MINISTRY OF HEALTH AND SOCIAL WELFARE

CONCEPT NOTE FOR THE SUPPORT TO IMPLEMENT A NATIONAL ACTION PLAN FOR HEALTHCARE WASTE MANAGEMENT IN TANZANIA. 2009 – 2015

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1. Introduction

Tanzania is among the sub-Sahara countries experiencing a high urban population growth rate ranging between 8% and 10% and giving population size 0f 34,000,000 people. It occupies an area of about 945,000 km(sq) 21 regions in mainland and 5 regions in Zanzibar 134 districts in Tanzania mainland

Tanzania has created an extensive network of Health –Care Facilities providing about 90% of the population with at least one HCF in a radius of 10km NGOs and private institutions play a major role in the sustainability of the Tanzania Health Sector. There a total of 219 hospitals 481 HC and 4679 dispensaries. Of these the Govt own 64.2

Tanzania like other developing countries still faces the problem of healthcare waste management (HCWM). The main reason for this include: the increased generation of HCW due to the multiplication and expansion of healthcare facilities particularly in urban areas as a result of dramatic population growth, on-going immunization campaigns for measles,TB and tetanus, usage of disposable syringes and needles in avoidance of HIV/AIDS transmission. Therefore it pose a potential health risks to health workers, environment and community at large i.e HIV/AIDs and a source of no-socomial infection in all health care facilities

The Basel Convention rests the responsibility for waste management to the polluter and in this case, it is the Health facility. The Government and Development Patners and other stakeholders developed National Health Policy, which amongst other things has focused to address effectively the management of healthcare waste, to accelerate prevention of communicable diseases and epidemics including HIV/AIDs, TB and Malaria (MDG6). The Policy has led to the development of Public Health Act, (2009). Which also address protection of the environmental health and sanitation including Healthcare waste management. In the HSSP III which translate the NHP 2007 under strategy 8 – Prevention and control of communicable and non-communicable diseases there is a slot which emphasize to provides for HCWM implementation at all level

Thus, the Government and the World Bank estimate that some aspects of the Health project's services could lead to an increase in the environmental and health risks. Inappropriate handling of HIV/AIDS infected materials does not only constitute a risk for HCF staff but also for municipal workers involved in waste handling as well as for families and street children who scavenge on dump sites.

Consequently, there must be a programme focusing on the improvement of the existing HCWM procedures within the medical institutions as well as finding appropriate treatment/disposal technologies through the development of an integrated National HCWM plan, appropriately budgeted with clear institutional arrangements for its execution. The development of the National HCWM plan should also be compatible with the Health Sector Development Project (HSDP), Millenium Development Goals which is currently supported by the World Bank, and includes modules that aim at reinforcing the capacity of the MOH in its central support role and strengthening the District Health Services.

When properly addresses it is a major input and assurance into the delivery of quality health services, which will eventually contribute in achieving the millennium development goals and specifically on;

- reducing Child Mortality due to unsafe and unhygienic delivery and sepsis which account for high infant mortality rate. (sepsis account for 30% death of all newborns) – (**New born Situation Analysis 2009**)
- **improve deaths** Health through reduction of HIV/AIDS, TB, sepsis and other diseases incidences
- Sustaining the living environment.

2. Specific Primary Objectives

1. To standardize the current health-care waste management practices with the application of on-going management and monitoring procedures. The minimum recommendations comprise:

    - The establishment of annual health-care waste management plans to progressively lead the medical institutions and the administrative authorities to consider health-care waste management a routine issue and reinforce progressively their organizational capacities;

    - The designation of a Health-Care Waste Management Officer in large health facilities who should be given the responsibility to operate and monitor the health-care waste management system on a daily basis;

- Standardised segregation procedures should be set-up in all Tanzania HCFs by implementing a three bins systems that should be systematically associated with a colour coding and labeling procedure;

- The application of a strict procedure for the most hazardous waste generated in medical institutions such as chemical pre-treatment of the highly infectious waste in a solution of sodium hypochlorite in concentrated form ands a centralized disposal of the Cytotoxic and Hazardous Pharmaceutical Waste supervised by the Medical Store Department.

