The aspiring Hantangang Global Geopark in Korea: Justification to be endorsed by UNESCO Global Geopark

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The Quaternary Hantangang River volcanic field of the central Korean Peninsula hosts unique and outstanding volcanic landforms associated with fluvial system. The intraplate volcanic field by fissure eruption originated from Mt. Orisan and 680 m-Peak in DPRK, consists of a series of the Late Quaternary basaltic lava flows. The lava flows filled the paleo-river channel, extending more than ca. 110 km to the terminus in the northern part of ROK. Afterwards, the lava flows were eroded by the antecedent river system, producing an array of precipitous exposures of columnar-jointed lava along the channel walls and other volcanic landforms. In addition to fantastic columnar joints along the river, special geological features such as pillow lavas and basalt flow layers overlying fluvial sediments are present along the river, implying that the lava flowed along the paleo-channel bed. Fifteen geosites are included in the geopark, and geological elements of several geosites are intimately associated with ecology, history, culture and archaeology. Comparative analysis with other volcanic landforms (WH sites and Global Geoparks) strongly suggests that the volcanic landform of the Hantangang Geopark is truly a unique geological feature in the world and includes invaluable geoheritage values of international significance. The presence of other types of Precambrian to Quaternary rocks (high geodiversity) also provides good chance of geotourism in this area. The location of the geopark is near Demilitarized Zone (DMZ), thus the site has been the area of very limited economic development. Therefore, geological as well as socioeconomic potential of this geopark can strongly justify the qualification of this aspiring geopark as a UNESCO Global Geopark.