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Nota di contenuto	Cover; Contents; Forewords; Acknowledgments; Abbreviations; Overview: Lessons from the Great East Japan Earthquake; MAPS; Map 0.1 The tsunami struck a wide area of Japan; TABLES; Table 0.1 The Great East Japan Earthquake of 2011 in figures; FIGURES; Figure 0.1 Summary of findings and lessons learned from the project; Figure 0.2 The many roles of the community in multihazard DRM; Figure 0.3 Dikes in Sendai before and after the tsunami of March 11, 2011; Figure 0.4 Otsuchi's mayor was in front of town hall when the tsunami struck; Figure 0.5 Broadcasting at RINGO Radio Map 0.2 Actual inundation areas were much larger than predicted Figure 0.6 Community rehabilitation facilitator; PART I: STRUCTURAL MEASURES; Chapter 1: Structural Measures Against Tsunamis; BOXES; Box 1.1 The enormous tsunami walls of Taro, Miyako City, Iwate Prefecture; Figure 1.1 Inundation area in Fudai Village, Iwate; Figure 1.2 No tsunami inundation in Hirono Town, Iwate; Map 1.1 Determining dike height; Figure 1.3 Effectiveness of the Kamaishi tsunami breakwater; Figure 1.4 Countermeasures against level 1 and level 2 tsunamis; Figure 1.5 Structure of a highly resilient breakwater

Map 1.2 Tsunami inundation area along the Kitakami and Kyu-Kitakami rivers Chapter 2: Building Performance; Figure 2.1 Share of houses that collapsed in the 1995 Kobe earthquake, by year of construction; Table 2.1 Comparison of three major disasters in Japan; Figure 2.2 Houses and cars were washed away by the tsunami; Figure 2.3 The tsunami destroyed the outer walls of steel structures; Table 2.2 Damage to buildings following the GEJE; Figure 2.4 Reinforced concrete building withstood tsunami even though submerged; Figure 2.5 Reinforced concrete building damaged by buoyancy  
Figure 2.6 Reinforced concrete building scoured by the tsunami current  
Figure 2.7 Overtaken building of reinforced concrete with pile foundation; Figure 2.8 Fallen ceiling panels in school gymnasium; Figure 2.9 Subsidence of houses from liquefaction; Figure 2.10 Houses damaged by failure of retaining walls; Figure 2.11 Revised design load requirements against tsunamis; Figure 2.12 Collapsed school building in which furniture is still standing (Yogyakarta province, following Central Java Earthquake, 2006)  
Box 2.1 A simple technical guideline and its dissemination through the building permit process in Indonesia Figure 2.13 Flowchart illustrating the Japanese building permit process; Box 2.2 Tsunami evacuation shelters applying the Japanese technical guideline; Chapter 3: Hydrometeorological Disasters Associated with Tsunamis and Earthquakes; Figure 3.1 Countermeasures taken against hydrometeorological disasters following the GEJE; Figure 3.2 Damage to river dikes at Narusegawa; Map 3.1 Subsidence caused by the earthquake increased inundation risks; Figure 3.3 Rehabilitation of coastal dikes  
Chapter 4: Multifunctional Infrastructure

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## Sommario/riassunto

While not all natural disasters can be avoided, their impact on a population can be mitigated through effective planning and preparedness. These are the lessons to be learned from Japan's own mega-disaster: the Great East Japan Earthquake of 2011, the first disaster ever recorded that included an earthquake, a tsunami, a nuclear power plant accident, a power supply failure, and a large-scale disruption of supply chains. It is a sad fact that poor communities are often hardest hit and take the longest to recover from disaster. Disaster risk management (DRM) should therefore be taken into account

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