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Role of municipal steering in sustainable building and refurbishment

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Abstract

The objective of the research was to assess the roles of municipal building authorities and their potential to act when a rapid change is needed towards energy-efficient and sustainable building and refurbishment. Our premise was that local authorities will have an essential role in improving the awareness and commitment of stakeholders and in supporting them to understand potentials of sustainable building. However, this may require the development of current roles. According to the results, consultation and negotiating steering is useful and needed especially towards non-professional builders. Change to consulting steering requires changes in building control processes. The strengths of guidance by building control authorities would be neutrality, good coverage (all builders must anyway be involved with building control), personal contacts, and responding to acute need of the client. To increase the consulting role of the building control authorities, more resources are needed. Establishment of electronic services in building control is believed to be a means to release resources from routine work for guidance. Municipal actors are also showing increasing interest in preparing city-level sustainability strategies. The municipal strategies should be closely linked to the local administration to ensure the realization of the strategy and also the allocation of adequate resources.

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1. Introduction

In order to achieve a rapid change towards energy-efficient and sustainable building and refurbishment, a variety of steering instruments is needed. Due to limitations of normative control and regulatory instruments, the stakeholders' voluntary commitment to sustainable building is essential and the role of municipal steering may increase. Different steering instruments are used to improve the energy-performance and overall sustainability of buildings. The effectiveness of different policy steering instruments has been studied by several researchers [1], [5], [47], [14-15], [26], [27], [34], [36], [43], [49-50]. The focus of the past research has been mainly on normative and fiscal instruments.

This research focuses on the role of municipal steering in promoting sustainable building. We define municipal steering here as the variety of actions by which cities and municipalities can state obligations or encourage voluntary actions at local level. This area of steering has gained only limited attention in the past, although significant advantages may exist.

Several instruments are available at municipal level, which may be effective in steering for sustainable building on a city level [30], [18]. Municipalities may, for example, regulate sustainable building in planning and land use by setting energy requirements. The role of municipal building control authorities may also be important regarding building-level energy-efficiency and sustainability goals. If the tasks of municipal building control authorities were directed to include guidance in addition to control, this might have an important positive influence on the progress of energy-efficient and sustainable building. An advantage of local steering is that the local authorities are typically in close contact with the most important decision-makers of both new building projects and notable refurbishment projects. They also possess extensive knowledge of building plans, and may be able to steer the choices of owners, users and all stakeholders towards more sustainable building. In the role of owners and developers of public buildings, the local authorities also have the opportunity to implement sustainability in their own building development and show example for others.

We here define that Sustainable building aims at the required building performance with minimum adverse environmental impact, while encouraging improvements in economic, social, and cultural circumstances [16]. The sustainable building process is defined as the overall quality of the process that enables the delivery of sustainable buildings.

2. Background

2.1. The structure and process of building steering by local authorities

In most European countries, the construction regulations are set on a national level, and complemented with regional or local regulation [37]. The Finnish regulatory system follows this general setting. Ministry of Environment is the central government authority steering building activities in Finland: it is in charge for the general steering of construction by issuing legislation on construction and maintaining the National Building Code. On local level, each municipality is responsible for the steering and monitoring of construction in its area. The municipalities have a significant role in planning and setting local building ordinances, which lay the instructions and regulations relating to local conditions [36].

2.2. Role of municipal building control

The Finnish building regulation system is based on regulation and enforcement by public-sector actors. This setting is commonly used and it is the traditional way of regulation in European countries [51]. Typically, a building permit is required before the start of construction work [37]. These permits are processed by local building control authorities, who check the compliance with building regulations and other requirements, and grant the permits. The construction work itself typically is subject to supervision by the local building inspection authority. Upon completion, a final inspection is carried out. If the construction fulfils all the requirements, an occupancy permit is issued and the building may be occupied. In Finland, each municipality has a designated board for building control,

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