'ombeni Power Ltd for electricity generation, Bahari Food Co.Ltd for fish processing and Sea Product also for fish processing in Mafia DC; Industries which are in Kibaha DC are NDC Biolarvicides (Lavicides), Complint International Ltd for nails and timber, Obbak Enterprises Ltd for assembling of buses and Trailers, Jafra Investments and Supply for building materials and Bahari Pharmacy.

Some of the factors behind the rapid growth of the industrial sector in Pwani region include:

Reliable Infrastructure/Tarmac Roads

In Pwani region almost all district councils are linked by good tarmac roads which are passable throughout the year. The region is borders Dar-es-salaam the commercial city of

Tanzania. Moreover, the region is the major link to Dar-es-salaam whereby no body can reach Dar-es-salaam without passing in this region hence a link with other big cities/towns in Tanzania like Mwanza, Arusha, Mbeya, Tanga, Morogoro, Ruvuma etc.

Easy Accessibility of Resources

The region is endowed with a diversity of natural resources and its geographical location enables easy access to resources in other places in the country. Raw materials can be transported from other regions in the country to the region through the tarmac highways/roads.

Availability of Markets

Availability of improved or modern technology makes it easy to produce goods of high quality that can compete in both local and foreign markets.

Access to Airports and Ports

Since Pwani region is next to Dar-es-salaam, it is accessed to Mwalimu Nyerere International Airport and Dar-es-salaam Port which makes it easy to transport raw materials and produced goods to other areas.

3.6 Trade

Trade is also one of the sub-sector fairing well in Pwani region. Different types of trades were done in the region in 2012. The following table gives trade operators by type and council in 2012.

Table 3. 45: Trade by Type and Councils in Pwani Region 2012

Trade Type	Wholesale	Retailers	Hotels	Restaurants	Guest Houses	Bars	Bodaboda	Bajaji	Buses	Taxi	Petrol Stations
Bagamoyo DC	50	567	13	23	50	282	768	150	209	20	29
Kibaha DC	5	1,476	5	3	30	37	275	0	5	8	4
Kisarawe DC	2	532	9	20	22	46	1,061	23	20	6	3
Mkuranga DC	24	794	3	6	21	12	1,134	19	0	6	11
Rufiji DC	9	750	15	11	51	59	413	2	24	2	5
Mafia DC	10	416	11	3	12	12	100	26	15	10	2
Kibaha TC	21	914	9	61	74	154	248	2	0	17	31
Total	121	5,449	65	127	260	602	3,999	222	273	69	85

Source: Pwani Region, Compiled Data from Councils, (Trade Department), 2013

CHAPTER FOUR

Economic Infrastructure

4.0 Introduction

This Chapter explains the existing economic infrastructure in Pwani region. It covers the road network development in terms of road classification, type of road surface and passability. It also covers railways, air services, postal services including radio calls and television facilities. In the energy sector developments in regards to hydro-electricity, biogas, solar energy, fuel wood and fossil fuels are discussed.

The road network in Pwani region forms an important link in the national road network linking Dar-Es-salaam with other regions of Tanzania Mainland. All road communications between Dar-es-salaam and other regions in the country pass through Pwani region.

The road links is as follows:

- i. The Dar-es-Salaam-Chalinze-Tanga and Arusha road. Links Dar-es-salaam with the northern parts of the country.
- ii. The Dar-es-Salaam- Morogoro-Dodoma road links Dar-es-Salaam with the central, the lake and western parts of the country.
- iii. The Dar-es-Salaam-Tunduma road links Dar-es-Salaam with the south-western parts of the country.
- iv. The Dar-es-Salaam-Kibiti-Lindi –Mtwara road which links Dar-es-Salaam with the southern parts of the country.

4.1 Road Network

Table 4.1 shows that the trunk roads accounted for 13.8 percent of the regional network; regional roads were about 15.9 percent, district roads were 27.8 percent, feeder roads were 30.6 percent and urban roads were 11.9 percent of the network. Pwani region total road length in 2012 was 4,876.9 kilometers.

Table 4.1 : Road Network by Type and Council, Pwani Region, 2012

Council	Type (Kms)					Total
	Trunk	Regional	District	Feeder	Urban	
Bagamoyo DC	323.8	276.5	352.9	87.8	72.5	1,113.5
Kibaha DC	8.8	43.3	131.8	79.6	32.0	295.5
Kisarawe DC	0	169.7	204.8	319.3	27.0	720.8
Mkuranga DC	82.7	45.0	420.3	167.6	15.0	730.6
Rufiji DC	164.0	221.0	116.8	782.0	91.0	1,374.8
Mafia DC	64.5	0	130.8	56.4	4.0	255.7
Kibaha TC	28.0	20.0	0	0	338.0	386.0
Regional Total	671.8	775.5	1357.4	1,492.7	579.5	4,876.9
Percent	13.8	15.9	27.8	30.6	11.9	100

Source: Pwani Region, Compiled Data from Councils, 2013

4.1.1 Road network classification



65.5 percent of total road network in Pwani region are earth roads

In Pwani region, 631.8 km (13.0 percent) of the road network were tarmac. Gravel roads were 1,050.3 km (21.5 percent) and the remaining 3,194.9 km (65.5 percent) were earth roads. Tarmac and gravel roads made up 34.5 percent of the network.

Table 4. 2: Road Network Surface Condition by Council, Pwani Region, 2012

Council	Surface Condition (Kms)			Total
	Tarmac	Gravel	Earth	
Bagamoyo DC	331.0	275.2	507.3	1,113.5
Kibaha DC	9.1	67.3	219.1	295.5
Kisarawe DC	11.5	216.8	492.6	720.8
Mkuranga DC	82.7	74.7	573.2	730.6
Rufiji DC	164.0	254.6	956.2	1,374.8
Mafia DC	0	27.8	227.9	255.7
Kibaha TC	33.5	133.9	218.6	386.0
Regional Total	631.8	1,050.3	3,194.9	4,876.9
Percent	13.0	21.5	65.6	100.0

Source: Pwani Region, Compiled Data from Councils, 2013

Passability of roads throughout the year in 2012 stood at 84 per cent. The councils with the highest percentage of passability were Mafia and Kibaha TC (95 percent) followed by Rufiji

DC (86 percent), Kibaha DC (84 per cent),Mkuranga DC (83 percent), Kisarawe DC (80 percent) and Bagamoyo DC (76 percent).

Table 4. 3: Passability of Road Network by Council in Pwani Region; 2012

Condition Network	Condition of Network throughout the Year in Kms				
	Passable throughout the year	Passable graeter part of the year	Not passable most of the year	Total Road Network	Percentage of passability
Bagamoyo DC	528.5	318.6	266.4	1,113.5	76
Kibaha DC	160.4	87.4	47.6	295.5	84
Kisarawe DC	382.6	195.7	142.5	720.8	80
Mkuranga DC	599.9	4.0	126.7	730.6	83
Rufiji DC	598.0	589.0	187.8	1,374.8	86
Mafia DC	239.6	3.2	12.9	255.7	95
Kibaha TC	249.8	115.9	20.3	386.0	95
Total	2758.8	1,313.8	804.2	4,876.9	84

Source: Pwani Region, Compiled Data from Councils, 2013

4.2 Railway Transport

Pwani region is served by railway lines owned by two different authorities which are Tanzania Railways Corporation (TRC) and Tanzania Zambia Railway Authority (TAZARA). The Central Railway Line is from Dar-es-Salaam to Kigoma via Tabora and also to Mwanza. There are six (6) sations on this line located in Pwani region namely Soga, Mpiji, Mgeta, Msua, Magindu and Ruvu Station.

The Northern Railway Line branches from the Central Railway Line at Ruvu and runs northwards to Tanga and Arusha. A number of small stations are found on this line but the major station is located at Wami. However, this railway line does not function frequently.

The Tanzania Zambia Railway cuts across Pwani region in a south west direction from Dar-es-Salaam with one station located at Mzenga in Kisarawe District. This line serves the regions of Morogoro, Iringa, and Mbeya besides Pwani region. This railway line also serves Zambia.

4.3 Air Transport Facilities

Pwani region has 10 airstrips and one airport. Airstrips are found in Bagamoyo DC at Zinga, Sanzile, Saadani, Kisanga and Wami Lodge. In Rufiji DC airstrips are at Utete, Jaja, Mchukwi, Kingupira and Mloka. In Mafia DC, there is an Airport in Kilindoni.

Table 4. 4: Air Services by Council, Pwani Region, 2012

Council	Air Services		
	No. of Airports	No. of Air Strips	No. of Passengers
Bagamoyo DC	0	5	320
Rufiji DC	0	5	na
Mafia DC	1	0	8,760
Regional Total	1	10	9,080

Na: not available

Source: Regional Commissioner's Office Pwani Region, 2013

4.4 Telecommunication Services

Information and communication technology (ICT) implementations in the region target investments in capacity building and promoting effective application and use of ICT in business and in enhancing community participation in development activities. E-Government is the use of ICT to enhance the delivery of Government services in terms of improving service quality, broadening service availability to more people, and innovating new types of services. The regional ICT strategies uses the framework set aside by the national ICT policy that will enable ICT to contribute towards achieving development goals and to transform the region into knowledge based society through the application of ICT.

ICT services are still not fully utilized. Few ICT services are still confined to urban areas; rural areas are largely without ICT service. Many initiatives and projects have been proposed with the aim of spreading the use of ICT in Pwani region. The ultimate goal of ICT use in the region is to have improved efficient way of conducting transactions between Government to Government (G2G), Government to its citizens (G2C), and Government to its Employees (G2E) and Business communities (G2B) as well as within the public administration itself, thereby bringing many types of Government services closer to citizens.

Table 4.5 shows the telecommunication infrastructure in Pwani region in 2012. From the table, Kibaha District had a big number of telephone lines (40 percent) followed by Rufiji

District (21 percent). Bagamoyo District had (20 percent), Mafia District (13 percent), and Kisarawe and Mkuranga Districts (3 percent each). Concerning internet centres (cafes) the district with many internet centres was Bagamoyo with 21 centres, followed by Kibaha district with 10 centres (4 centres in Kibaha DC and 6 in Kibaha TC). Kisarawe District had 3 centres and Rufiji and Mafia districts had 2 centres each. There were 6 Post Offices and 4 Sub-Post Offices as the table shows.

Table 4. 5: Telecommunications Services by Council in Pwani Region; 2012

Council	No.of Tel. Lines (Landlines)	No.of Television Stations Built	No.of Radio Stations Built	No.of Internet Centres	No.of Post Offices	No.of Sub Post Offices
Bagamoyo	325	0	0	21	2	0
Kibaha	672	0	0	10	0	2
Kisarawe	54	0	0	3	1	0
Mkuranga	44	0	0	0	1	0
Rufiji	353	0	0	2	1	1
Mafia	218	0	0	2	1	1
Total	1666	0	0	38	6	4

Source: Pwani Region, Compiled Data from Councils, 2013

4.5 Energy

Pwani region uses various sources of energy for lighting, cooking as well as for running machines. These sources include hydroelectricity, gas, paraffin, charcoal, firewood and others. However there were no up to date data on the number of users of the different kinds of energy. More reliable data will be available after the completion of the analysis of the 2012 Population and Housing Census.

CHAPTER FIVE

Social Services

5.0 Introduction

This chapter discusses the status of social services that are available in Pwani region and cover the development of health sector in terms of preventive and curative measures through morbidity, mortality, and reportable communicable diseases. It also covers preventive measures on HIV/AIDS prevalence, tuberculosis and other HIV/AIDS related diseases, mother and child health as well as health facilities.

Education is the second sector discussed in this chapter. It highlights education performance based on the increase of school facilities; pre-primary, primary and secondary educations, enrolment performance, school infrastructure and quality of education are also discussed.

Water supply and sanitation is also discussed in this chapter. Performance of water supply for both rural and urban areas of Pwani region is highlighted in terms of sources, technology and capacity of water supply. Sanitation level at the region is also briefly explained.

5.1 Health Sector

5.1.1 Health Facilities



Tumbi Regional hospital is the highest Referral hospital in Pwani region

The status of health services in any region can be easily visualised through the health infrastructure, availability and commitment of health practitioners, implementation of preventive and curative measures and availability of medicine and medical supplies. The main objective of any local government authority and the nation as a

whole is to ensure provision of quality health service to the community. The available data on health infrastructure in the region show that, the number of facilities increased from 192 in 2005 to 231 in 2008 and reached 262 in 2012. As a result, region has managed to raise the number of facilities per ward from 1.7 in 2005 to 2.3 in 2012 (Table 5.1).

Table 5.1 also indicates that Rufiji district council had the best ratios of health facilities per ward in 2005 (2.6 facilities per ward) and Bagamoyo had best ratio in 2008 and 2012 (2.7 and 3.1 facilities per ward) while Kibaha Town council was the worst by having 0.1 facilities per ward in 2005 and Kisarawe in both 2008 and 2012 with 1.2 facilities per ward in 2008 and 1.5 facilities per ward in 2012.

Table 5.1: Distribution and Growth of Health Facilities by Council, Pwani Region, 2005, 2008 and 2012

Council	Wards	Number of Health Facilities			Facilities per Ward		
		2005	2008	2012	2005	2008	2012
Bagamoyo	22	46	60	68	2.1	2.7	3.1
Kibaha DC	11	16	19	24	1.5	1.7	2.2
Kisarawe	15	20	18	23	1.3	1.2	1.5
Mkuranga	18	26	27	36	1.4	1.5	1.4
Rufiji	27	70	70	70	2.6	2.6	2.6
Mafia	8	13	15	18	1.6	1.9	2.3
Kibaha Town	11	1	22	23	0.1	2.0	2.1
Total	112	192	231	262	1.7	2.1	2.3

Source: Pwani Region, Compiled Data from Councils, (District/Council Medical Offices), 2013

Table 5.2 shows the distribution of health facilities by ownership and council. There were 7 hospitals (6 public and 1 private), 21 health centres (17 public and 4 private) and 234 dispensaries (193 public and 41 private) in 2012. Tumbi Regional Hospital which is the hospital in Kibaha TC designated as the region referral hospital receiving patients from district hospitals within the region. Rufiji district council had the best health infrastructure consisting of 2 hospitals, 5 health centres and 63 dispensaries followed by Bagamoyo (1 hospital, 5 health centres and 61 dispensaries). Kibaha district council had poor health infrastructure with no hospital, one health centre and 23 dispensaries.

In spite of the efforts made, the region still has shortages of health centres and dispensaries which cause unnecessary loss of peoples' lives through preventable diseases. The Health Policy requirement of having a dispensary in each village and a health centre in each ward has not yet been attained.

Table 5. 2: Availability of Health Facilities by Ownership and Council, Pwani Region, 2012

Council	Public Health Facilities			Private Health Facilities		
	Hospitals	Health Centres	Dispensaries	Hospitals	Health Centres	Dispensaries
Bagamoyo	1	4	50	0	1	11
Kibaha DC	0	1	20	0	0	3
Kisarawe	1	3	19	0	0	1
Mkuranga	1	2	22	0	0	11
Rufiji	1	5	55	1	0	8
Mafia	1	0	15	0	0	2
Kibaha TC	1	2	12	0	3	5
Total	6	17	193	1	4	41

Source: Pwani Region, Compiled Data from Councils, (District/Council Medical Offices), 2013

In order to serve the ever growing population in the region village health posts were established to complement the existing official health infrastructure. These centres are operated by Village Health Workers (VHWs) assisted by traditional Birth Attendants (TBAs) under supervision of Village Health Committees (VHCs).

Table 5.3 shows that by 2012, the region had 614 trained tradition birth attendants, 743 village health workers, and 78 village health posts. It also shows that the numbers of trained traditional birth attendants per village in the year 2012 were 1.2 and village health workers were 1.5. Further more, it shows that Mkuranga District had the best ratio of health carders per village. It was 2.3 for TBAs and 2.0 for VHWs.

Table 5.3: Distribution of Complementary Rural Health Facilities by Council; Pwani Region, 2012

Council	No. of Villages/Streets	Total Trained TBAs	Ratio of TBAs to Village/Street	No. of VHWs	Ratio of VHWs to Village/Street	No. of VHP	No. of TMP (Registered)
Bagamoyo	97	0	0	166	1.7	0	18
Kibaha DC	33	43	1.3	45	1.4	0	8
Kisarawe	79	44	0.6	158	2.0	0	0
Mkuranga	121	284	2.3	242	2.0	38	58
Rufiji	106	175	1.7	47	0.4	0	132
Mafia	23	39	1.7	45	2.0	0	24
Kibaha TC	53	29	0.5	40	0.8	40	122
Total	512	614	1.2	743	1.5	78	362

Source: Pwani Region, Compiled Data from Councils, (District/Council Medical Offices), 2013

5.1.2 Population per Health Facility

The region managed to reduce the average number of persons per facility from 4,609 people in 2002 to 4,193 people in 2012. The reduction was due to the increase of health facilities

from 192 in 2002 to 262 in 2012. In regard to health facilities per 10,000 people, the ratio increased from 2.2 in 2002 to 2.4 in 2012.

At council level, table 5.4 shows that in 2002 most pressure of the population on a health facility was experienced in Kibaha TC at 77,831 persons per facility, while Rufiji had the least pressure with its 2,885 persons per facility. Table 5.4 also shows that in 2012 Mkuranga had the highest pressure of 6,192 persons per health facility followed by Kibaha TC (5,586), Bagamoyo (4,653), Kisarawe (4,233), Rufiji (3,104) and Kibaha DC (2,925). Mafia had the least pressure of 2,580 persons per facility.

Table 5. 4: Relating Health Facilities to the Population by Council, Pwani Region, 2012

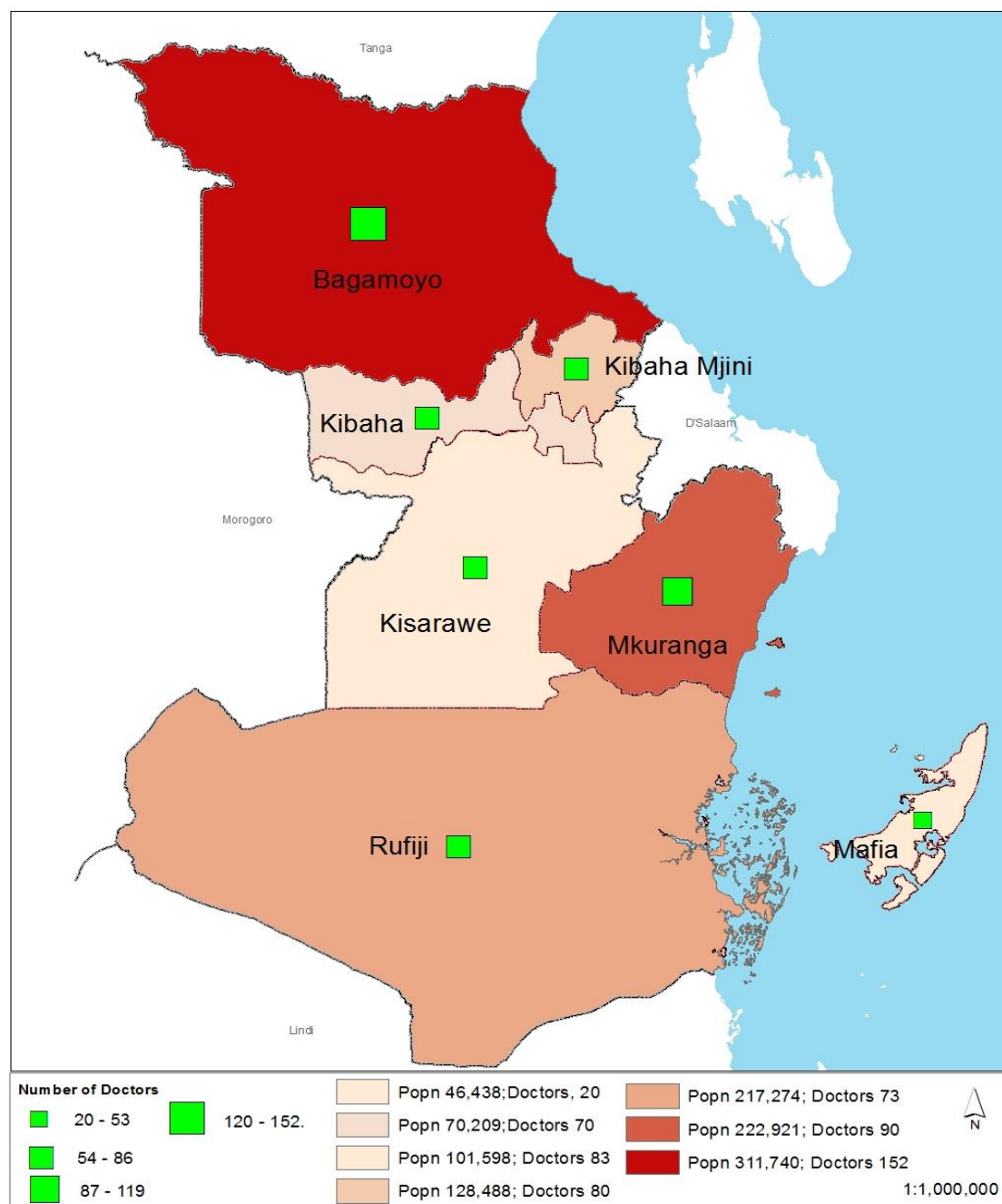
Council	2002				2012			
	Total Population	Total Number of h.f.s	Average Population per h.f.	H.f.s/ 10,000 people	Total Population	Total Number of h.f.s	Average Population per h.f.	H.f.s /10,000 Persons
Bagamoyo	228,967	46	4,978	2.0	311,740	67	4,653	2.1
Kibaha DC	53,411	16	3,338	3.0	70,209	24	2,925	3.4
Kisarawe	95,323	20	4,766	2.1	101,598	24	4,233	2.3
Mkuranga	186,927	26	7,189	1.4	222,921	36	6,192	1.6
Rufiji	202,001	70	2,886	3.5	217,274	70	3,104	3.2
Mafia	40,557	13	3,120	3.2	46,438	18	2,580	3.9
Kibaha TC	77,831	1	77,831	0.1	128,488	23	5,586	1.8
Total	885,017	192	4,609	2.2	1,098,668	262	4,193	2.4

Source: Pwani Region, Compiled Data from Councils, (District/Council Medical Offices), 2013

5.1.3 Population per Doctor

Table 5.5 indicates that the region had a serious scarcity of doctors though the Government had increased them significantly. In 2012, the region had only 568 practitioners to the region population of 1,098,668 with an average of 1,934 persons per doctor. Rufiji was the worst district council with 2,976 persons per doctor and Kibaha DC was the best district with a ratio of 1,003 persons per doctor.

Map 5. 1: Showing Average population per Doctor by Council, Pwani Region; 2012



Source: National Bureau of Statistics, Geographical Information System Unit, 2013

Table 5. 5: The Number of Persons per Doctor by Council, Pwani Region, 2002 and 2012

Council	2002			2012		
	Total Population	Number of Doctors	Average Population per Doctor	Total Population	Number of Doctors*	Average Population per Doctor
Bagamoyo	228,967	51	4,490	311,740	152	2,051
Kibaha DC	53,411	60	890	70,209	70	1,003
Kisarawe	95,323	30	3,177	101,598	83	1,224
Mkuranga	186,927	43	4,347	222,921	90	2,477
Rufiji	202,001	1	202,001	217,274	73	2,976
Mafia	40,557	18	2,253	46,438	20	2,322
Kibaha TC	77,831	36	2,162	128,488	80	1,606
Total	885,017	239	3,703	1,098,668	568	1,934

Doctor: Medical Officers (MO), Assistant Medical Officers (AMO) and Clinical Officers

Source: Pwani Region, Compiled Data from Councils, (District/Council Medical Offices), 2013

5.1.4 Population Hospital Bed Ratio

Table 5.6 shows the number of persons per hospital bed. Involvement of private sector in the provision of health services in Pwani region has increased the hospital beds from 904 in 2002 to 1,303 in 2012. The increase of beds has reduced the number of persons per bed from 920 in 2002 to 843 in 2012 (Table 5.6). In 2012, Bagamoyo district council had the worst access to the hospital bed at 1,792 persons per bed followed by Mkuranga and Kibaha DC which had 1,351 and 1,350 persons per bed respectively, while Kisarawe (364 persons per bed) had the best access due to the number of beds in a regional hospital and health centres.

