



Report of Committee on Urban Wastes

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REPORT OF COMMITTEE ON URBAN WASTES

REPORT—PART I

—AND

APPENDICES—PART II

GOVERNMENT OF INDIA

MINISTRY OF WORKS AND HOUSING
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SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

Chapter I—INTRODUCTION

1. The Government should take adequate steps to ensure proper implementation and follow-up of the recommendations made by the Committee. (Para 1.11)

Chapter II—PRESENT STATUS

2. While some of local authorities were not contributing adequate finances to the basic service of wastes disposal, some other were spending high proportion of their income leaving very little for other services. This reduces the status of the local authorities to more or less 'limited sanitation authorities' in place of their being fullfledged municipal authorities performing wide range of services. (Para 2.09)

3. Less than 25% of the available potential for preparing agricultural manure is being exploited at present. (Para 2.18)

4. In monetary terms, the value of the manure prepared from the city refuse should be tremendous and if tapped properly it can prove to be a stable source of income to the local authorities. (Para 2.19)

5. The refuse bins may be made of special design and affixed at such places where the householders could conveniently deposit the refuse into them and also guard against their theft. (Para 2.23)

6. There is a strong case for dealing with the whole question of storage, collection, transportation, disposal, etc. of refuse at the national level and in an integrated manner keeping in view the following basic objectives :—

- (a) cleanliness of the cities and environmental pollution control through a well designed and equipped system of collection, removal and disposal of city garbage;

- (b) eradication of degrading practice of manual handling of night soil and other urban refuse by provision of suitable handling equipment to the sanitary staff; and

- (c) making available enriched compost for agricultural production. (Para 2.24)

7. The services of public cleansing, mechanised transportation and proper disposal of the urban wastes should be put under unified control of a qualified public health engineer supported by qualified junior staff in different disciplines. To begin with, all local authorities in cities with population over one lakh could implement this suggestion. (Para 2.26)

Chapter III—COLLECTION AND TRANSPORTATION OF URBAN WASTES

8. In our climatic conditions lesser than daily frequency for collection of refuse will not be suitable. (Para 3.05)

9. The designs of standardised receptacle developed by NEERI etc. should be well publicised amongst the local bodies for adoption. (Para 3.06)

10. The local bodies may supply the bins to house-holders whose annual income is less than Rs. 6000/-, at subsidised cost for which they may be reimbursed in full by the State and Central Governments. (Para 3.06)

11. The local bodies may enact bye-laws laying down standards for size and shape of bins and to enforce their installation by the house-holders on the lines of powers available to the Bombay Municipal Corporation. (Para 3.07)

12. Effective steps should be taken to do away with the practice of manual handling of night soil and its carriage as head-loads by sweepers as soon as possible. (Para 3.10)

13. Certain types of wheel barrows recommended in the Report of the Transportation and Workshop Group (Appendix IX) and also the models developed by NEERI and CPHEEO should be publicised for wider and effective use. The Government should provide assistance to the local bodies upto 50% of the cost of wheel barrows needed. (Para 3.10)

14. The sweepers be educated and oriented to increasing use of wheel barrows. (Para 3.10)

15. The Government may provide assistance to the extent of 50% of cost of wheel barrows needed in Class I cities. (Para 3.12)

16. We would stress the necessity of properly constructed collection sites and their proper location on the basis of a scientific survey. (Para 3.12)

17. Government should work out a scheme for subsidising or substantially assisting the construction of collection sites. (Para 3.12)

18. An efficient night soil service on the model of Singapore may be introduced in certain selected areas of the cities on a pilot basis during the fifth plan to be extended to cover all non-sewered areas of the cities/towns during the Sixth Plan, till the objective of conversion of dry latrines into sanitary ones is achieved. (Para 3.17)

19. Local authorities should pay special attention to the areas like markets where bulk refuse is generated. By levying a special charge for collection, as is done in a number of countries, they should be able to improve the system of collection as well as removal. (Para 3.18)

20. Where the scale of commercial operations, narrowness of roads, etc. are severe constraints for an efficient removal service, the municipal authorities should consider transferring such markets to alternative sites. Other cities will do well to emulate the example of Delhi in this regard. (Para 3.18)

21. We commend the recommendations made in the report of the Transport and Workshop Group (Appendix IX) on different aspects for adoption by concerned authorities. (Para 3.26)

22. Since switch over to mechanised transport will take time, the transportation of refuse by other means should be made hygienic and less tedious for the workers by providing necessary facilities and precautions. (Para 3.27)

23. (a) A phased programme be prepared, depending on local conditions, for change over to mechanised transport. (Para 3.28)

(b) The selection of vehicles be made keeping in view all relevant factors. (Para 3.29)

(c) In metropolitan and other large cities, the transportation service be developed on operational research methods. (Para 3.30)

(d) The entire operation of transport should be carefully systematised and timed so as to achieve the aim of keeping the city clean and tidy causing least annoyance, inconvenience and nuisance to the citizen and avoiding friction to and obstruction of normal traffic. (Para 3.31)

