Report

Evidence-informed Policy Making in the United Republic of Tanzania: Setting REACH-Policy Initiative Priorities for 2008-2010

Submitted by:
National Institute for Medical Research
P.O. Box 9653, Dar es Salaam,Tanzania
www.nimr.or.tz

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ABREVIATIONS

AMREF	African Medical Research Foundation
BAKWATA	Baraza Kuu la Waislam Tanzania
CDC	Centres for Disease Control and Prevention
CHMT	Council Health Management Team
COSTECH	Tanzania Commission for Science and Technology
CVL	Central Veterinary Laboratory
DMO	District Medical Officer
EPI	Expanded Programme on Immunisation
FBO	Faith-based Organisation
FHI	Family Health International
HKMU	Hurbert Kairuki Memorial University
HSSP	Health Sector Strategic Plan
IHI	Ifakara Health Institute
JICA	Japanese International Cooperation Agency
MAT	Medial Association of Tanzania
MDG	Millennium Development Goals
MKUKUTA	Mkakati wa Kukuza Uchumi na Kupunguza Umaskini Tanzania
MKUZA	Mkakati wa Kukuza Uchumi Zanzibar
MMAM	Mpango wa Maendeleo ya Afya ya Msingi
MoHSW	Ministry of Health and Social Welfare
MUHAS	Muhimbili University of Health and Allied Sciences
NACP	National AIDS Control Programme
NIMR	National Institute for Medical Research
NMCP	National Malaria Control Programme
NTLP	National Tuberculosis and Leprosy Programme
PMO-RALG	Prime Minister's Office Regional Administration and Local Government
RCH	Reproductive and Child Health
REACH-PI	Regional East African Community Health-Policy Initiative
RHMT	Regional Health Management Team
RMO	Regional Medical Officer
TACAIDS	Tanzania Commission for AIDS
TCSSC	Tanzania Christian Social Services
TPHA	Tanzania Public Health Association
UNICEF	United Nations Children's Fund

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EXECUTIVE SUMMARY

Background: Research is an essential element for the improvement of health as well as social and economic development. However, most often, research findings are lost because they are rarely made known to anyone beyond the research group itself. In the United Republic of Tanzania, like in many other developing countries, health research has not been very effective most likely due to poor linkages between researchers and policymakers. This national survey which involved government ministries, research and academic institutions, faith-based organizations, professional associations and development partners was carried out in June-August 2008 to explore the gaps between research and policy making in Tanzania and identify current priority policy issues in the health sector.

Objective: The objective of the study was to explore the policy making process and identify priority questions in health systems and policy that are likely to come onto the policy agenda in 2008-2010 periods. The study, commissioned by East African Community REACH-Policy Project specifically, aimed to identify the obstacles to better research-policy communication, capacity and willingness in research-policy dialogues and recommendations on what should be done to facilitate research communication in Tanzania.

Methodology: The survey drew opinions from researchers, academicians, civil societies, religious organization, development partners and policymakers. This was guided by an initial literature review summarising current thinking about the complex relationship between research and policymaking, and identifying some of the tensions that this relationship can generate. It was further complemented by two case studies on HIV/AIDS and Primary Health Care policy documents, as well as in-depth face to face interviews with selected stakeholders. Those interviewed were also asked about their level of satisfaction with the availability of scientific and technical information in a number of different areas. Current priority policy issues were explored from each respondent.

Results: The findings of this study have revealed that Ministries of Health in Tanzania have low capacity to locate, interpret and systematically review evidence in the process of policy development. There is lack of research culture among policy makers. There is inadequate staff with skill to identify credible and reliable scientific information to support their decision making process. There is no mechanism to provide feedback to those who have contributed in policy development. Moreover, some of the policy developments re politically motivated and not based on scientific information; yet others are initiated and pressurized by development partners or donor agencies. There is little involvement of civil societies and professional associations in policy development process. Moreover, they have no formal forum to link researchers and policy makers.

The research and academic institutions have satisfactory capacity to carry out researches. However, they have low capacities to repackage research findings into user-friendly language for policy makers' consumption. This was attributed to lack of research and policy analysts. In Tanzania, research institutes do not receive adequate core funding that would allow them to do long-term planning, establish and comply with national research priorities, and invest in creating strong research programme. International donors give support to research, but usually for one-off projects, which the donor agency often designs and lead. With inadequate local funding of research in Tanzania, international donors are a key source of funding for local research.

Many of those interviewed expressed a high level of dissatisfaction with the degree to which policy is based on scientific evidence. The biggest single obstacle to the take-up of scientific information in policy-development process was identified as low scientific understanding amongst policymakers. Others included limited openness of politicians to new ideas, a lack of dissemination of research findings and a

lack of incentives to take scientific information on board in their decisions. However, policymakers expressed a strong interest in greater access to advice from scientific experts regarding the policy relevance of their findings.

Conclusion: Research generation and utilisation involves several stakeholders including ministries, research institutions, academia, civil societies and development partners. The communication of scientific information for evidence-based policymaking is poorly institutionalised in the Tanzania. This is mainly due to lack of a strong linkage between key stakeholders in health research. Various health and health-related institutions have different views as to the health priorities. These varied from human resources, financing, maternal and child health services, communicable and non-communicable diseases and their control. The interrelation between researchers and policymakers is been by and large considered as an important factor in an appropriate research communication process. The generation, analysis and utilisation of research for policy development therefore, require an integrated approach that takes on board all key stakeholders. There is need to strengthen the local research capacity in both the conduct of research, dissemination and translation of the findings and policy development.

INTRODUCTION

Although support for control of major disease problems in the United Republic of Tanzania has increased considerably over the past few years, an impact on the disease burden has not yet been achieved. Serious obstacles in the control of these diseases include: poor access to health care and poor performance of health service delivery, poor availability of proper diagnosis and treatment, increased drug resistance, high costs of health services, under-utilisation of health facilities, weak surveillance system as well as lack of an effective health education and promotion programmes. Other obstacles include social, cultural and economic factors that influence decision in adopting disease control interventions among the population.

The understanding of the health problem in all its relevant aspects, as well as being aware of the options available for improvement is a pre-requisite for an appropriate intervention. There is always a need for assessing whether new options in disease control are likely to be feasible and acceptable to the people and the policymakers. This means not only appreciating the epidemiological and technical dimensions of the problem but also those factors that affect whether particular options will be feasible or not.

Policy makers, practitioners, planners and communities at large, need to make rational evidence-based decisions to manage health problems. To manage health problems in an effective and sustainable way, there is a certain set of knowledge and information they need to be aware of, such as the disease transmission, signs and symptoms and control and preventive measures. In most cases, the decision makers/community is likely to be aware of far less than this. The difference between the knowledge that the decision maker/community has and that which it should have, to make good decisions is referred to as knowledge gap (Mboera, 1997; Mboera et al., 2007).

The causes of knowledge gaps include: (i) *Research gap:* Some of the required information is just unavailable. Therefore, if the gap is to be closed, appropriate research needs to be carried out; (ii) *Synthesis/interpretation gap*: Research has been carried out on the topic concerned but this information has not been pulled together and interpreted in the context of the community's problem; (iii) *Dissemination gap:* Part of the reason for an information gap at the decision maker/community level may be that relevant information is just not reaching them. This implies that the health system service needs to be improved or that the form in which information is relayed to the community needs to be changed; and (iv) *Reception gap:* Although the information gets to the policymakers/decision makers/community, they may not be able to utilize it properly because they lack the necessary background knowledge. In this case more effort devoted to advocacy and/or training is implicated (Mboera, 1997).

Health research is essential for improvements not only in health but also in social and economic development. Research is in fact a very useful analytical tool in trying to address problems of society. There are areas in which appropriate utilisation of findings of research will lead to more accurate preventive action against diseases. The global picture shows clearly those countries which have had strong culture of research and which have invested in developing quality research capacities are the ones enjoying a high social status and have better control of the global economics (Mwakyusa, 2007. Research has contributed better diagnostic and disease management tools, appropriate and adequate disease prevention and control strategies, and research continues to guide the conduct of interventions for greater input.

In most developing countries, most often research results are "lost" because they are never made known to anyone beyond the research group itself. In such countries, health research has not been very effective and that researchers are not interested in whether their results are used or not, but only in publishing papers in their own interest. Yet even then, much research never appears in print. Lack of utilisation of

research for development is mainly due to lack of capacity and effective policy and utilisation mechanisms.

Today's healthcare environment is changing rapidly, and decision makers are facing a complex environment, vast quantities of information that is often contradictory and comes from many different sources and new demands for accountability. To make informed decisions they need to refer to scientific evidence, which includes evidence from published research articles. Research is therefore, one of the many types of information and data used in making decisions. In particular, health services research can help to explain the need for certain decisions and to show the reasons for choosing one of many competing arguments; and increase confidence in decisions that are made. Making the best use of the ever-growing body of research information is essential for any health services or health policy organization. However, it is been realised that the field of knowledge production and policy formulation and implementation are very different and their goals and methods for working and evaluating results are complex and completely different and not easily interchangeable (Almeida & Bascolo, 2006).

There are four categories of problems which are major stumbling blocks in bridging the gap between research and policy formulations (Mwakyusa, 2007). The first category relates to ignorance of the value and potential contribution of the new knowledge or tools towards solving the problems at hand. That is, new knowledge may be available and yet inaccessible to the intended. The second category relates to the natural tendency or predisposition of the individual, community or policy maker to stick to the old way of doing things while being full aware of the existence of the new knowledge and its potential benefits. This is mainly caused by the inertia of holding into the old familiar ways, and natural resistance to change. Thirdly, is a problem related to affordability of adopting the new knowledge, a factor closely linked to poverty. Individuals or the system may be unable to afford health products or services even when they are excellent and could offer great benefits. Lastly, is the occasional lack of guidance by researchers on how to implement a proposed policy of intervention.

The Regional East African Community Health Policy Initiative (REACH-PI) recognizes increasing momentum towards reforms of national health systems among East African Partner States. The REACH-PI aims at carrying out a range of concrete tasks aimed at fostering better links between researchers, policy and decision makers, and users with a view to promote "knowledge translation" between them to overcome the know-do gap regarding large burdens of preventable diseases among populations in East Africa.

The main objective of this study was to determine health policy development process to identify priority policy questions in health sector that are likely to come onto the policy agenda in 2008-2010 period in the United Republic of Tanzania .

METHODOLOGY

The methodology used in this study combined literature review, face-to-face and self-administered interview of key informants.

Literature review

A review of documents on health profile and policy was carried out using current health sector policy framework, specific sector policies and current sector strategic plans. In the process, policy gaps and main actors in the health sector were identified. Issues addressed covered health policy, service delivery and organizational structure of the Ministry of Health and Social Welfare, health financing, health services access and utilisation and human resources. The authors independently and then selected the following government policy documents for critical analysis. These were

- Ministry of Health and Social Welfare, Tanzania, National AIDS Control Programme. http://www.nacp.go.tz/about_us/index.php. (Accessed on 09/09/2008)
- Health Sector Strategic Plan III July 2009 – June 2015. Ministry of Health and Social Welfare, the United Republic of Tanzania. Final Draft Version 17 September 2008.
- Zanzibar Health Sector Reform Strategic Plan II, 2006/07-2010/11. Ministry of Health and Social Welfare, Revolutionary Government of Zanzibar, 2007.
- National Multi-sectoral strategic Framework on HIV/AIDS, 2003 – 2007, pre final, October, 2002. The Prime Minister's Office, Tanzania Commission for HIV/AIDS.
- Ministry of Health and Social Welfare. (2007) Primary Health Services Development Programme (PHSDP)/Mpango wa Maendeleo wa Afya ya Msingi (MMAM) 2007 -2017. The United Republic of Tanzania.
- Tanzania Health Research Priorities 2006-2010
- Medium Term Malaria Strategic Plan 2008-2013

Key informant interview

A mapping exercise was conducted by the research team to identify and develop a stakeholder list and identify potential respondents in government, research and academic institutions, development partners, civil societies and faith based organizations. Key informant interviews from key stakeholders were conducted using an in-depth interview guide (Appendix 1 and 11). Face to face interview followed by an application of self-assessment tool, and discussion with those participating organizations were conducted to identify the gaps in evidence to policy link and preliminary list of interventions

Information sought included sources of research findings needs; ability to assess reliable, credible and relevant research findings; and ability of the organization to present the research findings to decision makers. Others included availability of skills, structures, processes, and culture in the organization to promote and use research findings in decision-making; utilisation of research findings; searching for scientific information; gaps; and suggestions for better use of research. The assessment also aimed to help organizations and institution to use the self-assessment tool to help them evaluate their capacity to identify policy challenges/issues in the country and timely use research evidence to inform policies.

Case studies

Two case studies were undertaken to include recent policy documents. The aim was to explore (i) the involvement of scientific methods in development of policy; (ii) participation of various stakeholders in

policy formulation; (iii) relevancy of the policy in relation to the available scientific evidences. These case studies were based on some of the key policy issues that were mentioned during in-depth interviews with key informants.

RESULTS

1. Literature Review

The United Republic of Tanzania (including the Islands of Zanzibar) is located between longitudes 28 and 37^0E and latitudes 1^0S and 12^0S. It has a total area of 947,480 km^2, of which 93.2% constitutes land and the remainder is water bodies. The country is divided into 26 regions and 140 districts. Each district is subdivided into divisions, wards and villages. Approximately, there are 10,000 towns and villages in the country. The councils (district, town, municipal, and city) are the most important administrative and implementation structures for public health services.

Tanzania population is estimated at 38.7 million with an annual growth rate of 2.9% (URT, 2003). The overall population density is 38 people per square kilometre. Approximately, 20% of the population is made up of <5 years of age and about 4% are pregnant women. The average household size is 4.9 persons. About 65% of the inhabitants are below 25 years of age and those aged 10 -24 constitute 31%. Of the total population, 23.1% are living in urban areas and 76.9% in rural areas. The maternal mortality ratio is 578 per 100,000 live births (TDHS 2005). Infant and under five mortality are estimated at 68 and 112 per 1000 live births, respectively. The life expectancy at birth for Tanzanians is on average 51 years.

Tanzania Mainland

National Health Policy

The health sector is guided by national policies, such as Government Reforms. The National Strategy for Development and Poverty Reduction (MKUKUTA) 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 (MoH, 2008a). The Health Sector Reforms programme continues with further strengthening of Local Government Authorities and hospitals to improve their performance. The Primary Health Service Development Programme aims at improving accessibility and quality of the health services. The Second Health Sector Strategic Plan (HSSPII) is coming to an end and the country is finalizing the development of the Third Health Sector Strategic Plan (HSSP III). The HSSPIII is expected to cover the period of July 2009 – June 2015.

The formulation process of the Third Health Sector Strategic Plan 2009 – 2015 (HSSP III) was lead by the Health Sector Reform Secretariat under the Division of Policy and Planning, Ministry of Health and Social Welfare, involving key stakeholders from relevant levels and institutions including the Prime Minister's Office for Regional and Local Government (PMO-RALG). The HSSP III is expected to consolidate existing Health Sector Reforms and it retains the key strategic priorities of the HSSP II adding some new priorities identified namely Social Welfare, Emergency Preparedness and control and Maternal, Newborn and Child Health (MoH, 2008a).

