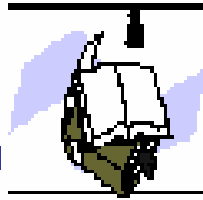


XHCP
XAHUNTA HOBUMARINTA
CILMIKAARISTA PUNTLAND



PDRC
PUNTLAND DEVELOPMENT
RESEARCH CENTER

DRAFT REPORT

ON

**SOCIO-ECONOMIC ASSESSMENT
IN PUNTLAND**

FUNDED BY: UNDP/WORLD BANK

**IMPLEMENTED BY: Puntland Development
Research Center**

APRIL 2004

INTRODUCTION

The economy of Somalia and other dimensions of its socio-cultural and political setting had always relied strongly on traditional and informal pillars; consequently had never been reflected authentically neither in official records of the former Somali governments nor in the previous colonial documentations that have preceded the birth of the Somali Republic in 1960. The modest efforts of data collection and analysis that have been achieved, particularly during the last two decades, have been destroyed following the collapse of the national state in early 1991. As is correctly stated in the World-Bank's Somalia Country Re-engagement Note, "Data collection and analysis have been severely affected by the fact that national institutions for data collection were one of the many casualties of the civil war"¹.

As part of the recent initiative of compilation of statistical data on Somalia, sponsored by World-Bank and UNDP, the Puntland Development Research Center (PDRC) is undertaking Macro Economic analysis and Socio-Economic assessment in Puntland. Data gathering is crucial for any programming and planning purposes and is equally an important tool for all local and international actors involved in the improvement of the quality the life in the region.

This Socio-economic study has been conducted by a team of 6 persons. The overall coordination of the study has been assigned to a senior economist, resident in Puntland. The coordinator was assisted by one professional consultant, an educationist, in matters related to the supervision of primary data gathering and compilation of the draft reports of the two studies. Three enumerators have spent one month period for gathering required primary data in different location, under the consultant. PDRC engaged also one consultant as a data processing associate. Finally all secretariat work was performed by junior graduate from Garowe based Puntland Community College (PCC).

1. Objectives of the study

The objectives of this socio-economic report consist of:

- To conduct socio-economic assessment study in Puntland regions
- To know the current socio-economic situation in the region to cover the sub sectors of education, health, sanitation, and water and food security.
- To recommend practical strategic interventions in the sector.

2. Area of Coverage of the study

PDRC office in Garowe has been used as the operational base of the study, while following locations were covered during collection of the primary data:

¹ Country Re-engagement Note, World-Bank/UNDP, Somalia 2003

- a. Bosaso and Galkacyo towns were selected as appropriate places for urban household surveys. A total of 482 households were interviewed in these cities.
- b. Galdogob District, Mudug Region, was the site for pastoral household survey. The area received good rains during the last wet season and many pastoralists moved their herds to its direction. A team of three enumerators and one supervisor visited five rural villages and walked from nomadic hamlet to another in order to interview pastoral households. The team has managed to interview 60 nomadic households in five days time.
- c. Primary data information were gathered from fishing communities of Eil district, Nugal Region. During the survey the team covered four fishing sites along Indian Ocean coast, and interviewed sixty persons involved in fishery production, business and other related services. Five days were spent in this exercise by three enumerators and one supervisor.

3. Methodology of the studies

In carrying out the study activities, the coordinator and his team employed three primary methods to provide required information for situation analysis:

- a. The study coordinator and the professional consultants undertook extensive review of relevant official documents by the current administrations and publications by international organizations and independent experts on the topics of the studies. The study refers also the previous publications of WSP inter-active research process and the outcome of the PDRC research initiatives – reports and publications.
- b. Right from the start, PDRC acknowledged the scarcity of the needed information concerning relevant issues that are crucial for development planning. On the basis of that assumption, the main emphasis of the study was centered on gathering primary data. For best utilization of the designated time frame and allocated resources all questionnaires were designed to incorporate issues concerning the study topic. Consolidated multi-indicator survey questionnaires were sought to be appropriate instead of employing separate tools for each of the socio-economic and Macro-economic studies. During the planning stage of the assessment, a decision was taken to design distinct questionnaire/s to capture the differences that exists between urban and pastoral contexts in Puntland. The analytical approach to the fishery sector employed two questionnaires, one for fishery production and another for fishery business. Unlike the areas of urban and pastoral clusters, were the households were taken as the focus of the survey; the assessment of the fishery sector was centered on the personal roles played by selected interviewees in the production of marine resources. The outcome of the survey on fishery sector will be reflected in the Macro-economic paper. Questions regarding access to essential services (health, education and water) were framed differently when interviewing urban and pastoral communities.

- c. The third approach the study intends to employ is to arrange focus group discussions and holding workshops for special groups. The purpose of this is to combine the classical survey methodologies used during the first two stages of the study with a Participatory Action Research (PAR). The coordinator will enlist lead policy questions from the findings of final draft report of the study, as a tool to stimulate interactive dialogue between different stakeholders. A focus groups discussion on Socio-economic issues, will be held imminently. Selected participants from the current administration in Puntland, private sector, civil society and international actors will be invited in an inter-active dialogue to identify priority socio-economic options. The outcome of planned focus group discussion and results from primary data analysis and review of the secondary information data will be harmonized to produce integrated thematic paper of the Socio-economic study paper.

4. Summary of the findings

The paper will comprehend eight chapters, to cover the study objectives. The first chapter concerns the Politico-administrative dynamics in Puntland. The chapter will try to provide background information in Puntland regions since the collapse of the national state of Somalia. This will be a concise note of how Puntland come into existence. The efforts to make functional administration and both factors that hindered and others that have favored its establishment will be highlighted. Moments of conflicts, their causes and repercussions will be also highlighted without venturing into in-depth conflict analysis.

The second chapter will provide estimates of the total population in Puntland by the year 2003. On the basis of revision and the projection of previous population estimates of Somalia, PDRC approximates that the current population in Puntland would be in the region of 1.5 million people, equalling to 21% of the total population of Somalia¹.

The socio-economic survey on Somalia undertaken by Somalia Watching Brief, 2003, assumed the urban population to be 34% of the total population, while the corresponding figure of rural and nomadic population as 66%. Accordingly the urban dwellers and rural and nomadic population in Puntland consists 510,000 and 990,000 people, respectively.

The percent of the female population in the enumerated urban households is 51%, while the male population resulted 49% of the total population. The percents of male and female in the rural and nomadic areas has been found equal to 52% and 48%, respectively. The mean value of these for entire population in Puntland is therefore 49.7% male, and 50.3% female. The total female population in Puntland is 765,000 people, while male members are 735,000. Other figures on the distribution of the population by age groups, distribution of the households by

¹ Official statistics in Puntland State of Somalia inform that Puntland population is 2.2 Million.

gender of the households as well as the marital status of the household heads shall be presented in this chapter.

The focus of the third chapter is devoted to the housing conditions in Puntland. Considering the lack of differentiation of the housing conditions of between nomadic populations, which constitutes the majority of the rural population, the study enquired the distribution of households by type of houses and ownership of the dwelling. Three types of houses have been identified: Stone-walled houses, huts and make shift houses. The distribution of the households by the type of dwelling indicates that 78% of the dwellings in Puntland are stone walled houses followed by 14% and 8% of huts and make shift houses. Moreover, the distribution of houses by type of roofing indicates that over 80% of the houses under this category are of simple concrete roofing (46.8%) and galvanized iron sheets (33.6).

Chapter four is dedicated to the study of the educational systems and facilities in Puntland. Two essential pillars of this system are traditional and modern approaches. The modern approach of education is superseding to the traditional method, nevertheless the later is still preserving its endurance. Teaching of Islamic religion is generally based on traditional systems of service delivery, despite recent efforts to modernize this sector.

The concise picture of the post-civil war modern education systems in Puntland denotes: Non existent pre-primary education, modest progress in primary education, few secondary schools and emerging rudiments of tertiary education.

The striking feature of the situation of educational accessibility in Puntland is the very low enrolment ratio of the primary school age children. Of the estimated 465,000 of children within the primary school age bracket only 53,005 pupils were enrolled in different primary schools in Puntland regions in 2002/2003 school year. This consists 11.4% of all primary school children, split into 8.5% girls and 14.3% boys.

In a situation of underdeveloped primary education, the achievements in secondary and tertiary educations can at best be symbolic. In fact the enrolments in all secondary and tertiary education institutions in Puntland consists 2868 and 558 students, respectively, in 2002/3 school year. During the elaboratio of the figures on various enrolments, the number of schools, ratios of pupils per teacher (PTR), teacher per class-room (TCR), and people per class-room (PCR), the study made strong use of the 2002/3 primary school survey conducted by UNICEF.

The fourth chapter of this report provides situational analysis of health delivery mechanism in Puntland. Like the education, the health treatments in Puntland are divided into traditional and modern delivery systems. Further subdivision of the traditional treatment methods are traditional medicine, faith/spiritual healing and exorcism; while modern health systems are institutionalised facilities and institutions

run by health personnel. Referral hospitals and PHC units constitute the pillars of the modern system of health treatment.

In general the study found out that 18.5% of the entire population of Puntland, in Pastoral and urban societies have resorted to different health facilities for various complaints, in 2003. The disaggregating of these into urban and pastoral categories illustrates that 13% of the above were urban dwellers, while only 5.5% of the entire pastoral communities had access to health services. On the hand, modern service delivery system provided service to 15.8% of the population, compared to 2.7% that have approached to traditional healers.

The total number of available health facilities in Puntland consists of 16 referral hospitals with total number of 555 beds, 16 MCH centres, and 25 health posts.

Table 5.2 exhibits figures, provided by the Ministry of Planning and Statistics, and related to available health staff and its distribution by region and by professional scale. The total number of all categories of health staff who are involved in different service delivery mechanisms (Public, private and community) in Puntland consists of 950 persons, as of the official records of 2002. About 60.3% of all these staff members are Community Health workers (CHWs) and traditional birth attendants (TBAs), which characterizes that the majority of the staff lacks the necessary competence to deliver adequate service standards. Human health doctors accounts only 6.5% of the entire health personnel. All other intermediate staff are negligent except the nurse category, which is at the ratio of 14.7% of all the health personnel in Puntland.

The study has investigated the frequency of the usage of each of the modern health facilities by urban population, as parameter of assessment of different roles currently played by each facility in the over-all service delivery mechanism.

The study survey questionnaire found out the, in 2003, Private clinics were the most frequented facilities by health seeking patients followed by referral hospitals and private pharmacies, as per order of importance attached to various facilities. As a corollary, the least frequented facilities are the MCH centres and health posts (HPs). The study concludes in this respect that curative system is more frequently used than the preventive methods. Another finding of the study is also the relative prominence of the private delivery mechanism in comparison to the health public sector. The cardinal motives behind the prioritisation of the curative and private delivery systems over preventive and public service delivery systems include the profit driven tendency of the leading sectors of the service and the lethargic attitudes of the public authorities in terms of the resources channelled to essential services from the public revenue and its failure to see the need to regulate health delivery systems, as well as other essential services.

The information about the water supply and hygiene and environmental sanitation are provided in chapters 6 and 7, respectively. In general Puntland is defined as water deficit zone. It has no perennial rivers, while the rain fall is the lowest of Somalia, ranging on the average of 50 to 250 mm for a normal year. Main water

points are berked, shallow wells, boreholes, and springs. During normal rain fall years, the majority of pastoralists rely on surface water, while in critical situations boreholes are the main source for the water needs of animal herders and their stock.

Relatively, the accessibility of water has improved in urban areas, following aid interventions by international agencies. Although most of the boreholes drilled by the former governments and several new wells have been drilled recently by international organizations, functioning boreholes are suffering from frequent failing and low yield of water.

Hygiene and environmental sanitation is critical in urban areas and pastoral villages, while health risks related to poor sanitation in sparsely populated areas are small. In general, main factors that affect the status of hygiene and environmental sanitation are access to or use of latrines, contamination of water from the source and during handling at household level, and waste management, particularly at urban area and pastoral villages. Findings of the survey, in this respect, include that about 9% of the urban population have no toilets at all. Consequently, health risks are considerable in urban centres due to indiscriminate defecation, and overflowing of septic tanks.

Water is drawn from shallow wells; risks of contamination include the infiltration of human refuse into the aquifer through seepage from septic tanks and pit latrines, while berked can be polluted by all kinds of waste when surface waters are channelled through to refill the reservoir.

Accumulation of garbage, including large amounts of food leftovers and plastic bags are seen in nearly all towns and pastoral villages. The absence of local authorities to designate appropriate temporary dumping sites and organise routine collection and burning is apparently the major problem.

The final chapter is reviews to food security situation. In order to monitor the accessibility of food, FSAU divided Puntland into different Food Economic Zones (FEZ), inhabited by different Food Economic Groups (FEG). Any category of the population which is affected similarly by major external shocks is defined as an FEG. External shocks can be droughts, imposition of international trade barriers, deterioration of security, outbreak of epidemics and other wider impact disasters. In line with the above characterization major food economic groups in Puntland are: pastoralists, frankincense collectors, fishermen, employees and traders.

Further classification of each FEG is based on asset holdings, and consequently divided into poor, very poor, middle and better off. Pastoralists, who constitute the majority in Puntland population, are currently in a serious distress situation as result of the current prolonged drought.

CHAPTER ONE

1. Politico-Administrative Dynamics of Puntland

The Somalia's disintegration into political and regional clan enclaves and the prolonged civil war caused tremendous humanitarian crisis to all Somali people. Hundreds of thousands fled from the Southern regions of Somalia to the present Puntland regions, leaving behind their history and property, accumulated over a century and escaping from clan-cleansing and eventual genocide. The early belief of the general populace, in the immediate aftermath of state collapse, was that the disintegration of Somalia will not last long and that soon the central state would be re-instituted. No one would have predicted that the statelessness would continue so long.

In 1991, after the collapse of the Somali State, the Somali Salvation Democratic Front (SSDF), which was one of the opposition fighting factions against the Somali government, was the only political and military structure that existed in North-eastern regions at the time.

The SSDF leadership, supported by the population, had directed its political and military actions toward defending its territory from the invading forces from the southern Somalia, spearheaded by USC (1991-1993) and the containment of Al-Itihad religious fundamentalists, who tried to take over the political and military powers by force from SSDF in 1992. Both forces were defeated; it was a heroic action that invigorated the SSDF's political and military posture, not only in the region, but also in the rest of Somalia.

As a parallel development, SSDF had suffered from internal power struggle between two competing factions within the organization. This political bickering failed SSDF to develop itself into a viable administrative and political organization that could address the pressing needs of the population. The failure of the all inclusive conference, which was held in Qardho on June 1994, had further inexorably weakened the political and social cohesion of the people.

From 1994 to 1998 (June), two SSDF factions, as separate entities, existed side by side, though without resorting to military confrontation. During this period, as there was no political unity, the public resources, generated from the customs duties and other sources had been accounted to no one, nor had a political development taken shape during this period.

Being tired of the political stalemate and continuous wrangling of the SSDF leadership, the clan leaders had at last taken positive steps by calling an all-inclusive general conference in Garowe on May 5, 1998, at which the Puntland regional state was formed, on the designs of three branches of government-legislative (66

members, with 5 women), Judiciary and Executive President with Vice President and 9 Ministers. Two regions-Sool and Eastern Sanag- had also joined the former North Eastern regions and thus jointly formed the Puntland State of Somalia as an autonomous regional administration, but integral part of Somalia

1.1 POLITICAL CONFLICT WITHIN PUNTLAND AFTER 1998

The First Provisional Charter of Puntland provided three year administration

The mandate of the government expired on June 30, 2001. The Puntland Provisional Charter (Article 28) stipulated that within the mandate period (July 1988-June 2001), the administration should have undertaken and completed (a) population census, (b) Draft Constitution, (c) Referendum to take place on Draft Constitution, and (d) produce law for holding elections. The administration failed to implement any of these covenants, but drafted a constitution document, which coincided with the termination of the administration's time mandate.

When such a constitutional crisis emerges, the charter provided dissolution of the Government (cabinet) and House of Representatives, and calling upon the Chief Justice to assume the presidency of a caretaker administration for a period of 30 days, during which he would organize a constitutional conference similar to, or designed on the model of 1988 Conference where the traditional leaders would make decisions to form a new government.

In spite of such constitutional arrangements, the Puntland Government opted a different approach by calling some titled leaders (Isimada-not all of them) to a conference in Garowe (June 13) to decide on one of two options (a) to extend the mandate of the government or (b) accept the dismantling of Puntland administration, which may lead to uncertain political and security situation. The government's argument for opting proposal (a) was based on economic and financial consideration and lack of resources. In fact, the chairman of the parliamentary election committee argued in his report (June 14, 2001) that in order to hold political elections the resource needed amounts to US\$ 91 Million, which the administration cannot provide.

As the Constitutional Court, stipulated in the expired Charter, was not established during the government term –1998-2001 to resolve such constitutional and legal conflicts, a political stalemate between the two contending factions became immediately apparent.

A group of Clan leaders from Abdullah's camp, then recommended extension of the government time-mandate to the House of Representatives, and the latter accepted the proposal and extended the government term for another three years. The constitutionality and legality of this decision was challenged by

another group of elders and opposition groups, who called upon the Chief Justice to assume a Care-taker Presidency, as provided by Charter.

A second conference was organized by elders and the chief justice to elect a new president. As a result, from July 2001 to May 2002, two administrations existed, headed by two antagonistic presidents, one in Bosaso and the other in Gal kayo/Garowe. These military confrontations of the sides in conflict led to serious consequences in terms of human casualties, economic distress as well as social and political shocks among the communities. Luckily, the conflict has been resolved by the mediation of two prominent traditional leaders, and a peace agreement was signed between the two factions on May 17, 2003. As a result, the two factions shared political power and ministerial positions and military and bureaucratic ranks in the administration, as stipulated in the peace agreement. The opposition's militia was also integrated in the security forces, which increased the latter's strength by 15%, and as a consequence the budget deficit has further escalated.

Another conflict, not yet resolved, is the current one between Puntland and Somaliland on the contested regions of Sool and Eastern Sanaag. Puntland claims that overwhelming majority of the population in the two regions adheres to Puntland on the basis of belonging to same clan and lineages, while Somaliland claims on the argument of colonial boundaries, which had been eliminated by the union and birth of the Somali Republic in 1960 of the former colonized regions of south and north.

