

発展途上国に適した低コスト型新下水道システムの開発 に関する研究

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概要：

本研究は、発展途上国の下水道事業に携わる国内の専門家、あるいは現地下水道管理者の業務等に資することを目的に、特に早急な水環境改善が求められる都市周辺地域における低コスト型の下水道整備手法、処理方式について検討を行った。このため、タイ及びインドネシアの現地実態調査および各種文献の調査等を行った。その結果、発展途上国の少ない投資余力や不安定な電力事情などの実状に適応し、土地、気候、安価な労働力などの特長を活かせる環境改善に即効性のある低コスト型下水道システムとして、既存の水路・腐敗槽の活用を前提としたインターセプター下水道による整備及びラグーン（安定化池）法による汚水処理が有効であることが判明し、この方法の採用を提唱している。また、沖縄におけるラグーンの実験結果や現地調査からみえてきた課題点、その対応事例、対応案についてソフト面も含めてとりまとめている。

キーワード：発展途上国、低コスト型下水道システム、インターセプター下水道、ラグーン

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Development of Low-Cost Sewerage System for Developing Countries

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Synopsis

This study has been carried out to examine methods of developing low-cost type sewerage system and treatment processes for areas surrounding urban areas where quick improvement of water environment is required in particular, aiming to contribute to the works of Japanese experts involved in sewerage development in less developed countries and local managers of sewerage systems. For this purpose, site surveys to grasp actual situation in Thailand and Indonesia and review of various related literature were conducted. As a result, it has been found out that development of interceptor sewerage by the use of existing water channels and septic tanks as preconditions with lagoons (stabilization pond) as a sewage treatment process is effective and efficient, as a low-cost type sewerage system which is suitable for the actual conditions in less developed countries such as little investing capability, unstable power supply, and has a quick effect on the improvement of environment by the use of characteristics of these countries, say land, climate, cheap labors, etc. Thus, it has been suggested that interceptor sewerage with lagoon should be adopted. In addition, this study has shown the problems of the suggested process, actual cases and ideas to cope with them including soft approaches, which has been identified through results of experiments with lagoon in Okinawa and site surveys.

Key Words : less developed countries, low-cost type sewerage system, interceptor sewerage, lagoon

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