



Stichting Onderzoek Wereldvoedselvoorziening van de Vrije Universiteit

Centre for World Food Studies

**Health in Central West African Countries:
Commonalities and Disparities**

By

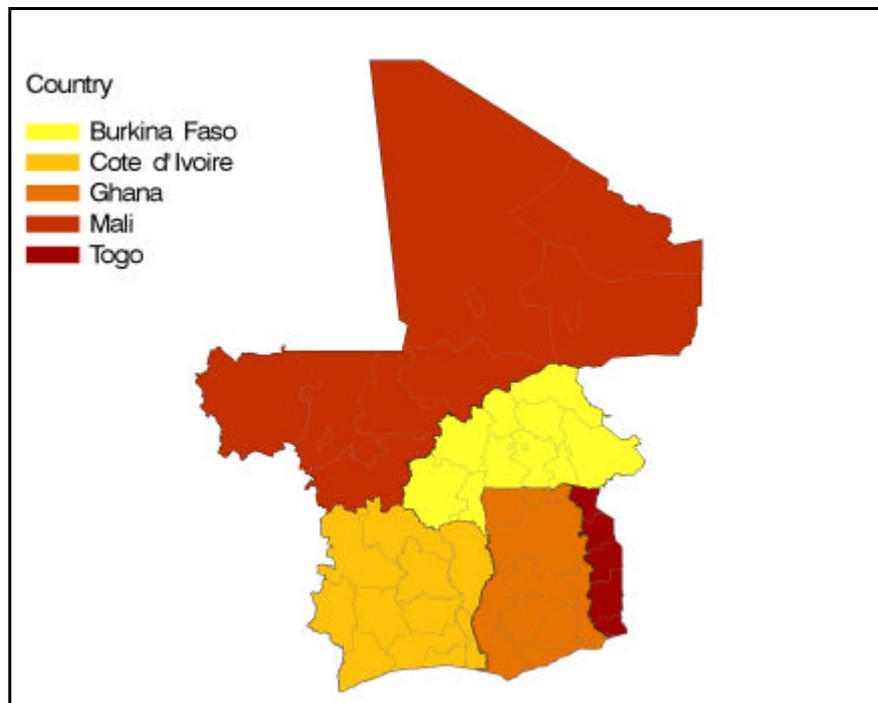
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Abstract

Five Central West African countries, Burkina Faso, Côte d'Ivoire, Ghana, Mali and Togo, cooperate in the Réseau-SADAOC (Sécurité Alimentaire Durable en Afrique de l'Ouest Central), which has as its major objective to increase food security in the region. The present report aims to review the health and nutrition situation in the five countries, to identify major bottlenecks in the functioning of the health care system, and to suggest strategies for addressing identified problems.

All five countries face serious health problems, but on the basis of most health indicators the coastal countries Côte d'Ivoire, Ghana and Togo perform somewhat better than the landlocked countries Burkina Faso and Mali. Health improvements, which took place over past decades, have stagnated in the 1990s.

Health care provision has a traditional and a modern component. There appears to be some discrepancy between reported perceptions and actual survey data on the relative importance and roles of traditional and modern health care in the SADAOC-countries. With respect to the traditional sector, a discrepancy exists between its perceived role and its rather small share in survey data. With respect to modern health care provision, the public sector dominates, with the private sector playing a complementary role, increasing in importance. Quantitative information on total availability of health care facilities (buildings, personnel) is scarce if not completely lacking, which is an impediment for policy development.

With respect to health expenditures, private expenditures are at least equal to, and in most countries higher than public expenditures. Private expenditures are mainly on drugs. In case of illness people often buy medicines without seeing a health care provider. Policies that affect availability, quality, prices, and intelligent usage of drugs, can play an important role in health developments in the SADAOC-countries.

In all countries public health sector reform continues. Important elements are the decentralization of health care provision, with less government spending on high-cost facilities in capitals and more funds being made available for primary health care, the transfer of responsibilities to the local level, and the raising of user fees. These developments are expected to make health care services more efficient and more responsive to local needs. Of specific interest are experiments that have the objective to separate government tasks with respect to health care policy from its tasks on health care provision.

Access to health care services (both physically as well as financially) is probably the most important condition for proper functioning of a health care system. With respect to physical access, for a large segment of the population there is still a need to reduce distance to a health care facility. With respect to financial access, public health care expenditures can, in principle be viewed as a form of health insurance. Both cost-ineffective treatments and inexpensive or largely predictable health treatments should be excluded from such an insurance scheme. For equity purposes, also inexpensive health treatments could be provided for free to the lowest income groups and to children. Finally, free or subsidized health services for government personnel should be financed separately from the basic public health insurance system.

Section 1

Introduction

Five Central West African countries, Burkina Faso, Côte d'Ivoire, Ghana, Mali, and Togo, cooperate in the Réseau SADAOC¹, which is a network of research institutes that aims to contribute to the strengthening of food security in the region. One approach to achieve a higher level of food security is investment in human capital: health and education.

With respect to the relationship between food security and health, economic literature suggests a positive relation between health and productivity in low-income countries (see for instance Schultz, 1997; Strauss and Thomas, 1998; Gallup and Sachs, 2000; Barghava et al., 2001). Higher productivity on its turn is assumed to stimulate economic growth and increase food security. A recent report by the WHO Commission on Macroeconomics and Health (WHO, 2001) articulates the linkages between health and economic development.

In the present report, after a brief general description of the five countries, a review is given of the situation with respect to health, including nutrition, in the respective countries. Major health indicators are reviewed, bottlenecks in the functioning of the health care system are identified, and possible strategies for addressing existing problems are explored. The review is based on national papers prepared by the five country teams², supplemented with information from other sources, including reports from international organizations (World Bank, UNDP, WHO) and research articles. Additional quantitative information on various health indicators has been derived, in particular, from the Demographic and Health Surveys³, which have been implemented in all five countries. Finally, the paper also draws on another SADAOC-document on health and health care in West Africa, which has a strong focus on Ghana (Overbosch, 1999).

From the outset it should be noted that health conditions in a country or region are not only determined by the performance of the health sector as such, but to a large extent also by factors outside the health sector. In low-income countries, overall poverty is undoubtedly a major determinant of poor health, not only because characteristics of poor households are often not conducive to good health, but also because under conditions of poverty environmental health risks may be significantly increased.⁴

The scope of the present paper is regional, with the objective to provide a sketch of health developments and problems in the five Central West African countries Burkina Faso, Côte d'Ivoire, Ghana, Mali, and Togo. Where possible, comparisons between the five countries are made and commonalities and disparities will be discussed.

¹ SADAOC - Sécurité Alimentaire Durable en Afrique de l'Ouest Centrale (Sustainable Food Security in Central West Africa). Project with participation from Burkina Faso, Côte d'Ivoire, Ghana, Mali, and Togo, with financial support from the Directorate General for International Cooperation, Ministry of Foreign Affairs, The Netherlands.

² The country papers will be referred to by country name and suffix B or G (e.g Burkina Faso, Country paper B, Burkina Faso, Country Paper G, Côte d'Ivoire, Country Paper B, etc.).

³ The Demographic and Health Surveys are part of a world wide program, designed to collect data on fertility, family planning, and maternal and child health. The program, funded by the US Agency for International Development, is implemented by Macro International, Calverton, USA, in cooperation with institutes in the countries where the surveys are held.

⁴ The importance of factors that affect health but which are outside the health sector are explicitly mentioned e.g. in the World Bank Reports on Ghana (World Bank, 1997, p. 9) and Côte d'Ivoire (World Bank, 1996, p. 21).

Section 2

The five SADAOC-countries of Central West Africa

The five SADAOC countries are located in the Sahel-zone (Burkina Faso and Mali) and the coastal zone (Côte d'Ivoire, Ghana and Togo) of Central West Africa. The climate is tropical with rainfall decreasing from south to north. Agricultural land use follows this rain pattern. In the southern forest regions of the coastal countries rainfall is abundant, and root and tree crops are major agricultural products. In the northern savannah regions of these countries less abundant rainfall and lower humidity allows cereals such as maize and rice to be grown. In the Sahel countries Burkina Faso and Mali rainfall is in good years sufficient for cultivation of cereal crops such as millet and sorghum, except in the northern desert region of Mali. However, in these countries rainfall is unreliable and droughts occur frequently.

Economically, the countries are characterized by low levels of per capita income, a largely rural based economy, but a rapidly increasing urban population (OECD-Club de Sahel, 1995). Main export commodities are cocoa and timber for Côte d'Ivoire and Ghana, coffee for Côte d'Ivoire and Togo, and cotton for Burkina Faso, Mali and Togo. Togo also exports fertilizer (phosphate), while Ghana and Burkina Faso produce gold. Over the past decades, all countries have implemented structural adjustment programs to reduce macro-economic imbalances and to foster economic growth. As shown in Table 1, the per capita Gross Domestic Product is in the landlocked Sahel countries Burkina Faso and Mali considerably lower than in the coastal countries. In all five countries a large part of the population is living below a poverty line of 2 PPP \$ a day. Economic growth has been moderate to slow over the past decade, with growth rates per head not exceeding 1.6 percent (Ghana).

Table 1. Population, GDP per capita (in PPP), percentage of population below poverty line, share of rural population, and last decade's growth rates for the five SADAOC-countries

	Total population (millions) 1999	GDP per capita (PPP US \$) 1999	Population below 2 PPP \$ a day (%) (1998)	Share of rural population (%) 1999	Per capita GDP annual growth rate (%) 1990-1999
Ghana (119) ^{a)}	18.9	1881	74.6 (1998)	62.1	1.6
Togo (128)	4.4	1410	n.a.	67.3	-0.5
Côte d'Ivoire (144)	15.7	1654	49.4 (1995)	54.3	0.6
Mali (153)	11.0	753	90.6 (1994)	70.6	1.1
Burkina Faso (159)	11.2	965	85.8 (1994)	82.1	1.4
Sub Sahara Africa	591	1640	..	66.5	-0.4
Developing countries	..	3530	..	61.1	3.2

^{a)} Number between brackets indicates Human Development Index ranking

Source: Columns 1, 2, 4 and 5, UNDP-Human Development Report, 2001; Column 3: World Bank, World Development Indicators, 2001.