- The development of specific treatment/disposal methods according to the type and the location of the health-care facility where the waste is generated. This includes:

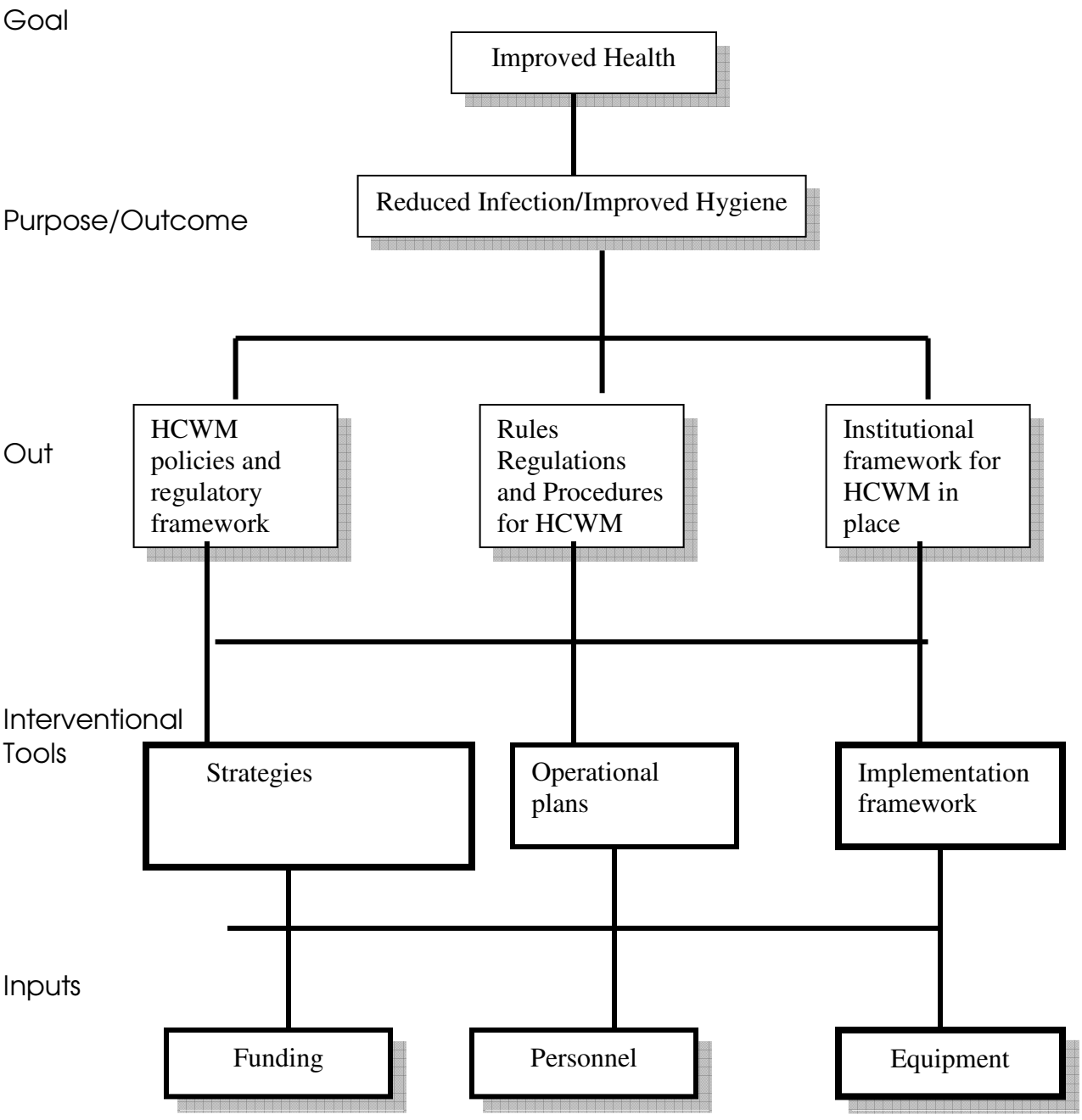
    - The use of "waste burning pits" in Dispensaries and Health Centres located in rural areas;
    - The on-site burning of sharps and the safe burying of the ash in Health-Centres and Dispensaries located in urban areas and the use of its, specifically designed, for pathological waste as a first step. Off-site disposal may be planned when the collection services are sufficiently developed;
    - The incineration of clinical waste in District and Regional Hospitals, as well as some Referral Hospitals located in small municipalities in appropriate low-cost incinerators and the use of placenta pits for some categories of pathological waste that cannot be incinerated in such incinerators;
    - In the absence of sanitary landfills, which would be the cheapest option for urban settlements, incinerated of health-care waste, without any treatment of the stack emissions, remains the disposal option that is proposed for the Hospitals located n large municipalities. The other alternatives would be either too complicated to implement (autoclaving and shredding, chemical disinfection) or too expensive (treatment using microwaves).

