



ASIAN DEVELOPMENT BANK

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**CAPACITY BUILDING FOR
ENVIRONMENTAL MANAGEMENT
IN SINDH**

**SOLID WASTE MANAGEMENT POLICY
FOR SINDH**

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1 SOLID WASTE MANAGEMENT POLICY FOR SINDH

2 PREAMBLE

1. The Sindh Solid Waste Management¹ Policy is intended to support and guide the Sindh City District Government and Taluka Municipal Administrations (TMA) to frame their own solid waste management (SWM) strategies, plans and programmes and is the result of stakeholder consultations held at the Taluka and provincial levels.
2. The Sindh Policy has been prepared after extensive consultations, detailed technical assessment in selected urban and rural areas and a process of consensus building. The objective of the process was to ensure participation of stakeholder groups both in (i) identification of issues, and (ii) together with the technical, fiscal and financial assessment carried out by the TA Team, build a consensus on policy response to the identified issues.
3. The first stage of the process involved three principal activities: (1) Consultation meetings with stakeholders in 41 Taluka Municipal Administrations (TMAs); (2) Issues assessment in 6 TMAs; and (3) Meetings at the provincial government level. The outputs of these consultations were analysed in the background of the detailed technical, fiscal, financial and WSS tariff assessments in the 6 selected TMAs. The issues highlighted in the Consultation process, together with reports from the technical and financial assessment conducted by the TA Team, formed the basis for preparing the first draft of the Policy.
4. The second stage of the process involved consensus building on the first draft of the Policy. This included: (1) Circulation of the summary issues statement and first draft of the Policy to a stakeholder group invited to a Consensus Building Meeting held on April 20, 2006. (2) Presentation of the issues assessment carried out in Sindh, the framework of the draft national policies, and the first draft of the Sindh Water Supply and Sanitation Policy. Discussions were held by the group, which included high-level Provincial Government officials, invited representatives from selected local governments who could make commitments on behalf of their organizations, and civic and civil society groups, on the draft of the Policy. (3) Publication of the Draft Policies in national press, with an invitation to the public to send in their comments.
5. The feedback from the meeting of April 20, 2006 on the first draft of the Policy and comments from the public provided the basis for the review and revision and the revised draft contained in this document.

3 CONTEXT

6. The SWM-related ground realities related to demographic change, coverage, social issues, the resource dimension, NGO and private sector involvement, capacity and capability of planning agencies and local government departments, are given below and has formed the basis for the development of the provisions of the Sindh Sanitation Policy.
7. Sindh's population according to the 1998 Census is 30.44 million. The annual population growth rate is 2.80 per cent which means that the population will double in the next twenty-five years. Urban growth is 3.5

¹ According to the United Nations, "Solid waste management refers to the supervised handling of waste material from generation at the source through the recovery processes to disposal." Glossary of Environment Statistics, Studies in Methods, Series F, No. 67, United Nations, New York, 1997

per cent and 48.8 per cent of Sindhis live in urban areas². This trend is likely to continue.

