

CEDIM Forensic Disaster Analysis Group (FDA)

Paktika Earthquake Afghanistan

Information as of 5th July 2022

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SUMMARY

Official Disaster Name	Date / local date	UTC / local time	Local
2022 Paktika/Khost Earthquake	21-062022 22-06-2022	20:54 UTC / 01:24	+4:30

Preferred Hazard Information*

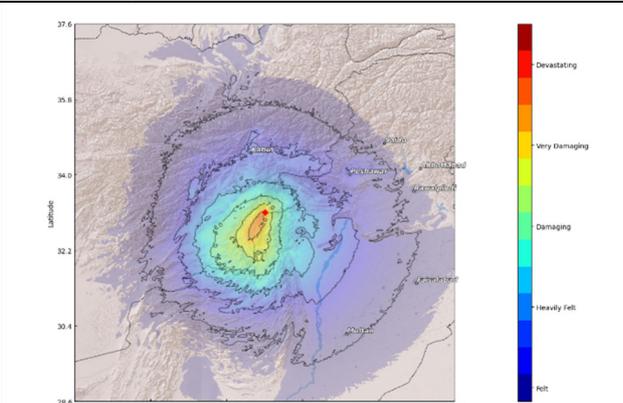
EQ_Latitude	EQ_Longitude	Magnitude	Hyp. Depth	Fault Mech.	Source	Spectra
33.09 / 32.98	65.51 / 69.46	5.9mww	11.5 km	Strike-Slip	USGS	Avail.

*Based on interferometry and damage observations, the USGS epicenter was moved by about 20 km to the South-West. Descriptions on the focal mechanism differ by source (including strike-slip and thrust).

Location Information:

Country	ISO	Dev. Region	Most Impact	Building PF	HDI (2019)	GDP (2021)	Pop. (2021)
Afghanistan	AFG	Paktika, Khost	Giyan, Barmal, Nika, Spera, Shamal	Low	-	-	430,000
Pakistan	PAK	Tribal Areas	Miram Shah	Low	-	-	150,000

Impact Information

EMS-98	MMI	PGA	ShakeMap
VIII	VIII	1.15g	
Hazard Description (Intensity & Ground Motion) Highest intensity and ground motion was observed about 20 km South from the calculated epicenter. Intensities reached VIII on the MMI scale – mostly poorly built structures collapsed, while damage to better engineered buildings was limited. The damage seen corresponds to VIII and for some locations up to IX depending on the built infrastructure			

Preferred Social Impact Information:

Type	Median	Accepted Range	Description	Source
Deaths	1039 (AFG) 12 (PAK)	May rise		News, WHO
Injuries	3669 (AFG) 25 (PAK)	May rise		News
Homeless/Displaced	25000 (AFG)	May rise	Estimated 500k+ affected	News

Loss of Life was primarily associated to the collapse of poorly built residential buildings. The occurrence at night time further increased the likelihood of death and injury.

Preferred Economic Impact

Type	Value	Description	Source
Destroyed Buildings	>1900	Collapsed buildings	Ground Reports & News
Damaged Buildings	>2600	Including minor, moderate and severe structural damage	Ground Reports & News
Total Loss	\$50-200mn.	Total loss including infrastructure, residential, public and business	CATDAT

Similar Events

Date	Lat	Lon.	Mag.	Depth	Deaths
1998-02-04	37.07	70.04	5.9 Mw	30 km	2323-4000
1998-05-30	37.14	70.09	6.5	35 km	4500-4700
2002-03-25	36.05	69.21	6.1	10	~1200

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