INDEPTH Training and Research Centres of Excellence (INTREC)

Tanzania Country Report

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Introduction

The WHO's Commission on Social Determinants of Health argued in 2008 that the dramatic differences in health status that exist between and within countries are intimately linked with degrees of social disadvantage. These differences are unjust and avoidable, and it is the responsibility of governments, researchers, and civil society to work to reduce them. Part of this work requires the production of setting-specific, timely, and relevant evidence on the relationship between social determinants of health and health outcomes, and yet this information is limited, especially in low- and middle-income countries (LMICs). Thus there is a strong need for the development capacity-building activities to enable such research.

INTREC has been established with this concern in mind. Its dual aims include (i) providing SDH-related training for INDEPTH researchers, thereby allowing the production of evidence on associations between SDH and health outcomes; and (ii) enabling the sharing of this information through facilitating links between researchers and decision makers, and by ensuring that research findings are presented to decision makers in an actionable, policy-relevant manner.

This Tanzania country report provides the baseline situation analysis for the Tanzanian component of INTREC. Specifically, the report addresses three primary areas of concern:

1. SDH-related training in Tanzania, as a baseline for INTREC to build on
2. The core SDH issues of concern in the country
3. Ongoing SDH-related work in Tanzania, both in terms of government policies and in terms of the efforts made non-governmental organizations

The report ends with a series of recommendations for action, directed at government and NGOs, as well as at INTREC itself.

Methods

1) Tanzania country context

Relevant databases pertaining to Tanzania were defined via internet. The internet search for data and material included keywords or acronyms, such as The internet search for data and material included keywords or acronyms, such as "Tanzania", "fact sheet", "country information", "World Bank", "WHO" (World Health Organization). More specific key words or acronyms were employed for different sub-sections, including "demography", "geography", "MDGs" (Millennium Development Goals), "NCDs" (non-communicable diseases), "HIV/AIDS",

"tobacco", etc. The data were then presented along with a commentary on the statistical patterns and public health challenges that the country faces. Furthermore, the section was complemented by the information about the epidemiological studies conducted in Tanzanian by INDEPTH HDSS sites.

2) Curricular review

A list of universities in Tanzania was developed and their websites were then visited to see which SDH-related courses and programmes were offered. The details of these programmes were then sought, either via internet or by direct contact with the respective institutes. Additionally, the information on Tanzania's capacity for use of internet in educative purposes has been assessed.

3) Literature and policy review

An electronic search for published literature on social determinants of health from 2005 onwards was done by using Google searching engine. The key words were "health inequalities in Tanzania" "health inequities in Tanzania" "health determinants in Tanzania" "Determinants of diseases in Tanzania" "WHO health determinants in Tanzania" and "social determinants of health in Tanzania". The search was extended by manually screening the reference lists of all included papers. The search resulted into twenty seven hits, of which five were reports and the rest were articles. Fourteen articles and five reports were used in the country reports.

The information gathered was organized into a matrix, indicating on-going work on SDH in the country, the country's SDH needs, and the policies and guidelines that relate to SDH. This matrix guided the writing of the report for the literature review (see Annexes 1 to 4).

4) Interviews

Twelve In-depth interviews were conducted with professional stakeholders whose work relates to SDH. Respondents were identified during the literature review and through the snowball method. Interviews were audio recorded by using a digital voice recorder and were later transcribed (Typed in word format). Four out of twelve respondents did not want their interview to be recorded, so the interviewer took notes instead. Data were analysed thematically, which involved interpreting and analysing information generated through the interviews. Some quotations from the respondents have been used to represent ethnographic accounts and views of the respondents regarding the topic.

Results

SDH in Tanzania

The review of the literature, epidemiological data and the analysis of in-depth interviews revealed a number of key SDH issues in Tanzania. These SDH include

- Poverty;
- Malnutrition;
- Unequal distribution of income and resources;
- Social inequality;
- Poor budget allocation for health care; including poor resource distribution;
- Lack of human resources for health care affecting in turn health care provision and quality of health care;
- Gender inequality, particularly discrimination of women;
- Lack of social protection and specialized health care for elderly;
- Education for children;
- Geographical location, incl. Its effect on the accessibility to health care;
- Poor links between policy and practice.

Reviewed literature and an epidemiological review also showed that there is an increase of non-communicable diseases such as cancer, sickle cell anaemia, and injuries.

SDH training

No SDH-specific courses are given in any Universities in Tanzania. Nevertheless, a number of different institutions in Tanzania are offering SDH-related courses and these cover a variety of health determinants as well as SDH. These health determinants include health systems, health care financing and policies, resource distribution, gender, development governance, poverty analysis, civil society development. Research methods are also being taught, including clinical research, epidemiology, biostatistics, and evaluation of health interventions. The courses are offered both within schools of public health and beyond. All above-mentioned courses are given as a part of Masters programme. There is a lack of SDH-related short courses, which limits the accessibility to education by those who cannot leave their job or other obligations to take a 1-2 year long Master programme.

Internet capacity has been significantly improved lately in Tanzania. However, while internet could be considered as a source of providing SDH training in Tanzania, accessibility problems should be explored and addressed before running any possible on-line courses.

SDH Policies

There is a number of national policies in Tanzania (such as vision 2025, MKUKUTA II, National Health Policy, National Ageing Policy and National HIV/AIDS Policy), covering a range of SDH, including:

- Growth and poverty
- Improvement of health, quality of life and social well-being
- Governance and accountability
- Improvement of health care delivery and health care system's responsiveness
- Fair distribution of health services

Other policies and strategies are in the process of being reviewed so as to address changes which are taking place. However, while policies addressing SDH are in place, their implementation is not always adequate. Some interviewers explained this by a lack of political interest in SDH. This view was not supported by the government officials, who underlined that SDH are prioritised on the political agenda, hence the SDH-relevant policies.

Recommendations

Based on the presented above findings, the following recommendations could be made for various stakeholders.

Policy-makers, NGOs and other stakeholders:

- Barriers to health care utilization should be studied and addressed. This is particularly important as the epidemiological transition progresses, with NCDs being on the rise in Tanzania.
- While policies are in place to address crucial questions of health inequalities in Tanzania, the implementation of policies should be improved.
- The knowledge of SDH and methods to address them should be increased
- Government, through the ministry of health, should incorporate social determinants of health in all its major programmes and in the programmes of other ministries.
- Non-governmental organisations should continue to empower community members on their rights and provide them with knowledge on existing policy and strategies so that they are aware of what kind of services they should expect from the government, and be able to question the government whenever they are dissatisfied with the services offered.

INTREC:

Training:

- SDH courses. Be aware of the content of other programmes not to duplicate or compete, but to complement.
- Short courses rather than longer programmes should be developed to increase the accessibility to the training.
- Online courses could be considered as an alternative. However, a course description should clearly state the quality of the internet connection that is needed to participate in the courses. A collaboration with the Tanzanian INDEPTH HDSS sites for the delivery of the online courses should be explored, both in terms of the possibility of using their computer halls (if any) and training future trainers.
- Courses should address the key SDH identified through the interviews, literature review and the analysis of the epidemiological data. These SDH include poverty; malnutrition; unequal distribution of income and resources; social inequality; poor budget allocation for health care; including poor resource distribution; lack of human resources for health care affecting in turn health care provision and quality of health care; gender inequality, particularly discrimination of women; lack of social protection and specialized health care for elderly; education; geographical location, including its effect on the accessibility to health care; and finally, the poor links between policy and practice.
- Education should not target only researchers. Other stakeholders seem to lack knowledge on SDH and how to address them. Since 'social determinants of health' is not a commonly used phrase in Tanzania, INTREC should work with non-governmental organisations to promote social determinants of health among members of parliament, policy makers and the common public. Once the government is involved, INTREC should offer technical support to the institutions which are offering SDH-related courses on how best the courses can be designed so as to produce competent professionals.
- INTREC should continue to collaborate with research institutions and ensure that findings from this study are widely shared with all the stake holders involved so as to create more understanding on social determinants of health.

Enabling collaboration between researchers and decision-makers

- With the forthcoming reviews of several national policies, it is particularly important to build upon the Government's commitment to collaborate with researchers. It is essential to be able to produce and present timely and country-specific evidence on SDH as well as evidence-based action-plans. INTREC could contribute to this by:
    - Providing training on SDH and SDH research methods
    - Providing training on communicating evidence to decision-makers and other stakeholders

1. INTRODUCTION

The WHO's Commission on Social Determinants of Health was concerned with the dramatic differences in health status that exist between and within countries (CSDH, 2008). It compared, for example, the lifetime risk of maternal death in Afghanistan (1 in 8), to the lifetime risk in Sweden (1 in 17,400) (WHO et al., 2007). It also highlighted the fact that maternal mortality is three to four times higher among the poor compared to the rich in Indonesia (Graham et al., 2004). The Commission argued that these disparities, and innumerable similar ones across the globe, are intimately linked with social disadvantage, and that they are both unjust and preventable.

Addressing health inequities is therefore a moral imperative, but it is also essential for reasons of global self-interest: a more inequitable society is inherently a less stable one. But the Commission recognised the challenges that face steps to strengthen health equity, and, critically, that it requires going beyond the current prevailing focus on the immediate causes of disease. Rather, it is necessary to identify and act upon the 'causes of the causes': "*the fundamental global and national structures of social hierarchy and the socially determined conditions that these create, and in which people grow, live, work, and age*" (CSDH, 2008:42).

To this end, three broad Principles of Action on these social determinants of health (SDH) were identified in the Commission Report, that together could, it was argued, 'close the gap' of health inequities within a generation (CSDH, 2008:2). These Principles of Action were:

1. Improve the conditions of daily life – the circumstances in which people are born, grow, live, work, and age.
2. Tackle the inequitable distribution of power, money, and resources – the structural drivers of those conditions of daily life – globally, nationally, and locally.
3. Measure the problem, evaluate action, expand the knowledge base, develop a workforce that is trained in the social determinants of health, and raise public awareness about the social determinants of health.

A wide range of actors is required if these Principles are to be effectively implemented. The Commission identified the core actors as the multi-lateral agencies (especially WHO), national and local governments, civil society, the private sector, and research institutions.

This report is concerned with the third of the three Principles of Action – the production of a strong SDH evidence base – and also with the people who are going to produce and then use that evidence base: those working in research institutions, and those with decision-making

authority in governments. Current capacity to produce setting-specific, timely, and actionable evidence on the relationship between SDH and health outcomes is limited, and especially so in low- and middle-income countries (LMICs). Likewise, with limited awareness of SDH among decision makers, and a general global culture that under-utilises evidence within the policy process, there is an urgent need for capacity-building activities to promote informed decision-making that aims at reducing health inequities. As the Report points out, "*Knowledge – of what the health situation is, globally, regionally, nationally, and locally; of what can be done about that situation; and of what works effectively to alter health inequity through the social determinants of health – is at the heart of the Commission and underpins all its recommendations*" (CSDH, 2008:45).

INTREC (INDEPTH Training and Research Centres of Excellence) was established with precisely this concern in mind. INTREC's two main aims are (i) providing SDH-related training for INDEPTH researchers in Africa and Asia, thereby allowing the production of evidence on associations between SDH and health outcomes; and (ii) enabling the sharing of this information through facilitating links between researchers and decision makers in these countries, and by ensuring that research findings are presented to decision makers in an actionable, policy-relevant manner.

The INTREC consortium consists of six institutions. The one around which most of the work revolves is INDEPTH – the International Network for the Demographic Evaluation of Populations and Their Health in Low- and Middle-Income Countries. With its secretariat in Accra, Ghana, INDEPTH is an expanding global network, currently with 44 Health and Demographic Surveillance Systems (HDSSs) from 20 countries in Africa, Asia and Oceania. Each HDSS conducts longitudinal health and demographic evaluation of rural and/or urban populations. INDEPTH aims to strengthen the capacity of HDSSs, and to mount multi-site research to guide health priorities and policies in LMICs, based on up-to-date evidence (Sankoh and Byass, 2012). The other five members of the INTREC consortium are all universities, which bring their own respective technical expertise to particular components of the work. These universities are Umeå University in Sweden; Gadjah Mada University in Indonesia; Heidelberg University in Germany; the University of Amsterdam in the Netherlands; and Harvard University in the USA.

The work of INTREC will build on the pre-existing INDEPTH network, and is primarily focused on seven countries. In Africa, these include Ghana, Tanzania, and South Africa; and in Asia, Indonesia, India, Vietnam, and Bangladesh are taking part. Starting in 2013, each continent will be served respectively by regional training centres in Ghana and Indonesia. These centres will act as focal points for research and training on SDH for the INTREC countries and, in due course, other low- and middle-income countries. See www.intrec.info for more details.

This report constitutes the very first step in the work of INTREC in Tanzania, by providing a situation analysis, conducted by an in-country social scientist and with the support of members of the consortium, that addresses three areas of concern:

1. Current SDH-related training in Tanzania, and gaps identified, as a baseline for INTREC to build on;
2. The core SDH issues of concern in the country;
3. Ongoing SDH-related work in Tanzania, both in terms of government policies and programmes, and in terms of efforts made by non-governmental organizations.

The report ends with a series of recommendations for action, directed at decision makers, programme implementers, as well as at INTREC itself. Based on the comprehensive, empirical background material included in the report, these recommendations will prove to be an invaluable guide for the future development of INTREC, as the programme works towards reducing health inequities in Tanzania, and also in other low- and middle-income countries.

2. METHODS

Various methods were used to gather information for different aspects of this report. The report has been put together through conducting desk reviews as well as conducting In-depth interview with professional stakeholders. The methods used for data collection have been described below.

a. Tanzania country context

Relevant databases pertaining to Tanzania were identified via the internet. Criteria for selection included the likely reliability of a given database (e.g. WHO was considered as highly reliable), and the degree to which the information given was up to date. Databases such as Wikipedia, and unofficial or private websites were not referenced in this report.

The internet search for data and material included keywords or acronyms, such as “Tanzania”, “fact sheet”, “country information”, “World Bank”, “WHO” (World Health Organization). More specific key words or acronyms were employed for different sub-sections, including “demography”, “geography”, “MDGs” (Millennium Development Goals), “NCDs” (non-communicable diseases), “HIV/AIDS”, “tobacco”, etc.

Cross-references were made where more than one database was available, to synthesize a comprehensive description of the situation. In some instances, WHO databases were the primary sources of information; in others, relevant journal articles were sought to give greater depth to an issue. The data were then presented along with a commentary on the statistical patterns and public health challenges that the country faces.

b. Curricular review methods

To begin with, a general search was conducted in Google**.** Key words included, “post graduate courses in Tanzania” “public health courses in Tanzania” “global health courses in Tanzania” “health economics courses” “social cultural courses“ “health related short courses” and “SDH-related courses in Tanzania”.

