

# *ECUADOR – Earthquake $M_w$ 7.8*

## *16 April 2016*

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Population Exposure Analysis

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**17 April 2016**

**Geneva, Switzerland**

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# 1 – Overview



An earthquake of 7.8 Magnitude struck Ecuador the 16 April 2016 23:58 UTC (18:58 local time) with an epicenter located in the Parroquia of Daule, Cantone of Musine, Esmeralda Province, in Ecuador

Population exposure estimates are based on Earthquake's related Light (IV) to Severe (VIII) shake areas deduced from USGS peak acceleration data.



**15,445,999**

Total population of Ecuador



**12,952,545**

Total population living within  
Light to Strong Shake Zones

**Table 1** shows Population exposure estimation based on Earthquake's related Light to Severe shake areas deduced from USGS peak acceleration data, at province level (Administrative Unit 1), desegregated data by administrative units 2 and 3 (cantones / parroquias ) can be accessible [here](#).

**Table 1. Population Exposure Estimation at Province Level (Admin 1)**

Provincias / cantones / parroquias	(IV) Light	(V) Moderate	(VI) Strong	(VII) Very Strong	(VIII) Severe	Pop Affected (WorldPOP)
Azuay	1,859					1,859
Bolivar	127,559	56,764	7,759			192,083
Canar	144,622					144,622
Carchi	171,324	1,398				172,722
Chimborazo	486,351					486,351
Cotopaxi	203,505	175,796	50,114			429,414
Esmeraldas		10,976	224,276	346,505	84,500	666,257
Guayas	974,391	2,465,553	282,331	129,340		3,851,615
Imbabura	348,224	68,819	4,532	3,691		425,265
Los Rios	9,178	164,777	378,852	263,052		815,860
Manabi		38,424	162,644	994,761	276,976	1,472,805
Morona Santiago	95,654					95,654
Napo	108,902					108,902
Orellana	42,258					42,258
Pastaza	84,067					84,067

<b>Pichincha</b>	<b>2,349,660</b>	<b>225,365</b>	<b>25,733</b>	<b>27,819</b>		<b>2,628,576</b>
<b>Santa Elena</b>	<b>286,966</b>	<b>45,442</b>				<b>332,408</b>
<b>Santo Domingo de los Tsaichilas</b>		<b>14,475</b>	<b>201,150</b>	<b>211,613</b>		<b>427,239</b>
<b>Sucumbios</b>	<b>34,759</b>					<b>34,759</b>
<b>Tungurahua</b>	<b>538,586</b>	<b>1,242</b>				<b>539,828</b>
<b>Pop Affected (WorldPOP)</b>	<b>6,007,865</b>	<b>3,269,032</b>	<b>1,337,391</b>	<b>1,976,781</b>	<b>361,475</b>	<b>12,952,545</b>

*Population exposure, summarized at Provincia, Canton and Parroquia level, has been calculated using 100 m resolution WorldPop dataset. This is a preliminary analysis & has not yet been validated in the field.*