Table 5. 6: Average Number of Persons per Hospital Bed by Council, Pwani Region, 2002 and 2012

Council	2002			2012		
	Total Population	Number of Beds	Average Population per Bed	Total Population	Number of Beds	Average Population per Bed
Bagamoyo	228,967	57	4,017	311,740	174	1,792
Kibaha DC	53,411	na	na	70,209	52	1,350
Kisarawe	95,323	235	406	101,598	279	364
Mkuranga	186,927	76	2,460	222,921	165	1,351
Rufiji	202,001	247	818	217,274	250	869
Mafia	40,557	75	541	46,438	90	516
Kibaha TC	77,831	214	364	128,488	293	439
Total	885,017	904	920+	1,098,668	1,303	843

Na: Not available

Source: Pwani Region, Compiled Data from Councils, (District/Council Medical Offices), 2013

5.1.5 Status of Health Personnel

The quality of a health facility depends on, among others, the availability of qualified practitioners, hospital equipment and medicines. Table 5.7 shows that the availability of medical personnel for the 2012 was uneven and in favour of females. Out of 2,186 medical staff, 69.8 percent were females with most of them in nursing and as medical attendants. The region had shortage of specialist doctors, dental surgeons, assistant dental surgeons and radiologists in 2012.

Table 5.7 : Number of Medical Personnel by Type and Sex, Pwani Region, 2012

Type of Personnel	Sex		
	Male	Female	Total
Specialised Doctors	6	1	7
Medical Officers	31	18	49
Ass. Medical Officers	63	23	86
Clinical Officers	227	139	366
Ass. Clinical Officers	31	17	48
Dental Officers	4	1	5
Ass. Dental Officers	9	1	10
Dental Therapists	10	8	18
Pharmacists	8	4	12
Pharmaceutical Technologist	8	7	15
Pharmaceutical Assistant	4	3	7
Laboratory Technicians	26	8	34
Laboratory Assistants	19	27	46
Radiologists	1	0	1
Radiographers	9	2	11
Radiographic Assistants	1	1	2
Nursing Officers	10	123	133
Trained Nurse/NM/PHN	35	419	454
MCHA	1	16	17
Medical Attendants	86	578	664
Health Officers	34	21	55
Health Assistants	18	9	27
Health Secretaries	8	6	14
Other Medical Carders	11	94	105
Total	660	1,526	2,186
Percent	30.2	69.8	100.0

Source: Pwani Region, Compiled Data from Councils, (District/Council Medical Offices), 2013

5.1.6 Morbidity

The health sector aims at solving the problem of morbidity or sicknesses along with mortality and these are the key targets of any health service development effort. In order to take care of morbidity, the government must have an inventory of these health problems. The inventory shows that the ten most commonly reported causes of illnesses are those given in tables 5.8 and 5.9.

Out-patients

Out of 994,896 out patients recorded in 2007, 83.5 percent were suffering from one or the other of the first five illnesses. Malaria ranked first as a cause of morbidity in the region. ARI ranked second and the third disease in ranking was Pneumonia. The fourth and fifth diseases were diarrhoea and intestinal worms respectively.

Observations made in 2012 were almost similar to those of 2007 in regard to the first five diseases except the number of reported cases. The report again reveals that Malaria ranked first with a total of 280,558 (54.7 percent of out - patients), followed by ARI (10.8 percent of out - patients) and pneumonia (9.9 percent) ranked third. The fourth and fifth diseases were skin infection and intestinal worms (7.4 percent and 5.4 percent of cases respectively) (Table 5.8).

Table 5. 8: List of the Ten Most Commonly Reported Causes of Morbidity (Out Patients Only), Pwani Region, 2007 and 2012

S/N.	2007			2012		
	Disease	No. of Cases	Percent Share	Disease	No. of Cases	Percent Share
1	Malaria	517,858	52.1	Malaria	280,558	54.7
2	ARI	148,352	14.9	ARI	55,168	10.8
3	Pneumonia	59,843	6.0	Pneumonia	50,616	9.9
4	Diarrhoea	56,242	5.7	Skin Infection	38,095	7.4
5	Intestinal Worms	48,252	4.8	Intestinal Worms	26,385	5.1
	Sub Total	830,547	83.5		450,822	88.0
6	Skin Infection	46,007	4.6	Eye Infection	22,277	4.3
7	Eye Infection	42,178	4.2	Diarrhoea	14,957	2.9
8	Minor Surgery	40,610	4.1	Emergency Surgery	12,080	2.4
9	UTI	21,119	2.1	Anaemia	12,001	2.3
10	Anaemia	14,435	1.5	Upper Respiratory Disorders	9,402	1.8
	TOTAL	994,896	100		512,539	100

Source: Pwani Region, Compiled Data from Councils, (District/Council Medical Offices), 2013

In-patients

A similar trend was observed for in-patients though there was a slight difference in the ranking and magnitude of cases. Out of 30,282 in patients recorded in 2007, 92.9 percent were suffering from one of the first five illnesses. In 2012 the first five causes of morbidity accounted for 85.8 percent of 32,271 in-patients. Moreover, the health data for in-patients in 2007 reveals that malaria illness ranked first, pneumonia second, anaemia third while and ARI ranked fourth and diarrhoea fifth cause of morbidity in Pwani region, while the first five diseases that caused morbidity in 2012 were malaria, anaemia, pneumonia, diarrhoea and clinical fractures (Table 5.9). ARI and Diarrhoea diseases which were ranked fourth and fifth causes of morbidity in 2007, dropped position with ARI to tenth position and Diarrhoea not among the ten most commonly reported causes of morbidity in 2012 indicating a decline in their prevalence in the region.

Table 5.9 : List of the Ten Most Commonly Reported Causes of Morbidity (In-Patients Only), Pwani Region, 2007 and 2012

S/N.	2007			2012		
	Disease	No. of Cases	Percent Share	Disease	No. of Cases	Percent Share
1	Malaria	16,736	55.3	Malaria	13,666	42.3
2	Pneumonia	5,800	19.2	Anaemia	4,423	13.7
3	Anaemia	3,456	11.4	Pneumonia	4,074	12.6
4	ARI	1,474	4.9	Diarrhoea	3,586	11.1
5	Diarrhoea	671	2.2	Fractures	1,929	6.0
	Sub Total	28,137	92.9		27,678	85.8
6	UTI	649	2.1	UTI	1,697	5.3
7	Complications during pregnancy	571	1.9	Road Traffic Accidents	1,592	4.9
8	Cholera	392	1.3	HIV/AIDS	628	1.9
9	Cardiovascular	268	0.9	Clinical AIDS	482	1.5
10	PID	265	0.9	ARI	194	0.6
	TOTAL	30,282	100		32,271	100

Source: Pwani Region, Compiled Data from Councils, (District/Council Medical Offices), 2013

5.1.7 Mortality

In 2007, the dominant cause of mortality for inpatients of all ages was Malaria (Table 5.10). The table also shows that out of 960 reported deaths in 2007, 85.0 percent were caused by the five diseases most frequent Malaria caused 50.9 percent of deaths, followed by

pneumonia (13.0 percent), anaemia (10.9 percent), tuberculosis (6.0 percent), and clinical AIDS (4.1 percent).

In 2012, mortality for inpatients of all ages malaria (35.9 percent) was still dominating followed by pneumonia (14.0 percent), diarrhoea (13.0 percent), HIV/AIDS (11.1 percent) and anaemia (8.9 percent). Lack of information on death toll at grass – root level limit the departments understanding of the performance of health sector on curative and preventive measures. Therefore, there is a need of strengthening the data collection system at grass-root level by using Village/Mtaa Register.

Table 5. 10: List of the Ten Most Commonly Reported Causes of Mortality in Pwani Region (In Patients Only), 2007 and 2012

S/N	2007			2012		
	Disease	No of Cases	Percent Share	Disease	No. of Cases	Percent Share
1	Malaria	489	50.9	Malaria	625	35.9
2	Pneumonia	125	13.0	Pneumonia	243	14.0
3	Anaemia	105	10.9	Diarrhoea	227	13.0
4	Tuberculosis	58	6.0	HIV/AIDS	194	11.1
5	Clinical AIDS	39	4.1	Anaemia	155	8.9
	Sub Total	816	85.0	Sub Total	1,444	83.0
6	ARI	37	3.9	Clinical AIDS	129	7.4
7	Diarrhoea	35	3.6	Cardiovascular	67	3.9
8	HIV/AIDS	30	3.1	Gynaecological Disease	45	2.6
9	Complications during pregnancy	21	2.2	ARI	32	1.8
10	Burns	21	2.2	Tuberculosis	23	1.3
	Total	960	100	Total	1,740	100

Source: Pwani Region, Compiled Data from Councils, (District/Council Medical Offices), 2013

Though hospital records are not exhaustive since they exclude unreported incidents, they provide indicative information for examining HIV/AIDs prevalence at regional level. Table 5.11 shows that out of 15,902 screened persons among blood donors in year 2007, 1,554 (equivalent to 9.8 percent) were found to be HIV positive. It also shows that HIV infection had declined among blood donors since out of 14,134 persons tested in 2012, 855 or 6.0

percent were positive. In 2007 males were more affected than females but in 2012 the rate of infection was the same for both males and females. Table 5.11 also shows that Kisarawe is the leading council for blood donation. In 2007 it accounted for 83.0 percent of all blood donors in the region and 2012 it accounted for 51.9 percent of the donors.

Table 5. 11: HIV Infections Among Family Blood Donors and New AIDS Cases by Council, Pwani Region: 2007 and 2012

Period/Council	Blood Donors						New AIDS Cases		
	No. of Blood Donors		No. of HIV+		% of HIV+		No. of New Cases		
	M	F	M	F	M	F	M	F	Total
2007									
Bagamoyo	197	186	ND	ND	ND	ND	ND	ND	ND
Kibaha DC	na	0	0	0	0	0	0	0	0
Kisarawe	3,305	9,887	1,095	365	33.1	3.7	1,095	365	1,460
Mkuranga	504	160	36	24	7.1	15.0	33	54	87
Rufiji	722	427	11	17	1.5	4.0	1,053	1,789	2,842
Mafia	426	88	5	1	1.2	1.1	2	1	3
Kibaha TC	NA	0	0	0	0	0	0	0	0
Total	5,154	10,748	1,147	407	22.3	3.8	2,183	2,209	4,392
2012									
Bagamoyo	255	231	ND	ND	ND	ND	ND	ND	ND
Kibaha DC	NA	0	0	0	0	0	0	0	0
Kisarawe	2,116	5,221	231	336	10.9	6.4	231	336	567
Mkuranga	1,050	324	76	30	7.2	9.3	2,464	1,408	3,872
Rufiji	1,980	1,260	46	68	2.3	5.4	611	754	1,365
Mafia	536	126	5	2	0.9	1.6	1	3	4
Kibaha TC	550	485	32	29	5.8	6.0	312	225	537
Total	6,487	7,647	390	465	6.0	6.1	3,619	2,726	6,345

ND; Means no data

na: means not applicable

Source: Pwani Region, Compiled Data from Councils, (District/Council Medical Offices), 2013

Table 5.12 : Expectant Mothers Who Participated in the PMTCT Service by Council, Pwani Region, 2012

Council	No. of AN Attendants	No. Screened	No. HIV+	Percent HIV+	No. Given Niverapine	Percent Given Niverapine
Bagamoyo	13,462	11,878	443	3.7	259	58.5
Kibaha DC	5,460	5,460	262	4.8	259	98.9
Kibaha (R)	2,930	2,830	128	4.5	65	50.8
Kisarawe	4,218	3,512	161	4.6	72	44.7
Mkuranga	8,826	7,038	405	5.8	107	26.4
Mafia	1,846	1,846	24	1.3	15	62.5
Rufiji	9,487	7,111	833	11.7	732	87.9
Total	49,229	39,675	2,256	5.7	1,509	66.9

Source: Pwani Region, Compiled Data from Councils, (District/Council Medical Offices), 2013

Establishment of VCT services in remote areas has provided a reliable source of data on the extent and significance of HIV prevalence in Pwani region since it is based on the willingness of the inhabitants to be screened. Table 5.13 shows that out of 72,200 persons screened in 2012, 12.2 percent were affected by HIV/AIDS with females being more affected (12.9 percent) than males (11.4 percent).

The most affected district council was Rufiji where 21.4 percent of the 23,803 persons screened were HIV positive, followed by Kibaha TC (10.6 percent) and Bagamoyo (9.5 percent), while Mafia had the lowest percentage (1.9 percent) (Table 5.13).

Table 5. 13: VCT Volunteers Screened for HIV by Sex and Council, Pwani Region, 2012

Council	No. Persons Tested			Persons with HIV+			Percent of HIV+		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Bagamoyo	3,816	4,600	8,416	354	449	803	9.3	9.8	9.5
Kibaha DC	1,931	3,079	5,010	90	194	284	4.7	6.3	5.7
Kisarawe	1,368	1,680	3,048	93	160	253	6.8	9.5	8.3
Mkuranga	5,065	11,476	16,541	440	961	1,401	8.7	8.4	8.5
Rufiji	11,900	11,903	23,803	2,234	2,869	5,103	18.8	24.1	21.4
Mafia	3,847	3,555	7,402	84	55	138	2.2	1.5	1.9
Kibaha TC	3,491	4,489	7,980	282	560	842	8.1	12.5	10.6
Total	31,418	40,782	72,200	3,577	5,248	8,824	11.4	12.9	12.2

Source: Pwani Region, Compiled Data from Councils, (District/Council Medical Offices), 2013

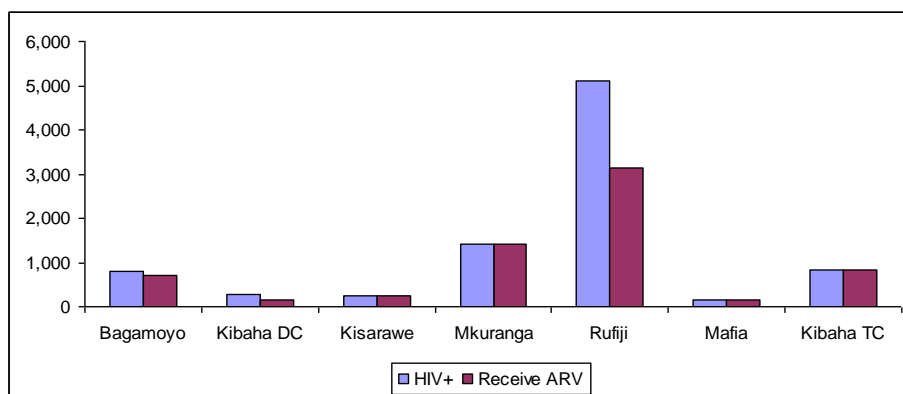
The availability of ARV for affected persons is a major constrain in combating the HIV/AIDS prevalence in Pwani region. Table 5.14 reveals that only three quarters of the affected people received ARV in 2012. Kibaha DC was the worst district in the region since only 50 percent of affected people received ARV followed by Rufiji (61.5 percent) and Bagamoyo (89.9 percent). Mkuranga, Mafia and Kibaha TC had the highest percentages (100 percent of affected persons received ARV).

Table 5.14 : Persons with HIV and Those receiving ARV by Council, Pwani Region; 2012

Council	Screened	HIV+	Percent HIV+	Received ARV	Percent Received ARV
Bagamoyo	8,416	803	9.5	722	89.9
Kibaha DC	5,010	284	5.7	142	50.0
Kisarawe	3,048	253	8.3	252	99.6
Mkuranga	16,541	1,401	8.5	1,401	100.0
Rufiji	23,803	5,103	21.4	3,137	61.5
Mafia	7,402	139	1.9	139	100.0
Kibaha TC	7,980	842	10.6	842	100.0
Total	72,200	8,825	12.2	6,635	75.2

Source: Pwani Region, Compiled Data from Councils, (District/Council Medical Offices), 2013

Figure 5. 1: Number of Persons with HIV and Those receiving ARV by Council, Pwani Region, 2012



Source: Pwani Region, Compiled Data from Councils, (District/Council Medical Office), 2013

5.1.8 Tuberculosis Prevalence

Reported Tuberculosis cases in Pwani region decreased by 19.9 percent (450 cases) from 2,262 in 2007 to 1,812 cases in 2012 (Table 5.14). At district level, Kibaha Town ranked

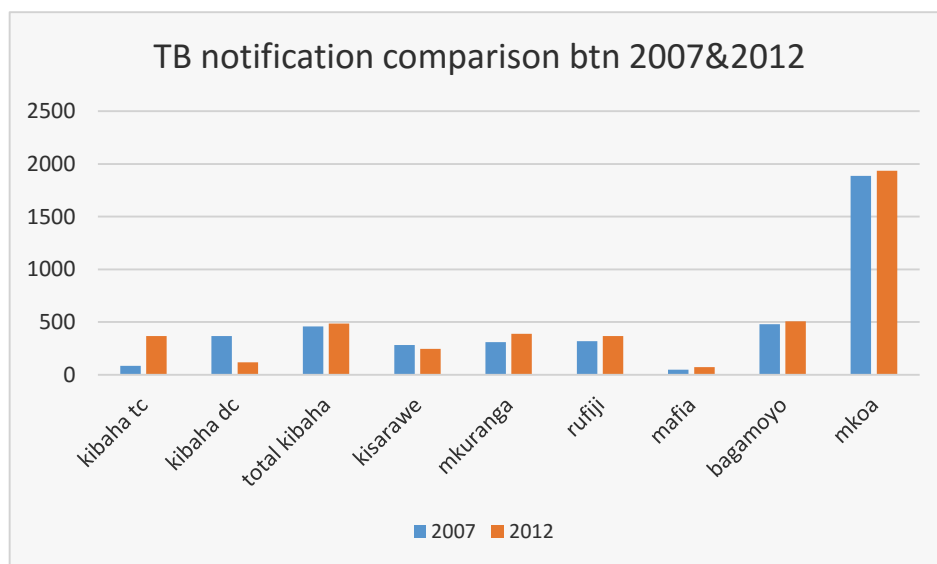
first council in tuberculosis prevalences in 2007 with 736 cases (32.5 percent of the total) in 2007 while Bagamoyo led in 2012 with 509 cases (28.1 percent of the regional total cases). Furthermore, rate of increase in TB cases was very high in Bagamoyo. It increased by 84.4 percent (233 cases) from 276 in 2007 to 509 in 2012. Kibaha Town council did well as reported TB cases decreased tremendously from 736 in 2007 to 367 in 2012.

Table 5. 15: Reported Tuberculosis cases by Council, Pwani Region; 2007 and 2012

Council	2007	Percent	Rank	2012	Percent	Rank	Change in Cases (2007&2012)	Percent changes
Bagamoyo	276	12.2	5	509	28.1	1	233	84.4
Kibaha TC	736	32.5	1	367	20.3	3	-369	-50.1
Kibaha DC	368	16.3	2	119	6.6	6	-249	-67.7
Kisarawe	287	12.7	4	207	11.4	4	-80	-27.9
Mkuranga	311	13.7	3	389	21.5	2	78	25.1
Mafia	49	2.2	7	74	4.1	7	25	51.0
Rufiji	235	10.4	6	147	8.1	5	-88	-37.4
Regional Total	2262	100		1812	100.0		-450	-19.9

Source: Pwani Region, Compiled Data from Councils, (District/Council Medical Offices), 2013

Figure 5. 2: Distribution of Tuberculosis Cases by Council, Pwani Region, 2007 and 2012



Source: Pwani Region, Compiled Data from Councils, (District/Council Medical Offices), 2013

5.1.9 Reportable Communicable Diseases

The epidemic of reportable communicable diseases in region occur occasionally especially during rainy season. Table 5.16 shows that Malaria was the most common disease followed by eye infections and intestinal worms. Malaria threatened the lives of people mostly in 2008 when 131,795 cases were treated but dropped to 17,328 in 2012. The number of cases for other communicable diseases fluctuated from year to year, but most of them were prevented earlier as indicated in table 5.16.

Table 5. 16: Number of Reported Cases of Reportable Communicable Diseases in Pwani Region, 2008 and 2012

No.	Disease	2008	2012	Change in Cases	Percent Change
1	Malaria	131,795	17,328	-114,467	-86.9
2	Eye condition	6,740	6,128	-612	-9.1
3	Intestinal Worms	5,462	2,336	-3,156	-57.2
3	Dysentery	4,871	2,305	-2,566	-52.7
4	Skin Diseases	4,312	2,332	-1,980	-45.9
5	STIs	3,701	2,267	-1,434	-38.7
6	HIV/AIDs	2,969	3,040	+71	+2.4
7	Schistomiasis	1,984	482	-1,502	-75.7
8	Diarrhoea	1,490	1,312	-178	-11.9
9	Tuberculosis	409	352	-57	-13.9
10	Rabid Animal	398	304	-94	-23.6
11	Typhoid	315	759	+444	+141.0
12	Measles	217	103	-114	-52.5
13	Pneumonia	141	208	+67	+47.5
14	ARI	45	37	-8	-17.8
15	Meningitis	43	19	-24	-55.8
16	Cholera	2	0	-2	na
17	Rabies	2	0	-2	na
18	Acute Flaccid Paralysis	0	3	+3	na

Source: Pwani Region, Compiled Data from Councils, (District/Council Medical Offices), 2013

5.1.10 Immunisation Coverage

Reduction of deaths among pregnant women is attributed to the wide coverage of immunisation campaigns in the region. Table 5.17 reveals that as much as 70 percent of targeted 37,284 expectant mothers were vaccinated with TT2 in 2008 in the region. In 2010, out of 36,015 targeted pregnant women 74 percent were vaccinated and 79.3 percent of 46,066 targeted pregnant women were vaccinated with TT2 in 2012. At council level, Mkuranga performed poorly in 2008 and 2010 for expected mothers vaccinated with TT2 as

it registered the lowest coverages of 47.5 percent in 2008 and 64.5 percent in 2010. In 2012, Rufiji performed poorly with TT2 vaccination coverage of 64 percent.

Table 5. 17: Expected Mothers Vaccinated TT2 by Council, Pwani Region, 2008, 2010 and 2012

Council	2008			2010			2012		
	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage
Bagamoyo	8,117	8,117	100.0	8,835	7,375	83.5	13,309	11,245	84.5
Kibaha DC	2,080	2,020	97.1	2,080	1,971	94.7	2,954	2,654	89.8
Kisarawe	3,293	2,709	82.3	3,450	2,280	66.1	4,291	3,399	79.2
Mkuranga	8,205	3,905	47.5	6,211	4,009	64.5	8,826	7,360	83.4
Rufiji	11,678	5,818	49.8	9,246	7,153	77.4	9,487	6,086	64.2
Mafia	1,477	1,356	91.8	1,567	1,033	65.9	1,798	1,484	82.5
Kibaha TC	2,434	2,309	95.0	4,626	2,791	60.3	5,401	4,300	79.6
Total	37,284	26,234	70.3	36,015	26,612	73.9	46,066	36,528	79.3

Source: Pwani Region, Compiled Data from Councils, (District/Council Medical Offices), 2013

Awareness among parents triggered the rapid growth in the number of children under one year who receive BCG vaccination in the region. The trend of BCG vaccination coverage for children under one year shows an increase between 2008 and 2012. At regional level, the percentage of targeted children vaccinated increased from 91.6 percent in 2008 to 94.1 percent in 2010 and 122.2 percent in 2012. The council with the highest coverage in all three years was Kibaha TC (103.5 percent in 2008; 100 percent in 2010; and 245.6 percent in 2012).

Table 5. 18: Percentage of Children under One Year Vaccinated BCG by Council, Pwani Region, 2008, 2010 and 2012

Council	2008			2010			2012		
	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage
Bagamoyo	8,624	8,196	95.0	9,604	8,385	87.3	9,827	11,216	114.1
Kibaha DC	2,162	2,070	95.7	1,993	2,549	127.9	2,081	2,977	143.1
Kisarawe	3,293	2,592	78.7	3,678	2,722	74.0	3,765	4,200	111.6
Mkuranga	7,727	7,316	94.7	7,937	7,287	91.8	8,110	8,351	103.0
Rufiji	8922	7,589	85.1	9,480	9,613	101.4	9,734	10,454	107

Mafia	1,371	1,358	99.1	1,441	1,378	95.6	1,482	1,896	127.9
Kibaha TC	2,343	2,424	103.5	2,861	2,862	100.0	2,969	7,293	245.6
Total	34,442	31,545	91.6	36,994	34,796	94.1	37,968	46,387	122.2

Source: Pwani Region, Compiled Data from Councils, (District/Council Medical Offices), 2013

In regard to DPT3, the coverage of immunisation in the region shows a good trend as in each year shown in Table 5.19; more than half of the targeted children were vaccinated. The best coverage was in 2012 at 108.3 percent therefore in excess of the target. Kibaha TC had the best immunisation coverage in 2008 (100.1 percent) while in 2010 and 2012, Rufiji had the best coverage at 271.9 and 324.3 percent respectively. On the other hand, Kisarawe had poor immunization coverage in all three years at 61.6 percent in 2008, 31.5 percent in 2010 and 46.4 percent in 2012.

