A web based rapid information on Afghanistan Earthquake (26 October, 2010 Hindu Kush Region)

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Summary

A 7.5 Moment Magnitude (Mw) earthquake stroked at Hindu Kush region of Afghanistan on October 26 at 9.09 am (UTC). The earthquake generated due to reverse fault mechanism at source level and epicenter was at 36.39 North Latitude and 70.86 E Longitude. The faulting was approximately 210 km below the ground level at Hindu Kush Range in northeastern Afghanistan. At the latitude of the earthquake, the India subcontinent moves northward and collides with Eurasia at a velocity of about 37 mm/yr. Strong ground shaking was felt in Afghanistan, northern part of Pakistan, southern part of Tajikistan and north-easterner part of India.

The total death toll stood at 336 with at least 253 people killed in Pakistan and at least 83 more in Afghanistan, according to official reports from the two countries. More than 2,000 people have been injured (source: until 27/10/2015 08:41 UTCearthquake-report.com).

Date: 15/10/26 09:09:32.24
Location: Hindu Kush Region, Afghanistan
Epicenter: 36.39 70.86
M_W 7.5

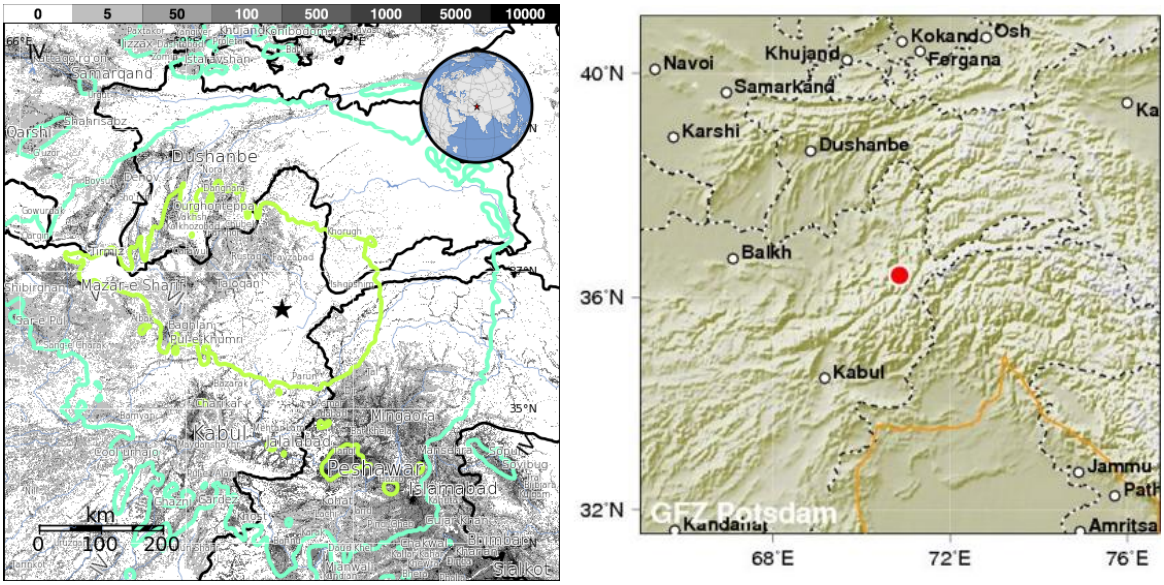
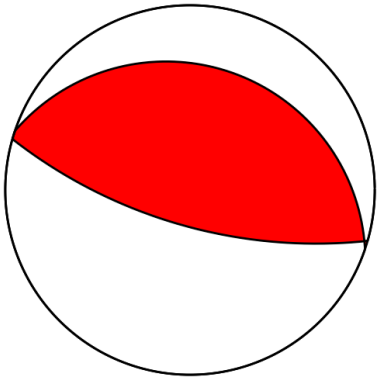


Figure 1: Area of Exposure of Hindukush Earthquake 2015
(Scale in km, source: USGS)