1.2 Politico-Administrative Development

Puntland State of Somalia, as sanctioned in its charter, pursues different path of development in comparison to the leadership of the political factions of southern regions of Somalia and Somaliland authorities. PSS presented an alternative option to highly central model of national state, still adhered by political tendencies in the southern regions of Somalia, while at the same, unlike Somaliland, which pursues secessionist political objectives, Puntland strives to pursue the principle of national unity and territorial integrity of the Somali Republic, independent of any future political structures that might come out of the Reconciliation Conference of Somalia.

Propelled by these political convictions, the Puntland administration has paved the ground for the future of Somalia federal state by promulgating a regional constitution, based on federalism and decentralized system of governance.

The Puntland administration succeeded to set up government institutions and administrative structures at both central and local levels, which have functioned since 1998. The setting up of various ministries, such as Planning and Statistics, Finance, Education, Health and Public Works, Livestock and Enrolment and autonomous agencies for Roads maintenance and Power and Water had shaped the

new administration's strategy in structuring state institutions. In spite of all these, the scarcity of resources and recurrent droughts has slowed the development of viable institutions capable of delivering effective and quality services.

The capacity and efficiency of these administrative and political structures to undertake development programs, good fiscal management and service delivery systems have been hampered by a number of concurrent constraints.

The first constraints were economic and fiscal. The Puntland economic mainstay springs from livestock production. As the livestock production is highly dependent on the level and frequency of seasonal rains, which often fail in many pastoral areas, the economic productivity of the livestock sector remained shaky in many ways. The economic dependency of one sector, such as livestock production and one market for livestock export, has also constrained the administration capacity to generate enough revenue and comprehensive fiscal and monetary policies. In spite of these two constraints, the administration had, however, created employment within the bureaucracy and security forces by engaging about 700 civil servants and nearly 6000 of security elements.

The second constraint that hampered rapid development and efficiency of the administration was the lack of trained human resource, with a capacity to manage effectively and transparently the available meager resources. The administration engages a relatively large bureaucratic staff, whose skill and managerial capacity is much lower than what their jobs requires. The reason is that the staff is appointed not on academic or professional qualifications or merit, but mostly on clan affiliation, a problem that needs to be addressed.

There are two institutions that offer management courses in business administration and management, which produced young graduates, but have no jobs, as the position in the bureaucracy had been filled up politically sponsored elements. The private sector businesses are ran on individual or family driven mode, which does not allow employment space for young graduates. In the coming three years a large number of youngsters will graduate from the secondary and post-secondary institutions without a clear direction about how to engage them.

The public perception about the administration's accountability is almost negative. Such attitudes from the resource generators constitute a risk factor that might ignite political conflict and instability on longer terms.

The third constraint, which further hampers the social and economic development, is the budgetary misallocation to various services. The security and political sectors absorb over seventy five percent (75%) of the revenue, while education, health and water sectors combined together receive less than five percent (5%) of the budget. The justification for this misallocation is generally attributed to perceived security

concerns and for averting political upheaval or instability of the system. Under such guises, resource mismanagement has become widespread and uncontrolled.

Under the new Draft Constitution of Puntland, the administration is required to establish local councils in this year-2004 in all district towns and pastoral settlements by organizing consultative conferences, meetings and forums for each district town population to select councilors, based on clan and women representation. This formula of selecting local councilors on clan basis is a prelude for paving the way for multi-political parties, to be introduced in later stages. However, the outcome of the Mbigathi Somalia Reconciliation Conference will have a strong bearing on the development of federal regions as building blocks of a national federal state.

CHAPTER TWO

2. Population Figure

2.1 Population Estimates

Demographic data has always been scarce in Somalia. The only time that all inclusive censuses have been carried in Somalia was 1975. However, serious objections have been raised by many critics who considered it misleading. They say that population figures for the regions currently known as Puntland have been deliberately under quoted in order to justify official neglect of these regions by former national governments. Despite these and other objections, it is obvious that a census that has been conducted thirty year before now cannot be taken as reference for the present conditions.

Taking into consideration this objective paucity of data, the present study relies, partially, on the population estimates provided by "UNFPA consultant in 1997 (5.76 million) after reviewing the estimates made by UNDP and US Census bureau"¹. The extrapolation of the above figure, while assuming an annual population increase of 3%, presupposes that the total population of Somalia have reached 7.04 million in 2003. Following the same approach of extrapolation in regard to regional breakdowns of UNFPA consultant, indicate that the share of the current inhabitant in Puntland regions could be within region of 1.2 million which correspondence 17% of the total population of the country.

However, as has been observed by the authors of the UNICEF Situation Analysis report of 1998, the regional breakdowns of the population done by UNFPA consultant "are not agreed by all aid bodies and such Somali authorities as exist, and may not take account of internal displacement, which have swollen the populations of Mogadishu South and north east Zone in particular"².

Despite the acknowledgment that any calculation based on UNFPA calculations under quote the actual size of total population in Puntland, the present study is at the same time cautious to agree with the total population figure provided by Puntland Authority. The recent publication of a Statistical Abstract by the Ministry of Planning and Statistics in Puntland Administration, suggests that the current population in Puntland is 2.2 million, which would have corresponded to 31% of the total population of Somalia³.

Since the current population figures used by international agencies for planning purposes are those estimated by UNFPA in 1997, the present study's calculations are similarly based on it, with one modification consisting and additional estimate of

¹ Socio- Economic Survey 2002, Somalia, Report 1; Somalia Watching Brief, 2003

² Children and Women in Somalia, Situation Analysis, UNICEF, 1998 Nairobi

³ Facts and Figures, Ministry of Planning and Statistics, Puntland State of Somalia, 2003, Garowe (Draft).

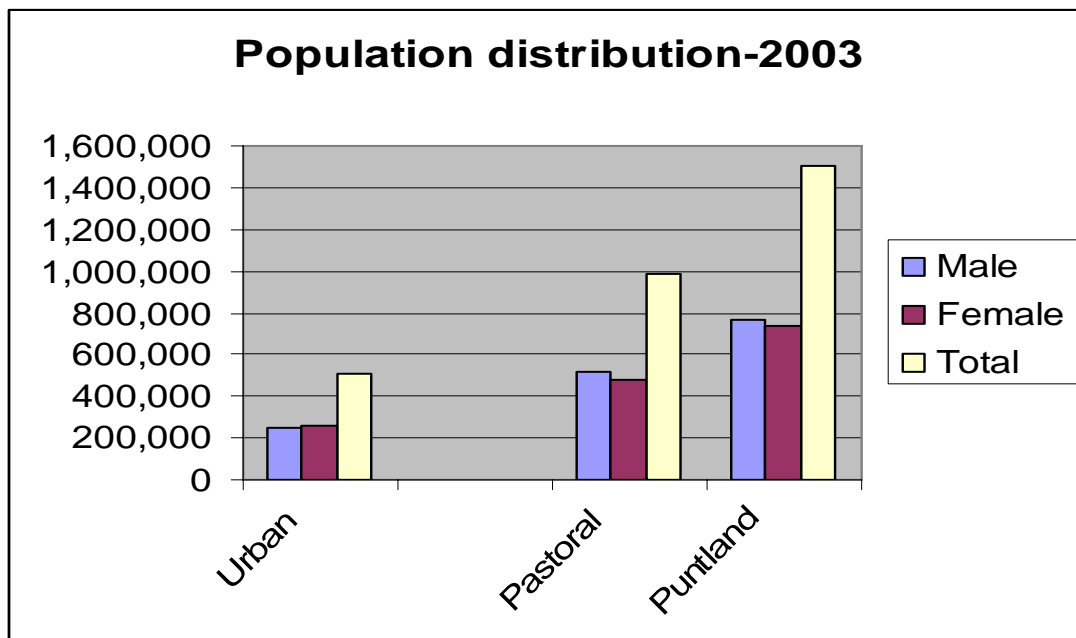
25% increase of population due to the high immigration rate during the civil war period. This approximates the current population in Puntland to the region of 1.5 million people, equalling to 21% of the total population of Somalia.

It is equally difficult to estimate the proportions of nomadic, rural and urban sections of the population. However, it is certain that the disastrous events of the civil war have not only attracted a conspicuous mass of returnees to Puntland, but they have also radically reshaped its pre-war demographic structure.

Although the paucity of data complicates calculation of a precise ratio between the different categories of population, indications are that the nomadic population still constitutes an absolute majority, but have decreased relatively in their proportion to urban and rural populations. The pastoralist community exhibits almost entirely natural growth rates, while the two other sectors have received an influx of immigrants, which naturally alters the pre-war proportions. Such changes have, indeed, serious implications for any serious development planning process.

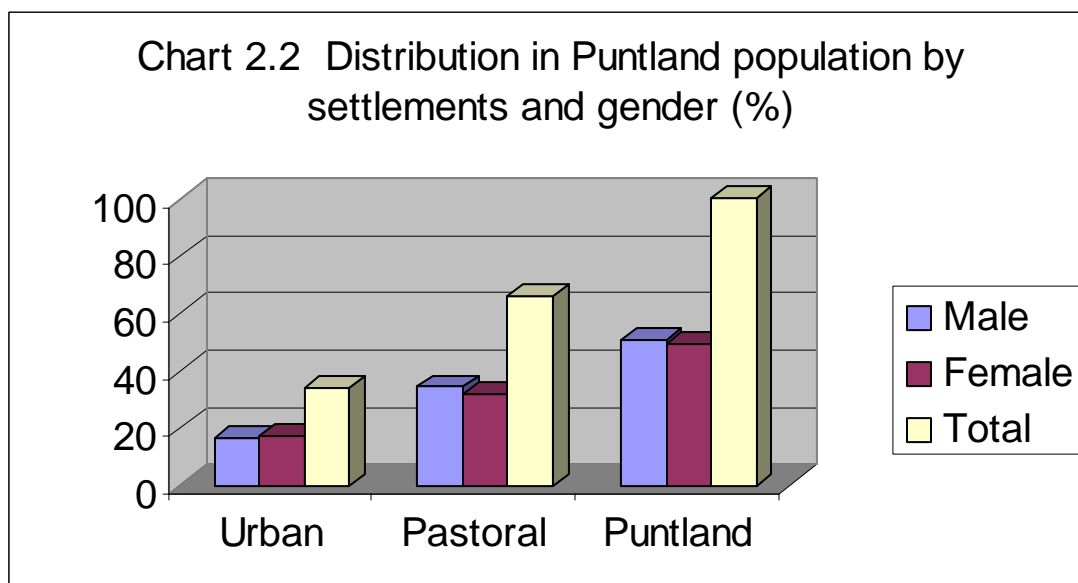
Confronted with such lack of agreed standard of desegregation of population by settlements, this socio-economic study sees justifiable to base calculations on the findings of the socio-economic survey on Somalia undertaken by Somalia Watching Brief, 2003. The later considers rural and nomadic in one category on the one hand, while on the other hand urban settlers are taken as another category. More over the study assumes that urban population constitutes 34% of the total population, while the corresponding figure of rural and nomadic population consists 66%. Accordingly, the urban dwellers and pastoral population in Puntland consists 510,000 and 990,000 people, respectively.

Table 1.1 illustrates the distribution of the population by settlements and by gender, which is based on the percent distribution of sampled population reported on table



1.2. The percent of the female population in the enumerated urban households is 51% of urban populations and 17.34 % of all population taken together (urban and nomadic-rural), while the male urban population resulted 49% of all urban dwellers and 16.66% of the total population, as is illustrated in the tables 1.1 and 1.2. On the other hand, the percents of male and female categories in pastoral area of the region have being found equal to 52% and 48%, respectively.

The mean values of male and female for entire population in Puntland are 50.98 % male, and 49.02 female. The total female population in Puntland is 735,300 people, while male members are 764.700, accordingly.



The average household size in the accounted urban dwellers and surveyed pastoral communities are 7.4 and 8.9, respectively. This suggests that the total number of households in Puntland consists of 180,155 families distributed into 111, 236 of pastoral/rural families and 68,919 urban dwellers, as shown in table 1.3.

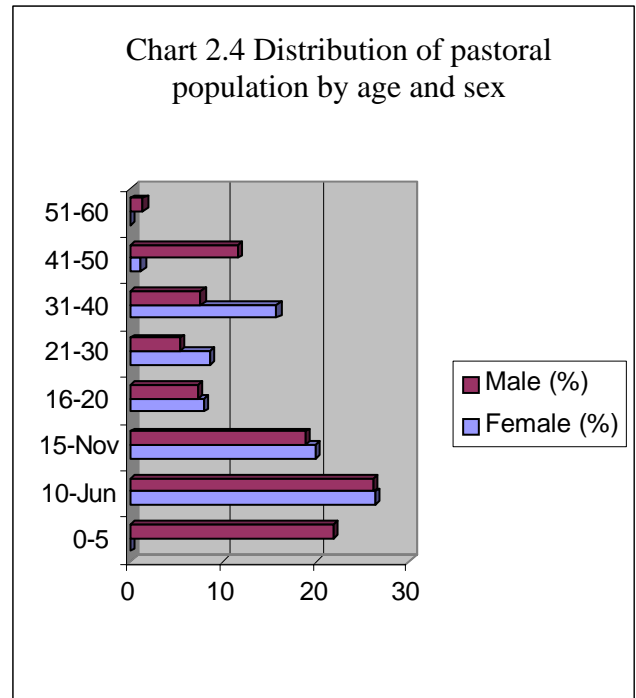
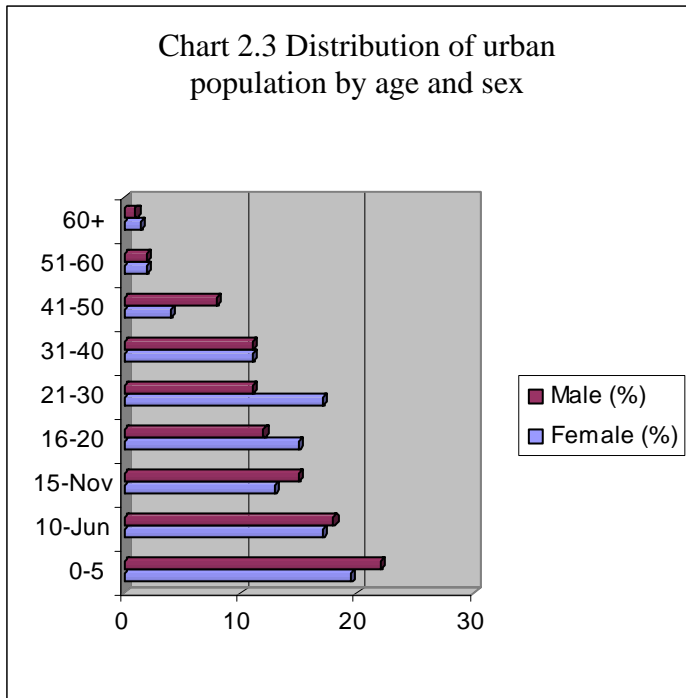
Table 2.3 Distribution of the population by average household size and number of households in urban and pastoral-rural area.

Settlements	Average HH Size	Total # of HHs
Urban	7.4	68,919
Nomadic	8.9	111,236
Puntland	8.3	180,155

Source: Study survey questionnaire, December 2003

The distribution of the surveyed population into different age brackets both in urban and pastoral areas is consistent with the typical demographic structure of the population in developing countries with high fertility and mortality rates.

Tables 1.4 and 1.5 (annex) demonstrate the natural trend of down sliding tendency of population as they become older.



The share of female headed households is estimated at 33% in urban and only 6.6% in pastoral areas, as shown on table 2.6 (annex).