2.1 Health conditions and problems

Like all sub Sahara African countries, the SADAOC-countries face severe health problems. To a large extent, this is related to the countries' overall low levels of socio-economic development,

and to climatic conditions which favor the breeding and flourishing of disease carriers such as mosquito's (malaria, yellow fever, dengue, lymphatic filariasis), flies (trypanosomiasis), and worms (riverblindness, schistosomiasis, guinea worm). In addition, polluted waters and poor hygienic practices contribute to the spread of diseases (Togo, Country Paper B, p.33).

Mortality

As shown in Table 2, underfive mortality rates are high in the SADAOC-countries, ranging in 1999 from approximately 100 in Ghana to well over 200 in Mali. According to the Human Development Report 2001, Mali has the fifth highest underfive mortality rate in the world, only surpassed by Sierra Leone, Afghanistan, Angola and Niger (UNDP, 2001). For all SADAOC countries underfive mortality has been decreasing significantly over past decades, but over most recent years the overall trend is less clear. In fact, in four out of the five SADAOC-countries the underfive mortality was in 1999 higher than in 1996. Also for Sub Sahara Africa as a whole, during the 1990s very little progress has been made with respect to further reducing the underfive mortality rate. It is remarkable that this lack of progress has been receiving only limited attention, though for the regions of East and Southern Africa stagnation in health improvements has been reported (Brockerhoff and Derose, 1996; Kalipeni, 2000; Ahmad, 2000).

Table 2. Under-five Mortality Rate ^{a)}

	1970	1990	1993	1996	1999
Ghana	186	140	170	110	101
Togo	216	147	135	125	143
Côte d'Ivoire	239	136	120	150	171
Mali	391	284	217	220	235
Burkina Faso	290	228	175	158	199
Sub Sahara Africa	226	175	178	..	172
Developing Countries	167	112	101	95	89

^{a)} Probability of dying between birth and five years of age expressed per 1000 live births.

Source: 1970 and 1999, UNDP, Human Development Report -2001; 1990, UNDP, Human Development Report -1992; 1993, UNDP, Human Development Report -1995; 1996, UNDP, Human Development Report -1998⁵

Data on life expectancy at birth, as given in Table 3, indicate that of the SADAOC-countries Ghana has the highest life expectancy and Burkina Faso the lowest. Again, while for all five countries life expectancy has been improving considerably over past 30 years, trends over the last 5-10 years are much less clear, and for some countries the trend has been reversed. Part of the decreases in life expectancy, as observed in Togo, Côte d'Ivoire and Burkina Faso, may be caused by the AIDS epidemic (Anonymous, 1999).

⁵ For various indicators, data in international reports (UNDP, World Bank) may differ strongly from data in the country reports. In the present report, where available, data from the international reports have been quoted, while in some cases additional information or data are being provided from the national reports.

Table 3. Life expectancy at birth ^{a)}

	1970-1975	1992	1995-2000
Ghana	49.9	56.0	56.3
Togo	45.5	55.0	51.3
Côte d'Ivoire	45.4	51.0	47.7
Mali	42.9	46.0	50.9
Burkina Faso	41.5	47.4	45.3
Sub Sahara Africa	45.3	50.8	48.8
Developing Countries	55.5	61.5	64.1

^{a)}The number of years a newborn infant would live if prevailing patterns of age-specific mortality rates at the time of birth were to stay the same throughout the child's life.

Source: 1970-1975 and 1995-2000, UNDP-Human Development Report -2001; 1992, UNDP-Human Development Report, 1995.

Information on maternal mortality rates as published in international reports is presented in Table 4. Maternal mortality may be caused by various factors of which the most important ones are post-partum hemorrhage, severe anemia, malaria, sepsis, obstructed labor, and also abortus provocatus (Ghana, Country Paper B, p. 50; Togo Country Paper B, p. 36). It is important to note that in particular data on maternal mortality are known for their inaccuracy, as a result of weak reporting systems and misclassifications. In fact, Ghana's maternal mortality rate might well be over 500, while for Mali even a figure of 2000 has been reported (Ghana, Country Paper B, p. 48; World Bank, 1994a, p. 13). It is remarkable that also within the UN-system widely diverging maternal mortality figures are being reported for one and the same country (see Table 4). While thus the maternal mortality estimates for the SADAOC-countries are unlikely to be very accurate, there is little doubt that they are high, with Ghana possibly performing somewhat better than the other four countries.

Table 4. Maternal mortality

	Deaths per 100.000 live births UNDP-Human Development Report, 2001	Deaths per 100.000 live births UNAIDS 2000-update (revised)
Ghana	210	740
Togo	480	640
Côte d'Ivoire	600	810
Mali	580	1200
Burkina Faso	..	930

Source: UNDP data refer to the most recent available data over the period 1980-1999, UNDP Human Development Report, 2001; UNAIDS data refer, according to the UNAIDS fact sheets, to the year 1990, and originate from WHO (UNAIDS Epidemiological Fact Sheets, revised 2000 Updates).

Major diseases

For all SADAOC-countries some information is available on major types of morbidity and causes of mortality, but the available information and the format in which it is presented in the country papers and other national reports differs strongly. For example, for Togo and Côte d'Ivoire, figures on mortality are available for adults and children together, for Mali and Burkina Faso reported mortality data refer to children. While for most countries some qualitative information is available on main causes of morbidity, quantitative estimates on major types of diseases are only provided for Burkina Faso (Burkina Faso, Country Paper B, p. 19).

Undoubtedly, obtaining and presenting quantitative (or semi-quantitative) information on illness incidence and prevalence and on causes of mortality in the SADAOC-countries is

complex, for a variety of reasons. First of all, in many cases information on disease prevalence might not be registered at all, in particular where many people seek treatment from traditional healers or directly buy medicines. Second, classification of diseases may not always be straightforward. For example, in many cases it may be almost arbitrary whether a case of infant or child death is attributed to malnutrition or to a specific disease, e.g. malaria. Furthermore, information on morbidity might be mainly based on numbers of registered consultations, which does not necessarily reflect the true incidence or prevalence rates of illnesses.⁶

Despite these difficulties, some broad patterns with respect to morbidity and mortality can be observed. For children major causes of morbidity and mortality in the region are malaria, acute respiratory diseases, diarrhea, meningitis and malnutrition. For adults major causes of death are AIDS and tuberculosis, while malaria is probably the major cause of morbidity (though in Ghana, according to a World Bank report (World Bank, 1997, Annex 2), malaria is not considered a major health problem in adults). As discussed above, all countries face high levels of maternal mortality. Furthermore, most countries still suffer from traditional tropical diseases such as onchocerciasis (riverblindness), trypanosomiasis, dracunculiasis (guinea worm), leprosy, etc. With respect to pushing back these diseases, over past decades significant progress has been made, with for example major successes in combating riverblindness in many West African countries including all five SADAOC-countries (World Bank, 1994b, p.2, 37, 38). However, there are also reports of resurgence or re-emergence of some of these diseases. For example, while in Togo some years ago trypanosomiasis appeared to be almost wiped out, the disease is now on the increase, and possibly also in Burkina Faso. Also onchocerciasis and leprosy are being reported to be on the increase. With respect to malaria, for Togo lower numbers of malaria cases in the second half of the 1990s in comparison with the early 1990s have been reported (Togo, Country Paper B, p. 39,40). Yet, there are serious concerns that malaria is on the increase in many countries of Sub Sahara Africa, as a result of increasing insecticide and antimalarial drug resistance (World Bank, 1994a, p 19; Bosman, 1999; Nuwaha, 2001), and long-term prospects are highly unclear.

Certain diseases such as cholera, meningitis, yellow fever, and also measles, often occur in the form of epidemics. For example, in 1996 there was a meningitis epidemic in Burkina Faso and in mid-2001 a yellow fever outbreak in Côte d'Ivoire (WHO, 2001b). Finally, it should be noted that accidents and violence are important causes of death in the region (second cause of adult death in Côte d'Ivoire), while drugs abuse and mental illnesses are also reported as serious health concerns.

With respect to AIDS, Table 5 provides currently best available estimates, showing in particular high rates in Côte d'Ivoire, where AIDS is reported to be the first cause of adult mortality. It may be noted that information on AIDS/HIV prevalence in the SADAOC countries is largely based on antenatal tests in pregnant women, and overall trends in AIDS prevalence are difficult to assess. Available data for Côte d'Ivoire and Burkina Faso suggest that among pregnant women the disease incidence tends to stabilize. Also, in Togo, Côte d'Ivoire and Mali, total numbers of newly reported AIDS-cases (people having symptoms of the disease) have been more or less stable over the second half of the 1990s.

The impact of the AIDS epidemic on practically all aspects of social and economic life is enormous, also as the disease affects in particular those who are in their most productive years.

⁶ On causes of morbidity and mortality in the SADAOC-countries, see e.g. Mali, Country Paper B, p. 9, 13; Togo Country Paper B, p. 17, 38; Burkina Faso, Country Paper B, p. 19 and Country Paper G, p. 18; Côte d'Ivoire Country Paper B, p. 75; and for Ghana: World Bank, 1997, Annex 2.

Much related to the AIDS epidemic is the increase in tuberculosis incidence, which occurs in almost all countries suffering from high levels of AIDS (WHO, 2000a).