Table 5. 19: Percentage of Children Under One Year Vaccinated DPT3 by Council, Pwani Region, 2008, 2010 and 2012

Council	2008			2010			2012		
	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage
Bagamoyo	8,624	7,845	91.0	9604	6,588	68.6	9,827	10,933	111.3
Kibaha TC	2,343	2,346	100.1	1,993	2,864	143.7	2,081	3,990	191.7
Kibaha DC	2,162	2,097	97.0	3,678	2,207	60.0	3,765	2,591	68.8
Kisarawe	3,293	2,030	61.6	7,937	2,502	31.5	8,110	3,767	46.4
Mkuranga	7,727	5,891	76.2	9,480	6,390	67.4	9,734	8,568	88.0
Mafia	1,371	1,260	91.9	1,441	1,242	86.2	1,482	1,630	110.0
Rufiji	8,922	6,129	68.7	2,861	7,780	271.9	2,969	9,627	324.3
Total	34,442	27,598	80.1	36,994	29,631	80.1	37,968	41,106	108.3

Source: Pwani Region, Compiled Data from Councils, (District/Council Medical Offices), 2013

Measles vaccination is performed to protect children against measles. At the regional level, coverage increased from 81.6 percent in 2008 to 82.3 percent in 2010 and then increased further to reach 108.5 percent in 2012. Rufiji District managed to have the best immunization coverage in all three years shown in table 5.20. As was the case in DPT3 immunisation coverage, Kisarawe had poor immunization coverage for children vaccinated with measles. The region should find the reason why Kisarawe district council had poor immunisation coverage not only for measles but also for DPT3.

Table 5. 20: Percentage of Children under One Year Vaccinated Measles by Council, Pwani Region, 2008, 2010 and 2012

Council	2008			2010			2012		
	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage	Total Targeted	Total Vaccinated	Percent Coverage
Bagamoyo	8,624	7,837	90.9	9,604	7,617	79.3	9,827	10,614	108.0
Kibaha DC	2,162	2,099	97.1	1,993	2,828	142.0	2,081	2,699	129.7
Kibaha TC	3,293	2,338	71.0	3,678	2,045	55.6	3,765	3,870	102.8
Kisarawe	7,727	2,240	29.0	7,937	2,513	31.7	8,110	3,805	46.9
Mkuranga	8922	6,109	68.5	9,480	6,005	63.3	9,734	8,607	88.4
Mafia	1,371	1,403	102.3	1,441	1,372	95.2	1482	1,640	110.7
Rufiji	2,343	6,087	259.8	2,861	8,067	281.9	2,969	9,965	335.6
Total	34,442	28,113	81.6	36,994	30,447	82.3	37,968	41,200	108.5

Source: Pwani Region, Compiled Data from Councils, (District/Council Medical Offices), 2013

5.1.11 Policy Implication on Health Sector

Provision of health services in Pwani region is still of low quality since the region still has inadequate number of practitioners. Inadequate number of practitioners led to limited provision of health services in preventive and curative areas including PMTCT. Health services can be improved through implementation of health strategies and programmes which can motivate and attract health workers to work in rural areas. Likewise, the programmes of constructing a dispensary in every village and one health centre in every ward should be adhered to in order to increase accessibility of health services to rural population. Involvement of private sector in the provision of health services is also very important for service improvement.

5.2 Education Sector

5.2.0 An Overview

As it is well known, education is one of the basic tools for social and economic development. This understanding is evident from the steps so far taken by the Government of Tanzania to increase intake of children into primary schools. Adoption of the Universal Primary School Education in 1974 played a big role in providing primary education to children of age 7-13. The 2002 Census shows that there was a significant decrease in illiteracy rate in Pwani region. In 2002, Pwani region had literacy rate of 72 percent compared to 68.3 percent in 1988.

5.2.1 Pre-Primary Education

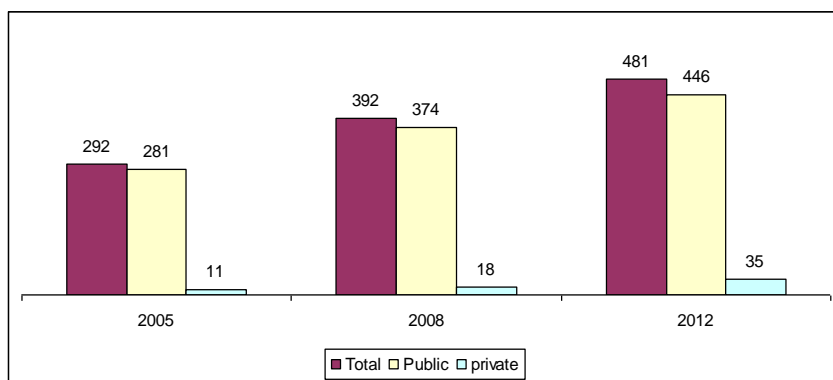
i) Introduction

The availability of nursery schools is another feature that distinguishes educational development between regions. Pre-schools are meant for children of age 3-6 years. The condition set by the Ministry of Education and Vocational Training that all children who start Standard One must have undergone pre-primary education has accelerated the establishment of pre-primary schools in the country. According to the Tanzania Ministry of Education and Vocational Training, each government primary school must have classes for pre-primary education. By June 2011, Tanzania had a total of 14,529 pre-primary school classes.

ii) Number of Classes

According to table 5.20, by the end of 2012 Pwani region had a total of 481 classrooms in both public and private pre-primary schools. Bagamoyo and Rufiji district councils had the largest number at 113 (23.5 percent of the region's total classrooms) followed by Kisarawe (73 classrooms, 15.2 percent). With 66 classrooms (13.7 percent) Mkuranga district council ranked third in the number of pre-primary school classrooms while Mafia had the least number of classrooms (34) which was equivalent to 7.1 percent of all classrooms available in the region in 2012. Table 5.20 also shows that the private sector's share of pre-primary school classrooms had increased from 11 percent in 2005 to 18 percent in 2008 and 35 percent in 2012. The Regional Authority should therefore encourage individuals and non-government institutions to establish more pre-primary schools in order to make sure that all children of age 3-6 years in the region acquire pre-primary education before joining Standard One.

Figure 5. 3: Number of Pre-Primary School Classes by Ownership, Pwani Region; 2005, 2008 and 2012



Source: Compiled Data from Councils, Education Departments, 2013

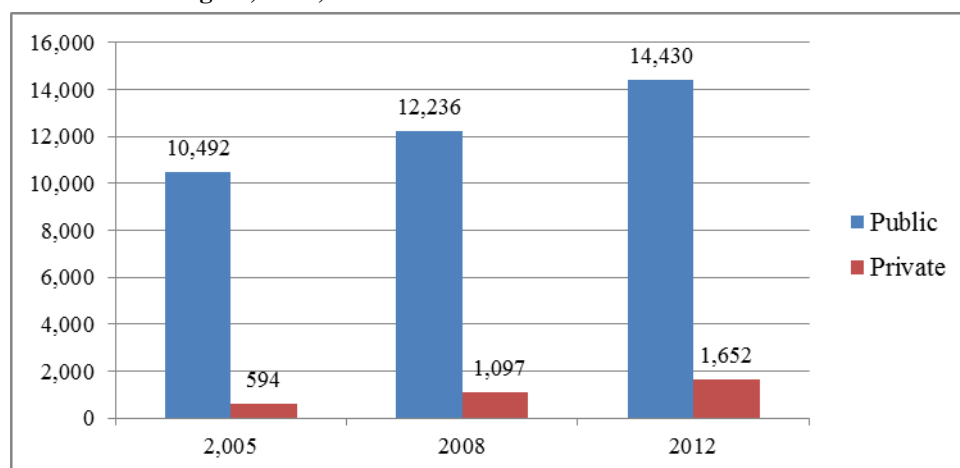
Table 5.21: Number of Pre-Primary School Classrooms by Ownership and Council, Pwani Region; 2005,2008 and 2012

Council	2005			2008			2012		
	Public	Private	Total	Public	Private	Total	Public	Private	Total
Bagamoyo	66	4	70	81	5	86	107	6	113
Kibaha DC	35	0	35	36	0	36	37	0	37
Kisarawe	68	1	69	68	1	69	70	3	73
Mkuranga	54	3	57	72	3	75	62	4	66
Rufiji	28	0	28	53	0	53	101	12	113
Mafia	29	0	29	32	2	34	32	2	34
Kibaha TC	1	3	4	32	7	39	37	8	45
Total	281	11	292	374	18	392	446	35	481
Percent share	96.2	3.8	100.0	95.4	4.6	100.0	92.7	7.3	100.0

Source: Compiled Data from Councils, Education Departments, 2013

iii) Enrolment in Pre-primary schools

Through the introduction of pre-primary school classes in most of its primary schools and with the availability of some private pre-primary schools, the Pwani region managed to increase enrolment of pre-primary pupils over the period given in table 5.22. The enrolment increased by 2,247 pupils from 11,086 in 2005 to 13,333 in 2008 and then 2,749 pupils between 2008 and 2012. Table 5.25 also shows that there was a huge difference between the number of pupils enrolled into public and private pre-primary schools. More pupils were enrolled in public than in private pre-primary schools. High school fees charged in private pre-primary schools as well as the small numbers of such schools especially in rural areas might be the reason behind small enrolment in private pre-primary schools. In 2012 Kisarawe district council was leading in the number of pupils registered into pre-primary schools. The council enrolled 4,133 pupils or 25.7 percent of all pupils enrolled into pre-primary schools in the region. Next to Kisarawe was Bagamoyo district council with 3,355 pupils (20.9 percent) followed by Mkuranga (3,289 pupils, 20.5 percent). Unless deliberate action is taken, Mafia and Rufiji will continue to lag behind in number of pupils enrolled into pre-primary schools. The two councils enrolled the lowest numbers of pupils than other councils (Table 5.22). Figure 5.4 shows that public pre-primary schools enrolled more pupils than private pre-primary schools.

Figure 5. 4: Pupils Enrolment in Public and Private Pre-primary schools, Pwani Region; 2005, 2008 and 2012

Source: Compiled Data from Councils, Education Departments, 2013

Table 5.22 : Pre-Primary schools Enrolment (Number) by Ownership and Council, Pwani Region; 2005,2008 and 2012

Council	2005			2008			2012			Percent
	Public	Private	Total	Public	Private	Total	Public	Private	Total	
Bagamoyo	2,134	175	2,309	2,702	196	2,898	3,094	261	3,355	20.9
Kibaha DC	1,221	0	1,221	951	0	951	951	0	951	5.9
Kisarawe	3,612	0	3,612	4,053	0	4,053	4,053	80	4,133	25.7
Mkuranga	1,612	213	1,825	2,292	372	2,664	3,036	253	3,289	20.5
Rufiji	250	0	250	666	0	666	666	321	987	6.1
Mafia	594	57	651	538	63	601	664	183	847	5.3
Kibaha TC	1,069	149	1,218	1,034	466	1,500	1,966	554	2,520	15.7
Total	10,492	594	11,086	12,236	1,097	13,333	14,430	1,652	16,082	100.0
Percent	94.6	5.4	100.0	91.8	8.2	100.0	89.7	10.3	100.0	

Source: Compiled Data from Councils, Education Departments, 2013

5.2.2 Primary Education

i) Introduction

Primary education provides the foundation on which the development of the human resource is based. A sound primary education gives the recipient a good start in this world of competition.

Two milestones are associated with the development of primary education in Pwani region. These are the launching of the Universal Primary Education Programme (UPE) in 1974 and efforts made by the Government, especially during the presidency, of Dr. Jakaya Mrisho Kikwete of increasing construction of primary school classrooms through involvement of the community and private sectors. These efforts have enhanced enrolment of pupils and increased the access of primary education in the country including Pwani region.

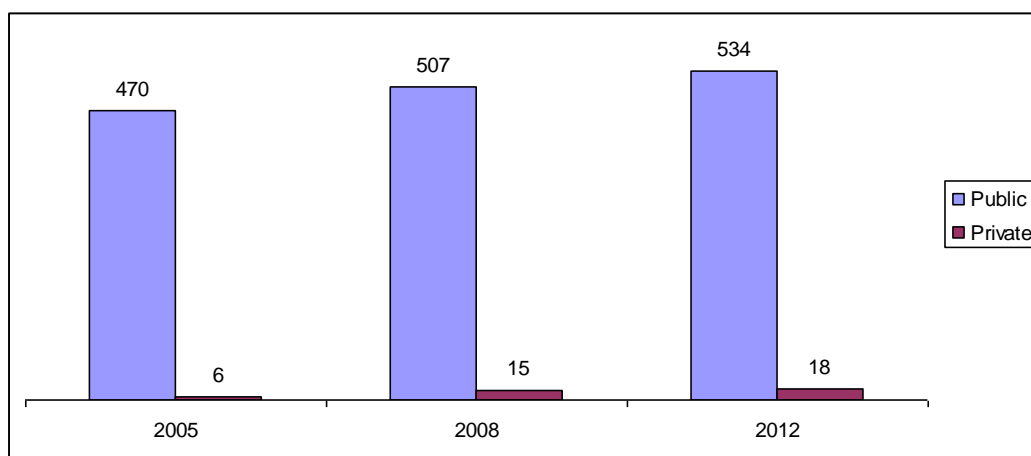
ii) Number of Primary Schools

As it may be noted in table 5.23, by the end of 2012 there was a total of 552 primary schools both public and private in Pwani region. Public primary schools were 534 accounting for 96.7 percent of all schools and private schools were 18 (3.3 percent). With 133 primary schools (24.1 percent of all primary schools in the region) Bagamoyo district council had the largest number of primary schools followed by Rufiji with 115 primary schools (20.8 percent) and Mkuranga (108 primary schools, 19.6 percent). As it was in pre-primary schools, table 5.23 shows that Mafia had the lowest number of primary schools (34) or 6.2 percent.

Table 5. 23: Number of Primary Schools by Ownership and Council, Pwani Region; 2005,2008 and-2012

Council	2005			2008			2012			
	Public	Private	Total	Public	Private	Total	Public	Private	Total	Percent
Bagamoyo	113	2	115	122	2	124	129	4	133	24.1
Kibaha DC	35	0	35	36	0	36	37	0	37	6.7
Kisarawe	76	0	76	76	0	76	80	0	80	14.5
Mkuranga	90	0	90	97	3	100	104	4	108	19.6
Rufiji	104	0	104	111	0	111	115	0	115	20.8
Mafia	29	0	29	32	2	34	32	2	34	6.2
Kibaha TC	23	4	27	33	8	41	37	8	45	8.2
Regional Total	470	6	476	507	15	522	534	18	552	100.0
Percent share	98.7	1.3	100.0	97.1	2.9	100.0	96.7	3.3	100.0	

Source: Compiled Data from Councils, Education Departments, 2013

Figure 5. 5: Number of Primary schools by Ownership, Pwani Region; 2005, 2008 and 2012

Source: Compiled Data from Councils, Education Departments, 2013

iii) Coverage of Primary School Education System

The number of primary schools per village/street given in table 5.24 shows the extent to which Pwani region has expanded accessibility of primary education to its villages. In 2012 the primary school village ratio was 1.1 which means that in every village, there was a primary school. At council level, with the exception of Kibaha TC and Mkuranga which had poor primary school village ratio of 0.8 and 0.9, the remaining five councils, Bagamoyo, Kibaha DC, Kisarawe, Rufiji and Mafia managed to have a primary school in each village.

Table 5. 24: Distribution of Primary Schools by Council and Their Accessibility at Village Level, Pwani Region; 2012

Council	No of Primary Schools (Public and Private)	No of Villages/Streets	Primary School per Village/Street
Bagamoyo	133	97	1.4
Kibaha DC	37	33	1.1
Kisarawe	80	79	1.0
Mkuranga	108	121	0.9
Rufiji	115	106	1.1
Mafia	34	23	1.5
Kibaha TC	45	53	0.8
Regional Total	552	512	1.1

Note: * Kibaha TC had 53 streets

Source: Compiled Data from Councils, Education Departments, 2013

Table 5.25 further highlights the coverage of primary school education system in Pwani region. In 2012 there was an average of 2 schools per 100 sq. kms or 2 schools within a walking distance. The average number of schools within a walking distance varied from

council to council with Bagamoyo and Rufiji having the worst situation of one primary school per 100 sq.kms. This means that in 2012 pupils in Bagamoyo and Rufiji districts walked longer distances to/from schools than pupils in the remaining district. For instance with seven schools per 100 sq.kms, pupils in Mafia District they walked shortest distances to reach school. In addition to that, the region had an average 2 schools per 1,990 persons. At district level, average population per school in 2012 ranged from 1,270 people in Kisarawe to 2,855 persons in Bagamoyo district council.

Table 5. 25: Coverage of Primary Schools by Land Area, Population and Council, Pwani Region; 2012

Council	Land Area (sq.kms)	Population (2012 population Census)	Number of Primary Schools (Public and Private)	Average Number of Schools per 100 sq.kms	Average Population per school
Bagamoyo	9,842	311,740	133	1	2,344
Kibaha DC	1,062	70,209	37	3	1,898
Kisarawe	4,464	101,598	80	2	1,270
Mkuranga	2,432	222,921	108	4	2,064
Rufiji	13,339	217,274	115	1	1,889
Mafia	518	46,438	34	7	1,366
Kibaha TC	750	128,488	45	6	2,855
Regional	32,407	1,098,668	552	2	1,990

Source: Compiled Data from Councils, Education Departments, 2013

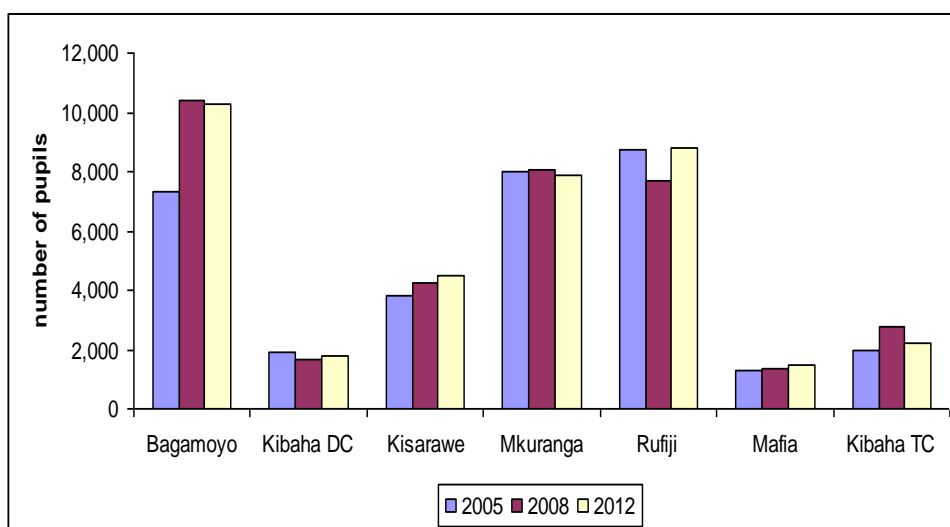
iv) Standard One Enrolment

In three years, 2005, 2008 and 2012, number of pupils enrolled into primary schools in the region showed an increasing trend. It increased from 33,105 pupils in 2005 to 36,178 pupils in 2008 and thereafter it increased to 36,988 pupils in 2012 (Table 5.26). In 2012 public primary schools accounted for 98.0 percent of standard one enrolment against 2.0 percent for private schools. Bagamoyo led in Standard One enrolment as the district council enrolled 10,306 pupils or 27.9 percent of all pupils enrolled into Standard One in the region in 2012. It was followed by Rufiji district council with 8,805 pupils (23.8 percent) then Mkuranga district council (7,871 pupils, 21.7 percent). Mafia district council registered the smallest number of pupils (1,463) or 4.0 percent.



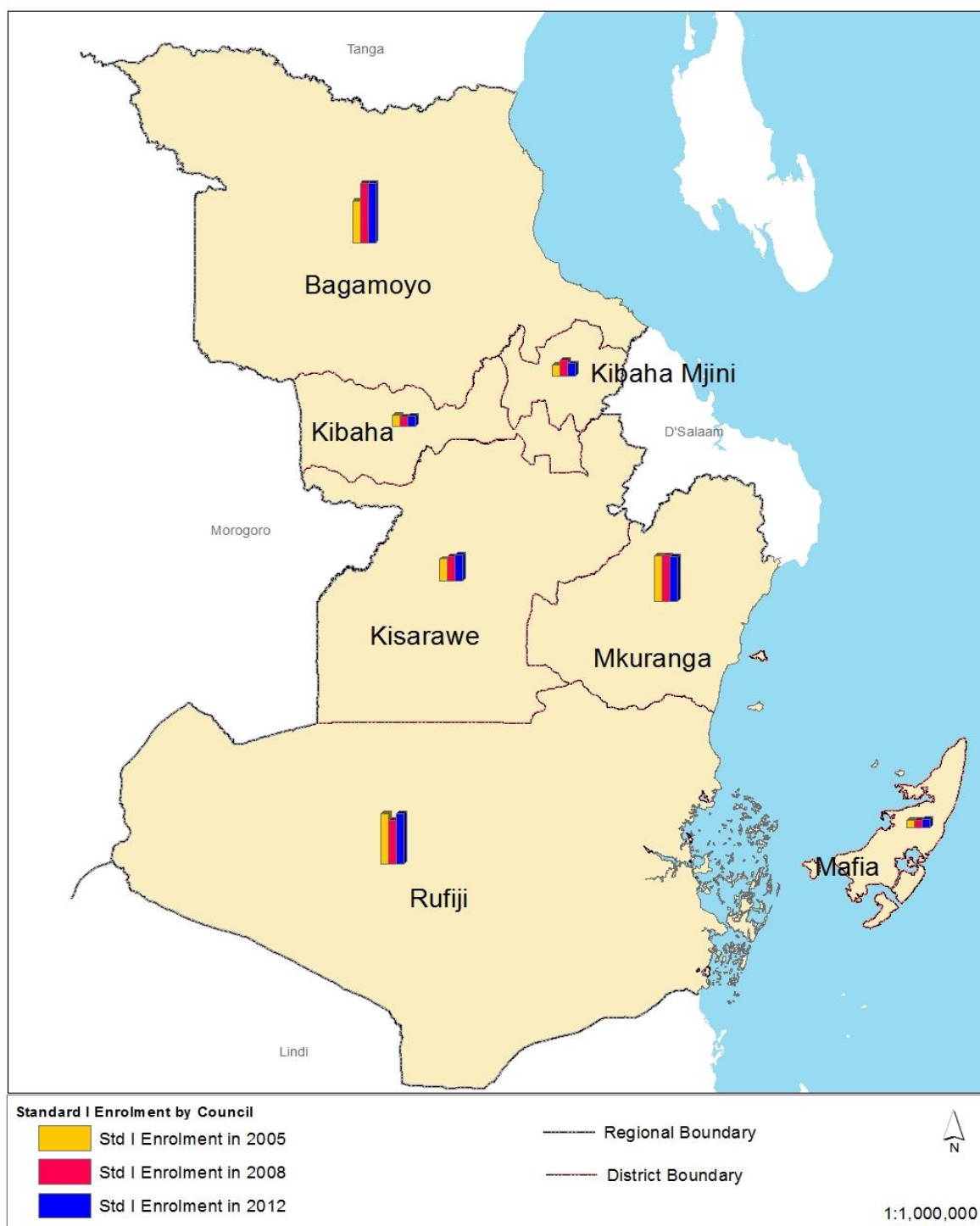
Although the total number of pupils enrolled into Standard One in the region showed an increasing trend, figure 5.6 shows that from year 2008 to 2012 there was a decrease in the number of pupils enrolled into Standard One in three district councils, Bagamoyo (10,400 to 10,306 pupils), Mkuranga (8,069 to 7,871 pupils) and Kibaha TC (2,768 to 2,233 pupils).