- The development of on-going awareness and training programmes as well as the review of the curricula of medical and paramedical staff.
- Guidelines for the medical staff to ensure hygiene and control no-socomial infections should be consigned in a comprehensive Code of Hygiene.

2. To consolidate the legal framework and the reinforcement of the existing rules and regulations. As a minimum; A Decree should be issued, containing the general and specific provisions to determine the enforcement of authorities, the obligations of health-care waste Producers and Operators, the authorized management, treatment and disposal procedures, the range of penalties to be applied.

3. To find an adequate strategy for the implementation of the plan at country level in the coming years;

Schematic representation of the goal hierarchy of HCWM Programme



3. Government Efforts

In 2002, the Ministry of Health and Social Welfare in collaboration with WHO introduced a dual chamber incinerator designed at De-Montfort University - UK

A pilot project on the De-Montfort incinerator was carried out in 13 Regional and district Hospitals. The good performance of these incinerators in 13 hospitals justified the expansion of the project, 43 more incinerators were constructed in different districts/ regional hospitals. Further more some districts have been allocating funds for the construction of medical waste incinerator.

Further to that, In 2003 the Government of Tanzania in collaboration with World Bank conducted a situational analysis of the healthcare waste management practices in Tanzania and further developed a National Action Plan on HCWM to address identified gaps and weakness for the improvement of the general management practices of HCW. These gaps and weakness includes;

- Absence of specific policy on healthcare waste management
- Lack of legislation governing management of HCW
- No clear plans and budget for managing healthcare waste in the Health facilities
- There is no formal categorization of healthcare waste
- Color-coding for receptacles receiving different types of waste is not in practice.
- No standardized safe ways of collecting sharps using standard containers
- Highly infectious waste not separated and pretreated before being disposed.
- Sanitary labor and nursing assistant are not properly protected during waste handling
- Personal protective equipment are always not in place
- There are no storage facilities available before final disposal. Incinerators are regularly used as storage point
- Access is not restricted and no protection from the weather (sun, rain and scavenging animals
- Waste Management and infection prevention committees are not organized leading to haphazard management of HC waste
- lack of knowledge and skills among health workers on the entire management of healthcare waste
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The action Plan on HCWM is a step-by-step five year plan (2003 – 2008) aimed at improving the management of Health Care Waste in Tanzania, hence significantly reduces risks associated with poor management of HCW. Four aspects are set-up to deal with the numerous areas linked to the implementation of the HCWM plan interalia;

- Develop the legal and regulatory frameworks for HCWM;
- Standardize HCWM practices, improve management and monitoring procedures;
- Facilitate provision of safe disposal facilities at medical institutions;
- Launch training and awareness measures on HCW to Health workers.