Further, the search was expanded to include the Tanzania commission for Universities (http://www.tcu.go.tz/universities/universities.php), in order to identify all the universities in Tanzania. After identifying all the universities, Google search was conducted for individual universities to identify universities offering SDH-related courses. As no university offered a specific course on SDH, the available course descriptions and syllabi for the other courses were scanned for the SDH-related topics. Since it was an online search, it is possible that some SDH-related courses were not found if their information was not available online.

The information gathered was organized into a matrix indicating the names of the SDH-related courses offered, the format of the course, the topics covered and course literature if available. This information informed the writing of the section of this report on curricular review.

c. Literature review methods

Electronic search for published literatures on social determinants of health from 2005 onwards was done by using Google searching engine. The key words were “health inequalities in Tanzania” “health inequities in Tanzania” “health determinants in Tanzania” “Determinants of diseases in Tanzania” “WHO health determinants in Tanzania” and “social determinants of health in Tanzania”. The search was extended by manually screening the reference lists of all included papers. The search resulted into twenty seven hits, of which five were reports and the rest were articles. Fourteen articles and five reports were used in the country reports.

The information gathered was organized into matrix indicating on-going work on SDH in the country, the country’s SDH needs and the policies and guidelines that relate to SDH. This matrix guided the writing of the report for the literature review.

d. Stakeholder Interviews methods

Twelve In-depth interviews were conducted with professional stakeholders whose work relates to SDH, including respondents from non-governmental organisations, faith based organisations, ministry of health, ministry of agriculture, ministry of finance, research institution, and the World Health Organisation. Relevant institutions were identified during the literature review and through the snowball method. Once institutions were identified, they were physically contacted and were presented with letter of intent to do the interview. Appointments were set and interview respondents were identified by individual institutions, depending on who they thought would be more conversant with the research topic. Prior to interviews, respondents were presented with consent forms which they read and signed to show that they have understood the topic and are willing to take part in the study

A total number of thirteen letters were distributed to thirteen identified institutions and eleven positive responses were received. A follow up was made to the two institutions which did not respond to the letters. One institution responded that they did not get approval from the director of the institution to take part in the study. Response from the second institution was that the topic was new and irrelevant to them as they were not dealing with health issues. Both institutions were dropped out of the study.

Interviews were audio recorded by using a digital voice recorder and were later transcribed (Typed in word format). Four, out of twelve respondents did not want their interview to be recorded, the interviewer took notes instead.

Data were analysed thematically, which involved interpreting and analysing information generated through the interviews. Some quotations from the respondents have been used to represent ethnographic accounts and views of the respondents regarding the topic.

3. TANZANIA COUNTRY CONTEXT

Tanzania has made significant progress in the past 20 years to achieve and maintain macro-economic stability, emerging as one of the best performers in Sub-Saharan Africa. Despite the economic growth in recent years, however, poverty is still pervasive in Tanzania. Tanzania remains one of the poorest countries in the world, with many of its people living below the World Bank poverty line.

Geography

United Republic of Tanzania is 31st largest country in the world. It is the largest country in East Africa, occupying an area of about 945,087 sq. km, and has acommon border with 8 neighbouring countries (World Bank, 2008). See Figure 1. It is mountainous in the northeast, where Mount Kilimanjaro, Africa's highest peak, is situated. Tanzania contains many large and ecologically significant wildlife parks, such as Ngorongoro Crater, the Serengeti National Park and more. Dodoma is the political capital of Tanzania, and Dar es Salaam is the largest city and the principal commercial capital (http://www.tanzania.go.tz/).

Figure 1: Tanzania and its bordering countries (Source: CIA World Fact Book)

Demography

As of 2009, the estimated population of Tanzania is 43.7 million, of whom 51% are women. Tanzania's population is young, 44% being children under the age of 15 years. The fertility rate is high at 5.7 per woman (World Bank, 2008). Population distribution is extremely uneven. Average population density is 38 persons per square kilometer, but this varies from 1 person

per square kilometer in arid regions, to 51 per square kilometer in the mainland, and to 134 per square kilometer on Zanzibar (http://www.tanzania.go.tz/).

Life expectancy at birth is 56 years; 53 years for males and 58 for females (WHO Tanzania). The annual number of births is estimated at 1 600 000, of which only 8% are registered. 73% of the population aged 15+ is literate. More than 75% of the population is rural (World Bank, 2008). Approximately, 57.8 % of the population is estimated to live under the poverty line of US$ 1 per day.

More than 120 ethnic groups form the African population and the population also includes people of Arab, Indian and European origin (http://www.tanzania.go.tz/).

Tanzania's age and sex distribution is presented in Figure 2 below, where the wide lower bands are indicative of rapid population growth.

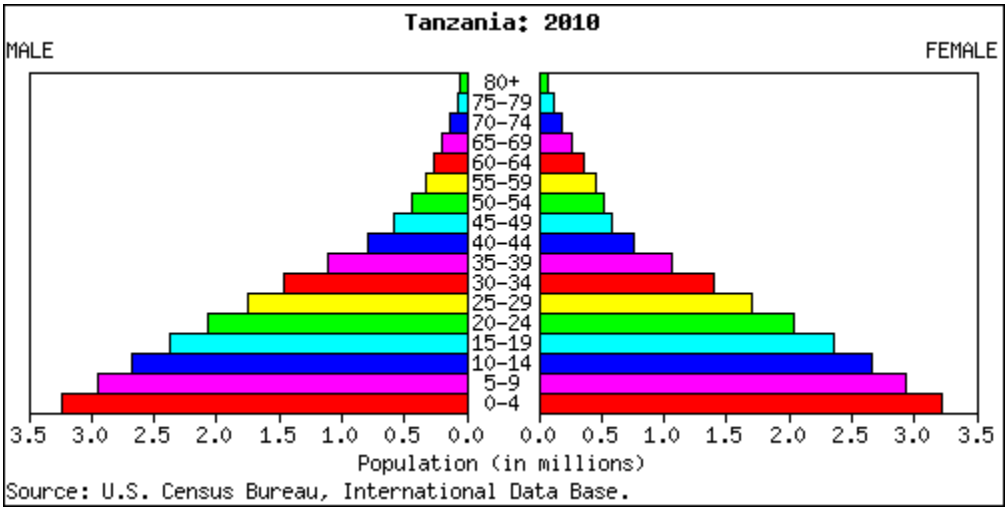

Figure 2: Tanzania population pyramid

Socio-economic and political context

The United Republic of Tanzania is a union between Tanganyika and Zanzibar, which was formed in April 1964 (World Bank, 2008). Nowadays, Tanzania is among the most politically stable nations of Sub-Saharan Africa. The nation has sustained high economic growth over the last decade, driven by structural reforms, steadily increasing levels of exports, and significant financial increase by government to support reforms (source: World Bank).

The GDP per capita increased from US$ 277 in 2003 to US$ 324 in 2006 and to US$ 414 in 2007. By 2006, the country had achieved a GDP increase of 6.7% per annum, underpinning strong

development results. The drivers of growth over the past decade have been mining, construction, communications, and the financial sector**.** About 80 percent of Tanzanian households depend on agriculture as their primary economic activity. The large degree of dependency on this sector renders the economy particularly vulnerable to adverse weather conditions and unfavorable prices in international markets (source: World Bank).

The health sector in Tanzania is guided by national policies, such as health sector reforms. The National Strategy for Growth and Reduction of Poverty (NSGRP) known in Kiswahili as MKUKUTA (Mkakati Wa Kukuza Uchumi na Kupunguza Umaskini Tanzania) provides the global direction for achievement of the Millennium Development Goals (MDGs). The Health Policy was updated in 2007, providing Government's vision on long-term developments in the health sector (World Bank, 2008).

Health and Development

The United Nations classifies Tanzania as one of the least developed countries. Most recent estimates on health indicators are available from year 2003 – 2009 and according to which the average annual growth of population in Tanzania is estimated at 2.8% (World Bank, 2008). With a predominantly rural population, the country has recently made impressive gains in reducing infant and under-five mortality rates, estimated in 2009 at 108 and 68 per 1000 live births respectively (WHO Health Profile, WHO NCD, 2011). These gains have been made despite 57.8% of the population estimated to live under the poverty line of 1 USD per day. However, the maternal mortality ratio (MMR) remains persistently high, reported as 790 per 100,000 live births (WHO Health Profile).

The enrolment in primary schools is close to universal. However, attendance rates are lower than enrolment, with gender differences. It is suspected that about 1/3 (400,000) of the 1.2 million seven-year-olds are out of school, with rural boys less likely to go to school than girls. This may be the result of child labour, which impacts boys more than girls. Most probably factors such as infrastructure, family and economic situation make children drop off school or not be able to attend it regularly.

Tanzania has made some important progress in the last decade to address gender inequality, for example in establishing quotas for female representation in Parliament, increasing the number and position of women in cabinet, dramatically boosting elementary school enrolment of boys and girls, and in correcting discriminatory laws. However, many of these changes have not translated into real changes in the lives of the majority of the men and women in the country, especially in rural areas (World Bank, 2008).

The health system is gradually expanding, but not enough to cover the unmet needs of the population. There is an acute shortage of staff: only 35% of the required personnel are in place to provide health services.

Disease Burden

The burden of diseases in Tanzania is high, with communicable diseases still prevailing. Communicable, maternal, perinatal and nutritional conditions account for 65% of total deaths in all ages HIV/AIDS, tuberculosis and malaria are among the most important. Increasingly the country is confronted with the "double burden of disease" due to non-communicable diseases. NCDs are estimated to account for 27% of all deaths and the remaining 8% deaths occur due to injuries (World Bank, 2008; WHO NCD).

HIV/AIDS: Tanzania HIV/AIDS Indicator Survey 2003/2004 reported 7% prevalence of the disease in the country (World Bank, 2008), but this had been reduced to 5.7% by 2007 (WHO Cooperation). Among this population group, 37% of women and 27% of men have been tested for HIV and received their results. HIV prevalence is still higher among women than men (7% and 5%, respectively). Only 53.3% of men reported using a condom at the last high-risk intercourse. Zanzibar is still experiencing a concentrated epidemic, with HIV prevalence of 0.6%. Coverage of HIV/AIDS prevention, treatment and care services is still low in both Tanzania Mainland and Zanzibar (WHO Cooperation). The estimated number of people, of both sexes, receiving Antiretroviral therapy by 2007 was 136 000 or only 31% of those with HIV. The reported number of sites that are providing ARV therapy increased from 96 in 2005 to 204 in 2007 (WHO HIV).

Tuberculosis: Tanzania is one of the 22 high burden countries with TB prevalence. The TB mortality rate (excluding HIV) is 13 per 100,000 population. The prevalence rate for TB is estimated at 183 per 100,000 population (WHO TB). TB case notifications have stabilized for the past three years at about 50% of expected WHO case detection estimates. For tuberculosis control, DOTS Strategy is being implemented in the country with 100% DOTs coverage. This is in line with the new Global Stop TB Strategy. The treatment success rate has reached the WHO global TB control target of 85%. More than 50% of TB patients in the country are co-infected with HIV (WHO Cooperation).

Malaria: Malaria is a leading public health problem in the Tanzania Mainland, contributing to 39.4% of total OPD attendance. It is the leading cause of death in children under-five, contributing to 36% of all deaths in this age group. Zanzibar has shown a marked decline in malaria incidence since the scaling-up of multiple interventions, including the introduction of Long-Lasting Insecticide-Treated Nets (LLINs) to vulnerable groups and the deployment of

Indoor Residual Spraying (IRS). Hence, in Zanzibar, malaria is no longer the number one cause of child mortality (WHO Cooperation).

Non-communicable diseases overview

As reported earlier, 27% of total deaths occur due to NCDs (WHO NCD). Non-communicable diseases are on the rise in Tanzania particularly in the urban areas, where 25% of the population resides (WHO Cooperation).

According to 2008 data, the total number of deaths due to non-communicable diseases is 757,000 among males and 588,000 among females. Out of this number, 42.8% of all deaths in males and 28.5% of all deaths in females under age 60 are due to NCDs (WHO Tanzania website). The disease specific age-standardized death rate per 100, 000 for four main NCDs is presented in Table 1.

Age-standardized death rate per 100 000	***males***	***females***
All NCDs	874.0	614.3
Cancers	79.0	73.6
Chronic respiratory diseases	130.5	52.1
Cardiovascular diseases and diabetes	472.7	381.9

Table 1: The disease specific age-standardized death rate for four main NCDs in Tanzania

Evidence suggests that the prevalence of certain non-communicable diseases, such as diabetes and hypertension, is increasing rapidly in parts of sub-Saharan Africa (Unwin et al., 1999). Declines in death rates from communicable diseases, together with population aging, leads to a higher incidence and prevalence of NCDs, such as atherosclerotic disorders, cancers, and chronic respiratory disease.

Diabetes prevalence is reported to be high in the urban Tanzanian community where prevalence of overweight is also growing (Aspray et al., 2000). Obesity among urban women has tripled from 4% in 1991 to 12% in 2004. An urban-rural difference is apparent, since overall female obesity is estimated at 6.4%, while it is 12% in towns; suggesting very low obesity in rural areas.

The effects of increasing risk factors, including unhealthy lifestyles, have led to an explosion of diabetes mellitus, hypertension, and ischemic heart diseases (WHO Cooperation). Low utilization of health services following screening for hypertension is reported in Dar es Salaam as well as in the rural areas (Bovet et al., 2008).

Increased use of Highly-Active Antiretroviral drugs (HAART) is also contributing to an increase in non-communicable diseases. Public attention to cervical and breast cancers has recently gained media publicity (WHO Cooperation). These findings emphasize the need to identify and address barriers to health care utilization for non-communicable diseases in this setting and, indirectly, the importance of public health measures for primary prevention of these diseases.

Risk factors

The WHO resources present risk factors for NCDs in two parts as the behavioral and metabolic risk factors. The figures for those estimates are provided in Tables 2 and 3 (WHO NCD).

Behavioral risk factors			
2008 estimated prevalence %	***males***	***females***	***total***
Current daily tobacco smoking	14.1	1.8	7.9
Physical inactivity	…	…	…

Table 2: Behavioral risk factors for NVDs in Tanzania

Metabolic risk factors			
2008 estimated prevalence %	***males***	***females***	***total***
Raised blood pressure	40.0	38.3	39.2
Raised blood glucose	6.9	7.5	7.2
Overweight	19.4	24.6	22.1
Obesity	3.4	6.4	5.0
Raised Cholesterol	19.9	24.1	22.1

Table 3: Metabolic risk factors for NVDs in Tanzania

Tobacco

Not much information is available regarding tobacco consumption in Tanzania. The only form of tobacco consumption for which prevalence is reported is cigarette smoking and is estimated that 23% of males and 1.3% of females are daily smokers in the ages 25-64 (WHO Tobacco).