Figure 5. 6: Standard One Pupils Enrolment by Council, Pwani Region; 2005, 2008 and 2012



Source: Compiled Data from Councils, Education Departments, 2013

Map 5. 2: Standard I Enrolment by Council, Pwani Region; 2012



Source: National Bureau of Statistics, Geographical Information System Unit, 2013

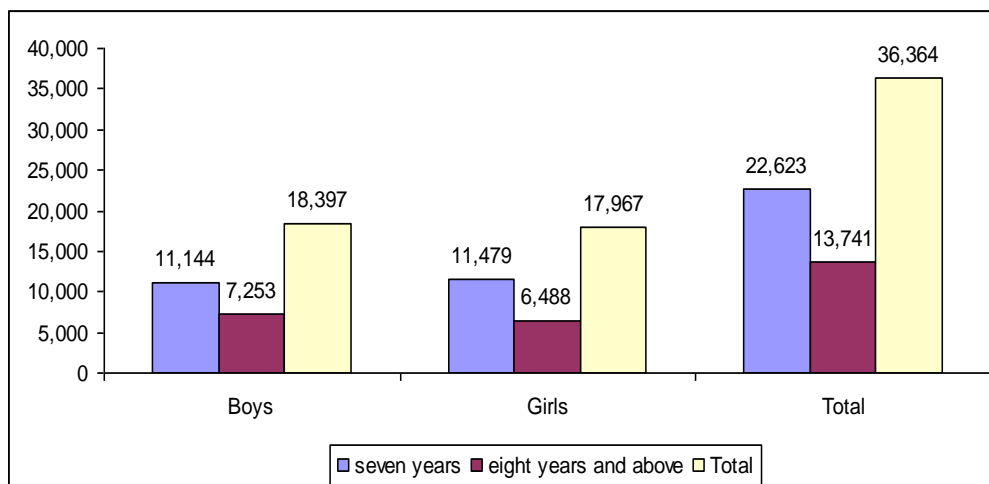
Table 5.26: Standard I Enrolment in Primary Primary Schools by Council, Pwani Region; 2005, 2008 and 2012

Council	2005			2008			2012			Percent
	Public	Private.	Total	Public	Private.	Total	Public	Private.	Total	
Bagamoyo	7,290	40	7,330	10,277	123	10,400	10,161	145	10,306	27.9
Kibaha DC	1,916	0	1,916	1,686	0	1,686	1,803	0	1,803	4.9
Kisarawe	3,833	0	3,833	4,252	0	4,252	4,507	0	4,507	12.0
Mkuranga	8,017	0	8,017	7,977	92	8,069	7,718	153	7,871	21.4
Rufiji	8,719	0	8,719	7,674	0	7,674	8,805	0	8,805	23.8
Mafia	1,322	0	1,322	1,329	0	1,329	1,397	66	1,463	4.0
Kibaha TC	1,849	119	1,968	2,544	224	2,768	1,868	365	2,233	6.0
Regional Total	32,946	159	33,105	35,739	439	36,178	36,259	729	36,988	100.0
Percent Shares	99.5	0.5	100.0	98.8	1.2	100.0	98.0	2.0	100.0	

Source: Compiled Data from Councils, Education Departments, 2013

Normally, the target group for enrolment into Standard One is seven year olds (SYOs). This is according to the directive of Universal Primary Education (UPE). But because of the big backlog of 7 to 13 year olds who are yet to join school, the target for enrolment into Standard One has been temporarily widened to include children of other ages within the primary schools going age group of 7 to 13 years. Nevertheless, the SYOs in a community are still the target of the recruitment campaign each year.

According to table 5.27, a total of 36,364 pupils mostly of age seven years but also of age eight and above were enrolled into Standard One in the region in 2012. Since 62.2 percent of those registered in Standard One were of age seven years thus the region largely adhered to Universal Primary Education Policy which requires that pupils should start Standard One at that age. Table 5.27 also reveals that 37.8 percent of the pupils were enrolled at the age of eight or above. Bagamoyo was the leading district council in registering Standard One pupils. They accounted for 28 percent of all pupils registered in the region. Mafia enrolled the smallest number of pupils who accounted for 4 percent of all pupils registered. More girls (11,479, 50.7 percent) than boys (11,144, 49.3 percent) were registered into Standard One at the age of seven years. Figure 5.7 shows that more pupils started Standard One at the age of seven years than at the age eight or above.

Figure 5. 7: Standard I Enrolment by Age Group and by Sex, Pwani Region; 2012

Source: Compiled Data from Councils, Education Departments, 2013

Table 5.27: Standard I Enrolment in Public Schools by Age Group, Pwani Region; 2012

Schools	Sex	Seven Years		Eight Years and above		Total	
		Number	Percent Enrolled	Number	Percent Enrolled	Number	Percent of all pupils enrolled
Bagamoyo	Boys	2,624	50.6	2,557	49.4	5,181	28
	Girls	2,609	52.4	2,371	47.6	4,980	
	Total	5,233	51.5	4,928	48.5	10,161	
Kibaha TC	Boys	942	100.0	0	0.0	942	5.15
	Girls	931	46.7	0	0.0	931	
	Total	1,873	100.0	0	0.0	1873	
Kibaha DC	Boys	755	81.5	171	18.5	926	5
	Girls	729	83.1	148	16.9	877	
	Total	1,484	82.3	319	17.7	1,803	
Kisarawe	Boys	1,683	70.6	702	29.4	2,385	13
	Girls	1,622	73.3	591	26.7	2,213	
	Total	3,305	71.9	1,293	28.1	4,598	
Mkuranga	Boys	2,190	56.4	1,696	43.6	3,886	21
	Girls	2,318	60.5	1,514	39.5	3,832	
	Total	4,508	58.4	3,210	41.6	7,718	
Mafia	Boys	611	83.4	122	16.6	733	4.22
	Girls	653	81.6	147	18.4	800	
	Total	1264	82.5	269	17.5	1533	
Rufiji	Boys	2,339	53.8	2,005	46.2	4,344	24
	Girls	2,617	60.4	1,717	39.6	4,334	
	Total	4,956	57.1	3,722	42.9	8,678	
Regional Total	Boys	11,144	60.6	7,253	39.4	18,397	100
	Girls	11,479	63.9	6,488	36.1	17,967	
	Total	22,623	62.2	13,741	37.8	36,364	

Source: Compiled Data from Councils, Education Departments, 2013

v) Standard (I-VII) Enrolment

As table 5.28 shows, for three years, 2005, 2008 and 2012, a total of 594,602 pupils enrolled in all primary schools in Pwani region. Most of pupils (206,020) were enrolled in 2008 than of other years. With exception of 2012, other years enrolled more boys than girls. At council level; Bagamoyo enrolled 26.5 percent of all pupils in the region and was the leading district council followed by Rufiji (24.4 percent) and Mkuranga the third (22.9 percent). Kibaha Town council enrolled the smallest number of pupils (19,598) or 3.3 percent of the region's total pupils enrolled in all three years.

Table 5. 28: Standard (I-VII) Enrolment by Sex and Council; Pwani Region; 2005, 2008 and 2012

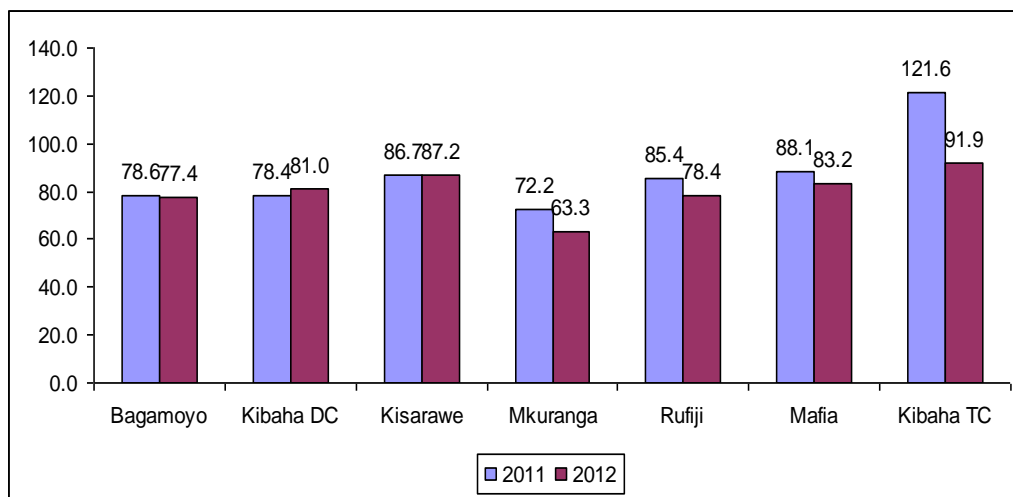
Council	2005			2008			2012			Council Total 2005, 2008 & 2012	Percent
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total		
Bagamoyo	24,719	23,137	47,856	28,789	27,673	56,462	26,409	26,997	53,406	157,724	26.5
Kibaha TC	6,745	6,779	13,524	1,316	1,228	2,544	1,803	1,727	3,530	19,598	3.3
Kibaha (R)	7,054	6,312	13,366	6,902	6,591	13,493	6,604	6,763	13,367	40,226	6.8
Kisarawe	11,252	10,630	21,882	11,172	10,566	21,738	10,067	10,291	20,358	63,978	10.8
Mkuranga	19,394	17,840	37,234	25,721	24,455	50,176	24,371	24,517	48,888	136,298	22.9
Mafia	9,172	4,636	13,808	4,773	4,687	9,460	4,143	4,361	8,504	31,772	5.3
Rufiji	22,691	19,988	42,679	27,010	25,137	52,147	24,777	25,403	50,180	145,006	24.4
Regional Total	101,027	89,322	190,349	105,683	100,337	206,020	98,174	100,059	198,233	594,602	100.0
Percent	53.1	46.9	100.0	51.3	48.7	100.0	49.5	50.5	100.0		

Source: Compiled Data from Councils, Education Departments, 2013

5.2.3 School Completion Rates

Table 5.29 shows that the number of pupils who completed standard seven (std VII) was 25,084 in 2011 and 25,502 in 2012. In both years more girls than boys completed primary education. Girls accounted for 51.3 percent of pupils who completed std VII in 2011 while the girls' share was 52.6 percent in 2012. Table 5.29 also shows that the overall completion rate decreased from 82.7 percent in 2011 to 76.9 percent in 2012.

In both 2011 and 2012, the completion rate was higher for girls than boys. In 2011, the completion rate was 86.0 percent for girls and 79.5 for boys while in 2012 it was 79.7 percent for girls versus 74.0 percent for boys.

Figure 5. 8: Percent of Pupils by Council who completed Primary school in 2011 and 2012

Source: Compiled Data from Councils, Education Departments, 2013

Table 5. 29: Number of Pupils who Enrolled in std I in 2005 and Completed std VII in 2011 and Those Who Enrolled in std I in 2006 and completed std VII in 2012, Pwani Region

Council	Enrolled STD I in 2005 and Completed STD VII in 2011						Enrolled in STD I in 2006 and Completed STD VII in 2012						Percent of the Total Enrolment		Percent of those who Completed	
	2005			2011			2006			2012						
	Enrolled		Total	Completed		Total	Enrolled		Total	Completed		Total				
	Boys	Girls		Boys	Girls		Boys	Girls		Boys	Girls					
Bagamoyo	3,258	3,089	6,347	2,418	2,570	4,988	3,981	4,042	8,023	2,981	3,226	6,207	20.9	24.2	78.6	77.4
Kibaha DC	1,023	893	1,916	757	746	1,503	958	973	1,931	780	784	1,564	6.3	5.8	78.4	81.0
Kisarawe	1,806	1,756	3,562	1,582	1,508	3,090	1,822	1,779	3,601	1,623	1,517	3,140	11.7	10.9	86.7	87.2
Mkuranga	4,175	3,842	8,017	2,771	3,015	5,786	3,958	4,019	7,977	2,376	2,674	5,050	26.4	24.1	72.2	63.3
Rufiji	3,426	3,579	7,005	2,969	3,014	5,983	3,560	4,067	7,627	2,594	3,382	5,976	23.1	23.0	85.4	78.4
Mafia	726	767	1,493	608	708	1,316	693	614	1,307	503	584	1,087	4.9	3.9	88.1	83.2
Kibaha TC	960	1,029	1,989	1,112	1,306	2,418	1,359	1,338	2,697	1,235	1,243	2,478	6.6	8.1	121.6	91.9
Total	15,374	14,955	30,329	12,217	12,867	25,084	16,331	16,832	33,163	12,092	13,410	25,502	100	100	82.7	76.9
Percentage by Sex	50.7	49.3	100.0	48.7	51.3	100.0	49.2	50.8	100.0	47.4	52.6	100.0				

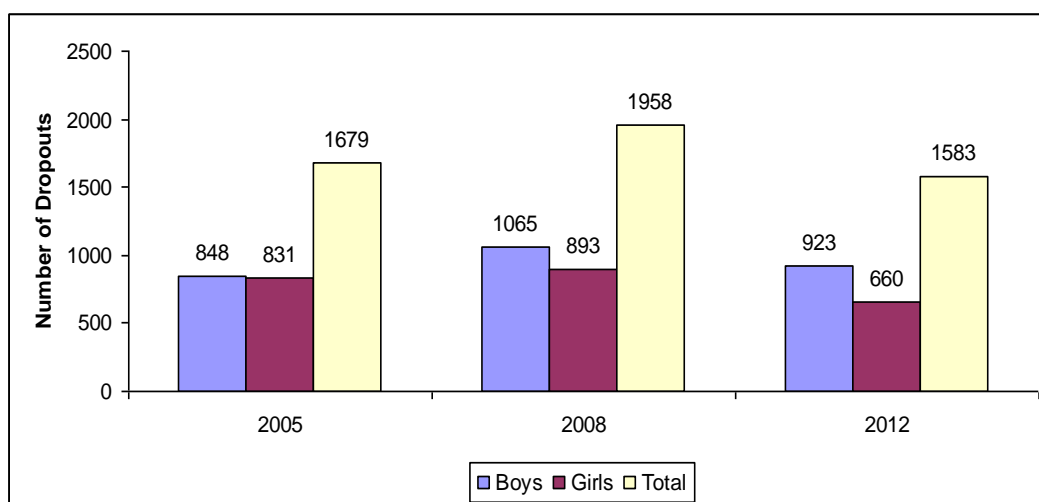
Source: Compiled Data from Councils, Education Departments, 2013

5.2.4 Primary School Dropout

Table 5.30 shows pupils dropouts in public primary schools in three years; 2005, 2008 and 2012 in Pwani region. The largest number of dropouts was 1,958 pupils in 2008. Year 2005 was second with 1,679 dropouts and 2012 had the smallest number of dropouts at 1,583. In all three years, there were more boys dropouts than girls. Table 5.30 shows that boys' dropouts were 2,836 (54.3 percent) and girls (2,384, 45.7 percent). In all three years, Rufiji district council had the largest number of primary schools dropouts (2,015). This was

equivalent to 38.6 percent of the region's total dropouts of 5,220 pupils. The Pwani Regional Authority in collaboration with the Rufiji district council should take this as a challenge and find out why Rufiji was leading in primary school pupils' dropouts. Next to Rufiji was Bagamoyo which accounted for 19.9 percent of the total dropouts and the last one was Kibaha which had dropouts of 2.6 percent (136 dropouts). Likewise, table 5.30 shows truancy was the most common source of dropouts for pupils in primary schools. It accounted for 79.5 percent (4,151) of all (5,220) dropouts in the region. The second cause was pregnancy with 324 dropouts equivalent to 6.2 percent of all dropouts in the region. Bagamoyo district council had the largest number of dropouts due to pregnancy (134 cases, 41.4 percent of all pregnancy dropouts' cases in the region in all three years). Deaths were the source of dropouts for 191 pupils (3.7 percent of all dropouts in the region) and dropouts due to 'other reasons were 554 or 10.6 percent of all dropouts in the region.

Figure 5. 9: Pupil Dropouts in Public Primary Schools by Sex, Pwani Region; 2005,2008 and 2012



Source: Compiled Data from Councils, Education Departments, 2013

Table 5. 30: Pupils Dropouts by Reason and Council, Pwani Region; 2005,2008 and 2012

Council	Reason	2005			2008			2012			Total Dropouts			Percent of the Total
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	2005,2008 and 2012			
											Boys	Girls	Total	
Bagamoyo	Truancy	112	91	203	153	86	239	127	87	214	392	264	656	12.6
	Pregnancy		105	105		19	19		10	10	0	134	134	2.6
	Death	8	6	14	14	12	26	17	7	24	39	25	64	1.2
	Other	21	15	36	40	30	70	47	33	80	108	78	186	3.6
	Total	141	217	358	207	147	354	191	137	328	539	501	1040	19.9
Kibaha DC	Truancy	26	22	48	23	15	38	41	24	65	90	61	151	2.9
	Pregnancy		2	2		6	6		1	1	0	9	9	0.2
	Death	4	1	5	1	1	2	1	1	2	6	3	9	0.2
	Other	3	0	3	10	13	23	23	10	33	36	23	59	1.1
	Total	33	25	58	34	35	69	65	36	101	132	96	228	4.4
Kisarawe	Truancy	271	159	430	ND	ND	ND	116	66	182	387	225	612	11.7
	Pregnancy		48	48		ND	ND		4	4	0	52	52	1.0
	Death	7	5	12	ND	ND	ND	3	3	6	10	8	18	0.3
	Other	4	0	4	ND	ND	ND	5	5	10	9	5	14	0.3
	Total	282	212	494				124	78	202	406	290	696	13.3
Mkuranga	Truancy	134	119	253	241	165	406	13	12	25	388	296	684	13.1
	Pregnancy		32	32		1	1		0	0	0	33	33	0.6
	Death	12	11	23	4	4	8	0	0	0	16	15	31	0.6
	Other	0	0	0	8	9	17	0	0	0	8	9	17	0.3
	Total	146	162	308	253	179	432	13	12	25	412	353	765	14.7

Table 5. 30 (ctd): Pupils Dropouts by Reason, Pwani Region; 2005,2008 and 2012

Council	Reason	2005			2008			2012			Total Dropouts			Percent of the Total
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	2005,2008 and 2012			
											Boys	Girls	Total	
Rufiji	Truancy	146	64	210	435	287	722	435	287	722	1016	638	1654	31.7
	Pregnancy		35	35		0	0		28	28	0	63	63	1.2
	Death	4	3	7	7	10	17	7	10	17	18	23	41	0.8
	Other	12	19	31	60	61	121	61	44	105	133	124	257	4.9
	Total	162	121	283	502	358	860	503	369	872	1167	848	2015	38.6
Mafia	Truancy	44	36	80	69	171	240	7	5	12	120	212	332	6.4
	Pregnancy		2	2		2	2		1	1	0	5	5	0.1
	Death	0	0	0	0	0	0	1	2	3	1	2	3	0.1
	Other	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	Total	44	38	82	69	173	242	8	8	16	121	219	340	6.5
Kibaha TC	Truancy	28	20	48	0	1	1	8	5	13	36	26	62	1.2
	Pregnancy		23	23		0	0		5	5	0	28	28	0.5
	Death	8	11	19	0	0	0	2	4	6	10	15	25	0.5
	Other	4	2	6	0	0	0	9	6	15	13	8	21	0.4
	Total	40	56	96	0	1	1	19	20	39	59	77	136	2.6
Regional Droputs	Total	848	831	1679	1065	893	1958	923	660	1583	2836	2384	5220	100.0
Regional Total Std (1-VII) Enrolment		101,027	89,322	190,349	105,683	100,337	206,020	98,174	100,059	198,233				
Percent of Dropouts to Total Enrolment		0.8	0.9	0.9	1.0	0.9	1.0	0.9	0.7	0.8				

Source: Compiled Data from Councils, Education Departments, 2013

5.2.5 Pass Rate in Primary Schools

For eight years period, 2005-2012, 180,654 pupils sat for standard seven examinations in Pwani region (Table 5.31). Among them, 112,398 pupils equivalent to 62.2 percent passed examinations. Percent of pupils who passed against those who sat for examinations were highest in 2005 at 76.8 percent and the lowest at 52.7 percent in 2009. Moreover, the Regional Authority in collaboration with councils should find out why girls sat for examinations, though were in bigger number (91,120) than boys (89,534), few of them (51,565) than boys (60,833) passed examinations.

Table 5. 31: Number of Pupils Who Sat and Passed STD VII Examinations in Public Primary Schools, Pwani Region; 2005-2012

Year	Pupils Sat for STD VII Examinations			Pupils Passed STD VII Examinations			Percentage of Pupils Who Passed		Percent of Total Pupils Who Passed
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	
2005	5,439	5,360	10,799	4,441	3,853	8,294	81.7	71.9	76.8
2006	8,850	8,514	17,364	6,859	6,166	13,025	77.5	72.4	75.0
2007	11,306	10,744	22,050	8,046	5,643	13,689	71.2	52.5	62.1
2008	14,263	14,553	28,816	10,097	7,453	17,550	70.8	51.2	60.9
2009	13,769	13,873	27,642	8,334	6,232	14,566	60.5	44.9	52.7
2010	12,018	12,076	24,094	7,426	6,283	13,709	61.8	52.0	56.9
2011	12,357	13,359	25,716	7,945	7,755	15,700	64.3	58.1	61.1
2012	11,532	12,641	24,173	7,685	8,180	15,865	66.6	64.7	65.6
Total	89,534	91,120	180,654	60,833	51,565	112,398	67.9	56.6	62.2

Source: Compiled Data from Councils, Education Departments, 2013

5.2.6 Transition to Secondary Education

In the education hierarchy, primary education leads to secondary education and then tertiary or university education. Transition from primary to secondary education is marked by an examination which aspiring pupils must pass before proceeding to higher education.

Table 5.32 gives the number of pupils who sat for std VII examinations and those who joined Form One in public and private secondary schools in the region. The pupils who sat for std VII examinations were 24,173 of whom 11,532(47.7 percent) were boys and 12,641(52.3 percent were girls). Table 5.32 also shows that 16,487 pupils joined Form one in public secondary schools compared to 1,980 pupils who joined private secondary schools. Bagamoyo district council led in number of pupils who joined in public secondary schools

(5,499) while Mkuranga was leading in number of pupils who joined in private secondary schools (1,572).

Table 5. 32: Number of Pupils Who Sat for STD VII Examination in Public Primary Schools and Joined Form I in Public and Private Secondary Schools, Pwani Region; 2012

Council	Pupils Sat for Std VII Examination			Pupils Joined Form One in						Percent Selected for	
				Public Sec. School			Private Sec. School			Public Sec. School	Private Sec. School
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total		
Bagamoyo	3,363	3,560	6,923	2,740	2,759	5,499	20	24	44	79.4	0.6
Kibaha DC	680	736	1,416	501	521	1,022	0	0	0	72.2	0
Kisarawe	934	903	1,837	934	903	1,837	0	0	0	100	0
Mkuranga	2,376	2,674	5,050	1,312	1,465	2,777	775	797	1,572	55.0	31.1
Rufiji	2,497	2,855	5,352	1,566	1,551	3,117	0	0	0	57.2	0
Mafia	503	584	1,087	260	323	583	0	0	0	53.6	0
Kibaha TC	1,179	1,329	2,508	807	845	1,652	85	279	364	65.9	14.5
Total	11,532	12,641	24,173	8,120	8,367	16,487	880	1,100	1,980	68.2	8.2
Percent by Sex	47.7	52.3	100.0	49.3	50.7	100.0	44.4	55.6	100.0		

Source: Compiled Data from Councils, Education Departments, 2013

5.2.7 Primary School Facilities

A teacher is the single most important factor in the development of primary education. He is followed by primary school facilities such classrooms, pit latrines, teachers' houses, desks, teachers' offices, school furnitures, water tanks etc.

i) Classrooms

The Tanzania Ministry of Education and Vocational Training, recommends the number of pupils per class-room to be 45. A classroom with more than 45 pupils does not adhere to the national standard and is an indication of classroom shortage.

