

Assessment of sustainability in the built environment: possible directions for developing countries

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Editor

With the emergence of sustainability as a key concern within the built environment (European Commission, 2007), assessment tools have increasingly been applied to ascertain the predicted sustainability performance of the building stock (Pope et al., 2004). Although formalised systems of assessment are over two decades old, they fail to adequately reflect the actual performance of the whole life sustainability of buildings through their application and outputs, and have been largely voluntary in their implementation (Cole, 2007). In developed economies, publicly procured construction projects are increasingly demanding sustainability assessment as a component of planning, client and funding requirements, representing a legislative and culture shift in procurement practice (Lutzkendorf and Lornez, 2006). Difficulties in delivering this shift are encountered in the coverage offered currently by assessment systems to address the three dimensions of sustainability (i.e. environmental, economic and social) in an integrated manner and the failure to integrate their application with the decisions made across the project lifecycle (Walton et al., 2005). Indeed many of the national assessment systems are criticised for failing to provide adequate feedback to contribute to the decision making associated with a projects evolution, let alone to inform early stage decision making for future building projects (Kaatz et al., 2006). Emerging calls exist for an approach to procurement within public sector projects that is aligned with a whole life value approach to decision making (Kelly, 2007), in line with the wider principles of sustainable development.

Sustainability assessment has the potential within such an approach to play a significant role in aiding decision makers to understand the predicted implications and actual performance levels of their actions across the whole life of the building (Kaatz et al., 2006; Cooper and Symes, 2008). Key to this approach is the need to benefit from the accumulation of knowledge that has been generated in over two decades of developing assessment tools and in their application in practice (Thomson et al., 2009). Since the focus on sustainability within the built environment is starting from a low threshold in both policy and practice, it is also necessary to account for the increasing desire for aspirational target setting (i.e. "raising the bar") and to therefore align assessment systems to focus on the ability to promote sustainable user behaviour (Bioregional, 2008).

A review of the state of the art indicates five key gaps in the current state of knowledge:

1. Integrating sustainability assessment with the decision-making process
2. Broadening the scope from "green" to sustainability assessment
3. Moving beyond mere mitigation of damage
4. A need for standardisation
5. Integrating whole life value within a sustainable procurement process

Given the above, attempts to develop national sustainable building assessment protocols should at least aim for three broad goals: National protocols should articulate sustainability value criteria against which the building's performance can be predicted, monitored and audited. A key lesson that needs to be learnt by future tool makers and protocol developers is to integrate assessment with the procurement process. Finally, protocols should aid decision making and future learning (i.e. assessment as a learning tool).

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