

VILLAGE DAMAGE SUMMARY: KEKHVI TO TSKHINVALI, SOUTH OSSETIA, GEORGIA

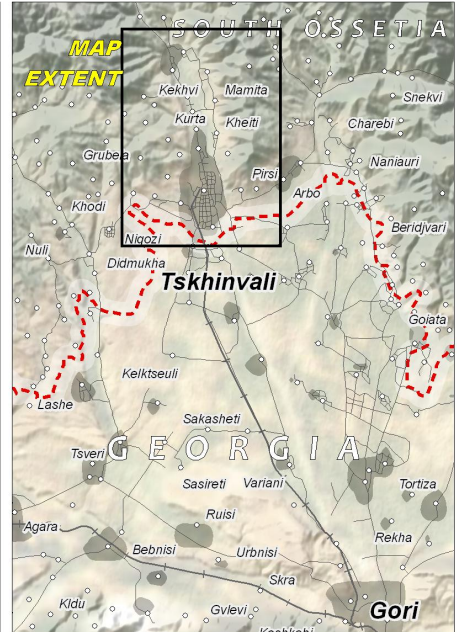
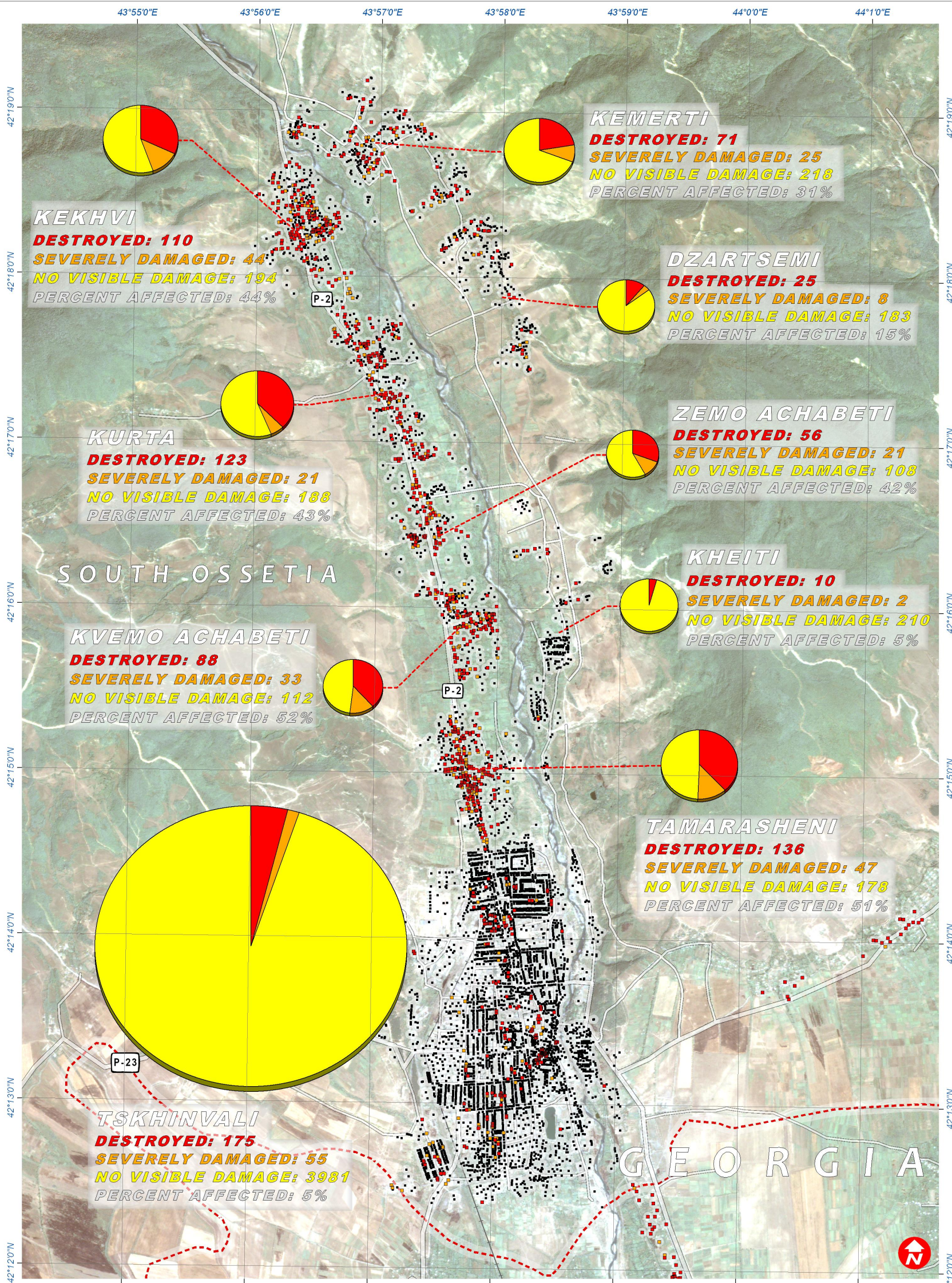
Damage Assessment with WorldView-1 & Formosat-2 Satellite Imagery Recorded on 19 August 2008

