

Cost Cap Sewerage Plan for Almost Completion of Sewerage Treatment Facilities in Ten Years

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Key words: Sewerage planning, low-cost development method, cost cap, solution for non-dissemination

1. Early almost completion of sewerage treatment facilities

The percentage of population connected to public sewerage (sewerage, combined household wastewater treatment facility, community sewerage, community plant) at the end of fiscal 2013 is about 89% (of these, about 76% are under the control of the Ministry of Land, Infrastructure, Transport and Tourism (MLIT)), and the population not using sewerage treatment facilities (population not connected to any sewerage) or sanitation system amounts to about 14 million.

The Ministry of the Environment, the Ministry of Agriculture, Forestry, and Fisheries, and the MLIT, responsible ministries for sewerage treatment facilities, revised the "Manual for Prefectural Planning of Sewerage system" in their joint names (April 2014) in order to solve the issue of non-dissemination of sewerage and launched the objective of "Almost completion of development of sewerage treatment facilities in 10 years" in the Manual.

2. Introduction of cost cap sewerage

Insufficient on-site survey or examination of technologies to introduce due to urgency of sewerage development may lead to adoption of expensive construction method, construction of excessive facilities, etc. and may result in burden of excessive service charge or aggregation of sewerage management. For this reason, we have proposed "cost cap sewerage plan," which aims at sustainable management within investable budget considering severe financial conditions of local governments as a planning method different from the conventional sewerage plan, which accumulates necessary facility sizes and costs after determining sewerage development area. We chose as a model area, Mihama Town in Aichi Prefecture, where no sewerage project has been undertaken, and published the results of estimation in the past year that can considerably reduce cost and development period after examining existing planning, development, and maintenance methods.¹⁾

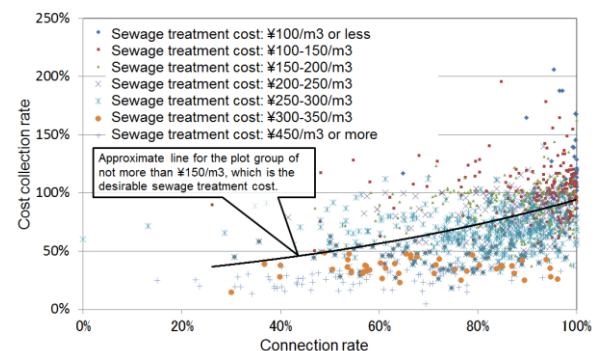
3. Examination of measures to improve sewerage connection ratio

Cost cap sewerage not only performs sewerage development at low cost but aims to achieve appropriate sewerage management after development. To achieve this aim, it is indispensable for citizens to connect to sewers without delay, but the connection ratio at the start is generally low, which contributes to the low level of user charge and rise in treatment cost. Accordingly, in order to contribute to achievement of the aforementioned objective, we conducted analysis of the factors of delay in

connection to sewers, organization of information concerning measures to improve connection ratio, and examination of effects.

As the result of investigation, we estimated that the dissemination of household wastewater treatment facility before starting, aging, number of household members, etc. affect the connection ratio. As measures to improve connection ratio, typical cases include door-to-door visit by municipal personnel or special promotion members, campaign and other awareness raising activities, and subsidies for installation of connection pipes. Since no quantitative assessment has been conducted for the effect of these measures, analysis of relevant data should be conducted in the future.

Figure 1. Relation between Sewerage Connection Ratio and Cost Collection Ratio



4. Dissemination development of cost cap sewerage

In order to disseminate the introduction of cost cap sewerage plan across the country, we advanced the documentation of findings of the research in Mihama Town as a manual (to be published in fiscal 2015) and held presentation meetings on introduction method in all parts of the country

5. Conclusion

Local governments aiming to solve the issue of no access to sewerage treatment facilities are faced with various issues, such as finance, organization, terrain, and declining birthrate and aging population, and methods of solving such issues are also various. In the future, we intend to distribute information useful for many local governments facing similar issues so as to realize low-cost development considering for regional characteristics.

[Reference] Document of Press Release on Sep. 4, 2013

<http://www.nilim.go.jp/lab/bcg/kisya/journal/kisya20130904.pdf>