Robotic Tile Laying: Robotic systems are being developed to automate the tile laying process. These robots can handle tasks such as spreading mortar, setting tiles, and monitoring tile and installation quality. They can work faster than humans and ensure consistent quality throughout the installation process. [2]

Mechanized and Semi-Automatic Solutions: Mechanized and semi-automatic tile laying machines are also being developed to assist masons in the installation process. These machines use suction pads and spring balancer mechanisms to lift and place tiles on both horizontal and vertical surfaces, reducing the physical effort required by masons. [3]

Benefits of Automation: Automated tile laying offers several benefits, including increased efficiency, reduced labor requirements, improved accuracy, and minimized material waste. It can also help address labor shortages in the construction industry.

To sum up, it's worth emphasizing that although automation can improve the process of laying tiles, skilled labor and human expertise remain essential for maintaining quality and managing intricate tile arrangements. Automation is designed to support and enhance human abilities rather than supplant them.

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THE IMPACT OF NATURAL DISASTERS ON THE CONSTRUCTION LABOR MARKET

Natural disasters can have significant effects on the construction labor market. Here are some key points based on the search results:

Shift in labor demand: After a natural disaster, there is often an increase in the demand for labor in sectors involved in reconstruction and recovery efforts. This can draw workers away from other sectors, such as agriculture, and into higher-wage non-tradable sectors like construction [1].

Wage growth: The shift in labor demand can lead to a rise in the marginal product of labor and wages in the agricultural sector. In some cases, employment in the agricultural sector may contract while the construction sector expands, resulting in greater wage growth for agricultural workers [1].

Migration patterns: Natural disasters can also affect migration patterns in the labor market. In the medium to long term after a disaster, there may be an increase in rural labor migration, with workers primarily moving to work within the affected county, particularly in the construction and manufacturing sectors [1].

Resilience of labor market outcomes: In the long term, labor market outcomes appear to be resilient to natural disasters, at least in wealthy countries. However, the economic impacts of natural disasters can

be severe in the short term, suggesting the need for policies that better insure against consumption losses during this time [2].

Challenges faced by the construction industry: The construction industry bears a significant brunt of natural disasters. Construction sites become vulnerable hotspots, material costs surge due to increased demand for reconstruction, and labor shortages arise as workers are displaced or prioritize emergency response efforts. Delays in ongoing projects and a decline in new construction contracts contribute to a slowdown in the industry [3].

Impact on construction costs: Natural disasters can lead to rising supply costs in the construction industry. Building material prices, such as lumber, can increase due to increased demand and reduced availability. Other materials like drywall, concrete, and steel can also become scarce, further complicating the rebuilding process. Construction delays can occur due to labor and supply shortages, driving up rebuilding costs.[4]

In conclusion, it is important to note that the impact of natural disasters on the construction labor market can vary depending on the specific characteristics of the affected area, the population, and public policy.

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WAYS OF REDUCING THE NON-RENEWABLE CONSUMPTION ENERGY IN CLIMATE CONTROL BUILDING SYSTEMS

The main condition for the functioning of any technology at a given time is the reduction of non-renewable energy consumption in indoor climate control systems.

The improving of indoor comfort is one of the areas for further development of life support systems in buildings.

Modern energy crisis creates a new technological policy based on the principle of energy conservation and strict control of its consumption. Energy consumption analysis for indoor climate control in buildings over the past decade has shown that it has been increased significantly. At the same time it should be expected that the trend of its increase will continue with the planned economic growth. At present, the microclimate systems use energy which is obtained from the non-renewable types of energy (coal, oil, gas) [1].

Reduction of energy consumption in indoor climate control systems can be achieved by means of the following:

- highly efficient thermal protection of the building envelope;
- use of renewable energy (sun, wind, biomass, soil and water heat, etc.);