The WHO Framework Convention on Tobacco Control (WHO FCTC) was signed in 2004 and ratified in 2007 by Tanzania. However, no specific national government objectives for tobacco control are reported. By 2010, the legislations on smoke-free environments like in hospitals and restaurants had not been enforced. However, direct bans on media and publicity exist. The

Government expenditure on tobacco control is also minimal and there is no national agency or technical unit for tobacco control.

In an article on preventing non-communicable diseases in sub-Saharan Africa it is reported that in Tanzania, 35% of adults smoke regularly and 32% of all cancers at one institute in Dar es Salam are attributed to tobacco use (Giles, 2010). Further, it reports that 100% of tobacco farmers realized that their farming was leading to deforestation, and 65% believed that soil fertility was declining due to tobacco farming, and all these 65% of farmers stated they were eager to change to alternative crops. The Tanzania Tobacco Control Forum (TTCF) worked with a number of farmers to move from tobacco farming to alternative crops, including sunflowers, maize, groundnut and rice. As a result of TTCF's efforts, in one region of Tanzania the number of tobacco farmers decreased from 22,300 to 6,333. The study calls on the Tanzanian government through the Ministry of Health and Social Welfare to make tobacco control a priority in dealing with aid agencies.

Alcohol

Data on alcohol consumption is available in more detail as compared to that of tobacco. Alcohol consumption is similar in prevalence as tobacco use. According to 1999 data, around 78.8% of the population aged 15+ was reported to be abstainers (did not drink in the last 12 months); out of which 65.8% are life time abstainers for both sexes. See Table 4.

Abstainers (15+ years), 1999 Persons who did not drink in the last 12 months			
	Males	Females	Total
Lifetime Abstainers	59.0%	72.4%	65.8%
Former Drinkers	15.9%	10.1%	13.0%
Abstainers	74.9%	82.5%	78.8%

Table 4: Alcohol abstinence in Tanzania (Source: WHO Alcohol)

Considering the former drinkers figures, 10.1% females are reported to have consumed alcohol at some time. In comparison with tobacco use, it appears that alcohol consumption is more frequent in females. It is important to note that the use of tobacco and alcohol by men is 23% and around 25% respectively, which is a very small difference.

Alcohol policy is established with excise tax on beer/wine/spirits. 18 years is the national legal minimum age for off-premise sales of alcoholic beverages selling or serving, including

restrictions on time of the days when such sales can undertake. Legally binding regulations on alcohol advertising and sponsorship are also in place (WHO Alcohol).

Physical activity and Nutrition

Not much information could be found regarding physical activity and nutrition in the sources that have been used to write this overview.

Country Capacity to address NCDs

The prevention and control of chronic disease is in its initial stages in Tanzania, as in most middle- and low-income countries. The WHO resources report that in Tanzania, a unit at Ministry of Health that is responsible for NCDs has been established. Separate funding has been made available for treatment and control, prevention, health promotion and surveillance, monitoring and evaluation. A national health reporting system that includes NCD cause-specific mortality and morbidity, but which is not yet equipped to obtain data for the different risk factors, has been set up. However, a population-based cancer registry is still non-existent. An integrated policy and action plan has been formulated which is currently operational for the four main NCDs (CVDs, cancer, chronic respiratory diseases and diabetes) and their four main risk factors (alcohol, unhealthy diet, physical inactivity and tobacco) (WHO HIV).

Being classified as one of the least developing nations, and with a high population growth rate, Tanzania faces significant challenges. Presently, roughly half of Tanzania's population is aged 15 years or younger, which raises the dependency burden, and creates additional unmet demands from youth. High rates of population growth also imply increased demand for social services in the future. However, it is encouraging to note that steps have been undertaken for NCD prevention and control.

4. CURRICULAR REVIEW

a. Introduction

The aim of curricular review is to identify on-going SDH-relevant training courses in Tanzania, and to establish where there may be gaps that INTREC can fill.

In this report, the SDH-relevant courses are defined as courses about social determinants of health, which are taught at *postgraduate* level in schools of public health or in other university departments, such as education, economics, sociology, development studies, geography etc.

b. SDH-related courses and programmes

A total number of eleven SDH-related courses were identified from seven universities. Out of twelve courses, five courses were offered within schools of public health and the remaining seven were offered outside the schools of public health. It was difficult to obtain online information regarding specific topics covered under various SDH-related courses, or information about course organisers and core course literature. This is because most institutions do not provide detailed information regarding course structures on their prospectuses, and some institutions do not update their websites on a regular basis. In order to confirm the online information about course contents and course organisation, two institutions were randomly selected and contacted but they did not respond to the required information. Due to time limit, it was impossible to contact all the eleven institutions.

SDH-related courses in Tanzania could be described as follows:

i) **Courses and programmes offered at the schools of public health and social sciences.**

These include programmes and course on *public health*, *health policy and management*, and *health system management.* The named courses focus on determinants of diseases as well as various aspects of disease control such as health promotion. Also, the courses focus on health care for special groups such as refugees. Further, the courses focus on health systems, particularly on health care delivery, human resources for health, reproductive health, occupational health as well as health care financing, health policy planning, management, and evaluation of health projects.

There is a number of master of public health programmes (MPH) running in Tanzania already. Additionally, Hubert Kairuki Memorial University will start offering an MPH course in September 2012. According to information posted on the university website, the course will have strong components of clinical research, non-communicable diseases and global health, in addition to

conventional topics covered by conventional MPH course. Source (http://www.hkmu.ac.tz) accessed on 25th September, 2012.

Ifakara Health Institute, in collaboration with Nelson Mandela Institute of Science and Technology, will start offering Master of Research in Public Health programme (MResPH) from September 2013.

ii) **Courses at other faculties and institutions**.

These are courses such as *gender, community development, social work* and *environmental management*. Mostly, these courses are offered in business colleges while others are offered under faculty of arts and social sciences in various institutions as shown in Annex 1. The courses focus on community development, participatory planning approaches, population and resources, gender and development governance and civil society development as well as poverty analysis. Although these courses are not directly related to health, they encompass important social determinants of health such as gender, resource distribution and poverty.

iii) **Short courses.**

A few institutions are offering SDH-related short courses. Sokoine University of Agriculture (SUA) under the institute of continuing education is offering a short course on "Nutritional Security for Health and Development". It is a two weeks programme, targeting extension workers and care takers involved in feeding programs and orphaned children. The course aims at improving nutrition security.

African Medical and Research Foundation (AMREF) is conducting a short course on "HIV AIDS counselling and testing". The course is designed for health care providers including registered nurses, medical practitioners, laboratory technicians, social workers including teachers, development persons and nutritionists. The main objective of the course is to equip service providers with knowledge, attitudes and skills for providing quality voluntary counselling and testing services to enable people know their HIV sero-status.

Other upcoming SDH-related short courses are "Gender and human rights" as well as "Civic empowerment and social movements" which are to be conducted by MS Training Centre for Development Cooperation (MSTCDC). The main objective of the "Civic empowerment and social movements" course is for participants to develop a good understanding of the dimensions and challenges of different approaches to empowerment for poor and marginalised people, and to be able to design, plan and offer advice based on the needs and wishes of the poor themselves. Course duration is two weeks, and it targets practitioners working with civil society organisations, government and other development agencies, operating at both policy

and programming levels and are dealing with process facilitation, management and operationalisation of empowerment initiatives.

c) Training gaps

As noted above, there are various SDH-related courses offered in various institutions in Tanzania. It was also noted that course content for MPH programme differed from one institution to another. For instance one institution taught a course on "maternal mortality" while other institutions did not have such a course in their MPH programme. Lack of standardization of MPH courses affect the quality of courses offered as well as the competence of graduating students. An anonymous respondent noted that most institutions design courses in order to compete in the market and attract more students. As for courses which are offered outside the school of public health, it was noted that only three courses had health components. These are *"social work and health" "Psychology guidance and counselling"* which are offered under Master of social work, and a "*Health and education"* course which is offered under Master of Gender studies. Since health is a cross cutting issue and an important aspect for development, it would be beneficial to have more health-related courses outside the school of public health.

It was further noted that there were only few short courses as compared to long courses or programmes, which take up to eighteen months. It would be better to have more short courses, so as to enable more people, especially those who are working, to attend various trainings within a short time.

Given the importance and relevance of social determinants of health, it is important that these courses are taught in higher learning institutions, starting with schools of public health. In order to address this gap, INTREC should work with other stakeholders to have SDH courses taught in institutions of higher learning. In the health sector, these would include the Ministry of Health, research institutions, policy makers, while those stakeholders outside the health sector include the Ministry of Education as well as higher learning institutions.

d) Internet access in Tanzania

The reach and quality of the internet is an important issue when considering the possibilities for online SDH-related training in Tanzania.

Internet services have been available in Tanzania since 1996, and connectivity was mainly via the satellite. In 2009, there was a remarkable change in the telecommunications landscape in Tanzania, when subsea fibre optic cables, SEACOM and EASSY, began operations, providing African countries like Djibouti, South Africa, Tanzania, Kenya and Mozambique with high speed

Internet connections to Europe and Asia. The change in Tanzania's telecommunications landscape can be attributed to two major factors, firstly, the arrival of submarine cables EASSY and SEACOM, and secondly, a massive effort led by the government to rollout 10,000km of national backbone crisscrossing Tanzania and to the eight countries on its borders.

The government's USD200 million investment in the national infrastructure means that this international connectivity reaches into towns and cities right across the country, and even brings it to the doorsteps of Tanzania's landlocked neighbours. The government has embraced telecommunications as part of a wider strategy to deliver electronic services including education, healthcare, and e-government to the people. It plans to do so through tele-centres spread throughout the country.

Following this major shift, from satellite to fibre optic cable connectivity, many Tanzanians are paying as little as 15 US dollars a month to enjoy high-speed mobile access to the internet from their cell phones, including the cost of voice calls. This has had an enormous transformative effect on education, entrepreneurship and social life in the country. Before the arrival of SEACOM and EASSY subsea fibre optic cables, there was just 300 Mbps of international bandwidth coming into Tanzania for the country's 50 million people. Today, Tanzania has a total of 3,459 Mbps capacity of which 1,473 (43%) are for satellite and 1964 (57%) Mbps are for fibre optic. Out of these 3,459 Mbps, 2,239 Mbps (65%) were in use as at June, 2010.

As of 31st Dec 2011, the country had about 4,900,000 internet users. The number has increased compared to 2005, when there were about 520,000 users. Most internet users (61%) are organisations, because internet is an important working tool in offices, widely used for communication, for administration, and for business. Individual internet users account for 35% of the total, while internet cafe users account for 5%. Among other internet access type (Cable, fixed wireless, mobile wireless and VSAT), mobile wireless has more users because of the portability and mobility that brings convenience to users. Also, the use of mobile phone handsets for internet services provided by most of the mobile networks is another reason. In relation to that, one of the challenges regarding internet services offered by mobile companies is the high price of USB modems, which starts at 15 US dollars, depending on mobile network providers. The main mobile network providers in Tanzania are Airtel, Tigo, Zantel, TTCL and Vodacom. In most cases, internet services which are offered by these mobile networks are unreliable, facing, for example, regular disconnection, data corruption during big downloads, blocked access to certain cervices, and slow or limited internet connections, especially in rural areas where mobile network coverage is poor.

Statistics show that there are about 300 internet cafes in Dar-es-Salaam alone and about 20 in Zanzibar. The majority of people visiting internet cafes seek services such as E-mail, general web surfing, making international calls and a few, go to these internet cafes for e-business transactions such as ordering cars, books, and clothes and building materials. Most of these customers are young people, business people, office workers, students and academicians.

In spite of all the efforts made by the government to improve telecommunication, statistics show that only 11% of Tanzanians had access and could use internet in 2010. The reason for this small percentage could be due to hindering factors such as literacy level, poor infrastructure and unavailability of internet services in most semi-urban and rural areas. Internet charges are also high especially in rural areas, where half an hour internet surfing costs up to 2 US dollars.

Thus, while internet could be considered as a source of providing SDH training in Tanzania, accessibility problems should be considered before running the on-line courses.

5. LITERATURE REVIEW: SOCIAL DETERMINANTS OF HEALTH IN TANZANIA

a) Background

Good health is an important element required for national development, poverty alleviation and other health development gains needed by all Tanzanians. To achieve this, the government has since independence emphasised the delivery of equitable, high quality preventive, promotive, curative and rehabilitative health services at all levels (MoH, 2003).

The health sector is one of the priority sectors on the Tanzania government. *Tanzania development vision 2025* identifies health as one of the priority sectors. Among its main objectives is achievement of high quality livelihood for all Tanzanians, and this is expected to be attained through access to quality primary health care for all.

The aim of this review is to:

- Establish what is already known about SDH and health related Inequalities in Tanzania
- Identify SDH relevant policies in Tanzania

b) Social determinants of health

i. General health determinants

The following SDH were identified as prevalent through the literature review

Poverty and health Inequality

Basing on the reviewed literature, poverty and inequality were the most frequently mentioned health determinants. The literature shows the link between poverty and health inequality. A study conducted in Rufiji DSS on health inequalities shows that there was an association between infant mortality and economic status, with the poorest households having higher probabilities of child death than the least poor (Mwageni et al., 2004). Results from another study show that a lack of cash was the most common reason for delaying seeking care for neonatal problems. Furthermore, results from a study on malaria prevention in Northern Tanzania show that poor households living in rural areas spend significantly less on all forms of malaria prevention compared to their richer counterparts (McElroy et al., 2009). Similarly, an article on Social determinants approaches to public health shows that treatment costs prevent the majority of households from purchasing bed nets. The poorest populations, who live in the rural areas, could not be reached for net distribution and awareness-raising campaigns (Blas et al., 2011).

Also, reviewed literatures have shown that malnutrition and micronutrient deficiencies such as Anaemia, Vitamin A and Iodine deficiencies are common among the poor children. Children

from poor families were stunted compared to children from the least poor households (Valerie & Kilama, 2009).

Gender inequality

Various studies have shown that women are more likely to be HIV-positive than men, in part due to biological make-up (Msuya et al., 2006). Others factors which continue to undermine women include unequal decision-making power, unequal resource distribution, and unequal burdens of work. Also, a poor legal framework and lack of gender sensitive policies and strategies cause women to continue being vulnerable to sexual violence and HIV infection. Other studies have shown that among older adults, men reported better health status than women and that quality of life and physical ability deteriorated markedly with increasing age (Mwanyagala et al., 2010).

Geographical Location

Geographical location as a determinant of health is noted in various studies. Results show that prevalence of hypertension, obesity and hypercholesterolemia were lowest in the rural areas. Also, women from the rural area had higher mean blood pressure levels from the pastoral population (Fox, 2010). Similarly, 2008 UNAIDS report shows that HIV prevalence is much higher in urban areas than in rural areas.