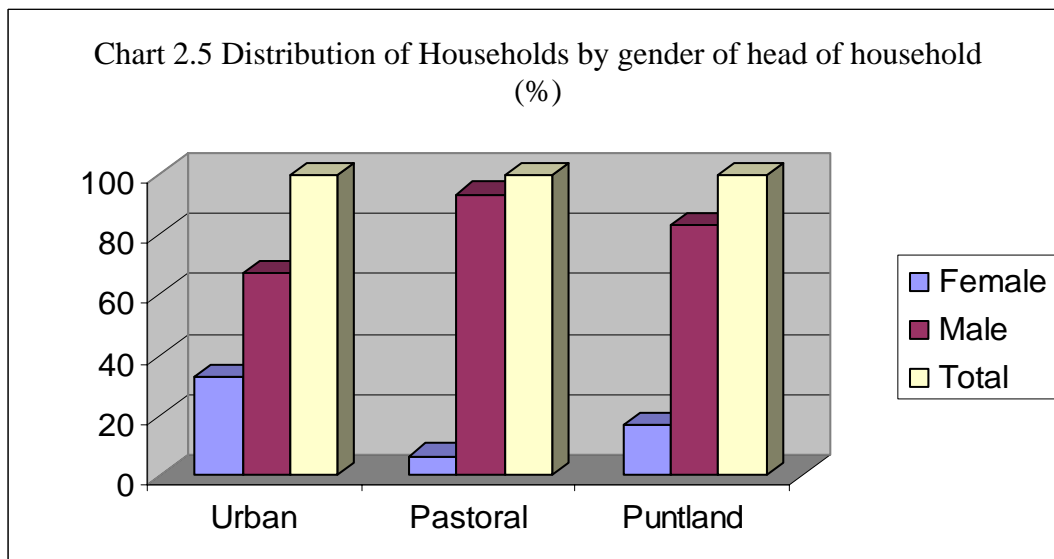
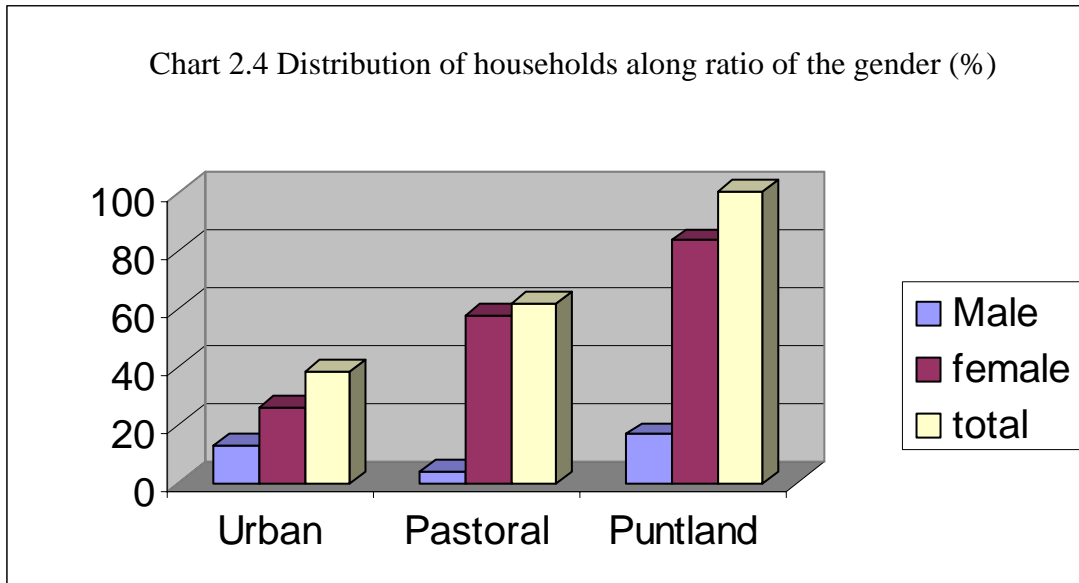
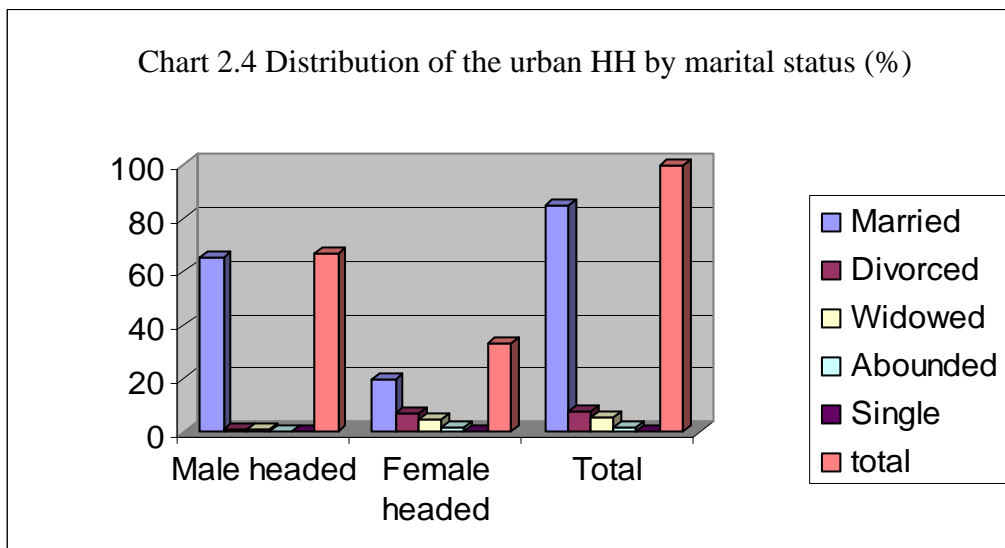


Table 2.7 (annex) reflects the overall picture in Puntland, urban and pastoral taken together, and evidences that 16.6 % of the Households are female headed; of this 12.6 are in the urban centres while 4% conducts pastoral way of living.



Since except only 4% of the household heads of the pastoral communities are male and all they are prevalently currently married, the analysis of the marital status of household heads is centred on the urban areas. 85% of urban household heads are currently married, of these 65% are male and 20% are female. The remaining 15% of the urban household heads are distributed into 7.8%, 5.3%, 1.5% and 0.4% of divorced, widowed, abandoned and single. Divorced and widowed male household heads constitute 0.8% of all urban household heads each, while all abandoned families are female headed.



Only 0.4% of all urban households are recorded with single marital status, and all of these are male. This is consistent with the traditional norms that inhibit women from declaring children born out of official marriage.

This explains the prominent role that women play in post-civil war Somali society, particularly in urban. Taken together, about 30,085 households distributed accordingly into 22,743 and 7,342 in urban and pastoral areas are maintained by women. The total population of these households consists 274, 605 persons, which corresponds 18.3% of the estimated population in Puntland. Moreover, the 20% of female household heads, which is currently married, reveals that respective husbands of these women, like any other household member, are dependent on the income earned by their wives. One important finding of this survey is that pastoral communities, separately, still preserve the traditional hierarchical male authority, characteristic of the Somali society, whereby the overall responsibility of over 93% of the households is exercised by man.

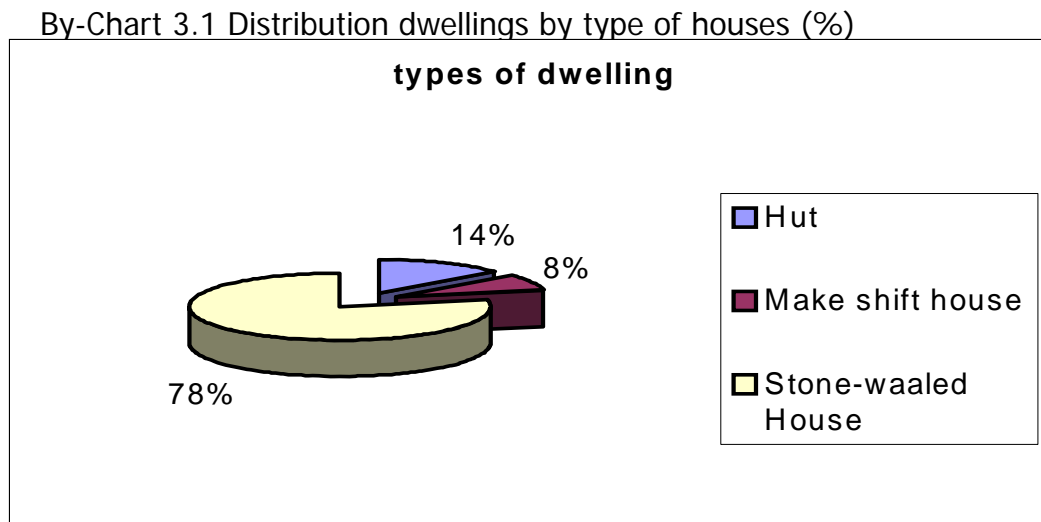
CHAPTER THREE

3 Housing Conditions

3.1 Type of the houses

Somali pastoral communities dwellings are characterized with uniformity of type of houses, which consists nomadic hamlets that can be easily dismantled and re-fixed. This type of houses is consistent with mobile grazing pattern of animal husbandry that requires frequent translocation from one place to another of pastoral households in search of pasture and water. Consequently this study inquires different housing units in urban settlements. The study has identified three types of houses in urban centres: Stone-walled, huts and make-shift houses. About 78% of the urban houses are stone-walled, while the remaining (22%) falls under the categories of huts (14%) and Make-shift-Houses (8%). The latter are occupied by IDPs from southern regions of Somalia and refugees from neighbouring states, mostly from Zone Five of Ethiopia. This category of houses is temporary and is made of Twigs, plastic sheets, flattened drums and tins and similar materials. Most of these houses, and the majority of its occupants (IDPs and refugees), are concentrated in main towns of Puntland.

Stone-walled houses can be classified as per type of roofing of each sub-category. Most of the stone-walled houses that have been constructed in Puntland before the outbreak of the civil war in Somalia, were either with simple-concrete or galvanized Iron sheets roofing. However,

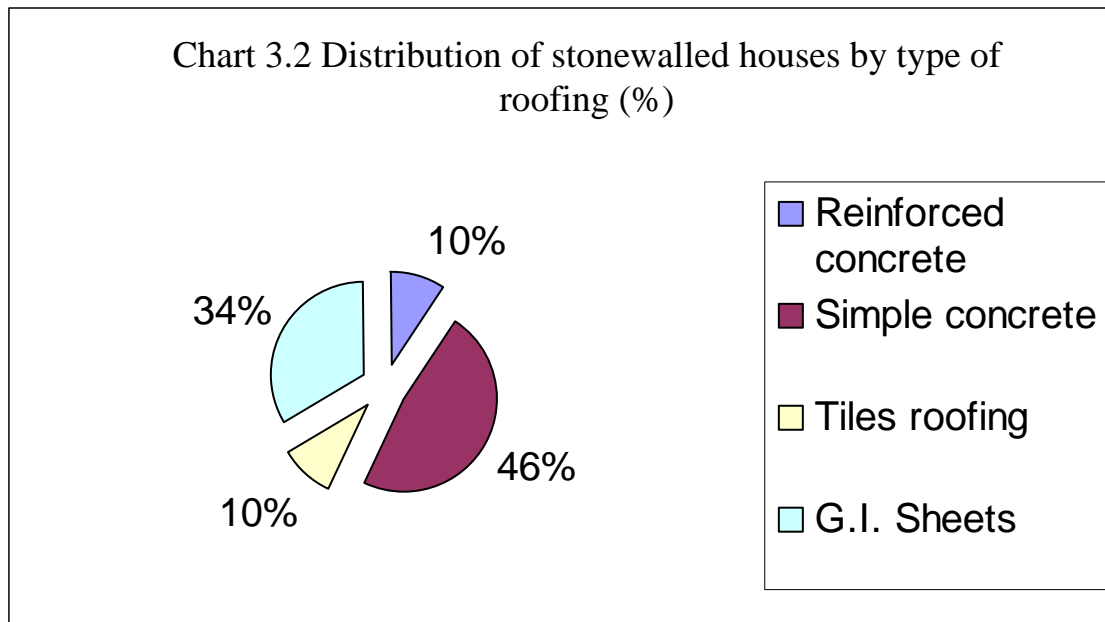


Source: Study Survey Questionnaires

Following the disintegration of the country into different territorial segments along kinship lines, Puntland has attracted massive inflow of returnees from other regions

of Somalia. The returnees included professionals in modern constructions skills i.e. engineers, geometers and contractors. This was coupled with growing demand for housing as a result of the rapid urbanization of the region, particularly during the first half of the last decade. Most of the stone-walled houses with tiles and reinforced concrete roofing have been constructed. It is important to note that construction skills of reinforced concrete roofs were unknown in Puntland, and the most of these types of houses started mushrooming in the urban centres in Puntland very recently.

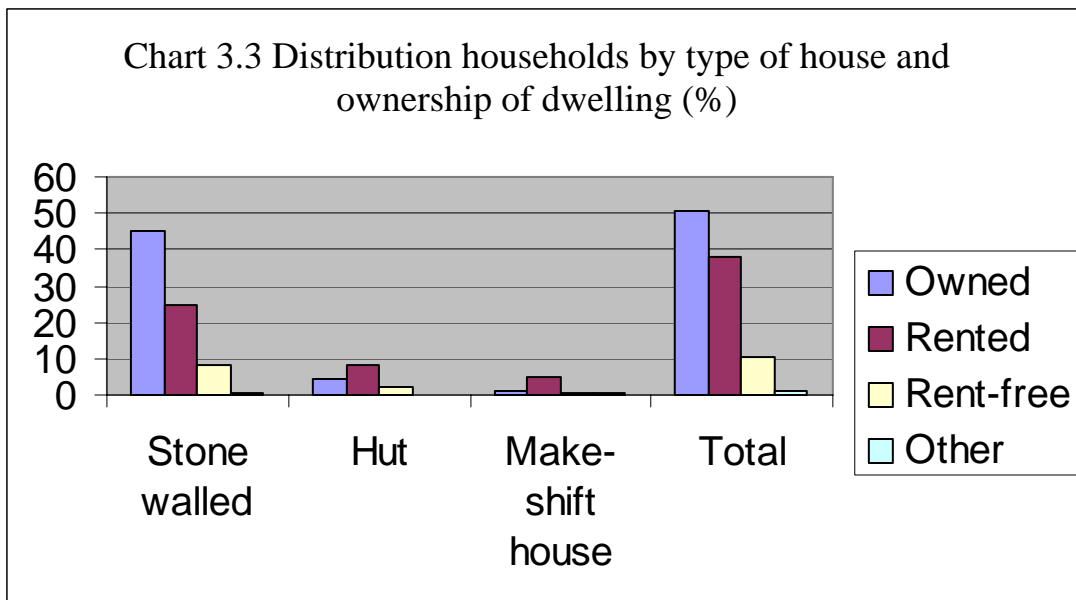
Table 3.1 shows the distribution of the stone-walled houses as per type of roofing, and indicates that over 80% of houses under this category are with simple concrete roofing (46.8%) and galvanized iron sheets roofing. This happens because the first type is traditional method of roofing stone walled houses, while the second is most affordable type.



The average number of rooms of the surveyed dwellings varies in the order of 3.6, 1.7, and 1.3 in stone walled, huts and Make shift houses, respectively.

3.2 Ownership of the dwellings

The study has identified the existence of mixed types of ownership of urban dwellings in Puntland. Table below indicates that over 50% of the houses are owned by respective dwellers followed by 38% of rented houses. Except less the 1% of the households which live in state owned buildings, all other remaining 12 % of families living in Puntland cities and towns occupy rent – free houses. These families consists destitute returnees who cannot afford paying rents and temporarily sheltered in houses that belong to their respective relatives, through the consent of the owners.



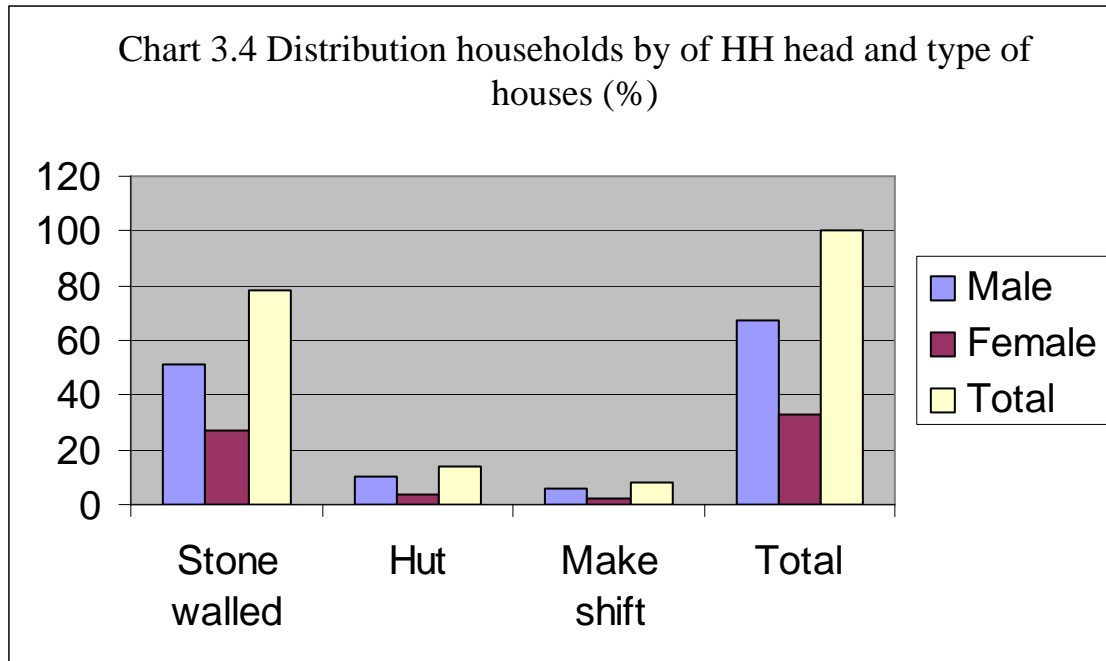
In the first place, this is a reflection of the endurance of the traditional social obligation demanding from the relatively better-off sectors of the society to assist disadvantaged categories of the population, mostly through kinship networks of reciprocal solidarity. In absolute terms, the estimated number of urban households currently living in rent-free houses, throughout Puntland, equals to 7,720 families, with a total household members of over 57 thousand persons. By logical deduction, this category of the urban population depends on that traditional support system for most of their other essential needs.

Secondly, the above phenomena (significant number of households occupying rent-free houses) signals emerging housing crises in Puntland. If the demand for rented houses keeps growing, landlords that are facing with economic difficulties may need to compensate the declining revenue by renting their houses currently occupied by non rent paying dwellers, with consequent eviction of the occupants. In addition to the increased vulnerability, the eventual cut-off/weakening of such kind of support to destitute families, would gravely undermine the traditional cohesion that existed through mutual reciprocal solidarity obligations among Puntland inhabitants. Indirectly, in the vent that this happens, it may contribute tensions and instability.

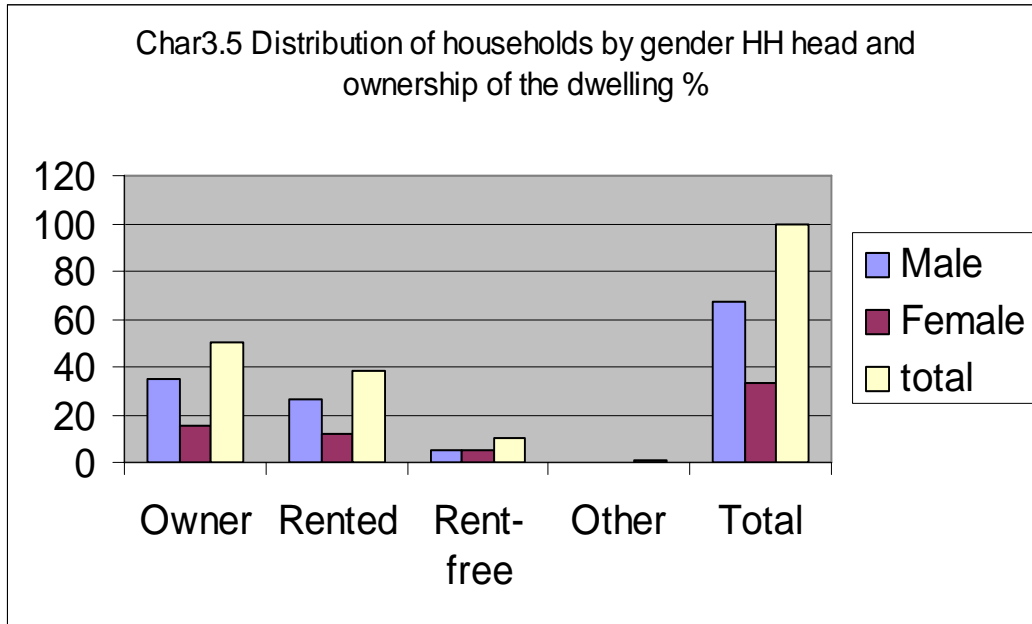
Finally, the fact that fewer than 1% of households are occupants of vacant houses, explains the previous neglect in Puntland regions by former Somali governments. The former Somali governments, as well colonial authorities that ruled the country before the attainment of the national independence, have marginalized these regions in terms of provision of essential services as a result of which the investment on government buildings have been negligible. Most of the state owned buildings that existed in the region before the collapse of the national, which are very few in numbers, were initially occupied by returnees from other regions of Somalia. However these buildings were evacuated from the temporary occupants, and afterwards rehabilitated with the assistance of the international organization

and currently used for the delivery of essential social services. Other previously state owned buildings are also used as offices for different administrative authorities. Since Puntland did not witness prolonged and all out war that sparked between its inhabitants, the forceful removal of many landlord from their houses by squatters, is unknown in Puntland.