8. Solid waste management systems exist only in the large cities and a few intermediate ones. In those urban areas served, as little as 50 per cent of the garbage generated by the major cities is lifted and taken to informal dumping sites since formal sites have not been adequately developed. It is estimated that only 5 per cent households in Sindh have access to a municipal garbage collection system. A system of incineration does exist in Karachi but it is not environmentally-friendly and caters to only a small fraction of the generated hospital waste in these cities.
9. TMAs are now responsible for solid waste management, but their ability to deliver services to an acceptable quality across their areas of jurisdiction is limited by lack of resources, organizational capacity and information. There is also a lack of strategic planning within the administrations.
10. The solid waste management problems in urban areas are compounded by the behaviour of waste generators. In many areas, householders and shopkeepers throw their waste directly onto streets. Door-to-door collection systems are not prevalent. This is likely to be because of a lack of awareness of the link between public health and solid waste management, and because of a lack of alternatives, such as conveniently placed sanitary community bins.
11. Prevailing waste management activities present a number of health and safety issues for the public and workers. Hand loading and unloading of vehicles is commonplace. Waste is often scattered on streets or left rotting in piles, and is the most common cause of blocked drains. Hospital and other hazardous wastes are rarely separated from other waste, and there are few provisions for treatment or controlled disposal.
12. The public sector has not been widely involved in solid waste management activities to date. The informal sector is active in collection and recycling activities, but its contribution remains unacknowledged and undervalued.
13. National Rules have been developed for healthcare waste, and a recent Ordinance bans the manufacture and use of plastic bags under 30 microns thickness. Awareness of rules and ordinances is not widespread, and systems of implementation and enforcement need to be further developed.
14. Government spending for the water and sanitation sector has been poor (0.08 per cent of the GDP for the year 2002-03, and 0.09 and 0.10 per cent for the years 2003-04 and 2004-05 respectively). These allocations are insufficient to meet the Millennium Development Goals and other targets for the sector and most of them are utilised for the water sector rather than sanitation or SWM.
15. Vertical programmes (such as the Khushal Pakistan Programme) are organised and implemented in ways that adversely effect the autonomy of the Taluka Municipal Administration (TMA) in preparing the development budget and also undermine local government accountability and operational efficiency.

² Urban Areas are defined by the Census of Pakistan as “all localities which were either metropolitan corporation, municipal corporation, municipal committee, town committee or cantonment”. In this document the term urban areas and cities are used interchangeably. The term “settlements” is used to extend the definition to include smaller agglomerations in “rural” areas.

16. In most urban areas and in all rural areas the costs of SWM are not properly priced and therefore O&M cost for SWM have to be subsidised from other sources.
17. Land-use and topographic maps and development plans of existing settlements and the infrastructure that they contain do not exist for the urban and/or rural areas of Sindh. Institutional capacity and capability for such documentation is almost non-existent. There is also inadequate technical capacity and capability in government agencies to plan and implement and an absence of management information systems. In the absence of such documentation, realistic and cost effective planning cannot take place.
18. So far there has been an absence of a SWM policy and an absence of a clear definition of SWM itself. In addition, roles of the different government agencies responsible for planning and implementation are not clearly defined. There are also a large number of actors involved in SWM and a large number of parallel SWM-related investments and programmes between which there is no coordination and many of which do not come under the preview of local government institutions. Local government and development agencies also lack managerial, administrative and monitoring capacity due to which a lot of ad-hoc decisions and programmes take place.
19. There is a powerful formal and informal sector involved in the development of human settlements in Sindh. SWM provision is not a priority with these developers.

4 OBJECTIVES

20. The primary objective of the SWM policy is to improve the quality of life of the people of Sindh and the physical environment. To achieve this, the policy has the following sub objectives:
 - i) To ensure a clean, healthy and pollution free environment in all settlements.
 - ii) To ensure the safe handling and disposal of solid waste and the promotion of health and hygiene practices to compliment the primary objectives.
 - iii) To develop guidelines for the evolution of an effective institutional and financial framework to implement the primary objectives.
 - iv) To link SWM programmes with environment, housing, water and sanitation and city and regional planning policies and programmes.

5 POLICY PRINCIPLES

21. The principles of the SWM policy are given below:
 - i) Health is fundamental human right and health targets cannot be achieved without environmental sanitation. This policy considers SWM an essential element in achieving health targets.
 - ii) To recognize that a clean and healthy living environment is the right of every one and that it is the responsibility of the state to ensure that it is available to all citizens.
 - iii) To recognize the role of the broad range of providers in the sector and provide a supportive policy framework that encourages alternate options through private provision, public-private partnerships, the

role of NGOs and community organizations.