Chapter IV—SYSTEM OF CITY GARBAGE DISPOSAL

24. To convert dumping into sanitary land-fill does not involve high cost and looking to the health and environmental aspects, we would urge that the local bodies be prevailed upon to adopt sanitary methods of dumping. (Para 4.02)

25. In view of the fact that dumping of wastes in water constitutes a definite health hazard, it should be prohibited by law. (Para 4.03)

26. Local authorities have to be persuaded to employ the methods of composting and sanitary land-fill in accordance with the local needs keeping in view the objective of re-cycling of the wastes for maintaining soil fertility. (Para 4.04)

27. Incineration of wastes should be prohibited generally wherever it is being practised, excepting in hospitals. (Para 4.05)

28. In the interest of sanitation and public health, the local authorities should invariably ensure carriage of refuse in covered vehicles particularly the slow moving ones. (Para 4.14)

29. Steps should be taken to make the local bodies to comply fully with the instructions on the supply of protective equipment to sanitation workers. (Para 4.15)

30. Steps should be taken by the local authorities to ensure necessary precautionary measures at the disposal sites. (Para 4.16)

31. The State Governments should reiterate the instructions and orders to the local authorities about disposal of night soil by sanitary methods. (Para 4.17)

32. This aspect should also be studied in depth by the Director of Local Bodies during periodical inspections as is done in case of general administration and audit and accounts. (Para 4.19)

33. Efforts to educate people about sanitation problems and advantages of cleanliness should be stepped up through mass media, educational institutions, voluntary agencies, social organisations, seminars, periodical campaigns, etc. (Para 4.20)

Chapter V—COMPOSTING

34. Keeping in view the necessity of recycling wastes for manurial purposes, composting may be made obligatory on the part of local authorities. (Para 5.21(1))

35. Depending on the local conditions, all compostable material should, as far as possible, be utilised for composting and the remaining material disposed of by sanitary land-filling. (Para 5.21(1))

36. The present practice of dumping night soil with city refuse should be banned. Night soil should be utilised either for composting with due health safeguards or it should be trenched properly. (Para 5.21(2))

37. Appropriate rules and bye-laws on composting be framed for the guidance of the local authorities. (Para 5.21(3))

38. The State Governments should revitalise the scheme of urban composting and provide financial and technical assistance for the purpose to the local authorities. (Para 5.21(4))

39. In the sewered cities, the sludge may be utilised with city wastes for composting. For this purpose, the composting grounds should be situated as near the sewage disposal works as possible. (Para 5.21(5))

40. Steps should be taken to ensure quality of the compost. The extraneous materials (like brick pieces, iron, glass pieces, leather, rags, etc.) should as far as possible be sorted out of the refuse before composting. Depending on the volume of work, mechanical sieving plants be set up in large cities. (Para 5.21(6))

41. The Ministry of Agriculture and the Ministry of Petroleum and Chemicals may get studies regarding efficacy of enriching the organic manure by admixture of rock phosphate/pyrites conducted early and take steps to put the process in use, if found advantageous. (Para 5.21(7))

42. Procedure for acquiring land for composting grounds should be simplified and if necessary special powers should be given to officers responsible for acquisition of land for the purpose. (Para 5.21(8))

43. In the town planning schemes, specific areas should be earmarked for composting grounds. (Para 5.21(9))

44. Since composting will be advantageous for agricultural operations, the State Agriculture Departments should look into the possibility of providing assistance particularly for transport needed for compost distribution; including loan and subsidy on a temporary basis till the profitability is built up. (Para 5.21(10))

45. The State Governments should encourage exchange of experience in this respect among the local bodies in the State as well as with local bodies in other States who have been able to launch the composting programme successfully and economically. (Para 5.21(11))

46. The State Governments should make a detailed study of economics of composting and provide the local authorities with detailed guidelines for making composting a self-paying proposition. (Para 5.21(12))

47. The present system of selling compost by auction in heaps or cart/truck loads should be replaced by sale by weight and at fixed prices. (Para 5.21(13))

48. The Central and State Governments and the local authorities should take steps to popularise compost through mass media, Farmers' Forums, Cooperatives, etc. (Para 5.21(14))

Chapter VI—MECHANISATION IN COMPOSTING

49. Composting processes and extent of mechanisation should be carefully selected to suit our conditions. (Para 6.17)

50. Where land is available in plenty, it may be desirable to follow a system of windrow composting suitably adopted to local conditions. Where space is limited but skilled manpower is available, it may be desirable to adopt one of the enclosed cell composting methods. (Para 6.20)

51. The location and size of the plants should be so designed as to balance between the haulage of wastes and the economics of size. (Para 6.21)

52. There is an immediate need for assessing and evaluating the utility of available equipments and for introducing new equipments for materials handling. (Para 6.24)

53. We commend the guidelines on mechanisation prepared by the NIDC (Appendix XIII) for adoption by concerned authorities keeping in view certain specified aspects. (Para 6.30)