The distribution of households by gender of household heads and type of houses (table 2.2), and by gender of the household head and ownership of dwelling is correlated to the distribution of the household heads by gender.



In other words the study did not reveal any kind of discrepancy like most of the female headed households occupying either shanty houses (huts and make shift houses) or rented houses. The ratio of Female headed households occupying stone-walled houses and owning respective dwelling is almost proportional to their share in the general distribution of households into male and female heads families.



The prospective of present boom of construction industry in Puntland is uncertain and will depend on the likelihood of the different scenario of the solutions of Somali crises. Further dragging of the stalemate situation that impede the rebirth of Somali State

CHAPTER FOUR

4. General overview.

4.1 Fundamental pillars of the educational System

The two main educational systems that exist in Puntland are the traditional and modern institutions. Each of these has its own ramifications and sub-systems. The first consists of various flexible approaches of Islamic teaching. The inspiring element of this kind of education is learning religious obligations of Islamic religion. This is conducted at Koranic schools and Xer¹ circles.

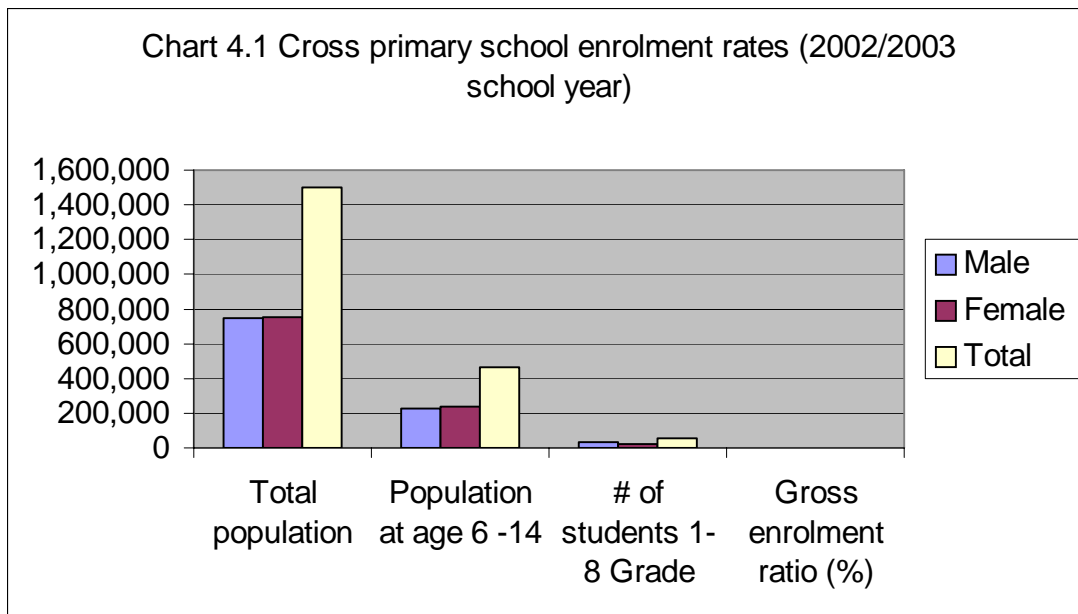
The modern education consist formal and non-formal approaches of learning. Formal education systems comprehend the classical stratification of standardized schooling systems: Pre-primary, primary, secondary and tertiary education systems. Non formal education consists mainly vocational training and adult education. The concise picture of the post-civil war modern education systems in Puntland denotes: Non existent pre-primary education, modest progress in primary education, few secondary schools and emerging rudiments of tertiary education. The following sections will present the status of the formal modern education in Puntland.

4.2 Primary Education

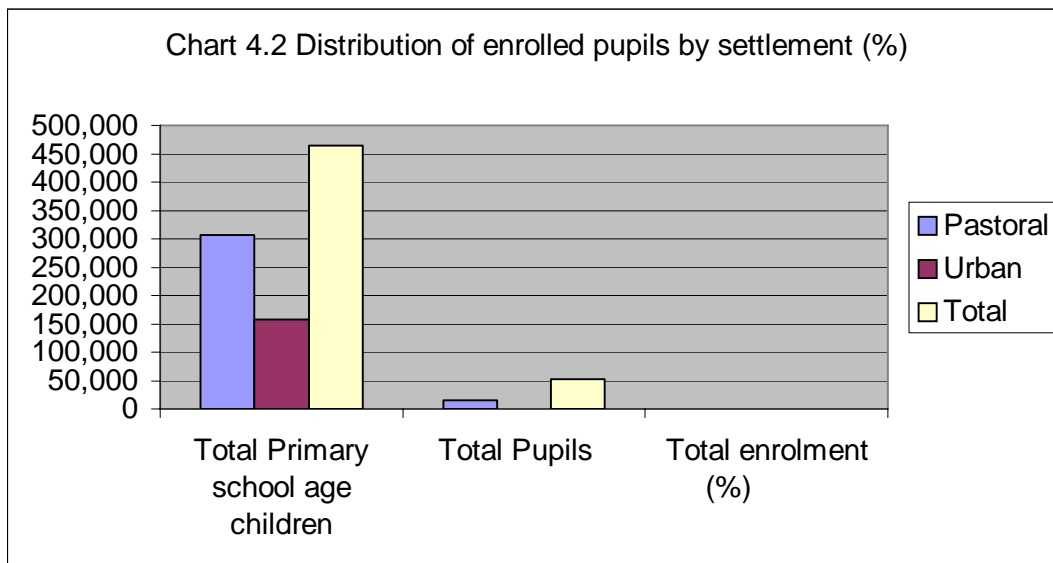
The information in this section is based on the primary schools survey conducted by UNICEF at the school year of 2002/2003. Enrolment figures, number of schools and teachers of Sool and Eastern Sanag concerns only those districts claimed by Puntland administration. Table 4.2 indicates the Gross primary school enrolment ratio in Puntland and its distribution by gender.

The striking picture of the situation of educational accessibility in Puntland is the very low gross enrolment ratio of the primary school age children. Of the estimated 465,000 of children within primary school age bracket only 53,005 pupils were enrolled in different primary schools in Puntland regions in 2002/2003 school year. This consists 11.4% of all primary school age children and 3.5% as of the ratio of total population. The enrolment ratio of the boys is 14.3% of the total number of the primary school age boys, while the ratio of primary school enrolment of the girls is 8.5%.

¹ Xer circles are itinerant teachers



The distribution of the pupil enrolled in the primary schools indicates further the marginalization of the children in pastoral communities that accounts only 5.2% of total enrolment ratio, against 23.4% of enrolment in urban areas, as shown in table



4.3.

The distribution of the primary school students by enrolment in lower and upper primary indicated a decline in number of classes and enrolled students in upper primary (grades 5 – 8). According UNICEF primary school survey the proportion of pupils enrolled in lower primary is 81% against 19% in upper primary¹. As to the regional breakdown of primary school enrolment, within Puntland, Bari region accounts about 42% of all pupils, 47.5% of the schools; 48% of teachers; and 43.3% of classes in 2002/3.

¹ Survey of primary Schools in Somalia 2002/3, September 2003, Volume 1: technical report; UNICEF

Table 4.3 Regional breakdown of the total number of schools, pupils, teachers and class

Region	No. of Schools	Total pupils	Total teachers	Total classes
Bari	136	22,391	861	681
Mudug	36	8,572	264	240
Nugal	32	6,200	216	191
Sool	44	8,038	225	225
Eastern Sanag	38	7,804	221	234
Total	286	53,005	1,787	1,571

Source: Survey of Primary Schools in Somalia 2002/3, UNICEF, September 2003

4.3 Status of the Secondary Schools

A total number of 2868 have been enrolled in 12 secondary schools that operate in Puntland, during 2002/3 school year. The proportion of female students is 535 (18.6%), against 2333 male students (81.4%). Table 4.5 indicates regional breakdown, within Puntland, of all secondary schools in Puntland and total number of students enrolled, in 2002/3. Half of the schools and more than half of the students are concentrated in Bari region, while other three regions have of equal shares in terms of the number of secondary schools. Eastern Sanag has no functioning secondary school.

Table 4.5 Distribution of No. of secondary schools and students enrolled by region, within Puntland.

Region	No. of schools	%	Students			%
			Female	Male	Total	
Bari	6	50	308	1220	1528	53.28
Nugal	2	16.67	126	370	496	17.29
Mudug	2	16.67	96	541	637	22.21
Sool	2	16.67	5	202	207	7.22
Total	12	100	535	2333	2868	100

Source: Facts and Figures, Draft report, 2004; Ministry of Planning in Puntland Administration.

4.4 Tertiary Education

Since the collapse the national state of Somalia, there have been many efforts to revive tertiary education. However, the establishment of universities in a country with underdeveloped primary education, so far produced weak results. Establishment of learning institutions that can be qualified as universities, or higher institutes and academies specialized in different disciplines requires solid preconditions.

It was on the merit of international assistance that Somali students have been receiving post secondary education opportunities, before the collapse of the national state. All Somali's with university education background have either graduated from overseas universities or from the defunct national university. However, the latter was totally sponsored thorough international donations, mainly by the Italian Cooperatio Fund.

The first post-secondary institution that started operating in Puntland is the Bosaso Vocational Institute, supported by UNCTAD, as part of a UNDP program. The program's aim was to provide institutional support to Bosaso Port. The institute started providing courses on Management, cost accounting and basics of economy and law, in 1998, to limited number of students for two years program. From 2001 the centre introduced three years curriculum on the same subjects and admits only new graduates from secondary schools. The number of students that were enrolled in Bosaso vocational institute reached 198 students in 2002/2003.

Puntland Community College (PCC), based in Garowe, is also a new institution of higher education. The college started providing courses for beginners on management to junior students and good numbers of its early graduates are recruited by some international agencies based in Puntland and also by different departments in Puntland administration. Like Bosaso Vocational Centre, PCC started three year program in the year 2003/4 to successful applicants

East Africa University (EAU), known as Bosaso University, is the second tertiary education established in Puntland, and started operating in Bosaso from the year 2000. Right from the start EAU consisted of two faculties which have provided courses of Business Administration and Sharia Law. By 2003 EAU included in its programs courses of computer science faculty. The overall enrolment capacity of the university for the year 2002/2003 figured a total of 381 students, distributed to 171 registered in the faculty of Sharia Law and Islamic Studies and 177 in the faculty of Business Administration. The new faculty of Computer Science admitted the first year students, consisting of 33 new entrants.

The construction of a new Teachers Training Centre is underway in Garowe through Diakonia funding. The college is planning to admit the first year students from the year 2004/5, as an institution that will train new teachers for primary and secondary

schools. It is expected that Puntland teachers training Centre will be both pre-service training centre, and at the same time a new faculty of education.

4.5 Problem Analysis

In comparison to the status of the education in Puntland, during the pre-civil war, the present record of enrolment in various educational institutions, and all other indicators related to education, suggest that Puntland have gained impressive achievements during the period after the state collapse. Between 1989/90 and 2002/3 school years, the primary school enrolment grow from 6000 pupils to over 53 thousands, number of primary schools increased from 70 to 286, number of class-rooms skyrocketed from less that 200 to over 1500, and similarly the number of teachers registered unprecedented leap. There is more number of secondary schools students in Puntland currently than before the civil war, while in the past any kind of tertiary education in Puntland was hard to think it even.

Table 4.6 presents the changes that happened in Puntland in the sphere of education during the civil war years.

Indicators	School year 1998/90	School year 2002/3	change
Primary education			
total number of pupils	6000	53,005	47,005
Number schools	70	286	216
Number of classes	200	1571	1371
Secondary schools			
secondary school students	400	2868	2468
Number of Secondary schools	6	12	6
Tertiary education			
Number of students	None	381	381
Number of institutions	None	3	3

Source: 1. Primary School Survey for Somalia, UNICEF, September 2003

2. Facts and Figures, Draft Report, Ministry of planning and Statistics, PSS, 2004.

Despite to the above impressive achievements in Puntland, reflected on the table 4.6, it is equally important to acknowledge that Puntland regions are currently lagging behind of other comparable regions of Somalia in educational achievements.

The present situation of access to education in Puntland can be understood by comparing it to the situation in the country. Table 4.7 illustrates the share in Puntland on the national records of the primary schooling in regard to the total number of schools, pupils, teachers and classes.

Table 4.7 Ratio of Puntland over the total Number of schools pupils, teachers and classes in Somalia (in Percent and in absolute terms).

Settlement	No. of schools	Total pupils	Total teachers	Total classes
Puntland	286	53005	1787	1571
Somalia	1192	286,808	9377	7770
% in Puntland	24	18.4	19	20.2

Source: Adjusted from Primary School Survey, UNICEF Somalia, and September 2003.

In referenced to the share in Puntland over total population of Somalia, calculated at 21%, Puntland is under represented, in respect to Somalia in general, in terms of total enrolment of primary school students, teachers and class-rooms; while it is apparently over-represented in terms of the number of schools.

Having mirrored the issue of education in retrospect to the pre-civil war period and in the light of the situation that prevails in Somalia, the relevance of these figures should be tested in the light of the present situation within Puntland and in isolation from any reference to the past and to other regions of Somalia.

The following points of deduction provide sufficient picture of the present day reality in Puntland, in respect of education:

- The present Gross Enrolment Ratio of the primary school of 11% of primary school age children indicates that 89% of the children are deprived of access to basic education. While the number of persons who missed education opportunities, only during the last decade and half swells the illiteracy rates of the population, there is no significant strategic program to improve the education levels and literacy rates in the future.
- The fact that only less than 20% of enrolled primary schools students attend upper primary grades testifies excessive rates of drop out students and absenteeism.
- The degree of urban bias of the educational system in Puntland, with only about 5% enrolment of the primary school age children of the pastoral communities, against 24% of the same category of children in urban area is a serious disregard to the principle of equity. Similarly female children are relatively disadvantaged in comparison to male one's, with a gap of 6 percent points in favour of the boys

- The regional breakdown of the primary education indicates, within Puntland, that close to 50 percent of total enrolled pupils, number of schools, teachers and classrooms are concentrated in Bari region. This surely indicates clear regional imbalance.

4.6 Core of problem issues

Needless to say, the number of schools and class-rooms is insufficient to the size of the population entitled for education. However, the present gross enrolments ratio is not making full use of all absorptive capacity of the existing infrastructure, particularly in pastoral area. The average ratio of pupils per class in Puntland is 33; however, schools in pastoral areas have lower ratio of around 10 to 15 pupils per class. Relatively congested schools exist only in major cities along the tarmac road. By simply targeting to increase the ratio of pupils per class-room in pastoral area up to the level of present average ratio, together with widely introduction of multiple shifts, the number of entrants of the existing primary school facilities could be expanded enormously.

The quality of education is seriously criticized as one of the major causes of the present impasse of education in Puntland. The two major catalysts for attractive education are greatly undermined by concomitance of set of problems. These are the teaching skill of teachers and the availability of adequate teaching materials. Only 37% of the primary schools in Puntland use exclusively subject teaching mode, where a class is taught different subjects by different teachers, while about 5% of the schools used exclusively mode of class teaching where a class is taught all subjects by one class teacher. The remaining 58% of the schools apply combination of both. According the primary school survey done by UNICEF, North East Zone (Puntland) is the area that substantial decline in the percent of the schools applying subject mode of teaching has been recorded between 2001/2 and 2002/3, as manifestation of deteriorating quality of education. Teaching materials, like text books and other aids, are also very scarce.

Education policy remains stick to the former approach which has been designed for settled communities, i.e. urban cities. Unlike settled communities, the pastoral society of Somalia conduct different life-style, based on mobile grazing pattern and, as a consequence of that, confronted with difficult choice, vis a-vis the education of their children.

The pastoral households have either to send their children to education and disengage them from herding activities, or have to keep children to take part of herding tasks, at the expense of their education. Unless an alternative approach of education is introduced, the right to education will continue to be denied to the majority of pastoral children.

4.7 Finance of Education

The education cost of the children cannot be afforded by substantial number of urban households and by the absolute majority of pastoralists. Quick look at the ordinary expenditure of one primary school student provides convincing picture of the limited affordability of such cost. As shown in table 4.8, the cost breakdown of essential ordinary expenses during one school year for one child at primary schools totalled about So.Sh. 1,055,000, in 2002/3, which is equivalent to 57 USD at the then exchange rate between Somali Shilling and US Dollar. Such level of cost is the minimum ordinary expenditure and excludes capital investment, operation and maintenance, cost of education materials and many other needed inputs. It is obvious in other educational levels the cost is higher, i.e. secondary and tertiary.

Table 4.8 Breakdown of ordinary expenditure on the education of one primary school pupil, in 2002/3.

Items	Monthly (So. Sh.)	Amount for nine months
School fee	50,000/=	450,000/=
Exercise books, pens/Pencils, etc.	20,000/=	180,000/=
School uniform	Two pairsX100,000/=	200,000/=
Other expenses	25,000/=	225,000
Total		1,055,000

Source: Parents, December 2003.

The above amount only corresponds to 21% and 39% of the per capita income of the urban and pastoral populations in 2003, respectively. The economic pressure on the households rises, as the number of pupils/students that goes to schools increases. Moreover, simultaneous enrolment of children in Koranic and formal schools, the desire of secondary school students to learn computer skills and payment of the service of home tutors for special subjects, on top of the ordinary teaching hours at schools, and money for other supplementary items, are among the factors that increases education costs for the families.