The vision of the Health Policy in Tanzania is to improve the health and well being of all Tanzanian with a focus on those most at risk, and to encourage the health system to be more responsive to the needs of the people. The policy mission is to facilitate the provision of equitable, quality and affordable basic health services, which are gender sensitive and sustainable, delivered for the achievement of improved health status. There are eight objectives of the Health Policy in Tanzania. It is the objective of the policy to reduce the burden of disease, maternal and infant mortality and increase life expectancy through the provision of adequate and equitable maternal and child health services, facilitate the promotion of environmental health and sanitation, promotion of adequate nutrition, control of communicable and non-communicable diseases and treatment of common conditions. The government aims to ensure the

availability of drugs, reagents and medical supplies and infrastructures; and also ensure that the health services are available and accessible to all the people in the country. To complement this, the government will strengthen capacity and make available competent and adequate number of health staff to manage health services with gender perspective at all levels. The community will be sensitized on common preventable health problems, and improve the capabilities at all levels of society to assess and analyse problems and design appropriate action through genuine community involvement. The policy plan to promote awareness among the community that health problems can only be adequately solved through multisectoral cooperation involving public sectors such as education, water, agriculture; non-governmental organizations, Civil Societies and Central Ministries such as Regional Administration and Local Government, Community Development, Gender and Children. Other strategies are to create awareness through family health promotion that the responsibility for ones health rests in the individuals as an integral part of family, community and nation; to promote and sustain public-private partnership in the delivery of health services; and to promote traditional medicine and alternative healing system and regulate the practice.

The national health policy is supported by the Tanzanian Development Vision 2025 which aim to achieve high quality livelihood for all Tanzanians through strategies, which will ensure (i) access to quality primary health care for all; (ii) access to quality reproductive health service for all individuals of appropriate ages; (iii) Reduction in infant and maternal mortality rates by three quarters of current levels; (iv) Universal access to clean and safe water; (v) Life expectancy comparable to the level attained by typical middle-income countries; (vi) Food self sufficiency and food security; and (vii) Gender equality and empowerment of women in all health parameters.

The key to the National Policy Strategies is based on Poverty Reduction Strategy. According to the Poverty Reduction Strategy, the Ministry of Health and Social Welfare is expected to use a greater proportion of the health budget to target cost effective interventions such as childhood immunization, Reproductive and Child Health including family planning and control of malaria, HIV/AIDS, and tuberculosis. The majority of the poor and specifically the rural poor suffer from the above and other preventable conditions. The Ministry of Health, therefore intends to continue to advocate for an increase in resource allocation to address cost effective interventions, while at the same time join hands with other stakeholders, the communities and development partners to reorient the services to be more responsive to the needs of the population, and specifically targeting the disadvantaged and vulnerable groups.

Despite the ambitious strategies, several challenges face the health delivery system in Tanzania. These include severe shortage of human resources for health; inequity in distribution of health services; the urban-rural divide; availability of quality health services; access to quality health services; and coverage with effective health interventions (Kitua, 2007).

Service delivery and organizational structure

The National Health System is based on decentralized services to Local Government Authority (LGAs) in line with decentralization by devolution principle. The Ministry of Health and Social Welfare and the Prime Minister's Office Regional Administration and Local Government (PMORALG) are jointly responsible for the delivery of public health services. In addition, the central Ministry of Health and Social Welfare is responsible for policy formulation and the development of guidelines. At the regional level, the Regional Health Management Teams (RHMTs) interpret these policies and supervise their implementation in the districts. The District Health Management Team (DHMT) is responsible for council health services including dispensaries, health centres and district hospital. The District Medical Officer (DMO) heads the DHMT as in charge of all district health services. The DMO is answerable to the LGA. The DHMT follows guideline for planning and management of district health issued jointly by MOHSW and PMORALG. The DMO is accountable to the Council's Director on administrative and managerial matters and responsible to the Regional Medical Officer (RMO) on technical matters.

The health system in Tanzania is categorised into household, community, facility, district, regional and national levels. Healthcare is initiated at the household level. In many cases, care is sought from either traditional or conventional health facilities, most often, when homecare has failed. Healthcare facilities are mainly responsible for curative services. Preventive services in most cases are provided by the district health teams.

A dispensary provides preventative and curative outpatient services to clients from the local communities and normal deliveries. Health centres have 25–30 inpatient beds. They cater for inpatients and outpatients, deliveries, receive referrals from dispensaries, as well as conduct preventive service activities. Hospitals provide outpatient and inpatient services at higher level to dispensaries and health centres. Laboratory diagnostic services (including radiology) and surgical services are provided by hospitals. The referral system is made up to three levels; dispensaries, health centres and hospitals.

Some public health (disease control) programmes are implemented vertically from the Central Ministry of Health. These include the Expanded Programme on Immunisation (EPI), Reproductive and Child Health (RCHS), National AIDS Control Programme (NACP), National Malaria Control Programme (NMCP), National Tuberculosis and Leprosy Programme (NTLP) and School Health Programme. Others include disease elimination programmes such as Onchocerciasis, Lymphatic Filariasis and Trachoma.

The private-public partnership (PPP) strategy has enhanced the policy of service liberalization. Faith-based Organisation (FBOs) and private sector for profit is part of the health service deliver system. The Government supports the work of voluntary agencies through substantial subsidies. Voluntary agencies run 40% of all health facilities (Table 1) and provide 40% of hospital beds. The private organizations also provide care through their hospitals, health centres and dispensaries.

Table 1: Health facilities in Tanzania Mainland according to ownership, 2006

Facility type	Type of ownership				
	Government	Voluntary	Parastatal	Private	Total
Consultancy/ Specialized Hospitals	6	2	0	0	8
Regional Hospital	17	0	0	0	17
District Hospital	61	19	1	0	81
Other Hospitals	0	74	8	34	116
Health Centres	300	82	5	47	434
Dispensaries	2,788	613	164	843	4,408
Total	**3,172**	**790**	**178**	**924**	**5,064**

Source: HMIS database, Ministry of Health and Social Welfare (2006)

Health financing

Tanzania is following a mixed type of financing the health system. It is largely relying upon a tax financial system of which about 70% is obtained from public financing. Taxation is complemented by user fees in the form of cost sharing in government health facilities. The Ministry of Health has also introduced Community Health Fund and National Health Insurance Fund (NHIF) scheme.

In line with fiscal decentralization the MOHSW has developed a formula for resource allocation from central to local government. The formula is used for government grant as well as basket funds. Domestic funds drive the recurrent budget, while the development foreign funding more heavily influences the capital budget. Off-budget funds are predominantly foreign; with the domestic contributions made by cost-sharing scheme in the sector (excluding NHIF) contributing 10–20% or more than 60% of the other charges of total projected off-budget resources. The government funding is channelled through four sources, namely the Ministry of Health and Social Welfare budget, the Ministry of Local Government

budget, revenues of the Councils from development levy and other locally generated sources and finally the Prime Minister's budget.

Currently, the health expenditure constitutes 4.5% of the gross domestic product (GDP). For the past five years the health budget has been growing in the range of 8% to 14% (2003). The health expenditure in 2005 was estimated at 10% of public expenditure and this corresponded to US$ 7.42 per capita per annum. However, when donor funds were included the per capita was US$11.57 for 2005 (it was US$8.12 in 2004). This allocation is far less the recommended rates by the World Development Report 1993 (US$12 per capita) and the Commission for Microeconomics and Health (US$ 35 per capita). The Abuja target for health expenditures is 15% of government expenditure. Although, under the National Vision 2025 the health sector has been given higher status through *Cluster II* of the National Strategy for Growth and Poverty Reduction (popularly known as *MKUKUTA*) as a key factor in economic development, the national budget for health for 2007/2008 was only 9.3% of total government expenditure (only about half of the Abuja target of 15%).

In the period 2006 - 2007, real GDP growth was 6%. Also GDP in agriculture has increased in recent years. The GDP growth has not reduced poverty in an equitable manner. Productivity has remained low, especially among smallholder farmers who constitute the majority of agricultural producers in Tanzania. A combination of low production, low productivity and low quality of agricultural produce has significant limiting effects on rural growth and therefore on poverty reduction (Household and Budget Survey 2007

Health Services Access and Utilization

The government's policy on provision of health services includes user-fees, which was introduced in 1993 as a cost-sharing programme. The user-fees were introduced at regional and referral hospitals for curative services only, in order to pay for the increased health expenditure as the population grows and as health services develop. User fees were later introduced at health centre and dispensaries only where a prepayment scheme i.e. Community Health Fund (CHF) was established. The user-fees were expected to improve the quality of services provided and to reduce the waiting time for services. The introduction of CHF and exemption mechanism for the poor and indigent, made services more available and accessible beyond the district hospital. However, in most districts, the identification of those who qualify for exemption has been difficult. All preventive services, including immunization, antenatal care and deliveries, and some communicable diseases like tuberculosis and HIV/AIDS continue to be free to all Tanzanians. The government has also introduced free insecticide treated nets for all <5 years children since August 2008.

In Tanzania, geographical inequalities in health service access and utilization do exist. Access to health care is constrained mainly by long distances to health facilities, poor road infrastructure, lack of public vehicles for transportation, lack of ambulance services and poor quality of service and at times non-availability of services. Most public dispensaries lack access to funds to provide appropriate services. All these are exacerbated by the socioeconomic/income inequalities in the access and utilization of health services by the members of the households.

Access to health service utilization is also cause-specific. Although the access to immunization service through the antenatal care is excellent, there are clear inequalities in the access to and utilization of services related to tuberculosis, malaria, HIV/AIDS and diarrhoeal diseases. Despite a very high (90%) antenatal care service coverage (TDHS, 2005), only about 72% of pregnant mothers are attended by nurses or midwives in terms of early attendance and that only 14% of pregnant mothers attend antenatal care (ANC) in their first four months of gestation as recommended. Trend in antenatal care coverage has increased from 83% in 2000 to 90% in 2004. However, the trend has not been stable (TDHS 2005). On the

other hand, despite this high registration of pregnant mothers for ANC services only 46% deliver at healthcare facilities (TDHS, 2005).

Human Resources for Health

Tanzania faces severe human resource shortages in health, a situation aggravated by the conditions imposed upon by the International Monetary Fund in the early 1990s not only to halt health workers recruitment, but also retrench and downsize the workforce in existence (Kitua, 2007). Statistics indicate that Tanzania has an estimated 48,000 health workers, many of whom are unskilled. Moreover, the workforce is unevenly distributed in favour of urban centres as compared to rural areas (Wyss, 2004; Dominick & Kurowski, 2004). About 51% of all practicing medical doctors are in Dar es Salaam. The recent deterioration of this ratio has also been attributed to retirements, brain drain and deaths of the healthcare staff. The rural communities are worse hit by the inadequate human resource for health. Poor infrastructure coupled with poor remuneration of health professionals and lack of differential incentives makes it extremely difficult to attract well-trained personnel to work in the rural areas (Kitua, 2007). The shortage is further compounded by low productivity (Mæstad, 2006), ineffective financial and non-financial incentives (such as poor pay), a poor working environment (Dominick and Kurowski, 2004), lack of supportive supervision (Manongi et al., 2006), poor career schemes (Dambisya, 2007), migration to other attractive health care labour markets in Africa and the developed world (Dussault & Franceschini, 2006), and absenteeism and the loss of health workers due to AIDS (Ngalula et al., 2005).

Currently, the doctor: population ratio stands at 1:20,000 people. The number of staff working at the district and regional levels is inadequate and stands at about 30% of the manning levels required according to establishment (Ministry of Health, Joint Annual Health Sector Review 2006). The shortage of staff that exists in many health facilities has lead to increased workload to available staff.

Human Resource Human development is being addressed as a priority in order to respond adequately to improvements in health services. More specifically, the agenda is the right sizing of multi-professional workforce, better quality of staff training, a more balanced approach to the allocation of human resources across service levels and geographical areas, and workforce incentives and remuneration package, including retention strategy. There have been a number of initiatives being carried out by the Ministry of Health, including raising the number of trainees in public run institutions and university graduates. Yet more effective collaboration is needed between the Ministry of Health and other sectors such as Local Government, Ministry of Finance and Department of Public Service Management to assure effective development and retention. Other aspects of staff motivation, such as good work recognition, helping to perform better, improving working environment are used in some districts to enhance worker' retention strategy.

A recent study by Munga & Mbilinyi (2008) indicates that the causes for Tanzania's health system failure to retain motivated health workers are many, and are not limited to individual based choices but are also influenced by macro factors in the health care system and factors from other sectors and systems. Efforts to address human resource for health in Tanzania require holistic strategic efforts recruitment, placement and retention. Specific policies and strategies for specific cadres and places need to be designed and implemented, taking into account that the health sector is just a small part of the bigger social system.

Zanzibar

Zanzibar is a semi-autonomous region within the United Republic of Tanzania. It comprises two main islands, Unguja and Pemba, and a number of sparsely populated islets. Unguja Island covers an area of about 1,464 km^2 and Pemba Island covers an area of about 864 km^2. Zanzibar has its own government and is directly responsible for all non-union affairs, including health services. There are five administrative regions, three in Unguja and two in Pemba island which are subdivided into 10 districts.

There are 50 constituencies and 289 Shehias. The Shehia is the lowest administrative level of the government structure. According to the 2002 Population and Housing Census, Zanzibar has a total population of 981,754 people with an annual growth rate of 3.1%. Unguja has a population of 620,957 and Pemba has 360,797 (females= 502,006; male=482,610. The population structure shows that under-fives account for almost 16% of the population, while the proportion of the population below the age of 15 years is about 47%. The population in age group 15-64 years, is estimated at 49%, with the remaining 4% being those aged 65 years and above (URT, 2003). Life expectancy at birth is be 57 years (NBS, 2002). The infant mortality rate is estimated at 61 per 1,000 live births, while under-five mortality is estimated at 101 per 1,000 (TDHS, 2005).

Mortality and morbidity in Zanzibar continue to be dominated by preventable, communicable diseases such as malaria, tuberculosis, and diarrhoea, including an increase in the number of cholera outbreaks. Conditions related to pregnancy and childbirth, and respiratory infections in young children also contribute significantly. At the same time, Zanzibar has documented a marked increase in non-communicable diseases, such as diabetes mellitus, cardiovascular disease, and breast cancers (RGOZ, 2007).

Currently, Zanzibar is implementing its second Health Sector Reform Strategic Plan (2006/07-2010/11) which is guided by the goals and objectives of Zanzibar National Health Policy (RGOZ, 2007). A number of national and international conventions, declarations, and policy documents have contributed to the preparation of this strategy. These include: the Constitution of Zanzibar; Zanzibar National Health Policy (1999); Vision 2020; the Zanzibar Poverty Reduction Plan; Millennium Development Goals (MDG); the Beijing platform; the Abuja Declaration; the Convention on the Elimination of all forms of Discrimination against Women; the Convention on the Rights of Children; and Education for All.

The second Zanzibar Poverty Reduction Plan (popularly known as MKUZA) covers the period 2006 to 2010. Health, nutrition, and water and sanitation are all included under Cluster 2 of the MKUZA. Cluster 2 covers social services and well-being, and addresses broad issues of human capability. Each of these goals has a number of operational targets, some of which are related to health status and others to coverage of health services. Several are drawn from the MDG key indicators.

The health system in Zanzibar enjoys a commendable infrastructure with more than 95% of Zanzibaris living within ≤5 km of a health facility. Health services are delivered through specialized vertical programmes such as Reproductive and Child Health (RCH), Zanzibar AIDS Control Programme (ZACP) and the Malaria Control Programme (ZMCP). Health services are decentralized and are planned and implemented at district and community levels. Primary Health Care (PHC) through service delivery at the community level and at Primary Health Care Units remains the cornerstone in Zanzibar, with Primary Health Care Centres and District Hospitals providing first line referral facilities. These facilities cannot provide certain specialized services, which are normally provided for at secondary and tertiary levels.

Zanzibar Health policy

The overall goal of the Zanzibar health policy is to *"improve and sustain the health status of all Zanzibar people"* (RGOZ, 2007). The intermediate objective is the reduction of both the absolute levels of morbidity and mortality from all major causes, and the disparities in those levels between different population groups and geographical areas. Emphasis is given throughout to ensuring that vulnerable groups such as the poor, women of reproductive age, children, the disabled and the elderly are assured of access to high quality services. Strengthening of primary health care remains the primary strategy.

