

Laws related to Management for Recycle Concrete Aggregate (RCA) on Developing Countries: Case study of Thailand

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Recycled concrete aggregate (RCA) has been widely adopted in developed countries, but little in the developing or underdeveloped countries¹⁻³. Regarding legal policies in most developing and underdeveloped countries are currently not well addressed⁴⁻⁵. The objective of this research is to study legal issues for the management of RCA in the case of Thailand, by comparing it with the developed countries in the case of Japan, where the RCA is successfully commercialized. The management theory used is Circular Economy-Concrete Recycle, CE-CR, consisting of planning, organizing, execution, direction, control, and review⁶. The results of the study revealed that the recycling process of concrete waste in developed countries including Japan must be managed reduction of construction and demolition waste from situ, sorting, operational control, to recycling processes⁷⁻⁹. Japan has a law specifically promoting the circulation of waste disposal and RCA manufacturing processes. A clear designation of responsible agencies is established. There is no overlapping operation allowing the accomplished circulation of waste from construction and demolition in Japan. When compared to the legal issues in the case of Thailand, no specific law on the recycling of construction and demolition waste is currently present. Such RCA is only classified as a part of general solid waste. The RCA management is therefore the same procedure of general waste disposal process. The legal policy to manage concrete waste which, if properly implemented, will be reused for cost-effective, leading to economic benefits. Additionally, the proper and specific legal policy will also create preserving the environment as the sustainable solution for our construction industry.

Recent Publications

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Biography

Lapyote Prasittisopin is a faculty member at Department of Architecture, Chulalongkorn University and has his expertise in sustainability, materiality, and architectural engineering. He was researcher at Siam Cement Group for 7 years to conduct industrial research in construction materials. He earned LLB law degree from Sukhothai Thammathirat; PhD Civil Engineering and MS Material Science degrees from Oregon State University; and BEng Chemical Engineering, Chulalongkorn University. He has developed new commercialized products including recycle aggregate and 3D cement printing and published more than 40 publications and 12 patents. Apart from academic background, he is also the advisor for The National Committee on Economics, Monetary and Finance, Secretariat of the House of Representatives of Thailand.