Although the payment of school fees implies great sacrifice for the household, nevertheless the collection of school fees alone is not sufficient to cover the payment of the lowest scale of school teacher's salary.

4.6 Need for Concerted efforts

In order to buttress and enhance concerted commitment on the advancement of the education the issue must be elevated as a priority agenda. The education must be an agenda of public debate at all levels of the societal order and cover:

- Mobility of the pastoral communities vis-a-visa stationary schools.
- Low income status of the majority of the population and implication of the growing economic stress that impedes many families to afford cost associated with the education of their children. In other words the promotion of the education in Puntland needs to be part of broader strategy of poverty reduction and service provision.
- The current administration in Puntland must be pressured to allocate education quota from the public revenue.
- Increased mobilization of international resources for the promotion of the education and proper utilization of existing donor support.
- Legislation of specialized institution for education development (education board) and pool of resources (education fund).
- Promote reduction and regional imbalance.

CHAPTER FIVE

5 Health Services in Puntland

5.1 General overview

The health services in Puntland are precarious, like other essential services, and are dispensed by modern and traditional service providers. Modern health service is provided by different categories of health facilities operated by health personnel of different qualifications and training backgrounds. On the other hand treatment through traditional methods varies from faith healing, traditional medicine and exorcism. This chapter will investigate the distribution of the population by source of health assistance, in case of illness, in pastoral and urban contexts. The available facilities in modern health delivery systems and respective health staff will be connected to the frequency of usage of these facilities by health care seeking population. Before entering into in-depth view of the modern health services, the following section will highlight the general picture of the traditional methods of treatment which are practiced in Puntland.

5.2 Traditional Treatments

Traditional healing systems fall into three categories, which are namely, traditional medicine, spiritual healing and exorcism. The first type of treatments consists of package of knowledge transmitted through father and mother by generations, through oral tradition and by observation of practices. Therapists of this kind include herbalists, bone setters and surgeons. Cauterisation, incision of ailing parts of body and suckling of blood (Toobin) include traditional treatment practices, which modern health professionals consider harmful to the patients.

Some of these practices have little curative value, despite their costs on the families and lapse of time. Often patients are taken to modern medicine facilities after the disease reached an advanced stage, because the appropriate time has been spent on non effective traditional medicine.

Faith healing is more spiritually based treatment, "conducted by religious devotee, who serve as judge, scribe and healer and possesses spiritual power (*barako*), which is partly divine gift and partly transmitted by elders on his investiture following completion of Islamic medical training"¹. A recent, major change in this area is spearheaded by modern Islamic trends who strictly abide to that treatment of all ailments can be found by taking references from the Holy Book (Qur'aan). The advocates of this believe aim to purify spiritual healing from all kinds of mysticism, particularly those traditions that involve folklore dancing and ecstasies.

The third category of traditional healing is exorcism which consists of a particular knowledge that embodies mixture of witchcraft and magic secrets to combat devil spirits.

¹ Children and Women in Somalia, A situation Analysis, UNICEF 1998, PP 56

5.3 Modern Health Care Services in Puntland

The health seeking population in Puntland resort to various health facilities, most of which are concentrated in urban centres. These facilities include: Referral hospitals, MCH/HPs, OPDs, private clinics, private pharmacies, and private laboratories/X-rays. The availability of these facilities does not mean access to adequate health service delivery. The achievement of dynamic health care system requires positive interplay of efforts and proper addressing of root causes and underlying factors.

5.4 Referral hospitals

Referral treatments are provided by mixture of private and public hospitals. The former regional and district hospitals that have been operating in Puntland during the pre-war period consist of eight facilities. Except the district town hospitals of Iskushuban and Alula, all other facilities are currently operational. The formal ownership right of these referral health facilities is claimed by the current administration in Puntland, and directly exercised under the authority of health department of the council of ministers. Other privately owned hospitals admit needy clients against payment of the cost of case treatment. Some of these facilities are fairly gaining reputation, while others are small dispensaries with few beds and with fewer facilities.

Table 5.1 provides figures on the total numbers of referral hospitals that operate in Puntland consisting of 16 facilities, according the Fact and Figures report produced by the Ministry of

Table 5.1 Availability of Health facilities in 2002 by region.

Region	Hospital	Beds	MCH	Health Post
Nugal/Garowe	3	99	1	10
Mudug/Galkayo	5	156	10	5
Bari/Bosaso	5	200	2	6
Sool/ Las Anod	3	100	3	4
Total	16	555	16	25

Source: Facts and figures, Ministry of Planning and Statistics in Puntland, 2004

Planning and Statistics in Puntland Administration. According the same report, the number of beds available in these hospitals are about 555 beds. The same table reports also the number of PHC units and regional breakdowns of both referral and PHC facilities, within Puntland.

5.5 Primary Health Care Centres (PHC).

MCH centres are intended to provide, at district and sub-district levels, antenatal and post-natal care, delivery services immunization, growth monitoring, treatments for diseases for children under five, and health education. OPDs were expected to provide treatment for minor ailments (common diseases found in the area), first aid services and health education for the population as a whole, while also dispensing drugs. Together, the MCH and OPDs were to ensure basic preventive and minimum curative health care services to the most vulnerable. The total numbers of primary Health Care (PHC) units that operate in Puntland consist of 16 MCH centres and 25 Health Posts (HP). Existing few OPDs are attached to the hospitals, and hence recorded as part of these facilities.

The quality of the services provided by these centres, throughout Somalia, is considered as sup-standard by many observers. Health financing study conducted in 1997 noted “frequent non-availability of drugs and inappropriate use of drugs and medical supplies by CHWs, while there are also reports that many of the drugs end up being sold through private pharmacies”.¹

5.6 Private clinics

The majority of human health doctors available in Puntland tend to have established private practices, but they may also manage hospitals and public health activities. Since public sector does not offer reasonable salaries, this is a pragmatic arrangement through which doctors manage to make a livelihood. Even part of the doctors that have landed gainful employments with the international organizations operating in Puntland, conduct private practices during their free time.

In general terms, private clinics provide consultation to their clients, against payment of fee. Depending on the case, doctors prescribe drugs for common ailments or advice the patients to make laboratory tests and return with results, before taking decision on the case. Doctors may also prescribe surgical operation to their patients in their private clinics, and then conduct the operation in the operation theatres of the regional/district hospitals, which is formally part of public sector health service delivery.

Despite the lack of any verification system of all professional claims, medical doctors are presumed either as former graduates of former faculty of medicine of Somali National University or from overseas universities. The collapse of national state of Somalia has led the closure of all higher educational institutions, while at the same time Puntland regions did not yet step in by setting up higher institutions that teach medical science in its own area. Taking into account that the presently available human health doctors have reached advanced age, coupled with lack of institutions that train fresh doctors in Puntland may signal imminent crises of the profession. More over, lack of refreshment courses and inexistence of other channels to update the existing doctors with the advancement of medical science may qualify the entire health service as outdated and, indeed in some cases, counter productive.

¹ Children and women in Somalia ; A situation Analysis, UNICEF, 1998

5.7 Private Pharmacies

Recent years have witnessed dramatic expansion of retail trade in drugs. Even the most remote areas in Puntland that are not served by a MCH clinic or a health post there is often a shanty pharmacy selling basic drugs. Opening pharmacy is no longer different from opening a kiosk or a corner shop selling cigarettes and drinks. A new pharmacy needs no license and is not subject to any government controls. Most pharmacies exist solely to sell as many drugs as possible, and therefore to maximize profit. The apparent profit drive for mushrooming of private pharmacies is encouraged by frequent health seeking clients who either self-prescribe drugs or approach respective pharmacy operators for advices, without consulting with medical doctor or any other senior health staff member.

This has certainly improved access to medication in both urban and pastoral settings, but it has also contributed to widespread abuse by dispensing drugs without doctor's prescription. Determining which medications are prescribed for which problems, and who can prescribe and dispense them is one of the key areas where policy intersect with practice.

5.8 Private laboratories/ x ray services

Diagnosis services are also provided by privately owned laboratories and X-Ray facilities, mainly on the basis of Doctor's prescription. The provisions of such services are not subject to any control, nor are the facilities licensed by any governmental authority. The quality of the equipments used by laboratories and level of training of the staff and believed incompatible with delicacy that laboratory analysis demand. The poor conservation of reagents may also lead false results of laboratory tests.

5.9 Availability of Health Staff

The collapse of national institutions which were responsible for training, certification and verifications of education testimonials has created opportunities for unqualified persons to portray themselves as health professionals and for less qualified persons to claim higher level of knowledge and certification than they actually possess.

Table 5.2 exhibits figures, provided by Ministry of Planning and Statistics, related to available health staff and respective distribution by regions and by professional scales. The total number of all categories of health staff that are involved in different service delivery systems (Public, private and community) in Puntland consists of 950 persons, as of 2002 official records. About 60.3% of all these staff members are Community Health workers (CHWs) and traditional birth attendants (TBAs), which characterizes that the majority of the staff lack the necessary competence to deliver adequate service standards. Human health doctors accounts only 6.5% of the entire health personnel. All other intermediate staff categories are

few in number except the nurse staff, which is at the ratio of 14.7% of all the health personnel in Puntland.

Table 5.2 Availability of Health Personnel in 2002

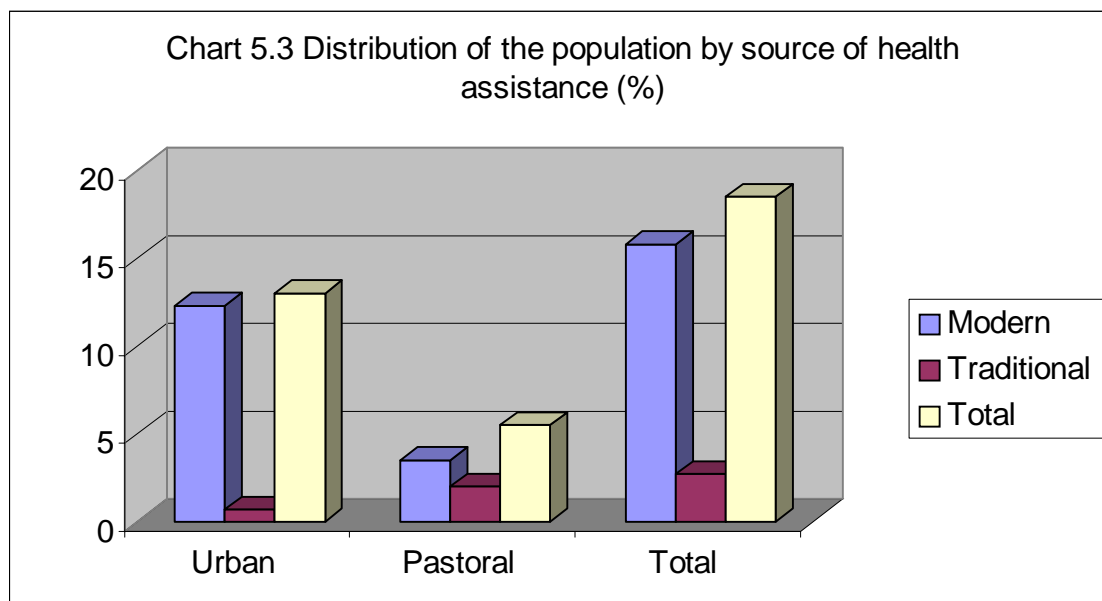
Description	Bari	Nugal	Sool	Sanag	Mudug	Cayn	Total
Doctor	28	7	7	0	19	1	62
Pharmacist	3	3	4	2	1	0	13
Post bas nurse	1	0	1	0	0	0	2
Midwives	18	2	2	3	3	5	33
Nurse	25	42	35	16	17	5	140
Lab tech	6	1	3	4	5	1	20
Asst lab tech	28	18	10	3	21	1	81
Sanitation	14	1	10	0	1	0	26
CHWS	72	120	19	20	60	4	295
TBA's	72	119	19	20	44	4	278
Total	267	313	110	68	171	21	950

Source: Facts and Figures; Puntland Ministry of Planning and Statistics, 2004

The regional breakdown, within Puntland, suggests that about 33% of the health personnel available in Puntland operate in Nugal Region. However, the majority of these personnel are less qualified ranks like Community Health Workers (CHWs) and Traditional Birth Attendants (TBAs). The highest number of doctors and other more senior health staff members are concentrated in Bosaso and Galkayo, the two most populated and commercial centres in Puntland.

5.10 Frequency of Usage of Health Services

Interview with selected households in urban and pastoral area indicated that 18.5% of the population in Puntland received different kinds of health assistance, during 2003, distributed accordingly 13% urban residents, and only 5.6% nomadic pastoralists. As per sources of assistance, 15.8% of health seeking population resorted to modern facilities, while only 2.7% approached to traditional healers (table 5.3).



The further distribution of pastoralist who approached the modern systems of health assistance are distinguished into 1.9% that have visited various HP post that operate in the closest pastoral villages, and about 1.6% that have been taken to urban centres for treatments, during 2003.

The inquiry on the frequency of usage of the health facilities in urban centres indicated that private clinics are the most used ones. About 5.9% of the urban population resorted to these facilities, during 2003 (table 5.4), which in absolute terms equals to 30,090 out – patients. Assuming that all 62 medical doctors available in Puntland conduct private clinical services in different urban towns in Puntland, this means that, on average, each doctor received about 485 clients throughout the year 2003. this is a supposition which might not reflect the actual data\record, but could be theorized.

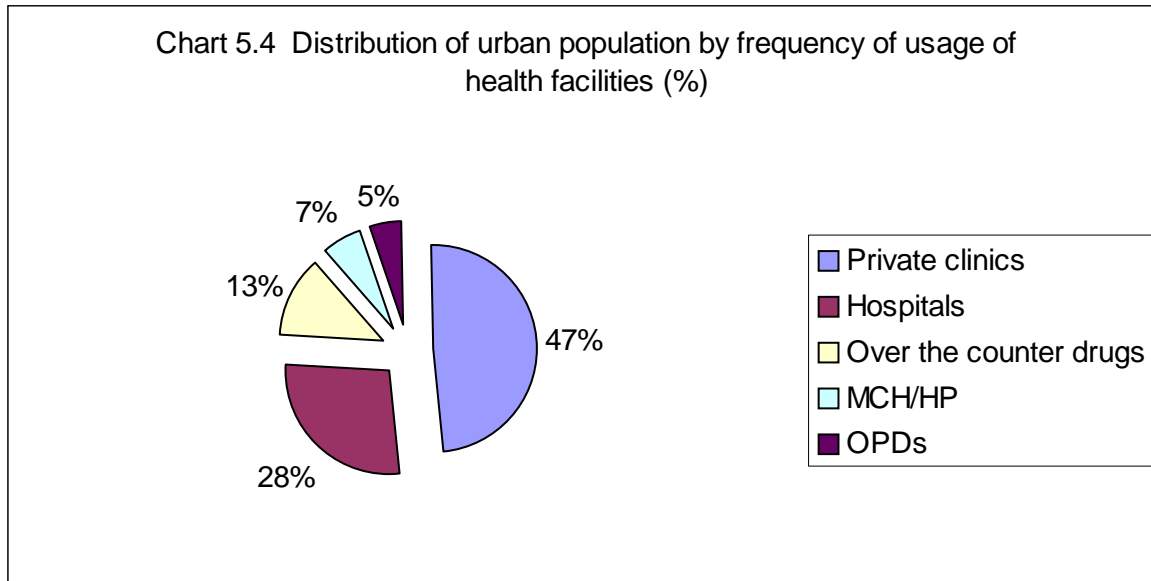
Referral hospitals are ranked at the second place in terms of frequency of usage. These facilities include former referral hospitals that exist in most of the regional capital towns (Galkayo, Garowe, Las Anod and Bosaso) and some private hospitals like the most frequently used Dhegacadde hospital in Galkayo owned by Somali Doctor who conducts private clinical service in Italy and comes once in every quarterly and stays for twp weeks.

The total number of hospitalised patients, recorded by this study survey, through the recall of the interviewee of urban households is about 17,340 persons that have been admitted for different ailments in different referral hospitals. The actual ratio of patient/bed is on the average of 31 persons per bed throughout 2003, or about 2.6 persons per month.

Interviewees reported also that 1.6% of urban population resorted directly to drug stores (pharmacies) without consulting with doctors or any other senior health staff.

This is little over 8000 persons who almost make self-diagnosis of their health complaints, self- prescription of drugs, and finally purchase of the drugs from over the counter, like any other commodity.

MCH centres and HPs, received 0.8% and 0.6% of urban population seeking health assistance.