Over the years, Zanzibar has developed an impressive public sector health infrastructure, based on a network of first and second line Primary Health Care Units in both urban and rural areas. These refer

either to 30-bed Primary Health Care Centres (known also as cottage hospitals) and/or district hospitals, which in turn are supported by Mnazi Mmoja Hospital as the major referral point for the islands. Specialist inpatient psychiatric care is currently provided only on Unguja, at Kidongo Chekundu Hospital. The numbers and distribution of public health infrastructure is summarised in Table 2.

Table 2: Public health facilities, 2006

District	PHCU		PHCC	District Hospitals	Other Hospitals	
	1st Line	2nd Line			Tertiary	Special
Urban	5	5			1	2
West	10	2				
North A	10	2	1			
North B	6	3				
Central	17	4				
South	7	2	1			
Wete	17	1		1		
Micheweni	9	3	1			
Chake Chake	11	2	1	1		
Mkoani	13	2		1		
Total	**105**	**26**	**4**	**3**	**1**	**2**

There is also a private health sector which is largely concentrated in the urban areas, notably Zanzibar town. There are about 99 privately owned facilities of which, 96 are dispensaries (or clinics) and three are general hospitals. Over 89.5%of the private facilities are located in Zanzibar. The rest are in Pemba.

Community-based health care takes place at two levels. There are outreach services from the health facility which include immunisation, home-based care, health education and promotion activities. Community-based Directly Observed Treatment for tuberculosis is been implemented in areas more remote from health facilities. The lowest level of public health facility is the Primary Health Care Unit (PHCU), of which there are two types. On one hand, the first line PHCUs have an estimated catchment population of 3,000-5,000 and provide the following services: (i) Basic outpatient services, including the management of common diseases and injuries; (ii) Maternal and child health services, including growth monitoring, immunisation, antenatal, delivery services, and post-natal services; (iii) Family planning and youth friendly services; (iv) Health education, counselling and referral to service point for voluntary counselling and testing, prevention of mother to child transmission; (v) environmental health services; and (vi) Outreach services/community-based health care services, including home-based care and care of the elderly. Second line PHCUs offer a similar service package to the first line PHCUs, with the addition of: (i) Facility-based delivery (currently being scaled up); (ii) Basic laboratory services, and (iii) Dental services.

Generally, antenatal coverage in Zanzibar is good, with 98% of women attending at least once during pregnancy, and 74% receiving at least one tetanus toxoid vaccination. Home deliveries have reduced from 63% in 1999 to 50% in 2004 (TDHS 2005). However, postnatal care coverage remains relatively low at 46%, with disparity between Unguja (56%) and Pemba (34%).

In terms of communicable diseases, malaria has historically been the major cause of morbidity and mortality in Zanzibar, particularly among children. A new drug policy of artemesinin combination therapy (ACT) was introduced in 2002, and insecticide-treated net (ITN) was scaled up during the first strategic plan period, resulting in an increase in coverage from 3.4% in 2002 to 45.8% in 2005 (RGOZ, 2007). As a result, there is some evidence that the incidence of malaria due to *Plasmodium falciparum*, is now falling. Other major diseases include HIV/AIDS and tuberculosis.

The 2002 prevalence survey indicated that overall HIV prevalence on the islands was relatively low (compared to the mainland) at 0.6%, with the figure being higher among young adults and women. The main transmission route of HIV is unprotected heterosexual sex, indicating the need for efforts to be maintained to prevent the spread to the broader population. There has been a slow but steady increase in smear positive tuberculosis in Zanzibar in recent years, and there are concerns that among HIV positive persons, TB incidence is rising much faster. The distribution of the TB burden around the islands is not even, with cases more concentrated in urban areas. The growing importance of non-communicable diseases (NCD) in the overall disease burden in developing countries has been recognised in recent years. The situation of NCD in Zanzibar mirrors that of other developing countries, with an increase particularly in diabetes and hypertension being seen in the health facilities.

Resources for Health

Like in the Mainland, human resources in Zanzibar are a critical factor for successful operationalisation of the current strategic plan. The health infrastructure in Zanzibar is impressive when compared to the mainland and to other low income countries in the region. A concerted programme of expansion in the 1960s and 1970s resulted in 100% of the population being within 10km of a public health facility, and 95% within 5km. Additional facilities have been built since this period, in response to the increase in population.

A number of physical structures are in place in many shehias, many of them had fallen into disrepair after 1995, as a result of the constrained resource availability. Much work has been undertaken during the first ZHSRSP period to renovate and rehabilitate these facilities, particularly PHCUs. To date, 52 first line PHCUs have been renovated.

Research and evidence-based decision-making

Most of the statistics used for planning in Zanzibar are based on the Health Management Information System. The system has been in place for well over a decade, but it needs updating in order to better support the functioning of a decentralised health system. Ongoing technical support has assisted in the revision of the data forms at health facility level, in collaboration with the technical programmes, and the process of agreement of a core set of indicators for PHC is underway. A database is currently under development that will incorporate routine health data, population /census data, information on health facilities and other infrastructural resources, human resources (through linkages with the personnel information system), and finances.

The need for both operational and bio-medical research in the sector is well-known. At present however, there is no coordinated approach to research, despite the existence of a Research Council which was revived during the first Strategic Plan period with the help of a Task Force. Failure to institutionalise budgets and constraints on the time of members of the Task Force has resulted in the Council remaining marginalised.

Collaboration with a number of institutions has been established, although without formal links. These include the Public Health Laboratory on Pemba, National Institute for Medical Research (Tanzania Mainland), the College of Health Sciences, Mnazi Mmoja Hospital, and various universities. The islands appear to be more a passive recipient of research rather than having an active research agenda which is targeted at clearly identified needs. Research capacity within the MOHSW is in urgent need of strengthening, not least as several individuals previously active in this area have recently left the system.

Health Financing

The health sector is currently financed from three main sources: RGOZ, development partner contributions (multilateral and bilateral), and the public. According to the 2006 health sector Public Expenditure Review, the Government contribution accounted for 29% of spending in the sector in

FY2004/05, while development partners accounted for the balance of 71%. RGOZ provide the core funding for the running costs of the health service infrastructure, including the salaries of public health sector workers, with personal emoluments accounting for just over 70% of budget and close to 90% of expenditure in FY2004/05. Although the budget has been increasing in nominal terms, the real value has fallen since FY2003/04, and in per capita terms RGOZ spend was estimated at US$4.19 in FY2004/05. External funding dropped sharply after 1995, adversely affecting the implementation of health services in Zanzibar. However, there has been a recent inflow due in large part to the increase in funding from global health initiatives.

Cost-sharing in the sector remains limited at present, with minimal revenue generated to date. Charges currently in place include those for issuing of infectious disease certificates, for some services of the Government Chief Chemist, and for X-rays and blood tests. Subject to the identification of funding to support the necessary preparatory activities, the Ministry intends to introduce both user fees and a Community Health Fund, in order to mobilise funds to strengthen health service delivery.

Priority areas for health research in Tanzania (2006-2010)

Priority setting in health and health research is of paramount importance for better utilisation of merger resources. Tanzania is implementing its Second Health Research Priorities plan which was finalized and launched in March 2006 (NIMR, 2006). Unlike the previous health priorities, the current health research priorities were developed through a process of documentary review, research, consultation and workshop of technical groups and key stakeholders. The current health research priorities are summarized in Table 3.

Table 3: Summary of research areas: highest (H), medium (M) and lower (L) priority

	BIOMEDICAL RESEARCH		HEALTH SYSTEMS RESEARCH
H	Communicable Diseases, Major	H	Human Resources for Health
H	Communicable Diseases, "Neglected"	H	Reproductive and Child Health
H	Maternal and Child Health	H	Health Service Delivery
M	Disease Control	H	HIV/AIDS
M	Non-Communicable Diseases	H	Health Financing
M	Nutrition	M	Drugs and Medical Supplies
M	Basic Research	M	Health Information
L	Environmental Health	M	Health Policy
L	Product Development	M	Essential Health Interventions Packages
L	Gender	M	Decentralisation
L	Traditional and Alternative Medicine	L	Inter-sectoral Collaboration
L	Occupational Health	L	Public Private Partnership
		L	International Funding Initiatives
HEALTH DETERMINANTS, SOCIO-CULTURAL, HEALTH RELATED BEHAVIOUR			

Source: NIMR (2006)

A detailed analysis of the current health research priorities provides an overview of the most pressing biomedical and health system and policy issues. For instance under the broad area of human resource for health issues to be considered for research include adequacy, human performance of staffing levels, incentive packages for hard to reach areas, recruitment and retention, etc. (Table 4).

Table 4: Health Systems Research broad and specific priority areas

Broad areas	Specific areas
Human resources for health	■ *Adequacy of staffing levels* ■ *Design and test incentive packages for hardship areas* ■ *Recruitment and retention* ■ *Impact of lengthy procedures in recruitment* ■ *Investigation of labour market competitiveness* ■ *Leadership factors affecting human resource management* ■ *Factors of the current human resource management* ■ *Human resource performance* ■ *Labour market and effects to human resource training* ■ *Graduate tracer studies* ■ *Declining interest in MD especially on Post graduate level*
RCH	■ *Factors mitigating against safe motherhood* ■ *Factors determining place/choice of delivery by 'skilled workers'* ■ *Availability and effectiveness of EMOC services* ■ *Adequacy of peri-natal and neonatal care* ■ *Infant and Child Feeding & Breast feeding Practices* ■ *Factors contributing to neonatal and perinatal morbidity and mortality* ■ *Status and adequacy of post natal and post abortion care in maternal health* ■ *Factors causing variations in MMR and IMR & U5M across regions and districts*
Health Service Delivery	■ *I.E.C and behavioural change communication* ■ *Physical conditions of buildings and impact to services* ■ *Distribution of health facilities* ■ *Quality of health services (Technical and clients aspects)* ■ *Referral system* ■ *NGO co-ordination and working relationships* ■ *Equity* ■ *Supervision, monitoring and evaluation* ■ *Roles and contribution of traditional medicine to service delivery* ■ *Levels of utilization of health services* ■ *Integration of services* ■ *Capacity of districts to control distribution of resources* ■ *Market forces and effects to decentralization*
HIV/AIDS	■ *Scaling up of intervention VCT, PMTCT, ARVs interventions* ■ *Issues of equity on interventions* ■ *Stigma and discrimination* ■ *Co-ordination of activities on HIV interventions especially by NGOs* ■ *Impact on health service delivery system* ■ *Effectiveness of current interventions* ■ *Socio-cultural aspects on HIV transmission including behavioural change* ■ *Traditional healers practices*
Health financing	■ *Resource mobilization and impact* ■ *Resource allocation at different levels* ■ *Benefit incidence analysis* ■ *Studies on financial accountability to tax payers* ■ *Cost and expenditure tracking studies*
Drugs and Medical	■ *Drug importation*

Supplies	■ *Storage and distribution* ■ *Rational use of drugs* ■ *Drug policy implementation* ■ *Key gaps in essential supply system*
Health Information	■ *HMIS* ■ *Effectiveness and efficiency of tools for decision support and adoptive management* ■ *Health information systems, information technology and communication systems in the Health Sector* ■ *Research on information uptake* ■ *Utilization of health information for policy and decision making*
Health Policy	■ *Effective use of evidence in policy and decision making* ■ *Causes of limited utilisation of research findings to inform policy and decision making* ■ *Capacity building in policy analysis* ■ *Evaluation research relating to implementation of various programmes*
Essential Health intervention Packages	■ *Applicability, success or failure* ■ *Resource availability* ■ *Status of intervention* ■ *Cost effectiveness* ■ *Scaling up of major interventions (Malaria, TB-DOTS, EPI etc)*
Decentralization	■ *Mismatch between roles and qualification of officials at decentralised structure* ■ *Effect of current organizational structure to effective decentralization* ■ *Community involvement and participation* ■ *Effectiveness of Health Boards and Committees.*
Socio-cultural determinants	■ *Food taboos in pregnancy and child/infant health* ■ *Female Genital Mutilation* ■ *Gender issues* ■ *Sexual abuse* ■ *Inheritance of widows* ■ *Early marriage* ■ *Social constructs (taboos, customs, beliefs, traditions)*
Inter-Sectoral collaboration	■ *Sectoral problems as implications of the implementation of MKUKUTA* ■ *Conflicting regulations/legislation authority* ■ *Sector wide Approach to programming, synergies, collaboration, resource sharing, synchronizing programmes and projects* ■ *Duplication of efforts and roles* ■ *Inter- Sectoral issues under MDGs related to:* o *Environmental sustainability* o *Nutrition,* o *Sanitation and* o *Water safety access*
Private- Public Partnership (PPP)	■ *Contract management* ■ *Explore main challenges for PPP*
International Funding Initiatives	■ *Impact of existing initiatives* ■ *The Implication to the national priorities* ■ *Sustainability and Coordination*

Source: NIMR (2006)

It is described explicitly in the Health Research Priorities document that before 1999, there was little evidence of explicit prioritisation for health research. "*Individual researchers were at liberty to decide on the problems to research upon. This was the likely reason why the bulk of the research funding was directed to biomedical research while other important areas of health research were neglected*". The current priorities have addressed this gap by making sure that neglected areas such as health policy, health information systems, health education and promotion as well as the relationship between developmental policy and health are given due importance.

In-depth Interviews

Institutions visited

A total of 22 respondents from 19 organizations were involved in the survey. This included government ministries (3), universities (2), research institutions (4), development partners (5), civil societies (3), and faith-based organizations (2) (Table 5). Within the Ministry of Health and Social Welfare (Dar es Salaam), the following were included in the interview: Directorate of Policy and Planning, Directorate of Preventive Services, National Malaria Control Programme and National AIDS Control Programme.

Table 5: List of interviewed institutions and respondents

Category	Name of the Institution	No. of interviewee
Government	Ministry of Health and Social Welfare (Dar es Salaam)	4
	Ministry of Health and Social Welfare (Zanzibar)	1
	Prime Minister's Office: Tanzania Commission for AIDS	1
Research and Academic Institutions	National Institute for Medical Research	1
	Ifakara Health Institute	1
	Tanzania Commission for Science and Technology	1
	Central Veterinary Laboratory	1
	Muhimbili University of Health and Allied Sciences	1
	Hubert Kairuki Memorial University	1
Development Partners	United Nations Children's Funds	1
	Centres for Disease Control and Prevention	1
	Japanese International Cooperation Agency	1
	Family Health International	1
	African Medical and Research Foundation	1
Civil Societies and Faith-based Organization	Tanzania Public Health Association	1
	Medical Association of Tanzania	1
	Tanzania Association of Non-Governmental Organization	1
	Tanzania Christian Social Services Commission	1
	Baraza la Kuu la Waislam Tanzania	1

Face-to-face interviews

Major challenges: Among the challenges that face the health sector in Tanzania include inadequate financial and human resource, accessibility to health services, weak and disorganized community health

services, poor planning, lack of coordination, poor priority setting, and inadequate/poor access to research information. Others include weak monitoring and evaluation of activities in the health sector, poor communication, and lack of public awareness on health sector reforms. Communicable and non-communicable diseases including HIV/AIDS, tuberculosis, malaria, maternal-related deaths, diabetes, cancer and hypertension continue to be the major cause of morbidity and mortality.

It was observed that equity is a problem for many of the Tanzanian population. Health services are not reached by majority of Tanzanian population due to long travel distances to the health facilities. Human resource shortage stands at only about 36% of the requirement. As regards to existing infrastructures, most of the health care facility buildings are not in good condition

Financial resources: There was a general agreement that Tanzania has enough resources to meet the basic needs of its people. However, there are problems related to allocation of resources based on national priorities including health. The problem is further intensified by poor governance and poor regulatory systems and corruption. The budget for the health sector is not enough to meet the costs for the basic needs of the health facilities at different levels in the country.