However, there is higher malaria burden and lower net ownership in rural areas. The poorest populations, which live in the rural area, are harder to reach for net distribution and awareness-raising campaigns (Blas et al., 2011).

Distance to the health facility was also identified as one of the key determinants (Mrisho et al., 2012).

ii. HIV/AIDS determinants

According to the 2008 UNAIDS report, HIV prevalence rate in Tanzania has decreased from 8% in 1997 to 6.4% in 2005/06. HIV prevalence trends in Tanzania vary dramatically across sub populations grouped by different characteristics as follows:

Socio-economic status

Contrary to the widely held notion that less educated and poorest population are more prone to HIV infection, various studies have demonstrated that risk of HIV infection can also increase with both wealth and education, through increased numbers of multiple sexual partners (Njelekela et al., 2003). HIV prevalence is high among those who are currently or formerly married. This also linked to risk behaviours such as extramarital affairs among others.

Geographical location, travelling, migration

HIV prevalence is much higher in urban areas than in rural areas. Sub populations at risk include: fishing communities, female affected by sexual and domestic violence, military, truck drivers and sex workers. Results from another study shows that women with partners who were frequent travellers or involved in tourism or mining industry had a higher HIV prevalence. Higher HIV prevalence was also observed in women who had recently migrated in less than two years (Msuya et al., 2006).

Poverty

It has been well established that poverty significantly influences the spread and impact of HIV/AIDS. In many ways it creates vulnerability to HIV infection, causes rapid progression of the infection in the individual due to malnutrition, and limits access to social and health care services.

iii. Determinants of non-communicable diseases

Non-communicable diseases (NCDs) are the leading causes of death globally, killing more people each year than all other causes combined (WHO, 2010a; WHO, 2010b).

The Adult Morbidity and Mortality Project (AMMP) was implemented in three regions of Tanzania, including Dar-es-Salaam, Morogoro and Kilimanjaro between 1992-2004. The project aimed at defining the cause and rates of mortality in adults living in rural and urban communities in Tanzania. Results from AMMP project shows that between 15-28% of deaths were a result of NCDs including injuries. The most prevalent were cardiovascular, cancer, diabetes, central nervous system, and chronic respiratory diseases. The studies showed that older people are the most affected group due to their vulnerability and age, suggesting that older people suffer more from NCDs compared to other age groups (MoH AMMP). Other studies have shown that road traffic injuries and violence are also on the increase (Chalya et al., 2010).

Cancer is the second leading cause of NCD mortality. Cancer diseases – particularly cervix, uterine, and breast cancer among women; and lung and prostate cancer among men – are common in Tanzania. For the past few decades, the number of cancer patients treated at Ocean Road Cancer Institute (ORCI) has been raising steadily. For example in 1975 there were new 48 patients, the number increased to 916 patients in 1989, 1639 patients in 1995 and 2866 patients in 2004.

Sickle cell Anaemia is another non-communicable disease that is on the rise in Tanzania. On 2nd of June 2012, Muhimbili hospital under (Muhimbili Sickle Cell Research Programme) together with other stake holders, organised a Sickle Cell awareness day. Tanzania ranks fourth in the world for having the highest number of people suffering from this genetic blood disorder. Children are at more risk of dying of the inherited disease if it is not contained. Between 8,000 and 11,000 new babies born annually are affected by the disease (Source: The citizen Newspaper of 02nd June, 2012, http://www.thecitizen.co.tz/news/-/22821-sickle-cell-anaemia-hits-tanzania-hard, accessed on 15 June, 2012).

Common risk factors for NCD in Tanzania are:

- *Smoking*
- *Excessively alcohol consumption*
- *Unhealthy eating habit*
- *Physical inactivity*
- *Obesity*
- *Raised blood pressure, sugar and lipids.*

Furthermore, common risk factors for road traffic injuries include (Mfinanga et al., 2011):

- *Poor roads condition,*
- *Alcohol consumption,*
- *Reckless driving and*
- *Over speeding*

To control non-communicable diseases, the fight against NCDs should not be left to the health sector, or to the government only. The fight requires multi-sectors, multidisciplinary, and civil society approach to make sure that health laws are effectively implemented (Mfinanga et al., 2011; Mayige et al., 2011).

c) SDH Relevant Policies and Strategies in Tanzania

There is a number of national policies in Tanzania, covering a range of SDH. The key policies are presented in detail below.

i. National Strategy for Growth and Poverty Reduction (NSGRP II or MKUKUTA II) 2011-2015

National Strategy for Growth and Poverty Reduction II, is a continuation of NSGRP I 2005-2010. As it was with NSGRP I, the focus of NSGRPII continues to be that of accelerating economic

growth, reducing poverty, improving standards of living and social welfare of the people of Tanzania, as well as good governance and accountability.

NSGRP II aims at:

Growth for Reduction of Income Poverty

This cluster aims at availing income generating activities across social groups, regions and sectors through pro-poor public investment and empowerment arrangements in order to bring about more equitable participation in the production and the sharing of outcomes.

Improvement of Quality of Life and Social Well-being

The focus is on how to deliver quality social services in education, survival, health and nutrition, clean and safe water, sanitation, decent shelter, and a safe and sustainable environment to reaching more of the targeted poor. Therefore, interventions that pointedly seek to bring about quality improvements will be emphasized. Apart from wellbeing, the essential target is to address population dynamics challenges and create human capital out of a learning population. Gaps in the low to medium level technical cadre in all sectors have been identified for empowerment.

Good Governance and Accountability

This is to ensure that the poor have access to and control over natural resources for lawful productive purposes, checking waste and diversion of public financial resources, ensuring democratic participation in the monitoring of public resources, rule of law, human rights and in total, a conducive business environment for attracting investments.

ii. Tanzania National Health Policy

In line with the government development *Vision 2025* and *Millennium development goals,* the National Health Policy is aimed at providing direction towards improvement and sustainability of the health status of all the people, by reducing disability, morbidity and mortality, improving nutritional status, and raising life expectancy. The policy recognizes that good health is a major resource essential for poverty eradication and economic development.

The vision of the Health policy of Tanzania is to improve the health and wellbeing of all Tanzanians, with focus on the most at-risk, and to encourage the health system to be more responsive to the needs of the people.

One of the policy objectives is to promote awareness among government employees and the community at large, so that health problems can only be adequately solved through multi-sectoral cooperation involving such sectors as education, agriculture, water, private sector

including non-governmental organizations, civil society and central ministries, regional administration and local government, community development, gender, and children.

With regard to non-communicable diseases, the policy states that the government, in collaboration with research institutions, will continue to do research in this area, to enhance control of the non-communicable diseases, and improve the management of patients with these conditions. This will include increasingly important areas of injuries and trauma, mental health and substance abuse.

Issues of nutrition are also covered in the health policy. In order to control Vitamin A deficiency, malnutrition, Iodine deficiency in pregnant women and Anemia, the ministries of health and other stake holders have a responsibility to ensure detection and early treatment of nutrition disorders. Also, measures are taken to strengthen better nutrition and practices and general care for vulnerable groups including children, pregnant and breastfeeding women, adolescents, the elderly, the sick, those in disaster situations and institutions.

iii. Health Sector Strategic Plan III

The aim of this strategy is to guide priority setting and deployment of resources in the health sector. It reflects the strategic intentions of the health sector for the period 2009-2015. It is for strategic planning at sub national levels and for annual planning.

Apart from diseases, the strategy focuses on cross-cutting issues in the health sector such as improving health status of individuals, ensuring equity (fair distribution of health services), and addressing gender issues.

iv. National Ageing Policy

The Policy concerns older people living in rural and urban areas as well as other special groups of older people such as retirees, peasants, herdsmen and fishermen. The policy defines an older person as an individual who is 60 years and above.

The general objective of the policy is to ensure that older people are recognized and provided with basic services. The policy states that, old people who are sixty plus are exempted from health service user fees. In practice, the exemption is not very helpful to old people due to inconveniences such as transport costs, poor services at the health facility and lack of drugs.

v. National Policy on HIV/AIDS

The overall goal of the National Policy HIV/AIDS is to provide for a framework for leadership and coordination of the national multi-sectoral response to the HIV/AIDS epidemic. This

includes formulation by all sectors of appropriate interventions which will be effective in preventing transmission of HIV/AIDS and other sexually transmitted infections, protection and support for vulnerable groups, and mitigating the social and economic impact of HIV/AIDS.

The main objective of the policy is to promote early diagnosis of HIV infection through voluntary testing with pre- and post-test counseling. The aim is to re assure and encourage the majority of the population who are HIV-negative to take definitive steps not to be infected, and for those who are HIV-positive, to receive the necessary support in counseling and care to cope with their status, prolong their lives, and not to infect others.

vi. Tanzania Development Vision 2025

Vision 2025 is the articulation of a desirable future condition or situation which the nation seeks to attain, while outlining a plausible course of action to be taken for its achievement.

Tanzania vision 2025 was formulated to fill the vacuum of structural adjustment programs which were introduced in 1980s. The structural adjustment programs focused on a few economic and social areas, and did not bring about the desired changes. Vision 2025 is about development attributes which Tanzania is expected to have attained by the year 2025. The attributes are a high quality livelihood; peace, stability and livelihood; good governance; a well-educated and learning society; and a competitive economy capable of producing sustainable growth and shared benefits.

According to vision 2025, a high quality livelihood will be attained by removing all forms of inequality in the society, by addressing gender and racial discrimination, as well as ensuring equal distribution of resources. A well-educated and learning institution will be attained by encouraging creativity, innovation, and high quality education in order to respond to development challenges.

vii. Forth coming policy reviews

Ongoing socio-economic changes, new government directives, emerging and re-emerging diseases, and changes in science and technology necessitate policy update. The Health policy was last revised in 2007. Currently, policy and planning department at the ministry of health are preparing strategies on health financing and cost sharing guidelines, which will also be incorporated into the 2007 National Health Policy. National HIV/AIDs policy is also going to be revised to include special population groups, such as prostitutes, men who have sex with men, and intravenous drug users. Studies have shown that HIV/AIDs infection rate is 12 times higher in some of these groups than that of the general population.

According to respondents from the Ministry of Agriculture, sections of agriculture policy are going to be revised in order to add some strategies such as food security and nutrition. They further noted that since the Ministry of Agriculture is no longer merged with the Ministry of Livestock, some amendments need to be made regarding issues of livestock since livestock and fishery is an independent ministry.

Ministry of Labor, International Labor Organization, Help Age International and other partners are lobbying for a universal pension. Universal pension will help to reduce old age poverty and social exclusion by providing a minimum income for old people. Universal pension strategy has already been accepted in the parliament and it will be implemented in the coming financial year, 2013/2014.

d) Ongoing work on social determinants of health

Muhimbili University of health and allied sciences has a project about HIV/AIDS among special population groups in the country (men who have sex with men, prostitutes and intravenous drug users). Results from this study have been shared with policy makers and other stakeholders, and these groups will be included in the national HIV/AIDS policy. (Interviewee, Muhimbili University)

Help Age International is advocating for universal pension for old people, and the government will start to implement the policy in the coming financial year 2013/2014 (Interviewee, Help Age International)

e) Summary

Reviewed literature shows that poverty in an important health determinant in Tanzania. Other determinants are age, sex and gender, education and wealth, as well as geographical location. The increase of non-communicable diseases such as cancer and heart diseases is a major public health concern since it is the cause of death and disabilities. The main focus of existing policies and strategies is to improve quality of life and social wellbeing of the people by reducing poverty and inequities. However, implementation of many good policies remains patchy, significantly reducing the potential benefits for society.

6. STAKEHOLDER INTERVIEWS

a) Introduction

The aim of the interviews was to explore respondent's knowledge of and attitude towards SDH and to identify the important SDHs and the most important related sectors.

A total number of twelve in-depth interviews were conducted with respondents from nongovernmental organisations, faith based organisations, Ministry Of Health, Ministry Of Agriculture, Ministry Of Finance, research institution, and the World Health Organisation as illustrated in Table 5 below. The study site was Dar-es-Salaam.

Type of the Institution	**Name of the Institution**	**Number of Interviews**
Non-Governmental Organisations	SIKIKA, TNCHF, and Help Age International	3 Interviews, one per each institution
Faith based organisation	CSSC	1 Interview
Health sector	Ministry of health and Social Welfare.	2 Interviews
Non –health sector	Ministry of Agriculture	2 Interviews
	Ministry of Finance	2 Interviews
World Health Organisation (WHO)	World Health Organisation, Dar-es-Salaam	1 Interview
Research institution	Muhimbili University of Health and Allied Sciences	1 Interview

Table 5: Respondents interviewed, by sector and institution

b) Findings from the interviews

i. Understanding of SDH

Nearly all of the interviewed respondents could define the term social determinants of health. Few respondents noted that the term was new to them, and they were not sure whether they defined it clearly, and they asked for guidance from the interviewer, as noted in the excerpt below.

> I: So which would you identify as the most important social determinants of health in our country, given your experience now with the community?
> *R: May I ask you....I mean I don't know if it is that simple....let us say ..in the.. if you*

gave us for example a list of social determinants and then we can say this is what we see as a priority, is that possible? (Respondent, TNCHF)

It was noted that the term social determinants of health was defined differently by different respondents. Respondents from the finance sector defined social determinants of health in terms of service delivery. They were concerned about how can services such as education and health be delivered to people, and what are the requirements to do this. Respondents from the ministry of agriculture included issues of food security and malnutrition in their definition of social determinants of health.

In general, respondents defined social determinants of health as things or issues that affect human health such as poverty, poor governance, ineffective health systems, issues related to lifestyle such as poor eating habits and lack of exercises, as noted in the excerpt below.

"Social determinants of health are various issues or things that affect human health such as poverty, gender imbalance, culture and taboos". (Respondent, food security department, ministry of agriculture)

ii. Main SDH

More than three quarters of the respondents mentioned *poverty* as the main health determinant, because poor people cannot afford to eat well, pay for education, or seek treatment when they fall sick.

Regarding the most important social determinants of health in Tanzania, most respondents noted that *lack of social protection for old people* was a major health determinant, which has a direct effect on the health of old people. Old people lack social protection after they retire. They live in poverty and sometimes they are forced to take up jobs like guards so as to sustain their lives. According to the respondent, 73% of older people in the country are forced to work so as to support themselves and their dependants, who are often orphans left behind after their parents died of AIDS or died of other causes. Lack of income and lack of social support affects old people psychologically and physically, because they need money to access to health care and other services as well as to support their dependants. Moreover, one respondent noted that more old people suffer from non-communicable diseases such as hypertension, diabetes and cancer, which require high costs and intensive health care support, which old people do not have access to. Regarding health care services for old people, respondents noted that the country does not have enough professionals working with geriatrics, and who have good understanding of diseases that affect old people. *Lack of health professionals who are specialised in elderly care* affects the quality of health care services offered for old people.

