

Earthquake Risk Transfer for Poland

Overview

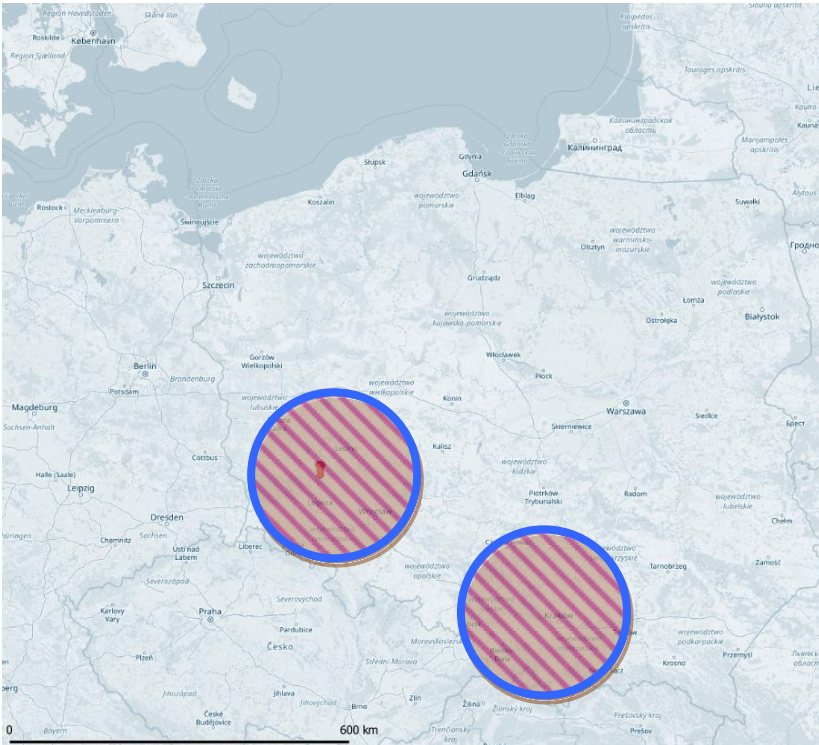


Figure 43. Hashed circles represent Poland undercover regions in late 2019.

Due to low-level seismicity in Poland, even one of the latest 5 years-long studies that brought over one hundred natural seismic events wasn't able to receive more than one greater magnitude 3.8 earthquake. Therefore generating a local profile for a region without having historical patterns that caused a noticeable earthquake is more complicated.

Since July 2018 that Earling started monitoring Poland ground shaking patterns, we have been able to issue earthquake preparedness alert for at least 3 events greater magnitude 4.



One of the latest reports which rocked the specified region, hours after preparedness alert issued is mentioned as follows.

If Poland had experienced a 50-year earthquake event in 2019, the affected GDP would have been about \$20 billion, alongside \$1.4 billion losses. In 2080, the affected GDP from the same type of event would range from about \$15 billion to about \$50 billion, due to population growth, urbanization, and the increase in exposed assets (Poland Affected Provinces by Flood and Earthquake, 2015).

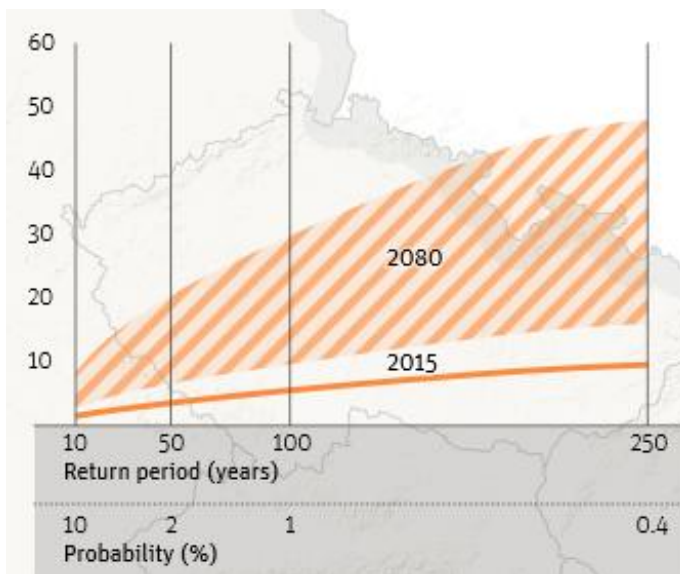


Figure 44. Exceedance probability curve, 2015 AND 2080. Source: World Bank



EPA Effect on Insurances Penetration Rates

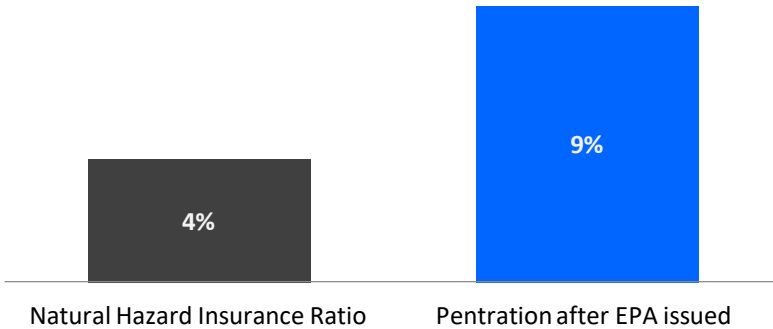


Figure 45. the EPA effect in high risk regions alert issued (COMITÉ EUROPÉEN DES ASSURANCES, 2005).