Most of the resources used for health services are from the development partners, little is allocated by the government. Nonetheless, resources from development partners are activity based/focused. The priority for which activities should be funded is mainly determined by the development partners' interests. This affects implementation of other priority activities based on local context.

Human resources: Deficits in human resources in the health sector in Tanzania were very much associated with the previous structural adjustment programme that was implemented during the 1980's to early 2000's. A significant number of health workers were retrenched after which the government failed to re-employ. Those who remained in employment were not well distributed to meet the demand of the health services in the country. To-date, there is a shortage of health workers both in quantity and quality. Shortage of skilled health workers is much more significant in rural areas; the problem is coupled with poor working conditions and lack of incentives. Moreover, qualified health workers are unable to work under difficult conditions and in remote areas where the health of the community requires their attention. With the current HIV/AIDS pandemic, the human resource crisis remarkably affect care and treatment of those affected, especially in rural areas where facilities are manned by unqualified medical personnel.

Infrastructure: The number, distribution and quality of health facilities are not adequate thus posing serious problems in terms of coverage and accessibility of health services to the community. This also hampers the delivery of major health services to the community. Poor infrastructure such as roads and communication facilities also play a major role in limiting access to health services.

Current reforms: Some of the current reforms in the health sector include the Primary Health Care Organizational Reform (popularly known MMAM= *Mpango wa Maendeleo ya Afya ya Msingi*), National Health Insurance Fund (NHIF), Community Health Funding (CHF), Decentralization of Health Services, and Basket Funding. MMAM aimed at improving access to health services through construction of more primary health care facilities. The plan is for each village to have a dispensary, and each ward to have a health centre. The NHIF requires that each government employee in Tanzania is covered by a health insurance scheme which will enable him/her to receive health services. On the other hand, the community in general has to contribute a total of TSh. 5000/= per annum to cover health services under the CHF.

The Ministry of Health and Social Welfare is implementing the devolution of decision making policy to the district and regional level so that most activities and plan of activities are centred under the Council Health Management Team. Under this, the powers to recruit and retain health workers remain under the

district councils. The government is trying to increase employment and retention of health workers in order to provide better health services. A programme/ plan of increasing matriculation/student's admission in the universities and colleges which offer any health course is been implemented.

Apparently, the health provider network is seen to improve in some district health facilities although it much less effective in remote areas. In recent years, the government has emphasised the need for public-private mix in the provision of health services. The private sector is providing funds and services to some health activities. The private sector in Tanzania is still weak in terms of coverage and capacity to provide services. It has been difficulty for private health providers to initiate reforms among themselves to improve health services in the country.

Current priority policy issues: The most important policy issues in the health sector varied from the responses from one organisation to another. For instance, development partners were of the opinions that child survival, child protection and participation, as well as improving communication at community level for behavioural and social change were of high priority. Research institutions mentioned that the development and implementation of science and technology innovation, development of national research policy were currently of great priority. Moreover, health research, ethics in research, and doing research on priority health problems which aims at finding solutions to health problems based on scientific evidence were the most important. Priorities areas according to the Government ministries included financing the MMAM programme, decentralisation and human resource for health. For the Ministry of Health and Social Welfare, the MMAM programme was emphasised to be the most important policy issue currently.

Health policy development in Tanzania: There were various responses on how health policy development process takes place in Tanzania. Most of the respondents were of the opinion that there are no standard procedures for policy development in the country. Moreover, policy development is not participatory, and more particularly doesn't involve people from the grassroots. Other respondents reported that the process is usually initiated by stakeholders in health (consumers) by raising concern on gaps/deficits in the existing policy or problem in the community. Moreover, mass media was identified as one of the strongest pressure group in policy changes. This is followed by the government forming a technical working group to validate and gather evidence on that particular problem. A policy document is then developed from the products of the technical working group. Development partners were mentioned to play a significant role in determining the formulation of most of the policies. Policy options were discussed at stakeholders and peer review meetings at ministerial level. Final approval of the policy is made by the parliament. Stakeholders in health policy development include ministries, community members, development partners, politicians, pressure groups, and researchers. These are also the major advocacy groups to the process in formulating health policies.

Despite the above reservations, a number of respondents said that development of health policies in Tanzania is generally evidence- based. Evidences were gathered through researches and review of grey literature. A workshop would be organized and presentations on the subject made by individuals invited. However, this does not necessarily involve a systematic review of the subject. The decision to seek for evidence was to be made by the relevant department in which the raised problem is related to. Based on the evidence, policy briefs and relevant documents are prepared by stakeholders, involving the Ministry of Health and research institutions. Although most of the respondents were not sure of whether gathering evidence for health policy formulation was done systematically or not, the process was considered useful to provide rationale for the proposed policy changes.

All respondents agreed that there is no specific forum with the responsibility to enhance translation of research to policy in Tanzania. This lack of an "intermediary" organizations (or knowledge translators

and knowledge brokers) in bridging the research-policy divide was observed to be the major reason for lack of credibility of the policy development process.

Barrier to the use of research findings: The barriers to the use of health research as evidence to policy formulation in Tanzania were mentioned to include non involvement of key stakeholders from the conception of the policy problem, language used in repackaging research results, inadequate resources (human, finance) and lack of an intermediary body to translate available research findings into policy issues. Others included a poor collaboration) between researchers and policy makers, lack of information sharing mechanisms, poor documentation of research findings, and poor management of health information systems.

Proposed strategies**:** Almost all organisations suggested the need to establish an intermediary body forum which will be responsible monitoring of on-going research, research translation and communication. They observed a need to have a specific office/unit or a person to take mandate or power of translating research findings into health policies. Researchers should be proactive in consulting policy makers during the whole process of conducting research and dissemination of its findings and ensure that the research findings are translated into health policy. There is a need to improve involvement of both policy makers and researchers in all stages of research formulation and generation of policy ideas. It is equally important to enhance interpretation of research findings by repackaging them using a simple language for policy formulation. Coordination between policy makers and researchers is very important so that they can work together.

The following were identified as critical players/actors in the health policy making process in Tanzania: Government ministries (Ministry of Health and Social Welfare; Agriculture and Food Security, Livestock Development and Fisheries, Community Development, Gender and Children, and Prime Minister's Office Regional Administration and Local Government. Research institutions including National Institute for Medical Research, Ifakara Health Institute, Tanzania Commission for Science and Technology and Tanzania Food and Nutrition Centre. Others were Muhimbili University of Health and Allied Sciences, Hubert Kairuki Memorial University, Sokoine University of Agriculture, Weills Bugando University of Health Sciences, Tumaini University and University of Dar es Salaam. Civil Societies, Religious Organisations, Regulatory Authorities (e.g. Tanzania Food and Drug Authority) and professional associations such as like Tanzania Public Health Association, Medical Association of Tanzania and Medical Women Association of Tanzania. Other organization included *Chama cha Uzazi na Malezi Bora Tanzania* (UMATI), Research on Poverty Alleviation, Economic and Social Research Bureau, Tanzania Gender Networking Programme, Women Dignity, Family Health International, African Medical and Research Foundation and Mass Media.

The development partners mentioned to have a significant contribution to the health sector reforms in Tanzania include United States Agency for International Development, United Nations Children's Fund, Centres for Disease Control, Danish International Development Agency, United Nations Population Fund, Japanese International Cooperation Agency, and the World Bank. Others include the Royal Netherlands Embassy, Swiss Embassy, Global Fund, Irish Aid, World Health Organisation, Canadian International Development Agency, Swedish International Development Agency and Deutsche Gesellschaft für Technise Zusammernabeit

2.3 Self-administered questionnaire

Government Ministries

In this category**,** respondents were from the Ministries of Health and Social Welfare (Zanzibar and Dar es Salaam) and Tanzania AIDS Commission (Prime Minister's Office). Within the Ministry of Health and Social Welfare in Dar es Salaam, the interviewees were from the Directorate of Preventive Services,

Directorate of Policy and Planning, National Malaria Control and National AIDS Control Programmes. In Zanzibar, the respondent was the Director General of Health Services.

The government institutions were aware of a number of health problems which may be ranked as most pressing issues requiring immediate attention. The Commission is able to assess research findings to ensure they are reliable, relevant and applicable to the policy issues identified through audit of quality of research findings. This ensures that the research findings presented to the decision makers are presented in a useful way.

All institutions reported to have skills, structures, processes and the culture in their organization to promote and facilitate use of research findings in the policy making process. For instance, TACAIDS as a government institution does not conduct health research, however, it works well and learns from peers through informal and formal networks about pressing policy challenges. It also does well on setting the research agenda of the organization around critical policy issues/challenges faced by policy makers in the country.

The institutions accesses relevant research results as evidence through journals, internet, library and websites as well as through workshops, conferences and seminars. Staffs in government institutions have critical appraisal skills and tools for evaluating the quality of methodology used in research. They also have appraisal skills to evaluate the reliability of specific, research by identifying related evidence and comparing methods and results.

On the other hand, in Zanzibar, the Ministry of Health inconsistently works with researchers through formal and informal networking meeting. The Ministry staffs, get involved with researchers as a host, decision maker, partner or sponsor of research. The Ministry staffs, sometimes learn from peers through informal and formal networks to exchange ideas, experiences and best practices. The Ministry staffs has poor critical appraisal skills and tools for evaluating quality of research methodology and reliability of specific research by identifying related evidence and comparing methods and results. However, inconsistently, the Ministry has arrangements with external experts who use critical appraisal skills and tools to assess methodology and evidence reliability, and to compare methods and results. With some consistency, the Ministry's staff can relate research to be done and point out similarities and differences. Sometimes, the Ministry makes arrangement with external experts to identify the relevant similarities and differences between what has been done and what the research says.

Government institutions have a general feeling that decision makers in the country usually give formal consideration to any evidence identified and recommended by the various organizations for policy making. However, in government institutions, staffs do not know when and how major decisions are made. There was some inconsistency in ensuring that staff and appropriate stakeholders are informed of how available evidence influenced the choices that were made by policy makers.

The Ministries of Health do not have enough skilled staff with time, incentives and resources to present research results concisely and in accessible language. They do not have enough skilled staff with time, incentive, and resources that to use research communications to synthesize in one document all relevant research, along with information and analyses from other sources. Rarely the Ministries have enough skilled staff with time, incentive, and resources to use research communication skills to link research results to key issues facing the decision makers. However, it makes arrangements with external experts to use research communication skills to provide recommended actions to decision makers and to synthesize in one document all relevant research, along with information and analyses from other sources.

The Ministries poorly consider research as a priority and thus poorly commit resources to ensure research is accessed, adapted, communicated and applied in decision making. It inconsistently ensures staffs are

involved in discussion on how research evidence relates to the ministry's goals. The Ministry poorly communicates its strategy and priorities to those creating or monitoring research know what is needed to support its plans. Moreover, internal communication to ensure there is information exchange across the entire ministry is poor.

When major decisions are made, the Ministries do not usually allow enough time to identify researchable questions and create/obtain, analyse, and consider research results and other evidence. Either the Ministries do not have enough expertise to evaluate the feasibility of each option, including potential impact across the Ministries and on clients, partners, and other stakeholders.

Policy-makers do inconsistently give formal consideration to any recommendations from staff who have developed or identified high-quality and relevant research. Staff and appropriate stakeholders poorly know when and how major decision will be made. However, they rarely know how and when they can contribute evidence and how that information will be used. Staffs who have provided evidence and analysis do not always participate in decision making discussion. Relevant on-staff researchers are not part of the decision making discussions but they do poorly receive feedback on decision with a rationale for the decision. With some inconsistency, staff and appropriate stakeholders are informed of how available evidence influenced the choices that were made in the Ministry. Staff may or may not be informed on how available evidence influences the choices that were made in the Ministry. Since research in the Ministry of Health is of higher priority, there is need to integrate the use of research into the work of people in the government. Our decision makers use research sometimes but not always. It is of highest priority to increase the local capacity in terms of skilled staff, resources and incentives.

Possible interventions will include urging the Ministry of Health to consider the importance of carrying out research and its appropriate dissemination and utilisation in evidence-based decision making. Training and re-training should be emphasized to access skilled staff.

Research institutions felt that there is a need to establish clear communication channels and process to deliver research evidence to policy makers. It is of great priority for the government institutions to increase their capacity to generate relevant research results and strengthening their links with policy makers. There is also a need to develop expertise in producing research summaries, capacity to communicate research evidence to policy makers/ stakeholders.

Research and academic institutions

In this category, the National Institute for Medical Research (NIMR), Ifakara Health Institute, Muhimbili University of Health and Allied Sciences and Tanzania Commission for Science and Technology were included. Challenges that face the health sector in Tanzania were identified to include the following:

1. Lack of input to planning from the sub-district level
2. Lack of a comprehensive strategy for implementation of control programmes (Although strategies are available, but implementation is still vertical)
3. Lack of good feedback mechanisms
4. Poor use of research for policy and planning

The current main health problems include communicable diseases (major and neglected) and maternal and child health. Others are human resources for health, maternal and child health services and health financing. There are problems about health care provider network including human resources, governance and management issues in the health sector. Provider networks are more developed in urban than in rural settings. Provider networks are constrained by lack of skilled manpower and poor skill mix

especially in rural areas. Management capacity is still poor in most places. Even staffs who hold management positions do not have management training.

Access to research data/information was described to face a number of problems as a result of poor research culture. It has been observed that even when research is available it is not used. This is coupled with poor dissemination of research findings. In some cases skill is not enough to disseminate results to help planning.

The current health sector reforms focus on decentralization when most of the power lies in the district. Then through the Council Health Management Team (CHMT) is where most of the district planning takes place. Resource allocation and implementation of activities are also overseen by the CHMT. There are plans to increase sub-district level involvement through the primary health care programme. The major current reforms in health care financing include user fees for service provision and consolidated basket funds for implementation of activities at the district level.

According to research institutions, frequent change in antimalarial treatment is considered to be the most important pressing policy issue in recent times. Taking the most recent policy making process as an example, the respect Technical Advisory Committee was the first to raise the need for the policy change. Policies are formulated/discussed through technical group meetings and the deliberations are passed on to the higher level policy makers. In some instances, Non-government organizations and development partners are invited to make contributions.

To some extent, development of health policies in Tanzania are evidence informed. The process is through working groups which discuss and developed synthesised deliberations which are the used in the policy document. Usually, when a policy issue is identified, the technical advisory committee (a technical group of the subject matter in question), decides to seek for evidence. The same Technical Advisory Group acquire the research information prepare policy brief or any other relevant document. Unfortunately, this is often non systematic- and is done very haphazardly and differs from issue to issue.
The barriers to the use of health research as evidence to policy formulation in Tanzania include lack of understanding of what research really is all about?; poor research culture among policy makers and poor approach in dissemination of research results among researchers. To improve the link between policy makers and researchers the following need to be done:

- Have a mechanism that will be able to synthesise research and present it in a user friendly manner
- Present research findings simply in the media
- Have regular stakeholder meetings to disseminate results to policymakers (making presentations that show clearly areas of policy implications)
- Find a mechanism to reward best practices i.e. when evidence is used to inform policy, awards as recognition should be given.

According to research institutions, critical players/contributors to the health policymaking in Tanzania include Ministry of Health and Social Welfare, Members of Parliament, Researchers and Government agencies. Others include development partners that are significant contributors to the health sector reforms in Tanzania such as Swiss Development Cooperation, Department for International Development, Danish International Development Agency and Canadian International Development Agency.