Poor budget allocation for health sector is another important health determinant noted by the respondents. According to the Abuja declaration of 2001, health should be a priority to all the national governments. They further noted that things are different in Tanzania, since the budget allocated for the health sector is between 9 to 12 percent, contrary to the 15 percent stipulated in the Abuja declaration. The overall budget allocated for medicine and medical supplies does not confirm with the actual needs of the people, and therefore it affects health care service provision. The budget allocation formula that is used by the Ministry Of Health to allocate resources focuses on population size and the burden of the diseases. Districts or areas which have larger populations are allocated more resources compared to districts which have smaller populations. According to the respondent, geographical aspects should be considered when allocating budget for the health sector, because some areas might have a smaller population but people are sparsely scattered, and therefore health workers will need more resources such as fuel and time to reach these people. So, instead of focusing on drugs or medical supplies, more resources will be channelled to fuel and other costs. They further added that in spite of all other factors such as population size, it is important for the Ministry Of Health to allocate budgets according to the needs of the people.

Another important social determinant of health that was noted by respondents was *poor link between policy and practice*. For instance, there is an exemption policy which says that pregnant women, children below five years, and old people are supposed to get free health care services. But when it comes to practices, it is a challenge because there is no funding strategy in place to cover for these groups which are exempted, and therefore, when these people go to the health facility, they do not get services or drugs as they are supposed to. Again, budget allocation from the facility to national level is not gender sensitive, as it does not cater for the needs of special groups of people such as old people, children below five years, and pregnant women.

Social inequality was also noted by the respondents as an important social determinant of health. The majority of poor people, especially the non-working class and those who are in informal sector, fail to access health care services due to lack of money to pay for health services. Unlike the formal sector, available health insurance does not cover people who are in the informal sector. This affects their health since they fail to access quality health care services.

Furthermore, *human resource for health* is another important social determinant of health that respondents mentioned. They further noted that the country has a shortage of health care workers from specialist doctors to the lowest cadre. Having fewer health care workers affects health care provision as well as the *quality of health care*, because health care workers are

forced to attend to many patients in order to meet the demand. They also noted that human resources are not only about the issue of quantity but also the issue of quality. What kind of knowledge do these health care workers have? How competent are they? Another aspect regarding Human Resources for Health that respondents mentioned was the issue of retention of health workers. In order to retain health care workers, the working environment should be improved and salaries should be increased to reflect increased costs of living.

Respondents were of the opinion that *unequal distribution of income and resources* should not be ignored since it is an important health determinant. The country has many resources but only a certain group of people benefit from the national cake, hence creating the gap between the rich and poor. One respondent pointed out that, during his leadership, President Nyerere tried to reduce the gap between the rich and the poor, unlike now when the gap is increasing. He further added that income has a direct relationship with the health of an individual, because one needs income to pay for health care services.

According to the respondents, *gender inequality* is another important health determinant. For example, some cultural practices such as forced marriages and female genital mutilation are still practiced in some communities. Such practises affect the health of women both physically and psychologically, and they also deprive them of their rights to good education and other life opportunities such as good jobs. To add on to that, respondents suggested that the poor legal framework has also contributed to gender inequality. Most of the laws are discriminative and have failed to tackle issues of gender violence such as rape and female genital mutilation.

Malnutrition is also a health determinant which was noted by a respondent from the Ministry Of Agriculture. He noted that malnutrition is common in regions which produce a lot of food. Due to economic hardships people sell all the crops and remain with little or no food for home consumption, hence their suffering from malnutrition. Malnutrition affects growth and it causes stunting for children.

Respondents noted that social determinants of health involve not only the health sector but all other sectors such as agriculture, finance, education, law and constitutions, infrastructure, culture, gender, as well as home affairs and security. All the interviewed respondents noted that they are all involved with social determinants of health through their activities.

iii. Recognition of the importance of SDH in Tanzania

Respondents had varied opinions as to whether they thought social determinants of health are seen as politically important in Tanzania. Some respondents from government institutions said that social determinants of health are seen as politically important, which is why there are

policy and strategies such as MKUKUTA II and Vision 2025. All these are strategies are there to cater for social determinants of health. On the other hand, most respondents from non-governmental organisations noted that social determinants of health are not seen as politically important, and in most cases politicians make strategies for their own interests and not from the interests of the majority. They further noted that policies and strategies are in place but implementation is lacking, as one respondent noted in the excerpt below.

"You know it's a policy of our country that every woman who is pregnant must get free services (yes). What free services is this woman going to get in a dispensary which does not have a health worker, it doesn't have a midwife, it doesn't have a clinical officer, it doesn't have the basics which they need for the woman to deliver, it doesn't have the basics which this woman needs as prophylactic measures against potential diseases for her and the baby. What kind of free services is this? And as a Tanzanian, you may have heard also people saying if you charge these women you are going to be punished" (Respondent, Muhimbili University).

7. SUMMARY AND RECOMMENDATIONS

Tanzania has made significant progress in the past 20 years to achieve and maintain macro-economic stability, emerging as one of the best performers in Sub-Saharan Africa. Despite the economic growth in recent years, health inequality remains a concern.

a) SDH in Tanzania

While the term "social determinants of health" was mostly un-known and unused in Tanzania, interviews with key stakeholders from health and other sectors showed that there was a general understanding of what SDH were.

The interviews, literature review and epidemiological data from WHO and other sources revealed following SDH as the most prevalent in Tanzania:

- *Poverty*, with poorer individuals and families running higher risk for poor health. Connected to this factor, *malnutrition* was named specifically as one of the SDH in Tanzania.
- *Unequal distribution of income and resources*, with an increasing gap between rich and poor and increasing *social inequality*.
- *Poor budget allocation for health care, including poor resource distribution.*
- Directly connected to the previous factor, is *the lack of human resources for health care* (both, the quantity and the quality of personnel). This in turn affects *health care provision* and *quality of health care.* Shortage of staff was named as one of the barriers to health care utilization, diminishing health care availability.
- *Gender inequality*, with women suffering from the unequal distribution of power, resources and work, gender violence, including forced marriages, rape and genital mutilation. Moreover, with a high fertility rate at 5,7 per woman, *maternal health* remained one of the crucial health concerns.
- L*ack of social protection and specialized health care for elderly*, leaving this group vulnerable with unattended needs.
- Children could be identified as another vulnerable group. With over a half of the population being age 15 years or younger, the dependency burden is high and the demands of youth are largely unmet. Of particular concern is *education* of children, as 1/3 of children do not go to school, particularly rural boys.
- *Geographical location*, with rural population running higher risk for malaria, while urban population having higher risk for HIV/AIDS and NCD risk-factors. Moreover, rural population has often higher distance to health care facilities. Given that over 75% of the population lives in rural areas, the *accessibility to health care* was one of the barriers to health care utilization.

- Finally, *poor links between policy and practice* was also named among the key SDH in Tanzania. As described below, while important policies seem to be in place, their implementation remains unsatisfactory.

b) Policies

There is a number of national policies in Tanzania, covering a range of SDH, including:

- Growth and poverty
- Improvement of health, quality of life and social well-being
- Governance and accountability
- Improvement of health care delivery and health care system's responsiveness
- Fair distribution of health services

Although the chronic disease prevention and control is in its initial stages, like in most other middle- and low-income countries, an integrated policy and action plan has been formulated in Tanzania. This plan is operational for the four main NCDs (CVD, cancer, chronic respiratory diseases and diabetes) and their four main risk factors (alcohol, unhealthy diet, physical inactivity and tobacco).

It is crucial to note that the Tanzania National Health Policy and the National Policy on HIV/AIDS recognizes the necessity of multi-sectoral collaboration in addressing health inequalities. Moreover, Tanzania's National Health Policy expresses a commitment to continuing collaborating with researchers, particularly for the prevention of NCDs. Hence, it is crucial that the researchers produce and communicate evidence which could be used during the upcoming revisions of several policies. An impressive example of Muhimbili University's research group on HIV illustrates that this could be done.

While the policies are in place, and they address a number of essential determinants of health inequalities, the implementation of these policies is lacking. For example, while the National Ageing Policy ensures that elderly are exempted from health service fees, but in practice, the costs around health services, poor quality of services and unavailability of drugs make this policy ineffective.

This might be a consequence of SDH not being recognized as politically important, and of political decisions being taken based on decision-makers' own interests, rather than the interests or the needs of the majority. This opinion expressed by some interview respondents from the non-governmental organisations was not shared by the respondents from governmental institutions. On the contrary, the latter claimed that SDH are seen as politically important, hence their inclusion in a number of national policies.

c) SDH training

When it comes to the research training, there are no postgraduate courses specifically on SDH in any of the universities in Tanzania. Nevertheless, some of the SDH or related health determinants are covered in other courses given by both schools of public health as well non-health faculties. These health determinants include health systems, health care financing and policies, resource distribution, gender, development governance, poverty analysis, civil society development. Research methods are also being taught, including clinical research, epidemiology, biostatistics, evaluation of health interventions.

There is a number of Master programmes in Public Health (MPH) given in various universities. However, there is no consistency between the programmes as the content of the programmes varies. While this broadens the competence of the future public health force in general, it might be difficult for potential employees to know what kind of background knowledge the graduates possess due to the lack of standardization of MPH education.

The majority of the health determinants are covered in the above mentioned longer programmes which demand 1-2 years commitment from the students. This limits the accessibility to the SDH-related training for those who are working or who have no possibility to devote such prolong time to education for other reasons (e.g., having to move to another city, or having to leave family obligations). In developing SDH-relevant courses, INTREC should consider providing short-term courses to increase the accessibility to the SDH education.

After a considerable investment by the Government in the improvement of internet access, many Tanzanians have a possibility to enjoy high-speed mobile access to the internet at a low cost. This has had an enormous transformative effect on education, entrepreneurship and social life in the country. However, individual use of internet is still low. Only 11% of Tanzanians had access to internet in 2011, and most internet use is done by institutions and companies rather than individuals. The hindering factors for individuals include literacy level, poor infrastructure, and unavailability of internet services in most semi-urban and rural areas.

Thus, while internet could be considered as a source of providing SDH training in Tanzania, accessibility problems should be considered before running the on-line courses. Some alternative solutions could include:

- The description of online courses should clearly state what kind of internet connection (particularly, speed of the connection) is needed to be able to participate in the course

- Ideally, the students should be able to take the online courses from the comfort of their own home. However, if this is impossible due to the limitations of their internet connection, the online courses could be delivered through the computer halls (if any) at the HDSS sites in Tanzania, provided they have good access to internet. In other words, if a student does not have a possibility to connect from home, he/she could gain access at the closest INDEPTH HDSS site.
- In the long run, follow-up sessions could be organized at the HDSS sites to discuss the content of the online sessions, provided that there are local SDH trainers educated in advance through INTREC.

d) Recommendations

Based on the presented above findings, following recommendations could be made for various stakeholders.

i) Policy-makers, NGOs and other stakeholders:

- Barriers to health care utilization should be studied and addressed. This is particularly important as the epidemiological transition progresses, with NCDs being on the rise in Tanzania.
- While policies are in place, and they address crucial questions of health inequalities in Tanzania, the implementation of policies should be improved.
- The knowledge of SDH and methods to address them should be increased
- Government, through the Ministry Of Health, should incorporate social determinants of health in all its major programmes and in the programmes of other ministries.
- Non- governmental organisations should continue to empower community members on their rights and provide them with knowledge on existing policy and strategies, so that they are aware of what kind of services they should expect from the government, and be able to question the government whenever they are dissatisfied with the services offered.

ii) INTREC:

Training:

- SDH courses. Be aware of the content of other programmes so as not to duplicate or compete, but to complement.
- Short courses rather than longer programmes should be developed to increase the accessibility to the training.
- Online courses could be considered as an alternative. However, a course description should clearly state the quality of the internet connection that is needed to participate in the courses. A collaboration with the Tanzanian INDEPTH HDSS sites for the delivery

of the online courses should be explored, both in terms of the possibility of using their computer halls (if any) and training future trainers.

- Courses should address the key SDH identified through the interviews, literature review and the analysis of the epidemiological data. These SDH include poverty; malnutrition; unequal distribution of income and resources; social inequality; poor budget allocation for health care; including poor resource distribution; lack of human resources for health care affecting in turn health care provision and quality of health care; gender inequality, particularly discrimination of women; lack of social protection and specialized health care for elderly; education; geographical location, including its effect on the accessibility to health care; and finally, poor link between policy and practice.
- Education should not target only researchers. Other stakeholders seem to lack knowledge on SDH and how to address them. Since 'social determinants of health' is not a common term in Tanzania, INTREC should work with nongovernmental organisations to promote social determinants of health among members of parliament, policy makers and the general public. Once the government is involved, INTREC should offer technical support to the institutions which are offering SDH-related courses on how best the courses can be designed so as to produce SDH-competent professionals.
- INTREC should continue to collaborate with research institutions and ensure that findings from this study are widely shared with all the stake holders involved, so as to create more understanding on social determinants of health.

