4 Guidance to develop a strategy to implement the National HCWM Plan

(136) Once the National HCWM plan is drafted, it is necessary to amend and validate it. Actually, this document should also be amended and validated with the National Guidelines and the National Policy so that the Government may have a comprehensive and coherent package to tackle HCWM issues. (137) The National Guidelines should be practical and directly applicable with the aim at helping the different HCFs of the country set-up adequate HCWM procedures as required in the legislation\(^{10}\). (138) The National Policy should outline the national goals and the key steps essential to the achievement of these goals. (139) The Government must develop a step-by-step strategy to improve the HCWM in the HCFs of the country and reduce significantly the occupational risks associated with the current practices. The strategy should show clearly the medium and the long-term objectives to be achieved and reflect the integrated effort that is necessary to set-up safe and environmentally sound HCWM practices. Whenever possible, it should underline the institutional and individual responsibilities as well as define the monitoring and administrative procedures. (140) It is of the utmost importance that the national, regional and municipal authorities implement new HCWM procedures in close co-operation and induce the Hospital Authorities to develop their own HCWM plan. New standards (segregation procedures first) should be applied first in the Hospitals of the tertiary level that could serve as referral medical institutions for the state and local medical establishments. A four-step approach is proposed:

- **Step 1:** organise a National Workshop;
- **Step 2:** set up the institutional framework to initiate the HCWM plan;
- **Step 3:** establish a National Action Plan to implement the HCWM Plan.
- **Step 4:** layout a time frame for the implementation of the National Action Plan.

4.1 Step 1: organise a National Workshop

(141) The organisation of an initial National Workshop should include representatives of the Ministries of Health, Environment and Finance; representatives of State and Local Governments such as national associations of local authorities, representatives of the Academy of Medicine and Nursing Schools as well as associations involved in the health sector. During the workshop, participative decisions should be taken to ensure a good co-operation between all the stakeholders for the future implementation of the plan. The following Ministries/Departments could also be included, however this will differ from country to country. This composition should also reflect at the Steering Committee level:

- Ministry/Department of Labour
- Department of Public Works
- Department of Provincial and Local Government
- Department of Water Affairs (responsible for landfill sites permits)

(142) Other representatives could be from non-governmental organizations, community based organizations, representatives of those involved in the healthcare waste management industry

(143) The implementation of the HCWM plan will require a regular commitment and monitoring. It is highly recommended that the National Steering Committee for HCWM (NSCHCWM) already mentioned under section 3.1 be in charge of this supervision and coordination task (see flow-chart below). During the workshop, the Committee should be reinforced and its new members designated. In addition, specific working groups (see step 2) should also be established once all the participants

\(^{10}\) For instance: hygiene in hospitals and occupational health and safety, responsibilities and duties of staff, separation, handling, storage and transport procedures, recommended treatment and disposal methods for each category of HCW, etc…
are in agreement with the National HCWM plan, the National Guidelines and the National Policy. It is during the workshop that these three documents should be amended and validated.

4.2  **Step 2: set-up the institutional framework to initiate the HCWM plan**

(144) The National Steering Committee for HCWM should supervise the overall implementation of the HCWM plan. The members should meet on a regular basis (a minimum every three months). A large number of institutions should be involved in this Committee in order to obtain a broad consensus for the implementation of the HCWM plan. The involvement of Bilateral or Multilateral Agencies should also be sought to obtain, *inter alia*, a potential financial support for the implementation of the Plan.

![Figure 7: Suggested institutional framework for the implementation of the HCWM Plan](image)

(145) The tasks of the National Steering Committee should be the following:

- Nominate a project co-ordinator;
- Compose the working groups;
- Establish the criteria for the evaluation of the HCWM plan during its implementation;
- Designate the administrative authorities in charge of the implementation of the HCWM plan at State and local levels;
- Select institutions and Provinces to test the HCWM plan already established;
Set-up intermediary and final evaluations of the implementation of the HCWM plan.

(146) The project co-ordinator should be assigned a full time post during the overall duration of the implementation of the plan (i.e. five years minimum). He/she should have excellent organising, managing and communication skills and should receive external support if necessary. He/she should co-ordinate the work of specific task groups that will be established by the Steering Committee.