Research institutions can find out what are most pressing policy issues that concern the policy makers usually through stakeholders meeting. Health Research Priority Settings workshops (NIMR, 2006) was given as the best example. To some extent, research institutions can find and obtain the research findings that are relevant to policy concerns through targeted research on synthesis of previous research. To some

extent, research institutions can assess research findings to ensure they are reliable, relevant, and applicable to the policy issues identified. This is because, the intuitions are in a position to carry out analysis of existing research findings, and synthesize them. Through this process they are also able to ascertain relevance and application. However, there is need to incorporate more people skilled in research and policy analysis in the process of knowledge translation and communication.

The National Institute for Medical Research (NIMR) can present the research to decision makers in a useful way through stakeholder meeting on dissemination of research results and through making presentations during parliamentary sessions. To some extent, skills, structures, process and culture to promote and facilitate use of research findings are available within the Institute. Researchers at the National Institute for Medical Research have had a number of times involved in providing scientific information and advisory role in policy development especially as regards to control of malaria, lymphatic filariasis, onchocerciasis, soil transmitted helminths, and sexually transmitted diseases including HIV/AIDS>

NIMR does quite well in terms of skilled staff to undertake research and in having enough time to undertake research (which is the core function of the institute). However, staffs have inadequate incentives and resources to do research. The Institute's staffs do quite well in working with policy makers through formal and informal networking meetings to identify pressing policy issues. Likewise, they do quite well in learning from peers through informal and formal networks as well as in setting agenda for the institutions around critical policy issues/challenges faced by policy makers in Tanzania. The Institute does quite well in looking for policy relevant research evidence in journal (through subscription, internet, or library access). In addition, the Institute does quite well in looking for policy relevant research evidence in non-journal reports (grey literature) by library or internet access, direct mailing from organizations such as ministries of health. The most common sources of scientific information include technical reports from the Ministry of Health and from the National Bureau of Statistics (the later is the source of Tanzania Demographic and Health Survey Reports).

Researchers at the NIMR have adequate critical appraisal skills and tools for evaluating the quality of methodology used in research. However, they have inadequate critical appraisal skills and tools for evaluating the reliability of specific research by identifying related evidence and comparing methods and results. To some extent, researchers at NIMR can relate their research and policy challenges and point out its relevance. The institution has formal arrangements with policy makers to identify relevance of the research done and what they need through organised health research priority setting forums. The Institute staff can plan and carry out research so that research evidence is timely supplied and inform policy making process. To some extent the Institute has enough skilled staff time, incentives, and resources who use research communication skills to present research results concisely and in accessible language. Similarly, it has to some extent, enough skilled staff with time, incentives and resources who use research communication to synthesize in one document all relevant research, along with information and analyses from other sources.

The institute does not have enough skilled staffs with time, incentive, and resources that use research communication skills to link research results to key issues facing decision makers. Rarely arrangements are made with external experts who use research communication skills to present research results concisely. Either, no arrangements are made with external experts who use research communication skills to provide recommended actions to decision makers. NIMR is a research institution and according to one of its mandate, it leads by example and show how research use is of value to the socio-economic development of the Tanzania population. Research is the priority undertaking of the Institute and thus, quite well, it commits resources to ensure research is accessed, adapted, communicated and applied in decision making. The Institute ensures her staffs are involved in discussion on how research evidence relates to the main goals. However, only few opportunities are available to do so. To some extent the

Institute management does clearly communicate its strategy and priorities so those creating or monitoring research to know what is needed to support the Institutional goals. To some degree, the Institute communicates internally in a way that ensures there is information exchange across the entire organization.

Experience has shown that when policy makers make major decisions they rarely allow enough time to identify researchable questions and consider research results and other evidence. Decision makers in Tanzania do not always give formal consideration to any evidence identified and recommended by the research institutions for policy making. Researchers do not usually know when and how major decisions are made. Yet, the poorly know how and when they can contribute evidence and how that information is been used. To some extent, a researcher who has provided evidence and analysis usually participates in decision-making. However, only in a few instances staffs and appropriate stakeholders receive feedback on decision with a rationale for the decisions neither they are informed of how available evidence influenced the choices that were made by policy makers.

Two academic institutions (a public and private university) were involved in the survey. These were Muhimbili University of Health and Allied Sciences (public) and Hurbert Kairuki Memorial University (private). While it was usual for the public university to obtain the research findings through internet search and interaction with researchers/collaborators, there is very little research been carried out by private university. It was a common practice for the public university to assess research findings to ensure their reliability, relevance, and applicability. This is done through prior review process of proposal assessment and publication of results, and through monitoring of the conduct of research by their researchers regularly to ensure compliance to quality.

Presentation of research findings to decision markers by universities was mainly through oral presentation after which findings are discussed and clarification on important aspects is made. Sometimes this is done by writing of user friendly reports specific for decision markers. This is also done through seminars, workshops, publications, newsletters and media.

In the academic institutions skills, structures, processes, and the culture that promotes the use of research findings in decision-making does exist. This is usually done through regular disseminations of research findings by researchers through seminars, workshops and scientific conferences. Within the two universities, a specified directorate that oversees research and publications, is in place and functional. The two universities have well trained and skilled staff to undertake research. The academic institutions reported to consistently provide some incentives and resources to do research. However, there are poor arrangements with external organization experts who search for research, monitor research, or do research for their institutions. The universities look for research findings from online journals such as Nature, Medline, Lancet, HINARI, and PubMed. They also look for research findings in non-journal reports through library or internet access, direct mailing from organizations such as Ministries, Research Institutions and the World Health Organization reports.

Staffs in the academic institutions do work with researchers through formal and informal networking meetings. Also they do get involved with researchers as hosts, decision-maker partners, or sponsors. They learn from peers through informal and formal networks to exchange ideas, experiences and best practices. Staff in academic institutions had critical appraisal skills and tools for evaluating the quality of methodology. They have arrangements with external experts who use critical appraisal skills and tools to assess methodology and evidence reliability, and to compare methods and results as well as to identify the relevant similarities and differences between what they do and what the research says. These help them to tell if the research is relevant and applicable.

The public university has enough skilled staff with time, incentives, and resources to prepare user-friendly research communication materials. They consistently use research communication skills to present research results concisely and in accessible language. However, the private university does it poorly and inconsistently. The staffs in the two universities rarely and inconsistently synthesize all relevant research in one document, along with information and analyses from other sources

The universities inconsistently use research communication skills to link research results to key issues facing decisions makers. The private university has no arrangements with external experts who use research communications skills to provide recommended actions to the decision makers. Both the two universities do not arrange with external experts to link research results to key issues facing decision makers to present research results concisely and in accessible language. However, both institutions reported to use research as a priority in their organization. The public university has inconsistently committed resources to ensure research is accessed, adapted, communicated and applied in decision making while the private university does not.

There is some inconsistency in ensuring staffs are involved in discussion on how research evidence relates to institutional main goals and that the management of their organizations clearly communicates their strategy and priorities so that those creating or monitoring research know what is needed to support their goals. The two institutions have a good internal communication in a way that it ensures there is information exchange across the entire organization.

While the public university reported to obtain the research findings they need through the internet, interaction with researchers and collaboration with partners who support research, the private university does not have a database where one can find research findings easily. It is a usual tendency for MUHAS to assess research findings to ensure their reliability, relevance, and applicability. This is done through prior review process of proposal assessment and publication of results, and through monitoring of the conduct of research by their researchers regularly to ensure compliance to quality. This was not the case with the private university thought it was not possible because of poor networking and communication between research institutions in Tanzania that most research initiatives were not realistic.

There is some inconsistency in ensuring staffs are involved in discussion on how research evidence relates to institutional main goals and that the management of their university clearly communicates their strategy and priorities so that those creating or monitoring research know what is needed to support their goals. They have a good internal communication in a way that it ensures there is information exchange across the entire organization.

Evaluation of the quality of methodology is done well in the academic institutions. Staffs have the critical appraisal skills to evaluate the reliability of specific research by identifying related evidence and comparing methods and results. Also the academic institutions have arrangements with external experts to identify the relevant similarities and differences between what they do and what the research says.

The results showed that academic institutions when making major decisions, they usually allow enough time to identify researchable questions and create\obtain, analyze, and consider research results and other evidence though this is done inconsistently, yet there is a room for improvement. Unlike at HKMU, decision makers at MUHAS, usually give formal consideration to any recommendations from staff who have developed or identified high-quality and relevant research.

There is some inconsistency in knowing when and how major decisions will be made, although there is a good knowledge and understanding on how that information will be used. The academic institution staffs who provide evidence and analysis usually participate in decision-making discussions. The staff and appropriate stakeholders receive feedback on decisions with a rationale for the decision. There is an

obvious impression that academic institutions view research to have higher priority in their organization. It has gone to the extent that there is a need to improve the quality of their integration of research use into the work of people in their institutions.

The academic institutions admitted that they need to increase skilled staff, resources, time, incentives and arrangements with external experts to increase the capacity in undertaking research. To do this, the institutions need to have more access to journals, databases and working with other researchers. However, non-journal reports (grey literature), web sites and learning from peers were deemed not to be their highest priority. The academic institutions need to improve the quality of their assessment. They need to improve their capacities in development of research summaries and to consider research in making decisions for policy use. It has been common that the institutions with the understanding of the importance of research as a core function of their organization; they insist their staff to publish which is in turn considered as a criterion for staff appraisal and promotion.

While the public university access skilled staff through development of linkages with individuals and institutions with sufficient human resource, the private university does by recruitment. The institutions have invariably made use of training available in writing research summaries during research methodology courses for undergraduate and postgraduate students and health systems and policy research training to strengthen capacities in research in the country. Case studies that were cited by the respondents from the universities were on the importance of research studies that have led to development of useful technologies and to discoveries of therapeutic agents.

The academic institutions admitted that research undertakings are costly. There was a general concern that if they are not assisted in changing the trend to generate research as evidence for decision and policy making, wrong decisions and policies will be put in place.

Development partners

In this category, United Nations Children's Fund (UNICEF), Family Health International (FHI), African Medical Research Foundation (AMREF), Japanese International Cooperation Agency (JICA) and Centres for Disease Control and Prevention (CDC) were involved. The development partners in Tanzania reported to obtain research information through grey literature from libraries, journals and through internet. They have the skills, structure, processes and the culture to promote and use research findings in decision making process. They always develop strategies and project framework using research results. However, the partners have inconsistently involved skilled staff to undertake research. They does not to work with researchers either formally or informally. They do not have staff with critical appraisal skills and tools for evaluating the quality of methodology, neither the staff that have critical appraisal skills to evaluate the reliability of specific research by identifying related evidence and comparing methods and results. Instead, they have inconsistently been arranging with external experts to achieve this.

Occasionally, the partners have been involved in promoting the use of research communication skills to link research results to key issues facing the decisions makers in Tanzania. They have also done this by arranging with external experts who use research communications skills to provide recommended actions to the institutions decision makers. This has also been the case on arrangements with external experts who use research communications skills to synthesize in one document all relevant research, along with information and analyses from other sources. However, they do not have arrangements with external experts who use research communications skills to provide recommended actions to decisions makers.

The development partners have inconsistently considered research as a priority in their organization. However, they commit resources to ensure research is accessed, adapted, communicated and applied in decision making. They have consistently ensured their staffs are involved in discussion on how research

evidence relates to their main goals. The development partners clearly communicate their strategies and priorities so that those creating or monitoring research know what is needed to support their goals. The internal communication is done well to ensure there is information exchange across the entire organization. When making major decisions, usually they allow enough time to identify researchable questions and create, analyze, and consider research results and other evidence.

Inconsistently, development partners know when and how major decisions will be made. They understand when they can contribute to evidence and how that information will be used. Development partners acknowledge to inconsistently being informed of how available evidence influenced the choices that were made in their institutions. This is done in a continued improvement process. They integrate research use into the work of their staff more often. Generally, the development partners have an impression that decision makers in Tanzania sometimes use research results for decision making just as they do.

The development partners have knowledge of the most pressing policy issues that concern the policy makers in Tanzania. This is what makes them participate in the policy dialogue conducted by various stakeholders. They reported to have found and obtained research findings that are relevant to the policy concerns in Tanzania through research results from the research interventions being implemented and published papers by projects.

FHI and AMREF which conduct health research had the capacity to assess research findings to ensure they are reliable, relevant and applicable to the policy issues identified. They have enough expertise in conducting and evaluating research interventions. They all present their research findings to the decision makers in the most appropriate and useful way. These institutions works closely with decisions makers, they hold dissemination activities and organize policy dialogue sessions with relevant stakeholders. All development partners felt that there are skills, structures, processes and the culture in their organization to promote and facilitate use of research findings in a policy making process. The two organizations have skilled staff to undertake research. While FHI do this inconsistently, AMREF does it well. FHI and AMREF staff has enough time for research but they do with some inconsistency. Their staffs have incentives and resources to do research. FHI and AMREF reported to work with policy makers through formal and informal networking meetings to identify pressing policy issues. They learn from peers through informal and formal networks about pressing policy challenges. FHI sets its research agenda around critical policy issues/challenges faced by policy makers in our country while AMREF did not have an answer to this.

The development partners have critical appraisal skills and tools for evaluating the quality of methodology used in research although they all do with some inconsistently. They all have critical appraisal skills to evaluate the reliability of specific, research by identifying related evidence and comparing methods and results. They can relate their research results to know policy challenges and point out the relevance of the results. The organizations have arrangements (formal and informal) with policy makers to identify the relevance of what the local researchers do and what they need. They can plan and carry out research so that research evidence is timely supplied and informs policy making process. Both AMREF and FHI, have enough skilled staff with time, incentives and resources that use the research communication skills to present research results concisely and an accessible language. Also they can synthesize in one document all relevant research, along with information and analyze from the other sources. The organizations have arrangements with external experts who use research communications skills to provide recommended actions to our decisions makers and to present research results concisely and in accessible language.

It was a concern by all development partners that using research results for decision and policy making was a priority in their organization. They regularly commit resources to ensure research is accessed,

adapted, communicated and applied in decision making. In some cases, they have thrived to ensure their staffs are involved in discussion on how research evidence relates to their main goal. The management of their organization clearly communicate the nations' strategies and priorities so those creating or monitoring research know what is needed to support. They all communicate well internally in a way that ensures there is information exchange across the entire organization.

Issues that were ranked higher in relevance by the development partner institutions include research–evidence production, strengthening links with policy makers and policy making process, and access to health research results. All responses revealed that assessment of research needs to be done more frequently. Researchers need to develop skills/capacity to better communicate research evidence to policy makers and stakeholders. All institution needs to build their capacities in research communication.

Civil societies and faith-based organizations

In this group, interviewed organisations included Tanzania Network of Non-government Organization, Tanzania Christian Social Services, Tanzania Muslim Council, Tanzania Public Health Association and Medical Association of Tanzania. Faith based organizations reported to obtain research findings through scientific meetings, internet, technical reports from Ministry of Health and National Institute for Medical Research. The societies do assess research findings to ensure they are reliable, relevant and applicable to them. There was a general impression that the societies do present the research results to decision markers through meetings and by writing of user friendly reports, also through seminars, workshop, publication, newsletter and media. The research findings are normally shared with decision makers at various levels though there is a need for some improvement.

While faith-based institutions were not doing well in undertaking health research, they have skilled staff who can undertake research. Some societies make use of skills and competencies to undertake health research from their professional members. The civil societies do not have critical appraisal skills to evaluate the reliability of specific research by identifying related evidence and comparing methods and result. The civil societies do well in communication internally in a way that ensures there is information exchange across the entire organization.

The societies usually allow enough time to identify researchable questions and create/obtain, analyze, and consider research results and other evidence. They also have management teams that have adequate expertise to evaluate the feasibility of each option, including potential impact across the organization and on clients, partners, and other stakeholders.