- iv) To fashion the role of the state in a manner which distinguishes between its functions as a service provider and the authority it must exercise as a regulator.
 - v) There will be an equitable distribution of resources between the richer and poorer sections of human settlements. However, preference will be given to those areas where the environmental and social impact of investments shall be the maximum.
 - vi) To recognize the key role that women play in the SWM sector and ensure their participation in decision-making for the sector at all levels.
 - vii) The needs of women and children are to be given priority in all policy, planning and implementation processes.
 - viii) To recognize the provision of SWM should be undertaken through a community-centred, demand-driven approach in which the community members are given a key role.
22. Development has to be sustainable. To achieve this, it is necessary to:
- i) build on what exists, mobilise local resources, minimize foreign loans and develop programmes that are implementable within available resources and enhanced capacities of institutions and communities;
 - ii) understand, accept and support the role that communities, NGOs and the formal and informal sector are playing in SWM;
 - iii) accept the component-sharing model for all government programmes and projects so as to ensure financial sustainability and community and private sector involvement in development and subsequent of O&M;
 - iv) develop and use technologies that are low cost, easy and cost-effective to maintain;
23. PC-1s for projects and programmes will only be prepared after the conceptual technical details and Bills of Quantities have been developed and a stakeholder consultation has been held. The feedback from the stakeholder consultation will be reflected in the modified designs and estimates.
24. Recovery of O&M costs will be generated at the local level through a combination of affordable taxes (on a sliding scale) and by assigning O&M responsibilities to community organisations.
25. SWM programmes and projects will be coordinated with settlement planning, housing, environment, health and education policy guidelines, programmes and projects.

6 MINIMUM ACCEPTABLE OPTIONS

26. The minimum acceptable options in the context of this policy are given below.
- i) Best possible use of existing staff and equipment, including re-planned beats and shifts where necessary, and improved staff attendance.
 - ii) Establish functioning public complaints system.
 - iii) Enforce SWM legislation and bylaws, e.g. the ban on manufacture

- and use of plastic bags < 50 mu.
- iv) Increase public awareness to encourage sanitary storage of waste, waste minimisation, source segregation and composting where appropriate.
 - v) Sweep streets and main roads in urban areas everyday with appropriate tools and wheelbarrows/handcarts for sweepers
 - vi) All waste generated to be conveyed to transfer points either by generators or door-to-door collectors.
 - vii) Daily removal of all waste from primary-secondary transfer points, and cleaning where necessary.
 - viii) Encourage, support and implement recycling and composting activities and link with existing informal- and private-sector activities.
 - ix) Shops, restaurants, healthcare centres etc. to contribute towards waste management costs.
 - x) Where possible, zero direct human contact with waste from primary collection to disposal, and covering of waste during transportation.
 - xi) Final disposal of waste at least 500m from housing to a contained area chosen and designed according to geological conditions, water table, wind etc.
 - xii) Zero open-burning of waste.
 - xiii) Separate collection, treatment and disposal of healthcare and other hazardous wastes.

7 SINDH PROVINCIAL STRATEGIES

27. The Provincial Strategies outline the various legislative, administrative, financial and technical measures that need to be instituted and implemented over the next few years, in order to move towards the goals of the Sindh Provincial policy for SWM.
28. The Provincial Strategies are also intended to support and guide the Sindh City District Government and Taluka Municipal Administrations (TMA) to frame their own SWM strategies, plans and programmes and are the result of stakeholder consultations held at the Taluka and provincial levels.

