

Climate-related Disasters in Japan: Types, Incidences and Damages

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Abstract

This article presents an overview of different types of natural disasters; and highlights the climate related disasters, incidences and damages in Japan. There is an increasing trend in the occurrence of natural disasters and it is likely that climate change aggravates the devastating impacts of disasters. Natural disasters can be occurred due to physical phenomena caused either by rapid or slow onset events which can be geophysical, hydrological, climatological, meteorological or biological. Climate-related disasters are generally caused by climatic factors which often represent climatological, hydrological and meteorological hazards. Climate-related disasters are becoming increasingly frequent and mainly caused by storm surges, floods, extreme temperature and landslide due to heavy rainfall. According to EM-DAT database (2019), in terms of occurrence, climate-related disasters represented 48% of all recorded events i.e. 8,564 over the past 29 years (1990-2018) where floods were the most frequent type of disasters, accounted 45% of all recorded events which affected 2.97 billion people, the majority of whom (96%) live in Asia. Japan faces frequent occurrence of natural disasters such as geophysical (earthquake, tsunami, floods and landslides) and climate-related including typhoon, tornado and tropical cyclone, heavy rainfall, consequent floods and landslides. In Japan, the intensity of climate-related disasters has also increased which cause a huge toll of fatalities, injuries and consequent economic damages. From 1990 to 2018, there were 146 incidents of climate-related disasters occurred in Japan which caused of 2981 fatalities (including missing lives) and 180,491 injured people and huge damages of housing property which makes 14344 peoples homeless. In addition, 4 million people were affected with huge damages of economic loss about US\$ 102 billion. The discussion on the initiatives, plans and programs for disaster mitigation and management is not covered in this article which can be in the future study. However, addressing risks and vulnerability of climate-related disasters requires proper policy-making that is more responsive and flexible as well as measures to disaster prevention and education, preparedness and recovery are considered and understood by the public and private agencies, community groups, and different stakeholders.