

Study on evolution of planning and responses to water-related disaster waste in Japan, and its application to Indian Ocean Tsunami case in Sri Lanka.

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1. OBJECTIVE

This study discusses for following 2 objectives:

- 1) To propose Japanese accumulating knowledge to cases overseas, in consideration of the evolution of disaster waste planning in Japan so far, since just after the Hanshin-Awaji earthquake in 1995.
- 2) To move forward recent study on disaster waste management, through involvement of waste separation procedures, extent of information provision to residents, collaboration with volunteers and other influential factors.

2. CONTENTS

Evolution of disaster waste planning in Japan is depicted by quality-focused approach in Chapter 2, through the literary search and interview to Environmental maintenance department of Hyogo prefecture and that of Toyooka city government. Chapter 3 deals with quantity-based analysis on disaster waste disposal by questionnaire survey to water-disaster affected 127 local governments in 1999-2004. Based on the discussion through these chapter 1-3, Proposal for application to overseas of accumulated Japanese knowledge is demonstrated in Chapter 4; that is, Indian Ocean earthquake-tsunami damage in Sri Lanka. In Sri Lankan case, this thesis reviews waste and debris problem following Indian Ocean Earthquake-Tsunami in 2004, especially in Galle District. By interviewing Galle MC Public health officer, this research found out that strengthening peoples' appropriate understanding of waste through separation, reuse, recycling of daily waste will be the first step for Tsunami waste separation.

3. RESULTS

During 3 days after the Indian-Ocean Tsunami, 100t of wastes are generated in the Galle MC. Necessity of disaster waste planning is confirmed, also through the fact that Tsunami wastes components are totally different from daily wastes, 83% of which are organic. Especially soft measures such as planning, network tries of Japanese evolution can be applicable to Sri Lankan case. This thesis indicate some points that Japan can learn from Sri Lankan case as well, in view of the most higher reuse-rate of Tsunami debris in Sri Lanka. This thesis found following data analysis results, from the questionnaire survey in Japan:

- Unit disposal cost (yen/t) is significantly different, between the cases if local governments make separation of debris 'at household' and 'at other cases (at administrative collection, at temporary storage area, at disposal facility)'. Household level separation of debris will reduce the unit waste disposal cost (yen/t).
- Actually, local governments which took 'household separation of debris' policy opened and well-managed their volunteer information.
- Cities which adopted household separation of debris policy took more 'consignment to local representatives' as PR measures.
- 'Household separation of debris' and 'Administrative-collection area separation of debris' can be done more easily if the debris disposal is within the disposal capacity of local authority's daily waste management.
- Separation of debris can be promoted more easily when the disaster waste disposal is 'within the capacity of the local authority's normal waste disposal'.