Online Resource 2

A fast and comprehensive qualitative GIS-based risk assessment for tephra fallout: the example of Cotopaxi volcano, Ecuador
Part II: Vulnerability and risk assessment

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In Natural Hazards

This online appendix contains the complete set of risk maps described in the main text, based on four aspects of risk: economic, environmental, physical and territorial. Each aspect contains one map per eruption scenario.
Refer to Biass and Bonadonna (this volume) for a review of all eruption scenarios used in this risk assessment. Refer to the main text for a detailed description of the vulnerability assessment and the definition of the risk classification.

Map overview

Map legend

Administrative limits
- NAPO Province
- Latacunga Canton
- Ambato Parish

Populated places
- Quito Capital
- Latacunga Main city

Natural features
- Volcano

Communication
- Highway
- Primary road
- Secondary road
- Airport

Risk level
- Residual
- Very low
- Low
- Medium
- High
- Very high
- No data

Map information
Map scale for A3: 1:577’000
Projection: UTM
Zone: 17 S
Datum: WGS-84

Map data source
- Elevation: SRTM 90 m
- Satellite image: MODIS
- Administrative units: INEC 2008
- Roads: Open Street Map
- Airports: Open Street Map
- Place names: Open Street Map
- Land cover: GlobCover 2004-2006
- Building census: INEC 2008
- Population census: Landscan 2005
- Intact forests: Greenpeace
- Protected areas: WDPA
Risk maps

Economic risk

OES Layer 3
Risk maps

Economic risk: ERS VEI 3
Risk maps

Economic risk

ERS VEI 4
Risk maps

Economic risk

ERS 3, 4 and 5 for a 100 years probability
Risk maps

Environmental risk

OES Layer 5
Risk maps
Environmental risk
ERS VEI 3
Risk maps

Environmental risk

ERS VEI 4
Risk maps

Environmental risk

ERS 3, 4 and 5 for a 100 years probability

Very low
Low
Medium
High
Very high
No data

Environmental risk

Risk maps

ERS 3, 4 and 5 for a 100 years probability
Risk maps

Physical risk

OES Layer 3
Risk maps

Physical risk

OES Layer 5
Risk maps

Physical risk
ERS 3, 4 and 5 for a 100 years probability
Risk maps
Territorial risk
OES Layer 3
Risk maps

Territorial risk

OES Layer 5
Risk maps

Territorial risk

ERS VEI 3
Risk maps

Territorial risk

ERS VEI 4
Risk maps

Territorial risk

ERS VEI 5
Risk maps

Territorial risk
ERS 3, 4 and 5 for a 100 years probability