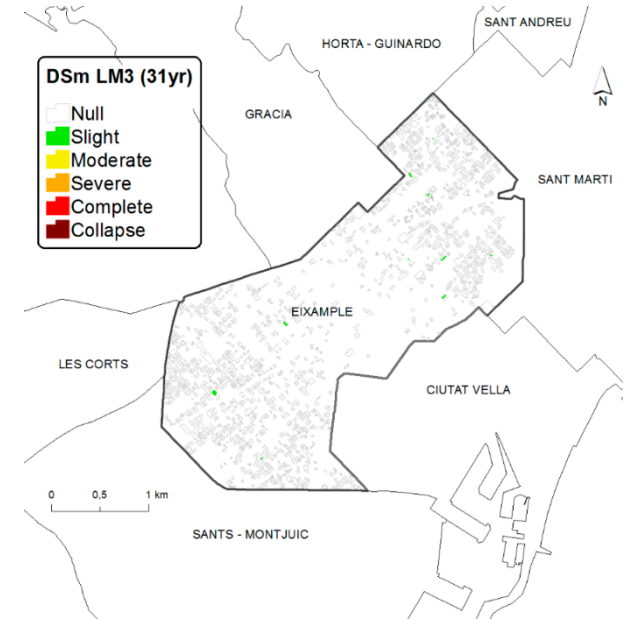


Supplementary Materials

Table S1. Damage Probabilities of the DS according to LM2 and LM3 for a Return Period of 31 Years.

Probability occurrence of the DS, LM3.

	$P_{DS_{0,T}}$	$P_{DS_{1,T}}$	$P_{DS_{2,T}}$	$P_{DS_{3,T}}$	$P_{DS_{4,T}}$	$P_{DS_{5,T}}$	DSm_T
RC_1	1.00	***	***	***	***	***	VL
RC_2	1.00	***	***	***	***	***	VL
RC_3	1.00	***	***	***	***	***	VL
RC_4	0.98	0.02	***	***	***	***	0.02
RC_5	0.98	0.02	***	***	***	***	0.02
RC_6	0.99	0.01	***	***	***	***	0.01
RC_7	1.00	***	***	***	***	***	VL
RC_8	1.00	***	***	***	***	***	VL
RC_9	1.00	***	***	***	***	***	VL
RC_{10}	1.00	***	***	***	***	***	VL
RC_{11}	1.00	***	***	***	***	***	VL
RC_{12}	1.00	***	***	***	***	***	VL
RC_{13}	1.00	***	***	***	***	***	VL
RC_{14}	1.00	***	***	***	***	***	VL



Distribution of DS_m LM3 (31 years) for the Eixample district.

Probability occurrence of the DS, LM2.

	P_{DS_0}	P_{DS_1}	P_{DS_2}	P_{DS_3}	P_{DS_4}	DSm
RCL	0.98	0.02	***	***	***	0.02
RCM	1.00	***	***	***	***	VL
RCH	1.00	***	***	***	***	VL

Probability occurrence of the DS, LM3*.

	P_{DS_0}	P_{DS_1}	P_{DS_2}	P_{DS_3}	P_{DS_4}	DSm
RCL	1.00	***	***	***	***	VL
RCM	0.98	0.02	***	***	***	0.02
RCH	1.00	***	***	***	***	VL

Global indicator of the damage.

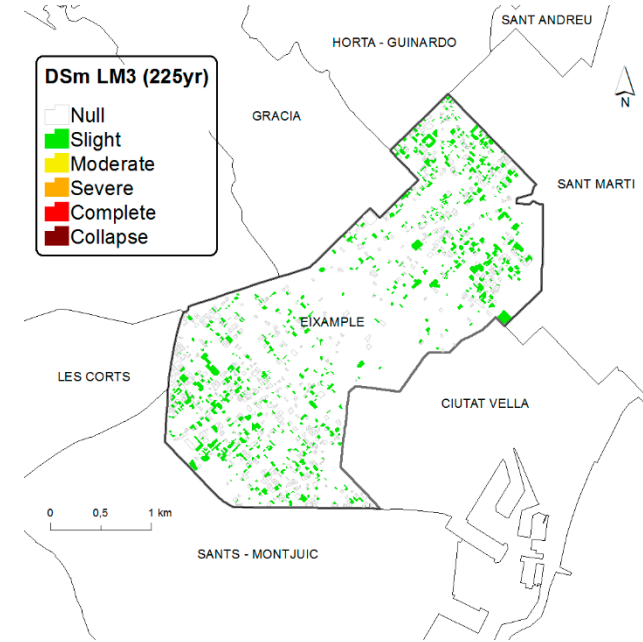
Method	$GDSm$
LM2	VL
LM3*	VL
LM3	VL

(***) means very low probability. (VL) means very low values.

