

ABSTRACTS VOLUME

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7-O-11

Sustainable Development of Geological Resources in Nakhon Ratchasima Province, NE Thailand

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Nakhon Ratchasima province, on the SW margin of Khorat Plateau in NE Thailand, yields various geological resources including rocks and minerals, geological structures, sedimentology and stratigraphy, geomorphologic landforms, and several types of fossils. Such geological resources play important roles on many aspects on both economic and academic values. Some of them are possible to sustainably develop for tourism attractions and learning sites. The landforms are varied from a series of mountain chains with cuesta, table land, karst, and wind and water gaps, in the west, southwest, and south areas of the province, and gradually changed to be undulating terrains and finally river flood plain towards the northeast. The rocks are varied in ages with a long geological time span from Paleozoic, Mesozoic, to Cenozoic Era.

The Permian rocks are composed of several types of marine fossil assemblages such as coral, fusulinids, ammonites, crinoids, brachiopods, and bryozoans, representing a shallow marine environment from coral reefs on the continental shelf to coastline. The Mesozoic rocks are mainly consisted of sandstone, conglomerate, siltstone, and minor portion of shale deposited under terrestrial environments. The rocks yield dinosaurs and other contemporaneous animals mainly under conifer forests along a river system. Known fossils have been studied from many localities including iguanodontian dinosaurs Ratchasimasaurus suranareae and Siamodon nimngami, allosaurs and pterosaurs, turtles Kizylkumemys khoratensis and Shachemys sp., crocodiles Khoratosuchus jintasakuli, hybodont sharks Thaiodus rucha, and Lepidotes sp. and semionotid fishes with abundant occurrence of petrified wood. The Cenozoic rocks are fluvial deposits with abundant Neogene and Quaternary fossil records of both plants and animals. Fossil proboscideans are exceptionally diversified, at least 8 genera have been recognized including Gomphotherium, Protanancus, Prodeinotherium, Tetralophodon, Stegolophodon, Sinomastodon, Stegodon, and Elephas. Other mammals include bovines, anthracotheres, pigs, deer, saber-toothed cats, giraffes, hyenas, antelopes, horses, rhinoceroses, hippopotamuses, and orangutans, some reptiles are also reported such as crocodiles, turtles, soft-shelled turtles, and Indian gharials. Abundant petrified woods are extensively studied representing the tropical mix-deciduous forests.

In addition, archaeological remains are also presented in forms of archaeological sites and ancient cities including Ban Prasat and Ban Non Wat archaeological sites, ancient rock-cutting sites, and Phimai Historical Park and Prasat Phanom Wan ancient towns. These archaeological evidences are important things for understanding indigenous society ancestral to the Empire of Angkor and also might be the development from the supposed colonization by Early Neolithic farmers about 4,000 years ago.

The natural and cultural resources in Nakhon

Ratchasima province mentioned above are currently studying to propose the province as outstanding geological and archaeological values to sustainably developing for social benefits possibly considering as a Geopark.

7-O-12

The Role of Geoparks in Regional Development Activities in the Oki Islands Geopark

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The Oki Islands are located in south-west Japan, 40 – 80km north of the Shimane Peninsula in the Sea of Japan. In 724, Oki was recorded as “the place for exile” and Emperor Gotoba and Emperor Godaigo were subsequently banished to these islands. In 1963 the stunning Oki Islands were included in the Daisen-Oki National Park. The rich historic background and natural environment of Oki led to this region flourishing as a tourist destination. However, in recent years, there has been a steady decline in the number of tourists visiting Oki due to the change in customer needs and the perceived inconvenience of remote island life.

In spite of these challenging times, in 2003 the “Kaze-Machi-Kaido Club” was established with the aim of stimulating activity in the Oki Islands Region. This group endeavors to revitalize the local community by utilizing the natural environment, culture and history of the Oki Region and from the early stages has been promoting eco-tourism activities that incorporate regional resources.

This group started with three key goals: to improve infrastructure and hospitality systems, to reinvigorate the local economy, and to develop pride in Oki. Currently, these goals have become the main focus for the Oki Region and Shimane Prefecture as a whole. The Oki Islands Geopark became a member of the Japan Geoparks Network in 2009, and in 2011 submitted the application dossier to become a member of the Global Geoparks Network.

7-O-13

Meeting the Imperative of Sustainable Development in Geoparks : Case Study of Mt Suswa Volcano, Kenya - An Aspiring African Geopark

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Mt Suswa is a large dormant Holocene trachyte-phonolite shield volcano, rising to a height of 2356m from the floor of the Eastern Rift Valley, 60km due west of Nairobi, Kenya. It exhibits impressive nested calderas, together with one of the world's most extensive lava tube cave systems, and is currently the subject of work to build an application for its designation as a UNESCO Geopark. Mt Suswa was recognised as a possible candidate Geopark