At the end of 2012, Pwani region had a total of 534 public primary schools having a total of 3,753 classrooms which accommodated 214,683 pupils (Table 5.33). This made the region to have a Pupil Classroom Ratio (PCR) of 1:57 which was higher than the national standard signifying classroom shortage. At council level, five councils in the region were facing a shortage of primary school classrooms in 2012. Mkuranga which had a pupil classroom ratio

of 1:81 was considered to have a critical shortage of classrooms. Other councils with classroom shortage were Bagamoyo DC with a PCR of 1:59, Rufiji DC (1:58), Kibaha TC (1:53) and Kibaha DC (1:48). Kisarawe and Mafia district councils each with PCR of 1:40 were within the national standard of PCR of 1:45.

Table 5. 33: Availability of Classrooms in Public Primary Schools by Council, Pwani Region; 2012

Council	Number of Schools	Total Pupils	Available Classrooms	Average Number of Classroom per School	Classroom Pupils Ratio (PCR)	Required Classrooms	Deficit/Excess of Classrooms	
							Number	Percent
Bagamoyo	129	53,406	909	7	1:59	1,187	-278	-23.4
Kibaha DC	37	13,449	283	8	1:48	299	-16	-5.4
Kisarawe	80	21,872	542	7	1:40	486	+56	11.5
Mkuranga	104	48,888	601	6	1:81	1,086	+485	-44.7
Rufiji	115	50,150	859	7	1:58	1,114	-255	-22.9
Mafia	32	8,504	211	7	1:40	189	+22	11.6
Kibaha TC	37	18,414	348	9	1:53	409	-61	-14.9
Total	534	214,683	3,753	7	1:57	4,770	-1,017	-21.3

Source: Compiled Data from Councils, Education Departments, 2013

ii) Pit Latrine

Table 5.34 shows that in 2012 there were 5,022 pit latrines in 534 public primary schools with an average of 9 pit latrines per school. The standard set by the Government of Tanzania is a pit latrine pupil ratio of 1:20 for girls and 1:25 for boys. Unfortunately, table 5.34 does not show number of pupils and pit latrines pupil by sex, therefore, the general pit latrine ratio shown in the table just depicts general situation of the availability of pit latrines in schools. In 2012, on average, 43 pupils in public primary schools in Pwani region were using one pit latrine. However; the region required 11,615 pit latrines and therefore had a shortage of 6,593 pit latrines (57 percent deficit). Primary schools in Rufiji had critical deficit of pit latrines as on average, one pit latrine was used by 50 pupils.

Table 5.34: Availability of Pit Latrines in Public Primary Schools by Council, Pwani Region; 2012

Council	No of Schools	Total Pupils	Available Pit Latrine	Average number of Pit Latrine per School	Pit Latrine Pupils Ratio	Required Pit Latrine	Deficit/ Excess of Pit Latrines	
							Number	Percent
Bagamoyo	129	53,406	1,175	9	1:45	2,643	-1,468	-55.4
Kibaha DC	37	13,449	319	9	1:42	692	-373	-53.9
Kisarawe	80	21,872	759	9	1:29	1,501	-742	-49.4
Mkuranga	104	48,888	992	10	1:49	2,978	-1,986	-66.7
Rufiji	115	50,150	994	9	1:50	2,496	-1,502	-60.2
Mafia	32	8,504	244	8	1:35	383	-139	-36.3
Kibaha TC	37	18,414	539	15	1:34	922	-383	-41.5
Total	534	214,683	5,022	9	1:43	11,615	6,593	56.8

Source: Compiled Data from Councils, Education Departments, 2013

iii) Staff Houses

Teachers' houses are important for teachers' welfare, school security and general efficiency of school services through teachers being on site. Table 5.35 highlights that in 2012 the region only had 1,291 teachers' houses leaving a substantial deficit of 4,999 houses or 79 percent. Moreover, all district councils had deficits ranging from 50 percent for Mafia to 95 percent for Bagamoyo.

Table 5.35: Availability of Public Primary School Teachers' Houses by Council, Pwani Region; 2012

Council	Required Teachers	Number of Available Teachers	Required Houses	Available Houses	Deficit of Houses	Deficit as Percent of the Required Houses	
						Percent of Available Houses	Percent of Available Houses
Bagamoyo	1,741	1,327	1,741	85	-1,656	-95	6.6
Kibaha DC	584	402	584	139	-445	-76	10.8
Kisarawe	728	553	728	292	-436	-60	22.6
Mkuranga	1,254	1,154	1,254	215	-1,039	-83	16.7
Rufiji	1,263	1,022	1,263	346	-917	-73	26.8
Mafia	216	196	216	108	-108	-50	8.4

Kibaha TC	504	613	504	106	-398	-79	8.2
Total	6,290	5,267	6,290	1,291	-4,999	-79	100.0

Source: Compiled Data from Councils, Education Departments, 2013

iv) Furniture (Desks)

The average number of pupils per desk is an important indicator of the provision of favourable and conducive learning environment for pupils. For primary schools, the recommended desk pupils ratio (DPR) is three pupils per desk (1:3). Based on the recommended DPR, table 5.36 shows that at regional level, primary schools in Pwani region had a shortage of desks. At council level, Kibaha DC, Kisarawe and Mafia complied with the national requirement of 3 pupils per desk while Bagamoyo, Kibaha TC, Rufiji and Mkuranga districts with a DPR of 1:4 had desks shortages. At regional level, there was a deficit of 36,846 desks or 38.5 percent.

Table 5. 36: Availability of Desks in Public Primary Schools by Council, Pwani Region; 2012

Council	Total Pupils	Available Desks	Desk Pupil Ratio	Required Desks	Deficit/Excess of Desks	
					Number	Percent
Bagamoyo	53,406	13,594	1:4	17,800	-4,206	-23.6
Kibaha DC	13,449	4,642	1:3	7,576	-2,934	-38.7
Kisarawe	21,872	8,689	1:3	10,936	-2,247	-20.5
Mkuranga	48,888	11,819	1:4	24,514	-12,695	-51.8
Rufiji	50,150	11,823	1:4	24,530	-12,707	-51.8
Mafia	8,504	3,198	1:3	4,255	-1,057	-24.8
Kibaha TC	18,414	5,133	1:4	6,133	-1,000	-16.3
Total	214,683	58,898	1:4	95,744	-36,846	-38.5

Source: Compiled Data from councils, Education Departments, 2013

v) Accessibility of Water

Water is not only important but also necessary for human beings and other living organisms. Availability of water in primary schools is very important. Schools having water sources within their compounds can improve their sanitation levels. In addition, the availability of water sources within primary school premises reduce time spent by pupils on fetching water. Table 5.37 shows that sources of water in primary schools differ among the councils. Topographic variations and availability of water bodies among councils determine type and sustainability of water sources used not only by pupils in primary schools, but also at households' level. Table 5.37 shows sources of water mainly used to supply water in primary schools in Pwani region.

Table 5.37: Accessibility of Water in Public Primary Schools by Council, Pwani Region, 2008 and 2012

Council	2008			2012		
	Number of Primary Schools with			Number of Primary Schools with		
	Water Tanks	Water Wells	Tap Water	Water Tanks	Water Wells	Tap Water
Bagamoyo	8	25	22	14	35	36
Kibaha DC	12	0	8	14	0	11
Kisarawe	19	4	2	35	7	2
Mkuranga	55	6	0	89	19	0
Rufiji	0	1	2	0	7	4
Mafia	2	18	1	4	21	1
Kibaha TC	7	1	16	5	0	28
Total	103	55	51	161	89	82

Source: Compiled Data from councils, Education Departments, 2013

vi) Teachers

Teacher Pupil Ratio (TPR) is an important indicator of the quality of education provided in schools. The national standard is one teacher should serve a class of 45 pupils (1:45). Table 5.38 shows that in 2012, majority of primary schools in Pwani region had teachers' pupil ratio (TPR) within the national standard. Rufiji with TPR of 1:49 was the only district council having shortage of teachers.

Table 5.38: Availability of Teachers (Grade A, B, Diploma and Degree) in Public Primary Schools by Council, Pwani Region; 2012

Council	Total Pupils	Teachers Required	Available Teachers	Deficit/Excess	Percent Deficit/Excess	Teacher Pupil Ratio
Bagamoyo	53,406	1,335	1,320	-15	-1.1	1:40
Kibaha DC	13,449	747	402	-345	-46.2	1:33
Kisarawe	21,872	728	553	-175	-24.0	1:40
Mkuranga	48,888	1,279	1,147	-132	-10.3	1:43
Rufiji	50,150	1,263	1,022	-241	-19.1	1:49
Mafia	8,504	223	196	-27	-12.1	1:43
Kibaha TC	18,414	405	613	+208	+51.4	1:30
Total	214,683	5,980	5,253	-727	-12.2	1:41

Source: Compiled Data from Councils, Education Departments, 2013

5.2.8 Secondary Education

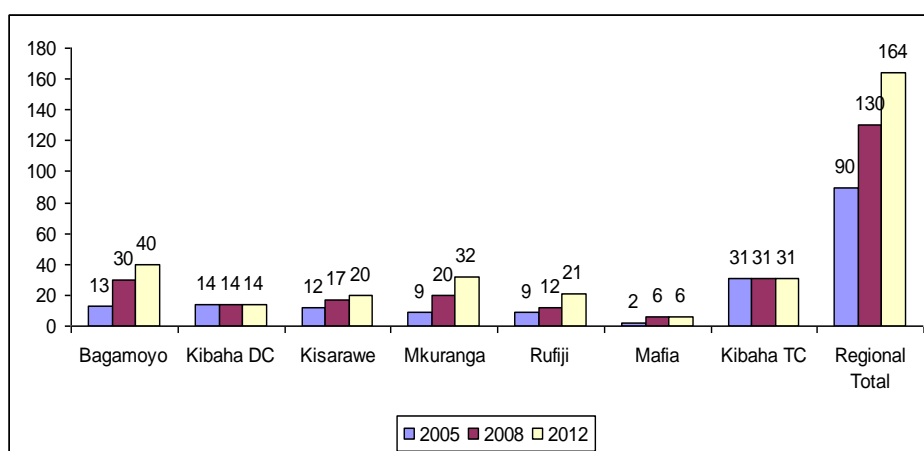
i) Introduction

Secondary education is optional. But many parents and students have discovered its value in preparing young people for the future. Hence there has been a dramatic increase in both enrolment and the number of secondary schools throughout the country. The policy of a secondary school per ward which was introduced by the government in early 2006 plays a big role in increasing number of secondary schools and enrolment in the region and the entire country. Private sector participation in the establishment of secondary schools is another reason for the increase in the number of secondary schools in the country.

ii) Number of Secondary Schools

Table 5.39 shows that number of secondary schools in the region increased from 90 in 2005 to 130 in 2008 and then reached 164 in 2012. Number of public secondary schools was higher than private. Figure 5.10 shows that in 2012, Bagamoyo had the largest number of secondary schools (40) equivalent to 24.4 percent of total secondary schools in the region). It was followed by Mkuranga (32, 19.5 percent), Kibaha TC (31, 18.9 percent), Rufiji (21, 12.8 percent), Kisarawe (20, 12.2 percent) and Kibaha DC (14, 8.5 percent). Mafia had the smallest number of secondary schools (6) (3.7 percent). Moreover, in 2012 Bagamoyo district council was leading in number of public secondary schools (24) and Kibaha TC led in number of private secondary schools (20).

Figure 5. 10: Number of Secondary Schools by Council, Pwani Region; 2005,2008 and 2012



Source: Compiled Data from Councils, Education Departments, 2013

Table 5. 39: Number of Secondary Schools by Ownership and Council, Pwani Region; 2005,2008 and 2012

Council	2005			2008			2012			Percent
	Public	Private	Total	Public	Private	Total	Public	Private	Total	
Bagamoyo	6	7	13	17	13	30	24	16	40	24.4
Kibaha DC	8	6	14	8	6	14	8	6	14	8.5
Kisarawe	7	5	12	12	5	17	15	5	20	12.2
Mkuranga	4	5	9	12	8	20	22	10	32	19.5
Rufiji	9	0	9	11	1	12	19	2	21	12.8
Mafia	2	0	2	6	0	6	6	0	6	3.7
Kibaha TC	11	20	31	11	20	31	11	20	31	18.9
Regional Total	47	43	90	77	53	130	105	59	164	100
Percent	52.2	47.8	100.0	59.2	40.8	100.0	64.0	36.0	100.0	

Source: Compiled Data from Councils, Education Departments, 2013

The number of primary schools per secondary Schools has declined due to a significant increase in secondary schools (Table 5.40). The number was 5.3 primary schools per secondary school in 2005, 4.0 in 2011 and then reached 3.4 primary schools per secondary school in 2012. This decrease in ratio of primary school per secondary school shows efforts done by Pwani Region Secretariat to have adequate number of secondary schools which meet the increasing demand of pupils who join secondary schools.

Table 5. 40: Average Number of Primary Schools per Secondary School by Council, Pwani Region; 2005,2008 and 2012

Council	2005			2008			2012		
	No of Primary Schools	Number of Secondary Schools	Average No. of Primary Schools per Sec. School	No of Primary Schools	Number of Secondary Schools	Average No. of Primary Schools per Sec. School	No of Primary Schools	Number of Secondary Schools	Average No. of Primary Schools per Sec. School
Bagamoyo	115	13	8.8	124	30	4.1	133	40	3.3
Kibaha DC	35	14	2.5	36	14	2.6	37	14	2.6
Kisarawe	76	12	6.3	76	17	4.5	80	20	4.0
Mkuranga	90	9	10.0	100	20	5.0	108	32	3.4
Rufiji	104	9	11.6	111	12	9.3	115	21	5.5
Mafia	29	2	14.5	34	6	5.7	34	6	5.7
Kibaha TC	27	31	0.9	41	31	1.3	45	31	1.5
Regional Total	476	90	5.3	522	130	4.0	552	164	3.4

Source: Compiled Data from Districts, Education Departments, 2013

According to table 5.41, Pwani region succeeded in implementing the government policy of 2006 which prescribes a secondary school for each ward. On average, each ward in the region had secondary school (1.5). Kibaha TC did a recommendable job by having the largest number of secondary schools in one ward of 2.8 which was the highest in the region. Rufiji and Mafia district councils had the smallest secondary schools ward ratio of 0.8 each.

Table 5. 41: Distribution of Secondary Schools among Wards, by Council, Pwani Region; 2012

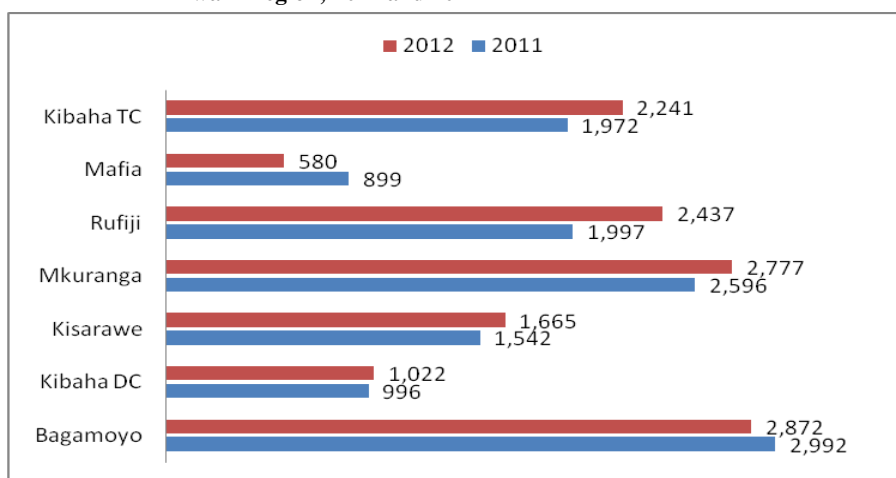
Council	Number of Secondary Schools	Number of Wards	Average Number of Schools per Ward	Rank
Bagamoyo	40	22	1.8	2
Kibaha DC	14	11	1.3	3
Kisarawe	20	15	1.3	3
Mkuranga	32	18	1.8	2
Rufiji	21	27	0.8	4
Mafia	6	8	0.8	4
Kibaha TC	31	11	2.8	1
Regional Total	164	112	1.5	

Source: Compiled Data from Councils, Education Departments, 2013

iii) Form (I-IV) Enrolment

With reference to Table 5.42, there was an increase of 600 students or 4.6 percent in the total form (I-IV) enrolment from 12,994 in 2011 to 13,594 in 2012 (Table 5.42). In both 2011 and 2012 there were more boys than girls enrolled into secondary schools in the region. Table 5.42 shows that in 2011, boys accounted for 53.4 percent of all the students compared to 46.6 percent of girls. In 2012, boys' students accounted for 50.2 percent against 49.8 percent of girls. On the other hand, girl's enrolment went up by 11.8 percent or 713 students from 6,058 in 2011 to 6,771 in 2012 while boy's enrolment dropped by 1.6 percent or 113 students from 6,936 in 2011 to 6,823 in 2012.

In 2012 the council with the largest enrolment was Bagamoyo which enrolled a total of 2,872 student (21.1 percent of total students enrolled in all secondary schools in the region). It was followed by Mkuranga (2,777 students, 20.4 percent), Rufiji (2,437 students, 17.9 percent), Kibaha TC (2,241 students, 16.5 percent), Kisarawe (1,665 students, 12.2 percent) and Kibaha DC (1,022 students, 7.5 percent), Mafia registered the smallest number of students with 580 students (4.3 percent) in 2012.

Figure 5. 11: Form (I-IV) Enrolment in Public and Private Secondary Schools, Pwani Region; 2011 and 2012

Source: Compiled Data from Councils, Education Departments, 2013

Table 5. 42: Total Form (I-IV) Enrolment in both Public and Private Secondary Schools by Sex and Council, Pwani Region; 2011 and 2012

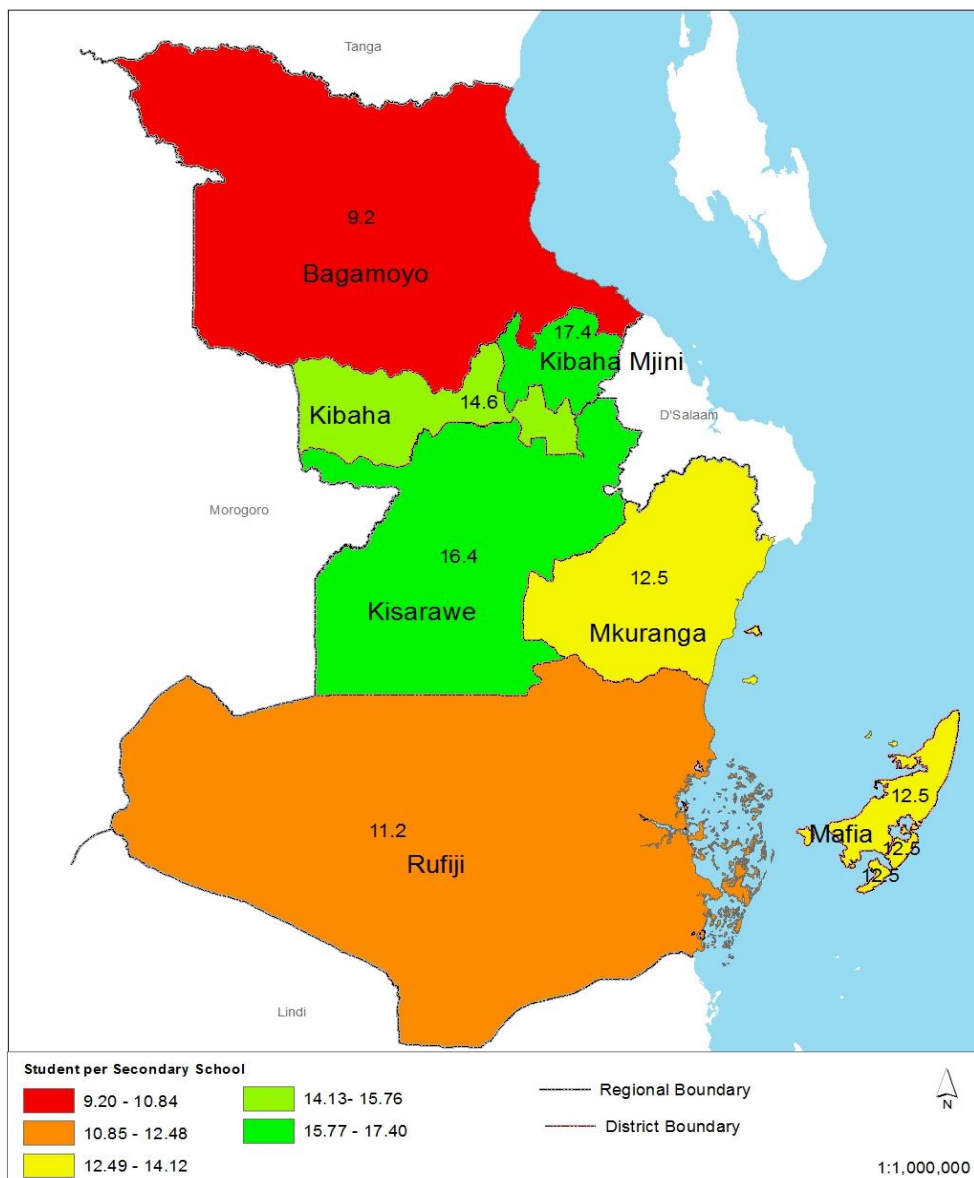
Council	2011								2012							
	Boys				Girls				Boys				Girls			
	Number	Percent Share	Number	Percent Share	Boys and Girls	Percent Boys	Percent Girls	Number	Percent Share	Number	Percent Share	Boys and Girls	Percent Boys	Percent Girls	Number	Percent Share
Bagamoyo	1,608	23.2	1,384	22.8	2,992	53.7	46.3	1,418	20.8	1,454	21.5	2,872	49.4	50.6		
Kibaha DC	491	7.1	505	8.3	996	49.3	50.7	501	7.3	521	7.7	1,022	49.0	51.0		
Kisarawe	867	12.5	675	11.1	1,542	56.2	43.8	857	12.6	808	11.9	1,665	51.5	48.5		
Mkuranga	1,256	18.1	1,340	22.1	2,596	48.4	51.6	1,312	19.2	1,465	21.6	2,777	47.2	52.8		
Rufiji	1,284	18.5	713	11.8	1,997	64.3	35.7	1,413	20.7	1,024	15.1	2,437	58.0	42.0		
Mafia	417	6.0	482	8.0	899	46.4	53.6	257	3.8	323	4.8	580	44.3	55.7		
Kibaha TC	1,013	14.6	959	15.8	1,972	51.4	48.6	1,065	15.6	1,176	17.4	2,241	47.5	52.5		
Regional Total	6,936	100.0	6,058	100.0	12,994	53.4	46.6	6,823	100.0	6,771	100.0	13,594	50.2	49.8		

Source: Compiled Data from Councils, Education Departments, 2013

Table 5.43 shows that in the year 2012 Pwani region had 12.4 students per 1000 of the population. This means that for every 1000 people in the region in 2012, there were 12.4 secondary school students. Kibaha TC had the largest number of students per 1000 of the population at 17.4 followed by Kisarawe (16.4), Kibaha DC (14.6), Mkuranga and Mafia (12.5 students each), Rufiji (11.2) and Bagamoyo had the smallest number of students per 1000 of the population (9.2). Table 5.43 also shows that in 2012 there were an average of 83 secondary school students per secondary school and 121.4 students per ward in the region. Rufiji had the largest average number of students per school (116) while Mkuranga had

largest average number of students per ward (154.3). Bagamoyo and Kibaha TC had the smallest average number of students per school (72) and Mafia had smallest average number of students per ward (72.5)

Map 5. 3: Average number of students per Secondary school by Council, Pwani Region; 2012



Source: National Bureau of Statistics, Geographical Information System Unit, 2013

Table 5. 43: Number of Form (I-IV) Students in Secondary schools per 1000 of the Population,by Council, Pwani Region; 2012

Council	Total Population (Based on 2012 Census)	Total Enrolment Form (I-IV) students	Number of Secondary Schools (Public and Private)	Number of Wards	Average Number of Students Per		
					1000 of the Population.	Sec. School	Ward
Bagamoyo	311,740	2,872	40	22	9.2	72	130.5
Kibaha DC	70,209	1,022	14	11	14.6	73	92.9
Kisarawe	101,598	1,665	20	15	16.4	83	111.0
Mkuranga	222,921	2,777	32	18	12.5	87	154.3
Rufiji	217,274	2,437	21	27	11.2	116	90.3
Mafia	46,438	580	6	8	12.5	97	72.5
Kibaha TC	128,488	2,241	31	11	17.4	72	203.7
Regional Total	1,098,668	13,594	164	112	12.4	83	121.4

Source: Compiled Data from Councils, Education Departments, 2013.