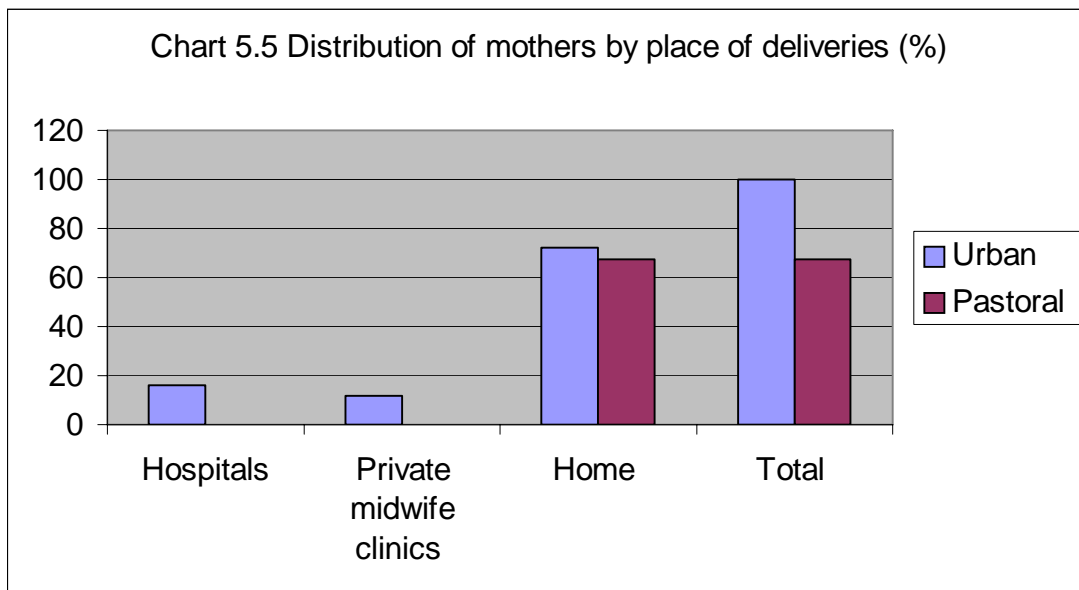
5.11 Mother and Child Care

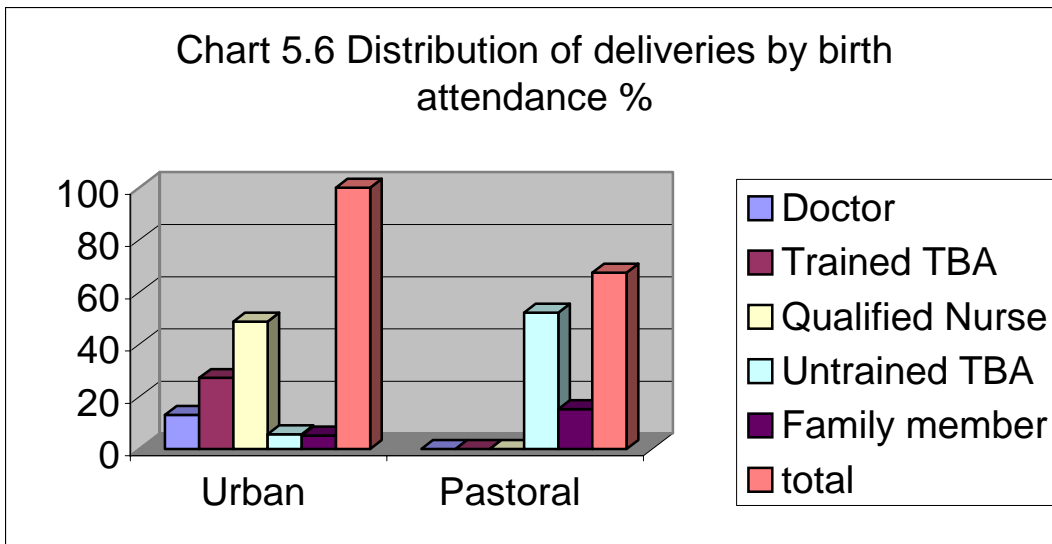
During the study of the marital status of the household heads, about 96% of the interviewed household heads in rural areas and 85% in urban centres have been reported married. From all households in urban areas, 63.6% of the mothers have been pregnant either one or two times during the last two years, according the survey results. About 87.8% of these have admitted of having received antenatal care services during the pregnancy period/s, while the other 12.2% of this category have responded negatively. Further inquest of the reasons which have prevented access to these services to the non-recipients, 6.2% persons responded only "other reasons", without giving further details. Such important services were also unaffordable to 5% of the interviewed mothers, while only 1% of the respondents considered this service as short of any value.

The distribution of the interviewed mothers by kind of antenatal care service and by source of assistance, indicate that MCH/HP centres assisted 57.3% of pregnant mothers, followed by 31% assisted by mobile teams, and the remaining 11.7% from both of the MCHs and mobile teams, during vaccination campaigns. As to kind of services obtained from MCHs and mobile teams taken together, 13% of the respondents where able to recall only Iron Folic Acid, while the remaining majority admitted of having received vaccines, iron folic acid and Vitamin A tablets.

According to the information collected during the survey, from the 475 urban households that have been interviewed, 213 cases of life births have been mentioned for the last two years (2002 and 2003). This is equivalent to 44.8% of study sample, and to the extent that this is representative suggests that from all urban households in Puntland, estimated of 68,919 families, a number of 30,876 life births occurred during the last two years. On the other hand pastoral communities demonstrated, according to the survey results, propensity to higher birth rates, compared to urban settlers. The interviewed 60 pastoral households acknowledged 40 cases of life births for the last two years, corresponding 66% of pastoral household's interviewee. In other words, in absolute terms, the total number of life births equalled to about 74,157 new born children, during 2002 and 2003. The approximation of child mortality rates in urban and pastoral communities is an important missing gap in this study. Consequently actual population growth rates cannot be estimated on the basis of this survey results.

The distribution of mothers by place of delivery, both in urban and pastoral constituencies, suggests the preponderance of deliveries that have taken place inside home.

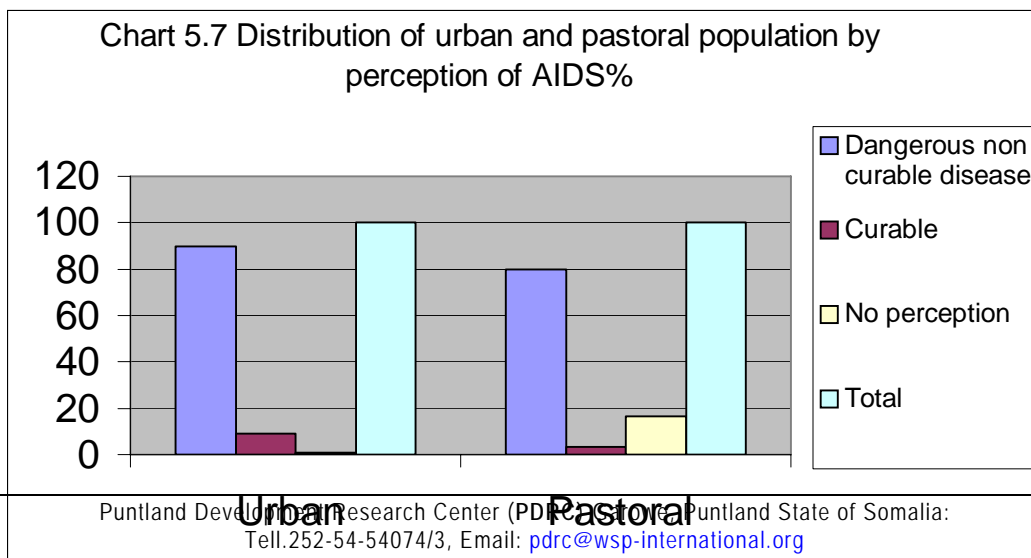




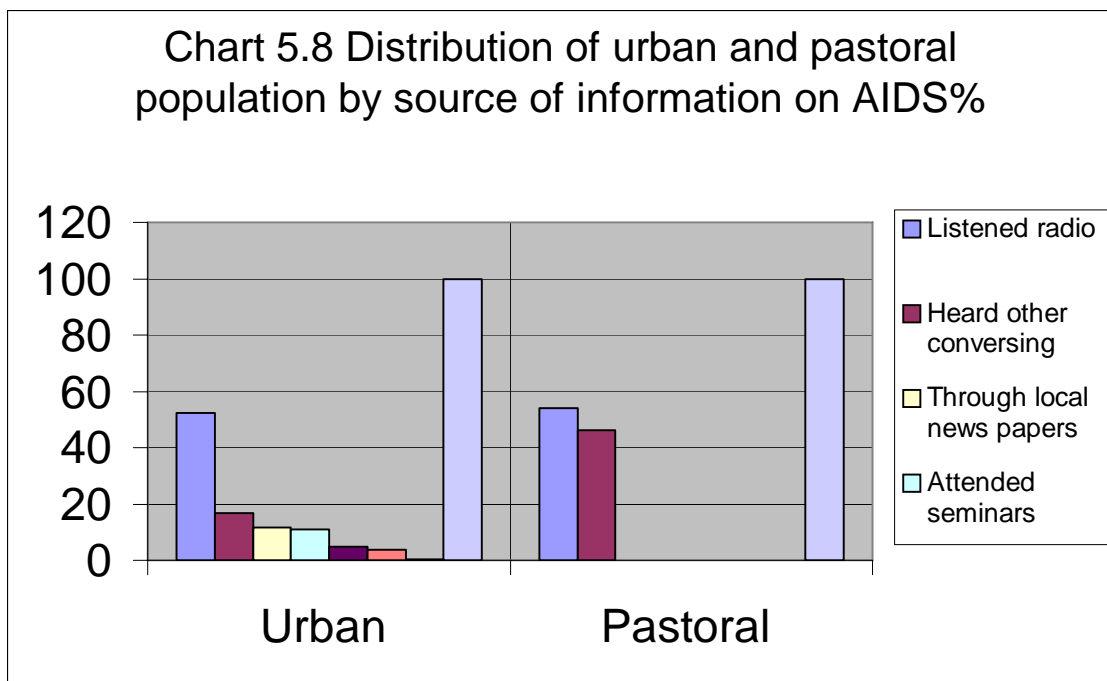
The distribution of the deliveries by birth attendants, recorded by surveyors on the basis of the information supplied by respondents is reported on table 5.6 below. Interviewees from selected pastoral households had no information about places of deliveries of pregnant women that have been taken to urban centres, as well as respective birth attendants.

5.12 Awareness about AIDS in Puntland

The awareness about the existence of a disease called AIDS is widespread among the urban and rural population in Puntland. However, notions on this disease are vague, particularly among the rural population. About ninety percent of the interviewed urban population consider AIDS non curable dangerous disease, while nine percent had expressed no perception about it. Only 1% considers AIDS a curable disease, without giving further details on the kind of treatments that are appropriate for recovering from AIDS. Among the pastoralists who were interviewed, 80% believe that AIDS is dangerous non curable disease, while 16.7 have expressed no perception on it. Only 3.3% believes that AIDS is curable. Table 5.7 provides the distribution of the urban and pastoral population by perceptions about AIDS.



As per source of information of urban and postural population in regard of AIDS, urban dwellers confirmed that they have multiple sources of information which include workshops and seminars, radio programs, conversation with people and view of posters and pictures showing horrifying images of people infected with AIDS in other parts of the world. In contrast, pastoralists received information about AIDS only from Radio programs and people talking about such disease. Because of relative disadvantage in accessing to information on the disease, in comparison to urban dwellers, pastoralists do not believe that they are exposed to infection of AIDS as they believe that it is far away urban malaise. Table 5.7 is demonstrative to the distribution of urban and rural population by source of information about AIDS.



In general there is absolute lack of understanding between HIV and AIDS. The widespread use of condoms, as means of protection from STD diseases, is hampered by intensive campaign conducted by religious preaches against the sale of condoms at the drug stores as well as their free distribution by health facilities. Influential religious circles are opposed to the use of condoms, because they believe that it encourages illegal sex and promiscuity, considered grave sins by Islamic religion.

CHAPTER SIX

6 Water Sources

6.1 General Situation of Water supply in Puntland.

Water throughout Somalia is in critical shortage, while conflicts originating from disputes over distribution of scarce water resources accounts for frequent number clashes. Recent assessment of access to water, in Somalia in general, underscore that, "a relatively small proportion - probably less than 20 percent of the total population - is believed to have access to water throughout the year; albeit with significant regional variations"¹.

In particular, Puntland area is known as a more seriously water deficit zone because of its arid environment. Despite the existence of untapped underground water courses, Puntland does not have perennial rivers, while the average rainfall ranges from 50 to 250 mm.

Before the achievement of National independence in 1960, the main water points in Puntland regions included *war/Bellies*, or natural dugouts; *galls*, depression areas in gravelled dry riverbeds; groundwater discharging from springs at the coast, particularly the Guan area facing the Gulf of Aden; and from incised valleys inland. Groundwater was extracted only from hand-dug wells located at long distances from each other.

On the eve of National Independence two types of water points—drilled boreholes and excavated *berkeds* (cemented pools for storing water), have been introduced to face the growing demand for water resulted from the increased human and animal population. Borehole water supply was under public ownership and management while *berkeds* were the first private water source in Somalia.

In general, the water points in Puntland can be classified as: (1) Surface water; and (2) ground water. Traditional communal *Wars/Bellies*, *Galls*, and *berkeds* are in the first category; while boreholes, shallow wells, and springs are ground water harvesting sources.

6.2 Distributional pattern of the water points

Table 6.1 presents the distributional pattern of the water points in all the six regions in Puntland. This is mainly based on the topography of different econ-systems. In those area were the water table is deep, main source of water consists *berkeds* followed by boreholes, while the area phasing Guban enjoy availability of springs and shallow wells. Shallow wells are more abundant in valleys like Nugaal, Dharoor, and Mudug. The overall picture of the water situation in the region demonstrates the preponderance of the *berkeds* over the ground water sources. The census of the

¹ Children and Women in Somalia, a Situation Analysis, UNICEF, 1998, PP. 161

number of berkeds in different localities in Puntland, undertaken by PASWEN, identified close to 9,000 units, followed by 1275 shallow wells. Boreholes are numerically very few in Puntland, and despite the introduction of these water points in these regions more than four decades ago, the currently functioning boreholes does not exceed 52 wells, throughout the vast territories in Puntland. However, during the long dry season and drought situations boreholes are important option for animal and human water consumption in most parts of the region.

Table 6.1 Distribution of regions by source of water

Source	Bari	Nugal	Mudug	Sool	Sanaag	Total
Shallow wells	475	405	265	98	29	1272
Berkeds	3000	1150	1300	2280	1450	9180
Boreholes	13	18	16	8	7	62

Source: Ministry of Public Works, Puntland State of Somalia, 2003

It is noteworthy that Sool and Sanag regions have the lowest number of shallow wells and boreholes, in comparison to other three regions in Puntland. Although the scarcity of shallow wells is due to natural ecological factors characterised by deep water table in those areas, the extreme deficiency of bore-wells in this two regions is related to political uncertainties that prevailed in these regions during the civil war period in Somalia. Contrasting claims in Puntland and Somaliland administration over the control of eastern halves of Sool and Sanag, prevented access to international assistance to these territories. Since the collapse of the national State in Somalia, rehabilitation and development programs conducted by international organizations have provided the bulk of the financial and technical assistance earmarked for the promotion of water supply systems in all parts of Somalia. Unlike the southern parts in Puntland, the contested parts of Sool and Sanag have been excluded from most of the international assistance that are vital for the advancement of essential social services (Water, education and Health).

6.2.1 Borehole Drilling

The first boreholes were drilled in Jedad in 1957 and Adisona in 1959 (both Qardho District). About 80 boreholes have been drilled so far in Puntland. Some of these water points are not-operational, while the functioning ones suffer from frequent failure, insufficient water output and poor management structures. These problems are related to selection of inappropriate sites, low quality of fittings and little attention paid to the problem of corrosion of materials.

The high level of initial capital investment required for drilling, extracting and distributing water exceeded the financial capabilities of nomadic communities, while

private investment in this sector seems un-attractive to local entrepreneurs. Relative to that, most of existing boreholes were drilled during the existence of the national state structures. Following the collapse of the central government, drilling additional boreholes had become difficult.

Drilling of boreholes was in the past under the ownership and management of the previous Somali governments. Following the over-throw of the government in the beginning of nineties some of the state sponsored boreholes had been abandoned because generators and pumps were looted. The functioning boreholes are under the virtual ownership of respective operators, or former government employees. When the Borehole is functioning, in most of the cases, operators do not save part of the money to cover maintenance and operation costs.

6.2.2 Rapid proliferation of Berkeds:

The precarious and unreliable borehole water system managed by the state has favoured the emergence of alternative private water points in the form of berkeds. The first berked constructed in Bari region is believed to have been in Unuun village (Qandala District) in 1959, followed by the villages of Rako (Qardho District) in 1960.

As no restrictions have ever been imposed on the excavation of berkeds, the area has witnessed the widespread proliferation of this private source within less than four decades. Speedy villagization also facilitated their propagation. Berked-driven villagization is an ongoing process that continues to absorb sizeable portions of land at the expense of communal grazing fields.

The main purpose for constructing berkeds is to directly harvest the runoff water, however beginning from last months of the dry seasons, or in case of prolonged dry season or recurrent drought, water trucked from boreholes and ballies are filled in the berkeds.

6.2.3 Shallow wells

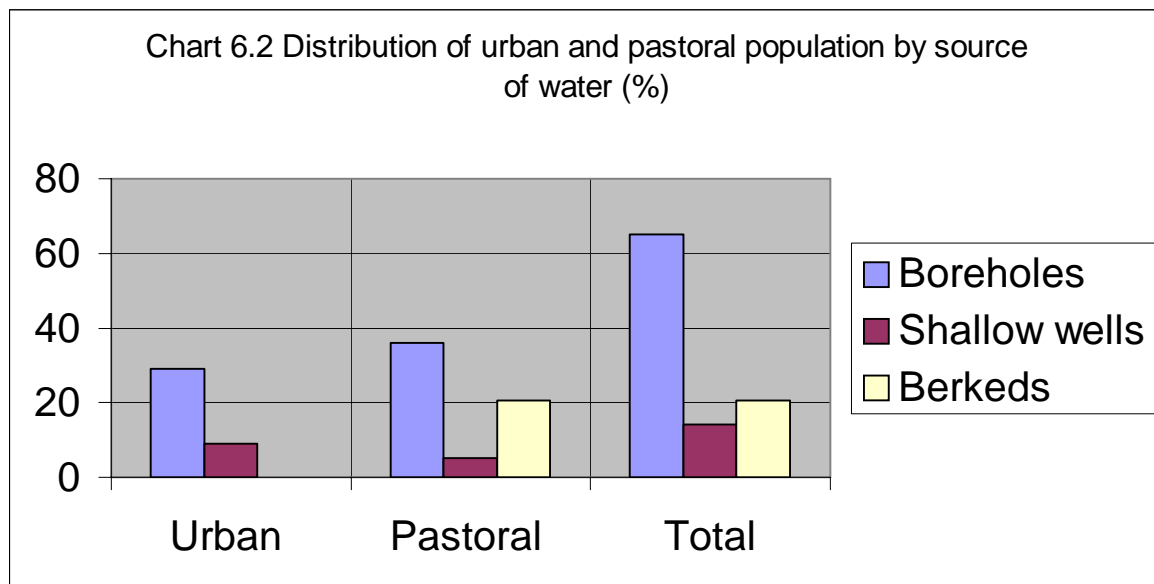
Access to water through shallow wells is possible in limited areas of Bari region. Areas of high concentration of shallow wells include Bosaso, along the main inland streams, and Nugal, Dharoor, and Mudug valley. Water wells are generally shallow in the range of 7 – 15 meters and most of these shallow wells have an average yield of one cubic meter of water per hour.

