

Table S1: ESI-07 intensities for the primary and secondary effects induced by the October 30, 2020, Mw=7.0, Samos earthquake and recorded in post-event field surveys of this study (source a), by Evelpidou et al. (2021) (source b) and Triantafyllou et al. (2021) (source c).

PRIMARY EARTHQUAKE ENVIRONMENTAL EFFECTS						
Fault Block affected by EEE	Area affected by EEE	Type of EEE	Description of EEE	Source	ESI-07 intensity	Epicentral distance (km)
Karlovasi Basin	Karlovassi vessel shelter (northwestern part of Karlovasi basin)	Permanent surface deformation	Coseismic uplift of 24 cm in Karlovassi vessel shelter	a	IX	16.68
Karlovasi Basin	Molos of Marathokampos (southern part of Karlovasi basin)	Permanent surface deformation	Coseismic uplift of 10 cm at a concrete jetty of Marathokampos port	a	IX	24.39
Western Samos	Akra promontory (northwestern part of Western Samos fault block)	Permanent surface deformation	Coseismic uplift of 20 cm at Akra promontory	a, b	IX	17.64
Western Samos	Punta promontory (northwestern part of Western Samos fault block)	Permanent surface deformation	Coseismic uplift of 20 cm at Akra promontory	a, b	IX	18.76
Western Samos	Ayios Isidoros (northwestern part of Western Samos fault block)	Permanent surface deformation	Coseismic uplift of 30-35 cm at Ayios Isidoros coast	a, b	IX	25.77
Western Samos	Megalo Seitani (northwestern part of Western Samos fault block)	Permanent surface deformation	Coseismic uplift of 22 cm at Megalo Seitani coast	b	IX	21.95
Karlovasi Basin	Ayios Nikolaos (northeastern part of Karlovasi Basin)	Permanent surface deformation	Coseismic uplift of 15-20 cm due to the mainshock, 8-10 due to the January aftershock	a	IX for the mainshock, VIII-IX for the aftershock	12.51

Western Samos	Kampos of Marathokampos (southern part of Western Samos fault block)	Permanent surface deformation	Coseismic uplift of 15-20 cm due to the mainshock, 8-10 cm due to the January aftershock	a	IX for the mainshock, VIII-IX for the aftershock	26.29
Mytilinii Basin	Kokkari (northern part of Mytilinii basin)	Permanent surface deformation	Coseismic uplift of 22 cm	b	IX	16.75
Mytilinii Basin	Potokaki beach (southern part of Mytilinii basin)	Permanent surface deformation	Coseismic uplift of 25-30 cm	a	IX	27.27
Eastern Samos	Asprochorti (northwestern part of Eastern Samos fault block)	Permanent surface deformation	Coseismic uplift of 10 cm	a	IX	21.30
Eastern Samos	Mourtia (northeastern part of Eastern Samos fault block)	Permanent surface deformation	Coseismic uplift of 8 cm	b	VIII-IX	27.26
Eastern Samos	Posidonio (southeastern part of Eastern Samos fault block)	Permanent surface deformation	Coseismic uplift of 13 cm	b	IX	31.99
Eastern Samos	Psili Ammos (southern part of Eastern Samos fault block)	Permanent surface deformation	Coseismic uplift of 15 cm	a	IX	29.64
Eastern Samos	Pythagoreio – dock (southern part of the eastern Samos fault block)	Permanent surface deformation	Coseismic uplift of 20 cm	a	IX	27.93
Eastern Samos	Pythagoreio – coastal rocks (southern part of the eastern Samos fault block)	Permanent surface deformation	Coseismic uplift of 15-20 cm	a	IX	27.77
Southern Samos	Sykia (southern part of southern Samos fault block)	Permanent surface deformation	Coseismic uplift of 23 cm	b	IX	30.90
Karlovasi Basin	Ayios Nikolaos	Permanent surface deformation	Coseismic surface ruptures	a	VIII-IX	12.51

	(northeastern part of Karlovasi Basin)					
Karlovasi Basin	Vrisses (northeastern part of Karlovasi Basin)	Permanent surface deformation	Coseismic surface ruptures	a	VIII-IX	14.26
Karlovasi Basin	Kontakaeika (northeastern part of Karlovasi Basin)	Permanent surface deformation	Coseismic surface ruptures	a	VIII-IX	13.62
Karlovasi Basin	Ayios Elias (northeastern part of Karlovasi Basin)	Permanent surface deformation	Coseismic surface ruptures	a	VIII-IX	14.26
Central Samos	Ampelos (northern part of Central Samos)	Permanent surface deformation	Coseismic surface ruptures	a	VIII	12.31
Central Samos	Ano Ayios Konstantinos (northern part of Central Samos)	Permanent surface deformation	Coseismic surface ruptures	a	VIII	12.11
SECONDARY EARTHQUAKE ENVIRONMENTAL EFFECTS						
Fault Block affected by EEE	Area affected by EEE	Type of EEE	Description of EEE	Source	ESI-07 intensity	Epicentral distance (km)
Western Samos	Potami coastal area – 1st site (northwestern part of western Samos fault block)	Slope failures	Rockfalls	a	V	18.13
Western Samos	Potami coastal area – 2nd site (northwestern part of western Samos fault block)	Slope failures	Rockfalls	a	V	18.81
Karlovasi Basin	Koumaeika village (southeastern part of Karlovasi Basin)	Slope failures	Rockfalls	a	VI	23.36
Central Samos	Ampelos – Stavrinides area (northern part of Central Samos)	Slope failures	Rockfalls	a	VI	13.34
Mytilinii Basin	Kedros (northeastern part of Mytilinii Basin)	Slope failures	Rockfalls	a	IV	18.81