54. The Committee recommend addition of sewage/sullage to the refuse, keeping in view certain requirements. (Para 6.31)

55. The ideal size for standardisation would be approximately 100-150 tonnes per day/capacity plant. A large capacity upto 300-450 tonnes per day can be provided by providing multiple units at one location. If the population of the city is more than 10 lakhs and the area is more than 100 Sq. Km. then provision of more than one composting plants should be considered. (Para 6.39)

56. Research and development work should be taken up by the institutions for evolving suitable tools and equipments for bridging the existing gap and introducing innovations. (Para 6.40)

57. The concerned Ministry may maintain a list of approved consultants who may be employed by the local authorities for setting up mechanical composting plants. (Para 6.41)

58. (a) The setting up of compost plants and their operations should either be entrusted to the Agro-Industries Corporations or be a joint venture of the local bodies and the Agro-Industries Corporations. (Para 6.43)

(b) Large local authorities who are willing to take the responsibility of setting up and operating these plants may be encouraged subject to certain arrangements. (Para 6.43)

59. It will be cheaper to manufacture compost mechanically than chemical fertilisers on an equal plant nutrient basis. The favourable economics plus the additional advantage of compost being a good soil conditioner should make it popular among the farmers. (Para 6.47)

60. We reiterate the recommendations made in the interim report regarding financial pattern and the management of the scheme at the Central Government level. (Para 6.48)

61. Project Management Group may evolve detailed guidelines to be followed by the State Governments and the local authorities. (Para 6.48)

Chapter VII—MUNICIPAL SEWAGE UTILISATION FOR IRRIGATION

62. In all cities/towns where underground drainage system has been laid, efforts should be made to cover the entire city. (Para 7.14(1))

63. The local bodies should draw up and implement a phased programme to make surface drains 'pucca' as early as possible. A part of the assistance provided to local bodies for general purposes should be earmarked for this purpose. (Para 7.14(2))

64. While formulating National Water Supply and Sanitation schemes specific allocations be earmarked for underground sewerage so that specified targets are achieved. (Para 7.14(3))

65. A self-contained scheme of utilisation of sewage on land may be considered for inclusion in the National Water Supply and Sanitation programme. (Para 7.14(4))

66. The selection of sites and soils for sewage farming be made through close liaison between the State Public Health Engineering and Agriculture Departments. (Para 7.14(4))

67. In the town planning schemes, specific areas should be earmarked for setting up of sewage farms by the local bodies. (Para 7.14(5))

68. The Ministry of Health may lay down standards regarding sewage farming practices in consultation with the Ministry of Agriculture to make the process hygienic and free from health hazard. (Para 7.14(6))

69. The guidelines prepared by the CPHEEO on use of sewage for irrigation purposes may be adopted by the field authorities. (Para 7.14(7))

70. The municipal authorities may supply sewage to the farmers at their fields on usual payment. (Para 7.14(8))

71. Sewage should be adequately diluted to make it less hazardous and also for covering larger areas for irrigation through it. (Para 7.14(9))

72. A special survey should be undertaken jointly by the State Public Health Engineering and Agriculture Departments to study the scope for full utilisation of sewage and to formulate suitable schemes. (Para 7.14(10))

73. The State Governments should make adequate provision in their plans for providing long term loans to the local bodies to undertake sewage utilisation schemes. (Para 7.14(11))

74. Sludge wherever available should be digested to get combustible gas. Raw sludge should be made use of for compost making where it is established that its mixing with compost will improve its quality. (Para 7.14(12))

Chapter VIII—LEGISLATION

75. Since the existing municipal legislation is found to suffer from the following inadequacies in so far as disposal of urban wastes is concerned, the need for comprehensive and coherent law is not only self-evident but is fully justified :—

- (a) These Acts are not uniform and differ in emphasis and detail from State to State.
- (b) The provisions therein are so scattered that their importance is diluted.
- (c) Enforcement on the part of the local authorities is not adequate.
- (d) It does not deal with the subject in its proper perspective, treating it as a minor branch of public health to be regulated by rules and regulations or administrative orders.
- (e) This function needs to be dealt with as distinct function under coherent legislation.
- (f) The definition, classification and methods of disposal of wastes are not enumerated in them.
- (g) These laws are only 'enabling' in nature, they do not demand certain specified minimum standards from different partners of the game.
- (h) They are somewhat narrow and restricted.
- (i) They deal with the problem from the angle of prevention of nuisance, without taking into account vital aspects of scientific and hygienic disposal including recycling.
- (j) The laws do not provide for overall control and coordination of whole range of operations. (Para 8.11 to 8.18)

76. (a) It is recommended that the Central Government may discuss with the State Governments the possibility of enacting a central law and after securing their consent proceed to do the needful. In case this course of action is not found feasible, the Central Government should take steps to get a model law prepared for the guidance of the State Governments. (Para 8.20)

(b) A broad frame-work and main attributes of the proposed comprehensive law are indicated. (Para 8.21 to 8.23)