研究課題名=「Establishment of Disaster Debris Management after Super Wide-area Flood Disaster including Disaster Debris Flow」

研究代表者名及び所属 = Nagahisa HIRAYAMA (Kyoto University)

共同研究者名及び所属 = Takayuki SHIMAOKA (Kyusyu University), Takeshi FUJIWARA (Okayama University), and Tomoko OKAYAMA (Meijo University)

要旨 = After natural disasters such as earthquakes and floods, enormous quantities of disaster debris would be discharged from collapsed houses and buildings and damaged household goods. In the aftermath, environment and waste management authorities should establish an effective and appropriate disaster management system for the emergency removal of disaster debris from urban districts and their disposal. In this study, number of damaged houses caused by and catastrophic flood disasters in the Tokyo Metropolitan Area were calculated based on the correlation between inundation depth and housing damage. According to the estimations of housing damages, the amount of debris from these disasters in the Tokyo Metropolitan Area has been calculated using per unit generation of disaster debris including housing damage. In addition, using waste reduction ratio, the reduction of time to expiration of landfill sites, caused by disaster debris derived from the earthquake and flood disasters in the Tokyo Metropolitan Area, was estimated. The quantity of tsunami debris in the tsunami stricken areas was estimated by multiplied the per unit generation debris including the viewpoint of damage to housing and the calculated number of damaged households together. As a result, the quantity of tsunami debris in the Pacific Coast of Tohoku was estimated at 27.1 million ton. For strategic planning of flood disaster debris, it is indispensable to establish a Japanese standard emergency response system for flood disaster debris, including an estimation procedure of quantity of flood disaster debris, evaluate the impact assessing of disaster debris on waste management system, disaster debris management planning P system, capacity development system.

キーワード = disaster debris, estimation procedure, natural hazard maps, per unit generation, flood disaster, tsunami inundation