

H.K LEE, T. PARK, H.K. KIM. **Framework for Infrastructure adaptation to climate change.** *Geron-technology* 2012;11(2):178; doi:10.4017/gt.2012.11.02.393.00 **Purpose** Due to global climate change, extreme weather events have greatly increased. These events often cause drastic deteriorations and unexpected failures of the infrastructures which can have an enormous socio-economic impact on the public. To minimize the damage, the adaptability of the infrastructure to the changing climate should be improved. However, since available resources and budgets for the improvements are limited in most cases, a long-term investment plans for this kind of adaptation should be established for the effective and efficient management of the infrastructure system. This study presents a framework for the adaptation strategies which take into account social benefits, the cost of improvements, the applicability of technologies, and vulnerability to climate change. The proposed framework consists of three levels of implementations (*Figure 1*): (i) prioritization, (ii) technologies selection, and (iii) adaptation planning. In this paper, mainly the first level implementation is discussed and we demonstrate how to determine the required information for asset valuation, to develop asset valuation methodologies, and to prioritize assets using a case study. The results of the study are expected to be used not only for constructing comprehensive asset management system, but also for supporting the policy making.

Keywords: Management & Social issue; climate change; adaptation; prioritization;

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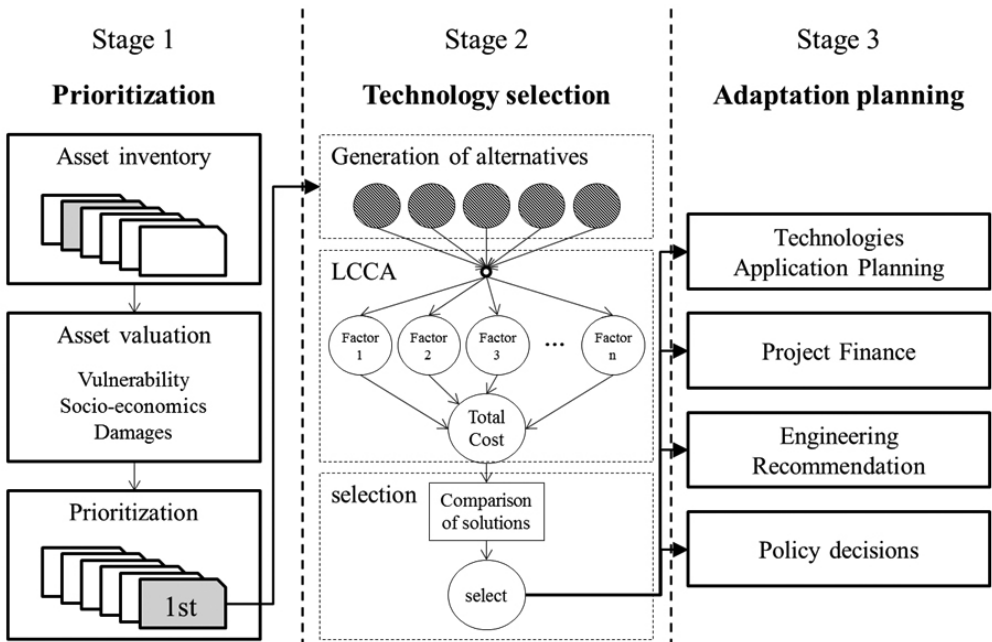


Figure 1. Three-stage adaptation framework to climate change in infrastructures management