The civil societies and associations have a poor sense of knowing when and how major decisions will be made. They lack an understanding when they can contribute to evidence and how that information will be used. In case a decision or policy is made, the civil societies were inconsistently informed of how available evidence influenced the choices that were made by their institutions. They all were pleased by the level and quality of their integration of research results into the work of their staff. The civil societies feel that decision makers in Tanzania sometimes they but not always use research results for policy and decision making.

To ensure that scientific information has a place in the decision making processes in Tanzania the societies usually give formal considerations to any recommendations from staff who have developed, or identified high quality and relevant research. They also know when and how they can contribute evidence. However, only in few instances that staffs who provide evidence and analysis participate in decision making discussions. It is also through intensive training of existing staff and through sharing of experience with research experts and institutions that civil societies can access skilled staff. They suggested that when scientific information from research done in the country is not available, then

research findings from other reliable sources should be adopted. In summary, priority policy issues that were identified by the interviewee is provided in Table 6.

Table 6: Priority policy issues as identified by different stakeholders

Priority area	Ministries	Research and academics	Civil societies	Development Partners
Scaling up of major interventions for malaria, HIV/AIDS, diarrhoeal diseases and tuberculosis	XX	XX	XX	XX
Maternal and child health services	XX	XX		
Health financing	XX	XX		
Human resource for health (quantity, quality, skill mix)	XX	XX	XX	XX
Effectiveness of evidence in policy and decision making	XX	XX	XX	XX
Establishment of a formal intermediary body for research communication	XX	XX	XX	XX
Child survival, protection and participation	XX			XX
Improving communication for behavioural change	XX			XX
Development of National Research Policy		XX		
Advocacy and promotion of knowledge translation and utilization of research in development of policy	XX	XX	XX	XX
Poor capacity of researcher in research communication	XX	XX	XX	XX

Case Studies

Case Study 1: Primary Health Services Development Programme

Introduction: The Primary Health Services Development Programme (PHSDP) is a ten-year programme beginning 2007-2017, which is implemented by the Ministry of Health and Social Welfare in collaboration with other stakeholders/sectors including the Prime Ministers Office (PMO), Regional Administrative and Local Government (RALG), Regional Secretariats (RSs), Local Government Authorities (LGAs) and Village Committees (VCs) (MOH, 2007).

This programme is an attempt to implement the National Health Policy (MOH, 2003). The programme, which in its presentation stands as a policy, directs the establishment of a dispensary in every village, a health centre in every ward, and a district hospital in each district. The programme has a technical working group, which is responsible for planning, coordinating, and monitoring of the programme activities. District level authorities play a key role in the implementation of the programme.

The programme policy document shows that since independence Tanzania has consistently focused its development strategies on combating poverty, diseases, and ignorance. However inadequate coverage of

the health system to provide for the health service needs of all the people in the country is still the biggest problem. In this regard, programme is a continuation of the country's efforts in fighting diseases and improving the quality of lives of the majority of its people. Its main aim is to provide accessible quality health services to all Tanzanians and to strengthen delivery of health services in the country so that health services are of good quality, equitable, and that communities are empowered and involved in health services provision. Specifically, the overall objective of the programme is to accelerate the provision of primary health care services for all by 2017. *The main areas of focus will be on strengthening of the health systems, rehabilitation, human resource development, the referral system, increase health sector financing and improve the provision of medicines, equipment and supplies*.

The programme has been formulated within the context of various enabling policies including the Tanzania Development Vision 2025; National Strategy for Growth and Reduction of Poverty (NSGRP); Millennium Development Goals (MDGs) and National Health Policy, Health Sector Strategic Plan, and Policy Paper on Local Government Reform. The programme has also been formulated to the large extent to fulfil the 2005 ruling party election manifesto (CCM, 2005).

Objective: This case study aims at reviewing the process of establishing the programme to find out if the programme formulation was research evidence-based. To establish this, we reviewed the programme policy and the national Health Policy documents.

Overview of the analysis: Before the year 2007, several health policies were formulated and implemented. One of such policy was the National Health policy of 1990 which was revised in 2003. The overall objective of Health Policy in Tanzania are to improve the health and well-being of all Tanzanians, with a focus on those most at risk and to encourage the health system to be more responsive to the needs of the people. This objective has to be achieved through Primary Health Care (PHC) which is the central element of health promotion aiming at coordinated action by all concerned e.g. health and health related sectors local authorities, industry non-governmental and voluntary agencies, the media and the community at large.

Analysis of the policy documents shows that the policy context which informed the formulation of the PHCS policy is clearly spelled out in the CCM election manifesto, NSGRP, and Tanzania Vision 2025. While the policy document outlines stakeholders who will be involved in its implementation, it does not indicate who initiated the formulation and those involved the implementation. The document outlines strategies for implementation of the policy and partly specifies indicators for programme assessment.

The process involved in formulating this policy is not clearly shown, more specifically, the extent to how the stakeholders as well as members from the grassroots were involved in the formulation process. The main objective of MMAM is within the national health policy objectives. The programme policy document does not spell out problems which faced the implementation of the 1990/2003 National Health policy objectives. In this regard it is difficult to see improvements that MMAM will make compared with the implementation of the National Health Policy before establishment of MMAM. In addition, the MMAM policy does not show research-based evidence in its formulation which could have been provided to show gaps of the National Health Policy and hence the proposed MMAM policy document.

Formulation of the MMAM policy seems to have been politically motivated, as it is clearly shown that it was formulated to fulfil the 2005 the ruling party election manifesto. In general, the revised policy is not evidence-based. As a result, it is unlikely that the programme objectives will be achieved to meet the expectations and needs of the majority.

Case study 2: National Policy on HIV/AIDS

Introduction: The National Health Policy aims 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 overall purpose of the National Policy on HIV/AIDS is to provide for a structure for leadership and coordination of the National multisectoral response to the HIV/AIDS epidemic. This includes all sectors to formulate appropriate interventions which will be effective in preventing transmission of HIV/AIDS and other sexually transmitted infections, protecting and supporting vulnerable groups, and mitigating the social and economic impact of HIV/AIDS. It also provides the framework for strengthening the capacity of institutions, communities and individuals in all sectors to arrest the spread of the epidemic. Being a socio-cultural and economic problem, prevention and control of HIV/AIDS epidemic will very much depend on effective community based prevention, care and support interventions. The local government councils will be the focal points for involving and coordinating public and private sectors, NGOs and faith-based groups in planning and implementing of HIV/AIDS interventions, particularly community based interventions. Best experiences in community based approaches in some districts in the country will be shared with the local councils. The objective of this policy includes Prevention of transmission of HIV/AIDS, HIV Testing, and Care for PLHAs, Sectoral Roles and Financing, Research, Legislation and Legal Issues.

Objective: The case study aimed at reviewing the process through which the formulation of the National Policy on HIV/AIDS took place. The basis for the review was to assess whether the formulation of the policy was evidence-informed, who were the key stakeholders and their roles in the process of policy formation.

Overview of the analysis: In this case study, a review involved desk analysis of existing policy documents, reports on reviews of the policy, and strategic plan documents as part of implementation of the policy.

The first AIDS case in Tanzania was identified in 1983. Since then, the national response to AIDS has developed through four phases as follows: (i) The Short Term Plan developed by the MOH governed early activities to control the epidemic (1985-1986); (ii) *1987–1991:* The First Medium Term Plan was implemented. It included a more complete set of interventions and the first steps to decentralize the program. It is during this period when the National AIDS Control Programme (NACP) was established in 1988 under the Ministry of Health (1987-1991); (iii) The Second Medium Term Plan was implemented. It adopted a multisectoral approach and focused on reducing transmission of HIV and mitigating the personal and social consequences of the epidemic (1992-1996); and (iv) The Third Medium Term Plan was developed (1996-1998).

In 1991, a review of the NACP called for the development of a national policy that would provide guidelines for dealing with AIDS. The review identified the following major issues: care of people with AIDS; pre-test of HIV counselling; AIDS orphans; and AIDS education in the schools. Both the Second and Third Medium Term Strategic Plan reiterated the need for a national policy and added several additional policy issues that needed to be addressed, including the following: support for family members of people who have died from AIDS; loss of productivity; protection of the legal rights of AIDS patients and people living with HIV and AIDS; and use of condoms.

With the absence of a supportive legal framework for many AIDS programmes, the need for a national policy became evident. It was difficult to change laws and regulations to create a supportive legal framework without a government policy requiring those changes. Therefore, the government designated the NACP to develop a national policy.

The NACP commissioned experts to prepare lead papers on 11 key components. The experts then presented the papers at a national policy formulation workshop in 1995. The workshop lasted for seven days and included 28 people, most of whom were government officials; only two represented NGOs. The NACP made efforts to solicit inputs from other sectors of the society, including PLHA and commercial sex workers, but received few responses. In 1998, the NACP prepared a new five year strategic plan for 1998–2002, which was developed with broad participation. The National Policy on HIV/AIDS was then formed and put in place in 2001.

DISCUSSION

The findings of this survey have revealed that Ministries of Health in Tanzania have low capacity to locate, interpret and systematically review evidence in the process of policy development. There is inadequate staff with skill to identify credible and reliable scientific information to support their decision making process. There is no mechanism to provide feedback to those who have contributed in policy development. Some of policy development are politically motivated and not based on scientific information. Some policy developments are initiated and pressurized by development partners. Health priorities are donor-driven. There is lack of research culture among policy makers. There is little involvement of civil societies and professional associations in policy development process. On the other hand, research institutions and universities have some capacities to identify research priorities, carry our researches and to disseminate research findings. However, the institutions have low capacities to repackage research findings into user-friendly language for policy makers' consumption. Moreover, they have no formal forum to link researchers and policy makers.

By and large, most respondents proposed for the need to: (i) strengthen the linkages between policymakers and researchers in a way that promotes a continuous dialogue throughout the research process; (ii) improve the dissemination and repackaging of research findings for policymakers; (ii) strengthen the capacity of local researchers in research communication and policy analysis; (iv) establish an national intermediary body to act as knowledge broker or a bridge between researchers and policymakers.

The need to strengthen linkages between researchers and policymakers has been addressed by a number of forums in East Africa which ultimately developed the Regional East African Community Research Policy Initiative in 2006. Several other initiatives such as "Getting Research into Policy and Practice" and the "Global Development Network" have been established elsewhere (Exchange, 2006). In Tanzania, setting of health research priorities is done collaboratively between researchers, practitioners, policymakers and development partners. Although this is highly commended, it is also important to encourage close interaction between researchers and policymakers during the design and conduct of the research as well as during dissemination of the results (IDRC, 2004).

The National Institute for Medical Research has been in recent years responsible for organizing health research priority setting process that involved a number of stakeholders including community, district official, decision makers, policy makers and development partners (NIMR, 2006). However, public research institutes do not receive adequate core funding from the government that would allow them to do long-term planning, establish and comply to national research priorities, and invest in creating strong research programme. For instance, funds allocated for research in the country is far below the recommended 2% of the national budgets (Kitua, 2007). International donors give support to research, but usually for one-off projects, which the donor agency often designs and lead. With inadequate local funding of research in Tanzania, international donors are a key source of funding for local research.

There is strength in the dissemination of research findings among the Tanzanian research institutions. It was interesting to realize that public research institutions share research findings with members of parliament. This shows that researchers are beginning to work more closely with policy makers, who need data and analysis to make more informed policy decisions. In this context, opportunities are expanding for research to inform and influence policy. However, the research institutions admitted to face limitation in the whole process of research communication because of lack of policy analysts. It should be noted that public policy analysis emerged as a science of action, a contribution by experts (analysts) to government decision-making process. The objective was to direct research in such a way to be relevant, useful for action (Almeida & Bascolo, 2006).

Despite the fact that both the ministries, research institutions, civil societies and development partners are key stakeholders in the undertaking of health research and its utilization, the links between them was weak. There are no formal forums for the stakeholders to meet and share issues of mutual interest. It has already been reported that the key tension at the research-policy interface concerns the divergent timescales of scientists and policymakers. The time-consuming nature of scientific research does not fit well with the demands of politicians, who are often compelled to work to very tight constraints (Choi et al., 2005). It becomes a significant challenge to produce credible information that is also salient to policy decisions. In many scenarios, the focus of scientific research and the problems with which policy-makers must deal are also often misaligned. Scientific research projects are often too narrowly focused to have an impact on policy debates that typically span a wide range of issues from a number of disciplines (Scott, 2006).

A number of respondents mentioned the use of scientific information in policy development. This has always been a difficult endeavour. However, from the two case studies, it was realised that scientific information is used mainly as political capital and incorporated only when it supports policy makers' preferred positions. This phenomenon has been observed in a recent survey in other developing countries and has been attributed to lack of institutionalised process of evidence-based policy making and the greater importance of personal ties in politics (Jones et al., 2008).

Poor capacity in knowledge translation and transfer among researchers was identified as one of the constraining factors in research communication. There is a lack of capacity in research findings synthesis and policy analysis. Knowledge transfer, which is described as the process of generating knowledge, disseminating it, building capacity for its uptake by decision makers, and tracking its application appear to be lacking among researchers in Tanzania. However, adoption of scientific information by policy makers is another stumbling block as was testified by the Minister of Health in a conference speech in 2007 when he narrated this practical example: "*In 1998, Tanzanian scientists presented for the first time date shown alarming levels of the malaria parasite resistance against chloroquine, the antimalarial drug which was until then, the cheapest, safest and effective. The information was presented as a paper in a research forum, and alarming as it was, it still left a lot of questions unanswered for a policy decision to be made. The type of questions included whether the resistance is geographically localised or widespread in the country, whether there was a suitable alternative choice of substitute drugs, how the alternative choice compared in effectiveness with chloroquine and finally and equally important question was, whether we could afford to switch to the alternative option and if the changes, once made, would be sustainable. After considerable discussions, the research community agreed to go back and search for answers to at least some of the questions. It was until 2001 after the questions had been answered adequately that the policy makers were satisfied to implement the prescribed changes…..*" (Mwakyusa, 2007).

Various barriers that hinder or prevent research from being used in the decision making process have been identified. There are ideological problems that constrain political rhetoric and formulation of reform agenda, in addition to a lack of political will or an inability to formulate and implement more integrated, interactive policies. There are historical separation between researchers, policymakers, service providers, administrators and planners allied to a mutual intellectual disdain (Trostle et al., 1999).

Unlike, the ministries and local research institutions, the development partners in Tanzania reported to have the skills, structure, processes and the culture to promote and use research findings in decision making process. They always develop strategies and project framework using research results. They often make arrangement with external experts who use research communications skills to provide recommended actions to the government decision makers and policymakers. This has also been the case on arrangements with external experts who use research communications skills to carry out research synthesis. However, they do not have arrangements with external experts who use research communications skills to provide recommended actions to decisions makers. The development partners have critical appraisal skills and tools for evaluating the quality of research methodology and credibility

and reliability of results. Despite this positive findings about the development partners, public policies work best when they are designed and implemented by local actors. Without locally generated scientific information, well-intentioned programme often do not respond to realities on the ground. Yet this is likely to have policies that address the need of the donors. The capacities that were observed among development partners but not within the local institutions indicate poor linkages between the two groups. Although the development partners recognise that local ownership is critical to successful development interventions, they often fail to invest in local institutions that carry out research and analysis needed by policy makers to effect local policy improvements over time.

Like in this study, much of the literature on research-policy interface concludes by advocating for intermediaries to remedy the divide between scientists and policymakers (Choi et al., 2005; Scott, 2006; Box & Engelhard, 2006). A number of respondents in our survey were of the opinion that an intermediary body will facilitate the research communication process and will link research and policy development. However, little was suggested about where, how, and by whom such a body is to be built. Cash et al. (2003) argue for "boundary organizations" mandated to act as intermediaries between the area of science and policy, involving specialised roles for managing the boundary, with clear lines of accountability to distinct arenas on both sides of the boundary, and providing a forum in which information can be co-produced. However, although there is a wide consensus on the need for intermediary organizations, there is no consensus on what they should do (Jones et al., 2008). There are a number of suggested strategies to address the problems described by various respondents. All respondents admitted that there is no such intermediary organisation in Tanzania.