7.1 Process

29. The Sindh Strategies have been prepared after extensive consultations, detailed technical assessment in selected urban and rural areas and a process of consensus building. The objective of the process was to ensure participation of stakeholder groups both in (i) identification of issues, and (ii) together with the technical, fiscal and financial assessment carried out by the TA Team, build a consensus on strategic response to the identified issues within the framework of the Provincial Policies.
30. The first stage of the process involved three principal activities: (1) Consultation meetings with stakeholders in 41 Taluka Municipal Administrations (TMAs); (2) Issues assessment in 6 TMAs; and (3) Meetings at the provincial government level. The outputs of these consultations were analysed in the background of the detailed technical, fiscal, financial and WSS tariff assessments in the 6 selected TMAs. The issues highlighted in the Consultation process, together with reports from the technical and financial assessment conducted by the TA Team, formed the basis for preparing the first draft of the Strategy.
31. The second stage of the process involved consensus building on the first draft of the Strategy. This included: (1) Circulation of the summary issues statement and first draft of the Strategy to a stakeholder group invited to a Consensus Building Meeting held on April 20, 2006. (2) Presentation of the issues assessment carried out in Sindh, the framework of the draft national policies, and the first draft of the Sindh Water Supply and Sanitation and SWM Policies. Discussions were held by the group, which included high-level Provincial Government officials, invited representatives from selected local governments who could make commitments on behalf of their organizations, and civic and civil society groups, on the draft of the strategies.
32. This final draft of the Strategies draws on the above discussions and consultations. Since the detailing and implementation of the strategies through Annual Action Plans and various other measures will be undertaken by the same organisations and institutions at the Taluka, District and even Provincial levels, for solid waste management, the Provincial strategies have been presented by strategic area rather than by sub-sector, except the technical aspects and actual provision and delivery of services.

7.2 Objectives

33. The objectives of the provincial strategies are to deploy available resources in the most effective way to ensure that it is possible to achieve the longer-term targets of the provincial policies. It allows for a framework

within which the annual investment and action plans can make a cumulative and consistent impact, as well as allowing for greater transparency and accountability.

34. The overall objective of the strategies is to provide guidelines to improve health, reduce incidence of disease while conforming to environmental regulatory standards for disposal of solid waste. At the same time, the Strategies should ensure that all programs are addressed holistically, linking environment, housing, water and sanitation, city and settlement plans, as well as providing linkages to provincial and national initiatives. The Strategies also provide guidelines that will enable the TMA achieve an effective institutional, legal and financial framework for ensuring SWM coverage.
35. The Strategies should allow the TMA to move towards a greater degree of sustainability in the provision and delivery of urban services by working towards a full-cost recovery of services provided. In keeping with National and Provincial policies, the users, and especially women, should be fully engaged in the decision-making process, and the private sector should be encouraged to participate in the provision and delivery of services.

7.3 Key Policy Instruments and Strategies

36. A variety of policy instruments and strategies will be used to achieve the objectives of the SWM Policy. The key strategic thrusts of the policy will be as follows:

7.3.1 Targeting Strategy

37. All municipalities will adopt a demand led approach in providing access to SWM to ensure that scarce resources are properly utilized and ownership and sustainability of schemes is ensured over the long-term.
38. Priority for SWM will be accorded to un-served, under-served areas, and disadvantaged areas.

7.3.2 Gender Strategy

39. Ensure the representation of female councillors in all review and decision making forums regarding SWM at the district, Taluka and tiers.
40. All provider-agencies, particularly the TMAs in rural areas, will make special efforts to ensure that both men and women are consulted in scheme identification, implementation and operation and maintenance.
41. Place special focus on gender training programs for all tiers of local government staff, TMAs, Local Government Staff and EPA so that they are able to respond in a sensitive manner to the gender differentiated needs in the SWM sector.
42. Make special efforts to recruit and induct women in TMAs, EPA and other relevant agencies to ensure that the needs of women clients are addressed.

7.3.3 Legislative Strategy

43. Respect and follow the constitutional roles and responsibilities for the SWM sector, and institutional roles and responsibilities will be consistent with the provisions of the Local Government Ordinance 2001 and the devolution framework, in ensuring access to SWM.
44. Frame a broad policy framework at the provincial level which encourages and supports city district and Taluka governments to design and

implement policy which is in-keeping with the existing capacities and strengths of institutions.

45. Develop a framework that allows the participation of the private sector, and encourages public-private partnerships, and the role of NGOs in the sector.
46. Develop a realistic framework for community participation in the sector and ensure that their inclusion helps to build more effective scheme identification, implementation, operations and maintenance systems.
47. Regularly review and update the legislative framework after every five years or when required, by a committee constituted specially for the purpose of reviewing the implementation of its guidelines, their efficacy and continued relevance to the changing situation in the country.