Table 5. AIDS/HIV prevalence

	AIDS/HIV Prevalence rate in adults (1999) (%) ^{a)}
Ghana	3.6
Togo	6.0
Côte d'Ivoire	10.8
Mali	2.0
Burkina Faso	6.4
Sub Sahara Africa	8.7
Developing countries	1.3

^{a)} Data refer to adults, 15-49 years

Source: UNAIDS, Epidemiological Fact Sheets, 2000 Updates (revised); Data for Sub Sahara Africa and developing countries from UNDP Human Development report, 2001

Finally, in recent years efforts are increasingly being made to quantify the total burden of disease in a country, by combining information on mortality and morbidity (Murray and Lopez, 1996). The Burden of Disease studies reveal for low-income countries relatively high levels of disease burden as a result of communicable diseases, maternal and perinatal conditions, and nutritional deficiencies, and a lower share of disease burden resulting from non-communicable diseases, in comparison with high-income countries. The Burden of Disease studies also show that many people are strongly hit by debilitating illnesses during their most productive years (Nubé and Overbosch, 2000). A limitation of reported Burden of Disease data on Sub Sahara Africa is that results are largely based on information from South Africa. With respect to the SADAOC-countries only for Burkina Faso is a national burden of disease study available (Wurthwein et al., 2001).⁷ Though the study only covers mortality data for one health district, it suggests that malaria, malnutrition and meningitis are locally more important causes of death than they are on average in Sub Sahara Africa.

Malnutrition

In addition to high rates of morbidity and mortality, large numbers of children and adults in the SADAOC-countries are subject to malnutrition. Between approximately 20 and 30 % of children (0-36 months) are stunted (height-for-age <median – 2 sd), while 8-16% of adult women have a Body Mass Index (BMI) below 18.5 (Table 6). Both with respect to children and adults, the nutritional situation is somewhat better in the coastal countries in comparison with the Sahel countries. In particular in Mali, the percentage of children with a low weight-for-height (wasting) is very high. Also *within* countries, there are large differences, with generally better nutritional conditions in urban areas in comparison with rural areas (Nubé et al., 1998).

⁷ It may be noted that pioneering work in the field of Burden of Disease measurement in less developed countries was done in Ghana in the early 1980s (Ghana Health Assessment Project Team, 1981). Recent Burden of Disease estimates for Ghana, however, are not available.

Table 6. Undernutrition in children and adults (in %)

	Under-nourishment (1996-1998)	Under-weight Children	Stunting Children	Wasting Children	BMI<18.5 Women
Ghana	10	24.9	20.0	12.9	11.3
Togo	18	25.1	21.7	12.3	10.9
Côte d'Ivoire	14	23.8	24.4	8.3	7.9
Mali	32	40.0	30.1	23.3	16.2
Burkina Faso	32	31.5	24.5	17.6	14.8

Source: Undernourishment (percentage of population with inadequate food energy supply), from FAO, 2000, The State of Food Insecurity in the World; Underweight, stunting and wasting in children, 0-35 months (% below reference minus two standard deviations) from DHS; Percentage women (15-49 years) with BMI<18.5 from DHS.

Figures 1A and 1B show graphically how prevalence rates of malnutrition in children and adult women are distributed over regions in the five SADAOC-countries. The figures illustrate the better nutritional status of children and adult women in the coastal regions, while in the western part of Burkina Faso the nutritional status of children and adult women tends to be better than in most parts of Mali and eastern Burkina Faso.

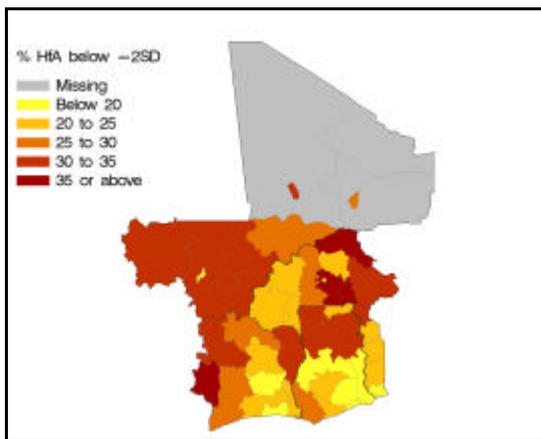


Figure 1a
Prevalence rates (%) of children with height-for-age below medium of reference minus 2 standard deviations
Source: DHS

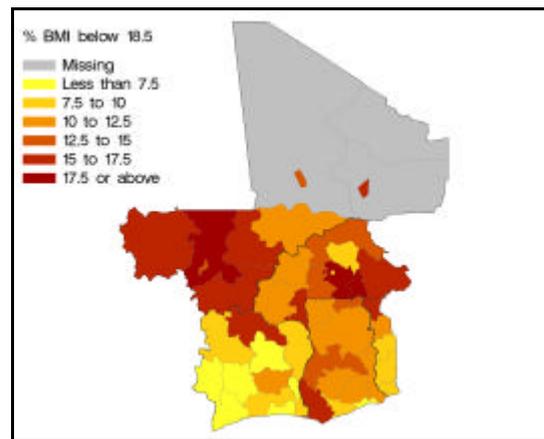


Figure 1b
Prevalence rates (%) of women with BMI<18.5
Source: DHS

With respect to micro-nutrients, in all countries considerable numbers of people face deficiencies in iron, iodine and vitamin A. Prevalence rates of deficiencies in these micro-nutrients can show strong geographical variation, in particular for iodine, where the occurrence of deficiency is related with the iodine content of local soils.⁸

⁸ On micro-nutrient deficiencies, see e.g. Ghana, Country Paper B, p. 67, and World Bank, 1997, p. 3; Burkina Faso, Country Paper B, p. 20 and Country Paper G, p. 37; Togo, Country Paper B, p. 11, 54; Côte d'Ivoire, Country Paper B, p. 26; and Mali, Country Paper B, p.16.

It is important to note that there is often a strong interaction and relationship between malnutrition and disease. On the one hand, many illnesses can have a deteriorating effect on an individual's nutritional status as a result of nutrient losses, e.g. through diarrhea, and also as a result of reduced appetite, while on the other hand a poor nutritional status can cause a weakened immunocompetence and an increased susceptibility for diseases. In general, with respect to mortality in children, it is estimated that approximately 50% of child deaths have to be attributed, at least partially, to malnutrition (Rice et al., 2000). In adults, a weak nutritional status of women can have strong negative implications for pregnancy outcomes both with respect to mother and child, with maternal mortality and stillbirth as the most dramatic consequences. Finally, it may be noted that both prevalence of malnutrition as well as of diseases can exhibit strong seasonal patterns.

Section 3

Health Care Systems

In response to persistent high levels of morbidity and mortality and in recognition of the fact that existing health care systems do not perform satisfactorily, during the 1990s all SADAOC countries have initiated health sector reform.⁹ A major stimulus in this respect has been the Bamako Initiative, which was endorsed in 1987 by the African ministers of health (World Bank, 1987; Knippenberg, 1997; World Bank, 1998, p. 18). Main components of the Bamako initiative are:

- preventive medicine has priority over curative
- cost-sharing between government and beneficiaries of health services (cost-recovery), under a system of decentralization
- promoting private initiatives
- protecting vulnerable groups
- essential drugs to become available

In the following paragraphs various aspects of the health services systems in the SADAOC-countries will be discussed. Not only components of health services delivery will be considered (types of health care, health personnel, access to services, health care financing), but information will also be presented how health outcomes, and health services provision and utilization is distributed over different regions and population groups in the SADAOC-countries. Developments in the private sector are briefly discussed.

3.1 Types of health care provision

With respect to different types of health care provision, distinction is generally made between traditional and modern health care.¹⁰ While over past decades the role of modern health care has steadily gained in importance, traditional health care still plays an important role, in particular in rural areas. Part of the continued importance of traditional medicine may be related with the fact that many people believe that certain diseases have supernatural causes, which are being addressed by the traditional practitioners (Asenso-Okyere, 1995).

There appears to be some discrepancy between reported perceptions and actual survey data on the relative importance and roles of traditional and modern health care in the SADAOC-countries. According to all country reports, traditional health care is the most important, if not the only recourse for rural people.¹¹ Also, information on estimated numbers of traditional health practitioners (e.g. in Ghana one practitioner for every 400 people) suggests an important role of this segment of health provision (Tsey, 1997). Yet, survey results do not corroborate such

⁹ See e.g. Ghana, World Bank, 1997, page 2, Medium Term Health Strategy; and World Bank, 1997, page 11, on the establishment of the Ghana Health Services, which operates relatively independently from the Ministry of Health; see also Côte d'Ivoire, World Bank, p. 14, on the Government National Health Development Plan; and Togo, Country Paper B, p. 5 on "Politique nationale de santé, République Togolaise, Ministère de Santé, 1998.

¹⁰ Terminology for different types of health care is not uniform. For example, for modern health care also the terms 'formal' and 'orthodox' are in use.

¹¹ On the relative importance of traditional health care, see e.g. Ghana, Country Paper B, p. 22; Côte d'Ivoire, Country Paper B, p. 43; Burkina Faso, Country Paper B, p. 33 and Country Paper G, p. 22; Togo, Country Paper B, p. 21, 22, World Bank 1996a, p. 72; and for Mali, World Bank, 1998, p. 6.

perception. According to the DHS surveys traditional health care has a modest role in the SADAOC-countries. For example, information has been collected where people seek health care or medical advice in case of diarrhea or cough in children. While figures presented in Table 7 for the various categories of health care providers in the five SADAOC-countries are not fully comparable, the share of the traditional sector in health care provision appears to be at most around 20%. In the rural area, traditional medicine is more important, but according to DHS survey data, also here, in case of illness, the majority of people seek modern health care from public health centers. Another recent survey in Ghana showed that in case of illness or injury about 37% of the people consult a modern health care provider, at most 6% a traditional practitioner, whereas about half of the people directly buy medicines (GSS, 2000; van den Boom et al., 2002).