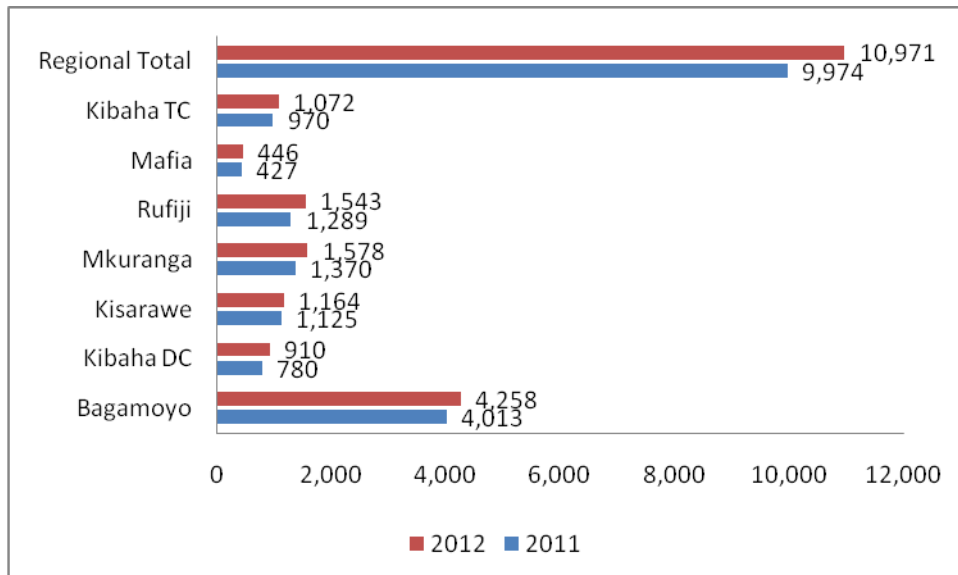
iv) Form IV Completion Rate

Table 5.44 shows that there were 9,974 students in 2011 and 10,971 in 2012 who completed Form IV education in public and private secondary schools in the region. In each year, smaller number of girls than boys completed Form IV education. Girls' students accounted for 41.0 percent in 2011 and 42 percent in 2012 of the total students completing form IV education. The Table also shows that the proportion of girls who completed Form IV increased from 41.0 percent in 2011 to 42.0 percent in 2012. Consequently, the proportion of boys completing decreased from 59.0 percent in 2011 to 58.0 percent in 2012. Bagamoyo had the largest number of students (4,258) who completed form IV in 2012 while Mafia had the smallest (446 students).

Table 5. 44 : Students Who Completed Form IV in Public and Private Secondary Schools by Sex, Pwani Region; 2011 and 2012

Council	2011							2012						
	Boys		Girls		Total Of which			Boys		Girls		Total Of which		
	Number	Percent Share	Number	Percent Share	Boys and Girls	Percent Boys	Percent Girls	Number	Percent Share	Number	Percent Share	Boys and Girls	Percent Boys	Percent Girls
Bagamoyo	2,166	36.8	1,847	45.2	4,013	54.0	46.0	2,324	36.5	1,934	41.94	4,258	54.6	45.4
Kibaha DC	446	7.6	334	8.2	780	57.2	42.8	489	7.7	421	9.13	910	53.7	46.3
Kisarawe	734	12.5	391	9.6	1,125	65.2	34.8	699	11.0	465	10.08	1,164	60.1	39.9
Mkuranga	842	14.3	528	12.9	1,370	61.5	38.5	890	14.0	688	14.92	1,578	56.4	43.6
Rufiji	870	14.8	419	10.2	1,289	67.5	32.5	1,052	16.5	491	10.65	1,543	68.2	31.8
Mafia	235	4.0	192	4.7	427	55.0	45.0	259	4.1	187	4.06	446	58.1	41.9
Kibaha TC	591	10.0	379	9.3	970	60.9	39.1	647	10.2	425	9.22	1,072	60.4	39.6
Regional Total	5,884	100.0	4,090	100.0	9,974	59.0	41.0	6,360	100.0	4,611	100.00	10,971	58.0	42.0

Source: Compiled Data from Councils, Education Departments, 2013

Figure 5. 12: Number of Students Who Completed Form IV in Public and Private Secondary Schools by Sex and Council, Pwani Region; 2011 and 2012

Source: Compiled Data from Councils, Education Departments, 2013

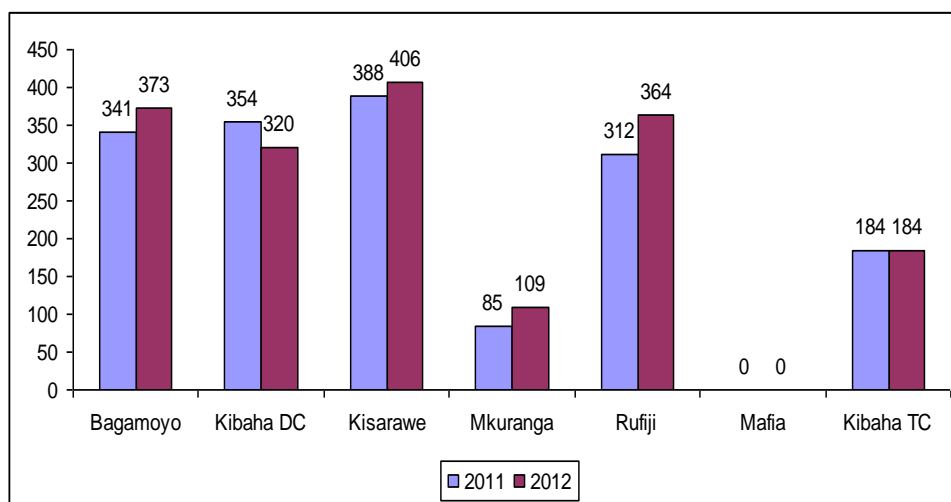
5.2.9 Form (V-VI) Enrolment

Table 5.45 shows that the students who enrolled in high school education increased by 5.5 percent (92 students) from 1,664 in 2011 to 1,756 in 2012. There was a bigger difference between boys and girls enrollment in 2011 than in 2012. In 2011, boys accounted for 80.9 percent of the total enrollment while girls accounted for 19.1 percent. In 2012 boys accounted 77.0 percent of total enrolment and girls accounted for 23.0 percent. In regard to enrolment for students of the same sex, Table 5.44 reveals that the enrollment of girls increased by 27.4 percent from 317 in 2011 to 404 in 2012 while that of boys increased by only 0.4 percent from 1,347 in 2011 to 1,352 in 2012. At council level, in both years Kisarawe had the largest high school enrolment while Mafia had no student enrolled in high school education (Table 5.45).

Table 5. 45: Total Form (V-VI) Students in Public Secondary Schools by Sex and Council, Pwani Region; 2011 and 2012

Council	2011							2012						
	Boys		Girls		Total of which			Boys		Girls		Total of which		
	Number	Percent Share	Number	Percent Share	Boys and Girls	Percent Boys	Percent Girls	Number	Percent Share	Number	Percent Share	Boys and Girls	Percent Boys	Percent Girls
Bagamoyo	239	17.7	102	32.2	341	70.1	29.9	219	16.2	154	38.12	373	58.7	41.3
Kibaha DC	139	10.3	215	67.8	354	39.3	60.7	70	5.2	250	61.88	320	21.9	78.1
Kisarawe	388	28.8	0	0.0	388	100.0	0.0	406	30.0	0	0.00	406	100.0	0.0
Mkuranga	85	6.3	0	0.0	85	100.0	0.0	109	8.1	0	0.00	109	100.0	0.0
Rufiji	312	23.2	0	0.0	312	100.0	0.0	364	26.9	0	0.00	364	100.0	0.0
Mafia	0	0.0	0	0.0	0	0.0	0.0	0	0.0	0	0.00	0	0.0	0.0
Kibaha TC	184	13.7	0	0.0	184	100.0	0.0	184	13.6	0	0.00	184	100.0	0.0
Regional Total	1,347	100.0	317	100.0	1,664	80.9	19.1	1,352	100.0	404	100.00	1,756	77.0	23.0

Source: Compiled Data from Councils, Education Departments, 2013

Figure 5. 13: Number of Form (V-VI) Students Enrolled in Public Secondary Schools, Pwani Region; 2011 and 2012

Source: Compiled Data from Councils, Education Departments, 2013

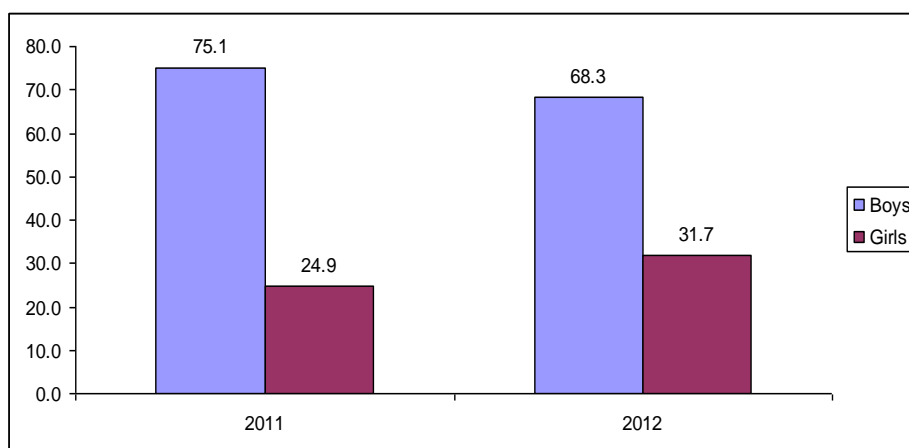
Form VI Completion Rate

Table 5.46 shows the number of students who completed high school education by sex in Pwani region. Number of students who completed high school in 2012 increased by 22.8 percent from 1,296 in 2011 to 1,591 students in 2012. The number of girls completing high school studies increased tremendously by 56 percent from 323 in 2011 to 504 in 2012. On the other hand, in 2012 boys who graduated from high school had increased by 11.7 percent from 973 of 2011 to 1,087 in 2012. Kibaha DC had the biggest increase in the number of high school graduates in 2012. They increased by 128 students or 56.4 percent from 227 in 2011 to 355 in 2012. It was followed by Rufiji (40 students, 18.1 percent increase), Kisarawe (38 students, 10.9 percent increase), Bagamoyo (25 students, 7.8 percent increase). Kibaha TC (13 students, 7.2 percent increase), Mkuranga had the first 51 students in 2012 while Mafia had no high school and hence, no students graduated.

Table 5. 46: Number of Students Who Completed High School in Public Secondary Schools by Sex and by Council, Pwani Region; 2011 and 2012

Council	2011							2012						
	Boys		Girls		Total of which			Boys		Girls		Total of which		
	Number	Percent Share	Number	Percent Share	Boys and Girls	Percent Boys	Percent Girls	Number	Percent Share	Number	Percent Share	Boys and Girls	Percent Boys	Percent Girls
Bagamoyo	224	23.0	96	29.7	320	70.0	30.0	196	18.0	149	29.56	345	56.8	43.2
Kibaha DC	0	0.0	227	70.3	227	0.0	100.0	0	0.0	355	70.44	355	0.0	100.0
Kisarawe	348	35.8	0	0.0	348	100.0	0.0	386	35.5	0	0.00	386	100.0	0.0
Mkuranga	0	0.0	0	0.0	0	0.0	0.0	51	4.7	0	0.00	51	100.0	0.0
Rufiji	221	22.7	0	0.0	221	100.0	0.0	261	24.0	0	0.00	261	100.0	0.0
Mafia	0	0.0	0	0.0	0	0.0	0.0	0	0.0	0	0.00	0	0.0	0.0
Kibaha TC	180	18.5	0	0.0	180	100.0	0.0	193	17.8	0	0.00	193	100.0	0.0
Regional Total	973	100.0	323	100.0	1,296	75.1	24.9	1,087	100.0	504	100.00	1,591	68.3	31.7

Source: Compiled Data from Councils, Education Departments, 2013

Figure 5. 14: Percentage of Students Who Completed High School in Public Secondary Schools, by Sex, Pwani Region; 2011 and 2012

Source: Compiled Data from Councils, Education Departments, 2013

5.2.10 Quantity and State of Secondary School Facilities

The most common resources/facilities are teachers, staff quarters, classrooms, libraries, laboratories, dormitories, desks and pit latrines. However, the following discussion only aims at indicating quantitative adequacy of the facilities in the region.

i) Teachers

Expansion of secondary education should always go hand in hand with the increase in the number of teachers. By the end of 2012, Pwani region had a total of 2,356 teachers distributed among 105 public secondary schools that were available in the region in that year. The average number of teachers per school was 22 (Table 5.47). Moreover, Kisarawe had 14 teachers more than those required by the district council.

In 2012 there were 2,356 teachers in public secondary schools in Pwani region. Given requirement of 3,122 teachers, there was a deficit of 766 teachers or a 24.5 percent deficit. The deficit of teachers among the districts ranged from 46.0 percent Mkuranga to 12.1 in Bagamoyo DC.

Table 5. 47: Distribution of Teachers among Public Secondary Schools by Council, Pwani Region; 2012

Council	Number of Public Sec. Schools	Required Teachers	Available Teachers	School Teacher Ratio	Deficit/Excess of Teachers	Percent Deficit/Excess of Teachers
Bagamoyo	24	779	685	1:29	-94	-12.1
Kibaha DC	8	338	249	1:31	-89	-26.3
Kisarawe	15	346	360	1:24	+14	+4.0
Mkuranga	22	504	272	1:12	-232	-46.0
Rufiji	19	397	227	1:12	-170	-42.8
Mafia	6	119	94	1:16	-25	-21.0
Kibaha TC	11	639	469	1:43	-170	-26.6
Regional Total	105	3,122	2,356	1:22	-766	-24.5

Source: Compiled Data from Councils, Education Departments, 2013

ii) Teachers' Houses

Teachers houses are important to teachers' welfare, school security and general efficiency of school services through teachers being on site. Table 5.48, shows that in 2012, there were only 427 teachers houses leaving a substantial deficit of 1,804 houses or 81.3 percent from the required 2,283 houses. All councils had large deficits ranging from 67.0 percent for Mafia to 90.0 percent for Kibaha TC. Bagamoyo had the largest share of the regional deficit of 462 houses represented 25.6 percent of the regional deficit of 1,804 houses. The Regional Authority should recognize the importance of teachers houses as a promoter of teacher retention and effective teaching. Therefore, efforts to improve performance of education system in the region, apart from focusing on employing more teachers, should also focus on building more teachers houses.

Table 5. 48: Availability of Teachers Houses in Public Secondary Schools, by Council, Pwani Region; 2012

Council	Number of Schools	Number of Teachers	Required Houses	Available Houses	Deficit of Houses	Percent Deficit/Excess of the Required Houses	Percent to the Regional Deficit
Bagamoyo	24	685	524	62	-462	-88.2	25.6
Kibaha DC	8	249	213	45	-168	-78.9	9.3
Kisarawe	15	360	360	73	-287	-79.7	15.9
Mkuranga	22	272	384	63	-321	-83.6	17.8
Rufiji	19	227	397	122	-223	-69.3	12.4
Mafia	6	94	94	31	-63	-67.0	3.5
Kibaha TC	11	469	311	31	-280	-90.0	15.5
Total	105	2,356	2,283	427	1,804	-81.3	100.0

Source: Compiled Data from Councils, Education Departments, 2013

iii) Classrooms

Classrooms are a key requirement for the development of education. In the year 2012 Pwani region had a deficit of 497 classrooms or 29.6 percent of its requirement. Of the councils, Mkuranga had most of the deficit at 126 classrooms or 25.4 percent of the regional deficit. Even Bagamoyo with the least deficit (25.3 percent) had a gap to fill in terms of new classrooms. It required 98 additional classrooms in 2012 (Table 5.49).

Table 5.49: Availability of Classrooms in Public Secondary Schools, by Council, Pwani Region; 2012

Council	Number of Public Secondary Schools	Number of Classrooms		Average Available Classrooms per School	Deficit of Classrooms		Percent to the Regional Classroom Deficit
		Required	Available		Number	Percent	
Bagamoyo	24	387	289	12.0	-98	-25.3	19.7
Kibaha DC	8	153	113	14.1	-40	-26.1	8.0
Kisarawe	15	232	163	10.9	-69	-29.7	13.9
Mkuranga	22	346	220	10.0	-126	-36.4	25.4
Rufiji	19	261	174	9.2	-77	-33.3	15.5
Mafia	6	104	72	12.0	-32	-30.8	6.4
Kibaha TC	11	198	143	13.0	-55	-27.8	11.1
Total	105	1,681	1,174	11.2	-497	-30.2	100.0

Source: Compiled Data from Councils, Education Departments, 2013

iv) Pit Latrines

The deficit of pit latrines in the region was 1,555 for the year 2012. Mafia had the least share of the regional deficit at 104 latrines while on the other hand, Bagamoyo had the largest share of 431 pit latrines. The 105 public secondary schools that were available in the region in 2012 had on average 15 pit latrines per school. Secondary schools in Kibaha TC had the largest average number of pit latrines per school at 21, while Kisarawe and Mafia had the smallest average number of 11 pit latrines per school each (Table 5.50).

Table 5. 50 : Availability of Pit Latrines in Public Secondary Schools, by Council, Pwani Region; 2012

Council	Number of Public Secondary Schools	Number of Pit Latrine		Average Available pit latrines per School	Deficit of Pit latrines		Percent to the Regional Pit Latrine Deficit
		Required	Available		Number	Percent	
Bagamoyo	24	783	352	15	-431	-55.0	27.7
Kibaha DC	8	247	137	17	-110	-44.5	7.1
Kisarawe	15	350	165	11	-185	-52.9	11.9
Mkuranga	22	630	390	18	-240	-38.1	15.4
Rufiji	19	497	287	15	-210	-42.3	13.5
Mafia	6	168	64	11	-104	-61.9	6.7
Kibaha TC	11	507	232	21	-275	-54.2	17.7
Total	105	3,182	1,627	15	-1,555	-48.9	100.0

Source: Compiled Data from Councils, Education Departments, 2013

v) Dormitories

The availability of dormitories help students solve the problem of walking long distances to school, give students more time for self study, reduces truancy as well as help to reduce girls students drop outs due to pregnancies. Table 5.51, shows that in 2012 a total of 542 dormitories were required out of which 122 were available. This left a deficit of 77.5 percent or 420 dormitories. The most desperate council in this regard was Kibaha DC whose deficit stood at 91.1 percent. Secondary schools in Kisarawe were in better position in terms of dormitories availability as they had the least percentage deficit of 25 percent.

Table 5. 51: Availability of Dormitories/Hostels in Public Secondary Schools by Council; Pwani Region; 2012

Council	Number of Public Secondary Schools	Dormitories		Deficit of Dormitories		Percent to the Regional Dormitories' Deficit
		Required	Available	Number	Percent	
Bagamoyo	24	207	52	-155	-74.9	36.9
Kibaha DC	8	56	5	-51	-91.1	12.1
Kisarawe	15	24	18	-6	-25.0	1.4
Mkuranga	22	109	16	-93	-85.3	22.1
Rufiji	19	74	9	-65	-87.8	15.5
Mafia	6	9	1	-8	-88.9	1.9
Kibaha TC	11	63	21	-42	-66.7	10.0
Total	105	542	122	-420	-77.5	100.0

Source: Compiled Data from Councils, Education Departments, 2013

vi) Libraries

The library facility is considered essential but not crucial for the development of knowledge and skills of a student. According to the standards set by the Ministry of Education and Vocational Training, every secondary school should have a library to enable students borrow and use supplementary books besides textbooks.

Table 5.52 shows that out of 105 public secondary schools, only 26 had libraries in 2012. This left 82 schools without libraries and therefore, an equal number of new libraries to cater for the shortage of 75.9 percent. The situation was worst in Kisarawe, Mkuranga, Mafia and Kibaha TC which had one library each.

Table 5. 52: Availability of Libraries in Public Secondary Schools by Council, Pwani Region; 2012

Council	Number of Public Secondary Schools	Libraries		Deficit of Libraries		Percent to the Regional Libraries' Deficit
		Required	Available	Number	Percent	
Bagamoyo	24	24	14	-10	-41.7	12.2
Kibaha DC	8	8	2	-6	-75.0	7.3
Kisarawe	15	18	1	-17	-94.4	20.7
Mkuranga	22	22	1	-21	-95.5	25.6
Rufiji	19	19	6	-13	-68.4	15.9
Mafia	6	6	1	-5	-83.3	6.1
Kibaha TC	11	11	1	-10	-90.9	12.2
Total	105	108	26	-82	-75.9	100.0

Source: Compiled Data from Councils, Education Departments, 2013

vii) Desks

The deficit of desks in the region was 11,500 for the year 2012. According to table 5.53, Bagamoyo had serious deficit than other councils at 3,900 desks or 32.5 percent deficit to its requirements of 12,014 desks. Next was Rufiji with a deficit of 2,323 desks (24.8 percent of its requirements) following Mafia with a deficit of 689 desks (21.1 percent of its requirements), Kisarawe with a deficit of 1,043 desks (20.6 percent of its requirements), Mkuranga with a deficit of 1,121 desks (19.4 percent of its requirements) and Kibaha DC with a deficit of 2,443 desks (17.1 percent of its requirements. On the other hand Kibaha had excess of 9 desks therefore no shortages in the year 2012. In regard to availability of desks per school, Table 5.53 shows that Kibaha DC had the largest average number of desks per school of 1,478 and Mkuranga had the smallest average number of desks per school of 212.

Table 5. 53: Availability of Desks/Tables in Public Secondary Schools by Council, Pwani Region; 2012

Council	Number of Public Secondary Schools	Number of Desks		Number of Available Desks per School	Deficit of Desks		Percent to the Regionals' Desks Deficit
		Required	Available		Number	Percent	
Bagamoyo	24	12,014	8,114	338	-3,900	-32.5	33.9
Kibaha DC	8	14,268	11,825	1,478	-2,443	-17.1	21.2
Kisarawe	15	5,069	4,026	268	-1,043	-20.6	9.1
Mkuranga	22	5,792	4,671	212	-1,121	-19.4	9.7
Rufiji	19	9,318	7,005	369	-2,313	-24.8	20.1
Mafia	6	3,265	2,576	429	-689	-21.1	6.0
Kibaha TC	11	8,146	8,155	741	+9	+0.1	+0.1
Total	105	57,872	46,372	442	-11,500	19.9	100

Source: Compiled Data from Councils, Education Departments, 2013

viii) Laboratories

A laboratory is a necessary facility for students majoring in science subjects. The standard set by the Government is that each secondary school in the country should have at least three laboratories for physics, chemistry and biology subjects. Table 5.54 shows that in 2012 a total of 382 laboratories were required out of which 69 were available. This left a deficit of 81.9 percent or 313 laboratories. The most desperate council in this regard was Bagamoyo with a laboratory deficit of 105 (87.5 percent of its requirements). Next was Kisarawe (41, 85.4 percent) followed by Mafia (23, 85.2 percent), Mkuranga (55, 83.3 percent), Rufiji (44, 77.2 percent) and Kibaha DC (23, 76.7 percent). Kibaha TC had the smallest laboratory deficit at 22 (64.7 percent).

Table 5. 54: Availability of Laboratories in Public Secondary Schools by Council, Pwani Region; 2012

Council	Number of Public Secondary Schools	Number of laboratories		Deficit of Laboratories		Percent to the Regional Laboratorie Deficit
		Required	Available	Number	Percent	
Bagamoyo	24	120	15	-105	-87.5	33.5
Kibaha DC	8	30	7	-23	-76.7	7.3
Kisarawe	15	48	7	-41	-85.4	13.1
Mkuranga	22	66	11	-55	-83.3	17.6
Rufiji	19	57	13	-44	-77.2	14.1
Mafia	6	27	4	-23	-85.2	7.3
Kibaha TC	11	34	12	-22	-64.7	7.0
Total	105	382	69	-313	-81.9	100.0

Source: Compiled Data from Councils, Education Departments, 2013

5.2.11 Higher Learning Education

Higher education institution is a college, university or any other autonomous institution that offers a level of academic education or professional training that leads to full academic and or professional qualifications and competence. By the end of 2012, higher learning institutions/colleges in the region were Open University of Tanzania (headquarters in Kibaha Town Council), Bagamoyo Art of Institute and Agency for Development of Educational Management (ADEM) both in Bagamoyo district council.

