



#### Supplement of

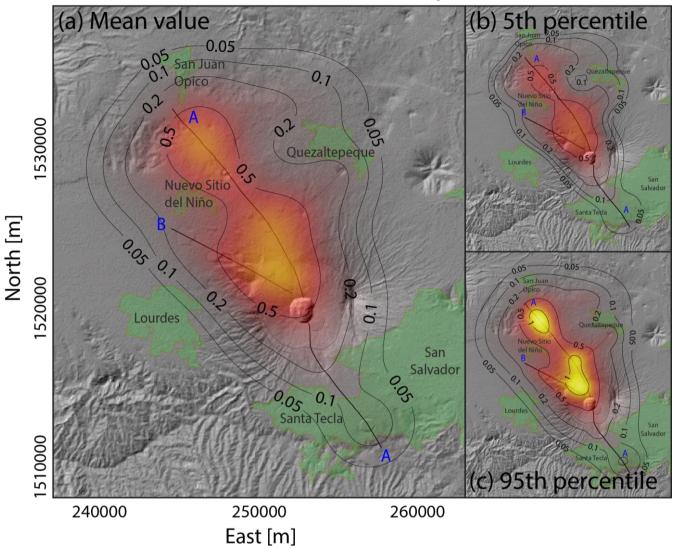
#### Thematic vent opening probability maps and hazard assessment of small-scale pyroclastic density currents in the San Salvador volcanic complex (El Salvador) and Nejapa-Chiltepe volcanic complex (Nicaragua)

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#### San Salvador Volcanic Complex - Ballistics



20 Figure S1: Density distribution of the probability of vent opening at San Salvador Volcanic Complex, associated with the occurrence of volcanic activity able to produce ballistic fragments. (a) Mean value. (b) 5<sup>th</sup> percentile. (c) 95<sup>th</sup> percentile. Results are expressed in percentage per km<sup>2</sup>.

### San Salvador Volcanic Complex - Low-intensity fallout

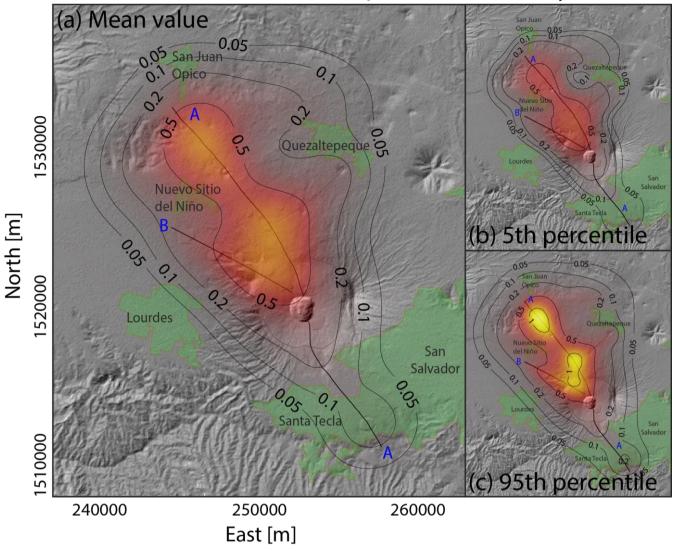


Figure S2: Density distribution of the probability of vent opening at San Salvador Volcanic Complex, associated with the occurrence of volcanic activity able to produce low-intensity fallout pyroclastic deposits. (a) Mean value. (b) 5<sup>th</sup> percentile. (c) 95<sup>th</sup> percentile. Results are expressed in percentage per km<sup>2</sup>.

# Nejapa-Chiltepe Volcanic Complex - Ballistics

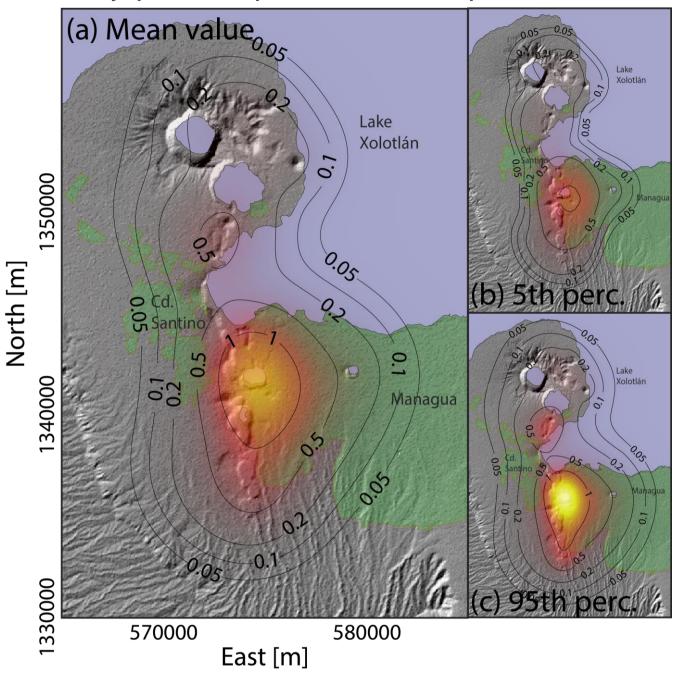


Figure S3: Density distribution of the probability of vent opening at Nejapa-Chiltepe Volcanic Complex, associated with the occurrence of volcanic activity able to produce ballistic fragments. (a) Mean value. (b) 5<sup>th</sup> percentile. (c) 95<sup>th</sup> percentile. Results are expressed in percentage per km<sup>2</sup>.