6. 2.4 springs

Springs are natural discharges of underground water and are the main reliable traditional source in Bari region. Perennial springs are found in Iskushuban town, Eil, areas around Bosaso, and different localities at the encroached to some sections of the coastal areas. Out of the numerous spring improvements possible, only in few cases have springs been captured and improved.

6.3 Distribution of the population by source of water

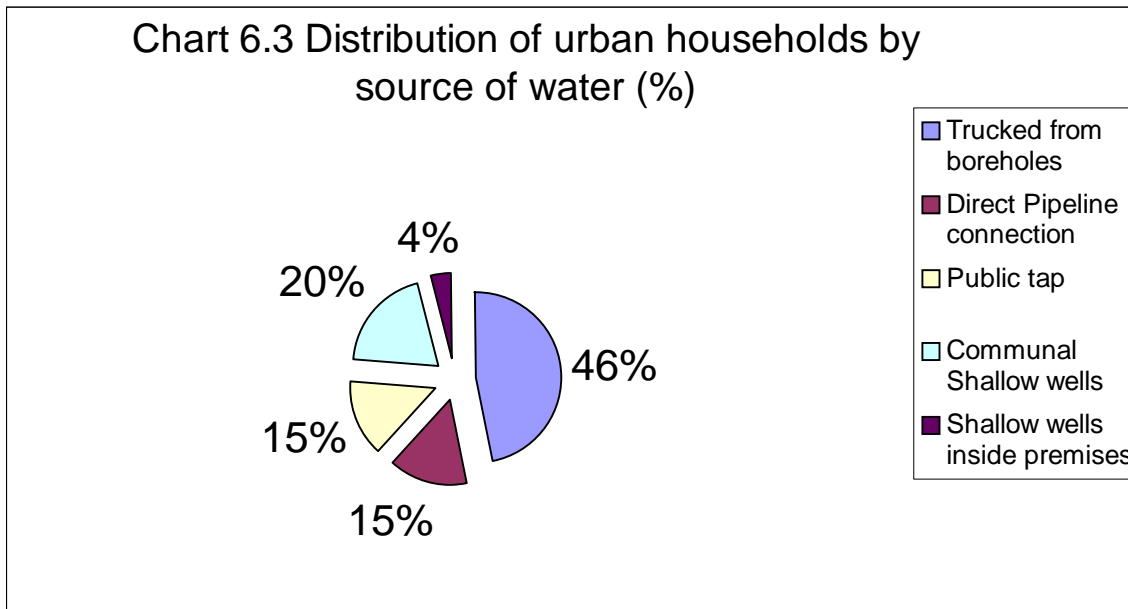
Recent assessments on the distribution of the population by type of water sources, which has been conducted by UNICEF in 1997, indicated prevalent dependence of surface water in comparisons to ground water harvesting in Puntland. Overall, it has been estimated that 50% the population obtained water from surface reservoirs (Berkeds and Ballies) during at least part of the year; 35% from open wells, 10% from boreholes and 5% from springs. However, during the last seven years, Puntland regions have witness increasing severity of water scarcity. Puntland had been enfolded by prolonged drought that in some regions started from 1998. As a result of that, surface water sources; through out the territory in Puntland, have been dried long time ago.



Unlike pre-drought period, it is estimated that surface waters covered water needs for 20.7% of all households (all of them pastoral households), for domestic uses and animal consumption. Although small number of urban households use directly intercepted or/and trucked rain water in small underground berkeds for special uses (drinking, washing expensive clothes), consumption of surface water is uncommon in urban areas. Over 60 percent of all urban households, (distributed into 36% and 29% pastoral and urban families respectively), depended water from boreholes, while little over 20 percent of the households (urban 9.1; pastoral 5.1) relied on shallow wells, in 2003.

In order to understand the clear picture of water supply in Puntland, it is important to make distinction between urban and pastoral contexts. In the first place, urban population seem to have achieved improved water supply, following the aftermath of state collapse. The provision of water from direct access to pipeline connection to

14.8% of urban households consolidates such assertion of increased access of water in Puntland cities (table 6.3). Bosaso water supply system started operating from the 1999 through capital investment by UNICEF and leasing contract to private shareholding company (GUMCO). Galkayo followed similar system from the year 2002, while most of physical infrastructures of Garowe water supply system had being laid down recently for imminent start up. Other important water systems that have been accomplished in several urban towns in Puntland include 225 open wells (176 were fitted with hand pumps) and 11 mini systems serving 112, 500 and 62,000 beneficiaries, respectively.



In contrast to the improved access of water to the urban population, rural populations are facing unprecedented severity of water scarcity. The almost exclusive dependency on Boreholes is compounded with low yields and frequent failures of functioning boreholes. This explains the alarming situation that has caused continuing massive death of animal stocks and threat to the life of large number of pastoral population.

6.4 Problem Analysis: the impact of water development initiatives on environment.

Puntland regions are by definition characterized as a serious water deficit area. Consequently, in response to the natural increase of human and livestock population major efforts were exerted to improve water supply in the region. Despite these efforts, the general picture is an insufficient level of the water actually harvested, unreliability of almost all existing water points and inadequacy of the most of the harvested water for human consumption.

The immediate impact of the wider distribution of the water points, in response to the water shortage, had radically changed the traditional grazing pattern. The major impacts on the environment which is attributed to unplanned water development initiatives are described below.

6.4.1 Mushrooming of rural settlements

Berked driven villagization is an ongoing process that continues to absorb sizable portions of the land at the expense of the communal grazing fields. Due to the private ownership of the berkedes, the construction of one berked implies to settle permanently on the site persons that are kin to respective owners with double responsibility to take care of the facility from eventual wrongdoers and the same times act as a retail seller of the water. With the increase of the number of berkedes there is always accompanying expansion of the size of individual settlements. In addition to the sale of water, rural villages have become important trading centres for major items of necessity to the nomadic population: Food stuffs, human and animal drugs, cloths, home utensils, and, high demand item of *Quad* are regularly marketed in these villages.

6.4.2 Increase of Livestock numbers

Accessibility of water eased by the frequent construction of berkedes has increased livestock numbers to unprecedented levels. Moreover, instead of the long migratory pattern from and to long distances in search of water and pasture the recent upsurge of berkedes narrowed the movement of the animals that have continued to linger around in a very circumscribed area. Each rural settlement has attracted several pastoral households that often have kept their animals in the surroundings of the village. Following the short distances that separate between various rural villages the entire region turned into relatively permanent grazing fields. Livestock export ban against live animals entering Saudi markets has partially contributed the increase of animal population, prior the advent of current severe and prolonged drought.

6.4.3 Overgrazing

The increase of livestock numbers, compounded by dissolution of the traditional grazing pattern which implied the distinction of the pastoral lands into dry season and wet season grazing lands, have caused serious over grazing of most of the Puntland range lands. This breakaway from the traditional migratory pattern of animal husbandry has resulted into serious over-grazing and over-browsing of pastoral lands. Goats and camels are kept widely and their continual browsing even during prolonged drought around the same area has led the removal of the most of the consumable biomass in the region. Other irrational resource management behaviours that have been brought by the mushrooming of the villages consists

cutting of trees for charcoal production, housing, fencing and berked covering materials. The magnitude of the state of overgrazing in the region was best expressed by one of the participants of previous WSP workshops, who said, "It is slow and gradual strangulation. What was green landscape and pasture a few years ago is today very small patches of green during the wet season only"¹.

6.4.3 Increased recurrence of droughts

The level of rainfall is in direct correlation with the density of the vegetative cover. Consequently the excessive removals of grazing resources for various uses, partially, contribute to the current prolonged drought in the region.

6.4.4 Decline of livestock productivity

As a result of the depletion of animal feeding in the region, the productivity of the livestock has enormously declined. During the last three years livestock reproduced less profusely, milk production was scarce, and there is clearly manifested negative weight gain of all species of herds, particularly camels. The decline of livestock productivity deprives to the herders of sufficient household consumption of milk and meat as well as the essential cash flow needed to cover the fast growing household expenditures. The proportion of the pastoral household expenditure that have to be earmarked for the payment of water and veterinary drugs is growing faster in respect to other expenses on stable food and other items needed by household members. This kind of pressure, which persisted during the last three years, has already forced many poor pastoral households to relinquish herding of animals. It is also unlikely presumable those even wealthy nomads would in the long run afford to continue to sustain the current deficit spending on animal husbandry.

6.4.5 Massive de-stocking

The favouring factors that have contributed increased livestock, particularly between 1990 up to 1998, have been reversed to source of opposite tendencies, particularly since the start of the new millennium. The precipitation of rain water, which was rated above the normal ranges in Puntland, particularly during 1991-1995, started dwindling from 1998, while from 2002 rains have failed for most parts in Puntland territory. Imposition of import ban of Somali livestock by Saudi Arabia and other Arab States has also undermined the motivations for keeping large stocks by pastoral households.

¹ Nugal Regional Note, WSP Somalia, 1997

7. Discussion and conclusions

The severity of the current level of water scarcity, and the above listed negative impacts of previous efforts, mostly attributed to the deregulated mushrooming of water development initiatives, present daunting challenges. Essential characteristic of general scenario of the underlying conditions could be summarised by the following conclusive remarks:

- a.** In the first place all the above listed impacts (problems) have reached to a level of serious threats that endanger the possibility to farther conduct animal husbandry activities.
- b.** Local communities are economically too weak to confront the above challenges. On the other hand, although there is strong traditional leadership in rural communities at Diyah-paying level, there is little cooperation between different communities. In other words communities are short of necessary strengths of solid internal social cohesion to achieve general progress and improved livelihood.
- c.** Moreover there are few opportunities outside rural communities in terms of strong public authority that could provide impulse for dynamic positive change. Availability of external funds is also shrinking due to a donor fatigue and overwhelming global crises.
- d.** To conclude, similar crises situation need serious commitments that are based strategic development framework and sound plan of action.

CHAPTER SEVEN

7 Hygiene and Environmental Sanitation

7.1 General perceptions of Hygiene and sanitation

The preservation of cleanness of the body and living space by Somali population is mandatory requirement by Islamic religion that supposedly constitutes the fundament of lifestyle of the entire population. According to The Prophet Mohamed's sayings (Haddith) "Hygiene/Cleanness is half of the believe" is incorporated in the traditional Culture of Somalis and strongly influences attitudes, behaviours and practices of the population in relation to hygiene and Sanitation:

Important Islamic practices that are in principle conducive to health include:

- Cleaning segregation organs after defecation and ablution before praying which, during non-travelling days, is five times daily.
- Strongly recommended bathing of each Friday,
- Compulsory bathing after every act of sexual contact, and even after ejaculation without partner, before praying
- People do not eat pork which can be a major transmitter of disease.

Despite such important Islamic precepts, two important factors derail the actual adoption of practices that match with the high standards of general hygiene requirements. These are:

1. The scarcity of water, un-affordability of soap needed to wash hands after defecation and other detergents for cleaning sanitation facilities, lack of access to toilets, lack of functioning municipal services, and
2. The awareness of the risks associated with poor hygiene, excreta and accumulated waists are also lacking behind the required standards.

The present study is focused on three cardinal issues in relation hygiene and environmental sanitation. These are:

- Access to or use of latrines
- Contamination of water from the source and/or during handling at household
- Waste management particularly at urban household level

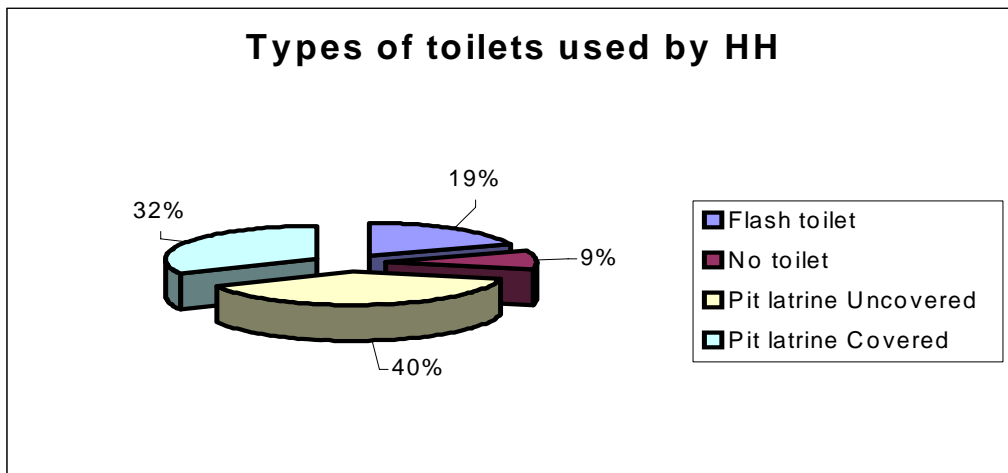
7.2 Access to and use of latrines

Since latrines are not compatible with constant movement of pastoralist, defecation in the nomadic area is in the open. Unlike the children, adult population normally go away from the dwellings, while health risks of sparsely populated areas are small.

In settled rural areas, some village households use simple pit latrines but most of the people use nearby fields indiscriminately. Consequently, health risks in and around villages are significant.

Disposal of excreta constitutes serious health hazard in major urban town, and more specifically in pre-urban areas inhabited by IDPs and refugees. The following by-chart describes the results of urban household survey in Puntland, undertaken during the primary data collection stage of this study. Accordingly, nine percents of all urban households have no access to any kind of toilets, while about 72 percent use simple

Chart 7.1: Distribution of households by type of toilets (%)



Pit latrines of which 40 percent are without roof. Only nineteen percents of urban households, that uses flash toilets, use relatively appropriate sanitation facilities. The underlying situation of the above scenario of access to toilets is indicative that close to 46, 000 (9%), persons that have no access to latrine facilities, defecate more-or-less indiscriminately. Most of the urban dwellings have simple covered bit latrines, with often poorly designed septic tanks and seepage pits while appropriate facilities for emptying septic tanks are lacking.

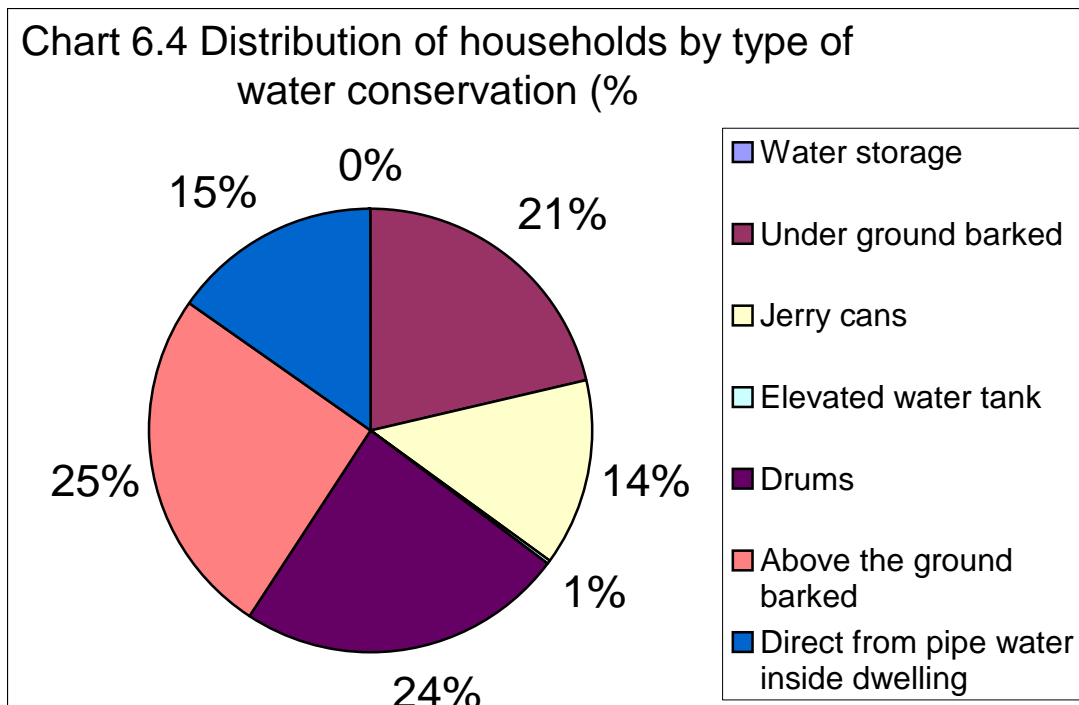
Health risks are considerable in all urban town in Puntland, due to this indiscriminate defecations and overflowing of septic tanks.

7.3 Contamination of water from the source and during handling and storing

The water table of the geographic locations of certain cities in Puntland is close to earth surface and water can be reached within few meters from above the ground. Were water is drawn from shallow wells; risks of contamination include the infiltration of human refuse into the aquifer through seepage from septic tanks and pit latrines. For example most of the 70 wells tested in Bosaso, in 1997, were found to be unfit for drinking. Needless to say, the introduction of pipeline system has improved the sanitation of the water, however large section of the population accounting to about 24% of the urban population still depend on shallow wells for their water needs.

Berkeds in particular can be polluted by all kinds of waste when surface water flows are channelled into them to refill the reservoir. Lack of fencing and poor quality of the materials used to cover berkeds is not also adequate to protect the water from all kinds of pollutant objects.

Water consumed by urban households is exposed to risks of contamination during the conservation. As is seen from table 6.4, within the households, 25.3%, 23.9% and 13.6% of household waters are conserved in above the ground berkeds, drums and jerry cans, respectively.



