1. Record Nr. UNINA9910437956303321

Titolo	Encyclopedia of Natural Hazards / / edited by Peter T. Bobrowsky
Pubbl/distr/stampa	Dordrecht : , : Springer Netherlands : , : Imprint : Springer, , 2013
ISBN	1-78539-643-9 1-4020-4399-6
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (479 illus., 336 illus. in color. eReference.)
Collana	Encyclopedia of Earth Sciences Series, , 1871-756X
Disciplina	363.3403
Soggetti	Natural disasters Geomorphology Earth sciences Physical geography Natural Hazards Earth Sciences Physical Geography
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes case studies.
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	AA-LAVA -- Accelerometer -- Acid Rain -- Adaptation -- Airphoto and Satellite Imagery -- Albedo -- Antecedent Conditions -- Arsenic in Groundwater -- Asteroid -- Asteroid Impact -- Asteroid Impact Mitigation -- Asteroid Impact Predictions -- Automated Local Evaluation in Real Time (ALERT) -- Avalanches -- Aviation (Hazards to) -- Avulsion -- Base Surge -- Beach Nourishment (Replenishment) -- Beaufort Wind Scale -- Biblical Events -- Body Wave -- Breakwaters -- Building Code -- Building Failure -- Buildings, Structures, and Public Safety -- Calderas -- Casualties Following Natural Hazards -- Challenges to Agriculture -- Civil Protection and Crisis Management -- Classification of Natural Disasters -- Climate Change -- Cloud Seeding -- Coal Fire (Underground) -- Coastal Erosion -- Coastal Zone Risk Management -- Cognitive Dissonance -- Collapsing Soil Hazards -- Comet -- Communicating Emergency Information -- Community Management of Natural Hazards -- Complexity Theory -- Concrete Structures -- Convergence -- Coping Capacity -- Cost-Benefit Analysis of Natural Hazard Mitigation -- Costs (Economic) of Natural Hazards

and Disasters -- Creep -- Critical Incident Stress Syndrome -- Critical Infrastructure -- Cryological Engineering -- Cultural Heritage and Natural Hazards -- Damage and the Built Environment -- Debris Avalanche -- Debris Flow -- Deep-seated Gravitational Slope Deformation -- Desertification -- Disaster Diplomacy -- Disaster Relief -- Disaster Research and Policy, History -- Disaster Risk Management -- Disaster Risk Reduction -- Disasters -- Dispersive Soil Hazards -- Doppler Weather Radar -- Dose Rate -- Drought -- Dust Bowl -- Dust Devil -- Dust Storm -- Dvorak Classification of Hurricanes -- Early Warning Systems -- Earthquake -- Earthquake Damage -- Earthquake Prediction and Forecasting -- Earthquake Resistant Design -- Economic Valuation of Life -- Economics of Disasters -- Education and Training for Emergency Preparedness -- Elastic Rebound Theory -- Electromagnetic Radiation (EMR) -- El Niño/Southern Oscillation -- Emergency Management -- Emergency Mapping -- Emergency Planning -- Emergency Shelter -- Epicenter -- Epidemiology of Disease in Natural Disasters -- Erosion -- Erosivity -- Eruption Types (Volcanic Eruptions) -- Evacuation -- Expansive Soils and Clays -- Expert (Knowledge-Based) Systems for Disaster Management -- Exposure to Natural Hazards -- Extensometers -- Extinction -- Extreme Value Theory -- Eyjafjallajökull Eruptions 2010 -- Fault -- Federal Emergency Management Agency (FEMA) -- Fetch -- Fire and Firestorms -- Flash Flood -- Flood Deposits -- Flood Hazard and Disaster -- Flood Protection -- Flood Stage -- Floodplain -- Floodway -- Fog Hazard Mitigation -- Fog Hazards -- Föhn -- Forest and Range Fires -- Frequency and Magnitude of Events -- Frost Hazard -- Fujita Tornado Scale -- Fumarole -- Galeras Volcano, Colombia -- Gas-Hydrates -- Geographic Information Systems (GIS) and Natural Hazards -- Geographic Information Technology -- Geohazards -- Geological/Geophysical Disasters -- Glacier Hazards -- Global Change and its Implications for Natural Disasters -- Global Dust -- Global Network of Civil Society Organizations for Disaster Reduction -- Global Positioning Systems (GPS) and Natural Hazards -- Global Seismograph Network (GSN) -- Haiti Earthquake 2010: Psychosocial Impacts -- Harmonic Tremor -- Hazard -- Hazard and Risk Mapping -- Hazardousness of a Place -- Heat Waves -- High-Rise Buildings in Natural Disaster -- Historical Events -- Hospitals in Disaster -- Human Impacts of Hazards -- Humanity as an Agent of Natural Disasters -- Hurricane (Typhoon, Cyclone) -- Hurricane Katrina -- Hydrocompaction Subsidence -- Hydrograph, Flood -- Hydrometeorological Hazards -- Hyogo Framework for Action 2005-2015 -- Hypocenter -- Ice and Icebergs -- Ice Storms -- Impact Airblast -- Impact Ejecta -- Impact Fireball -- Impact Firestorms -- Impact Tsunamis -- Impact Winter -- Inclinometers -- Indian Ocean Tsunami, 2004 -- Induced Seismicity -- Information and Communication Technology -- Insect Hazards -- Insurance -- Integrated Emergency Management System.-Intensity Scales -- International Strategies for Disaster Reduction (IDNDR and ISDR) -- Internet, World Wide Web and Natural Hazards -- Isoseismal -- Jökulhlaups -- Karst Hazards -- Krakatoa (Krakatau) -- Lahar -- Land Degradation -- Land Subsidence -- Land Use, Urbanization, and Natural Hazards -- Landsat Satellite -- Landslide -- Landslide Dam -- Landslide Impacts -- Landslide Inventory -- Landslide Triggered Tsunami, Displacement Wave -- Landslide Types -- Land-Use Planing -- Lateral Spreading -- Lava -- Levee -- Lightning -- Liquefaction -- Livelihoods and Disasters -- Loess -- Macroseismic Survey -- Magma -- Magnitude Measures -- Marginality -- Marine Hazards -- Mass Media and Natural Disasters -- Mass Movement -- Megacities and Natural Hazards -- Mega-Fires in Greece (2007) -- Mercalli, Giuseppe