Moment Tensor Solution



Red = T
White= P

Figure 2: Moment Tensor Solution (106, 68, 89) using MoPad program

Based on GFZ (German Research Center for Geosciences) information, following moment tensor solution has been found:

```
GFZ MOMENT TENSOR SOLUTION
Depth 201        No. of sta: 322
Moment Tensor;   Scale 10**20 Nm
  Mrr= 1.35       Mtt=-1.24
  Mpp=-0.11       Mrt= 1.36
  Mrp=-0.38       Mtp= 0.37
Principal axes:
  T  Val=  1.95  Plg=67  Azm= 15
  N        0.00       0      106
  P       -1.95      23      196
Best Double Couple:Mo=2.0*10**20
 NP1:Strike=106 Dip=68 Slip=  89
 NP2:       287     22        91 (source: GFZ Potsdam)
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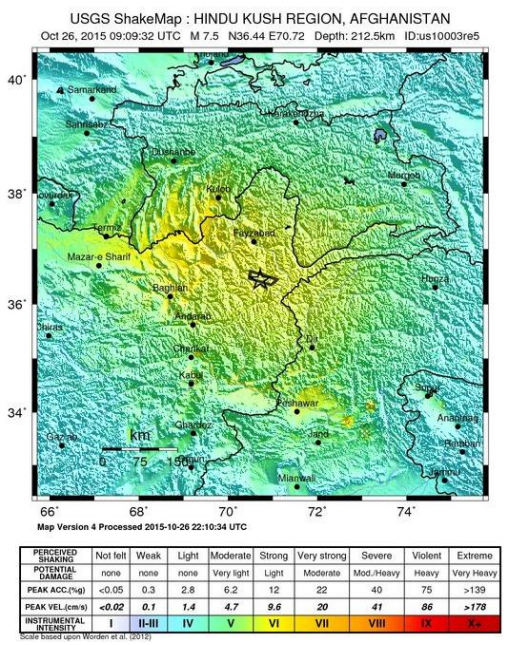


Figure 3: ShakeMap for Intensity Distribution (Source: USGS)

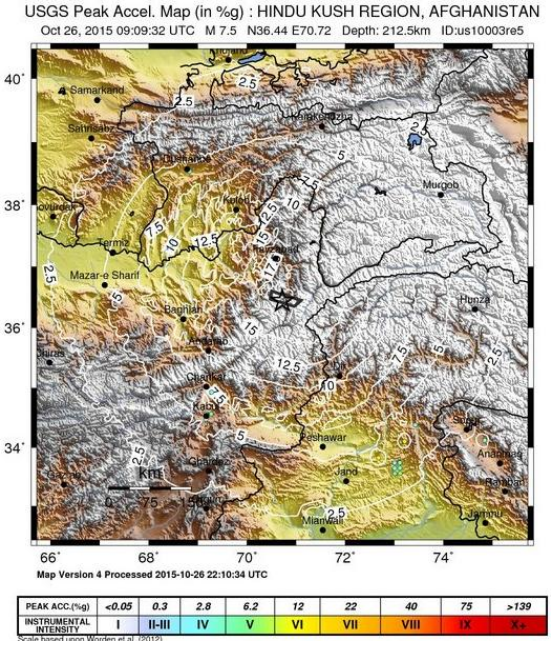
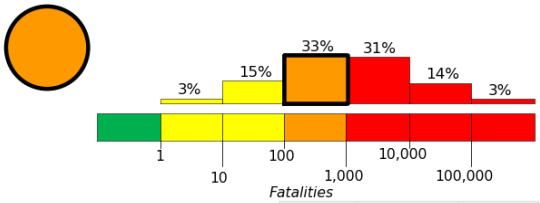
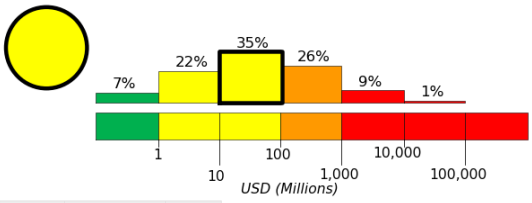


Figure 4: ShakeMap for Peak Ground Acceleration (Source: USGS)



MMI	Shaking	Pop.
I	Not Felt	--*
II-III	Weak	--*
IV	Light	34,319k*
V	Moderate	55,919k*
VI	Strong	18,881k
VII	Very Strong	42k
VIII	Severe	0k
IX	Violent	0k
X	Extreme	0k

Casualities



MMI	City	Pop.
VII	Taloqan	64k
VI	Dasht-e Qal`ah	<1k
VI	Yangi Qal`ah	7k
VI	Darqad	<1k
VI	Chubek	20k
VI	Dasht-e Archi	8k
VI	Peshawar	1,219k
V	Kabul	3,044k
V	Srinagar	976k
V	Islamabad	602k
V	Dushanbe	543k

Economical Loss

Figure 5: Estimated loss scenario till 27th October, 2015

Source of Information:

1. www.channelnewsasia.com
2. www.telegraph.co.uk
3. earthquake-report.com
4. www.ibtimes.com
5. GFZ Potsdam
6. www.usgs.gov

Induced Landslide after the Earthquake

Mud houses are affected tremendously

Partial Out of Plane failure of Brick Masonry Wall

Building Collapsed

Healthcare treatment of affected habitants

Figure 6: Post Earthquake Scenario

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