Enabling collaboration between researchers and decision-makers

- With the upcoming revisions of several national policies, it is particularly important to build upon the Government's commitment to collaborate with researchers. It is essential to be able to produce and present timely and country-specific evidence on SDH, as well as evidence-based action-plans. INTREC could contribute to this by:
    - Providing training on SDH and SDH research methods
    - Providing training on communicating evidence to decision-makers and other stakeholders

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Annex 1: Table of SDH-related courses offered in Tanzania

Name of the Institution	Degree level	SDH-related Course Offered	Remarks
HEALTH RELATED COURSES			
Tumaini University (KCMU) College	Post graduate	**Master of Public Health** -Assessment of community health needs 1. *Introduction to public health including determinants of health* 2. *Epidemiology* 3. *Biostatistics* 4. *Research methodology* -Public health policy and determinants of illness/health and evaluation 1. *Sociology and health illness* 2. *Health promotion and non-communicable diseases* 3. *Health policy planning and information system* 4. *Health economics and health care financing* 5. *Evaluation of health projects* -Special public health issues 1. *Reproductive and family health* 2. *Communicable disease control (including epidemics)* 3. *Environmental health* 4. *Leadership, management and teaching methodology* 5. *Law, ethics and public health* 6. *Refugee health and disaster management/disability and occupational health*	The main objective of the course is to provide MPH level training to physicians (e.g. RMO,s DMO,s) senior nurses and allied health professionals in Tanzania and other countries, to enable them to implement action oriented intervention programmes, particularly in disease control.
Muhimbili University of Allied and Health Sciences	Post graduated	**Master of Health and Policy Management** -Foundation of health policy analysis and planning -Ethics, Legal and human rights issues in health and health care -Health care financing and financial management -Health Policy implementation and management -Social cultural dimensions of international health -Globalisation and health	

		-Environment and health -Gender and health -Methods in health system research for policy, management and priority setting -Pandemics and Economic development (HIV/AIDS and Malaria)	
Muhimbili University of Allied and Heath Sciences	Post graduate	**Master of Public Health** -Introduction to Public Health -Assessing community health needs -Implementing Change -Special public health issues -Health policy, planning management and health services organisation	
Mzumbe University	Post graduate	**Master of Health systems management** -Strategic management of health systems -Marketing Strategy for heath systems -Epidemiology and Biostatistics -Health systems Research -Health Policy and Planning -Legal aspect of health systems management -Public sector governance -Management of social and economic services -Strategic health psychology	
Catholic University of Health and Allied Sciences (CUHAS)	Post graduate	**Master of Public Health** Epidemiology, Biostatistics and determinants of diseases 1. *Epidemiology* 2. *Biostatistics* 3. *Demography and geriatric* -Review of communicable diseases control and nutrition 1. *Burden of diseases* 2. *Communicable disease control* -Environmental health and occupational health 1. *Environmental health and occupational health* 2. *Disaster preparedness* -Reproductive health and foundation of populations *1. Introduction to reproductive health*	The course focuses on promoting public health with a focus in public health in developing countries. The programme is suitable for district, regional and health managers at different levels. It is also suitable for district, regional and health managers working with NGO's, training institutions and those managing health programs and health projects in developing countries

		2. *Maternal mortality* 3. *ANC services/TBA's voles* -Health planning and management 1. *Health planning* 2. *Health management and leadership* -Health system delivery and HMIS 1. *Introduction to health system delivery* 2. *Health facility committees* 3. *Cascade of health system delivery* -International and family health needs and assessment 1. *International health* 2. *Family health* -Health promotion ethics 1. *Concept of health promotion* 2. *Communication skills* 3. *Cultural barriers in communication*	
COURSES OFFERED OUTSIDE SCHOOL OF PUBLIC HEALTH			
Moshi University College of Cooperative and business studies (MUCCoBS)	Post graduate	**Master of Art in cooperative and Community development** -Community economic development -Participatory planning approaches -Management of community resources -Advocacy, Lobbing and negotiation skills -Contemporary challenges in Cooperative and community development -Laws and policies related to cooperative and community development	To equip development practitioners with practical knowledge and skills in cooperative and community development.
Open University of Dar-es-Salaam.	Post graduate	**Master of Environmental management** -Population, resources and environment -Gender and resource management -Regional and micro development planning -Water resources Development and management -Urban and Rural planning	The main goal of this course is to meet the acute country's need for high level manpower in environmental resources assessment planning and management for sustainable development.

Open University of Dar-es-Salaam	Post graduate	**Master of Community economic development** -Social planning and policy for development -Gender issues in community economic development -Sustainable response to environmental problems	The main objective of this programme is to train community economic development practitioners to work in the government and communities.
Open University of Dar -es-Salaam	Post graduate	**Master of Social work** -Social work and health -Social Security and social policy -Social work, population and gender -Psychology guidance and counselling -Social work and disaster management	
University of Dar- es-Salaam	Postgraduate	**Master of development management** -Governance for development -Poverty analysis -Development policy -Gender and resource management -Gender mainstreaming -Gender, political systems and development -Gender, culture and development -Health and development -Education for development -Gender and Sexuality	
University of Dar-es-salaam	Postgraduate	**Master of Development Studies** -Health and Development -Governance for development -Globalisation for development -Environment and development -Rural and urban development -Development and human right -Population and development	
University of Dar-es-Salaam	Postgraduate	**Master of Gender studies** -Gender and Food security -Gender and resource management	

		-Gender mainstreaming -Gender, political systems and development -Gender, culture and development -Health and development -Education for development -Gender and Sexuality	

Annex 2: Table of SDH country needs

Reference/ title of article	Name and contact details of the first author	Objective of study	Findings	Recommendations
The HIV Epidemic in Tanzania Mainland.	Report prepared by ASP 2008, (Aids Strategy and Action Plan) for UNAIDS		HIV prevalence rate in Tanzania has decreased from 8% in 1997 to 6.4% in 2005/6 The number of HIV persons living in rural areas is higher than those living in urban (because 77% of total populations are living in rural areas. Heterogeneity in HIV prevalence HIV prevalence trends in Tanzania vary dramatically across sub populations (grouped by different characteristics) sex, education, wealth, marital status, where they live and how mobile they are. **Sex-** Women are more likely to be HIV positive than men. As for discordant couples more male positive and female negative couples. Women are more likely to be HIV positive in all age groups except for men aged 34-39 years. **Education**: Persons with higher education are less likely to be HIV positive than uneducated persons **Wealth**: More wealth persons are more likely to be HIV positive. **Marital status**: HIV prevalence is high among those who are currently or formerly married. **Geographical heterogeneity: Residence:** HIV prevalence is much higher in urban areas than in rural areas. Sub Populations at risk: fishing communities, Female affected by sexual and domestic violence, military, truck drivers and sex workers.	Promote abstinence, delayed sex debut partner reduction and consistent condom use among young people in and out of school. Reduce risk of HIV infection among the most vulnerable population. Expand work lace Interventions, with special attention on mobile and migrant workers. Prevent, treat, and control other sexually transmitted infections. Promote and expand HIV testing and counseling services. Prevent mother to child transmission of HIV.

				Promote and distribute condoms. Prevent HIV Transmission through blood transfusions exposure to contaminated body fluids and contaminated instruments. Male circumcision services be made available in rural areas
TACAIDS(http://www.tacaids.go.tz/ **http://www.tacaids.go.tz/hiv-and-aids-information/about-hiv-and-aids.html**			Drivers of HIV Epidemic Promiscuous sexual behavior Intergerational sex Current Sexual Partners Presence of other sexually transmitted infections such herpes simple x2 virus Lack of knowledge of HIV Transmission Poverty and transactional sex with increasing numbers of commercial sex workers. Men's irresponsible sexual behaviors due to cultural patterns of virility. Social, economic and political gender inequalities including violence against women. Substance abuse such as alcohol consumption. Local cultural practices e.g. widow cleansing. Mobility in all its forms which leads to separation of spouses and establishment of temporary sexual relationships . Lack of male circumcision.	
Violence against children in Tanzania	United Republic of Tanzania.2011		Violence against children is a global human rights and public health issue with significant negative health and social impact on children's development. Violence against children erodes the strong foundation that children need for leading healthy and productive lives.	Raise awareness on violence against children. The government and

			Forms of child violence: Sexual, Physical and emotional. Sexual violence experienced in childhood. Nearly, 3 out of every 10 females aged 13-24 in Tanzania reported to experiencing at least one incident of sexual violence before turning age 18. Among males of the same age (13-24) 13.4% reported experiencing at least one incident of sexual violence prior to age 18. The most common form of violence experienced by both male and females before the age of 18 was sexual touching followed by attempted sexual intercourse. 14% of males aged 13-17% reported that they had experienced at least one form of sexual violence.	stake holders should develop "National Plan of Action to Prevent and Respond to Violence against children. Develop rules and regulations to impement 2009 Law of the Child Act. Develop and implement a public information campaign directed at older children and youth. Increase the numbers and capacity of social welfare officers to respond to child abuse and violence.
			Almost three quarter of male and three quarter of female participants reported experiencing violence by a relative, authority figure (such as teachers) or intimate partner prior to the age 18. The vast majority of this abuse was in the form of being punched, whipped or killed. Perpetrators of violence against children **Perpetrators Child sexual violence:** Neighbors and strangers were the most frequently reported perpetrators of sexual violence that occurred prior to females turning 18 years of age. **Perpetrators Child physical violence:** adult relatives, fathers, mothers, and teachers. **Perpetrators Child emotional violence:** relatives.	

IMF Country Report. Tanzania Poverty Reduction Paper 2011. publications@imf.org			The second national strategy for Growth and Reduction of Poverty II (NSGRPII) or MKUKUTA II in its Kiswahili acronym is a continuing of the government and national commitments to accelerating economic growth and fighting poverty. **Poverty Situation** Tanzania's GDP growth rate has been impressive in the recent past. However, the incidence of income poverty did not decline significantly. Out of every 100 Tanzanians, 36 were poor in 2000/01 compared to 34 in 2007. Income poverty (basic needs and food poverty) varied across geographical areas, with the rural areas being worse off. Rural growth proxied by growth of the agricultural sector was about 4.5 percent on average. When this growth is contrasted with the national population growth rate of 2.9 percent, the change in rural per capita income becomes small, thus perpetuating poverty in rural Areas. Sound economic governance of natural resources is critical for poverty reduction, not only for the communities in the locality, but also for the whole nation. **Unemployment** Although about 630,000 new jobs were created annually particularly in the informal sector, unemployment remains an issue in particular among the youth. Unemployment rate was higher for females about 15.4 percent compared to 14.3 percent for male youth Women Constituted only 24.7 percent of paid employees. **Hunger** The high rate of poverty in rural areas is also explained by the main source of livelihood. Tanzania has shown a significant positive correlation between basic needs poverty and food poverty. Food poverty is high in rural areas. Given the large proportion of the poor in rural areas who depend on agriculture as their mainstay, agriculture is central to poverty reduction in general and hunger/food poverty in particular. **Agriculture:** Agriculture is still dominated by small-scale farmers; with about 70 percent of	

			farming being dependent on the hand hoe. Agricultural sector has been defined as growth driver. Given its role in supporting the rural poor and in reducing malnutrition, agriculture has the potential of lifting many of the poor out of poverty. In Tanzania, poor growth of agriculture is a result of a combination of many factors. These included poor infrastructures to support agriculture, inadequate extension services, and poor technology of production, low value addition, lack of appropriate financing mechanisms for agriculture, unreliable markets, unfair and Uncompetitive farm gate prices and environmental degradation. **Malnutrition:** Under-nutrition among Tanzanians is manifested at an early age; therefore, great emphasis is placed on monitoring child nutrition. **Malnutrition** of children is a serious problem in Tanzania, a manifestation of not only poverty and food insecurity but also nutrition of women of reproductive age. Malnutrition is caused by food insecurity, poor caring practices, unhealthy living environment, and inadequate access to quality health services. For children under the age of two years, who are most vulnerable to malnutrition, the major causes are inadequate breastfeeding and bad complementary feeding practices, combined with poor maternal nutrition and micronutrient deficiencies. Child malnutrition fuels illnesses, undermines learning, erodes human capital and reduces labor productivity, ultimately affecting growth and labor market outcomes at the adult age. Children in rural areas suffer substantially higher rates of malnutrition than urban children. Four out of every 10 children under five years of age are stunted and about one out of every five is underweight. **Sanitation and Hygiene:** In 2010, only 24% of households used improved Sanitation facilities. Hygiene is constrained by shortages of water and soap and poor waste disposal practices.	

			Water-borne diseases, especially diarrhoea and dysentery, remained significant health challenges. Dehydration caused by severe diarrhoea is a major cause of morbidity and mortality among children.	
Insecticide treated nets in Tanzania Mainland: Challenges in reaching the most vulnerable, most exposed and poorest groups.	Jaap Koot et al. National Institute of Health Promotion, Woerden, The Netherlands.	To analyze the National Program for insecticide treated nets in Tanzania during the period of 1995-2008. Assess how the poorest, most exposed and most vulnerable groups in society have benefited from the program.	There is urban– rural divide, with a higher malaria burden and lower net ownership in rural areas. Although reaching the poor was an important target from the onset of the ITN programme, in practice, it was very difficult. The poorest live in rural areas that are difficult to reach for ITN distribution activities and awareness-raising campaigns. Lessons learned from the Tanzania ITN Programme according to the (SDH). **Context and Position:** Poverty in Tanzania is widespread, but people in remote rural areas are the most disadvantaged. **Exposure:** Mosquito nuisance and frequent suffering from malaria plays a role in increasing the awareness of people. **Vulnerability:** The poor, especially in rural areas are more vulnerable. Tanzania has achieved remarkable success with its ITN programme by combining social marketing and voucher. Focus on the poorest and on people in remote areas was not sufficient.	Free net distribution and rural promotion campaigns can be a solution but are dependent on high donor inputs.
http://www.tfnc.or.tz/eng/focus/obesity.htm	Tanzania Food and Nutrition Centre.		In the 21st century, there is a challenge of fighting against a dramatic rise in non communicable diseases (NCD). These diseases including cardiovascular diseases of which stroke and ischaemic heart diseases are the most common in terms of mortality, diabetes, hypertension and cancer. In Tanzania, the Adult Morbidity and Mortality Project (AMMP) in three local areas: Dar-es Salaam City, Hai District and Morogoro Rural District, demonstrated a high risk of dying from non-communicable diseases during adulthood (15-59 years) compared to developed countries. In Tanzania, Cardiovascular diseases, which include coronary heart disease,	The main goals for national NCD prevention and control programmes are to prevent as far as possible the evelopment of NCD in susceptible individuals and communities

			stroke, rheumatic heart disease, are the leading cause of death and important factor contributing to disability among NCD. The prevalence of Hypertension in Tanzania varies from 2.6% in rural Mara region to 10.4% in Dar-es-Salaam. Cancer in the second leading cause of mortality form NCD. Cancer diseases particularly cervix, uterine, and breast cancer among women and lung and protest cancer among men is common in Tanzania. Data from Ocean Road Cancer Institute (ORCI) shows a fifty fold increase in the number of patients reporting for treatment from 1975-2000. World Health Organisation (WHO), estimates that there are approximately 20,000 new cancer patients annually in Tanzania. NCD share several common related risk factors • Smoking • Excessively alcohol consumption • Unhealthy eating habit • Physical inactivity • Obesity • Raised blood pressure • Raised blood lipids • Raised blood sugar. Risk factors for cardiovascular diseases are physical inactivity, smoking and unhealthy eating habits including high fat consumption. Hypercholesterolemia, obesity, impaired glucose tolerance and diabetes are both diseases and a risk factor for cardiovascular diseases.	through modification of Diet by-: *Limit pure sugars in food and drinks.* *Encourage consumption of whole meal cereals, vegetables and fresh fruits.* *Restrict the use of animal and fats and encourage the use of fish and vegetable oils (except refined palm oil and coconut oil).* *Restrict the addition of salt to prepared food.* *Harmful effects of smoking and excessive alcohol intake should be emphasised and advice given.* *To provide NCD education for health promotion and self referral to health care professionals.* *To maintain the health and quality of life of individuals ith NCD through effective patient care*