4. Progress since 2006

With the support from World Bank through TACAIDS and other stakeholders the following activities have been implemented since the establishment of the NAP-HCWM in 2004;

- A National Programme for HCWM established in the Ministry of Health and Social Welfare in 2006
- Designated a National Coordinator for HCW management Programme;(2006)
- Designated 3 officers to work on Healthcare waste Management since 2006
- Designated an office for NHCWMP located at DENTAL UNIT
- Development of the National Policy Guidelines for Healthcare Waste Management (Officially signed)
- Development of the National Standards and Practices on HCWM.(Officially signed)
- Development of the Monitoring Plan for the NHCWM(Officially signed)
- Preparation of the Training Manual for Health Workers on HCWM
- Stake holders nominated members for a National steering committee on HCWM
- Validated the National Action Plan for HCWM developed in 2003
- National Policy Guidelines and standards disseminated to all regions and district RHMTs &CHMTs inc. other stake holders implementing Healthcare waste activities
- 32 National Regional TOTs on Healthcare Waste Management trained.
- Office equipment procured to support the HCW activities
- One vehicle Nissan station wagon procured to support HCW activities
- Assist Regions and districts to plan and cost HCWM activities

5. Roles and Responsibilities of various Levels

National level

- Encourage and support districts and health facilities to incorporate HCWM in the Comprehensive District Health Plans or other health facilities plans
- Include HCWM Budget in the national annual budget
- Solicit support from key stakeholders and partners to support HCW Management activities at all levels
- Conduct supervision and monitoring on HCWM
- Create awareness to communities
- Capacity building to health facility staff and waste handlers
- Develop a legal framework (Regulations) to enforce safe management of HCW

Regional Level

- Translate policy guidelines and standards into actions
- Follow-up districts on HCWM monitoring issues
- Support districts to solicit adequate funds for maintaining hospital hygiene
- Ensure that the HCWM plan of each hospital is in conformity with the National Guidelines. They shall set up regular monitoring and control procedures.
- Analyse HCWM monitoring reports from districts
- Summarize district HCWM monitoring reports and forward them to the RHMT
- Organize annual meetings with district HCWM Committees/Officers to deliberate on monitoring reports
- Assist districts in addressing HCWM operational issues/problems identified in the monitoring process
- Provide feedback to districts on HCWM performance.

District Level

- Develop a plan and budget for HCWM and incorporate it into the comprehensive Council Health Plan (Include operation and maintenance)
- Formulate an infection prevention and control committee with TOR
- Include HCWM in the supervision checklist. Report on HCWM
- Create Data Base for HCWM
- Assign Responsibilities
- Adhere to HCWM stream system

- ☐ Ensure proper segregation, collection, storage, treatment and disposal
- ☐ Monitor and Inspect any hospital, treatment or disposal facility located within the area of his jurisdiction to check that the provisions of the National guidelines are being complied with any contravention shall be reported.
- ☐ Create community awareness on HCWM risks

Health Facility level

- ☐ Ensure that monitoring tools (Checklists and Questionnaires) are completed at each point in the HCW steam (generation, storage, transportation and disposal)
- ☐ Maintain a HCW movement log/register at each point of HCW stream
- ☐ Collect completed HCW tools and summarize them on a weekly basis and submit to district HCWM Committee/Officer
- ☐ Identify gaps/weaknesses in HCWM process and advise facility management on a daily basis on outstanding problems
- ☐ Conduct/organize monthly meetings with all personnel manning points in the HCW stream and prepare quarterly reports.
- ☐ Practice proper segregation, collection, storage, treatment and disposal of Healthcare waste
- ☐ Order and procure working equipments for HCWM
- ☐ Monitor and supervise daily HCWM activities

Home Based care at Household Level

While specific recommendations are in development, the following points are offered for interim guidelines.