5.2.12 Vocational Education

Vocational training is important in preparing youths for employment or self employment. Training of youths is the remedy for income poverty and also contributes significantly to the national and regional GDP. With reference to table 5.55, in 2012, there were 7 vocational training centres in the region distributed as follows; Bagamoyo (3), Kibaha TC (2), Mkuranga and Rufiji (1 for each district council). Kibaha DC, Kisarawe and Mafia had no vocational training centres. Since the region has a number of vocational training centres, the remaining challenge is to increasing the number of youths under training especially youths from rural areas. Reducing fees and explaining the importance of vocational educational to rural population would lead to more youths undergoing training and eventually being self employed which would reduce income poverty.

Table 5. 55 : List of Vocational Public and Private Training Schools/Centres, Pwani Region; 2012

Council	College	Major Skills Taught	Number of Students	
			Male	Female
Bagamoyo	Msata Vocational College	Community Development studies	28	37
	ADEM	Educational Management	218	286
	TASUBA	Arts,Nursing, Library	464	716
Kibaha TC	VETA Kongowe	Autoelectrical, Capentry and Journey, Electrical Installation, Electronics,Secretarial and Computer, Motor Vehicle Mechanical, Refregeration and Air Condition.	136	46
	Kibaha FDC	Driving,Agriculture/Livestock,Electricity,Carpentry,Mansonry ,Welding,Fabrication,Mechanics,Cooking,Tailoring and Plumbing.	210	162
Mkuranga	Vikindu TC	Education Curriculum	248	226
Rufiji	Ikwiriri FDC	Computer skills,Agriculture,Electrical and Cookery	20	25
Total			1,324	1,498

VTC: Vocational Training Centre

Source: Compiled Data from Councils, Education Departments, 2013

5.2.13 Education for the Disabled

The issue of disability has of late gained recognition worldwide. This is due to the fact that the level of disability appears to be on the increase in most societies. Hence, it is important to prepare programmes for the disabled pupils to get special education according to their type of impairment.

Table 5.56 shows that in 2012 there were 677 disabled pupils registered in primary schools in Pwani region. The majority of them (60 percent of the total disabled pupils) were males. Females accounted for the remaining 40 percent of the total pupils. Most of disabled pupils registered in primary schools suffered from intellectual impairment. These were 183 pupils or 27.0 percent of the total disabled pupils registered in primary schools in 2012. They were followed by physical impairment pupils (163, 24.1 percent), deaf (111 pupils, 16.4 percent). Both totally blind and optizim had the smallest number at 11 (1.6 percent).

Table 5. 56: Number of Pupils Enrolled in Primary Schools by Type of Impairment; Pwani Region; 2012

Type of Impairment	2008			2012			Percentage
	Male	Female	Total	Male	Female	Total	
Physical Impaired	149	101	250	93	70	163	24.1
Intellectual Impairment	100	60	160	121	62	183	27.0
Other Impaired	79	63	142	14	11	25	3.7
Deaf	66	45	111	66	45	111	16.4
Mentally Impaired	65	30	95	32	33	65	9.6
Low Vision	35	40	75	54	23	77	11.4
Total Blindness	30	12	42	4	7	11	1.6
Albino	15	15	30	16	15	31	4.6
Optizim	8	5	13	6	5	11	1.6
Regional Total	547	371	918	406	271	677	100
Percent	59.6	40.4	100.0	60.0	40.0	100	

Source: Compiled Data from Councils, Education Departments, 2013

5.2.14 Adult Education

The socio-economic development of any country depends much on the level of literacy of the population. Literacy is gained through education obtained both formally and informally. Tanzania has since independence (1961) embarked on a programme to eradicate illiteracy by expanding primary and secondary education as well as placing emphasis on the Adult Education Programme. In the 1970s primary schools were earmarked as centres of adult education and head teachers of such schools were put in charge of the adult education campaign in the area around their schools. In recent years MUKEJA and MEMKWA programmes have been introduced to revive adult education learning in the country. Table 5.57 shows that in 2008 the region had 407 adult education centers and in 2012 it had 337. The number of adults registered at such centers was 21,491 in 2011 and 23,606 in 2012. Table 5.57 also shows that in both years Bgamoyo had the largest number of centres but it was Rufiji which had largest number of enrolment being 7,885 in 2008 and 12,932 in 2012. In terms of number of centres, Kisarawe had the smallest number of centres (31 centres in 2008 and 14 in 2012) and in regard to enrolment, Kibaha TC had smallest number of enrolment in both years (39 in 2008 and 43 in 2012).

Table 5. 57: Number of Adult Education Centers and Enrolment by Council, Pwani Region; 2011 and 2012

Council	Number of Centres (MUKEJA) - ICBAE		Enrolment (MUKEJA) - ICBAE	
	2008	2012	2008	2012
Bagamoyo	142	96	3,634	6,177
Kibaha DC	35	36	667	669
Kisarawe	31	14	871	525
Mkuranga	56	44	6,986	1,861
Rufiji	74	69	7,885	12,932
Mafia	38	38	1,409	1,399
Kibaha TC	31	40	39	43
Total	407	337	21,491	23,606

Source: Compiled Data from Councils, Education Departments, 2013

5.2.15 Literacy

Literacy is the ability to read and write with an understanding a short simple statement on everyday life. It excludes the ability to only write or sign one's own name or write memorized phrases. The ability to read and write may be in any language. With reference to Table 5.58, literacy rate for a population of age 10 years and above in Pwani region has been increasing. It increased from 26 percent in 1967 census to 44 percent in 1978 census then reached 51.1 percent in 1988 census and. During 2002 census, the regional literacy rate reached 60.2 percent which was lower than the literacy rate of 70.5 percent of Tanzania Mainland. With the literacy rate of 60.2 percent in 2002, Pwani region ranked 23 in Tanzania Mainland in literacy for the population of age 10 years and above. The first and second regions were Dar es Salaam (90.9 percent) and Kilimanjaro (89.5 percent).

Table 5.58: Percentage Literate for the Population of Age 10 Years and/ above by Region, Tanzania Mainland

Region	1967 Census	1978 Census	1988 Census	2002 Census	Rank (2002)
Tanzania Mainland	na	na	na	70.5	
Pwani	26.0	44.0	51.1	60.2	23
Iringa	31	54	68.3	79.5	5
Kilimanjaro	56	74.1	80.8	89.5	2
Dar es Salaam	60	73.3	80.7	90.9	1
Ruvuma	41	66.3	70.5	77	6
Tanga	40	60.6	66	74.6	8
Morogoro	37	58.6	62.8	70.7	11
Mara	35	56.4	63.9	75.3	7

Kagera	40	52.9	59.5	68.3	14
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Table 5.58 (ctd): Percentage Literate for the Population of Age 10 Years and/ above by Region, Tanzania Mainland

Region	1967 Census	1978 Census	1988 Census	2002 Census	Rank (2002)
Mtwara	28	51.4	57.1	62.0	19
Dodoma	24	49.5	55.5	64.4	16
Mbeya	29	49.2	61.9	72.0	10
Rukwa	-	48.5	58.6	61.6	20
Lindi	-	48.4	53.8	60.2	22
Singida	24	46.7	57.4	69.5	13
Mwanza	25	44.3	57.3	69.5	12
Kigoma	19	43.7	55.1	65.7	15
Arusha	26	41.9	58.1	73.4	9
Manyara	na	na	na	63.4	18
Tabora	27	40.5	50.5	54.5	26
Shinyanga	16	33.2	48.3	58.5	24

na: means not applicable.

Source: NBS, 1967, 1978, 1988 and 2002 Population and Housing Census Reports

5.2.16 Policy Implications on Education Sector

Although there is recognizable progress in both primary and secondary education, policy intervention need to take place to alleviate the few challenges observed. The region needs to put more effort in construction of girls' dormitories which will help to prevent or reduce girls' dropouts and also increasing pass rate for girls. In addition to that, for learning improvement in primary schools, the school feeding programme is of paramount importance.

Since both primary and secondary schools in the region have critical shortage of pit latrine, more latrines should be constructed to satisfy the requirement of one pit latrine for 20 girls or 24 boys. Likewise, the number of desks in some of primary and secondary schools should be increased to meet education policy requirement of one desk per three pupils in primary schools, and one table and chair per student for secondary school.

Some primary and secondary schools in Pwani region have no access to clean and safe water. Therefore, initiatives are needed to supply the schools with clean and safe water through tap water or bore holes. Rain water harvest technology can also help to alleviate the water shortages. Moreover, if not all schools, boarding secondary schools should be supplied with electricity to improve learning environment.

5.3 Water Supply and Sanitation

Sustainable access to clean and safe water is essential for reducing poverty and health problems. The largest use of water is domestic water supply but due to increase in economic activities and delivery of social services which utilize water in one way or another, supply of water has become a burden which the government alone cannot meet. Hence the Government is encouraging private sector to invest in the water sector. Moreover, 45.3 percent of all agricultural households in 2007/08 depended on unprotected wells while 20 percent depended on piped water (2007/08 Pwani Region Agriculture Sample Census Report).

5.3.1 Rural Water Supply

In rural areas, water supply and sanitation services are operated and owned by communities. Table 5.59 shows that by the end of 2012 shallow wells summed at 1,115 (52.9 percent to region's total water sources) continued to be the dominant water source for rural population in Pwani region. Bore holes were the second dependant water source. Tap water sourced from piped scheme remains the main challenge in the region as only 3.9 percent of all water sources in the region was from piped scheme.



Only 3.9 percent of water sources are from piped scheme

Table 5. 59: Number and Type of Rural Water sources by Council, Pwani Region; 2012

Council	Charco	Spring	Shallow Well	Rain Water Harvest Tanks	Bore Holes	River Water	Lake Water	Dam	Piped Scheme
Bagamoyo	8	66	75	14	6	9	0	103	19
Kibaha DC	20	0	22	16	0	0	0	0	12
Kisarawe	3	3	6	31	56	1	0	3	5
Mkuranga	0	2	326	96	103	2	0	2	9
Rufiji	1	5	534	31	136	13	10	1	23
Mafia	0	13	131	17	142	1	0	0	4
Kibaha TC	0	0	61	22	3	2	0	2	13
Total	32	89	1,155	227	446	28	10	111	85
Percent to total sources	1.5	4.1	52.9	10.4	20.4	1.3	0.5	5.1	3.9

P=Permanent, S=seasonal, W=Working, NW=Not working

Source: Compiled Data from Councils (Water and Sanitation Departments), 2013

Hand pump was the most popular water delivery technology used in the rural areas of Pwani region (470 working hand pumps) (Table (5.60). Electric pump was the second (89 working pumps). The remaining technologies were rarely used. The schemes shown in the table are both that were working and those that were not working. Therefore, maintenance of water schemes is necessary to get rid of the problem of non-working schemes that exists in the region.

Table 5. 60: Number of Water Schemes by Type of Water Delivery Technology by Council, Pwani Region;2012

Council	Type of Water Delivery Technology									
	Wind Mill		Electric Pump		Diesel Pump		Hand Pump		Gravity Piped	
	W	NW	W	NW	W	NW	W	NW	W	NW
Bagamoyo	0	1	2	1	2	3	37	55	0	0
Kibaha DC	0	0	0	0	0	0	0	0	0	0
Kisarawe	0	0	2	0	0	0	0	0	0	0
Mkuranga	0	0	19	1	0	2	0	2	0	0
Mafia	0	0	60	2	0	0	15	7	0	0
Rufiji	0	0	5	0	21	0	416	38	26	0
Kibaha TC	0	0	1	1	1	0	2	0	0	0
Total	0	1	89	5	24	5	470	102	26	0
Percent	0.0	0.1	12.3	0.7	3.3	0.7	65.1	14.1	3.6	0.0

W= working, NW=not working

Source: Compiled Data from Councils (Water and Sanitation Departments), 2013

By the end of 2012, 69.9 percent of the rural population in Pwani region was served with clean water (Table 5.60). By having several water projects than other councils, Rufiji district council led in percentage proportion (85.8 percent) of population served with clean water. According to 2012 National Population Housing and Census there is no rural population in Kibaha Town Council. This is the reason why Table 5.60 does not portray proportion of rural population served with clean water in Kibaha Town Council.

Table 5.60 : Percenta of Rural Population Served with Clean Water by Council, Pwani Region; 2012

Council	Total Rural Population	Population Served with Clean Water	Percent Population Served with Clean Water
Bagamoyo	236,952	180,546	76.2
Kibaha DC	38,370	23,406	61.0
Kisarawe	84,174	34,884	41.4
Mkuranga	183,426	112,800	61.5
Rufiji	161,078	138,210	85.8
Mafia	34,297	26,516	77.3
Kibaha TC	na	na	na
Regional Total	738,297	516,362	69.9

Source: Compiled Data from Councils (Water and Sanitation Departments), 2013

Water supply in rural areas is managed by village communities. Once water supply schemes are established, villagers form village water committees whose task is to operate and run the schemes using funds from Village Water Funds (VWFs). One village may have several village water committees and village water funds. Villagers also form Water Users Groups (WUGs).

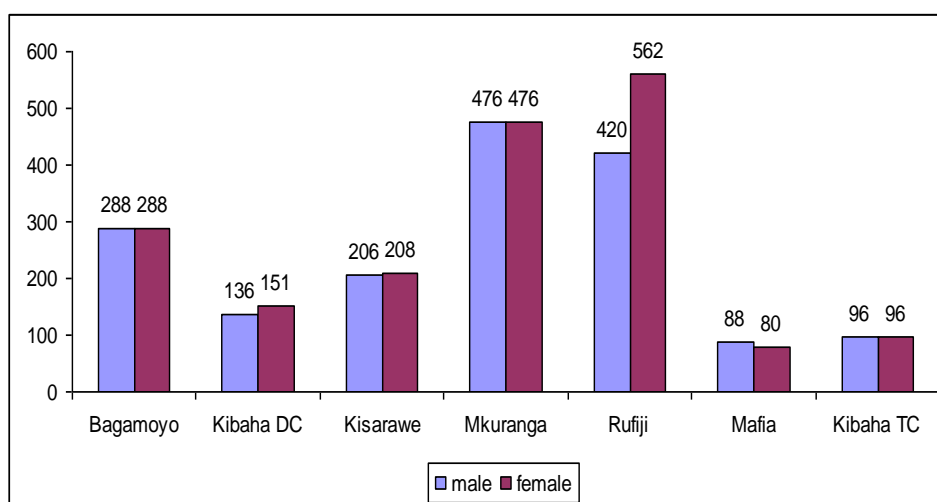
Pwani region had a total of 198 village water committees with 3,561 members (Table 5.61). Female members were 1,861 and male members were 1,710. Total funds collected by all committees were TShs 152,265,393. Rufiji had the largest number of water committees (87) also committee members (972). Village water committees in Bagamoyo collected the largest amount of money at TShs 38,990,197 while Kibaha DC collected the smallest amount (TShs. 7,906,690).

Table 5.61: Number of Village Water Committee Members by Sex and Value of Village Water Funds by Council, Pwani Region as at 31.12 2012

Council	Village Water Committee Members			Village Water Funds (VWFs)/Water Users Groups (WUGs)	Total Funds (TShs)
	Male	Female	Total		
Bagamoyo	288	288	576	86	38,990,197.00
Kibaha DC	136	151	287		7,906,690.00
Kisarawe	206	208	414	0	26,921,471.00
Mkuranga	476	476	952		11,411,400.00
Rufiji	420	562	982	87	36,625,894.00
Mafia	88	80	168		12,884,000.00
Kibaha TC	96	96	192	25	17,525,741.00
Total	1,710	1,861	3,571	198	152,265,393.00

Source: Compiled Data from Councils (Water and Sanitation Departments), 2013

Figure 5. 15: Number of Village Water Committee Members by Sex and Council, Pwani Region; 2012



Source: Compiled Data from Councils (Water and Sanitation Departments), 2013

5.3.2 Policy Implications for Water Sector

Shallow wells are the dominant source of water for the rural population in Pwani region. There is a need to put in place policies that will guide the provision of water in the rural areas change the water source from shallow wells piped water schemes. There is also need of establishing practicable institutional arrangements and mechanisms to ensure sustainability of community managed rural water supplies.

Pwani region is also facing a problem of poor sewage system which results into big problem of sanitation and hygiene to urban population. To alleviate the problem, Pwani Urban Authorities have to institute rules of guidance of water disposal in households in urban areas with firm follow-up strategies.

CHAPTER SIX

Other Development Issues

6.0 Introduction

Chapter Six discusses other development issues including gender empowerment such as day care centers, women economic groups, youth economic groups, cooperative development (SACCOs and other cooperative activities) as well as women participation in managerial, political, professional and technical fields.

6.1 Gender Empowerment

Gender empowerment aims at ensuring that all gender, particularly women, fully participate in policy and decision-making processes and in all aspects of economic, socio-cultural and political life. Various measures had already been taken to minimize time spent by women and girls in attending to home activities and thus allow them more time for use in the above mentioned activities. These measures include the use of family planning, opening and operating of day care centers, establishment of women economic groups, participation in SACCOs, CBOs and other cooperative activities. These initiatives are also implemented in Pwani region.

6.1.1 Day Care Centers

Sending children to day care centers provides chances of mothers participating in various economic activities which contribute in reducing income poverty at household level. Day care centers are meant for children of age 3 to 4 years. These are the young ones who are not even qualified for pre primary education. In Pwani region care centers were mostly found in Kibaha Town Council which had 36 centres with 1,103 pupils followed by Mkuranga with 29 centres and 1,772 students. However, in some council, day care centers are not common. In Rufiji for instance, there was one day care centre without pupils also Bagamoyo and Mafia had one day care centre (Table 6.1).

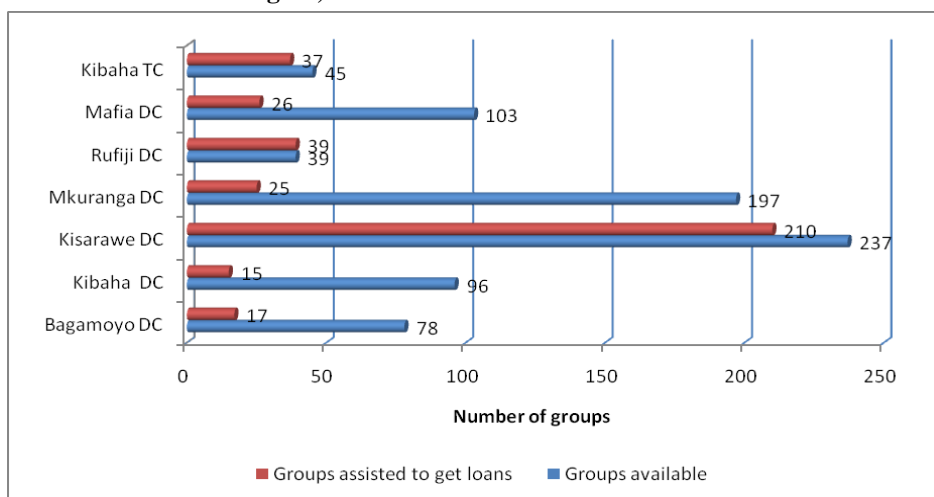
Table 6.1 : Number of Day Care Centers and Pupils by Council, Pwani Region; 2010 and 2012

Council	2010		2012		Difference in Numbers of Pupils(2010 to 2012)
	Number of Centres	Number of pupils	Number of Centres	Number of pupils	
Bagamoyo DC	1	37	1	17	-20
Kibaha DC	12	310	12	515	+205
Kisarawe DC	8	400	7	337	-63
Mkuranga DC	26	1,670	29	1,772	102
Rufiji DC	1	0	1	0	0
Mafia DC	1	65	1	57	-8
Kibaha TC	0	0	36	1,103	1,103
Total	49	2,482	87	3,801	1,319

Source: Compiled Data from Councils (Community Development Departments), 2013

6.1.2 Women Groups

Women in Pwani region are industrious and a good number of them are engaged in various economic activities. In order to respond to the need of women emancipation in society, women economic groups have been established to cater for womens' emerging needs. These women groups which are engaged in various micro economic activities such as small scale businesses, horticulture, agriculture, poultry keeping, tailoring, sewing, tie and dye, pottery, bakery food and beverages, etc. will increase the growth of district's economy. Table 6.2 and Figure 6.1 show that in 2012 Pwani region had 795 women groups distributed in all of its districts. Most economic groups were in Kisarawe DC (237) followed by Mkuranga DC (197), Mafia DC (103), Kibaha DC (96) and Bagamoyo DC (78). However, Bagamoyo DC with only 78 groups received the largest loan of TShs 52,900,000 followed by Rufiji DC with 39 groups received TShs 49,980,000. Figure 6.1 reveals that all the groups in Rufiji DC were assisted with a loan, and 89 percent of the groups in Kisarawe DC were assisted. In other district councils, assistance was as follows Kibaha TC (82 percent) Mafia DC, (25 percent) Bagamoyo DC (22 percent) Kibaha DC (16 percent) and Mkuranga DC only 13 percent.

Figure 6. 1: Number of Women Economic Groups who Received Loans by Council, Pwani Region; 2012

Source: Compiled Data from Councils (Community Development Departments), 2013

Table 6. 2: Women Economic Groups by Council, Pwani Region, 2008 and 2012

Council	2008		2012				
	Total No. of Groups	Total Members	Total No. of Groups	Total Members	No. of Groups Assisted	Total Loaned TShs.	Percent of Groups Assisted
Bagamoyo DC	93	465	78	1,488	17	52,900,000	22
Kibaha DC	124	600	96	480	15	7,500,000	16
Kisarawe DC	81	1,440	237	4,780	210	8,000,000	89
Mkuranga DC	94	1,339	197	3,255	25	10,920,000	13
Rufiji DC	36	281	39	281	39	49,980,000	100
Mafia DC	52	461	103	821	26	8,000,000	25
Kibaha TC	30	252	45	294	37	26,400,000	82
Total	510	4,838	795	11,399	369	163,700,000	46

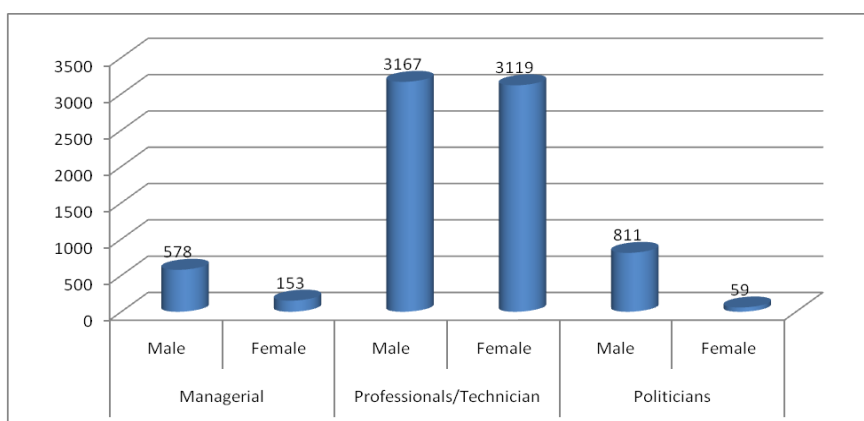
Source: Compiled Data from Councils (Community Development Departments), 2013

Despite the efforts made by International and Local organizations together with the government, participation of women in managerial posts in Pwani region was very low as shown in table 6.3. The information provided, gives a general indication of women participation in policy and decision – making in the region.

Women have low percentage of participation in all categories except in professional/technicians (50 percent) of all posts. The participation of women in managerial posts was 21 percent against 79 percent for men. Likewise in political posts women participation was 7 percent against 93 percent for men.

The high participation of women in professional positions illustrates the efforts that are being made by women to acquire decision making positions other than managerial and political posts. Professional/technicians posts involved a lot of people thus accounting for 80 percent of all posts, followed by politicians (11 percent) and managerial posts (9 percent).