Table 7. Consulted providers of health care for children with diarrhea, fever or cough

	Public health	Private health	Pharmacy	Traditional healer	Community health	Other
Ghana	48	7	37	4	1	3
Togo	63	6	..	12	..	19
Côte d'Ivoire	55	3	6	19	..	16
Mali	23	1	31	21	17	6
Burkina Faso	78	6	..	14	..	2

Source: DHS-surveys data, analysis by SOW -VU.

While for decades modern health care tended to ignore traditional health care, in recent years there has been increasing recognition of traditional forms of health care provision. For example, in Côte d'Ivoire a division for traditional medicine has been established at the Ministry of Health, which aims for some form of integration between traditional and modern health care. A first step, in 1998, was a census among traditional health practitioners (Côte d'Ivoire, Country Paper B, p. 16). In Ghana, within the Ministry of Health a unit in charge of herbal medicine has been established, while also a scheme has been introduced in which traditional birth attendants are being trained (Asenso-Okyere, 1995). Similar developments are taking place in Togo. While such integration has positive elements, careful review of roles and functioning of both types of health care provision seems warranted (Asenso-Okyere, 1995; Tsey, 1997). In fact, some concern has been expressed that governments might promote traditional health care only with the objective to reduce the pressure exerted on the public health system to provide (more expensive) modern health care in rural areas.

With respect to modern health care, three sectors can be distinguished. In the first place there is the public health sector, operating under the umbrella of a ministry of health. In all SADAOC-countries, the public health sector, traditionally characterized by a centralized and pyramidal organization structure, plays a major role in health care supply. In the second place there are non-governmental organizations (NGO's) and churches who play in the SADAOC-countries, as in many other African countries, an important supplementary role in health services provision, in particular in the form of running clinics and hospitals (private not-for-profit sector). For example, in Ghana one third of hospitals are run by churches (Asenso-Okyere, 1995). In the third place, there is the private sector where health providers (doctors, nurses, midwives) operate on a for-profit basis.

In all SADAOC-countries health care is provided through a multi-layer system, from basic preventive and simple curative health care being offered by health centers throughout the country

up to highly specialistic curative treatment provided in university or other well-equipped hospitals and clinics, located in the capital and main towns. For a meaningful assessment of the health care situation in the SADAOC-countries, information should be available on health facilities, in terms of total numbers of hospitals, numbers of clinics and health centers, and numbers of rural health units, where the various health care services, both preventive (e.g. vaccination) and curative, are being offered. Unfortunately, such information is not easily available. While both national and international reports generally provide some information on health facilities, interpretation of the information is complex. In the first place, numerous terms are being used for different types of health care facilities, such as hospitals, clinics, health centers, health posts, medical centers, village health posts, community health centers, and the like.¹² Making comparisons between countries is hardly possible as it is difficult to assess what types of staff is typically available and what types of services are being offered in the various types of health units. A center that is classified as a (small) hospital in one country may be classified as a district health center in another country. Also, in reports on health facilities there is not always a clear differentiation between the public and private sector, with for some countries information only being available for the public sector, for another country for the public and private sector combined, and again for another country separately for the private and the public sector. Furthermore, part of the information may just not be available at all. For example, in Ghana the number of NGO's performing health-related activities is unknown, and this is attributed to the fact that there is no coordinating body collecting such information (Ghana, Country Paper B, p.18).¹³

An assessment of the health care supply in a country can also be made on the basis of information on total numbers of different types of health care personnel, such as doctors, nurses, midwives, pharmacists etc. However, data on health sector personnel have similar shortcomings as information on health care facilities. Information on numbers of doctors and nurses, or other personnel in the public or private health sector, is often incomplete, and different reports on the same country give different figures. Also, government health personnel may be (part-time) engaged in informal private health practice, but records on such activities are not available (World Bank, 1998, p. 18). Table 8 gives information on numbers of physicians in the SADAOC-countries as reported by UNDP (UNDP, 2001), but the figures can only be considered crude approximates. For nurses and other health personnel it is even more difficult to arrive at sensible estimates.

Table 8. Numbers of Physicians in SADAOC-countries

	Ghana	Togo	Côte d'Ivoire	Mali	Burkina Faso
Physicians (1990-1999) per 100,000 people	6	8	9	5	3

Source: UNDP, Human Development Report -2001

¹² Health reports written in French include terms such as centre de santé, dispensaires rureaux, infirmeries, cabinets medicaux, etc.

¹³ For all countries some information on health facilities (hospitals, dispensaries, health centres) is available: see e.g. Ghana, Country Report B, p. 15; Côte d'Ivoire, Country Paper B, p. 24, 36, 37, 38 and World Bank, 1996, p. 4; Burkina Faso, Country Paper B, p.24; Togo, Country Paper B, p. 44, 45; Burkina Faso, Country Paper, G. p. 12; Mali, World Bank, 1998, p. 15.

As can be expected, also with respect to *trends* in numbers of health personnel, available information is scanty. For Togo a declining number of physicians has been recorded for the period 1991 to 1995 (Togo, Country Report B, p. 47). However, it is unclear whether the decrease represents an overall decline in numbers of doctors in the country or whether many doctors are switching from the public to the private sector. For Burkina Faso, the numbers of health personnel appear to have been rather stable over the period 1990-1995 (Burkina Faso, Country Paper G, p. 65).

Despite the lack of comprehensive information on numbers of health personnel, there is little doubt that in all SADAOC-countries the health sector labor force is small in relation to the sizes of the populations. Yet, despite the low numbers of health personnel, for several countries underuse of available human resources has been reported, and attributed, at least partially, to the many vertical health programs, where one specific illness or group of illnesses is addressed within a vertically organized structure (World Bank, 1994a; Burkina Faso, Country Paper B, p. 22). Such structures, often sponsored by donors, might have certain organizational advantages, they can however also easily lead to inefficient utilization of available resources.

Another serious problem with respect to health care personnel is a high rate of attrition. Salaries for health workers are generally low, and for those who are adequately trained, migration to other countries can be attractive. Also, well trained medical people often move to better paid managerial jobs in the health ministry. In many countries there is a tendency of overstaffing in public ministries and other government agencies at the expense of staffing of medical units.

3.2 Access to and use of health services

Access to health services is a key requirement for adequate functioning of the health care system in a country (WHO, 2000b, p 24). In past years, international organizations tended to report on 'access to health services' by providing information on the percentage of the population "that can reach appropriate local health services on foot or by local means of transport in less than one hour" (see e.g. UNDP, 1998). However, in more recent years information on access to health services as defined above is no longer given.¹⁴ It is increasingly being recognized that access not only depends on physical vicinity of health services, but also on aspects such as costs and quality of offered health services (Stierle et al., 1999; Biritwum et al., 2000). As a result, there is a tendency to assess functioning of health care systems on the basis of at least a number of different indicators, such as for example access to essential drugs, coverage rates and utilization of vaccination programs, and availability of family planning services. Also, in a number of studies and reports information is presented only on access to specific disease control programs, such as for AIDS or tuberculosis.

Table 9 provides for the five SADAOC countries information on access to essential drugs, on use rates of oral rehydration therapy and contraceptive methods, on vaccination coverage rates for tuberculosis and measles, and on percentages of births assisted by birth attendants. Access to the various health services varies considerably, with for example in most countries high coverage rates of tuberculosis vaccination, but much lower vaccination rates against measles. For most

¹⁴ The document Better Health in Africa (World Bank, 1994) includes a table (Table A-9) which gives percentages 'Access to health services' both for the urban and for the rural area of African countries. 'Access' is here defined as 'the proportion of the population having treatment for common diseases and injuries and a regular supply of the essential drugs on the national list available within one hour's walk or travel'. In more recent WHO documents, the indicator 'access to health services' appears to be dropped, which can be considered reflection of the difficulties in defining and obtaining data for this indicator.

indicators, access to health services is somewhat better in the coastal countries Ghana, Côte d'Ivoire, and Togo, in comparison with Mali and Burkina Faso.

Table 9. Access to and use of health services (in %)

	Population with access to essential drugs 1999	Oral Rehydration Therapy use rate 1995-2000	Contraceptive prevalence 1995-2000	One-year-olds fully immunized against tbc/measles 1997-1999	Births attended by skilled health staff 1995-1999
Ghana	44	36	22	88/73	44
Togo	70	23	24	63/47	51
Côte d'Ivoire	80	29	..	84/66	47
Mali	60	16	7	84/57	24
Burkina Faso	60	18	12	72/46	27

Population with access to essential drugs: percentage of population for whom a minimum of 20 of the most essential drugs are continuously and affordably available at public or private health facilities or drug outlets within one hour's travel from home; Oral rehydration use rate: percentage of all cases of diarrhea in children under age five treated with oral rehydration salts or recommended home fluids, or both; Contraceptive prevalence: percentage of married women aged 15-49 who are using, or whose partners are using, any form of contraception, modern or traditional.

Source: UNDP, Human Development Report -2001.

In particular rural people have limited access to health care, as shown in Table 10 for Burkina Faso, Ghana and Mali. In the first two countries just over 50% of the rural population lives close (i.e. within 5 km) to a health facility where at least a nurse is available, but in Mali this applies only to a third of the rural population. Though only a minority lives far away (i.e. 15 km or more) from such a health facility, two-third to almost half of the rural population in these three countries does not live close to a health facility with a nurse. Higher-level health facilities with doctors are even scarcer in rural area. Only 15-20 percent lives close to a health facility where a doctor can be consulted, and in Burkina Faso and Mali for more than 90% of the rural people the nearest hospital is more than 15 km away. Thus, ample scope still exists to extend the health care coverage in the rural areas, to have at least almost all living close to a nurse, with a possibility of referral to a health facility with a doctor at a reasonable distance, say at most 15 km away. To improve the quality of medical care where doctors are scarce, Ghana has introduced so-called Medical Assistants. They are experienced nurses, which have received additional training in clinical care and in some administration, and can therefore take over several tasks of doctors. By 1996, Ghana had about 350 Medical Assistants (Ghana, 1997, Annex 3, p. 2).