(1850-1914) -- Meteorite -- Methane Release from Hydrate -- Mining Subsidence Induced Fault Reactivation -- Misconceptions About Natural Disaster -- Mitigation -- Modified Mercalli (MM) Scale -- Monitoring Natural Hazards -- Monsoons -- Montserrat Eruptions -- Mortality and Injury in Natural Disasters -- Mt Pinatubo -- Mud Volcanoes -- Mudflow -- Myths and Misconceptions in Disasters -- Natural Hazard -- Natural Hazards in Developing Countries -- Natural Radioactivity -- Neotectonics -- Nevado del Ruiz Volcano, Colombia 1985 -- North Anatolian Fault -- Nuée Ardente -- Overgrazing -- Ozone -- Ozone Loss -- Pacific Tsunami Warning and Mitigation System (PTWS) -- Pahoehoe Lava -- Paleoflood Hydrology -- Paleoseismology -- Paraglacial -- Perception of Natural Hazards and Disasters -- Permafrost -- Piezometer -- Piping Hazard -- Planning Measures and Political Aspects -- Plate Tectonics -- Pore-Water Pressure -- Post Disaster Mass Care Needs -- Posttraumatic Stress Disorder (PTSD) -- Primary Wave (P-Wave) -- Probable Maximum Flood (PMF) -- Probable Maximum Precipitation (PMP) -- Psychological Impacts of Natural Disasters -- Pyroclastic Flow -- Queensland Floods (2010-2011) and „Tweeting“ -- Quick Clay -- Quick Sand -- Radiation Hazards -- Radon Hazards.-Recovery and Reconstruction After Disaster -- Recurrence Interval -- Red Cross and Red Crescent -- Red Tides -- Reflections on Modeling Disaster -- Release Rates -- Religion and Hazards -- Remote Sensing of Natural Hazards and Disasters -- Reservoir, Dams, and Seismicity -- Resilience -- Richter, Charles Francis (1900-1985) -- Rights and Obligations in International Humanitarian Assistance -- Rip Current -- Risk -- Risk Assessment -- Risk Governance -- Risk Perception and Communication -- Rock Avalanche (Sturzstrom) -- Rockfall -- Rogue Wave -- Rotational Seismology -- Sackung -- Saffir-Simpson Hurricane Intensity Scale -- San Andreas Fault -- Santorini, Eruption -- Sea Level Change -- Secondary Wave (S-Wave) -- Sedimentation of Reservoirs -- Seiche -- Seismic Gap -- Seismograph/Seismometer -- Seismology -- Shear -- Shield Volcano -- Sinkhole -- Slide and Slump -- Slope Stability -- Snowstorm and Blizzard -- Social-Ecological Systems -- Sociology of Disaster -- Solar Flares -- Solifluction -- Space Weather -- Storm Surges -- Storms -- Stratovolcanoes -- Structural Damage Caused by Earthquakes -- Structural Mitigation -- Subduction -- Subsidence Induced by Underground Extraction -- Sunspots -- Supernova -- Surge -- Susceptibility -- Tangshan, China (1976 Earthquake) -- Tectonic and Tectono-Seismic Hazards -- Tectonic Tremor -- Thunderstorms -- Tidal Bores -- Tiltmeters -- Time and Space in Disaster -- Tohoku, Japan (2011 Earthquake and Tsunami) -- Torino Scale -- Tornadoes -- Triggered Earthquakes -- Tsunami -- Tsunami Loads on Infrastructure -- Uncertainty -- United Nations Organizations and Natural Disasters -- Universal Soil Loss Equation (USLE) -- Unreinforced Masonry Buildings -- Urban Environments and Natural Hazards -- Usoi Landslide and Lake Sarez -- Vaiont Landslide, Italy -- Vesuvius -- Volcanic Ash -- Volcanic Gas -- Volcanoes and Volcanic Eruptions -- Vulnerability -- Warning Systems -- Waterspout -- Wenchuan, China (2008 Earthquake) -- Wildfire -- World Economy, Impact of Disasters -- Worldwide Trends in Natural Disasters -- Zoning.