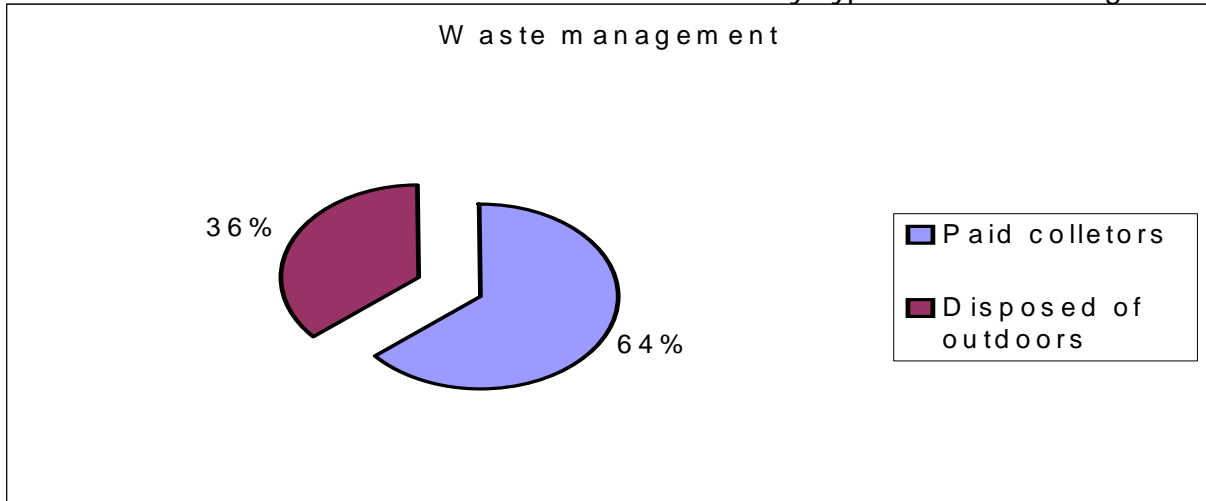
All above methods of conservation are insufficient to protect water from contact with pollutant objects, like dusts, insects from latrines, etc. In other words, save water are consumed only 15.4% which draw directly from pipeline. Underground berkedes are also improved methods of water conservation, particularly if routinely cleaned.

Except for chlorination during cholera outbreaks, there is virtually no treatment of water used for drinking.

7.4 Solid and Liquid waist management

Accumulation of garbage, including large amounts of food and plastic bags are seen in nearly all towns and villages. The absence of local authorities to designate appropriate temporary dumping sites and organise routine collection and burning is apparently the major constraint.

Chart 5.2 Distribution of urban households by type of waist management



Waste management at household level is typically indicative to the serious neglect of sound disposal methods of solid and liquid wastes that are generated by the household uses. Apparently 64% of household's garbage is removed by paid collectors, however that is usually spread in street corners or taken to the surroundings of IDP camps, because most of garbage collectors are women from IDP camps who depend on such service for earning. Garbage is directly disposed at outdoors by 36% of urban households. In general liquid wastes are flushed at outdoors or inside the dwellings, because of lack any kind of drainage and sewage infrastructure in all urban towns in Puntland.

Chapter Eight

8. Food Security in Puntland

8.1 General Approaches of food security Assessments

The international organizations operating in Puntland employ nutritional surveys and food security monitoring methods, as tools food security assessments. The first is which are namely, nutritional surveys and food security monitoring. The first approach is used by UNICEF and other international health institutions, while the second is employed by Food Security Assessment Unit (FASU).

In view of the findings of the latest nutritional surveys, the Inter-Agency assessment report on Sool Plateau and Gebi Valley (Sool and Sanag regions) pointed out that “the number of villages assessed was few and there was a sampling bias favoring settled communities”¹.

General food insecurity precedes the manifestation of status of malnutrition, because the latter results from prolonged and continuous food shortage. It obvious that malnourishment accentuates further food insecurity because of the reduced active engagement of the population in labor force.

Although nutritional surveys are important tool for humanitarian emergency interventions, it is important to have in place an early warning system that alerts concerned parties before the advent of actual critical shortage of food to the majority of the population. FSAU is the lead agency in monitoring food security situation in Puntland, through the regular observation of a set of variables. These include the level of rain-fall, access to market, terms of trade, water prices, security situation, existence of epidemics, etc.

FSAU approach of food security assessments delineate entire territory of Puntland into different Food Economic Zones (FEZ), on the basis of common characteristic of different eco-systems. Since nomadic pastoralists are the majority of population of Puntland, they are the main focus of food security assessment of FSAU, as a distinct Food Economic Group (FEG). Other FEG include urban, frankincense/pastoral, and coastal communities.

8.2 Normal Year (NY) indicators.

The parameters that define Normal Year in different FEZ in Puntland inhabited by pastoral FEGs, according FSAU food security assessment tools are:

- Rainfall is within normal average ranges; consequently the price of water is within the limits of So.Sh. 1,000 against one Jerrygan of water (20 liters) or

¹ Inter-Agency Assessment report of Sool and Gebi Valley (Sool and Sanag regions), 9-13 October 2003, pp. 27

0.54 USD in exchange of 1 Drum of water (200 liters). In normal year there is no water trucking.

- Terms of trade between 1 average condition shoat (sheep and goats) against is in the ratio of 1 shot for 50 kg of rice (1 sack)
- Security is good and,
- there should not be an outbreak of epidemic diseases neither on the animal nor on the human being.

The symptoms of bad year include the rise of water prices over the above ratio, particular if coupled with deterioration of terms of trade. The severity of food insecurity of pastoral communities is in direct correlation with the duration and sharpness of above trends, i.e. rise of the price of water and deterioration of the terms of trade. Favorable deviations of these same parameters from the normal year standards i.e. lower water prices and improved terms of trade imply improved food security and general well-being of the nomadic population.

8.3 Pastoral Wealth Groups (WG).

On the basis of respective asset holding, pastoralists are classified into Poor, Middle and Better-Off categories. Table 8.1 presents the percentage of pastoral population of each WG in different FEZ during a hypothetical NY.

Table 8.1 Percentage of WGs in Different FEZ.

FEZ	WGs		
	Poor	Middle	Better-off
Haud Plateau	20 – 30 %	45 – 55 %	15 – 20 %
Sool plateau	25 – 35 %	45 – 55%	15 – 25 %
Nugal	30 – 35 %	50 – 60 %	15 – 20 %
Adduun	25 – 30%	45 – 55 %	20 – 25 %
Gagaab	35 – 40 %	40 – 45 %	15 – 20 %

Source: FSAU Bulletins

The table above illustrates that, in normal years, the middle WGs constitute the majority of the population in all FEZs of Puntland. The average size of this category ranges from a minimum of 40 percent in Gagaab FEZ to a maximum of 60 percent in Nugal.

8.4 Asset holdings of the pastoralists

The table on the below (8.2) shows that poor wealth groups are those which do not have cattle in general, with 1-2 pack camels and 1-2 milky ones. Pastoralist in Gagaab FEZ do not even have a single pack camel and use 1-2 donkeys and means of transport. The smaller herd size in Gagaab is compensated with the ownership of frankincense fields by the households that on average produce 50kg of incense products per year. Other additional assets of the middle WGs include one Berked, particularly in Sool and Haud plateaus, while Better-off WGs have 1-2 berkedes, 1 truck and 1-2 houses in nearby pastoral villages and district towns.

Table 8.2 Wealth breakdown of WGs in different FEZs.

FEZ	WGs								
	Poor			Middle			Better-off		
	Shoats	Camels	Cattle	Shoats	Camels	Cattle	Shoats	Camels	Cattle
Haud Plateau	50-60	5-10		80-100	25-30	10-15	200-250	25-30	30-40
Sool plateau	70-90	5-10		120-150	50-80	5-10	200-250	50-80	10-15
Nugal	60-70	4-8		100-150	25-30	0-3	200-250	80-100	
Adduun	40-60	2-5		80-120	10-15		150-200	20-30	0
Dharoor	70-120	5-10		120-250	10-25	10-15	250-375	25-35	15-20
Gagaab	45-55	0		90-100	0-1		150-250	1-2	0

Source: FSAU Bulletins

8.5. Food sources

On the basis of respective asset holding, the pastoralists in different FEZs of Puntland have three main food sources.

Table 8.3 Food source of different WGs in different FEZs

FEZ	WGs					
	Poor			Middle		
	Own production	Purchases	Gifts	Own production	Purchases	Gifts
Haud Plateau	25 - 35%	50-60%	10-15%	45 - 55%	45 - 55%	
Sool plateau	25 - 35%	50-60%	10-15%	45 - 55%	45 - 55%	
Nugal	20 - 30%	70 - 80%		30 - 40%	60 - 70%	
Adduun	15 - 20%	70 - 75%	10-20%	25 - 35%	65 - 75%	
Gagaab	10%	82%	8%	18%	82%	

Source: FSAU Bulletins

These consist of: (i) production of animal products by the households themselves and; (ii) purchase of cereals, sugar and oil; (iii) Gifts are also important food source for poor WGs, except in Nugal valley, where even the poor pastoralists are self-sufficient in normal year conditions.

8.6 Drought Assessment

The drought assessment conducted by Inter-agency Assessment Team, by the end of the 2003, found out enormous swelling of Poor nomadic sections in Sool and Sanag regions, which come close to half of the pastoral population. Table 8.1 illustrates pauperization of significant sections of pastoralists in Sool region.

Table 8.1 Wealth ranking of pastoralists

Livestock type	Poor		Middle		Better-off	
	Normal	Current	Normal	Current	Normal	Current
Shoats	70 -90	25-30	120-150	50 - 60	200-250	100-150
Camel	5-10	0 - 5	50 - 80	10 - 15	50 -80	30-40
Cattle	0	0	5 -10	0 -2	10-15	0 -5
Pack-Camel	1-2	0	2- 4	0 -1	4 -6	0 -2
% of Population	25-35%	40 -50%	45-55%	35-45%	15-25%	10-15%

Source: Inter-agency Assessment of Sool Plateau and Gebi valley (Sool and Sanag regions), 9-13 October 2003.

FSAU performed its function of providing the international organizations with warning and analysis, as early as 2002, concerning deteriorating situation in the Sool plateau, the area that stretches north towards Sanag and east to the border with Bari region.

The current drought is seventh consecutive rainy season to fail in Sool plateau and, "roughly 60% of the herds have died or sold in distress"¹. The situation of food availability will further deteriorate, throughout the pastoral areas of Puntland, and the inter-agency assessment team warned imminent famine situation in the event of failure of GU season of 2004. The areas hardly hit by the current drought include Haud Plateau, Nugal Valley, Deeh area, Adduun and Gagaab Foothills.

8.7 Impacts of drought on food sources

The loss of assets of pastoral communities of over 40% of the shoats and close to 60% of camels and almost near total depletion of cattle herds produced the following impacts on main food sources:

- Deprived pastoral families much of the food of their own production. Milk productions, which constituted the main diet of the children decreased enormously, despite possible increase of meat consumption of pastoralists as a result of increased home-slaughtering of weak conditioned animals that have lost market value. The poor pastoral WGs have become short of food gifts which, in normal year, covered about one third of the food consumed by these categories.
- Absolute dependence on food purchase by all pastoral WGs in a situation of sharp decline of sale of live animals and animal products. Sale of livestock and livestock products are the main source of pastoral income, which is main source of income through which food purchased, decreased enormously because of the reduction of marketable stocks caused by asset depletion and loss of conditions of survived animals, in addition to declined animal productivity. With little income coming from livestock, there is little difference between better-off and middle wealth groups, while poor categories may not exist as they now could be classified as destitute having lost majority of their livestock.
- Another difficulties encountered by pastoral households, during drought situations, is the sharp increase of water prices. The price of a drum of water (200 liters) stepped from 0.50 USD in normal years to 3 USD by the end of 2003. Although the scarcity of water seriously affects poor households, middle and better-off categories have lost the revenue from the sale of water from owned berkedes, when latter assets became dry as a result of rain failure.

¹ FEWS/NET and FSAU bulletin, November 2003

8.4 Food insecurity in urban areas.

There are no sufficient materials concerning the assessments on food security situations in urban areas of Puntland. However, as will be illustrated further in Macro-economic analysis it is ascertained that IDP categories living in urban areas of Puntland are in a situation of permanent food insecurity. The urban households living in free-rent dwellings might also face food insecurity.

Table 2.1 Distribution of the estimated population by settlements and sex.

Settlements	Male	Female	Total
Urban	249,900	260,100	510,000
Nomadic and rural	514,800	475,200	990,000
Puntland	764,700	735,300	1,500,000

Source: Study survey questionnaire, December 2003

Table 2.2 Distribution in Puntland population by settlements and gender (%)

Settlements	Male	Female	Total
Urban	16.66	17.34	34.0
Nomadic	34.32	31.68	66.00
Puntland	50.98	49.02	100

Source: Study survey questionnaire, December 2003

Table 2.4 Distribution of urban population by Age and Sex (%)

Age groups	Female (%)	Male (%)
0-5	19.5	22
6-10	17.0	18
11-15	13.0	15
16-20	15.0	12
21-30	17.0	11
31-40	11.0	11
41-50	4.0	8
51-60	2.0	2
60+	1.5	1

Source: Study survey questionnaire, December 2003

Table 2.5 Distribution of pastoral population by Age and Sex (%)

Age groups	Female (%)	Male (%)
0-5	22.83	21.81
6-10	26.37	26.18
11-15	19.92	18.90
16-20	7.87	7.27
21-30	8.66	5.45
31-40	15.74	7.63
41-50	1.18	11.63
51-60	0.04	1.45
Total	100.00	100.00

Source: Study survey questionnaire, December 2003

Table 2.6 Distributions of Households by Gender of Head of Household (%)

Settlements	Female	Male	Total
Urban	33	67	100
Rural and Nomadic	6.6	93.4	100
Puntland	16.6	83.4	100

Source: Study survey questionnaire, December 2003

Table 2.7 Distribution of the households along ratio of the gender of Household head over the total number of the households (%)

settlements	Male	female	total
Urban	12.6	25.6	38.2
Pastoral	4	57.8	61.8
Puntland	16.6	83.4	100

Source: Study survey questionnaire, December 2003

Table 2.8 Distribution of the urban HH by marital status (%)			
Marital status	Male headed	Female headed	Total
Married	65.0	20.0	85.0
Divorced	0.8	7.0	7.8
Widowed	0.8	4.5	5.3
Abounded		1.5	1.5
Single	0.4	0	0.4
total	67.0	33.0	100

Source: Study survey questionnaire, December 2003

Table 3.1 Distribution of stone-walled houses by type of roofing (%).	
Type of roofing	%
Reinforced concrete	9.8%
Simple concrete	46.8%
Tiles roofing	9.8%
G.I. Sheets	33.6%
Total	100

Source: Study survey questionnaire, December 2003

Table 3.3 Distribution of households by gender of HH head and type of houses %.				
Gender of HH head	Type of houses			Total
	Stone walled	Hut	Make shift	
Male	51	10	6	67
Female	27	4	2	33
Total	78	14	8	100

Source: Study survey questionnaire, December 2003.

Table 3.4 Distribution of households by gender HH head and ownership of the dwelling %

Gender of HH head	Ownership				
	Owner	Rented	Rent-free	Other	Total
Male	34.9	26.7	5.1	0.4	67
Female	15.4	12.0	5.5	0.2	33

Ownership	Type of house			Total	
	Stone walled	Hut	Make-shift house		
Owned	45.0	4.2	1.3	50.5	
Rented	25.0	8.0	5.0	38	
Rent-free	8.2	2.0	0.4	10.61	
Other	0.4	0.0	0.49	0.89	
Total	78.6	14.2	7.2	100	
total	50.3	38.7	10.5	0.6	100

Source: Study survey questionnaire, December 2003.

Table: 3.2 Distribution of households by type of house and ownership of dwelling (%)

Table 4.1 Cross primary school enrolment rates (2002/2003 school year)

Gender	Total population	Population at age 6 -14	# of students 1- 8 grade	Gross enrolment ratio (%)
Male	744,900	227,850	32,691	14.3
Female	755,100	237,150	20,314	8.5
Total	1,500,000	465,000	53,005	11.4

Source: Adjusted from primary schools survey conducted by UNICEF, 2002/3

Table 4.2 Distribution of enrolled pupils by settlement (%)			
Settlements	Total Primary school age children	Total Pupils	Total enrolment (%)
Pastoral	306,900	16,000	5.2
Urban	158,100	37, 005	23.4
Total	465,000	53,005	11.4

Source: Adjusted from the same source as above.

Table 5.3 Distribution of the population by source of health assistance (%)			
Source of assistance	Urban	Pastoral	Total
Modern	12.3	3.5	15.8
Traditional	0.7	2	2.7
Total	13	5.5	18.5

Source: Study survey questionnaires, December 2003

Table 5.4 Distribution of urban population by frequency of usage of health facilities (%)	
Facilities	% of users
Private clinics	5.9
Hospitals	3.4
Over the counter drugs	1.6
MCH/HP	0.8
OPDs	0.6
Total	12.3

Source: Study Survey questionnaires, December 2003

Table 5.5 Distribution of mothers by place of deliveries (%)		
Place of delivery	Urban	Pastoral
Hospitals	16.0	NA
Private midwife clinics	11.7	NA
Home	72.3	67.5
Total	100	67.5

Source: study survey questionnaires, December 2003

Table 5.6 Distribution of deliveries by birth attendance %		
Birth attendant	Urban	Pastoral
Doctor	13.1	NA
Trained TBA	27.2	NA
Qualified Nurse	48.8	NA
Untrained TBA	5.6	52.2
Family member	5.1	15.3
total	100.0	67.5

Source: study survey questionnaires, December 2003

Table 5.7 Distribution of urban and pastoral population by perception of AIDS%		
Perceptions	Urban	Pastoral
Dangerous non curable disease	90	80
Curable	9	3.3
No perception	1	16.7
Total	100	100

Source: study survey questionnaires, December 2003

Table 5.8 Distribution of urban and pastoral population by information on AIDS%		
Source of information	Urban	Pastoral
Listened radio	52.2	54
Heard other conversing	16.9	46
Through local news papers	11.5	No access
Attended seminars	10.8	=
Have seen posters	4.7	=
Through mobilization campaigns	3.7	=
Other sources	0.2	
Total	100.0	100

Source: study survey questionnaires, December 2003

Table 6.2 Distribution of urban and pastoral population by source of water (%)

Source	Urban	Pastoral	Total
Boreholes	29.1	36.0	65.1
Shallow wells	9.1	5.1	14.2
Berkeds	0	20.7	20.7
Puntland	38.2	61.8	100

Source: study survey, 2003.

Table 6.3 Distribution of urban households by source of water (%)

Water Sources	%
Trucked from boreholes	46.6
Direct Pipeline connection	14.8
Public tap	14.8
Communal Shallow wells	19.8
Shallow wells inside premises	4.0
Total	100

Source: Study survey, 2003

Table 6.4 Distribution of households by type of water conservation (%)

Water storage	
Under ground barked	21.3%
Jerry cans	13.6%
Elevated water tank	0.5%
Drums	23.9%
Above the ground barked	25.3%
Direct from pipe water inside dwelling	15.4%
Total	100%