

Green infrastructure development as education for sustainable development model in Universiti Malaysia Sabah

ABSTRACT

A development of green infrastructure (GI) on university compound has been acknowledged as one of the foundations of Education for Sustainable Development (ESD), an initiative that could provide various benefits to the campus community. The present study shared the experience of the Faculty of Sustainable Agriculture, UMS in the development of GI, namely, a rooftop garden as a medium for ESD. The project was divided into four phases: formation of planning and management team, participatory planning, site inventory and analysis, and GI design and development. The planning and management team involved academic staff and students interested in the project. In the participatory planning, the team members took part in a discussion on strategies to achieve the development of GI as a medium for ESD including taking part in mini training on hard and softscaping at several locations on the campus. This discussion and training prepared the team members for the site inventory and analysis. In the latter, the roof area of the administrative building was finally selected for the GI development. The selected roof area was originally built as an observatory area but was found to have an archetypal problem associated with the urban environment: absence of vegetation, intense solar radiation, and unfit for multifunctional usage. Based on those factors, during the GI design and development phase, the problems were solved using sustainable landscape approaches, for example, increasing the vegetative cover, reducing the solar radiation and glare, and fitting the area with an efficient irrigation system. At the end of the project, the participants had been exposed directly to the keys to identifying environmental issues and their solutions, and by this way, they were carrying out sustainable initiatives on campus environment. The project signifies the potential of GI development in empowering the campus community towards sustainable development and achieving the objectives of ESD.