Table S2. Damage Probabilities of the DS according to LM2 and LM3 for a Return Period of 225 Years.

Probability occurrence of the DS, LM3.

	$P_{DS_{0,T}}$	$P_{DS_{1,T}}$	$P_{DS_{2,T}}$	$P_{DS_{3,T}}$	$P_{DS_{4,T}}$	$P_{DS_{5,T}}$	DSm_T
RC_1	0.92	0.08	***	***	***	***	0.08
RC_2	0.92	0.08	***	***	***	***	0.08
RC_3	0.70	0.30	***	***	***	***	0.30
RC_4	0.66	0.34	***	***	***	***	0.34
RC_5	0.62	0.38	***	***	***	***	0.38
RC_6	0.83	0.17	***	***	***	***	0.17
RC_7	0.90	0.10	***	***	***	***	0.10
RC_8	0.96	0.04	***	***	***	***	0.04
RC_9	0.98	0.02	***	***	***	***	0.02
RC_{10}	0.99	0.01	***	***	***	***	0.01
RC_{11}	0.99	0.01	***	***	***	***	0.01
RC_{12}	1.00	***	***	***	***	***	VL
RC_{13}	1.00	***	***	***	***	***	VL
RC_{14}	0.98	0.02	***	***	***	***	0.02



Distribution of DS_m LM3 (225 years) for the Eixample district.

Probability occurrence of the DS, LM2.

	P_{DS_0}	P_{DS_1}	P_{DS_2}	P_{DS_3}	P_{DS_4}	DSm
RCL	0.70	0.26	***	0.05	***	0.40
RCM	0.98	0.02	***	***	***	0.02
RCH	1.00	***	***	***	***	VL

Probability occurrence of the DS, LM3*.

	P_{DS_0}	P_{DS_1}	P_{DS_2}	P_{DS_3}	P_{DS_4}	DSm
RCL	0.85	0.15	***	***	***	0.15
RCM	0.70	0.30	***	***	***	0.30
RCH	0.98	0.03	***	***	***	0.03

Global indicator of the damage.

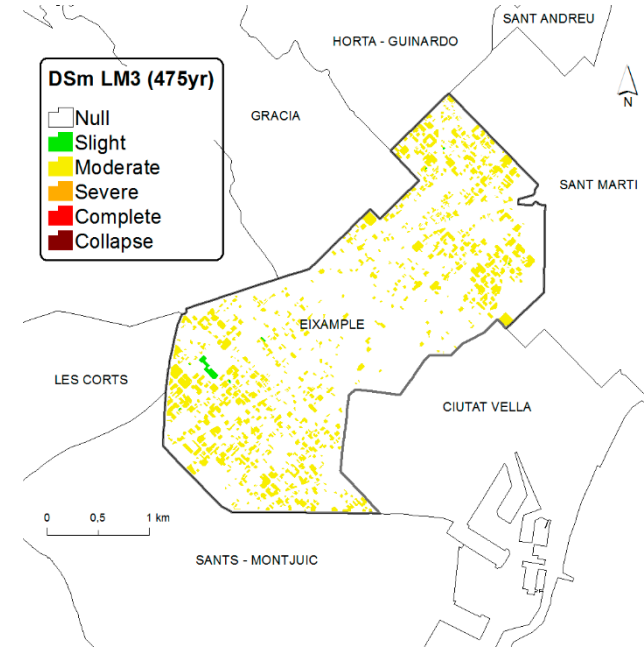
Method	$GDSm$
LM2	0.01
LM3*	0.05
LM3	0.04

(***) means very low probability. (VL) means very low values.

Table S3. Damage Probabilities of the DS according to LM2 and LM3 for a Return Period of 475 Years.

Probability occurrence of the DS, LM3.

