

Sustainable development of eco friendly initiatives through green Building Information Modeling (BIM)

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Corresponding author:**Shahab Naderi****ABSTRACT:**

World Commission on Environment and Development (WCED) defines sustainable development as set of actions performed to fulfill the needs of current generation without causing any damage to the future generation. LEED is one of the most applicable systems for rating green buildings. Building Information Modeling (BIM) is a set of parametric information which is applied to make decision about designing, making qualified building plans, predicting building performance, price estimation, time scheduling, operations, maintenance procedures, and contract management. The model of the recent research is a villa which is assumed to be located in Tehran. Relevant action to green building information modeling was conducted such as building location, building orientation, wind direction, sun path and relevant analysis to rainwater and grey water harvesting, web site design and analyzing energy by Revit (2015) (energy + ECOTECT applications). A questionnaire with 19 technical questions was designed and answered by experts. This questionnaire was designed based on Likert scale and data was gathered by Delphi method and the obtained results were analyzed by Cronbach's alpha method. The questions cover issues such as the application of BIM, received certification of different projects, different aspects of BIM implementation, BIM cost of using, BIM score, related analysis to BIM and applied tools in BIM. In addition, some other issues such as marketing return on investment, the application of human-made systems including photovoltaic panels, wind turbines, mechanical and lighting systems and developing green building are taken into account.

Keywords:

Building information modeling, Green building, Rating system, Sustainable development.