Mytilinii Basin	Kokkari area (northeastern part of Mytilinii Basin)	Slope failures	Rockfalls along an artificial road slope from Vathy to Avlakia	a	IV-V	17.81
Mytilinii Basin	Kokkari bay (northeastern part of Mytilinii Basin)	Slope failures	Rockfalls in Kokkari islet	a	V	17.16
Mytilinii Basin	Kokkari bay (northeastern part of Mytilinii Basin)	Slope failures	Rockfalls in Kokkari peninsula	a	V	16.72
Mytilinii Basin	Kokkari bay (northeastern part of Mytilinii Basin)	Slope failures	Rockfalls in Kokkari town	a	V	17.10
Mytilinii Basin	Lemonakia (northeastern part of Mytilinii Basin)	Slope failures	Landslide along a road slope	a	IV	15.97
Mytilinii Basin	Avlakia (northeastern part of Mytilinii Basin)	Slope failures	Rockfalls and landslides along a road slope	a	VIII	13.86
Mytilinii Basin	Tsambou beach (northeastern part of Mytilinii Basin)	Slope failures	Rockfalls along the coastal slope	a	VI	13.23
Mytilinii Basin	Remataki (southern part of Mytilinii Basin)	Slope failures	Rockfalls along a slope in an unstable zone with recent failures	a	VII	27.72
Mytilinii Basin	Marina of Samos (southern part of Mytilinii Basin)	Slope failures	Rockfalls	a	IV-V	28.06
Eastern Samos	Psili Ammos (southern part of Eastern Samos fault block)	Slope failures	Rockfalls	a	IV-V	30.47
Central Samos	Platanos (southern part of Central Samos fault block)	Slope failures	Rockfalls along a road slope	a	IV	21.98
Southern Samos	Tsopela Cape (southern part of Southern Samos fault block)	Slope failures	Rockfalls along a coastal slope	a	VI	30.83

Mytilinii Basin	Malagari (northeastern part of Mytilinii Basin)	Liquefaction phenomena	Ejection of liquefied material along cracks in Malagari port	a	VI	22.65
Mytilinii Basin	Maounes beach (northeastern part of Mytilinii Basin)	Liquefaction phenomena	Ejection of liquefied material along cracks, sand boils, lateral spreading in Maounes beach	a	VIII	22.11
Central Samos	Petalides (northern part of Central Samos fault block)	Ground cracks	Ground cracks in Petalides coastal road	a	VI-VII	11.60
Mytilinii Basin	Malagari (northeastern part of Mytilinii Basin)	Ground cracks	Ground cracks in Malagari coastal road	a	VI-VII	22.80
Central Samos	Ampelos (northern part of Central Samos fault block)	Hydrological anomalies	Increased water discharge	a	VI	12.43
Mytilinii Basin	Kazania (central part of Mytilinii Basin)	Hydrological anomalies	Reappearance of springs and increased water discharge	a	VII	22.08
Western Samos	Kiourka (southern part of Western Samos fault block)	Hydrological anomalies	Reappearance of springs	a	VII	24.16
Eastern Samos	Coastal Vathy town (Southeastern coast of Vathy Bay)	Tsunami	Run up ranging from 1.15 to 2.0 m, run-in ranging from 35 to 102 m, maximum run up 2.0 m at maximum run in distance of 102 m, material damage	c	VIII	23.19
Eastern Samos	Gagou beach (Northeastern coast of Vathy Bay)	Tsunami	Maximum run up of 0.4 m, maximum run-in distance of 7.0 m	c	VI	27.74
Eastern Samos	Malagari beach	Tsunami	Tsunami run up of ~1.25 m at a run-in distance	c	VII	22.23

	(Southwestern coast of Vathy Bay)		of ~20 cm, objects moved away and rotated, vessels drifted away or lost in the sea			
Mytilinii Basin	Kedros beach (western coast of Vathy Bay)	Tsunami	Run-up of ~0.8 m at run-in distance of ~5 m, no material damage	c	VI	19.18
Mytilinii Basin	Kokkari beach (northeastern part of Mytilinii Basin)	Tsunami	Sea level rise of ~1.0 m and water whirlpools	c	VI	17.16
Karlovasi basin	Karlovasi vessel shelter area (northwestern part of Karlovasi Basin)	Tsunami	Tsunami run-up ≥ 0.7 m at run-in distance ≥ 84 m, light wooden structures and objects displaced, boats moved ashore and fences deformed	c	VII	16.71
Karlovasi basin	Karlovasi port (northwestern part of Karlovasi Basin)	Tsunami	Tsunami run-up of 0.7 m at run-in distance of 53 m, material damage in stores	c	VII	16.99
Karlovasi basin	Ayios Nikolaos beach (northeastern part of Karlovasi basin)	Tsunami	Tsunami run-up of 3.55 m	c	VIII	12.53
Eastern Samos	Psili Ammos bay (southern part of Eastern Samos fault block)	Tsunami	Tsunami run-up < 0.5 m	c	VI	29.57
Mytilinii Basin	Pythagoreio town, port (southeastern part of Mytilinii Basin)	Tsunami	Tsunami run-up < 0.5 m	c	VI	27.75
Southern Samos	Heraion beach (eastern part of Southern Samos fault block)	Tsunami	Tsunami run-up of 0.4 m	c	VI	28.45

Western Samos	Kampos beach (southern part of Western Samos fault block)	Tsunami	sea level drop by 0.3 m and rise by 0.2-0.3 m	c	VI	24.55
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