## Nejapa-Chiltepe Volcanic Complex - Low-intensity fallout

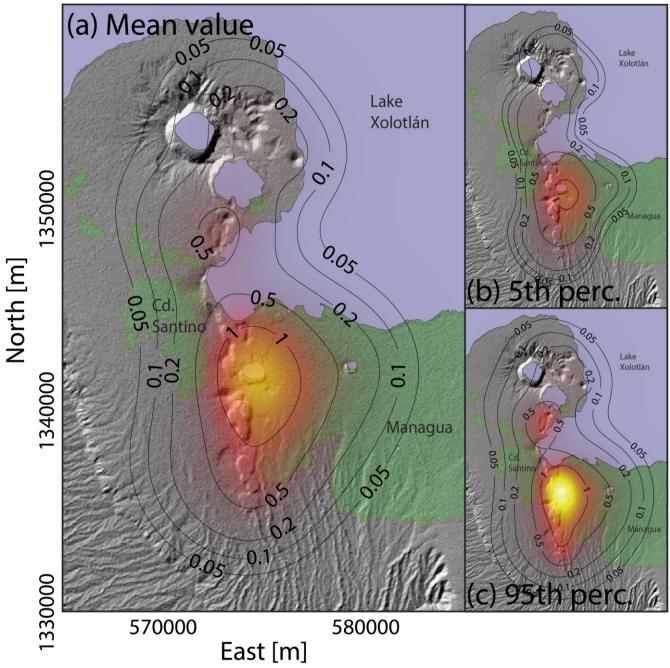
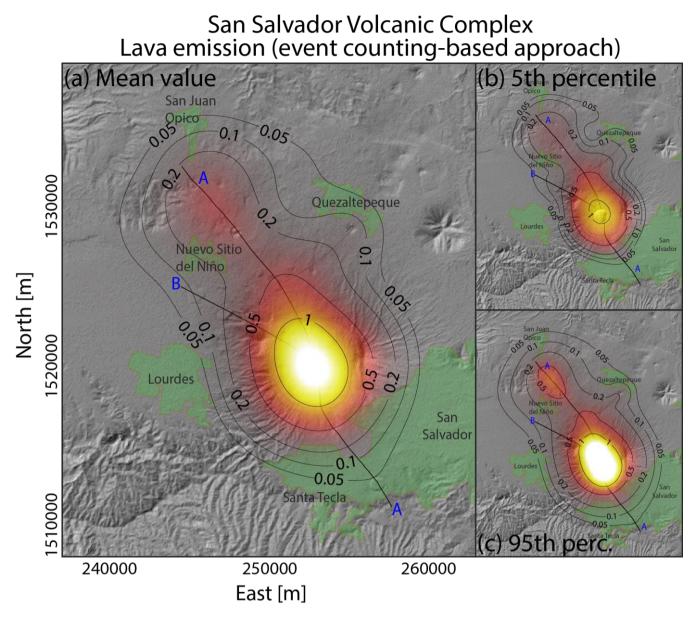
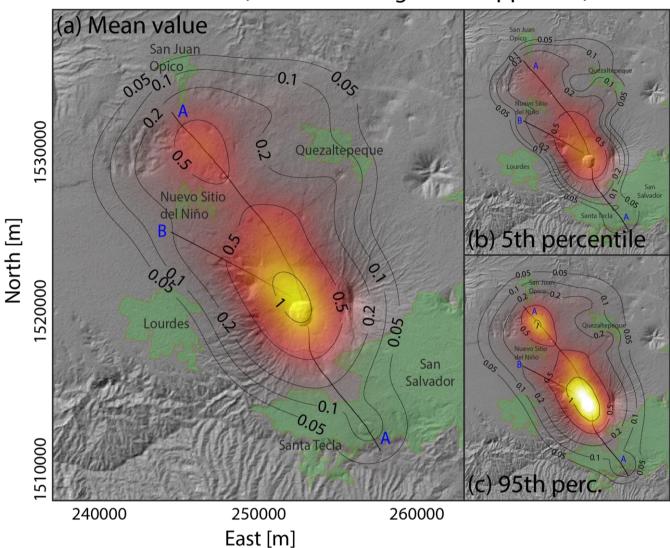


Figure S4: Density distribution of the probability of vent opening at Nejapa-Chiltepe Volcanic Complex, associated with the occurrence of volcanic activity able to produce low-intensity fallout pyroclastic deposits. (a) Mean value. (b) 5<sup>th</sup> percentile. (c) 95<sup>th</sup> percentile. Results are expressed in percentage per km<sup>2</sup>.



**Figure S5:** Density distribution of the probability of vent opening at San Salvador Volcanic Complex computed using an event countingbased approach (i.e. the polygenetic central vent presents a weight higher than monogenetic vents). These maps are associated with the occurrence of volcanic activity able to produce lava flows. (a) Mean value. (b) 5<sup>th</sup> percentile. (c) 95<sup>th</sup> percentile. Results are expressed in percentage per km<sup>2</sup>.

40



### San Salvador Volcanic Complex Ballistics (event counting-based approach)

Figure S6: Density distribution of the probability of vent opening at San Salvador Volcanic Complex computed using an event countingbased approach (i.e. the polygenetic central vent presents a weight higher than monogenetic vents). These maps are associated with the occurrence of volcanic activity able to produce ballistic fragments. (a) Mean value. (b) 5<sup>th</sup> percentile. (c) 95<sup>th</sup> percentile. Results are expressed in percentage per km<sup>2</sup>.