Table 10. Distance to health facility by quality level ^{a)}, in the rural area of some SADAOC countries

Level	Burkina Faso		Ghana		Mali	
	Within 5 km	15 km or more	Within 5 km	15 km or more	Within 5 km	15 km or more
Nurse	55.1	13.6	58.2	14.5	34.1	23.2
Doctor	15.7	64.5	17.2	52.7	20.1	43.7
Hospital	0.9	94.9	14.3	56.3	2.2	91.6

^{a)} Quality levels: 'nurse' = health facility with at least a nurse or higher level health care provider (medical assistant, doctor); 'doctor' = health facility with at least a doctor.

Sources: DHS Burkina Faso 1993, GLSS4 Ghana 1998/99, DHS Mali 1996; own calculations

An area which, in particular, has been receiving much attention over past years is access to essential drugs (UNDP, 2001). As shown in Table 9, reported access rates to essential drugs in

the SADAOC-countries vary between 44% and 80%, and for some countries it has been claimed that major improvements have been achieved in recent years (see e.g. Burkina Faso, Paper G, p 23, and for Mali, World Bank, 1998). Yet, it should be noted that very little information is available how the data on levels of access to essential drugs have been collected. Over past years concerns have been expressed on the success of the essential drug programs (Pecoul, 1999; Bosu, 2000; Turshen, 2001; Ratanawijitrasin, 2001), and there appears to be a strong need for making more transparent the actual situation with respect to the performance of the essential drugs programs in the SADAOC-countries.

The degree of utilization of health services is also determined by peoples perceptions of the quality and effectiveness of provided advice and treatment (Haddad, 1998). With respect to health services quality, there are numerous accounts of poor functioning. In Ghana, quality of health services, in particular in rural areas, has been reported to be in some cases appalling: shortages of drugs, long queues, or poor staff behavior (Agyepong, 1999). Similar complaints with respect to health care provision are expressed in Burkina Faso, Togo, and Côte d'Ivoire. In Côte d'Ivoire, health services are reportedly underused because they do not respond to needs, and the large majority of Ivoriens are not satisfied with the existing health system. And also in Mali, despite substantial progress in establishing community clinics (see below) and in improving physical access to health services in rural areas, utilization rates remain low, with for example in 1996 Malians visiting a government or community health center for curative services only 0.16 times per year on average (World Bank, 1998, p. 23, 43). Among factors contributing to low utilization rates are low quality of services, inadequate outreach services, fees which are still too high for the majority of the rural population, and client preferences for traditional medicine and self-medication (see also Table 7). Low occupancy rates of beds have been reported for Burkina Faso.¹⁵

While above perceptions of poor quality and poor utilization of available health services are by themselves reasons for concern, even more worrisome is the fact that some reports indicate, over past years, deteriorating levels of performance of health services in rural areas. For example, in a recent publication, it is stated that “despite health reform and increasing public investment in the health sector in Burkina Faso, utilization of curative health services, immunization coverage and patient satisfaction with the public health care system are steadily decreasing” (Bodart, 2001; Burkina Faso, Country Paper G, p. 20). In Togo, vaccination coverage rates have been decreasing in the early 1990s as did visits to health services (Togo, Country Paper B, p 35, 36). More recent information is, unfortunately, not available.

It should be noted that much of above quantitative information on utilization of health services has to be treated with caution. First, data by themselves are generally weak. Secondly, lower levels of consultations might be related with the fact that in many countries user fees have been introduced, but this does not necessarily imply a deterioration of health conditions. And finally, decreasing numbers of visits might, in principle, just be the result of the fact that people's health conditions improve.

3.3 Financing of health care

Levels of health services provision and utilization depend, at least partially, on availability and allocation of financial resources, both on the side of health care providers and on the side of

¹⁵ On the perception of poor quality of health services in the SADAOC countries, see e.g. Ghana, Country Paper B, p. 55; Burkina Faso, Country Paper B, p 21, 22, 33, 34, and Country Paper G, p. 20, 22; Togo, Country Paper B, p. 2; Côte d'Ivoire, Country Paper B, p. 19, 78, 81; Côte d'Ivoire, World Bank, 1996, p. 11.

health care consumers. Total spending on health care can be considered to consist of three components: health expenditures by the government, expenditures paid or funded by donors (including religious organizations), and expenditures paid privately by households.¹⁶

Table 11 provides, for the five SADAOC-countries, information on total per capita health expenditures, in US \$ and in PPP \$, and on total, public and private health expenditures as share of GDP. Total per capita health expenditures vary between 8 USD and 29 USD per capita per year, with Côte d'Ivoire and Ghana spending two to three times more on health care in comparison with Mali, Togo and Burkina Faso. The share of GDP spent on public health care varies between 1.2% and 2.1%, while the share on private expenditures on health care varies between 1.3% and 2.9%.

Table 11. Health expenditures

	Health exp. per capita USD 1990-1998	Health exp. per capita PPP 1990-1998	Total Health exp. as % of GDP 1990-1998	Public Health exp as % of GDP 1990-1998	Private Health exp as % of GDP 1990-1998	As % of Gov. exp
Ghana	19	85	4.7	1.8	2.9	5-7
Togo	8	36	2.6	1.3	1.3	9-12
Côte d'Ivoire	29	62	3.8	1.2	2.6	...
Mali	11	30	4.2	2.1	2.2	4-9
Burkina Faso	10	36	3.9	1.2	2.7	±8%
Sub Sahara Africa	42	89	4.3	1.7	2.6	...
Developing countries

Source: Columns 1 to 5, World Bank, World Development Indicators-2001; last column, Ghana Country Paper B, p. 26-28, and World Bank, 1997, p. 2, Togo Country Paper B, p. 23, World Bank, 1998 (Mali), p. 27, 30, Burkina Faso, Country Paper G, p. 16.

It is important to note that Public Health Expenditures as listed in Table 11 include, according to the World Bank definition, 'all government spending (recurrent and capital), external borrowing and grants (donations from international agencies and non-governmental organizations), and social (or compulsory) health insurance funds'. And Private Health Expenditures, as listed in Table 11, include 'direct household spendings, private insurance, charitable donations, and direct service payments by private corporations'. Thus, Table 11 provides information on the two main categories of health expenditures, public and private, and indicates that in the SADAOC countries between 50% and 70% of total health expenditures is in the form of privately paid health care. However, Table 11 does not provide information on categories of health expenditures at a more disaggregated level, e.g. health care financing through aid or direct household spending for medical treatment and drugs.

For Mali, more detailed information on health financing is provided in a World Bank report (World Bank, 1998, Table 3.1). According to the report, the government accounts for 17.5% of total health financing, other institutions (NGO's) for 5.8%, external donors for 25%, and households for 51.5%.¹⁷ A similar breakdown of total health expenditures (government, other institutions (NGO's), external donors, households) is not available for the other countries. Only with respect to external donor assistance, some quantitative information is available for Côte

¹⁶ In this paragraph we do not consider government expenses for public works (water, sanitation) or for education. Investments in these areas are essential for health improvement, but they are generally kept separate from the health budget.

¹⁷ As noted in World Bank, 1998, p. 31 (Mali): "Most strikingly, primary health care and education programs were entirely funded by donors". Such situation clearly illustrates the vulnerability of the financing of primary health care activities.

d'Ivoire, where in 1990 and 1994 approximately 3% of total health expenditures was funded by foreign countries and international organizations (World Bank, 1996b, p. 8).¹⁸

Generally, more detailed information is available with respect to the government health budget. For example, in Ghana government health expenditures were in 1998 for 54% financed from tax revenues, 21% was financed through credit, 10% through internally generated funds (user fees, sale of drugs), 15% was financed by donors/NGO's, and 0.5% by others (Ghana, Country Paper B, p. 25). For most countries information is also available how public expenditures are distributed over categories such as salaries, buildings and equipment, medicines and vaccines, etc. Yet, also here there are no standard formats according to which data on health care financing are being reported. It has to be concluded that it is extremely difficult to make a detailed comparative assessment on health care financing in the five SADAOC-countries.^{19, 20, 21}

A policy issue of increasing importance is in which way and to what extent individuals or households should directly contribute to the costs of health services. First, in all countries patients or their caretakers are partially or fully charged for drugs provided by public health centers, or the required drugs have to be purchased from private suppliers.²² Elements of cost-recovery, and retainment of proceeds at the local level, have been introduced in all SADAOC countries. In some countries, in public health facilities an overhead is being charged on provided drugs, which generates funds that can be used for local recurrent expenses of the facility, while also user fees for medical services have been introduced.

In Ghana the raising of user fees started already in 1985, while in Côte d'Ivoire since 1994 public sector primary care facilities have been allowed fully to recover the cost of medicines and the non-salary cost of curative medical interventions. In the last country, health centers retain between 70 and 90 % of the revenues for the replenishment of drugs stocks or for local operating and maintenance costs (World Bank, 1996b, p. 5; see also note 22).

With respect to user fees and payments for drugs, the dilemma is that on the one hand there is an increasing need for the health sector to recover at least part of the costs, on the other hand fees and charges for drugs may discourage in particular low-income people to seek medical assistance. In fact, in Ghana after the introduction of user fees there was a significant reduction in visits to public health centers (Asenso-Okyere, 1995). In this respect, information on shares of total household expenditures spent on health is highly relevant. In Togo, households spent

¹⁸ For Africa it is estimated that on average donor funding accounts for approximately 20% of total health expenditures (World Bank, 1994, p.43; World Bank, 1996, p. 8). Classification of total health expenditures into categories such as public and private may not always be feasible. For example, donor funding of health care may be partially in the form of funds provided to governments, but also in the form of funds made available to churches or other non-governmental institutions, and detailed and complete information how donor funds are being channelled may not always be available. An additional difficulty in quantifying health expenditures, in particular in rural areas, is that payments for health services may be partially made in kind.

