

Abstract

Sustainable development is a principal concept for housing, urban infrastructure, energetics, transportation, or business. Fragmentation of concept definition is a result of abusive term overuse by the entire society. In 2015 UNECE established a clear sustainable housing definition through The Geneva UN Charter on Sustainable Housing and its 34 Rationales. The UN encourages its member states to measure progress in sustainable development through existing or newly developed indicators. Existing commercial housing evaluation tools are insufficient for the Geneva UN Charter concept. Initially, the tools measured the so-called greenness of buildings overlooking anthropocentric and social qualities of housing underlined in the UN Geneva Charter. Commercial certification tools heavily reliant on profits often utilize incorrect concepts of sustainability. That results in false sustainability. This work aspires to introduce a transparent housing sustainability assessment tool for the Czech Republic. Firstly, were identified unique phenomena outlining the concept of housing sustainability. To identified phenomena were consequently nominated and assigned appropriate indicators. While in a different situation is housing interpreted as a human environment, building, home, investment, or fundamental human right, in research, it should be a unique and scientifically constructed theoretical situational model. Understanding sustainable housing and its evaluation were consistently associated with sustainable development discourse. Regarding sustainable housing, environmental-technical, anthropocentric, three-pillar, and lastly, a holistic approach has developed. Experts currently favour a holistic approach.

During the research were applied mixed and quantitative methods. The conceptual process required an analysis of a large number of scientific articles and strategic documents. The methods used include bibliometric analysis of scientific literature, systematic literature review or textual analysis of strategic documents of the Czech Republic. The content analysis of strategic documents and the subsequent comparative analysis of the UN Geneva Charter on Sustainable Housing facilitated additional research objectives. The expert panel method validated the 55 identified phenomena and corresponding housing sustainability indicators.

The original theoretical framework for a housing sustainability assessment tool includes four dimensions of sustainability: (i) economic, (ii) environmental, (iii) institutional and (iv) social and three components of housing: (a) building, (b) community and (c) locality. The developed tool for assessing housing sustainability (HSAT) consists of 55 phenomena evaluated by 22 individual indicators, 19 Yes-No questions, three indices and 11 dashboards, incorporating another 53 individual indicators. The full English version of the tools has also been made available on [Data Mendeley](#). Moreover, the research verifies the full readiness of the Czech Republic's strategic planning for the UN Geneva Charter on Sustainable Housing concept. At the same time, analysis confirmed the often-highlighted absence of essential indicators. In the case of housing sustainability, social and institutional indicators are missing. Furthermore, the unfamiliar phenomenon "indicator determination" was observed, described, and discussed.

This work contributes to the housing sustainability assessment in the Czech Republic, especially in a theoretical part. The implementation prerequisite is the identification of the weights and relationships between individual phenomena, including positivity. Successful application of the tool would require intensive coordination and partnership across public administration, business, academia, and the public.