

Chapter 5

Nexus of Climate Change and Sustainable Real Estate

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ABSTRACT

This chapter investigates the nexus of climate change and real estate sustainability. Climate change is the topical dramatic swing of the planet's normal climate patterns caused by a spike in emissions of carbon dioxide triggered by human activities. Climate change risk is not being effectively estimated into commercial real estate assessments. Due to high demand for coastal properties, a lopsided share of commercial real estate is vulnerable to climate change risks. Thus, it was concluded that real estate is an essential part of an evolving growth phenomenon and also plays a major role in stimulating economic growth. This makes it important for investors and property owners/dealers to be resilient in combating climate change, and adequate information should be available for investors so they will know the risk attached to their investment.

BACKGROUND TO THE STUDY

In recent years, real estate and construction have begun to make a concerted effort not just to counteract the climate change effect of the industry, but to efficiently and effectively build solutions (Teicher, 2018). Property, land, buildings, air rights above the land, and underground rights below the land are all examples of real estate. The industry's new determination to lessen its effect is a decidedly optimistic and significant step in the climate change reduction campaign, either due to anticipated tighter legislation, public pressure, or generational shift (Warren-Myers, Hurlimann & Bush, 2020). For some time, the impetus for sustainable change within the real estate sector has been emerging, setting the stage

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for the development of both technological capabilities and market preference. The poor effort of the environmental movement from the construction sector and real estate has led, from carbon emissions to resource use and land growth, to an overwhelmingly hostile picture of the industry (Francart, Larsson, Malmqvist, Erlandsson & Florell, 2019). For real estate owners and developers, being submerged has often been a metaphorical shorthand for problematic periods when land debt exceeds property value or spending exceeds profits (Giglio, Maggiori, Stroebe & Weber, 2015). The term has a new meaning now, however, as real estate may be threatened by potential climate change. Rising ocean and land temperatures, extreme south and north latitudes, weather trends and unprecedented frequency and severity of weather-related events such as wildfires, floods, and hurricanes, accelerated glacial melting at the poles, shifting biosphere patterns, increasing sea level is detectable and measurable. Humans may not have to be scientists to acknowledge that real estate may be disproportionately influenced by the market and physical impacts of climate change.

At all geographical locations and scales, threats exist along seacoasts, within watersheds, on hillsides, and in fragile urban, exurban, and suburban areas (Teicher, 2018). Individual buildings are also in danger, depending on their design and location. For ages, non-governmental organisations (NGOs) and alerts from scientists have repeatedly censored the field. New reporting requirements were implemented by regulations and their objections were raised by consumers, millennials, even investors. But the strain has only begun to make a change in the previous year or so, and only by recognising the full magnitude of the danger posed by climate change to real estate assets has it been strengthened. In 2019, retail spaces and offices were predicted to be vulnerable to flooding and sea-level rise by publishers and market intelligence providers on the economic danger of climate change (Locatelli, Guerrero, Russo, Martínez-Gomariz, Sunyer & Martínez, 2020). It is time for the building and real estate industries to consider initiating real action against climate change (Giglio et al., 2015). In their plans, investors are now taking into account climate change by investing directly in unique asset mitigation measures, participating in local resilience strategies, incorporating climate risk in their due diligence processes, mapping physical threats for existing portfolios and future acquisitions, and integrating physical adaptation and threat asset mitigation measures (Teicher, 2018).

STATEMENT OF THE PROBLEM

It is well documented and scientifically proven that climate change impacts real estate in a variety of respects. There is clear scientific evidence that the burning of fossil fuels causes carbon emissions that change the atmosphere (Bunten & Kahn, 2017). The consequences of climate change include a rise in extreme weather events and changes in the availability of natural resources, with a direct influence on the real estate industry (Muldoon-Smith & Greenhalgh, 2019). Since value creation and preservation is a key concept of the real estate industry, climate risks need to be identified and measured so that they can be handled and controlled to prevent adverse impacts on value (Wieteska-Rosiak, 2020). The assessment of opportunity against risk is critical for any investor, and real estate investors in particular, in the age of climate change, the risk is increasing exponentially. Progressive climate change could negatively affect the growth and viability of the real estate market as well as property values (Teicher, 2018). Ownership costs and investment, including taxation, code compliance, insurance, infrastructure, and finances, may be increased by policymakers to reduce climate change impacts (Bunten and Kahn, 2017).

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