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論 文 要 旨

THESIS SUMMARY

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要旨（和文 2000 字程度）
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In the field of large- scale post-disaster recovery and reconstruction, a sustainable approach to rebuilding critical infrastructure and energy systems, mindful of a policy setting that seeks to address the growing impact of climate change, is critical to the successful design and implementation of a long-term reconstruction agenda. Given the recent uptick in mega disasters and the renewed focus on clean energy policy, current scholarship has not yet integrated the debate over practicable climate change and energy policy with a green approach to post-disaster reconstruction. It is often during the post-disaster window that leaders, inadvertently or not, make long-term decisions regarding the trajectory of a country's energy mix, the system's ability to withstand future disasters, and the energy industry's contribution to global greenhouse gas emissions. While current literature has considered community-centered reconstruction theoretically and on a case-by-case basis, researchers have not systematically reviewed instances of large-scale disasters and their aftermath in order to analyze the range of post-disaster scenarios and to draw lessons for future policy. This thesis introduces an integrated approach to rebuilding in post-disaster settings, uniting reconstruction best practice with the application of community-centered and national renewable energy policies and clean technology

solutions. A number of recent large-scale disaster cases are reviewed and analyzed including the Great East Japanese Earthquake (Japan 2011), Hurricane Katrina (US 2005), Hurricane Sandy (US 2012), Hurricane Irene (US 2011), the 2006 tornado in Greensburg, Kansas (US), and the devastating 2008 Sichuan Earthquake (China). Both pre- and post-disaster scenarios are reviewed, and opportunities and challenges to undertake green reconstruction in today's policy environment are identified. A dynamic index is introduced to score countries/communities on their post-disaster green reconstruction progress by assessing their movement toward renewable energy and implementation of policies that promote green rebuilding. The key impact of this research is two-fold: 1) to provide a reference for policy-makers to better integrate long-term green reconstruction policies into the existing reconstruction agenda post-disaster going forward, especially in the context of growing concerns of climate change and 2) to clarify the costs and benefits of instituting greener energy policies in post-disaster reconstruction efforts.