¹⁹ Also the Côte d'Ivoire report provides information on financing sources for the health sector (Côte d'Ivoire, Country Paper B, p 60); per capita health expenditures are reported to be 22USD per year (year not indicated) of which about half is paid by households themselves (p 60).

²⁰ On the distribution of government health expenditures over various categories, see e.g. Côte d'Ivoire, Country Paper B, p. 62; Ghana, Country Paper B, p. 34; Togo, Country Paper B, p. 23, 24.

²¹ Overall trends in health expenditures are not clear. According to the Ghana report, over the period 1990-1998 the Ministry of Health's share of total government budget was almost halved, from 9.7 % in 1990 to 5.1 % in 1998 (Ghana, Country Paper B, p. 29, 70 and World Bank, 1997, p. 4, 5). For Togo, available data for the period 1990-1996 do not show a clear trend, while information on more recent years is not given (Togo, Country Paper B, p. 23).. In Côte d'Ivoire the health budget has been increasing considerably over the period 1995-1999 (Côte d'Ivoire, Country Paper B, p. 62).

²² In Côte d'Ivoire, since 1994 public sector primary care facilities have been allowed fully to recover the cost of medicines and the non-salary costs of curative medical interventions. In rural areas, health facilities retain 90 percent of these revenues, and in urban areas 65 per cent, to be used for replenishment of drugs stocks and for local operating and maintenance costs (Côte d'Ivoire, WB-97, p 5).

Experiments in health sector reform

Countries experiment with new management and organization structures in health care provision with the objective to increase effectiveness, efficiency and responsiveness to demand. Among these, the establishment of the Ghana Health Services in Ghana and of the Community Health Centers in Mali may be singled out.

Ghana Health Service

As part of the reorganization of the health care sector, Ghana has established the Ghana Health Service. This organization is responsible for the daily management of the public health care facilities in Ghana, and focuses on the efficient provision of health care to the general public. The Ministry of Health is now able to orient itself to health policy in a broad sense, including supervision of private health care and supply of medicines, as well as disease prevention activities such as health knowledge dissemination, disease vector control, and improving water supply and sanitation.

Mali Community Health Centres

The establishment in Mali of the so-called Community Health Sector is part of the Government's Health Strategy since the early 1990s. The established Community Health Centres are owned and managed by the local community, and operate largely independently from the Ministry of Health, which is made possible by raising user fees and by making some profit on the sales of drugs. Though not without problems, the experiences with the community health centres are until now reasonable successful, with provided services being more geared towards community demand. A particular problem is that provided services tend to be oriented towards curative interventions, which generate income for the centre, but relatively limited time and efforts are devoted to non-income generating preventive health services. Another constraint is the difficulty in attracting and retaining qualified staff.

Sources

Ghana Health Service: World Bank, 1997, p. 11

Mali Community Health Centres: World Bank, 1998, p. 17, 32, 38, 40, 45.

approximately 5% of their total expenditures on health (Togo, Country Paper B, p. 27; World Bank, 1996b, p. 28). Households in Ghana spend 4.6 percent of their total expenses on health, which corresponds to a considerably higher contribution than the Internally Generated Funds reported by the Ministry of Health, due to additional fees and charges levied locally at the health facilities, of which proceeds are retained at the own facility (van den Boom et al., 2002).

As user fees together with overhead on drugs can cover a considerable part of local non-salary recurrent costs, such schemes can play an important role in the decentralization process, in transferring responsibilities from higher to lower levels, and in making health services more responsive to local needs (World Bank, 1998, p. 46; Nyongator and Kutzin, 1999).

Another approach to finance health care costs would be through formal insurance schemes. In the SADAOC-countries health insurance is still in its infancy. In Côte d'Ivoire in the mid-1990s about 7% of the population was covered by a private voluntary health insurance (World Bank, 1996b, p. 7). In an implicit form, several governments and companies provide health insurance to their personnel through free or subsidized medical services. In Côte d'Ivoire public sector employees are covered by publicly sponsored health insurance and in Togo government employees are for 50% insured for health treatments (Togo, Country Paper B, p. 26). At least in the near future, voluntary insurance schemes are unlikely to be accessible to the low income

segments of the populations in the SADAOC-countries, but middle and higher income groups might increasingly enter some form of private health insurance, possibly partly paid by their employer (Asenso-Okyere, 1997; McFarlane and Sammon, 2000).

To offer a basic health insurance to the whole population, a public insurance scheme seems required. For such a public basic health insurance to be efficient and affordable, ideally it should be very selective in its coverage of treatments, and only cover large unpredictable health care expenses for treatments that are sufficiently cost-effective. On the one hand expensive, less cost-effective treatments would be excluded. On the other hand small or predictable health care expenses do not need to be included in any insurance, and should be paid out of income or savings. Compared to such an ideal basic health insurance, the current public subsidized health care systems in the SADAOC countries have two shortcomings. First, their geographic coverage is incomplete in rural areas. Second, the treatments that they offer do not seem to be systematically selected according to cost-effectiveness and affordability. They are biased in favor of expensive curative care in hospitals for mostly urban patients, and a shift in coverage towards primary health care for the whole population would probably improve both equity and efficiency. For its Medium Term Health Strategy, Ghana has selected a minimum set of priority treatments, that could be an example of a limited treatment package for a general basic health care insurance (World Bank, 1993; World Bank, 1997, p. 12; WHO, 2001a). As far as government personnel is nowadays offered free or highly subsidized health care covering a wider range of treatments than included in a basic public health insurance, such benefits could be reorganized explicitly as a separate supplementary health insurance scheme for civil servants as part of their remuneration package.

A basic public health insurance for all could also easily include a public subsidy for health services related to prevention and treatment of communicable diseases. Furthermore, to increase the equitable access to health care, for special population groups such as children or the very poor also small and partially predictable treatments could be included in the scheme, for example through exemption of payment.

The focus on primary health care placed by the Bamako Initiative with respect to public health subsidies has recently been challenged (Filmer et al., 2002). The argument is that many primary health treatments neither have externalities nor involve catastrophic health expenses. Public subsidies for such treatments are thus not justified by economic theory, and the supply of such treatments can be left to the private sector. Filmer et al. also argue in favor of subsidizing a limited number of hospitals over a much larger number of clinics for management and staffing reasons. However, they do not consider that in rural area of developing countries, private health care supply is rather low, and that government intervention might be needed to guarantee minimal access to health care. In their article they also ignore the (lack of) cost-effectiveness of expensive hospital treatment, and the strict selection of covered treatments needed for an efficient and affordable public health insurance. Such selection will for each country depend on its own possibilities and preferences with respect to affordability and cost-effectiveness, and might also cover some Primary Health Care.

Section 4

Differentiation and inequalities in health services provision and utilization

Health conditions in the SADAOC-countries differ between regions, between urban and rural areas and between low-income and high-income population groups. As an example, Table 12 shows how under-five mortality rates vary between different socio-economic quintiles, with the highest quintile representing the richest 20% of the population and the lowest quintile the poorest 20%. For all SADOOC-countries there is strong trend of increasing under-five mortality rate when moving from the richest to the poorest quintile. In Ghana, Togo, Côte d'Ivoire and Mali, under-five mortality rates in the lowest quintiles are approximately twice as high as in the highest quintile, while in Burkina Faso the difference is smaller but still considerable.

Table 12. Under-five mortality rates by living standard quintiles

	Living Standard Quintiles				
	Poorest	Second	Middle	Fourth	Richest
Ghana (1993)	157	172	141	102	75
Togo (1988)	168	158	154	122	97
Côte d'Ivoire (1994)	190	167	148	128	97
Mali (1995/96)	298	284	252	241	169
Burkina Faso (1992/93)	199	224	237	199	156

Source: World Bank-HNP/Poverty Thematic Group, 2000. Quintiles based on data on household assets as collected in Demographic and Health Surveys (DHS); under-five mortality rates based on births in the 10 years preceding the DHS surveys. Note: data are not fully consistent with data presented in Table 2, partially as years of measurement are not the same, partially as a result of differences in source

Differences in health outcomes are, at least partially, the result of the fact that health services provision and utilization are not uniformly distributed over different regions in countries. Specialized and well-equipped hospitals and health centers are generally located in the capital and larger cities, while less specialized medical services are provided in smaller towns and villages in rural areas. In many African countries there have been tendencies to allocate large parts of available resources to the central hospitals, leaving a relatively small budget for the remaining medical services in other parts of the country. In Ghana, in recent years between 40-50% of the total health budget is allocated to the Ministry of Health's Headquarters, to tertiary institutions and teaching hospitals, and a considerable portion of (Ghana's) health resources was channeled into urban, hospital-based curative care. Also in the other SADAOC-countries, health systems are reported to have a bias towards urban curative health care (Côte d'Ivoire, Country Paper B, p. 24; World Bank, 1996b, p. 9; Asenso-Okyere, 1995).

In order to prevent low levels of access to health services for the poorest population segments, countries may have made exemption rules or price differentiation, with decreasing fees for low income population groups. An example is the Social Exemption Package in Ghana, which aims to reduce health costs for target groups such as people who need ante-natal care, those aged above 70, the under-fives, and also for generally deprived groups such as refugees, patients suffering from diseases such as leprosy and tuberculosis, etc. (Ghana, Country Paper B, p. 30,31; Asenso-Okyere, 1995). However, in practice these exemption schemes seem not to work satisfactorily (Nyonator and Kutzin, 1999). In Ghana, in 1998 the utilization of the exemption

fund was less than 50% and it has been reported that those in the exemption categories are hardly benefiting from the package (Ghana, Country Paper B, p. 32). Also in the community health centers in Mali, in principle the most needy are exempted from paying fees or drugs. But also here, experiences with exemptions are unsatisfactorily (World Bank, 1998, p. 43).