EPA Effect on Estimated Maximum Loss

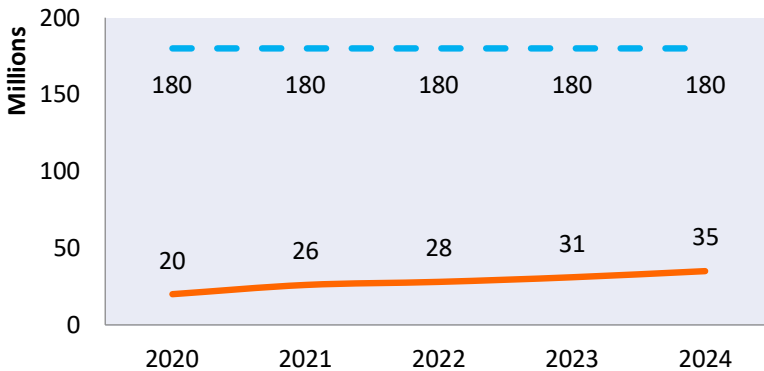


Figure 46. Estimated effects of public EPA, on Poland, short-term earthquake insured loss, without preparation operation that needs to be applied through Earling First Notice. Poland's earthquake average loss is about \$180 million (Poland Disaster & Risk Profile, 2014). Public EPAs can extend the earthquake insurance penetration rates in the high-risk timeframe. As a result, it increases insured losses up to the average annual loss.



EPA Effect on Probable Maximum Loss

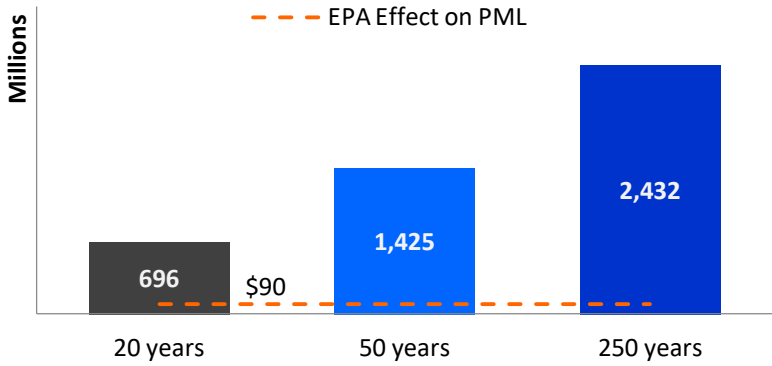


Figure 47. Probable Maximum Loss - Mean return period in years. Poland earthquake Average Annual Loss is \$188.81 million (Poland Disaster & Risk Profile, 2014).



Poland Documented EPAs



Figure 48. 8 shallow earthquakes > M3.8 hit South-Western Poland. Besides, during the time 5 other earthquakes hit Southern Poland. Earling has been issued precise EPAs for the regions.

EPA issued date	Earthquake	Mag	Status	Average Annual Loss AAL (million)
01:31 Sep 15, 2019 ²¹	04:55 Sep 15, 2019	3.9	Hit	
01:31 Sep 15, 2019	17:58 Sep 15, 2019	3.4	Hit	
Jan 24, 2019 ²²	Jan 29, 2019 ²³	4.8	Hit	\$188
Jan 17, 2019 ²⁴	Jan 18, 2019 ²⁵	3.8	Hit	
Aug 1, 2018 ²⁶	03:47 Aug 1, 2018 ²⁷	4.2	Hit	

Table 6. EPAs that issued for undercover regions in Iran in 2018.

²¹ <https://twitter.com/FarzadAzima/status/1173077979167109120>

²² <https://www.instagram.com/p/BtAmLKnAhcD/>

²³ <https://www.emsc-csem.org/Earthquake/earthquake.php?id=741578>

²⁴ <https://www.instagram.com/p/Bsw5HTOHOn6/>

²⁵ <http://geofon.gfz-potsdam.de/eqinfo/event.php?from=rss&id=gfz2019bfky>

²⁶ <https://www.instagram.com/p/Bl8eXfjFNpD/>

²⁷ <http://geofon.gfz-potsdam.de/eqinfo/event.php?from=rss&id=gfz2018oxqe>