7.3.4 Institutional Strategy

48. Focus on the role of the Government, as both a service provider and regulator, to ensure SWM standards are properly articulated, maintained and enforced.
49. The Sindh Provincial and Local Governments will be responsible for establishing policy guidelines and legislation for SWM sector at the provincial level and be responsible for special initiatives and allocation of special funds to ensure coverage in underserved and disadvantaged areas.
50. The TMAs will be encouraged to make use of the SLGO (2001) provision that allows for a variety of “contracting in” and “contracting out” arrangements for more effective service provision through the civil society and private sector organizations using performance-based contracts. These arrangements can, potentially, be used for design and implementation, testing, operation and maintenance, collection of charges, awareness building, etc.
51. The TMAs will be encouraged to adopt a service-provider orientation to its clientele. It will develop an approach which integrates community engagement, demand assessment and service provision and marketing in order to effectively enhance its professional credibility and meet the needs of the people within its jurisdiction.
52. Capacity Building programmes will be designed to strengthen institutions which are lacking in capacity such as the Town and Taluka Municipal Administrations, the Sindh Environmental Protection Agency, the Local Government and Rural Development Departments, etc.
53. The planning, design, implementation and operations of SWM systems will ensure a decision-making role of the intended beneficiaries, who should be treated as partners rather than passive recipients of development.
54. Ensure that the planning, implementation technological choices and supply specifications are determined through close participation with the users and community organizations, especially in rural areas where the participation of women is critical to ensure effective use and sustainability of SWM systems.
55. High-performing municipalities will be given special acknowledgement by instituting a system of performance grants and rewards for the institutions and the individuals.

7.3.5 Technical Strategy

56. Promote effective rehabilitation and efficiency improvements in existing SWM systems, through justifiable investments, significant reductions in solid waste generation and recycling, user-charges and other initiatives.
57. Technical assistance will be provided to the provincial and area governments for the preparation of appropriate technical guidelines which can be subsequently disseminated to all TMAs and other SWM sector agencies.
58. Standard operating procedures (SOPs) will be developed for planning, design, implementation and operations and maintenance for the various categories of SWM schemes. This will ensure adherence to technical standards and eliminate the huge concerns with regards to poor and inadequate SWM practices.
59. Appropriate and cost-effective technology will be used to ensure that the local government resources are used optimally and that the systems are easy to design and build and easy to maintain by the local communities and/or the concerned local governments.
60. Special care should be taken to use materials and parts of good quality in constructing SWM schemes. Lifetime, rather than only initial-cost comparisons should be made when considering alternative systems or tenders.
61. Wherever possible, preference should be given to rehabilitate existing schemes (functioning or not) over the construction of new schemes, unless there are special reasons to justify otherwise.
62. Low cost technological options should be developed and promoted to provide affordable SWM options, in both urban and rural areas.

7.3.6 Operation and Maintenance Strategy

63. The community should be given responsibility for monitoring and surveillance of the schemes, especially in the rural areas and small settlements. Where appropriate, the responsibility for the operations and maintenance of small schemes may be devolved to the intended beneficiaries. These communities will be responsible for routine maintenance and operations. However, in case of a major breakdown of the scheme, the TMA will be responsible for scheme rehabilitation.
64. Women will be especially consulted when determining the operations and management arrangements for schemes.
65. Capacity building programs for community organizations will be implemented (in collaboration with NGOs where appropriate) for improving the local level capacity for operation and maintenance of schemes.

7.3.7 Cross-Sectoral Issues

66. SWM issues are closely related to larger environment, housing, city and regional planning, health and education, gender, drainage and industrial effluent, and regulations, programmes and projects. A process of coordination at the provincial, district and TMA level will be established between these different sectors.