- ☐ Sharps waste handling and disposal
- ☐ Self-injecting patients like diabetics, shall be provided with small puncture resistance containers or safety boxes for hypodermic needles and shall return them, when full, to the nearest health facility.
- ☐ Non-sharp infectious waste disposal
- ☐ Healthcare waste other than sharps shall be double-packed in plastic bags and then disposed of with household refuse.
- ☐ Use of simple burning pits and take to near by incinerator

6. Challenges

- Despite of the health risks associated with it Healthcare waste has not been given a due attention due to scarce resource allocation and low capacity in terms of skills to handle HCWM. The

Management of health facilities need to be sensitized on the importance of safe management of HCW

- Incineration is still a debatable concerning their efficiency among key sector for health and environment.

- Financial support for the National Programme to sustain the management of HCW in health facilities

- Competing demands eg. MDG4, 5 & 6 leave the HCWM relegated at the bottom

- Not clearly captured under MTEF and CCHP

7. Conclusion

- ☐ With the few exceptions, the current HCWM practices existing in Tanzania are not safe and have harmful health and environmental effects that need to be addressed urgently.
- ☐ Soliciting for appropriate financial resource for the regular implementation of the National health Care Waste Management Plan at all levels will remain a key issue for its application
- ☐ The sustainable implementation of safe procedures to manage health-care Waste requires a lasting commitment at all levels up to the households.
- ☐ Adequate supply of equipments at the health-care facilities will facilitate the administration and medical staff the necessary tools to apply the standardized procedures in their establishments and medical services:
- ☐ In-service training programme and adequate curricula will have to be set up followed by t*he ongoing training of all staff*
- ☐ Monitor performance of implementation of HCWM activities at all levels and provide technical support
- ☐ **Last but one we need support of our development partners in financing the strategy and technical assistance where needed.**

8. Reference

1. National Health Policy 2007
2. Health Sector Strategic Plan III 2009 - 2015
3. MKUKUTA –(2005 – 2015)
4. National Action Plan on HCWM (2003)
5. New born Situation Analysis (Launched in 2009)
6. Public Health Act, (2009)

The National Action Plan for HCWM (2009 – 2015)

Budget Estimates

1. Define a general Framework for the Implementation of the National Action Plan for HCWM

Actions			Time frame	Coordination	supervision	Indicator of achievement	Cost USD
	0.1	Organisation of a national workshop to modify and validate the proposed NAP and set-up specific work groups.	Dec 2009	DPS	Chief. Med. Officer	• Updated NAP • Minutes of workshop • Specific work group available	Initial 50,000
	0.2	Establish and hold the National Steering Committee on Health-Care Waste Management	By June 2009	DPS	Chief. Med. Officer	List of members Minutes of meetings	250,000
	0.3	Designation of a consultant to facilitate the implementation of the NAP	Dec 2010	NSCHCWM	Chief Med. Officer	Presence of a consultant with clear description of TOR	200,000
	04	Appointment and running of Mult disciplinary working group	June 2009	DPS	PS	List of names of the woking groups with clear TOR	250,000
	05	Establishment of the criteria for the evaluation of the NAP during its implementation.	June 2010	PC	NSCHCWM	Criteria for evaluation available.	50,000
	0.6	Designation of the administrative authorities in charge of the implementation of the NAP at Regional and District levels.	Dec 2010	DPS	PS.	Directive diseminated to Regional and District authority. Regional and District in	50,000

Actions			Time frame	Coordination	supervision	Indicator of achievement	Cost USD
						charges in place	
	0.7	Set-up and conduct: 1) intermediary and 2) final evaluations of the implementation of the NAP		PC	NSCHCWM	Intermediary and final evaluation reports.	80,000
	0.8	Facilitate office running cost for HCWMP(Staff allowances, fuel, stationeries, repair		PC	NSCHCWM	Availability of funds	560,000
	SUB TOTAL						1,410,000

