

Review of: "How Social Infrastructure Saves Lives: A Quantitative Analysis of Japan's 3/11 Disasters"

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Potential competing interests: No potential competing interests to declare.

Based on a more profound interpretation of disaster resilience, the Japanese government published the new Act on Development of Areas Resilient to Tsunami Disasters after the 3/11 tsunami. It regulated that the safeguards of the coastal zones should resist the tsunami's impact for a 100-year return period. While considering the cost-benefit, there is no safeguard standard for the tsunami for a 1000-year return period like the 3/11 tsunami. Communities in the risk area should be able to evacuate, adapt to, and recover from the effects of the disaster timely. The distinction between physical and social infrastructures and the emphasis on the importance of social infrastructure to community resilience in this article corresponds well with the resilience concept. It is an interesting topic. Through the correlation analysis between the social infrastructure density and the mortality rate, this article's proposed policy implications are concrete and constructive.

Here is one question for discussion only: the physical and social infrastructure may play roles in different disaster management stages based on specific mechanisms. For instance, physical infrastructure resists physical impact during the stage of disaster occurrence. In contrast, social infrastructure plays its part in emergency response, recovery reconstruction, and pre-disaster prevention stages by encouraging communication, acquiring information, building community cohesion, etc. Therefore, I wonder if it is possible to access the mortality rate data in different stages and do the calculations respectively, which can help address the policy implications, such as investment and construction priorities in specific stages of the disaster management cycle.