ASSESSMENT OF VOLCANIC HAZARD FROM AVACHINSKY VOLCANO,
KAMCHATKA, RUSSIA

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The evaluation of volcanic hazard from Avachinsky volcano is important because Avachinsky volcano is located 25-30 km away from the cities of Petropavlovsk-Kamchatsky and Elizovo. Volcanic hazard was estimated based on the eruptive patterns of the Young Cone of Avachinsky, which started to form 3500 14C yrs BP. We have compiled a volcanic hazard map, which shows the following zones:

A – Highly hazardous zone likely to be affected most frequently and during eruptions of any magnitude. Prohibited for economic development. This zone includes areas which are exposed to hazards associated with: 1) lava and pyroclastic flows and surges; 2) debris avalanches; 3) lahars.

B – Moderately hazardous zone likely to be affected less frequently and only by strong eruptions. Unfit for economic development or suitable only for restricted usage. This zone includes areas of hazard associated with: 1) pyroclastic flows; 2) lahars.

C – Low hazard zone likely to be affected only by very strong and catastrophic eruptions. Suitable for limited economic development and habitation. This zone includes areas likely to be affected by: 1) pyroclastic flows and lahars; 2) only lahars; 3) pyroclastic surges associated with pyroclastic flows.

D – Minor hazard zone. Suitable for economic development. This zone is unlikely to be affected by lava, pyroclastic or mud flows but may be affected by ash falls. The map shows isopachs of maximum possible tephra thickness and most likely tephra thickness, maximum possible size of tephra particles, frequency of ashfalls, and mud flows. The map was handed over to the administration of Petropavlovsk-Kamchatsky.