	$P_{DS_{0,T}}$	$P_{DS_{1,T}}$	$P_{DS_{2,T}}$	$P_{DS_{3,T}}$	$P_{DS_{4,T}}$	$P_{DS_{5,T}}$	DSm_T
RC_1	0.11	0.87	0.01	***	***	0.01	0.94
RC_2	0.11	0.72	0.11	***	***	0.06	1.24
RC_3	***	0.83	0.07	***	***	0.10	1.47
RC_4	***	0.95	0.03	***	0.01	0.01	1.10
RC_5	***	0.92	0.08	***	***	***	1.08
RC_6	0.02	0.84	0.14	***	***	***	1.12
RC_7	0.09	0.70	0.21	***	***	***	1.12
RC_8	0.11	0.62	0.27	***	***	***	1.16
RC_9	0.25	0.52	0.23	***	***	***	0.98
RC_{10}	0.19	0.63	0.18	***	***	***	0.99
RC_{11}	0.20	0.53	0.26	0.01	***	***	1.08
RC_{12}	0.18	0.48	0.33	0.01	***	***	1.17
RC_{13}	0.17	0.45	0.38	***	***	***	1.21
RC_{14}	0.24	0.41	0.33	0.01	0.01	***	1.14



Distribution of DS_m LM3 (475 years) for the Eixample district.

Probability occurrence of the DS, LM2.

	P_{DS_0}	P_{DS_1}	P_{DS_2}	P_{DS_3}	P_{DS_4}	DSm
RCL	0.01	0.12	0.64	0.22	0.02	2.13
RCM	0.10	0.38	0.38	0.12	0.02	1.58
RCH	0.37	0.44	0.17	0.02	0.01	0.85

Probability occurrence of the DS, LM3*.

	P_{DS_0}	P_{DS_1}	P_{DS_2}	P_{DS_3}	P_{DS_4}	DSm
RCL	0.07	0.81	0.06	***	0.06	1.16
RCM	0.01	0.90	0.08	***	0.01	1.10
RCH	0.18	0.54	0.27	***	***	1.11

Global indicator of the damage.

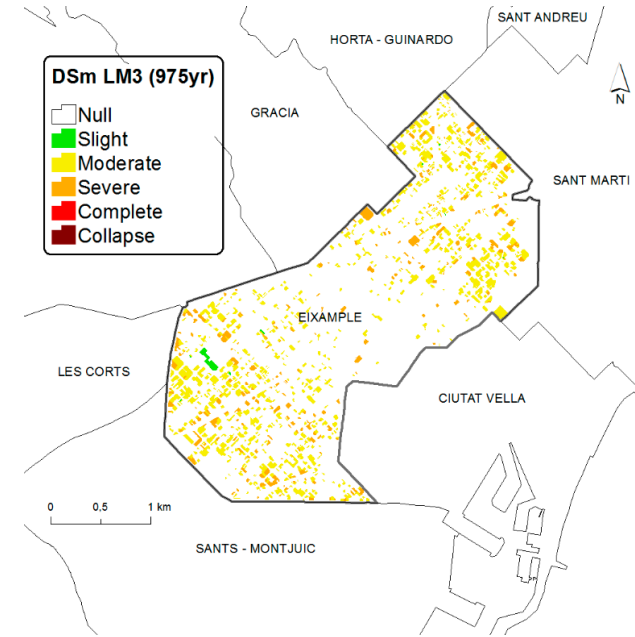
Method	$GDSm$
LM2	0.93
LM3*	1.11
LM3	1.04

(***) means very low probability. (VL) means very low values.

Table S4. Damage Probabilities of the DS according to LM2 and LM3 for a Return Period of 975 Years.

Probability occurrence of the DS, LM3.

	$P_{DS_{0,T}}$	$P_{DS_{1,T}}$	$P_{DS_{2,T}}$	$P_{DS_{3,T}}$	$P_{DS_{4,T}}$	$P_{DS_{5,T}}$	DSm_T
RC_1	0.10	0.83	0.03	***	0.01	0.03	1.08
RC_2	0.01	0.46	0.20	0.01	0.01	0.31	2.48
RC_3	***	0.33	0.37	0.03	0.01	0.26	2.50
RC_4	***	0.60	0.20	0.02	0.01	0.17	1.95
RC_5	***	0.42	0.55	0.03	***	***	1.61
RC_6	***	0.23	0.74	0.03	***	***	1.80
RC_7	***	0.14	0.82	0.04	***	***	1.90
RC_8	0.02	0.20	0.72	0.06	***	***	1.82
RC_9	***	0.20	0.74	0.05	0.01	***	1.87
RC_{10}	0.01	0.15	0.77	0.06	0.01	***	1.91
RC_{11}	***	0.13	0.85	0.02	***	***	1.89
RC_{12}	0.01	0.07	0.80	0.12	***	***	2.03
RC_{13}	***	0.09	0.82	0.08	0.01	***	2.01
RC_{14}	0.01	0.09	0.73	0.16	0.01	***	2.07



Distribution of DS_m LM3 (975 years) for the Eixample district.

Probability occurrence of the DS, LM2.