2. Develop the Legal and Regulatory Framework

Actions			Time frame	Coordination	supervision	Indicator of achievement	Cost (USD)
Short – term 1-12 months	2.1	Prepare National Guidelines for HCWM	Dec 2006	WGLR & PC	NSCHCHM	HCWM Guidelines in place	0
	2.2	Dissemination HCWM Guidelines to all health facilities	June 2008	PC	NSCHCHM	Aavailability of Guidelines at all health service levels	300,000
	2.3	Prepare Natioalregulations for 1) Hospital Hygiene and Infection Control 2) Safe Management of the Health-Care Waste	Dec 2009	PC	NSCHCHM	Two documents available	150,000
	2.4	Complete the Public Health Act and edit a specific Decree	June 2008	ADEHS	DPS	Decree published in the Government Gazette	100,000
	2.5	Establish a Regulations on Code of Hygiene for Health facilities	Sept 2009	PC	DPS	Regulation on Code of Hygiene available	170,000
Long – term 2 – 3 year	2.6	Elaborate an Addendum to the Local Government Act.		MOHSW	GOT	Addendum available	30,000
	2.7	Complete the Professional Code of Ethics for Nurses and Midwives in Tanzania		NMC	MOHSW	Code of Ethics available and taught in the nursing schools	100,000
	SUB TOTAL						**850,000**

Recommendations

- To implement these actions, the MOHSW should set-up a Working Group on Legislation and Regulations (WGLR). Should participate to this Group Lawyers, Environmental an d Public Health Specialists from the MOH and MOEI.
- Ideally, the "National Guidelines", the list of acceptable technologies and a catalogue of equipments should be the Decree. The regulatory documents should clearly define roles, responsibilities, duties and penalties for the mismanagement of HCW (cf. part 2 of this report).
- On-going controls carried out in the field by the MOH and the PHS should be reinforced to ensure an adequate implementation of the HCWM plans. They should be accompanied with activities of advice and follow-up.
- The criteria for enforcement and inciting measures to ensure that the medical staff complies with the management procedures defined in the law/decree and described in the "National Guidelines" should be set up together with the Trade Unions.

3. Standardise the HCWM Practices and Improve Management and Monitoring Procedures

Actions			Time Frame	Coordination	Supervision	Indicators of achievement	Cost (USD)
Short – term 6 -12 months	3.1	Set-up Health Care Waste Management Team at district level	By June 2009	DHO	RHO	- Member list is established, regular meetings scheduled	80,000
	3.2	Dissemination of acceptable procedure of HCWM and requirements for Health Care Waste disposal technologies	By June 2010	PC	NSCHCHM	- National standards and procedure disseminated to health care waste management team and other stakeholders - List of acceptable technologies	200,000
	3.3	Appoint : 1) HCWMO in Referral, Regional and District Hospitals; 2) Officers in charge in Health centre and Dispensaries	By June 2009	PC	PS/DPS	- Appointment letters in place and appointees available	0
	3.4	Develop a plan for management of HCW in Health institutions including recycling	Dec 2009	PC	NSCHCHM	- The plan is set-up	268,000
	3.5	HCWM should be added in the job description of all medical and paramedical jobs.	By June 2010	PC	NSCHCHM	- HCWM component in the Job Description	1000
	3.6	Conduct monitoring, \supervission and research	By 2013	PC	NSCHCWM/WG	- Supervission and reseacrh reports	450,000

Long – term 2-3 year	3.6	Distribute official forms for the establishment of Regional, District and health facilities HCWM plans	By Jan. 2009	PC	NSCHCHM	Forms available in all health facilities and in use	20,000
	3.7	Elaborate a cost recovery system	By Dec. 2009	PC	DPS/DPP	HCWM included in the accountancy books	20,000
SUB TOTAL							**1,039,000**

Recommendations

- The action 2.4 should include: 1) the inventory by MSD of the materials susceptible to generate pollution when treated: 2) a feasibility study for the replacement of hazardours materials with less hazardous ones; 3) a feasibility study for the implementation of a national waste recycling programme; 4) the set-up of a waste minimization programme.
- The forms for the HCWM plans should provide the necessary indications to estimate the quantities of HCW generated in their institution/ District, report incidents, inventory of the available equipment and materials and assess the on-going needs for HCMW. The regional and district HCMW plans should be gathered and analysed at central level to periodically adjust the "National Guidelines" and the "National Policy".

