

## Supply chain and life cycle cost of roofing in Sabah: a case study

### ABSTRACT

The roofing industry in Sabah has undergone marked changes and improvement in its quality and performance for the past 20 years in response to changes in local environment. In recent years, an increasing number of practitioners in the roofing construction industry in Sabah have observed that information related to roofing selection in terms of suitability and cost effectiveness is limited. This paper reports the results of an investigation on the supply chain of roofing materials in Sabah. All data were obtained based on information gathered through questionnaires, site visits and interviews with number of practitioners working in related fields such as developers, engineers, contractors, roofing manufacturers, suppliers, government agencies and occupiers. Recommendations to rectify the identified weaknesses along the supply chain have been suggested. Besides that, comparative life cycle cost analysis was carried out based on source of roofing, maintenance planning and installation alternative. Life cycle cost comparison study proved that the roofing system obtained through distributor agents gave the lowest total life cycle cost (TLCC) and highest net saving, while, roofing system obtained through stockists gave the highest TLCC and lowest net saving. Proper maintenance planning and quality of roofing system were identified as the main factors that influenced the life cycle cost value