				education. Particular attention should be given to the importance of seeking medical attention. *The importance of regularly attending follow-up clinics and compliance with prescribed treatment and advice should be emphasized.* *To prevent and treat obese patients with NCD and thereby decrease morbidity and mortality.* *Screening for early detection of cases.* *Public education.* *Tobacco control through increased taxation and health education is mandatory.*
Non communicable Diseases: An overview of Africa's New Silent Killers.	*Dr Matshidiso Moeti, Director Division of Prevention and Control of Non communicable*		Heart disease, stroke, cancer, diabetes and other chronic diseases are often thought to be public health problems of significance only in high-income countries. In reality, only 20% of chronic disease deaths occur in high-income countries, while 80% occur in low- and middle-income countries where most of the world's Populations live. The impact of chronic diseases in many low- and middle-income countries is steadily growing. In these countries, around 28 million people died in 2005 from a chronic disease, and cardiovascular disease alone killed five times as many people	

	diseases at the WHO regional office for Africa. AFRICAN HEALTH MONITOR: January-June 2008.		as HIV/AIDS. Middle aged adults are especially vulnerable to chronic disease. People tend to develop disease at younger ages suffer longer and die sooner than those in high income countries. This undermines countries' economic development as many of those affected are at the peak of their productive and economic activity. The burden of illness from chronic diseases in the Region is already significant and is set to increase in the next decades, adding to the overwhelming and unmet demand for health services due to communicable diseases. Cancer is an emerging and increasingly serious public health problem in the WHO African Region. The main risk factors for cancer are infections such as HIV/AIDS, human papillomavirus, hepatitis, or schistosomiasis; tobacco use; environmental pollution; unhealthy diet; excessive alcohol intake; old age; and lack of physical exercise. Diabetes Mellitus is also common in African countries. In Africa, the number of people with diabetes in 2006 was 10.4 million, expected to increasee to 18.7 million in 2025. The majority of cases of diabetes in Africa go undetected; the undiagnosed cases are estimated to be as high as 60% to 80% in Cameroon, Ghana and Tanzanzania. Hypertension is a main physiological risk factor for other Cardiovascular diseases (CVDs). It is estimated that more than 20 million people are affected in the African Region, mainly in urban areas. Prevalence ranges from 25% to 35% in adults aged 25 to 64 years. Rheumatic heart disease is the most important form of acquired CVD in children and adolescents in sub-Saharan Africa. The WHO African Region now faces a double burden of disease. While combating communicable diseases, countries are now confronted with non communicable diseases (NCDs) which are Projected to increase significantly. They are related to risk factors. Linked mainly to lifestyles which must be dealt with simultaneously.	

WHO, Global Status Report on Non Communicable diseases, 2010.			Non communicable diseases (NCDs) are the leading causes of death globally, killing more people each year, than all other causes combined. Contrary to popular opinion, available data demonstrate that nearly 80% of NCD deaths occur in low- and middle-income countries. Despite their rapid growth and inequitable distribution, much of the human and social impact caused each year by NCD-related deaths could be averted through well-understood, cost-effective and feasible interventions. Of the 57 million deaths that occurred globally in 2008, 36 million – almost two thirds – were due to NCDs, comprising mainly cardiovascular diseases, cancers, diabetes and chronic lung diseases. The combined burden of these diseases is rising fastest among lower-income countries, populations and communities, where they impose large, avoidable costs in human, social and economic terms. About one fourth of global NCD-related deaths take place before the age of 60. NCDs are caused, to a large extent, by four behavioral risk factors that are pervasive aspects of economic transition, rapid urbanization and 21st-century lifestyles: tobacco use, unhealthy diet, insufficient physical activity and the harmful use of alcohol. The greatest effects of these risk factors fall increasingly on low- and middle-income countries, and on poorer people within all countries, mirroring the underlying socioeconomic determinants. Poverty exposes people to behavioural risk factors for NCDs and, in turn, the resulting NCDs may become an important driver to the downward spiral that leads families towards poverty. However, in the African region there are still more deaths from infectious disease than NCDs. However, the prevalence of NCDs is rising rapidly and is projected to cause almost three-quarters as many deaths as communicable, maternal, perinatal, and nutritional diseases by 2020, and to exceed them as the most common causes of death by 2030. In the year 2008, the leading causes of NCD deaths was cardiovascular diseases, cancer and respiratory diseases including asthma and chronic obstructive pulmonary diseases and diabetes. Risk factors for coronary heart disease are *tobacco use, physical inactivity and*	A major reduction in the burden of NCDs will come from population-wide interventions, which are cost effective and may even be revenue-generating, as is the case with tobacco and alcohol tax increases, for instance. Improved health care, early detection and timely treatment is another effective approach for reducing the Impact of NCDs. Health systems need to be further strengthened to deliver an effective, realistic and affordable package of interventions and services for people with NCDs.

			unhealthy diet. Rick factors for cancer are *tobacco use, Insufficient physical activity and harmful use of alcohol.* In 2008, the most frequently diagnosed cancers for males in Tanzania was Oesophagus and Cervix Uteri for females.	
Country Health System Fact Sheet, 2006.	United Republic of Tanzania.		In 2002, lower respiratory infections accounted for 12% of all deaths. Cerebrovascular diseases accounted for 3% while Road traffic accidents account for 2% of all deaths.	
Physical Activity and Cardio vascular diseases risk factors among young and middle aged men in Urban Mwanza.	Muhihi *et al* 2012, Harvard School of Public Health.	To assess the level of physical activity and its relationship with Cardiovascular disease risk factors among young and middle aged men in a fast growing city of Mwanza in Tanzania.	In this study, all men except for three had energy expenditure of more than 1000 Kcal/week. It has been shown that an energy expenditure of 1,000Kcal/week decreases the risk of non- communicable disease, decrease mortality and increase life expectancy. Results from this study have demonstrated high level of physical activity and low profile of cardiovascular risk factors. Physical activity energy expenditure was inversely correlated with cardiovascular disease risk factors.	Physical activity is an appropriate and cost effective intervention for primary prevention of cardiovascular diseases.
Nutritional variation and cardiovascular risk factors in Tanzania –rural urban difference.	Njelekela *et al 2003.* Department of Physiology, Muhimbili University College of	To assess the relationship between dietary factors and cardiovascul	Prevalence of hypertension BP, Obesity and hypercholesterolemia were lowest in the rural areas. Important determinants of BP among men were Body mass index (BMI) and salt intake. Among women, serum total cholesterol (TC), BMI and coconut milk consumption were important BP determinants. Salt intake was positively associated with systolic BP (SBP) and diastolic BP (DBP)	Differences in dietary habits contributed significantly to the urban-rural-pastoral variations in CVD risk pattern in Tanzania. Carefully designed

	Health Sciences, DSM, Tanzania.	ar (CVD) risk factors in middle-aged men and women, in urban, rural and pastoral settings in Tanzania.	in men but not among women. women from the rural area had higher mean BP levels than women from the pastoral population. BMI was higher in urban areas in both genders and higher among women in rural than in pastoral population. Findings from this study add to the evidence that apart from other factors, diet plays an important role in the pattern of cardiovascular risk factors. This study provides evidence that in Tanzania the prevalence of Hypertension and obesity have increased in the urban area compared with rates found in the same area almost a decade ago. A direct association exists between BP and meat intake in both genders and coconut milk consumption among women only. Further, these results strengthen the evidence that diet has an independent effect on BP.	nutritional interventions could have a major impact on future CVD risk patterns in Tanzania.
OCEAN ROAD CANCER INSTITUTE http://www.orci.or.tz/index.php?option=com_content&view=article&id=46&Itemid=37			***Background of Cancer in Tanzania.*** Cancer is the generic term for a group of diseases that can affect any part of the body, the capacity to grow beyond their usual boundaries, and can invade adjoining tissues, and may spread to other organs or tissues as metastases. Cancer is raising in the health agenda throughout the world. In Tanzania we are not only experiencing different kinds of cancers as those seen in developed world but we appear to be undergoing a cancer epidemic in some kinds of cancers. Over the last two decades the number of cancer patients treated in the country has increased thirty folds. According to WHO figures, every year cancer affects at least 9million people and kills 5 million people. The economic as well as health consequences make cancer a substantial, health problem. In Tanzania very little money and initiatives are made available to treat and control cancer. Cancer has been recognized as a serious public health problem in Tanzania. ***Cancer as a Problem*** For the past few decades the number of cancer patients treated at Ocean Road Cancer Institute (ORCI) has been rising steadily. For example in 1975 were 48 new patients, 1989 were 916, 1995 were 1639 and in 2004 were 2866.	Despite lack of records on social economical assessment over the disease, it is obviously clear that the cost of treating cancer patients with a primary diagnosis of cancer is very high.

			World Health Organization (WHO) estimates that there were approximately 21,000 new cancer patients in Tanzania, 10,080 men and 10,920 women for the year 2002. Among men attending ORCI, Kaposi's sarcoma followed by Oesophagus and head and neck cancers are the commonest while there is evidence that incidence of cancer of the prostate is on rapid upward trend. Kaposi's sarcoma used to be over four times as frequent among men as to women, but now due to HIV the difference is leveling out as is noted in increased incidence among women. In women, cancer of the cervix and breast are the most common. Cancer of the Cervix represents about 35-40% of all cancer cases and 55-65% of all cancers in women. It is stipulated that about 25% of Tanzania's 35 million habitants will develop cancer in the course of their life time. The risk of developing cancer varies according to geographical area, and is highest in densely populated areas. However, the various forms of cancer have different geographical distributions; for example, liver cancer is more frequent in the central part of the country while cancer of the cervix is common among communities that do not circumcise their males. ***Impact of Cancer in the country.*** Every year about 10,000 people die of cancer in the country. About 32.5% of all death due to cancer are in people less than 60 years. For women in this age group, cancer is responsible for about 43% of deaths. Delay in diagnosis is a substantial problem for cancer patients in Tanzania and majority of them die during the first year after being diagnosed. In the country as whole, about 95% of cancer patients die at home and about 5% in hospital. Statistics show that between 1974 and 1995 there were 1,219,562 admissions to Muhimbili Medical Centre, out of these 46,343(3.8%) had cancer.	
Prevalence of Obesity and Associated risk factors among adults in	Shayo et al, 2011, Department of internal medicine,	This study aimed at determining the prevalence	Prevalence of obesity is on the rise in Tanzania. In the setting of the study population, increasing age, female sex, marriage, high socioeconomic status and less vigorous physical activities increase the Likelihood for obesity in the population. Obesity was found in 19.2% (240/1249) of participants.	

Kinondoni Municipal district, Dar-es-Salaam.	Muhimbili University of Health and Allied Sciences, P.O.Box ,65001 Dar es Salaam Tanzania	of obesity and its associated risk factors among adults aged 18 - 65 years in Kinondoni municipality, Dar es Salaam, Tanzania from April 2007 to April 2008.	Over weight was present in 24.1% (301/1249) of the study participants. Obesity prevalence was highest (31.9%) in age group 45 - 54 years. Age group 18-24 years had obesity prevalence of 6.7%. Prevalence of obesity in females was significantly higher than in males (24.7% and 9.0% respectively). The prevalence of obesity was highest among those with high socio-economic status (29.2%) as compared to those with medium (14.3%) and low socio-economic status (11.3%). In general, BMI was noted to increase with age, more so in women than men of corresponding age group. The highest prevalence of obesity (33.3%), was among respondents who were widowed compared to 8.3% among single respondents. Also, Prevalence of obesity was significantly higher in participants with no formal education (26.4%) compared to those with primary (19.5%), secondary (14.2%) and post secondary education. It was noted that those who did light intensity activities had highest prevalence of obesity (26.0%) followed by those who did moderate intensity activities (21.4%) while those who did vigorous activities had obesity prevalence of 7.6%. Married and cohabiting respondents showed significant increase of the risk for obesity by 60% than were single respondents.	
Public health concern and initiatives on the priority action towards non-communicable diseases in Tanzania.	Mfinanga et al 2011. Nationa Institute of Medical Research, Muhimbili Center.	To provide insight of the "salient epidemic" of NCDs, existing interventions and recommend on prioratized actions.	**Major NCDs.** Raised blood pressure, Diabetes, Chronic Obstructive Pulmonary Disease (COPD), Cancer (cervix uteri, oesophagus, breast, Non-Hodgkin Lymphoma, lip and oral cavity and prostate cancer for men) mental health, haemoglobinopathies (Sickle cell and thalassemia) violence and injuries. Smoking and alcohol consumption are some of the most common and major risk factors for non communicable diseases. Risk factors associating with the cause of traffic accidents in Tanzania are, technical element of the highway construction, corruption, irresponsibility, poor management, driving while using cell phone, driving without training, failure to respect and obey traffic regulations, bad condition of vehicles, age of vehicles and poor condition of service. In 2008, NCD mortality (Total NCD deaths in 100,000) was 134.5.	To control NCDs strategies for health insurance coverage need to be improved. Research is needed to prioritize on inter-sectoral and multidisciplinary approach to understand and influence the macroeconomic and social determinants of

			NCD deaths in < 70 years (% of all NCD deaths) was 56.6% Results from a population based study revealed that among all ages, death due to injures accounted for 5% of all deaths in Dar-es-Salaam, 8% in Hai and 5% in Morogoro districts. According to the study conducted in Dar-es-Salaam, the largest categories of injuries were road traffic injuries (43.7%) followed by violence and assaults (23.5%). Others studies have described Motorcycle injuries as major but neglected emerging public health problem in major cities in Tanzania. Studies on economic impact of cardiovascular disease in low income countries (Argentina, China, India and Tanzania) indicated that most of the people (73-92%) with heart diseases spend more than 40% of their non food income on care and treatment. One third of the respondents did not comply with medications as prescribed due to high costs. Most respondents decreased their work time, limited their work activities and felt limited due to hospitalization. **Existing policies, strategies and interventions for control of NCDs.** The government has shown commitment for control of NCDs by establishing a Non-Communicable Disease Unit under the Ministry of Health and Social Welfare. The Unit is responsible for coordinating formulation of various NCD policies. **Other Strategies:** Cancer Strategy, 2008, National Strategy for Non-Communicable diseases 2008-2013 and Tanzania Non Communicable Disease Action Plan developed in 2011. Research strategies on NCDs are included in research priorities of research institutions, including, National Institute for Medical Research, Ocean Road Cancer Institute, Muhimbili University of Health and Allied Science and Sokoine University of Agriculture. Nationa Institute for Medical Research (NIMR) in collaboration with Ministry of Health and Social Welfare (MoHSW) has developed an NCD surveillance program in two urban rural districts of Temeke in Dar –es-Salaam and Rungwe in Mbeya. The aim of the surveillance is to get comprehensive hospital based NCDs data to supplement on studies done in the community, for policy formulation and planning. Ministry of Health (MoHSW) has put on place other initiatives including	NCDs and exposure to NCD factors.