4. **Equip the Health Institutions**

		Actions	Co-ordination	Supervision	Indicators of achievement	Cost (USD) Initial
In six months	3.1	Develop a National catalogue of equipment for segregation, packaging, collection and disposal of the HCM in the Health institutions materials (both solid and Liquids)	PC	WGE	A catalogue of Equipment available	100,000
	3.2	Write Technical Specifications and Bids by 2010	City councils, WGE & PC	NSCHCWM	Documents available	50,000
	3.3	Installation of centralized treatment by 2012	City councils, PC	WGE& NSCHCWM	Treatment plants available	700,000
	3.4.	Creation of Mutual benefit Groups in all cities	PC & City Council	NSCHCWM PC	The Group are constituted	20,000
	3.5	Negotiate with the private Sector for establishment of recommended disposal systems in all cities.	City CHMT	PC	Agreement and Memorandum of understanding signed	20,000
Within 1½ years	3.6	Launch international bids for City councils to Evaluate the Possibility to use sanitary landfills by 2011		NSCHCWM WGE, & PC	Documents available	600,000
	3.7	Equip all large HCFs with segregation, packaging, collection material (including protective clothes), transportation and disposal equipments by 2013	City CHMT CHMT	SCHCHM	Equipment available	800,000
	3.8	Equip all small health institutions with appropriate HCWM facilities by 2013	CHMT	WGE & PC	Delivery forms and equipment available.	700,000

4. Launch Training and Awareness Measures

Actions			Co-ordination	Supervision	Indicators of achievement	Cost (USD)
						Initial
	4.1	Conduct awareness campaign by December 2013 • Policy makers • Health facility personnel/staff • General Community/population.	WGT & PC	NSCHCWM	Posters displayed in Health facility. Documentation of trainings Number of trained personnel Documentation on mass education.	600,000
	4.2	Create awareness on HCWM in Health Science institution and initiate teaching programmes to students by December 2012.	WGT & PC	MOHSW	Health care management topics incorporated in current	300,000
	4.3.	Finalize training packages for HCWM in English by March 2008.	WGT & PC	NSCHCWM	Training package in English available.	60,000
	4.4.	Translation of training package to Swahili language by June 2008	WGT & PC	NSCHCWM	Swahili Training package	40,000
	4.5	Provide Technical training for the	WGT & PC	NSCHCWM	Training packages	

		Health Officers of the MOHSW, National Institutions (CEDHA, MUCHS,) Regional and District Authorities (train 'trainers of trainers") by December 2008.			available and sessions organized.	300,000
	4.6	Set-up a Group of Trainers by January 2009 (train the trainers).	WGT & PC	NSCHCWM	Registration of the groups	50,000
	4.7	Set-up-in-service Training Programmes in regional Centres for medical, paramedical and technical staff by April 2010.	WGT & PC	NSCHCWM	Reports of the different groups of trainers	900,000
	4.8	Recruit new staff members at the MOHSW by December 2010.	MOH	GOT	Job descriptions and new positions at the MOH	-
	4.9	Organize systematic initial briefing in Health institutions by December 2010.	WGT & PC	NSCHCWM	Briefing procedures available.	200,000
	4.10	Review curricula in health institutions to incorporate HCWM by July 2010.	WGT & PC	NSCHCWM & all health institutions	HCWM incorporated in teaching curricula.	300,000
Sub total						**5,740,000**
GRAND TOTAL						**9,039,000**