



A plan for reducing the volcanic risk of Vesuvius

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In the sixty years passed since Vesuvius last erupted in 1944, its risk greatly increased either because volcanic history indicate that the next eruption could be a high energy sub-plinian or plinian explosive event and, mostly, because of the wild urbanization of its slopes. Nearly 600,000 people live today in the “red zone”, the one that could be devastated by pyroclastic flows. Other major risks come from: (i) mud flows (lahar) generated by rain mobilization of loose pyroclastics deposited by the eruption on the Vesuvius slopes and on downwind reliefs (blue zone) and (ii) ash fallout that may cause roof collapses (yellow zone). The emergency plan foresees that the red zone inhabitants be evacuated before the eruption onset, whereas those of the blue and yellow zones will be evacuated immediately after the beginning of the eruption when, known the eruptive column height and the wind direction and speed, the area exposed to severe ash fallout and lahar risks will be precisely identified. About one million people could be interested and the Vesuvius preparedness plan is by far the most complex worldwide for volcanic hazard. In 2003 the Campania Region approved “Vesuvia”, a 15-year plan to mitigate the risk by reducing the number of residents in the red zone. The plan pillars are: a) total forbiddance to build new houses and fight against unauthorized buildings (3 MEUR per year for demolitions) b) bonus of 30 KEUR for each family to buy a house outside the risk zone (30 MEUR per year = 15,000 families in 15 years) c) transfer of public buildings and construction of new residential complexes outside the risk zone reserved for location to families of the red zone (118 MEUR of public funds) d) residence buildings converted into “bed & breakfast” initiatives (10 MEUR) e) interventions to improve communication (roads, harbours, railway) to reduce the evacuation time f) information and education campaigns on the volcanic risk. Vesuvia will invest in 15 years a total of 724 MEUR to relocate 150,000 residents. All the mayors of the red zone sit in the Vesuvia management council. An important result has been already obtained by this plan, namely that of increasing risk perception and awareness as administrators and citizen of the red area are since two years deeply

involved in discussing the Vesuvius risk, the possibility of eruption forecasting and of risk mitigation measures.