



# Supplementary material: Site effects observations and mapping on the weathered volcanic formations of Mayotte Island

*Document complémentaire : Observations et cartographie des effets de site sur les formations volcaniques altérées de l'île de Mayotte*

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**Supplementary Table S1.** Location and records list of the 84 events used for H/V earthquake spectral

Dates TU	$M_{IV}$	Hypocenter (km)	Latitude	Longitude	Records
13/05/2018 04:28:03	52,200	4070	-12,7808	45,5047	YTMZ, MILA
14/05/2018 04:12:02	52,100	3900	-12,8100	45,5283	YTMZ, MILA
14/05/2018 09:11:03	49,700	3787	-12,7808	45,5342	YTMZ, MILA
14/05/2018 14:41:36	56,800	4000	-12,7568	45,5630	YTMZ, MILA
15/05/2018 15:48:09	60,400	4100	-12,7685	45,5605	YTMZ, MILA
22/05/2018 12:37:00	57,000	4476	-12,7808	45,5448	YTMZ, MILA
25/05/2018 05:44:00	52,700	3687	-12,8158	45,5467	YTMZ, MILA
25/05/2018 06:35:00	55,400	4000	-12,8027	45,5297	YTMZ, MILA
25/05/2018 09:32:00	54,500	4000	-12,7662	45,5627	YTMZ, MILA
26/05/2018 00:33:00	54,700	000	-12,7678	45,6158	YTMZ, MILA
27/05/2018 14:23:00	50,700	4170	-12,8237	45,5555	YTMZ, MILA
27/05/2018 14:52:10	49,000	4000	-12,7760	45,6012	YTMZ, MILA
28/05/2018 13:55:00	52,200	4000	-12,8385	45,5722	YTMZ, MILA
28/05/2018 17:09:00	53,400	4288	-12,7808	45,5758	YTMZ, MILA
28/05/2018 22:12:00	53,000	900	-12,7662	45,6253	YTMZ, MILA
29/05/2018 15:53:40	50,000	2978	-12,8092	45,6073	YTMZ, MILA
30/05/2018 05:53:00	57,400	4000	-12,8173	45,5977	YTMZ, MILA
30/05/2018 16:21:50	51,500	3900	-12,8107	45,6195	YTMZ, MILA
30/05/2018 19:11:00	51,100	3700	-12,8118	45,6132	YTMZ, MILA
31/05/2018 01:10:00	52,800	3700	-12,8250	45,6277	YTMZ, MILA
01/06/2018 03:24:00	51,500	900	-12,8132	45,6102	YTMZ, MILA
01/06/2018 03:29:00	48,600	3600	-12,8078	45,5990	YTMZ, MILA
01/06/2018 03:33:40	51,200	2900	-12,7808	45,6472	YTMZ, MILA
01/06/2018 05:25:00	48,400	2900	-12,8555	45,5775	YTMZ, MILA
01/06/2018 05:44:00	52,000	3900	-12,8083	45,6157	YTMZ, MILA
01/06/2018 07:14:00	52,700	3193	-12,8195	45,5937	YTMZ, MILA
01/06/2018 08:28:00	50,500	3277	-12,8307	45,6163	YTMZ, MILA
02/06/2018 06:16:00	50,000	3600	-12,8315	45,5842	YTMZ, MILA
02/06/2018 07:43:00	52,500	4000	-12,8130	45,6200	YTMZ, MILA
02/06/2018 17:28:30	49,200	3600	-12,8185	45,6185	YTMZ, MILA
02/06/2018 17:39:00	51,800	2900	-12,7808	45,6313	YTMZ, MILA
03/06/2018 01:57:00	49,300	3086	-12,8182	45,6007	YTMZ, MILA
03/06/2018 02:36:00	50,600	3800	-12,8088	45,6163	YTMZ, MILA
03/06/2018 03:26:00	50,500	3700	-12,8210	45,6097	YTMZ, MILA
03/06/2018 06:13:20	54,800	4000	-12,8182	45,6117	YTMZ, MILA
04/06/2018 09:23:00	48,100	3800	-12,8367	45,6180	YTMZ, MILA
04/06/2018 18:52:00	53,200	4000	-12,7775	45,5948	YTMZ, MILA
04/06/2018 19:53:00	55,600	3700	-12,8050	45,6132	YTMZ, MILA

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**Supplementary Table S1.** (continued)