7.3.8 Government's Vertical Programmes

67. Funding from government's vertical programmes and from IFIs and bilateral agencies will be a part of a larger investment plan prepared by the provincial government and managed by the city district government and the TMAs

7.3.9 Adoption of the Component-Sharing Model

68. The component-sharing model will be adopted for all TMA schemes, whereby different aspects and components are handled by different organisations and entities. The model has been successfully deployed in cities across the Province and there is considerable experience and expertise available. There are a number of ways that component-sharing could be done, for example, communities and/or developers, housing societies etc. are responsible for adopting operation and management of door-to-door collection, and improving public awareness of solid waste issues and improving the solid waste management practice up to community bins/transfer points. Secondary collection, transportation and disposal will be handled by TMAs.

7.3.10 Public-Private Partnerships

69. Currently, the private sector is engaged in the sector primarily to fill the gaps left in the public systems. Rather than seeing these as "temporary" arrangements tolerated by the public sector, these should be supported and formally incorporated into the system. The private sector will be encouraged to participate in the collection and disposal of solid waste, either as part of the component-sharing model, or through any variety of contracting arrangements.
70. The private sector-community-NGO linkages in solid waste management in Sindh are well established. City governments and TMAs will identify these good practices, assign roles and responsibilities through consultations and invest in promoting them. Support to the private sector can range from technical and managerial capacity-building to loans and financial packages. A formal partnership can help improve the quality and the quantity of the service by taking advantage of each other strengths and capabilities. Informal sector, community-led groups or small enterprises will be engaged where possible to undertake primary collection, reliable secondary collection and sanitary transfer points (e.g. community bins) will be provided by the TMAs. Where feasible and economical, the private sector will be engaged for secondary collection. Provision of disposal facilities will remain the responsibility of TMAs.
71. Formal sector real estate development is creating townships and housing estates all over Sindh. Bye-laws will be developed by the provincial government and implemented by the TMAs for developing SWM systems for different sizes of developer-promoted schemes. Communities in informally developed housing areas will be provided incentives and disposal points by the TMAs.

7.3.11 Urban Sanitation

72. City governments and TMAs will develop their capability and capacity to document existing settlements and for identifying the existing SWM related infrastructure and its condition. On the basis of this documentation, a programme for the rehabilitation of damaged

infrastructure (as opposed to its rejection and/or duplication) will be developed and implemented.

73. An overall SWM plan will be developed for all urban settlements by city governments and the TMAs in coordination with all other agencies involved in sanitation. The plan will focus mainly on the details of the secondary collection and disposal of solid waste. All other SWM related agencies (cantonments boards, railways, etc) will develop their plans in accordance with the overall plan.

7.3.12 Rural Sanitation

74. Generation rates of solid waste in rural areas are low, and contain a high proportion of organic material, suitable for composting. Therefore rural solid waste management interventions will focus on awareness-raising campaigns relating to waste reduction, recycling and disposal of non-biodegradable wastes. The motivation programme will educate people on the health problems associated with handling of animal dung and the health hazards of keeping animals within homes. Alternatives to the present conditions will be developed in association with the governments livestock departments.

7.3.13 Consultations

75. City district government and TMAs will hold public consultations at the conceptual design of the development plan, schemes and projects. Modifications in the designs will be carried out to accommodate the concerns of the stakeholders. The PC-1 will be prepared only after such a process has been carried out. Taluka Council Monitoring Committees will oversee the programme/project/scheme. Accounts of the projects shall be made available to the public and made available to the media as stipulated by the SLGO (2001).

7.3.14 Communication and Dissemination Strategy

76. The Environment Protection Agency will be responsible for disseminating information on solid waste disposal standards, through articles in the press, leaflets, newsletters and dissemination of information to schools, through NGOs, civil society organizations, Community Citizens Boards and community organizations, etc.
77. The approved SWM Policy will be widely disseminated to municipal institutions, civil society, community organizations and users. In order to undertake this effectively, consideration may be given to putting in place a coordinating and steering mechanism with the participation of key stakeholders.
78. Regular policy dialogue will be facilitated between all tiers of government and key stakeholders on key issues and challenges, awareness building, experience sharing and dissemination of good practices.
79. Civil society organizations and community activists will participate in information dissemination and raising awareness about SWM issues.
80. Best Practices regarding successful initiatives in the SWM sector will be widely disseminated and shared and will be used to enhance the performance in the sector.