			programmes on Vitamin A supplementation (coverage is 60%) Iodine supplementation coverage is 85%). Currently all pregnant mothers do receive iron and folic acid supplementation and all school children are dewormed. The ministry has adapted policy on promotion of exclusive breast-feeding, integrated management of acute malnutrition and food fortification under national reproductive care services. The Ministry of Health is working closely with Tanzania Diabetes Association (TDA) to establish comprehensive programme for diabetes care in public, private and faith-based health care facilities in the country. National Diabetes Programme and National Kidney Foundation were launched in 2011. The National Institute for Medical Research (NIMR), MoHSW, CDC, University of Copenhagen and Muhimbili University of Health and Allied Sciences (MUHAS) has developed a short annual course on NCD in 2011. Alcohol consumption is an issue in Tanzania although the country has strict regulations designed to control alcohol like banning 18- year olds from entering alcohol dispensing units as well as stating opening and closing times for bars and groceries. Alcohol is banned in government offices, educational buildings and health care establishements. The United Nations Millenium Development Goals lack of mention of Non-communicable Disease (NCDs). The MDG do not mention cardiovascular diseases, cancer or diabetes although it has greater burden on global health and economic development than the infectious diseases. The main drawback on fighting against NCDs in the country is weak implementation of the strategies and enforcement of the laws, and therefore it is becoming difficult to achieve the intended results. As it is for now, the implementation of the laws, regulations and various initiatives is fragmented. Most of these interventions address specific conditions, and none is integrative even within the health sector. The fight against non communicable diseases should not be left to be one for the health sector or government only, the fight requires multi-sectors, multi-	

			disciplinary and civil society approach to make sure that health laws are effectively implemented. Regarding tobacco law, Tanzania needs to strengthen tobacco control strategy to save the nation from the "salient raising epidemic" of NCD. As for tobacco and alcohol Acts to be successful, appropriate measures are taken especially by addressing the rampant advertising and promotional activities by tobacco and alcohol companies and to educate the community on the benefits of the laws to the health of all people. In Tanzania, traffic laws and regulations enforcement is weak. The traffic police should strengthen surveillance and enforcement to drivers who drink alcohol, use cell phone while driving and not following traffic laws. NCDs need to be included in the development agenda and perhaps included on to the millennium development goals although the time frame is short. Now the end point for the MDGs is approaching, UN needs to consider including NCDs in future development goals. Prevention and control of NCDs is crucial to reduce the burden, and protect future generations by providing an environmental supportive to people's healthy. Multi-sectoral approach in control and preventive interventions, including policy changes, regulations, and market interventions, are of highest priority. Political commitment is of paramount importance in the prevention of NCDs. This include action such as increased taxes on cigarettes, bans on smoking in public places, bans on cigarette advertisements, provide alternative income generating activity for tobacco farmers. The Lancet NCD action group and the NCD alliance (2011), have proposed five priority actions for the response to the NCD crisis; - leadership, prevention, treatment, international cooperation, and monitoring and accountability - and the delivery of five priority interventions—tobacco control, salt reduction, improved diets and physical activity, reduction in hazardous alcohol intake, and cheap essential drugs and technologies. The interventions are cost-effective, have low cost of implementation and they are politically and financially feasible. The most urgent and immediate priority is tobacco control. Increased awareness, and more attention to causal relations of COPD are	

			important steps towards developing strategies for both prevention and treatment of COPD in accordance with the local epidemiological context, and should be prioritized in future research.	
Tanzania Tobacco Control Forum http://www.ttcf.or.tz/modules/pages/aboutus/index.php?menuid=MM2			Tanzania Tobacco Control Forum was registered in June, 2006, following the WHO Framework Convention Alliance (FCA) East African Workshop on Tobacco Control Initiatives, which was held in Nairobi in November 2005. The mission of the Tanzania Tobacco Control Forum (TTCF) is to bring together tobacco control activists from all walks of life to advocate for and, implement, best practice tobacco control policies. TTCF has high level representation from government departments, higher learning institutions, women's groups, environmental organizations, professional associations, lawyers' organizations, members of parliament, small farmer group organizations, journalists, and individuals with interest in tobacco control. **Vision** To enhance public health through effective control and stopping of tobacco use in Tanzania. **Mission** To create an enabling environment, whereby tobacco control activists and other stake holders in various institutions can work together in a co-ordinated manner, to make a lasting impact in controlling and ending tobacco use in Tanzania. **Main Objective** Enhance and champion tobacco control in Tanzania. Other objectives: -To co-ordinate tobacco control activities in Tanzania. -To undertake tobacco control activities and campaigns in Tanzania. -To improve implementation of the Tobacco Products (Regulation) Act 2003 and such other laws that seeks to control and stop the use of tobacco in Tanzania. -To raise public awareness on the hazards of tobacco use. **Activities (Dec 2006 to Dec 2007).** - Establish reliable scientific data on tobacco problems in Tanzania -Persuade the Tanzania Government to ratify the FCTC Treaty. - Persuade the Tanzania Government to enforce the Tobacco Products (Regulation) Act 2003 and amend it to be in line with FCTC.	

			- Raise public awareness on the hazards of tobacco growing and use	
Non Communicable diseases in Tanzania: call for urgent action.	Mayige *et al*. National Institute of Medical Research (NIMR), Tukuyu Mbeya.	This paper summarizes the review of published papers on the magnitude of Non Communicable Diseases in the country.	Overweight and obesity, unhealthy diet, tobacco use, alcohol consumption, high blood pressure, high cholesterol levels, and lack of physical activity have been described as the major risk factors in non-communicable diseases. Available reports indicate high prevalence of both overweight and obesity. The mean BMI levels were reported to be higher in urban compared to rural areas. Prevalence of obesity is markedly higher in males and females. The prevalence of overweight and obesity is estimated to be around 22% in males and 26% in females. Further, studies reveal that dietary patterns contributed to differences in the risk of cardiovascular diseases and the pattern of cardiovascular diseases risk factors. For example, the diet eaten in a community in Tanzania showed that a big proportion of diet is comprised of carbohydrates with limited protein and vegetable and fruits intake. Studies have reported that physical activity levels were low in urban compared rural areas and consequently the urban population had higher levels of BMI and Cholesterol levels compared to rural counterparts. According to available statistics the prevalence of current smokers in Tanzania is estimated at 17.7% in males and 2.5% in females. Most of these studies report a prevalence of >15% in males, with the highest prevalence of about 43% in Kilimanjaro region. Smoking is not only a problem among adults but also affects adolescents; a study in Tanzania showed a prevalence of 3.0%and 1.4% among male and female adolescents less than 15 years respectively. Alcohol use is prevalent among adult populations in Tanzania. The prevalence of current alcohol users is reported to range from about 23% to 37% in males and 13% to 23% in females. It is estimated that per capita consumption of pure alcohol in Tanzania is 7.8 litres. The type of alcohol consumed is mainly local brew which accounts for about 86% of all alcohol consumed in the country. Hypertension was defined as a blood pressure of ≥140/90 mmHg and only	Although Tanzania has made efforts to respond to the growing burden of NCDs more efforts are needed at the country level to increase the capacity for prevention and control of non communicable diseases. Sound and explicit policies such as tobacco and alcohol policies, nutrition/diet policy, policies on food labelling and marketing and school health policy are essential. Priority should be given to develop and implement preventive interventions based on action plan for the country's NCDs strategy bearing in mind available interventions

			information from population based studies involving the general population was included. The prevalence of hypertension was found to range from 27.1% to 32.2% and 28.6% to 31.5% in men and women, respectively. Studies in have reported mean cholesterol values above the optimum threshold and women had generally higher cholesterol levels compared to men. Hypertensive heart diseases such as left ventricular hypertrophy are common in Tanzania. However, there is limited data on the magnitude of ischemic heart diseases including myocardial infarction. This could be due to the complicated methodologies for their diagnosis. With regard to stroke, a study have demonstrated that age standardized stroke incidence rates in Hai, are similar to those seen in developed countries. Age-standardized incidence rates were strikingly higher in Dar-es-Salaam than seen in most studies in developed countries, hypertension being a major risk factor, Stroke causes significant morbidity that leaves the patients with considerable disabilities. Similarly mortality rates from strokes were higher in Dar es Salaam compared to other areas. Stroke has been described as an emerging problem in Tanzania. However, it is poorly known among the communities. An anthropological study in Tanzania has shown stroke in urban Dar es Salaam is widely believed to emanate from supernatural causes (demons and witchcraft), while in rural Hai District in northern Tanzania is described to be mostly due to 'natural' causes. There is a marked difference in prevalence of diabetes among rural (<2%) and urban (>5%) populations and higher in people of Asian origin where the prevalence is >7%. Findings from these surveys have also shown a prevalence of more than 80% of undiagnosed diabetes in their study populations. Chronic respiratory diseases such as chronic obstructive pulmonary disease (COPD) and asthma also contributes to the burden of non-communicable diseases.	that have been shown to be effective. community mobilisation is needed to implement prevention strategies and reduce and prevent exposure to the non communicable diseases risk factors and subsequently reduce the burden of the diseases.

			There is limited information on the prevalence of COPD in the general population in Tanzania. However, chronic respiratory symptoms have been reported among cement factory workers. Asthma is another type of chronic respiratory conditions also characterized by difficulty in breathing. Unlike COPD which occurs in adults mostly above 40 years, asthma is more common in children and is one of the important childhood chronic illnesses. Cancers have long been reported as an important cause of morbidity and mortality in Tanzania. Male cancer of the oesophagus, oral cavity and pharynx, liver, stomach, lung and skin are most common. In females the common ones are cancers of the cervical, breast, liver and stomach. The emergence of HIV epidemic has also led to increasing prevalence of certain cancers for example cervical cancer and Kaposi's sarcoma.	

Annex 3: Table of on-going work on SDH

Name of group/ institution/ actor	Web address, and name and contact details of key person/ people	Mission of group/ institution	Core area of work, and possible alliances	Accomplishments, future aims
Muhimbili University of Health and Allied Sciences	http://www.muchs.ac.tz/ Prof: Leshabari-Mob:0783 287062	Centre for Training and Research on health sciences.	Core area of work: Health sciences. Ministry of Health and Social Welfare	
Help Age International	http://www.helpage.org/tags/tanzania/ Mr. Smati Mr. Leonard Ndamgoba-Mob: 0786 040293	Reduce the Impact of HIV/AIDS on older people and their families by influencing government policy	Ministry of Labor and Employment, Ifakara Health Institute, Policy Research for Development (REPOA) Ministry of Finance and Ministry of Health and Social Welfare	

Annex 4: Table of SDH policies and policy reviews

Responsible Ministry	Name and year of policy document	SDH-relevant components (incl. details of actions, people affected, etc)	Groups/ individuals in support of policy, and why	Groups/ individuals in opposition to policy, and why	Policy review date (if known)
Ministry of Health and Social Welfare	**Tanzania National Health Policy (October,2003)**	The policy involves all the groups in the society with special focus on the ***"most at risk"*** The policy strategy is to ensure that health services are available to all the people in the country by strengthening District Health services and improve Referral system and ensure public private partnership in health provision. Also, the policy aims at improving maternal health by reducing the burden of diseases, maternal and infant mortality and increase life expectancy through the provision of adequate and equitable maternal and child health services. In addition, the policy aims at improving under five and infant mortality through malaria prevention and effective treatment, provide immunization services and vaccination as well as increase coverage of effective interventions such as vitamin A distribution.		Pharmaceutical companies as they fear losing out business in case the health services are improved and disease burden decrease.	**Reviews Date (not known)** Currently the Ministry is working on health financing strategy and cost sharing guideline which will be included in the 2007 health policy.
Ministry of Labor and Employment	**National Ageing policy (September, 2003).**	**-** The policy involves old people who are 60+ and who lives in both rural and urban areas. It aims at allocating enough			**No Reviews**

		resources with a goal of improving service delivery to older people. In order to improve the health status of older people, the policy states that: the government in collaboration with various stakeholders will ensure that cost sharing policy shall be revised to adjust the criteria for determining 60 years as a standard age.			
Ministry of Labor and Employment, Ministry of Finance, and Ministry of Health and Social Welfare	**Social Protection Policy**	-The policy objective is universal pension for all old people who are 60+, whether they are employed or not. The policy has not started to be implemented yet. In the 2012, July parliament it was stated that the policy will start to be implemented in 2013/2014 financial year.			**No Reviews**
Prime Minister's Office	**National Policy on HIV/AIDS (2001)**	The main objective of the policy is to promote early diagnosis of HIV infection through voluntary testing with pre and post test counseling. The aim is to re assure and encourage the 85% - 90% of the population who are HIV negative to take definitive steps not to be infected, and those who are HIV positive to receive the necessary support in counseling and care to cope with their status, prolong their lives and not to infect others.		Religious leaders, such as Sheikhs, Priests.	**Review Date (Not known)** The policy is going to be reviewed so as to involve special population groups such as prostitutes, men who have sex with men and Intravenous drug users .

The United Republic of Tanzania.	**The Tobacco Products (Regulation) ACT, 2003 http://www.tobaccocontrollaws.org/legislation/country/tanzania.**		Tanzania became a Party to the WHO Framework Convention on Tobacco Control on April 30, 2007. The Tobacco Products (Regulation) ACT, 2003, is an Act to regulate the manufacturing, labelling, distribution, sale, use, promotion of tobacco products smoking field areas and matters connected there to. The **objective** of the Act is to reduce tobacco use and its consequent harm by-: -Protecting persons under eighteen and other non smokers from inducements to use tobacco products; -Protecting non smokers from exposure to tobacco smoke; Ensuring that the population is adequately informed about the risk of using tobacco products and exposure to second hand tobacco smoke and about the benefits available for quitting smoking. Ensuring that tobacco products are modified to reduce harm to such an extent as may be technologically and practically possible; and Promoting a climate that will lead to a smoking-free atmosphere in all walks of life.
			Regarding access to and sell of Tobacco Products the Act stipulates that : - No person under the age of eighteen shall smoke or famish a tobacco Product. - No person shall famish a tobacco product to any person under the age of eighteen years in any place. - Restriction on the use of Tobacco Products on certain places. - Any person being in charge of higher educational establishment, an office building, a hotel, bar or a restaurant, and any other enter- allowed enter tainment facility shall set aside rooms for smoking and non-smoking. - A room set aside for smoking shall be equipped with ventilation system which allows smoke to be evacuated to the outside of the building. **Offence and Penalties.** - Any person who contravenes the provisions of Part III of this Act, commits an offence and upon conviction is liable to a fine not exceeding two million shillings or to imprisonment for a term not exceeding two years. - Any person who contravenes the provisions of Part IV of this Act, commits an offence and upon conviction shall be liable to a fine not exceeding five hundred thousand shillings or to imprisonment for a term not exceeding one year.