Figure 6. 2: Participation in Managerial, Political, Professional and Technical Posts by Sex, Pwani Region, 2012



Source: Compiled Data from Councils (Community Development Departments), 2013

Table 6. 3: Participation as Managerial, Political, Professional and Technical Personnel by Sex and Council, Pwani Region; 2012

Council	Managerial			Professionals/ Technicians			Politicians (MPs, DCs)			Total			Percent
	M	F	Total	M	F	Total	M	F	Total	M	F	Total	
Bagamoyo DC	105	17	122	1,093	1,175	2,268	25	8	33	1,223	1,200	2,423	31
Kibaha DC	30	5	35	60	21	81	45	13	58	135	39	174	2
Kisarawe DC	28	6	34	27	11	38	1	2	3	56	19	75	1
Mkuranga DC	104	27	131	770	918	1,688	177	8	185	1,051	953	2,004	25
Rufiji DC	261	75	336	839	674	1,513	493	15	508	1,593	764	2,357	30
Mafia DC	19	9	28	326	268	594	9	4	13	354	281	635	8
Kibaha TC	31	14	45	52	52	104	61	9	70	144	75	219	3
Total	578	153	731	3167	3119	6286	811	59	870	4556	3331	7887	100
Percent by Sex	79	21	100	50	50	100	93	7	100	58	42	100	
Percent by Category			9			80			11				100

M=Male, F=Female, MPs=Members of Parliament, DCs=District Commissioner

Source: Compiled Data from Districts (Community Development Departments), 2013

6.2 Youth Economic Groups

Youths in Pwani region are mainly involved in small scale activities like boda boda driving, horticulture and small businesses. Employment of youth in these activities has helped to overcome the problem of youth unemployment. However, self-employment even in these sectors needs some preparation and some capital input. Accesses to entrepreneurship skills as well as credit are therefore essential facilitators if these youths are to develop their potential and contribute to the district economy and poverty eradication. Availability of training and credit facilities depend on the formation of mutually beneficial economic groups basically because many youths have no collateral. Youths can be provided with entrepreneurial skills and access to credit through these groups, which provide supervision and guarantee repayment of the loans.

Based on this paradigm of helping youth to generate income for poverty alleviation, youth have initiated and formulated economic groups. At the end of 2012, Pwani region managed to have youths organize themselves into several groups.

Table 6. 4: Youth Economic Groups and Total Money Loaned by Council in Pwani Region, 2012

Council	Total Number of Registered Groups	Total Members	No. of Groups who got Loans in 2012	Total Loaned, 2012 (TShs)	Total Loans of 2011 Recovered as at 31 Dec. 2012	Total Loans not Recovered as at 31 Dec. 2012
Bagamoyo DC	81	1,451	28	50,500,500	18,215,000	32,485,000
Kibaha DC	13	254	0	0	0	0
Kisarawe DC	10	134	0	0	5,964,870	5,039,130
Mkuranga DC	59	996	8	3,800,000	3,599,000	300,000
Rufiji DC	13	43	13	70,295,500	56,236,020	21,200,000
Mafia	11	88	11	2,471,402	1,378,000	1,367,000
Kibaha TC	7	60	7	550,000	1,990,000	1,310,000
Total	194	3,026	67	127,617,402	87,382,890	61,701,130

Source: Compiled Data from Councils (Community Development Departments), 2013

Most groups were in Bagamoyo DC (81), and Mkuranga DC (59), while in Rufiji DC and Kibaha DC each had 13 groups; Mafia DC has 11, Kisarawe DC (10) and Kibaha TC (7). The groups in Rufiji DC received TShs 70,295,500 or 55 percent of total loaned in the region and recovered 72.6 percent of the loaned amount, where as Bagamoyo DC were loaned for TShs. 50,500,500 equals to 40 percent of the region loan and recovered only 36 percent of the loaned amount.

6.3 Vulnerability

Vulnerability is all about self protection and is reflection of lack of control. In fact, all children and especially younger ones are vulnerable as because of their age they cannot:

- Provide their basic needs.
- Cannot defend themselves against physical assault
- Cannot get away from a dangerous situation
- Cannot even know when a dangerous situation is developing

Children totally depend on others for protection and provision of their basic needs. Increasing physical and mental maturity usually leads to growing capability for self-provisioning, but during the period of childhood and adolescence, children and young people continue to need special care and support. While most children in Tanzania are cared for and protected by their families and communities, many are not so fortunate. Aspects of child vulnerability include:

- Child mortality and malnutrition

- Orphan hood and HIV/AIDS
- Children in household headed by children or household with elderly adults only
- Education and child labour and
- Gender abuse.

The above aspects were used to identify vulnerable children in Pwani region. Table 6.5 gives the number of most vulnerable children in Pwani region by council. Vulnerable children were identified whether they were orphans or non orphans. Out of 501,532 children aged between 0-17 years in the region vulnerable children, orphans were 18,067 (3.6 percent) and non-orphans (11,253, 2.2 percent). However, Kibaha DC did not show the number of non orphans. Table 6.5 further shows that, 44 percent of orphans were found in Kibaha DC, 27 percent in Mkuranga DC and 10 percent each in Bagamoyo DC and Kibaha TC. For data of non-orphans the highest percent was found in Kisarawe DC (36 percent), followed by Kibaha TC (29 percent), Bagamoyo DC (14 percent) and Rufiji DC (11 percent). Kibaha DC did not produce data for non-orphans. Among the most vulnerable children (orphans) boys were 9,041 and girls were 9,026. For non orphans, boys were 11,253 and girls were 5,861. Note that data for Kibaha DC were not available for non orphans.

Table 6. 5: Number of Most Vulnerable Children by Council in Pwani Region; 2012

Council	Total Children Aged 0 - 17	Most Vulnerable Children									
		Orphans					Non Orphans				
		No. of Girls	Girls Percent	No. of Boys	Boys Percent	Total	No. of Girls	Girls Percent	No. of Boys	Boys Percent	Total
Bagamoyo DC	140,579	960	0.7	793	0.6	1,753	736	0.5	803	0.6	1,539
Kibaha DC	29,851	3,878	13.0	3,983	13.3	7,861	ND	-	ND	-	ND
Kisarawe DC	42,380	327	0.8	423	1.0	750	1,867	4.4	2,149	5.1	4,016
Mkuranga DC	107,121	2,501	2.3	2,332	2.2	4,833	620	0.6	437	0.4	1,057
Rufiji DC	108,441	324	0.3	361	0.3	685	575	0.5	611	0.6	1,186
Mafia DC	20,013	147	0.7	232	1.2	379	58	0.3	81	0.4	139
Kibaha TC	53,147	889	1.7	917	1.7	1,806	1,536	2.9	1,780	3.3	3,316
Total	501,532	9,026	1.8	9,041	1.8	18,067	5,392	1.1	5,861	1.2	11,253

ND=No data

Source: Compiled Data from Councils (Community Development Departments), 2013

6.4 Savings and Credit Cooperative Societies (SACCOS)

The Government and stakeholders encourage people to create SACCOS to alleviate poverty. SACCOS are perceived as appropriate and micro financing outlets for rural and poor people

because they are simple form of financial institutions suitable for rural communities. People in Pwani region have positively responded to the call to form SACCOS. Up to the year 2012 a total of 262 SACCOS were registered in Pwani region of which 103 were active and 159 were dormant. The total numbers of members were 15,254 (8,279 males, 6,975 females). A total of TShs. 4,281,923,741 were loaned to members in the period of January to December 2012, and a total loan of TShs. 3,006,825,905 (70 percent) were recovered by the end of the year 2012. This shows that loan recovery is good in the region, and this may be due to industrious nature of the people in Pwani region.

Among councils, Kibaha TC had the highest rate of loan recovery of 100 percent followed by Rufiji DC with 80 percent, Mafia DC with 69 percent, Bagamoyo DC with 62 percent, Mkuranga DC 40 percent, Kibaha DC and Kisarawe DC had the least loan recovery of 38 percent each.

Table 6. 6: Active SACCOS by Council, Pwani Region; 2012

Council	No. of SACCOS (Registered)		Total Members			Total Value of Shares (TShs) as at 31.12.2012	Total Money Loaned to Members from Jan to Dec 2012 (TShs)	Total loans Recovered from Members, Jan – Dec 2012 (TShs)	Percent of Loan Recovered
	Active	Dormant	Male	Female	Total				
Bagamaoyo DC	40	64	3,303	2,691	5,994	229,470,000	439,630,705	273,355,025	62
Kibaha DC	4	5	1,038	482	1,520	660,375,743	291,912,828	111,348,044	38
Kisarawe DC	10	15	943	837	1,780	71,973,500	1,355,296,717	508,137,475	38
Mkuranga DC	4	30	328	415	743	4,000,000	2,510,000	1,000,000	40
Rufiji DC	6	11	749	313	1,062	4,120,000	70,295,500	56,236,020	80
Mafia DC	14	11	555	680	1,235	14,437,840	210,155,110	144,626,460	69
Kibaha TC	25	23	1,363	1,557	2,920	233,939,788	1,912,122,881	1,912,122,881	100
Total	103	159	8,279	6,975	15,254	1,218,316,871	4,281,923,741	3,006,825,905	70

Source: Compiled Data from Councils (Community Development Departments), 2013

6.5 VICOBA

Kisarawe DC has largest number of VICOBA while Mafia district with 61 had the smallest number. As table 6.7 shows, majority of members were females. Mkuranga district council had the highest number of members (3,675).

Table 6. 7: Village Community Bank (VICOBA) by Council, Pwani Region; 2012

Council	Number of VICOBA	Number of Members			Percent	
		Male	Female	Total	Male	Female
Bagamoyo DC	76	173	2,011	2,184	8	92
Kibaha DC	86	569	1,112	1,681	34	66
Kisarawe DC	256	971	1,256	2,227	44	56
Mkuranga DC	169	1,278	2,397	3,675	35	65
Rufiji DC	65	578	1,372	1,950	70	
Mafia DC	61	596	1,216	1,826	33	67
Kibaha TC	103	295	1,354	1,647	18	82
Total	816	4,460	10,718	15,190	29	71

Source: Compiled Data from Councils (Community Development Departments), 2013

6.6 Other Cooperatives

Besides SACCOSs and VICOBA, the region also had other cooperatives. Table 6.8 indicates that there were 2 consumer cooperatives, 12 service cooperatives, 127 marketing cooperatives and 219 other cooperatives.

Table 6. 8: Active Cooperatives by Council in Pwani Region; 2012

Council	Consumer Cooperatives		Service Cooperatives		Marketing Cooperatives		Others (Not SACCOSs)	
	No. of Cooperative	Total Members	No. of Cooperatives	Total Members	No. of Cooperatives.	Total Members	No. of Cooperative	Total Members
Bagamoyo DC	0	0	0	0	26	1,246	56	3,454
Kibaha DC	1	45	1	30	3	217	1	43
Kisarawe DC	0	0	1	72	4	244	2	364
Mkuranga DC	0	0	3	1,245	72	4,149	2	180
Rufiji DC	0	0	0	0	16	975	7	186
Mafia DC	1	10	7	142	0	0	141	1,410
Kibaha TC	0	0	0	0	6	691	10	347
Total	2	55	12	1,489	127	7,522	219	5,984

Source: Compiled Data from Districts/ Town Councils (Community Development Departments), 2013

6.7 Non-Governmental Organizations (NGOs)

Table 6.9 shows that by the end of 2012, there were 220 active non-government organizations (NGOs) in Pwani region. Most of the NGOs were found in Mkuranga district council (71) followed by Bagamoyo (43), Kibaha DC (35) and Rufiji (25). Smallest number (4) of NGOs was registered by Mafia district council. A total of 345,921 NGOs beneficiaries were recorded in the region. These benefited from various programmes offered by the organizations such as HIV/AIDS, environmental Conservations, child protection, etc.

Table 6. 9: Active Non-Governmental Organization (NGOs) by Council; Pwani Region; 2012

Council	No. of Organizations	Type of Programs/ Activities	No. of Beneficiaries
Bagamoyo DC	43	Environment Conservations, HIV/AIDS, Most Vulnerable Children	805
Kibaha DC	35	Saving and Credit, Orphans & MVCs, Environmental Conservations, Blinds, Economic Development and HIV/AIDS.	9,853
Kisarawe DC	20	Community empowerment, awareness building, Combating HIV/AIDS, Supporting vulnerable groups.	34,658
Mkuranga DC	71	Provision of Economic and Socio Services, Combating HIV/AIDS, Supporting vulnerable groups	0
Rufiji DC	25	Environmental Conservation, HIV AIDS & Counselling.	0
Mafia DC	4	To help children, to provide education, to advice on marine conservation.	235
Kibaha TC	22	Education, HIV/AIDS and Entrepreneurship	670
Total	220		345,921

Source: Compiled Data from Councils (Community Development Departments), 2013

6.8 Community Based Organizations (CBOs)

In 2012, Pwani region had 534 CBOs of which 69 percent were in Mkuranga DC. Kisarawe DC had the smallest number of CBOs. There were 25,006 beneficiaries although Mkuranga DC and Rufiji DC did not show the number of beneficiaries. In 2005, the number of CBOs was 59 (Table 6.10).

Table 6. 10: Community Based Organizations (CBOs/BMUs) by Council in Pwani Region; 2012

Council	No. of Organizations	Type of Programs/ Activities	No. of Beneficiaries
Bagamoyo DC	64	HIV/AIDS, Most Vulnerable Children	808
Kibaha DC	45	Saving and Credit, Orphans & MVCs, Environmental Conservations, Economic Development and HIV/AIDS.	10,945
Kisarawe DC	5	Awareness on corruption, HIV/AIDS, accountability and transparencies	12,878
Mkuranga DC	370	Provision of socio-Economic services, combating HIV/AIDS, Providing support to vulnerable groups	0
Rufiji DC	9	Saving and credit, environmental conservation, support orphans and vulnerable children, HIV/AIDS and capacity building on IGAs activities	0
Mafia DC	11	HIV/AIDS, Environmental conservation, support orphans and vulnerable children	225
Kibaha TC	30	Entrepreneurship	150
Total	534		25,006

Source: Compiled Data from Councils (Community Development Departments), 2013

6.9 Faith Based Organizations (FBOs)

Pwani region had 24 FBOs in the year 2012. In 2005 there were 10 FBOs. This is an increase of 140 percent. As NGOs, the FBOs concentrate on paramount issues such as HIV/AIDS, child protection, entrepreneurship etc. The councils which did not show the beneficiaries are Mkuranga DC and Rufiji DC.

Table 6. 11: Faith Based Organization (FBOs) by Council, Pwani Region; 2012

Council	No. of Organizations	Type of Programs/ Activities	No. of Beneficiaries
Bagamoyo DC	5	HIV/AIDS, Most Vulnerable Children	1,070
Kibaha DC	6	Savings and Credit, Education, Health, Faith and Beliefs.	2,363
Kisarawe DC	1	Child Protection	5,274
Mkuranga DC	3	Provision of Social and Economic Services and moral support the society.	0
Rufiji DC	4	Fisheries Management and Socio-Economic development.	0
Mafia DC	3	To help small farmers, to provide education on HIV/AIDS to members.	100
Kibaha TC	2	Education, Entrepreneurship and Education	200
Total	24		9,007

Source: Compiled Data from Districts/ Town Councils (Community Development Departments), 2013

6.10 Financial Institutions

A number of financial institutions are operating in Pwani region. Increase in population from 885,017 persons in 2002 to 1,098,668 in 2012 increased demand of financial services. On top of that, regional economic growth attributed to increased social and economic activities provided conducive business environment for financial and even non-financial institutions to operate. Table 6.12 shows a list of financial institutions operating in the region.

Table 6. 12: List of Banks Available by Council; Pwani Region; 2005, 2009 and 2012

Council	2005	2009	2012
Bagamoyo DC	NMB	NMB, TPB	NMB, CRDB, TPB
Kibaha DC	-	-	-
Kisarawe DC	NMB	NMB	NMB
Mkuranga DC	NMB	NMB	NMB
Rufiji DC	NMB	NMB	NMB
Mafia	NMB	NMB	NMB
Kibaha TC	NMB,CRDB,NBC	NMB,CRDB,NBC	NMB,CRDB, NBC
Total	NMB, CRDB,NBC	NMB, CRDB,NBC,TPB	NMB, CRDB,NBC,TPB

Source: Compiled Data from Councils (Trade Departments), 2013

6.11 Crime Statistics

6.11.1 Introduction

The growth of towns, population increase, the development of science and technology and the increase of crimes are the sources and catalyst to the erosion of morals in the country. The statistics on the rate of crime and the type of offences committed reveal that the erosion of morals within the society has been increasing day by day. Pwani region like other regions in the country also experiences an increase in crime as well as erosion of morals.

6.11.2 Crime Cases

A total of 9,877 crime cases were reported in Pwani region, the most common crime was property crime with 54 percent of reported cases, violent crimes reported were 38 percent and drug crime accounted for 8 percent of the reported cases. Of the total 973 persons jailed 614 (63 percent) were jailed due to property crimes, 192 persons (20 percent) were jailed due to violent crimes and 167 persons (17 percent) were jailed due to drug crime cases.

Table 6. 13: Crimes Cases Reported by Councils in Pwani Region, 2012

Council	Total No. of Police Officers in the District	Total Number of			Total Number of People Jailed due to				
		Violent Crimes Reported	Property Crimes Reported	Drug Crimes Reported	Total	Violent Crimes	Property Crimes	Drug Crimes	Total
Bagamoyo DC	296	1,726	2,711	81	4,518	70	250	65	385
Kibaha DC	23	19	94	32	145	2	11	7	20
Kisarawe DC	103	148	185	30	363	28	50	17	95
Mkuranga DC	155	665	532	31	1,228	36	23	0	59
Rufiji DC	131	823	1,420	600	2,843	10	220	58	288
Mafia DC	65	327	418	35	780	46	60	20	126
Total	773	3,708	5,360	809	9,877	192	614	167	973

Source: Pwani Regional Police Office, 2013

6.11.3 Accidents

Like other regions in Tanzania, Pwani region is menaced by the number of accidents that involve road users of all types. According to Pwani Regional Police Office, a total of 1,580 accidents were recorded in 2012. Most of the reported accidents were due to motor vehicles only (770), followed by motor cycles (574) and accidents involving motor vehicles and

motor cycles versus pedestrian were at 143. Accidents involving motor vehicles versus motor cycles were the smallest in number (93). Of the total people involved in accidents, 15 percent died while 85 percent were injured. The highest percentage of death occurred in accidents that involved motor vehicles only.

Table 6. 14: Accidents Reported in Pwani Region; 2012

Council	Total Number of Accidents involving					Total Number of People Died/Injured from Accidents involving											
	Motor vehicles only	Motor Vehicles Versus Motor Cycles	Motor Cycles only	Motor Vehicles and Motor Cycles and Motor Cycles versus Pedestrian	Total	Motor Vehicles only		Motor Vehicles Versus Motor Cycles		Motor Cycles only		Motor Vehicles and Motor Cycles Versus Pedestrian		Total			
						D	I	D	I	D	I	D	I	D	I	Total	
Bagamoyo DC	98	25	102	30	255	103	352	21	47	8	90	4	5	136	494	630	
Kibaha DC	9	11	43	2	65	4	33	2	7	3	31	1	3	10	74	84	
Kisarawe DC	34	25	37	18	114	12	90	5	75	5	54	7	28	29	247	276	
Mkuranga DC	152	0	93	0	245	21	166	0	0	7	76	15	61	43	303	346	
Rufiji DC	120	10	200	82	412	5	54	3	7	8	150	6	57	22	268	290	
Mafia DC	8	2	30	6	46	0	7	1	5	0	19	0	5	1	36	37	
Kibaha TC	349	20	69	5	443	28	261	5	20	9	42	23	52	65	375	440	
Total	770	93	574	143	1580	173	963	37	161	40	462	56	211	306	1797	2103	

Note: D=Dead; I=Injured

Source: Councils Police Offices, Pwani region, 2013

6.11.4 Theft Cases

Number of theft cases reported in the regional police office in the year 2012 was 967. Livestock stealing were the most reported theft cases and accounted for 95.4 percent of all cases reported. It was followed by motorcycle stealing (38 percent), motor vehicle stealing (0.5 percent) and bicycle stealing (0.2 percent). People jailed due to livestock stealing accounted for 98 percent of the total people jailed.

Table 6. 15: Theft Cases Reported by Council in Pwani Region 2012.

Council	Total No. of Police Officers in the District	Total Number of				Total Number of People Jailed due to stealing of					
		Motor vehicles stolen	Motor cycles stolen	Bicycles stolen	Livestock stolen (cattle and goat)	Total	Motor vehicles	Motor cycles	Bicycles	Livestock (cattle and goats)	Total
Bagamoyo DC	8	3	15	0	315	333	1	0	0	50	51
Kibaha DC	5	0	5	2	313	320	0	0	0	0	0
Kisarawe DC	2	0	2	0	18	20	0	0	0	9	9
Mkuranga DC	4	0	9	0	81	90	0	0	0	7	7
Rufiji DC	6	0	3	0	57	60	0	1	0	12	13
Mafia DC	65	2	0	0	12	14	0	0	0	3	3
Kibaha TC	6	0	3	0	127	130	0	0	0	3	3
Total	96	5	37	2	923	967	1	1	0	84	86

Source: Pwani Regional Police Office, 2013

CHAPTER SEVEN

Investment Opportunities in Pwani Region

7.1 Introduction

Pwani region is endowed with investment potentials which if utilized fully will speed up the development of the people of the region. The table below is a guide to local and foreign investors regarding location (districts) of potential areas for investment. Proper utilization of these opportunities will overcome poverty which exists within the communities. The ultimate goal of these opportunities is to improve the social wellbeing of the people as well as the economy of Tanzanians.

No.	Opportunity	Rationale	Area of investment
1	Fruit processing	High production in pineapples, oranges, mangoes tomatoes, okra, water melon, egg plant and green pepper	Rufiji Bagamoyo, Mkuranga Kisarawe.
2	Tourism and Hotel development	Presence of old historical buildings, Saadani National Park, Selous Game reserve, Forest Reserves and coastal beaches	Bagamoyo, Kibaha, Kisarawe, Rufiji, Mkuranga and Mafia.
3	Livestock Produce and Processing	An area over 10,000 sq km suitable for livestock keeping (cattle, goats, sheep, and pigs) was set aside.	Bagamoyo, Kibaha, Kisarawe, Rufiji, Mkuranga.
4	Honey processing	There are 44 forest reserves with an area of 375,712 ha which is potential for beekeeping. There are 4,000 beekeepers with a total of 11,990 beehives. The production of honey and bees wax per annum is 30 tons and one tone respectively.	Bagamoyo, Kibaha, Kisarawe, Rufiji, Mkuranga and Mafia.
5	Cashew nuts processing	High production of cashew nuts over 9,640 tones per year.	Rufiji and Mkuranga
6	Poultry farming and processing	Conducive environment for keeping improved local chicken because they are resistant to disease	Rufiji Mkuranga Bagamoyo, Kibaha Kisarawe
7	Irrigation farming	Availability of 57,150 ha of suitable land for irrigation along Wami, Rufiji, Ruvu rivers and other valleys	Rufiji Mkuranga Bagamoyo, Kibaha Kisarawe
8	Agro processing	High production of agricultural produce need to be processed to add value for example (coconut, cassava, paddy, simsim etc)	Bagamoyo, Kibaha, Kisarawe, Rufiji, Mkuranga and Mafia
9	Industrialization	Planned industrial areas are available as follows. 1,500 acres in Zengereni, 300 acres at Kamal EPZA Bagamoyo, 9000 ha SEZ at Bagamoyo and 80 acres of Global Park at Mkuranga	Kibaha, Bagamoyo, Mkuranga
10	Fishing and Fish processing	Fishing industry is potential in rivers, Ox-bow lakes and Indian ocean (deep sea)	Bagamoyo, Rufiji, Mkuranga and Mafia
11	Extraction of Natural gas Deposits	Research has indicated that there are vast deposits of natural gas and oil	Rufiji, Mkuranga and Mafia
12	Energy production (electricity)	Unutilized water falls in Rufiji River.	Rufiji

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Pwani Regional Secretariat

Vision

A competent, transparent, effective and dedicated Regional Secretariat for enabling Local Government Authorities to perform developmental and administrative roles.

Mission

To facilitate capacity building to LGAs so as to enable them execute good governance, law and order and provide timely efficient, effective and quality services to the public.