It can be concluded that with respect to the health budget, in the first place it should be ensured that a sufficient part is allocated to Primary Health Care all over the country, with special attention to remote rural areas. Formulation of minimum packages of essential health services to be provided at primary health care level might be instrumental in program design and allocation of resources (World Bank, 1996b, p. 14,15,20,21,27; World Bank, 1997, p. 14; World Bank, 1998, p. 40). Highly subsidized health services in centrally located facilities are justified only when they are sufficiently cost-effective and accessible and available for everybody, and not only for privileged urban segments of the population (World Bank, 1994a, p.65; 1996b, p. 27; 1998, p. 32). And finally, it should be ensured that the specialized hospitals indeed provide those specialized services that cannot be provided at lower cost by lower level facilities (Togo, Country Paper B, p. 8).

Section 5

Private sector development

In most countries the modern private-for-profit health sector is small, but gaining in importance. From a consumers point of view the private sector may well offer a number of advantages, such as better and more flexible access, greater confidentiality, and greater sensitivity to user needs (Zwi et al., 2001). Yet, private health practitioners work without government subsidies and costs have to be fully recovered from the clients or their employers. Therefore, lower income segments of the population are, at least in the short run, unlikely to benefit much from private sector development. Ministries of health have an important task in regulating and monitoring private sector development, in order to ensure safety and quality of offered services and in order to prevent that unreasonably high fees are being charged. At present, in most SADAOC-countries there appears to be no clear policy how the process of private sector development should be guided.²³

One area where private sector involvement and development is most pronounced is the pharmacy sector. In most countries importing and marketing of drugs has been liberalized, resulting in the supply of cheaper, generally generic drugs. With systems of drugs supply being increasingly in the hands of private pharmacists or drugstores, ministries of health have the task to ensure countrywide availability of drugs for major diseases at competitive (possibly subsidized) prices. In areas where the private sector is not willing or not able to do so, government pharmacies should ensure the essential drug supply. Information on situation and trends with respect to availabilities and prices of major drugs should be made widely available in all SADAOC-countries in order to create transparency in this segment of the health care system.

Experiences in the late 1980s and early 1990s in Mali have shown that reform of the pharmaceutical sector can have a strong impact on availability and prices of drugs. In fact, after the abolishment of public monopoly on imports and sales of medicines in the early 1990s, by around 1995 drugs prices were on average only 20% of pre-reform prices and the reforms and essential drugs policies were considered largely successful (World Bank, 1998, p. 6, 30, 33, 34). The reductions in drugs prices are likely to be partially the result of increased competition and partially the result of a switch from expensive brand name drugs to cheaper generic drugs.

In this respect, it should be mentioned that the purchase of drugs is for many people often the only form of health seeking behavior in case of illness. For example in Ghana, in case of illness 57% of the people do not consult a health care provider, but most of the ill (85%) buy medicines or medical supplies. Moreover, private health expenditures are largely on drugs (World Bank, 1996b, p. 28; World Bank, 1998, p. 30). How these expenses on drugs are divided over payments to government pharmacists, private pharmacists or drugstores, traditional practitioners and others is not known. It may also be noted that payments to traditional healers are often made in kind, which makes it more difficult to estimate such expenditures.

The process of privatization of drug sales is not without risks, and there are reports of insufficient quality control, lack of knowledge by sellers, and also of intentional selling of fake drugs. When people seek their only health advice from drug sellers, there are clearly health risks

²³ In Mali private health care provision was only allowed in 1985, at regulated prices that were unaffordable to most of the populace (World Bank, 1998). As a result the number of registered private physicians was in 1997 only 57, with the majority of them residing in Bamako.

related to drug use, and governments have an important role in supervising and regulating the sales of drugs to guarantee their quality (Burkina Faso, Country Paper G, p 21, 22, 23).

Section 6

Health promotion outside the health care sector

Health conditions of people are not only determined by availability and quality of health care services. Other factors, such as access to safe water, levels of education, and availability of general health information might in fact be even more important than the performance of the health care sector. Yet, in national health reports, generally only limited attention is given to developments in these areas outside the health care sector itself. Still, a sector wide approach seems preferable in health policy design. Below, some information with respect to water and sanitation and with respect to education in the SADAOC-countries will be presented and how these factors relate to health and disease.

6.1 Water and sanitation/vector control

People acquire infectious diseases through various routes. AIDS is spread through direct human contact, tuberculosis is mainly spread by air, while malaria and yellow fever are transmitted by mosquitoes. A large number of diseases result from contact with or consumption of contaminated water or food. Among these are most diarrheal diseases, including cholera, but also diseases such as guinea worm, onchocerciasis and schistosomiasis.

Access to safe water and the availability of adequate sanitary and waste disposal systems are therefore widely recognized as major factors in preventing or at least reducing disease prevalence. Table 13 provides information on percentages of households in the five SADAOC-countries considered to have access to safe water and sanitary facilities.

To some extent in analogy with the problems in defining access to health services, also with respect to access to water and sanitation there are problems how to define and accurately describe these indicators. According to the World Bank: 'Access to an improved water source' refers to 'the percentage of the population with reasonable access to an adequate amount of water from an improved source, such as a household connection, public standpipe, borehole, protected well or spring, or rainwater collection. Unimproved sources include vendors, tanker trucks, and unprotected wells and springs. Reasonable access is defined as the availability of at least 20 liters a person a day from a source within one kilometer of the dwelling'. And 'Access to improved sanitation facilities' refers to 'the percentage of the urban or rural population with access to at least adequate excreta disposal facilities (private or shared, but not public) that can effectively prevent human, animal, and insect contact with excreta. Improved facilities range from simple but protected pit latrines to flush toilets with a sewerage connection. To be effective, facilities must be correctly constructed and properly maintained' (World Bank, 2001). Clearly, above definitions, which include terms such as 'reasonable', 'adequate', 'effective', 'correctly', and 'properly', leave room for discussion. In view of these difficulties, Table 13 also includes information on access to water and sanitation as derived from the DHS-surveys.²⁴

²⁴ According to the Burkina Faso Country Paper G (p. 30) 80% of the population have access to safe water. The difference with figures in Table 13 is possibly the result of the fact that different definitions for 'safe water' are being used.

Table 13. Access to water and sanitation

	Water		Sanitation	
	Access to an improved water source (%) 2000	Own well or own tap, public tap or tanker truck	Access to improved sanitation Facilities (%) 2000	Flush toilet, septic tank or improved latrine
Ghana	64	40	63	29
Togo	54	48	34	9
Côte d'Ivoire	77	67	(49)	41
Mali	65	42	69	1
Burkina Faso	(53).	45	29	4
Sub Sahara Africa	55	...	55	...
Developing countries	79	...	52	...

Source: Column 2 and 4. UNDP, Human Development Report -2001/ World Bank, World Development Indicators, 2001; figures are for 2000, but figures between brackets are for 1990; Column 3 and 5, DHS surveys, analysis by SOW -VU.

It may be noted that health sector reports generally provide only very limited information on the developments and the functioning of water supply, sanitation and waste disposal systems. The reason is that public works on water and sanitation are generally not under the responsibility of ministries of health. Yet, in view of the importance of the water and sanitation situation in relation to overall health conditions, in health sector reports more information and more attention to the subject would be appropriate.

Water and sanitation facilities not only require significant budgetary allocations for their construction, but also for their maintenance. In fact, in Burkina Faso agencies responsible for maintaining water and sanitation systems face serious problems, with for example in 1996 over 30% of deepwells and puts being temporarily or definitely out of order (Burkina Faso, Country Paper B, p. 34). In analogy with financing of health services, also with respect to access to and use of water, payment schemes need to be developed, and decisions are to be made to what extent water provision is a public or private responsibility. Information on countries' policies on these financial aspects of water and sanitation development is hardly available (Burkina Faso, Country Paper G, p. 29).

While access to safe water and adequate sanitary systems is a requirement for good health, it is obviously not a guarantee. Of great importance, but difficult to measure, is how people utilize such facilities (World Bank, p. 1998, p. 42). Obviously, there is likely to be a strong link between on the one hand people's knowledge and understanding of hygiene and mechanisms of disease transmissions, and on the other hand the actual risk that they will fall ill. Some aspects of the relationships between health and education will be further discussed below.

6.2 Education

Knowledge on relationships between hygienic practices and transmission mechanisms of diseases can strongly affect the way and degree that people expose themselves to pathogens. Also, people who are well informed will better recognize symptoms of diseases and will timely invoke medical advice. Thus, utilization of health services tends to increase with increasing level of education, as shown recently for Ghana (Addai, 2000; van den Boom et al., 2002; Overbosch et al., 2002). And also, people with more education will generally better adhere to prescriptions and medical advice in comparison with those without or with very little education. In case of illness many people only visit drugstores or pharmacists and buy their medicines without further medical consult (see

also Table 7). Thus, with such high levels of self-medication, programs and policies aimed at intelligent use of medicines are needed and most likely effective.

With respect to the relationships between health and education, women take a particular position (World Bank, 1994a, p 34-36). First of all, a number of fertility characteristics are related with women's level of education. For example, numbers of children born to women with secondary or higher education tend to be considerably lower than to women with no or only primary education. Related with the higher child number of less educated women is the age of first pregnancy. High rates of teenage pregnancy, with associated health risks for both mother and child, is a serious health concern in all SADAOC-countries. And also, as can be expected, better educated women are generally better informed on methods of birth control, and more willing to practice some form of birth regulation²⁵

Table 14 shows how in the SADAOC-countries underfive mortality rates are associated with educational records of mothers. For children born to mothers without education the underfive mortality rate is at least two times higher in comparison with children born to mothers with secondary education.

In view of the strong relationships between health and education, information on educational attainments and school enrolment rates, separately for males and females, is highly relevant, also from a health point of view. Figure 2 provides information on literacy rates, expressed as percentages of people who can "read easily" (DHS).

