

## Preliminary report on emergency survey of Nyiragongo eruption on January 17,2002

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Volcano Nyiragongo (3470 m) in eastern R.D. Congo belongs to the Virunga volcanic chain and is located in the central part of the western rift of the East African Rift System. This volcano was chosen in 1991 as the African Decade Volcano by IAVCEI as an activity of International Decade of Natural Disaster Reduction (IDNDR) program and has presented the highest potential threat to the human lives around the volcano. After 5 years quiescence from the last eruption on January 10, 1997, the lava lake of Nyiragongo volcano appeared again on June 22, 1982 in the summit crater of about 1.3 km in diameter and 800 m in depth. Since then, the level of lake rose by about 500 m intermittently during the next twenty years. On January 17, 2002, fissures with the N-S direction opened and the lava suddenly effused out from the summit crater and poured into the city of Goma, the capital of Kivu province, of which whole population being 400,000-450,000. The total lava flow covered more than 20 km long. The lava flow moved rather slowly at the outskirts and the downtown of Goma. The loss of life from this eruption was estimated to be around 50, however, more than several hundred houses and the part of the Goma airport were buried under the lava flow, of which thickness was observed to be 2-3 m. The area and residents of Goma affected by lava flow were estimated to be 4.5 km<sup>2</sup> and about 100,000, respectively, by the international humanitarian community such as UN-OCHA. This paper will cover the following subject; (1) history of lava lake, (2) prediction of eruption, (3) fissure and lava flow, and (4) catastrophe in Goma city.