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Nota di contenuto	1 Site investigation using engineering geology mapping and geological hazard evaluation: Case study of the New Hail Economic City, Hail

Region, KSA -- 2 Pre-design Site Investigation for an Oil and Gas Facility in the Marginal lands of the Nigerian Niger Delta Sub-region -- 3 Geotechnical Properties of Expansive Clay Shale in El-Mahrowsa, Qena, Egypt -- 4 Contribution of Zeolite to Deterioration of Pelitic Rocks from Asu-River Group and variation of the Deterioration with Water Sorption -- 5 Detection of elastic region varied by inherent anisotropy of reconstituted Toyoura sand.

Sommario/riassunto

The ongoing population growth is resulting in rapid urbanization, new infrastructure development and increasing demand for the Earth's natural resources (e.g., water, oil/gas, minerals). This, together with the current climate change and increasing impact of natural hazards, imply that the engineering geology profession is called upon to respond to new challenges. It is recognized that these challenges are particularly relevant in the developing and newly industrialized regions. The idea beyond this volume is to highlight the role of engineering geology and geological engineering in fostering sustainable use of the Earth's resources, smart urbanization and infrastructure protection from geohazards. We selected 19 contributions from across the globe (16 countries, five continents), which cover a wide spectrum of applied interdisciplinary and multidisciplinary research, from geology to engineering. By illustrating a series of practical case studies, the volume offers a rather unique opportunity to share the experiences of engineering geologists and geological engineers who tackle complex problems working in different environmental and social settings. The specific topics addressed by the authors of chapters included in the volume are the following: pre-design site investigations; physical and mechanical properties of engineering soils; novel, affordable sensing technologies for long-term geotechnical monitoring of engineering structures; slope stability assessments and monitoring in active open-cast mines; control of environmental impacts and hazards posed by abandoned coal mines; assessment of and protection from geohazards (landslides, ground fracturing, coastal erosion); applications of geophysical surveying to investigate active faults and ground instability; numerical modeling of seabed deformations related to active faulting; deep geological repositories and waste disposal; aquifer assessment based on the integrated hydrogeological and geophysical investigation; use of remote sensing and GIS tools for the detection of environmental hazards and mapping of surface geology. This volume is part of the proceedings of the 1st GeoMEast International Congress and Exhibition on Sustainable Civil Infrastructures, Egypt 2017.
