



A house destroyed in Rubotnol Village, Childara Jamoat, Tavildara District

**Preliminary Disaster Assessment Report
5.7 Mw Scale Earthquake
Rasht Valley, Direct Rule Districts, Tajikistan**

Assessment Dates: 16 and 17 May 2012

Report Prepared By: REACT – Dushanbe

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- Locations Visited:**
1. Nurabad District, Childara jamoat, Langar village
 2. Tavildara District, Childara, jamoat, Safedkhok village
 3. Tavildara District, Childara jamoat, Rubotnol village
 4. Tavildara District, Tavildara town
 5. Tavildara District, Childara jamoat, Khujai Khumoz village
 6. Rasht District, Kalai-Surkh jamoat, Langarak, Kadara and Kuloba villages

Assessment Methodology: Interviews with local authorities and residents, direct observation, photo and video documentation.

DISTRICTS AFFECTED BY THE EARTHQUAKE ON 13 MAY 2012



Situation Overview

A 5.7 Mw (Movement Magnitude) (<http://www.emsc-csem.org/Earthquake/earthquake.php?id=266286>)

earthquake occurred on the night of May 13th, 2012 in the Rasht Valley, central Tajikistan. The earthquake affected the districts of

Nurabad, Rasht and Tavildara, killing 1 and directly affecting an estimated 2,531 people - residents of the 113 destroyed and 231 damaged residential buildings. Housing damage information is from the Committee of Emergency Situations (CoES) and is subject to change as further assessments are in progress. The earthquake affected locations are located in a mountainous area of Tajikistan.

President Emomali Rahmon visited Rasht and Tavildara districts on May 16th to observe the impact of the earthquake and deliver instructions on response operations. Assessment and response operations coordination is ongoing by the locally established Commission for Emergency Situations on “Liquidating the Consequences of the Earthquake”. Based on the latest information available, this Commission completed the assessment for Tavildara district on May 21st, and proceeded to assess Nurobod district.

Table 1 Affected Locations		
District	Jamoat	Village
Rasht	Hijborak	Khazorchashma, Gulhan
	Kalai Surkh	Langarak, Host, Kuloba
	Askalon	Askalon, Sari Shukhon
Nurobod	Khumdon	Humdon, Holibek, Tukhji, Sarikosh, Pustin, Duzon, Yofuch, Shahrizabz, Obi Lurd, Gardanga, Kh. Sherozi, Tirgar, Hojai Shanbe, Marghuzori Sir.
	Samsoliq	Langar, Pandovchi, Tag, Kalinazar, Ghulomon
	Mujiharv	
	Yakhak-Yust	Roghun, Yakhchdara
Tavildara	Tavildara	Tavildara town
	Childara	Khamdara, Chashmai Kabud, Girdob, Rubotnol, Gharibon.

Damage to Housing

Table 2 at right provides the preliminary damage to housing as reported by the local Commission on Emergency Situations established in for the earthquake response (data as of May 18th)

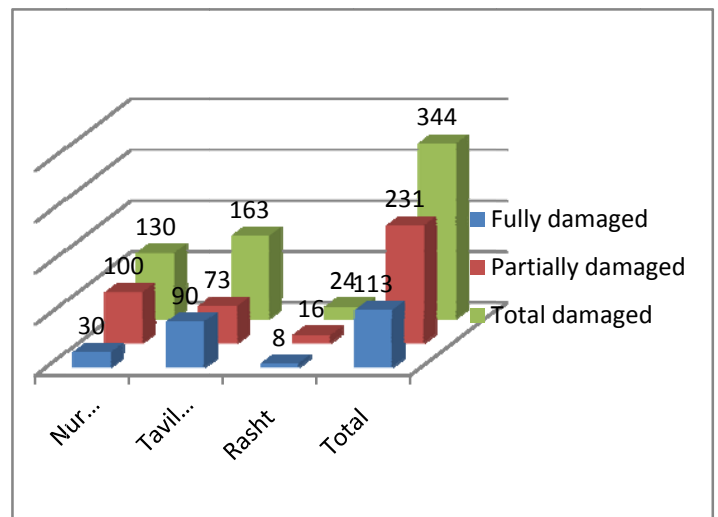
The number of destroyed and damaged houses in Rasht is less than in Nurabad and Tavildara. The greatest damage was in the village of Langarak in Rasht, where 8 houses were fully destroyed, caused by a combination of an earthquake and a landslide. Note that at the time of the earthquake the affected locations have been experiencing frequent rainfall and soils are likely saturated.

The style of building construction varies from the district to district and reflects the construction materials available locally. A majority of destroyed houses were adobe or stone masonry construction built in the last 10 to 15 years.

In Rasht and Nurobod, clay is the predominant construction material. Houses are constructed in a traditional way, laying clay blocks on top of each other. This method allows construction of a house in a couple of months if the weather is favorable.

In Tavildara, houses are constructed from stone. This type of construction requires more time and more professional inputs. According to the REACT team observations, many of the damaged or destroyed houses

Table 2 Housing Damage By District



were not build ways which would reduce the impact of earthquakes.

As indicated in Figure 1, the walls bearing the weight of the roof and ceilings remained undamaged, whereas the side walls have collapsed. Most of the affected people escaped via the opening formed as the result of collapsed walls. (Doors were often blocked.) Despite the heavy damage to majority of houses the absence of human death is the result of the fact that in majority of houses the roofs did not collapse.