Dates TU	M <sub>Iv</sub>	Hypocenter (km)	Latitude	Longitude	Records
04/06/2018 21:20:00	55,700	3800	-12,7933	45,6365	YTMZ, MILA
05/06/2018 23:00:00	52,900	2700	-12,8490	45,6352	YTMZ, MILA
06/06/2018 09:33:00	51,400	323	-12,8413	45,6363	YTMZ, MILA
07/06/2018 13:07:00	49,800	2998	-12,8577	45,6135	YTMZ, MILA
08/06/2018 00:56:00	48,600	000	-12,8173	45,6232	YTMZ, MILA
08/06/2018 03:31:00	48,200	3600	-12,8303	45,5622	YTMZ, MILA
08/06/2018 12:03:00	49,700	3600	-12,8117	45,5628	YTMZ, MILA
09/06/2018 22:36:00	50,900	2298	-12,9020	45,6558	YTMZ, MILA
12/06/2018 17:17:00	55,800	4000	-12,8888	45,6375	YTMZ, MILA
18/06/2018 13:43:00	52,100	2000	-12,8830	45,7238	YTMZ, MILA
19/06/2018 21:36:00	47,500	2000	-12,8428	45,7028	YTMZ, MILA
22/06/2018 12:50:00	48,100	2000	-12,7503	45,7673	YTMZ, MILA
23/06/2018 19:45:30	53,400	2000	-12,8900	45,6707	YTMZ, MILA
25/06/2018 17:42:00	55,100	800	-12,8488	45,7088	YTMZ, MILA
27/06/2018 06:41:00	55,700	000	-12,8532	45,6530	YTMZ, MILA
25/05/2019 13:08:06	43,700	3200	-12,7480	45,3963	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
28/05/2019 10:53:20	45,300	3233	-12,8122	45,4205	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
06/06/2019 14:53:31	43,800	2533	-12,7462	45,4207	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
14/06/2019 02:05:15	46,300	3200	-12,8128	45,4045	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
15/06/2019 03:45:08	50,500	3900	-12,8208	45,5338	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
16/06/2019 07:31:39	47,100	2589	-12,8143	45,4000	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
30/08/2019 00:32:47	49,700	3800	-12,8135	45,5498	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
20/10/2019 01:42:05	42,700	3346	-12,7880	45,5962	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
23/10/2019 22:44:29	44,800	2700	-12,7975	45,4537	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
07/11/2019 17:29:58	44,300	3000	-12,7863	45,5880	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
15/12/2019 19:13:34	39,600	2600	-12,7723	45,4267	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
16/12/2019 04:13:26	35,800	3600	-12,8405	45,5517	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
16/12/2019 12:09:23	30,700	4000	-12,7990	45,4095	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
17/12/2019 17:45:18		4000	-12,7890	45,3122	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
21/12/2019 03:06:12	36,800	3300	-12,7818	45,4060	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
24/12/2019 23:27:25	37,900	3100	-12,7923	45,6215	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
26/12/2019 08:22:44	29,000	2949	-12,8617	45,3810	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
02/01/2020 16:00:33	53,100	3642	-12,8022	45,5577	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
04/01/2020 09:47:49	34,500	3187	-12,7903	45,4343	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
05/01/2020 06:06:30	36,600	3542	-12,1962	45,8258	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
06/01/2020 00:05:42	36,000	3753	-12,7975	45,5217	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
07/01/2020 08:33:59	35,700	3300	-12,8428	45,5382	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
08/01/2020 05:04:58	38,600	2800	-12,8208	45,4197	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
09/01/2020 11:47:27	34,100	3418	-12,8072	45,6012	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
23/01/2020 09:56:40	34,600	2432	-12,8487	45,4072	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2

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**Supplementary Table S1.** (continued)

Dates TU	M <sub>Iv</sub>	Hypocenter (km)	Latitude	Longitude	Records
25/01/2020 00:18:51	33,400	3529	-12,8523	45,5878	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
26/01/2020 05:43:37	37,500	3116	-12,8312	45,3963	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
26/01/2020 19:58:33	31,800	3552	-12,7825	45,3685	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
31/01/2020 22:24:53	31,200	2965	-12,8517	45,3897	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
01/02/2020 04:52:49	35,100	3500	-12,7975	45,3992	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2
09/02/2020 02:58:00	33,400	3205	-12,8168	45,3488	YTMZ, MCHI, MILA, MTSB, KNKL, PMZI, R1EE2

**Supplementary Table S2.** List of BRGM public reports used for the compilation of the H/V and MASW data on Mayotte Island

Site	Year	No. report	Référence
Mamoudzou city center	2002	RP-51839-FR	Sabourault <i>et al.</i> , 2002
Chirongui High School	2005	RP-53832-FR	Roullé <i>et al.</i> , 2005a
Mamoudzou Hospital	2005	RP-53975-FR	Roullé <i>et al.</i> , 2005b
Dzaoudzi-Pamandzi Airport	2006	RP-55151-FR	Auclair <i>et al.</i> , 2006
Dembeni IFM (Teacher Training Institute)	2006	RP-54960-FR	Rey <i>et al.</i> , 2006d
Dembéni High School	2006	RP-54467-FR	Rey <i>et al.</i> , 2006c
Kaouéni High School	2006	RP-54470-FR	Rey <i>et al.</i> , 2006b
Pamandzi High School	2006	RP-54471-FR	Rey <i>et al.</i> , 2006a
Dembéni High School, Tsararano site	2008	RP-56431-FR	Vermeersch <i>et al.</i> , 2008
Labattoir College, Bouéni College and Chirongui High School	2009	RP-57715-FR	Oppermann <i>et al.</i> , 2009
Majicavo-Lamir Detention Center	2010	RP-58025-FR	Rey <i>et al.</i> , 2010
West Bambo College	2012	RP-61593-FR	Rey and Cochery, 2012
Eight Educational Institutions	2012	RP-61170-FR	Rey <i>et al.</i> , 2012
Three extension sites for Educational Institutions	2013	RP-62972-FR	Rey <i>et al.</i> , 2013a
Extension of the Mayotte prefecture	2013	RP-62965-FR	Rey <i>et al.</i> , 2013b
Mamoudzou Hospital Center	2013	RP-63175-FR	Rey <i>et al.</i> , 2013c
Kwalé High School	2014	RP-63836-FR	Cochery <i>et al.</i> , 2014
Ten building/extension sites for Educational Institutions	2019	RP-68294-FR	Roullé <i>et al.</i> , 2019
Methodology for revising the local seismic hazard and liquefaction on the pilote sites of Dembeni, Longoni and Combani	2021	RP-71365-FR	Roullé <i>et al.</i> , 2022

All those reports are available on website <http://infoterre.brgm.fr/>.