Table 14. Educational record of mothers and underfive mortality

	Underfive mortality rate		
	No education	Primary	Secondary
Ghana	131	113	(60)
Togo	159	127	83
Côte d'Ivoire	161	135	93
Mali	265	205	101
Burkina Faso	230	170	(100)

Source: DHS; figures between brackets: relatively small samples (between 250-500); *Note:* Ghana has also category Middle/JSS (between primary and secondary school) with underfive mortality rate of 91

²⁵ Extensive information on women's fertility characteristics can be found in the Demographic and Health Surveys, which are available for all five SADAOC-countries.

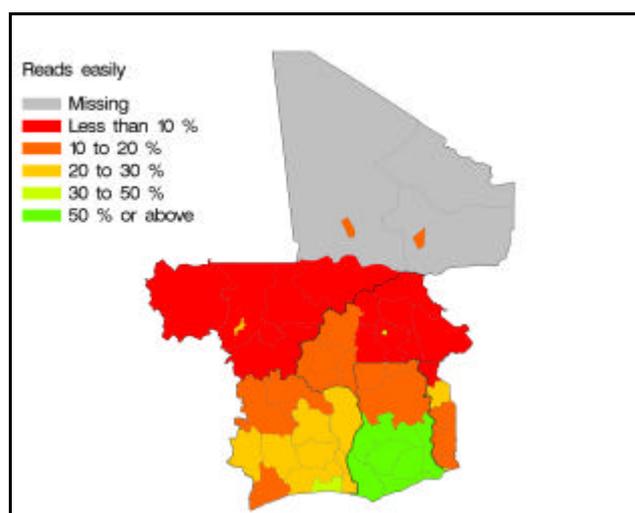


Figure 2: Percentages of population that can “easily read”
Source: DHS

Table 15, finally, gives information on gross enrollment rates for primary and secondary school. Given these enrollment rates, an increase in literacy can be expected in coming years. Yet, in particular for secondary school, enrollment rates in the SADAOC-countries are still low and differences between boys and girls are large. In Ghana, Côte d’Ivoire and Togo, secondary school enrollment rates are approximately three times higher than in Burkina Faso and Mali.

Table 15. Gross enrolment ratios in SADAOC countries

	Gross Primary School Enrollment Ratio (1995-1999)		Gross Secondary School Enrollment Ratio (1995-1997)	
	Male	Female	Male	Female
Ghana	82	72	45	29
Togo	126	89	40	14
Côte d’Ivoire	82	60	33	16
Mali (153)	60	40	14	7
Burkina Faso (159)	48	33	11	6
Sub Sahara Africa	80	67	28	22
Developing Countries	99	89	55	46

Source: Unicef, 2001.

Section 7

Conclusions and recommendations

The present report aims to provide a review of the health situation in the five Central West African countries Burkina Faso, Côte d'Ivoire, Ghana, Mali, and Togo, both with respect to actual health outcomes and with respect to the organization of the health system.

In terms of health outcomes, the countries face serious health problems, reflected in low average life expectancies, high child and maternal mortality rates, and high prevalence rates of illnesses such as malaria, diarrhea, tuberculosis and AIDS. For most health indicators, the coastal countries Côte d'Ivoire, Ghana and Togo are somewhat better off than Burkina Faso and Mali. In fact, in the last decade health improvements in the region have stagnated, and in some respects even deteriorated (AIDS, tuberculosis, and possibly malaria). Therefore, a major concerted effort to improve the health situation in the region seems needed.

All countries are in a process of health sector reform. With respect to the ministries of health, of specific interest are experiments that have the objective to separate the task of direct health care provision from all other tasks of the ministry of health. In such organizational set-up, the ministry could orient itself to a sector wide approach to health, including supervision over all types of health care provision and health infrastructure. Also, in all countries the need for less centralized and less pyramidal organizational structures is recognized. With local communities getting more responsibilities and more decision making power, health care services are likely to become more efficient and more responsive to local needs.

Also with respect to health care financing changes are taking place. In most countries there continues to be a shift from central spending on high-cost health facilities in capitals and big towns and on overstuffed health departments towards spending on lower level health care, in particular primary health care. Apart from the need for such "decentralization" of public health expenditures, it is also important that central high-cost health services indeed provide only those services and treatments which cannot be provided at a lower level, either as at the lower level the required equipment is lacking or as the required medical knowledge is not available.

In most countries some forms of cost-recovery have been introduced. Though moneys collected through cost-recovery are limited, when local health centers are allowed to retain the proceeds for their own operations, they are an important stimulus for efficiency and work-satisfaction at this level. At the same time, there is a risk that provided services tend to be oriented towards curative interventions, and specific incentives might be needed to avoid neglect of preventive services.

As public expenditures on health care can, in principle, be viewed at as a form of health insurance, its financing should also be guided by principles of basic public health insurance. In such schemes both expensive cost-ineffective treatments and very inexpensive or largely predictable health treatments should be excluded. For the lowest income groups and for children, also the least expensive health treatments could be provided for free, to increase equitable access to health care. Finally, where government personnel are enjoying free or subsidized health services, this should be financed separately from the basic public health insurance scheme.

The geographical coverage of the health care system is rather low in rural area. A large share of the rural population lives more than 5 km away from a health facility where at least a nurse can be consulted, and more than 15 km away from a hospital or other facility where a doctor can be consulted. In rural areas thus ample scope still exists to extend the public health care system, as well as stimulate private health care supply.

It is important to note that in all countries private health care expenditures are at least equal to, and in most countries higher than public health expenditures. Out of these private health care expenditures, a large part is generally spent on drugs. Therefore, policies that affect availability, quality and prices of drugs play an important role in health developments in the SADAOC-countries. At the same time, dissemination of information to the public on intelligent drug use is of great importance. In most countries, there is a tendency for an increased role of the private sector in the distribution and selling of drugs. Such developments are likely to increase competition, and drugs monopolies with associated high prices are broken down. At the same time, there is a need for a public drugs policy in the sense that availability of essential drugs at reasonable prices is ensured. Though most countries are recognizing the need for an essential drugs policy, the actual situation in this respect is unclear. A regional system of collecting and publishing information on availability and prices of essential drugs would contribute to transparency in this area of health care provision.

With respect to different types of health care, distinction can be made between traditional and modern health care. Information presented in various national health reports of the SADAOC-countries and information collected in various large scale health surveys do not reveal a clear picture on the relative importance of the traditional versus the modern health care sector. While according to most national reports traditional health care is of great importance, in particular in the rural areas, according to survey data modern health care is by far the preferred type of medical care. There appears to be a need for better consensus on the actual situation in this respect as concepts on relative roles of traditional and modern health care are likely to have an impact on future health policies.

More in general, for health policy design there is a strong need for monitoring health development in all its aspects. Information is needed on trends in prevalence of major diseases, developments in health infrastructure, trends in manpower availability (doctors, nurses, etc) and so forth. Currently available information is weak and often poorly presented. With respect to health infrastructure and manpower, it is important that not only information on public facilities is considered but also information on the private health sector, both the private-for-profit and the private-not-for-profit sector. In view of changing relative roles of public and private health care provision, developments in one sector cannot be seen separately from the other sectors. International organizations such as WHO and World Bank could possibly play an important role in providing guidance on health sector data collection and reporting.

As a final note, it is observed that health sector reports often give only very limited attention to health related developments which do not fall under responsibility of ministries of health. Most important in this respect are developments with respect to water and sanitation and with respect to education. As developments in these sectors might well be at least as important for better health in comparison with developments within the health care sector itself, much more attention to these aspects is needed.

Listing of SADAOC HRD project Country Papers

Burkina Faso, Country Paper B:

Volet Santé et Nutrition, Projet Développement des Ressources Humaines et Réduction de la Pauvreté (PDRHRP), Rapport provisoire, Réseau SADAOC-Burkina Faso (hard copy, no electronic file).

Burkina Faso, Country Paper G:

Impacts des politiques sanitaires et nutritionnelles sur la réduction de la pauvreté et la sécurité alimentaire,

(PDRHRP), Réseau SADAOC-Burkina Faso (electronic file, September 2000)

Côte d'Ivoire, Country Paper B

Situation de la Santé et de la Nutrition en Côte d'Ivoire, Projet Développement des Ressources Humaines et Réduction de la Pauvreté (PDRHRP), Rapport Provisoire, Novembre 1999, Réseau SADAOC-Côte d'Ivoire (electronic file).

Ghana, Country Paper B:

Situation of Health and Nutrition in Ghana, Human Resources Development, May 2001, Réseau SADAOC- Ghana (electronic file).

Mali, Country Paper B:

Situation Sanitaire et Nutritionnelle au Mali, 2000, Réseau SADAOC-Mali (hard copy, no electronic file)

Togo, Country Paper B:

Situation de la Santé et de la Nutrition au Togo, Développement des Ressources Humaines pour la Réduction de la Pauvreté et pour la Sécurité de la Ménage (DRH), October 2000 (electronic file).

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The Centre for World Food Studies (Dutch acronym SOW-VU) is a research institute related to the Department of Economics and Econometrics of the Vrije Universiteit Amsterdam. It was established in 1977 and engages in quantitative analyses to support national and international policy formulation in the areas of food, agriculture and development cooperation.

SOW-VU's research is directed towards the theoretical and empirical assessment of the mechanisms which determine food production, food consumption and nutritional status. Its main activities concern the design and application of regional and national models which put special emphasis on the food and agricultural sector. An analysis of the behaviour and options of socio-economic groups, including their response to price and investment policies and to externally induced changes, can contribute to the evaluation of alternative development strategies.

SOW-VU emphasizes the need to collaborate with local researchers and policy makers and to increase their planning capacity.

SOW-VU's research record consists of a series of staff working papers (for mainly internal use), research memoranda (refereed) and research reports (refereed, prepared through team work).

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