	P_{DS_0}	P_{DS_1}	P_{DS_2}	P_{DS_3}	P_{DS_4}	DSm
RCL	***	0.01	0.62	0.31	0.05	2.40
RCM	***	0.09	0.48	0.35	0.08	2.41
RCH	0.03	0.23	0.40	0.28	0.06	2.12

Probability occurrence of the DS, LM3*.

	P_{DS_0}	P_{DS_1}	P_{DS_2}	P_{DS_3}	P_{DS_4}	DSm
RCL	0.04	0.54	0.20	0.01	0.21	1.82
RCM	***	0.42	0.50	0.03	0.06	1.73
RCH	0.01	0.13	0.78	0.07	0.01	1.94

Global indicator of the damage.

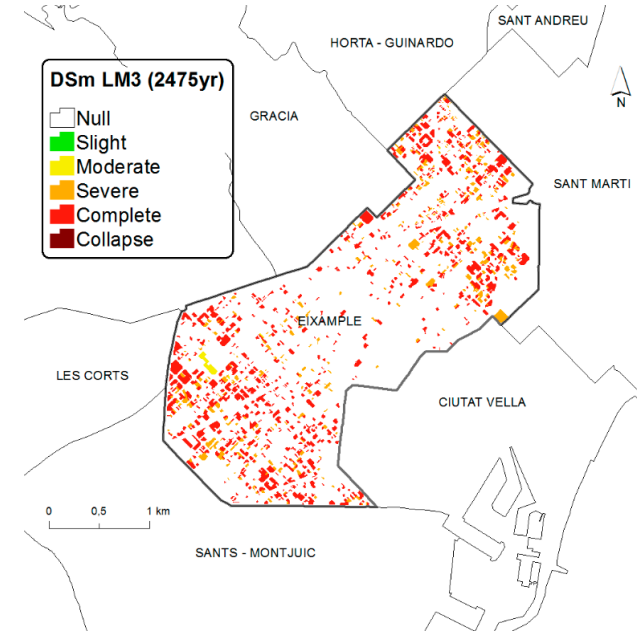
Method	$GDSm$
LM2	2.15
LM3*	1.92
LM3	1.89

(***) means very low probability. (VL) means very low values.

Table S5. Damage Probabilities of the DS according to LM2 and LM3 for a Return Period of 2475 Years.

Probability occurrence of the DS, LM3.

	$P_{DS_0,T}$	$P_{DS_1,T}$	$P_{DS_2,T}$	$P_{DS_3,T}$	$P_{DS_4,T}$	$P_{DS_5,T}$	DSm_T
RC_1	***	0.65	0.11	0.04	0.03	0.17	1.96
RC_2	***	0.09	0.32	0.09	0.04	0.46	3.46
RC_3	***	0.05	0.43	0.10	0.08	0.34	3.23
RC_4	***	0.06	0.31	0.20	0.05	0.38	3.38
RC_5	***	0.02	0.47	0.36	0.05	0.10	2.74
RC_6	***	***	0.29	0.54	0.12	0.05	2.93
RC_7	***	***	0.34	0.49	0.16	0.01	2.84
RC_8	***	***	0.26	0.51	0.21	0.02	2.99
RC_9	***	***	0.30	0.36	0.33	0.01	3.05
RC_{10}	***	***	0.20	0.47	0.29	0.04	3.17
RC_{11}	***	***	0.36	0.37	0.22	0.05	2.96
RC_{12}	***	***	0.09	0.52	0.31	0.08	3.38
RC_{13}	***	***	0.13	0.40	0.41	0.06	3.40
RC_{14}	***	***	0.11	0.49	0.36	0.04	3.33



Distribution of DS_m LM3 (2475 years) for the Eixample district.

Probability occurrence of the DS, LM2.

	P_{DS_0}	P_{DS_1}	P_{DS_2}	P_{DS_3}	P_{DS_4}	DSm
RCL	***	***	0.46	0.42	0.12	2.66
RCM	***	***	0.18	0.54	0.27	3.09
RCH	***	0.01	0.06	0.57	0.37	3.30

Probability occurrence of the DS, LM3.

	P_{DS_0}	P_{DS_1}	P_{DS_2}	P_{DS_3}	P_{DS_4}	DSm
RCL	***	0.26	0.29	0.08	0.37	2.56
RCM	***	0.03	0.36	0.37	0.25	2.84
RCH	***	***	0.22	0.45	0.33	3.10

Global indicator of the damage.

Method	$GDSm$
LM2	3.27
LM3*	3.07
LM3	3.05

(***) means very low probability. (VL) means very low values.