Sommario/riassunto

Few subjects have caught the attention of the entire world as much as those dealing with natural hazards. The first decade of this new millennium provides a litany of tragic examples of various hazards that turned into disasters affecting millions of individuals around the globe. The human losses (some 225,000 people) associated with the 2004 Indian Ocean earthquake and tsunami, the economic costs (approximately 200 billion USD) of the 2011 Tohoku Japan earthquake,

tsunami and reactor event, and the collective social impacts of human tragedies experienced during Hurricane Katrina in 2005 all provide repetitive reminders that we humans are temporary guests occupying a very active and angry planet. Any examples may have been cited here to stress the point that natural events on Earth may, and often do, lead to disasters and catastrophes when humans place themselves into situations of high risk. Few subjects share the true interdisciplinary dependency that characterizes the field of natural hazards. From geology and geophysics to engineering and emergency response to social psychology and economics, the study of natural hazards draws input from an impressive suite of unique and previously independent specializations. Natural hazards provide a common platform to reduce disciplinary boundaries and facilitate a beneficial synergy in the provision of timely and useful information and action on this critical subject matter. As social norms change regarding the concept of acceptable risk and human migration leads to an explosion in the number of megacities, coastal over-crowding and unmanaged habitation in precarious environments such as mountainous slopes, the vulnerability of people and their susceptibility to natural hazards increases dramatically. Coupled with the concerns of changing climates, escalating recovery costs, a growing divergence between more developed and less developed countries, the subject of natural hazards remains on the forefront of issues that affect all people, nations, and environments all the time. This treatise provides a compendium of critical, timely and very detailed information and essential facts regarding the basic attributes of natural hazards and concomitant disasters. The Encyclopedia of Natural Hazards effectively captures and integrates contributions from an international portfolio of almost 300 specialists whose range of expertise addresses over 330 topics pertinent to the field of natural hazards. Disciplinary barriers are overcome in this comprehensive treatment of the subject matter. Clear illustrations and numerous color images enhance the primary aim to communicate and educate. The inclusion of a series of unique “classic case study” events interspersed throughout the volume provides tangible examples linking concepts, issues, outcomes and solutions. These case studies illustrate different but notable recent, historic and prehistoric events that have shaped the world as we now know it. They provide excellent focal points linking the remaining terms in the volume to the primary field of study. This Encyclopedia of Natural Hazards will remain a standard reference of choice for many years.