4.3 Step 3: establish a National Action Plan to implement the HCWM Plan

(147) The implementation of the six objectives contained in the National HCWM Plan will require the development of specific actions. These actions, should be included in a National Action Plan (NAP) that will be periodically monitored and reviewed. As mentioned previously, a typical time frame for a NAP is around five-years. For each action, it is necessary to set-up indicators of achievement that will help the regular monitoring of the Plan. The figure below provides an example of how the objectives of such a plan (in this case, objective 1) could be laid out.

1. Develop the Legal and Regulatory Framework

<table>
<thead>
<tr>
<th>Actions</th>
<th>Co-ordination</th>
<th>Supervision</th>
<th>Indicators of achievement</th>
<th>Cost Initial</th>
<th>Cost Annual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-term</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Recommendations
- National Guidelines should be urgently written and distributed to the HCFs by the MOH. Ideally, a Catalogue of the Equipments available in the country for the safe management of HCW (see table on the standardisation of the HCWM procedures) should be annexed to these guidelines as well as the HCWM registration forms and certificate...
- The regulatory documents should clearly define roles, responsibilities, duties and penalties in relation with the (mis)management of HCW (cf. part ... of this report).
- The criteria for enforcement and inciting measures to ensure that the medical staff complies with the management procedures defined in the Law and described in the "National Guidelines" as well as the review of the Health Worker job description and their Code of Ethic should be set up together with the representatives of the Medical Doctor and Nurse Associations.
- The government will need to get external support to prepare the National Guidelines, establish the Code of Hygiene and prepare a Law on Hazardous Waste.

Figure 8: Example of the one of the objectives of a National Action Plan (NAP)

(148) The following general scheme of actions should be taken as a minimal basis:
1. List the initial measures to be taken in all HCFs to upgrade the internal handling of the most hazardous HCW (segregation of sharps);
2. Implement pilot projects in selected national hospitals and introduce monitoring procedures for infection control, HCWM inside the hospitals and environmental impact;
3. Assess the lessons learned for the pilot projects and review the National Documents if necessary;
4. Implement gradually the national HCWM plan, first in national hospitals;
5. Develop simultaneously local and central infrastructures for HCW disposal;
6. Evaluate the results in an intermediate progress report before implementing the NAP in the whole country as described hereafter;
7. Develop a framework programme for capacity building and training addressing new developments and different target groups;

8. Generalise the HCWM plan at national level.

(149) The supervising and the co-ordinating institutions, with their respective duties should be clearly identified at all levels for the implementation of the specific actions. Minimum requirements are:

- At National level, a task force is responsible for the overall implementation of the HCWM plan. It includes the National Steering Committee in charge of the overall supervision of the HCWM plan, the project co-ordinator and the working groups;

- At Regional level, the Secretary of Health is responsible for the good supervision of the HCWM within the region. The Medical Officer of Health is in charge of the implementation in the Health Units;

- Finally, at hospital level, each Director is administratively responsible for the HCWM within his/her institution. He/she watches over the application of the rules and nominates the team(s) in charge of the management of the HCW.

4.4 Step 4: layout a time frame for the implementation of the NAP

(150) The timeframe presents the breakdown of the activities over the whole duration of the HCWM Plan. It enables to underline the coordinated approach that will have to be adopted between all the different objectives.

(151) In the example below, the first column lists the number of each action (typically 1.1 or 101 for the first action of the first objective; 2.20 or 220 for the twentieth action of the second objective, etc.). The second column provides part of the action labelling for easy reference. The remaining part of the table provides information as to when each action is supposed to be implemented with regards to the others.