7.3.15 Awareness and Education

81. Provincial and local government programmes will be developed to advise and collaborate with the media, especially TV and radio channels, to

promote SWM related messages in their entertainment programmes and to develop special programmes related to SWM and its relationship between civic responsibility, health and education.

82. Awareness raising and education programmes will be developed focusing on solid waste management, intended to improve public understanding of the links between safe hygienic practices and public health. All educational institutions (schools and colleges), and teachers training institutions and local government department and agencies will be involved in the process. Healthcare centres will also be targeted with messages relating specifically to Healthcare waste.

7.3.16 Financial Strategy

83. The TMAs will consider a differentiated approach which will include full cost recovery, partial cost recovery, subsidization and cross-subsidization to achieve financial sustainability in the sector. The tariff system should ensure appropriate subsidies to poorer communities.
84. The implementation of professional systems for billing and collection will be encouraged through options such as strengthening the TMAs, outsourcing to the private sector, community-based system of collection, etc.
85. Systems of performance grants will be encouraged to reward those institutions and individuals who have been able to meet performance milestones and achieve the specified targets.
86. The capacity of service providers in the area of financial management, budgeting, audit and accounting, revenue collections will be strengthened.

7.3.17 Monitoring and Evaluation Strategy

87. The Local Government Department will be responsible for monitoring the coverage of SWM.
88. The TMAs will initiate the establishment of internal as well as external systems for monitoring and evaluations. They will follow professional protocols for annual work planning, identify key progress indicators and conduct effective monitoring and evaluation functions on a regular basis.
89. The coverage and specific targets and achievements of TMAs will be displayed on bulletin boards outside their offices to inform the public of proposed plans and achievements. In addition, the TMAs will encourage forums in which citizens and community members can participate to provide regular feedback on TMA performance.
90. The Government of Sindh will conduct third party surveys with provincial and district level resolution to assess the coverage to SWM and assess the extent to which sanitary disposal of solid waste facilities have been provided and are being operated.

7.3.18 Capacity Building

91. TMAs will be encouraged to identify the training needs of their professional, technical, administrative staff and elected representatives to better fulfil their mandate.
92. Projects and programmes considered as good practices will be converted into training centres for government officials, TMA staff, community activists, representatives and technicians; and elected representatives.

Training will be provided to groups in which all stakeholders are present together.

93. At the union council (UC) level, a team of community technicians will be trained in surveying, mapping, estimating and supervision of construction work so as to provide technical support to the UC. Salaries for this technical team will be provided through an endowment meant exclusively for this purpose. The technical team will also be responsible for training community members in the skills the technical team possesses.
94. The capacity of all levels of government will be developed to ensure public consultations and self-monitoring and documentation of their work.
95. Professional academic and research institutions will be involved in the capacity building process and as a result build their own capacities through interaction with grass root realities.

7.3.19 Research Strategy

96. Special efforts will be undertaken to pilot test new approaches and innovative ideas and arrangements in the SWM sector, especially those which help to improve access, efficiency, effectiveness and sustainability.
97. Where these experiments are successful they will be widely disseminated and plans will be made to up scale and replicate them at the national level.

7.4 Roles and Responsibilities of Stakeholders

7.4.1 Government Institutions

7.4.1.1 Roles and Responsibilities under SLGO 2001

98. All provincial, district, Taluka and UC level legislative bodies and government departments and agencies will fulfil their roles strictly in keeping with the provisions of the Sindh Local Government Ordinance 2001.
99. The Government of Sindh, in coordination with the district governments, will remove all anomalies, lack of regulations and procedures, conflict of interests between government institutions, to make it possible for different tiers of government and agencies to fulfil their assigned roles.
100. The Government of Sindh will take steps to increase the capacity and capability of all SWM related agencies and departments in accordance with the measures spelt out in this document.