The other issue in Nurobod and Tavildara is the absence of market where construction materials can be purchased. Interviews revealed that the main construction materials such as asbestos, beams, cement and galvanized sheets are ordered from the Dushanbe or Rasht markets. The high prices of these construction materials are associated mainly with the high price of transportation.

The assessment team visited four houses, two in Kadara village and two in Langarak village (Kalai Surkh jamoat, Rasht district) constructed after an earthquake in 2007 in using seismic reinforcement methods. One of the houses in Langarak village is right next to houses damaged as the result of the landslide. All four houses were in good condition. This indicates that the reinforcement techniques used in the four houses may have prevented seismic damage when compared to houses constructed in the traditional way. The Team suggests that more in depth analyses of the houses build in 2007 should be carried out to evaluate the seismic resistance of the model used.



Figure 1; Partial collapsed house in Rubotnol village

Water and Sanitation

In villages affected by the earthquake the water system was not damaged seriously and access to water was not hampered except in the village of Langarak where the water supply system was damaged by the landslide. The main sources of water are mountain springs, delivered to only in few villages via pipes. For the rest of the villages, water is delivered via open channels. In some villages people consume water from the river which is delivered on donkeys or by hand. The water used by the population in these situations cannot be considered as safe drinking water.

Health

Tavildara Central District Hospital (CDH), the medical points in Langar village (Nurabad) and local rural hospital (SUB) in Childara village (Tavildara) remain open and operational. The Tavildara CDH experienced moderate damage and is undergoing evaluation by the Ministry of Health to determine if it is safe for continued occupancy. The Childara SUB was also damaged and needs further assessment.

Local health authorities reported approximately 40 patients were treated for minor trauma after the earthquake. Three seriously injured patients remain hospitalized.

Local health officials expressed concern about the potential effects of the earthquake has had on creating stress on the population, and have observed individual cases of acute stress reaction in various forms. Concerns about the stress caused by the earthquake were also expressed by individuals interviewed in several communities. Local health providers noted their limited capacities in addressing psycho-social issues.

Education

The school year officially ends On May 5th, with exams until mid June. The school in Langar village still being occupied by students despite significant damage. The Team recommends that the school should be evacuated. School tents (villages Khujai Kuloz, Rubotnol, Safed Khok in Tavildara district and Langar village in Nurabad district.) need to be distributed. Structural assessment of other schools is required.

Food Security

The assessment revealed that the main sources of food in the affected areas are kitchen gardens, livestock, poultry and gardening. As for income sources, people mainly rely on producing and selling potatoes, meat, fruits and honey. The Team concluded that no significant damage has been caused to these sources of food. The Government distributed food as a form of compensation and economic support of population (see table below). An exception is Langarak village (Rasht), where the houses were destroyed by a landslide and people lost their livestock and food commodities. Additional assessment of food security needs and response options may be needed.

Team Recommendations**Immediate Needs:**

- Evacuation of the school in Langar
- Tents for housing in Langar village, Nurabad district
- School tents for Khujai Kuloz, Rubotnol, Safed Khok in Tavildara district and Langar in Nurabad district.
- A structural vulnerability assessment of public infrastructure (schools, hospitals, medical points, etc.).
- Updated assessment of recovery needs

Longer Term Assistance:

- Construction materials (cement, iron bars, Wood, etc) and trainings on seismic resistant construction are a basic need. The construction season will last for another 2-3 months before the colder weather sets in. If construction materials are not provided in the quantities needed the population will reconstruct their houses in the same seismically vulnerable manner as before.
- A rapid mobilisation of training for construction specialists (masons, carpenters) and sensitizing the affected community on seismic safe construction.
- Additional temporary shelter (tents), household items and food to offset the loss of income as earthquake survivors will be predominantly occupied with reconstructing houses before the onset of winter.
- As some families are staying in tents and with other families, the monitoring of health situation should be continued. The weather in the disaster area is cold at nights and humidity tends to be high due to frequent rains. These conditions may affect the general health with the most vulnerable being children and the elderly.
- Provide support for community level initiatives to address the psychosocial effects of the disaster through local activities and support to local health care providers in assessment and the provision of interventions where needed.

Response provided as of 17 May 2012:

Type of assistance	Districts			Total
	Tavildara	Rasht	Nurobod	
<i>President's Reserve Funds</i>				
5,000 Somoni (1,040 USD) for each family with house destroyed		8		40,000 SMN (8,320 USD)
3,000 Somoni (625 USD) for each family with house damaged		16		48,000 SMN (10,000 USD)
1,000 Somoni (210 USD) for each affected family, not qualifying for the above categories	150			150,000 SMN (31,200 USD)
<i>Government of Tajikistan</i>				
Wheat flour (MT)	15	3		18
Sugar (kg)	3,750	750		4,500
Vegetable oil (l)	1,500	300		1,800
Rice (kg)	3,750	750		4,500
Macaroni (kg)	1,500	300		1,800
Tents	140	30		170
<i>Red Crescent Society of Tajikistan</i>				
Non Food Items family sets (Kitchen sets, Hygiene sets, blankets, mattresses)	65	8	20	93
Psycho- social support to affected population in shock				
<i>World Health Organization through the Ministry of Health</i>				
Emergency Trauma Kits	6	4		10

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