<table>
<thead>
<tr>
<th>ID</th>
<th>Actions</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
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</thead>
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<tr>
<td>220</td>
<td>Elaborate directives for inspectors</td>
<td></td>
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<tr>
<td>222</td>
<td>Elaborate control mechanisms</td>
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<td></td>
<td></td>
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<tr>
<td>224</td>
<td>Organise regular visits</td>
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<td></td>
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<tr>
<td>300</td>
<td>Implement new budget line</td>
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<td></td>
<td></td>
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<tr>
<td>310</td>
<td>Estimate HCWM costs</td>
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</tr>
<tr>
<td>311</td>
<td>Calculate the rates for the taxing system</td>
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<tr>
<td>313</td>
<td>Equip central and HCF pharmacies</td>
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<tr>
<td>314</td>
<td>Establish new accounting system</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>401</td>
<td>Assess medical staff training curriculum</td>
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<tr>
<td>404</td>
<td>Set up a radio programme in local language</td>
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<tr>
<td>410</td>
<td>Include the University in research programme</td>
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<tr>
<td>411</td>
<td>Create communication material for HCFs</td>
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<tr>
<td>500</td>
<td>Assess training needs based on field observations</td>
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<tr>
<td>501</td>
<td>Create a core group of trainers + train them</td>
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<tr>
<td>510</td>
<td>Organise training sessions at district level</td>
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</tr>
<tr>
<td>512</td>
<td>Training of auxiliary staff at HCF level</td>
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<tr>
<td>600</td>
<td>Intermediary evaluations</td>
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<tr>
<td>601</td>
<td>Final evaluation &amp; report</td>
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</tbody>
</table>

Figure 9: Example of how a time frame for the implementation of a NAP could be laid out
Conclusion

(152) Health-care services in rural or urban settings inevitably generate wastes that may be hazardous to health or have harmful environmental effects. Some of them, such as sharps, cultures from medical laboratories or infected blood, carry a higher potential for infection and injury than any other type of wastes. The absence of or improper management measures to prevent exposure to hazardous health-care waste (HCW) results in important health risks to the general public, in- and out-patients as well as the medical and ancillary staff. Furthermore, improper treatment or disposal of HCW, such as open-air burning, can constitute a significant source of pollution to the environment through the release of substances such as dioxins, furans or mercury.

(153) Safe management of HCW is a key issue to control and reduce nosocomial infections inside a hospital and to ensure that the environment outside is well protected. The current practices encountered in most of the Sub-Saharan countries of Africa do not comply with the international requirements to guaranty a safe and environmentally sound management of HCW: the full spectrum of health-care waste management (HCWM) practices are found in the health-care facilities (HCFs), from the most hazardous ones where no segregation system is applied and the waste is simply dumped in the backyard to safer procedures where the waste is segregated and the part considered as hazardous is incinerated separately. To significantly improve the current situation, the Governments of most of the Sub-Saharan countries of Africa must develop a medium and long-term national strategy that should become an integral feature of the HCFs. This strategy should reflect the integrated effort that is necessary to set-up safe and environmentally sound HCWM practices. In particular, a special attention should be paid to the following points:

- At each administrative level, *clear institutional and individual responsibilities should be established*. Moreover, specific monitoring and administrative procedures should be set-up and adequate resources allocated to ensure a proper management of the HCW;
- *Adequate awareness and training programmes* for health officers and planners, hospital administrators, medical staff and environmental health officers should be developed;
- *Appropriate, environmental-friendly and affordable* technologies should be selected for the treatment and the disposal of HCW, taking into consideration both technical and financial resources available in the country.

(154) In many Sub-Saharan countries, the lack of resources in the health sector tends to affect negatively the way HCW is managed. Furthermore, for a given country, the situation can differ significantly from one region to the other depending on the resources (financial, human and material) locally available. Under these adverse circumstances, planning remains a key issue. It requires the definition of a strategy that takes into account the given constraints and opportunities, appropriate allocation of resources, clear formulation of objectives, practical indicators of achievement and a well-structured timeframe.

(155) Preparing and implementing a HCWM plan requires developing sequential steps that are presented in figure 10. The satisfactory execution of each of these steps is strongly dependent on the completion of the other ones; none can be omitted but they can be tackled in varying sequences. Special attention must always be paid to the *analysis of the situation* and the *formulation of adequate recommendations* as well as to the *elaboration of the implementation strategy*.

![Figure 10: The Planning Progression](image)