The need of intermediary organization has been emphasised in a number of literature (Choi et al., 2005; Scott, 2006; Cash et al., 2003). The authors call for intermediary organizations to facilitate communication, translation, and mediation. The intermediary organization will thus serve as knowledge brokers at the research-development policy interface and as capacity-builders for both researchers and policymakers (Jones et al., 2008). The knowledge broker will be responsible for information dissemination, advocacy for the use of scientific knowledge in policy, representing and mediating the views and goals of researchers and policy-makers, identifying important actors in the policy process, and networking between researchers and policy makers.

The case study on the National HIV Policy shows that the need for a national policy on HIV/AIDS originated from gaps in implementation of the national control programme (NACP) activities and when setting a multisectoral approach in combating HIV/AIDS epidemic. This establishment appears to be appropriate as the origin of the idea to have the policy seem to be the end users of the ultimate policy. NACP being among end users of the policy took lead in gathering evidence for policy formation by involving experts. However, the initial involvement of government officials in receiving and analyzing the evidence while excluding other stakeholder (politicians, community, NGOs, research and academic institutions) may have affected the quality and timely formation of the policy. The lack of widespread participation in the development of the policy may have contributed to a lack of momentum for approval (Stover et al., 1999).

The low response rate in opinion giving on the draft policy may have been contributed by lack/inadequate sensitization on the need to participate in establishing the policy. Also it is not clear which mode of involvement (meeting, workshop, mailing out documents, or phone calls) was used to solicit inputs from the society, though the criteria for selection of respondents was also not clear. Inadequate knowledge on contents of the policy, lack of awareness on what was needed to be included in the policy document, and on what was the right way and forum to register their opinion on the policy may have attributed to the low response to NACP.

There is a prevailing understanding within the research community that policymakers often do not make use of research findings in decision making. In addition, managers of health-care programmes are seen to not always use research results, nor apply scientific methods in planning, monitoring and evaluating the services they deliver. Researchers have been accused of failing to address the health problems that are perceived as top priorities by policymakers, health managers, and the public. Researchers often do not succeed in communicating their findings and recommendations beyond the academia and in readily understandable language nor in a timely fashion. Research will have a greater likelihood of being used in decision making if all the stakeholders are identified and encouraged to take ownership in defining health problems and seeking solutions.

In general, the needs of policymakers are simple: they want the right information, in the right form, at the right time. Consumers of research results are not alike; their communication needs can differ tremendously. The right form in which to convey information depends on a policymaker's background, perspective, and political context. But policymakers do have a common preference: they are more likely to read research results and policy implications that are timely and clearly and succinctly presented.

Most often, research findings that feed into the process during stages 1-4 are likely to have the best chance of finding their way into the consensus-building, legislation, and implementation stages. Very often, when research results are published, policymakers find them indigestible. This is unfortunate but understandable because the results have been written for a different target group, namely other researchers. All researchers have to document in a detailed way the scientific methods with which they obtain their results. It is their fundamental ethical obligation to rigorously examine and publish the results and methodology of reported research. Researchers' commitment to objectivity and disciplinary and scientific practice also obliges them to use and describe the latest scientific methods. This is in fact how science corrects mistakes and ever more closely approximates truth and understanding. Most policymakers, however, will not read lengthy research reports, especially when these are written in a language with a different target group in mind. Research reports have to be simplified and condensed in close cooperation with the researchers and presented in a way that is appealing to what is considered as the market segment of "insiders". This group includes, policy advisers who give their recommendations to policymakers, experts in the donor community, and any other group that has a professional interest in a research issue. The simplification and condensation process is not an easy task as many researchers hold the opinion that simplification and condensation are a threat to the "scientific appeal" of their published work.

Among the strategies proposed to overcome the obstacles at the science-policy interface include supporting credible knowledge brokers to mediate between researchers and policymakers and effectively tailoring information services and product to audience needs. However, some organizations suggested having a strong need for capacity building. Already, it has been proposed by other authors that a system-wide capacity building around the science-policy interface is necessary and should be targeted to the need of diverse actors (Jones et al., 2008). Policy makers need a better understanding of scientific information, along with civil servants in a number of ministries in national and local government. Similarly, scientists require a better understanding of policy processes in order to communicate research findings more effectively and to engage in a timely manner. In order to build demand for the uptake of scientific information into policy, there is need to build scientific literary capacities among the general public to improve meaningful participation of ordinary citizens in policy debates about research issues.

Our findings suggest that there is a strong support by researchers and policymakers for greater engagement of researchers with policy discussions. Studies have already shown that policymakers operation under multiple pressures and influences will only adopt information that is relevant to their current policy concerns. Similar situation has recently been reported in other developing countries (Jones

et al., 2008). However, a strong consensus emerged from both the Ministry of Health and Research Institutions for the need of knowledge brokers.

The findings of this study indicate that the most pressing priority policy issues are similar to those already identified by stakeholders during the health research priority setting forum in 2005 (NIMR, 2006). However, respondents in this study had a rather a small list of priorities. This is likely due to the limited time during the interview. The list provided by the health research priority document is relatively exhaustive and was based on a more rigorous process. It is already known that prioritisation is a political process that involves dialogue and debate as well as underlying value system. Prioritisation relies on the less quantifiable aspects of peoples' perceptions and needs. In acknowledging the political nature of prioritisation, there is concomitant recognition of the different interest groups in society based on variables such as gender, education, religion and socio-economic class that in turn relate to individuals' values (NIMR, 2006). A more rather specific policy issues can also be found in specific programme strategic plans. For instance, the National Malaria Control Programme considers issues of malaria diagnosis, home case management, mosquito net coverage and epidemic response as utmost important issue. It is unfortunate that in its strategic plan, NMCP does not consider research as an important component for the next five years (MoH, 2008b)

One of the major challenges in achieving health development in any given country is addressing the dichotomy between research and policy decision-making. The work that researchers conduct often does not reach policymakers because of inadequate and inappropriate policy communication. There is a tremendous need for information to guide policy formulation and programme development for better health care delivery, since, in the absence of such information, decisions may not be based on optimal choices. The information must also be useful, made available at the right time to those who need it (such as policy makers, programme planners, and health workers), and it must be in the right form.

In conclusion, the findings of this study suggest that the use of scientific evidenced-based policy making is poorly institutionalised in Tanzanian contexts. Research generation and utilisation involves several stakeholders including ministries, research institutions, academia, civil societies and development partners. Various health and health-related institutions have different views as to the health priorities. These varied from human resources, financing, maternal and child health services, communicable and non-communicable diseases and their control. The interrelation between researchers and policymakers has by and large considered an important factor in an appropriate research communication process. In conclusion, generation, analysis and utilisation of research for policy development require an integrated approach that takes on board all key stakeholders. There is need to strengthen the local research capacity in both the conduct of research, dissemination and translation of the findings and policy development.

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Appendices

Appendix 1: IN-DEPTH INTERVIEW GUIDE

1. Personal Identifier: Date ----------

   Name of Institution: ----------

   Position of respondent: ----------

Category:

a) National level policy maker use structured questionnaire as well
b) Regional level policy maker use structured questionnaire as well
c) In-country development partner
d) Other (specify): ---------- ----------

Introduction

The purpose of this interview is to obtain information about the reforms/changes in the health sector in Tanzania. Learn more about the policy-making process for the current/upcoming reforms and if and when the research evidence is helpful and/or contributing to this process. We intend to limit ourselves to several general questions.

2. Could you please describe briefly challenges that face the health sector in Tanzania?

Probe questions about:

i) *Pressing health problems of the population*

ii) *Lack and/or problems in health care financing, in organization and delivery of personal or public health services*

iii) *Problems about health care provider network including human resources, governance and management issues in the health sector, etc.*

iv) *Access to research data/information*

3. Could you describe current or planned reform efforts in the health sector in Tanzania?

Probe for:

i) Reforms in the area of health care financing
ii) Provider network,
iii) human resources for health
iv) Management capacity
v) The role of private sector in financing or service provision, stewardship/ governance

4. Currently what are the most important three policy issues your organization (ministry) is dealing with in the health sector?

   a) ----------

   b) ----------

   c) ----------

5. Can you please describe the process through which the health policy development takes place in Tanzania?

It will be easier to pick the very last policy making process and use it as an example and probe for:

i) Who raises the need for policy change/need
ii) Where and how the policy options are formulated/discussed
iii) Who contributes to advocacy groups
iv) Where and by whom the final decisions are made.

6. a) In your opinion do you think that development of health policies in Tanzania are evidence informed/based?

    i) Yes
    ii) No
    iii) Not applicable

    b) If YES, could you describe the process through which evidence is acquired, assessed, adopted and applied?

    Probe:
    - *i) When policy issue is identified who decides to seek for evidence?*
    - *ii) Who acquired the research and prepared policy brief or other relevant document*
    - *iii) How systematic or non-systematic is this practice, etc?*

    c) If NO, explain why health policies developed in Tanzania are not largely evidence informed/based?

7. What do you think are the barriers to the use of health research as evidence to policy formulation in Tanzania?

8. What do you think should be done to improve the link between policy makers and researchers?

9. In general who are the critical players/contributors to the health policy making in Tanzania?

    Probe for organizations active in policy making in the;

    iv)Government agencies

    ---

    v) Research organizations and

    ---

    vi) Private sector and civil society

    ---

    vii) Others: (Media)

    ---

10. Could you provide information about the development partners/donors that are significant contributors to the health sector reforms in Tanzania?

    a) ---

    b) ---

    c) ---

    d) ---

    e) ---

Appendix 2: SELF-ASSESSMENT TOOL AND DISCOUNT GUIDE FOR HEALTH SERVICES AND HEALTH POLICY ORGANIZATIONS

Is RESEARCH Working for You?
A Self-Assessment Tool

1. Personal Identifier: Date ----------

Name of Institution: ----------

Position of respondent: ----------

Category:

a) National level policy maker use structured questionnaire as well
b) Regional level policy maker use structured questionnaire as well
c) In-country development partner
d) Other (specify): ---------- ----------

NOTE:
IF YOU BELONG TO A HEALTH SERVICE OR HEALTH POLICY ORGANIZATION, PLEASE ANSWER QUESTIONS ON PAGES 2 - 8

IF YOU BELONG TO A RESEARCH OR ADVOCACY ORGANIZATION, PLEASE ANSWER QUESTIONS ON PAGES 9 - 15

Why Use this Tool?
When we refer to Research Evidence, this includes evidence from published research articles/papers. Academic research is only one sort of evidence, but has the advantages of greater rigour, relevance and independence. Research is one of the many types of information and data used in making decisions. In particular, health services research can help to: Explain the need for certain decisions; Show the reasons for choosing one of many competing arguments; and increase confidence in decisions that are made.

Making the best use of the ever-growing body of research information is essential for any health services or health policy organization. Whether you are a national, provincial or territorial health authority, hospital, professional practice, long-term care organization, or community health organization, this self-assessment tool provided by the *Alliance for Health Policy and Systems Research* (AHPSR) will help identify how you gather and use research for policy development and if there is a potential for improvement.

The purpose of this self=assessment tool is to help organizations evaluate their capacity to use research evidence in the design of policies. There are no right or wrong answers in the self-assessment.

2. a) Can your organization (ministry) find and obtain the research findings it needs?
   i) Yes
   ii) No
   iii) Not applicable

   d) If YES, Explain how? If NO, explain why?

3. a) Can your organization (ministry) assess research findings to ensure they are reliable, relevant, and applicable to you?
   i) Yes
   ii) No
   iii) Not applicable

   b) If YES, Explain how? If NO, explain why?

4. Can your organization (ministry) present the research to decision makers in a useful way?

i) Yes
ii) No
iii) Not applicable

d) If YES, Explain how? If NO, explain why?

5. a) Are there skills, structures, processes, and the culture in your organization (ministry) to promote and use research findings in decision-making?
   i) Yes
   ii) No
   iii) Not applicable

   b) If YES, Explain how? If NO, explain why?

Making Decisions in Health Services
Financial, organizational, and resource decisions must be made by those who fund, organize and set priorities in health services, by those who develop health policies, and by health service providers. These decisions must be made so that the best investments are made for the health of the people.

Today's healthcare environment is changing rapidly, and decision makers must face: A complex environment; Vast quantities or information that is often contradictory and comes from many different sources; and new demands for accountability.

Using this tool can help your organization determine:

- How research is currently being used;
- How research is located;
- The capacity within the organization to locate and use research;
- What is missing;
- Ideas for better use of research; and
- Next steps you should consider

6. Who defines what is "enough" effort or adequate resources?

Use the following rating system to record your answers to the following questions. There are five ratings from which to choose for the current situation in your organization.

Rating

1	2	3	4	5
Don't do	Do poorly	Do inconsistently	Do with some consistency	Do well
Don't do it at all	Do it but poorly	Do it but not very well and not consistently	Do it quite well But with room for improvement	Confident in your ability to do it well

PART ONE: ACQUIRE: Are we able to acquire research?

	Rating				
1=Don't do 2=Do poorly 3=Do inconsistently 4=Do with some consistency 5=Do well					
1. We have skilled staff to undertake research	1	2	3	4	5
2. Our staff has enough time for research	1	2	3	4	5
3. Our staff has the incentive to do research (it is used in our decision making)	1	2	3	4	5
4. Our staff has the resources to do research	1	2	3	4	5
5. We have arrangements with external organization experts who search for research, monitor research, or do research for us	1	2	3	4	5

Are we doing research in the right places?

	Rating				
1=Don't do 2=Do poorly 3=Do inconsistently 4=Do with some consistency 5=Do well					
6. We look for research findings in journals (for example, by subscription, Internet, or library access). Example are please list the sources: a) ---------- b) ---------- c) ----------	1	2	3	4	5
7. We look for research findings in non-journal reports (grey literature) by library or Internet access, direct mailing from organization such as ministries of health. *Please list the sources:* a) ---------- b) ---------- c) ----------	1	2	3	4	5
8. We look for research in databases by subscription or internet access such as the *please list the source:* a) ---------- b) ---------- c) ----------	1	2	3	4	5
9. We look for research information on websites (those that collate and/or evaluate sources) such as *Please list the sources:* a) ---------- b) ---------- c) ----------	1	2	3	4	5
10. We work with researchers through formal and informal networking meeting with our staff	1	2	3	4	5
11. We get involved with researchers as a host, decision-maker partner, or sponsor	1	2	3	4	5
12. We learn from peers through informal and formal networks to exchange ideas, experiences, and best practices	1	2	3	4	5

PART TWO: ASSESS: Can we tell if the research is reliable and of high quality?

	Rating				
13. Staff in our organization has critical appraisal skills and tools for evaluating the quality of methodology	1	2	3	4	5
14. Staff in our organization has the critical appraisal skills to evaluate the reliability of specific research by identifying related evidence and comparing methods and results.	1	2	3	4	5
13. Our organization has arrangements with external experts who use critical appraisal skills and tools to assess methodology and evidence reliability, and to compare methods and results.	1	2	3	4	5

Can we tell if the research is relevant and applicable?

	Rating				
14. Our staff can relate our research to our organization and point out similarities and differences	1	2	3	4	5
17. Our organization has arrangements with external experts to identify the relevant similarities and differences between what we do and what the research says.	1	2	3	4	5

PART THREE: ADAPT Can we summarize results in a user-friendly way?