7.4.1.2 Additional Roles

101. Provincial, district, Taluka (town) and UC elected representatives and administration will identify NGOs and CBOs and private sector (formal and informal) good practices and convert them into training centres for their staff with the help of NGOs, CBOs and/or private sector/entrepreneurs and replicate these practices in other locations within their jurisdiction through the formation of stakeholder partnerships.
102. A system of feedback, consultation and coordination will be established at the provincial, district and TMA level between all agencies (such as Environment Protection Agency, Health, Education, and Urban and Regional Planning Departments and institutions) dealing with SWM issues.

103. The process for the establishment of a management information system will be initiated at the provincial, district and TMA level, in order to enable the planning and development of SWM. The information and data from all monitoring and research agencies will be consolidated, and made freely available to the public through a policy of data sharing (through IT technology) within and amongst all SWM related organisations.
104. Each city government and TMA will prepare a comprehensive mapping and Taluka database which will be linked to the proposed management information system. On the basis of this the TMA will prepare spatial and medium term plans which will guide and steer the future development in the sector and on the basis of which appropriate SWM investment plans can be prepared at the federal, provincial, Taluka and UC level.
105. The TMA will provide technical support to NGOs and CBOs working on SWM related issues on the self-help component sharing model or other community initiatives.

7.4.2 NGOs and CBOs

106. NGOs and CBOs will be encouraged to assist communities in mobilising for SWM related programmes and projects and will assist the district city government/TMAs/UCs in the planning, funding and development of community-based infrastructure and for the safe disposal of solid wastes.
107. NGOs and CBOs will be encouraged to help in the formation of Citizen Community Boards (CCBs) and to guide them in formulating SWM projects.

7.4.3 Community Responsibilities

108. Through the process of mobilisation of communities envisaged in this policy and through public consultation and media programmes, communities will be encouraged to maintain a safe and pleasant physical environment in their settlement, participate in the provision of SWM infrastructure and its management and manage the disposal of solid waste at the neighbourhood level.

7.4.4 Individual Households

109. Through the process of mobilisation and media programmes, individual households will be encouraged to cooperate with the union administration and with their neighbours to form community organisations that can promote SWM related programmes and projects.

7.5 Mechanisms for Implementation and Monitoring

7.5.1 Implementation Strategy

110. The policy will be implemented by the Government of Sindh, local governments, and government agencies in accordance with the guidelines, principles and measures spelt out in this document.
111. Communities, NGOs and the private sector will be supported and their involvement encouraged in accordance with the provisions of SWM Policy.
112. Existing SWM related policies and their regulations and procedures should be reviewed and, where necessary, modified so as to fulfil the requirements of the Sindh SWM Policy.

113. A policy and regulatory framework for coordination between the various sectors involved in SWM related issues will be put in place at the provincial, district and TMA level.
114. The component-sharing model for the provision of SWM will be adopted and the procedures and regulations for its implementation will be developed.
115. Local government will raise funds for the O&M of SWM systems and/or hand over O&M responsibilities to communities and the private sector so as to make O&M sustainable.
116. The Higher Education Commission will be requested to make it compulsory to link professional education in medicine, engineering, architecture, planning and social work to grass root realities.
117. The Sindh government will support the National government in its efforts to honour its international agreements and obligations which include the Millennium Development Goals, the recommendations of the World Summit on Sustainable Development and the UN Istanbul Declaration.

7.5.2 Monitoring

118. Monitoring of programmes and projects in the TMA will be done by the Taluka Monitoring Committees. They will also provide the necessary feedback, as required, to the provincial level on the implementation of the policy.
119. The Sindh Government will monitor the implementation of the policy and programmes within the province and provide necessary feedback and liaise with federal government on the wider issues related to SWM.