垃圾掩埋場址之治理及其土地永續利用

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摘要

There are more than 500 landfills Taiwan island wide, including over 300 sites are in situations of long-term care after closure. The programs for the closed landfills are not only passive, but also detrimental to the land use close to the sites, not mention for the huge cost for the long-term care. The closed landfills are not compatible to the environment neither sustainable. Meanwhile a significant portion of the capacity of municipal waste combustor is unused due to the quantity of waste received at the facilities declined. This integrated research program proposes to investigate alternatives to avoid liability through site remediation, to reduce the closure cost, and to reclaim the lands for other sustainable use. The two year program integrates five sub-projects presided by professors with different expertise including geographic information analysis, environmental engineering, geotechnical engineering, and hydraulic engineering. The focus will be set on the environmental diagnosis methodology for selecting the sites and the process for landfill reclamation, including site characterization, potential economic benefits, regulatory requirements, worker health and safety plan, and the process costs. Results of the 4-D simulation showed the different space states of a landfill reclamation site at different points in time, effectively pointing out the possibility of public participation on the sensitive environmental issues.

關鍵字：Geographic Information System, Environmental Sensitive Area, Landfill Mining and Reclamation, Slope Stability, Visualization, Municipal Solid Waste, Vegetation Recovery