	Rating

1=Don't do 2=Do poorly 3=Do inconsistently 4=Do with some consistency 5=Do well					
18. Our organization has enough skilled staff with time, incentives, and resources that use research communications skills to present research results concisely and in accessible language	1	2	3	4	5
19. Our Organization has enough skilled staff with time, incentive, and resources that use research communications to synthesize in one document all relevant research, along with information and analyses from other sources.	1	2	3	4	5
20. Our Organization has enough skilled staff with time, incentive, and resources who use research communication skills to link research results to key issues facing our decisions makers.	1	2	3	4	5
21. Our Organization has arrangements with external experts who use research communications skills to provide recommended actions to our decision makers.	1	2	3	4	5
22. Our Organization has arrangements with external experts who use research communication skills to present research results concisely and in accessible language.	1	2	3	4	5
23. Our Organization has arrangements with external experts who use research communications skills to synthesize in one document all relevant research, along with information and analyses from other sources.	1	2	3	4	5
24. Our Organization has arrangements with external experts who use research communications skills to link research results to key issues facing our decision makers.	1	2	3	4	5
25. Our Organization has arrangements with external experts who use research communications skills to provide recommended actions to our decisions makers.	1	2	3	4	5

PART FOUR: APPLY

4.1 Do we lead by example and show how we value research use?

	Rating				
1=Don't do 2=Do poorly 3=Do inconsistently 4=Do with some inconsistently 5=Do well					
26. Using research is a priority in our organization	1	2	3	4	5
27. Our organization has committed resources to ensure research is accessed, adapted, communicated and applied in decision making	1	2	3	4	5
28. Our organization ensures staff involved in discussion on how research evidence relates to our main goals.	1	2	3	4	5
29. The management of our organization has clearly communicated our strategy and priorities so those creating or monitoring research know what is needed to support our goals.	1	2	3	4	5
30. We communicate internally in a way that ensures there is information exchange across the entire organization.	1	2	3	4	5
31. Our corporate culture values and rewards flexibility, change, and continuous quality improvement with resources to support these values.	1	2	3	4	5

Do our decision-making process in Tanzania have a place for research?

	Rating				
1=Don't do 2=Do poorly 3=Do inconsistently 4=Do with some inconsistently 5=Do well					
32. When we make major decisions, we usually allow enough time to identify researchable questions and create /obtain, analyze, and consider research results and other evidence.	1	2	3	4	5
33. Our management team has enough expertise to evaluate the feasibility of each option, including potential impact across the organization and on clients, partners, and other stakeholders.	1	2	3	4	5
34. Decision makers in our organization usually give formal consideration to any recommendations from staff who have developed or identified high-quality and relevant research.	1	2	3	4	5
35. Staff and appropriate stakeholders know when and how major decisions will be made.	1	2	3	4	5
36. Staff and appropriate stakeholders know how and when they can contribute evidence and how that information will be used.	1	2	3	4	5
37. Staff who has provided evidence and analysis usually participate in decision-making discussions.	1	2	3	4	5
38. Relevant on-staff researchers are part of decision-making discussions.	1	2	3	4	5
39. Staff and appropriate stakeholders receive feedback on decisions with a rationale for the decision.	1	2	3	4	5
40. Staff and appropriate stakeholders are informed of how available evidence influenced the	1	2	3	4	5

choices that were made in our organization.					

Our Results: A Discussion Guide

41. Establish research as a priority in our organization. *We feel research in our institute (ministry) should have* (*circle one)*
    a) Higher priority
    b) Same priority
    c) Lower Priority

42. Integrate the use of research into the work of people in our institution (ministry). *We feel we need to (Circle one)*
    a) Integrate research (we do not do this right now)
    b) Integrate research more often
    c) Improve the quality of our integration of research

43. Encourage the use of research by our decision makers. *We feel our decision makers (circle one):*
    a) Do not use research
    b) Use research sometimes
    c) Use research enough

44. Increase our capacity for research. We Need (If you have more than one answer, *please rate your needs from 1 to 5, with 1 being the highest priority)*

	Highest Priority				Lowest priority
Skilled staff	1	2	3	4	5
Resources	1	2	3	4	5
Time	1	2	3	4	5
Incentives	1	2	3	4	5
Arrangements with external experts	1	2	3	4	5

45. Acquisition of research. We need more access to (if you have more than one answer, *please rate your needs from 1 to 6, with 1 being the highest priority):-*

	Highest Priority				Lowest priority
Journals	1	2	3	4	5
Non-journal reports (grey literature)	1	2	3	4	5
Databases	1	2	3	4	5
Web sites	1	2	3	4	5
Working with researchers					
Learning from peers	1	2	3	4	5

46. Assessment of research: We need to *(circle the one which is most appropriate or best describes your situation):-*
    a) Assess and adapt research
    b) More frequently assess and adapt research
    c) Improve the quality of our assessment

47. Development of research summaries: We need to *(circle the one which is most appropriate or best describes your situation):*
    a) Develop expertise in research summaries
    b) Increase expertise in research summaries
    c) Improve expertise

48. Linking research results to key issues facing our decision makers: Our decision makers need to *(circle the one most appropriate or which best describes your situation):*
    a) Consider research in making decisions
    b) Consider research somewhat more often in making decisions
    c) Improve the quality of linking research results to key issues facing our decision makers.

What Next?
While thinking about the possible interventions try to raise and answer the questions. We offer sample questions that will fit most situations, but take time to write those specific to the evaluated institutions and based on the self-assessment exercise;

1. How do we help out organization understand the importance of research?

2. How do we access skilled staff?

3. How do we access outside assistance with research?
4. What training is available in writing research summaries?
5. What case studies can we cite to emphasize the importance of research?
6. Is research acquisition costly?
7. What if we cannot afford research?

Appendix 3: A SELF ASSESSMENT TOOL AND DISCUSSION GUIDE FOR RESEARCH AND ADVOCACY ORGANIZATION2/THINK TANKS

What is different in this Tool?
This tool is similar to the described earlier in the Annex 2, with the difference that it has been modified and adjusted to be used with research produces and advocacy groups. Most of the questions are similar and are based on the same principles. Only some questions are modified/added (in the tools these questions are colored in grey) with the objective to determine how effectively the research producers or advocacy groups are able to identify policy issues within the country and timely address these challenges through provision of relevant evidence to the policy makers.

The methodology for application of this tool is similar to the previous one. And the ratings used are also same.

The purpose of this self-assessment tool is to help research and advocacy organizations evaluate their capacity to identify policy challenges/issues in the country and timely use research evidence to inform policies. There are not right or wrong answers in the self-assessment. Ideally such organizations need to be able to:-

2. a) Can your organization find out what are most pressing policy issues that concern the policy makers?
   i) Yes
   ii) No
   iii) Not applicable

   b) If YES Explain how? If NO, explain why?

3. a) Can your organization find and obtain the research findings that are relevant to policy concerns?
   i) Yes
   ii) No
   iii) Not applicable

   b) If YES Explain how? If NO, explain why?

4. a) Can your organization assess research findings to ensure they are reliable, relevant, and applicable to the policy issues identified?
   i) Yes
   ii) No
   iii) Not applicable

   b) If YES Explain how? If NO, explain why?

5. a) Can your organization present the research to decision makers in a useful way?
   i) Yes
   ii) No
   iii) Not applicable

   b) If YES Explain how? If NO, explain why?

6. Are there skills, structures, process and the culture in your organization to promote and facilitate use of research findings in a policy making process?
   i) Yes
   ii) No
   iii) Not applicable

The questions and Rating
Use the following rating system to record your answers to the following questions. There are five rating from which to choose for the current situations in your organization.

Don't do	Do poorly	Do inconsistently	Do with some consistency	Do well
Don't do it at all	Do it but poorly	Do it but not very well and not consistently	Do it quite well but with room for improvement	Confident in your ability to do it well

PART ONE: ACQUIRE Are we able to acquire research?

	Rating				
1=Don't do 2=Do poorly 3=Do inconsistently 4=Do with some inconsistently 5=Do well					
1. We have skilled staff to undertake research	1	2	3	4	5
2. Our staff has enough time for research	1	2	3	4	5
3. Our Staff has the incentive to do research (It is used in our decision making)	1	2	3	4	5
4. Our staff has the resources to do research	1	2	3	4	5

Are we doing research in the right places?

	Rating				
1=Don't do 2=Do poorly 3=Do inconsistently 4=Do with some inconsistently 5=Do well					
5. We work with policy makers through formal and informal networking meetings with our staff to identify pressing policy issues	1	2	3	4	5
6. We learn from peers through informal and formal networks about pressing policy challenges.	1	2	3	4	5
7. We set research agenda of our organization around critical policy issues/challenges faced by policy makers in our country	1	2	3	4	5
8. We look for policy relevant research evidence in journals (for example subscription, internet, or library access). Examples are Please list the sources: a) ---------- b) ---------- c) ----------	1	2	3	4	5
9. We look for policy relevant research evidence in non-journal reports (grey literature) by library or internet access, direct mailing from organizations such as ministries of health, the please list the sources; a) ---------- b) ---------- c) ----------	1	2	3	4	5
10. We look for policy relevant research evidence in database by subscription or internet access as the *please list the sources:* a) ---------- b) ---------- c) ----------	1	2	3	4	5
11. We look for information on websites (those that collate and/or evaluate sources) such as *please list the sources:* a) ---------- b) ----------	1	2	3	4	5

PART TWO: ASSESS: Can we tell if the research is reliable and of high quality?

	Rating				
1=Don't do 2=Do poorly 3=Do inconsistently 4=Do with some inconsistently 5=Do well					
12. Staff in our organization has critical appraisal skills and tools for evaluating the quality of methodology used in research	1	2	3	4	5
13. Staff in our organization has critical appraisal skills to evaluate the reliability of specific research by identifying related evidence and comparing methods and results	1	2	3	4	5

Can we tell if the research is relevant and applicable?

	Rating				
1=Don't do 2=Do poorly 3=Do inconsistently 4=Do with some inconsistently 5=Do well					
14. Our staff can relate our research to know policy challenges and point out its relevance	1	2	3	4	5
15. Our organization has arrangements (forma and informal) with policy makers to identify the relevance of what we do and what they need.	1	2	3	4	5
16. Our staff can plan and carry out research so that research evidence is timely supplied and informs policy making process	1	2	3	4	5

PART THREE: ADAPT: Can we summarize results in a user-friendly way?

	Rating				
1=Don't do 2=Do poorly 3=Do inconsistently 4=Do with some consistency 5=Do well					
17. Our organization has enough skilled staff with time, incentives, and resources that use research communications skills to present research results concisely and in accessible language	1	2	3	4	5
18. Our Organization has enough skilled staff with time, incentive, and resources that use research communications to synthesize in one document all relevant research, along with information and analyses from other sources.	1	2	3	4	5
19. Our Organization has enough skilled staff with time, incentive, and resources who use research communication skills to link research results to key issues facing our decisions makers.	1	2	3	4	5
20. Our Organization has arrangements with external experts who use research communications skills to provide recommended actions to our decision makers.	1	2	3	4	5
21. Our Organization has arrangements with external experts who use research communication skills to present research results concisely and in accessible language.	1	2	3	4	5
22. Our Organization has arrangements with external experts who use research communications skills to link research results to key issues facing our decision makers.	1	2	3	4	5
23. Our Organization has arrangements with external experts who use research communications skills to provide recommended actions to our decisions makers.	1	2	3	4	5

PART FOUR: APPLY

4.1 Do we lead by example and show how we value research use?

	Rating				
1=Don't do 2=Do poorly 3=Do inconsistently 4=Do with some inconsistently 5=Do well					
24. Using research is a priority in our organization	1	2	3	4	5
25. Our organization has committed resources to ensure research is accessed, adapted, communicated and applied in decision making	1	2	3	4	5
26. Our organization ensures staff involved in discussion on how research evidence relates to our main goals.	1	2	3	4	5
27. The management of our organization has clearly communicated our strategy and priorities so those creating or monitoring research know what is needed to support our goals.	1	2	3	4	5
28. We communicate internally in a way that ensures there is information exchange across the entire organization.	1	2	3	4	5
29. Our corporate culture values and rewards flexibility, change, and continuous quality improvement with resources to support these values.	1	2	3	4	5

Does decision-making process in our country have a place for research?

	Rating				
1=Don't do 2=Do poorly 3=Do inconsistently 4=Do with some inconsistently 5= Do well					
30. When policy makers make major decisions they usually allow enough time to identify researchable questions and consider research results and other evidence	1	2	3	4	5
31. Decision makers in our country usually give formal consideration to any evidence identified and recommended by our organization for policy making	1	2	3	4	5
32. our staff knows when and how major decisions will be made	1	2	3	4	5
33. Our staff knows how and when they can contribute evidence and how that information will be used.	1	2	3	4	5
34 Staff who has provided evidence and analysis usually participated in decisions- making	1	2	3	4	5

35 Staff and appropriate Stakeholders receive feedback on decisions with a rationale for the decisions.	1	2	3	4	5
36. Staff and appropriate stakeholders are informed of how available evidence influenced the choices that were made by policy makers	1	2	3	4	5

Our Results: A discussion Guide

37. Establish closer linkages with policy making process. *We feel establishing linkages with policy makers should have (circle one)*

a) Higher priority
b) Same priority
c) Lower Priority

38. Enable our Staff organization to better communicate research evidence to policy makers. *We feel we need to (Circle one)*

a) Better communicate research evidence to policy makers (we do not do this right now)
b) Communicate research –evidence to policy makers
c) Establish clear communication channels and processes to deliver research – evidence to policy makers

39. Encourage the use of research- evidence by our decision makers. *We feel our staff organization (circle one)*

a) Do not encourage the use of research evidence by policy makers
b) Encourage the use of research evidence by policy-makers sometimes
c) Encourage the use of research evidence by policy makers enough

40. Increase our capacity for relevant research-evidence production. *We need (if you have more than one answer, please rate your needs from 1 to 5, with 1 being the highest priority):*

	Highest priority	→			Lowest priority
Skilled staff	1	2	3	4	5
Resources	1	2	3	4	5
Time	1	2	3	4	5
Incentives	1	2	3	4	5
Arrangements with expert/networks	1	2	3	4	5
Arrangements/linkages with policy makers to be aware of current policy challenges/issues	1	2	3	4	5

41. Strengthen our links with policy makers and policy making process. *We need (if you have more than one answer, please rate your needs from 1 to 5, with 1 being the highest*

	Highest priority	→			Lowest priority
Closely monitor policy processes in the country	1	2	3	4	5
Establish close linkages with policy makers	1	2	3	4	5
Develop formal channels of communicating research evidence to policy makers/ stakeholders	1	2	3	4	5
Improve the quality of linking research results decision makers	1	2	3	4	5

42. Acquisition of research
We need more access to (if you have more than one answer, please rate your needs from 1 to 6, with 1 being the highest priority)

	Highest priority	→			Lowest priority
Journals	1	2	3	4	5
Non-journal reports grey (literature)	1	2	3	4	5
Databases	1	2	3	4	5
Websites	1	2	3	4	5
Working with researchers	1	2	3	4	5
Learning from peers	1	2	3	4	5

43. Assessment of research. We need to (*which is most appropriate or best describes your situation);*

a) Assess and adapt research *circle one*
b) More frequently assess and adapt research
c) Improve the quality of our assessment

44. Development of research summaries. We need to (circle the one which is most appropriate or best describes your situation)

a) Develop expertise in research summaries
b) Increase expertise in research summaries
c) Improve expertise

45. Development skills /capacity to better communicate research evidence to policy makers/stakeholders. We need to (circle the one which is most appropriate or best describes your situation)

a) Develop expertise communicating research evidence to policy makers/ stakeholders
b) Increase expertise communicating research evidence to policy makers/ stakeholders
c) Improve expertise