Fire & Armed Conflict 29 August 2008



Version 1.0

UNOSAT-2008-000153



Analysis Description

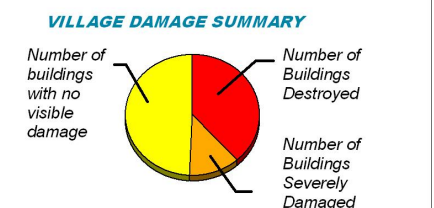
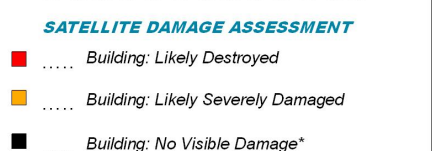
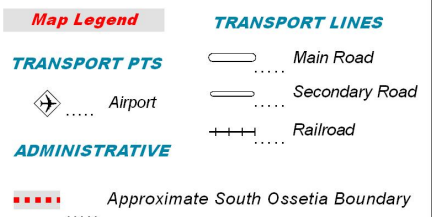
This map presents a satellite-based damage assessment overview for the affected villages from Kekhvi to Tskhinvali, South Ossetia, Georgia following the armed conflict between Georgian and Russian military forces, August 2008. Damaged buildings have been identified with WorldView-1 & Formosat-2 satellite imagery acquired on 19 August 2008.

Affected buildings were classified either as destroyed or severely damaged by standard satellite image interpretation methods. Destroyed buildings have been defined either by the total collapse of the structure or when it was standing but with less than 50% of the roof still intact. Severely damaged buildings were defined as having visible structural damage to a portion of one wall, or where a section of the roof was damaged but with over 50% of the roof still intact.

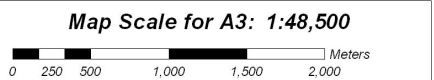
The estimated total number of affected buildings for the selected villages is approximately 1,050. Of this total 794 buildings have likely been destroyed and 256 buildings have likely been severely damaged. A further 5,372 buildings were identified as showing no visible damage in the available satellite imagery.

An important preliminary finding of this satellite damage analysis is the observed heavy concentration of damages within clearly defined residential areas.

Please note, this is an initial damage assessment and has not yet been independently validated on the ground. Please send any additions or corrections to UNOSAT at info@unosat.org or call the 24/7 Hotline: +41 76 487 4998.



Relative size of pie charts reflect the total building count estimate by village / town.



Satellite Data WorldView-1
 Resolution 50 cm
 Imagery Date 19 August 2008
 Copyright Digital Globe (2008)
 Source U.S. Department of State - HIU
 Access Rules NextView "EULA" - 2008
 Additional Imagery Formosat-2 (2m pansharpened)
 Imagery Copyright NSPO 2008
 Imagery Date 19 August 2008
 GIS Data USGS, UNEP, UNOSAT
 Damage Analysis UNOSAT
 Projection Pulkovo 1995 GK Zone 8N
 Datum Pulkovo 1995

The depiction and use of boundaries, geographic names and related data shown here are not warranted to be error-free nor do they imply official endorsement or acceptance by the United Nations. This map was produced by the United Nations Institute for Training and Research (UNITAR) Operational Satellite Applications Program (UNOSAT). UNOSAT provides satellite imagery & related geographic information to UN humanitarian & development agencies & their implementing partners.

Building Damage Summary Breakdown by Affected Village / Town: *

Village Name	Total Building Count Estimate	Est. Buildings Destroyed	Est. Bld Severely Damaged	Est. Buildings with no visible damage	Est. Total Affected Buildings	Est. percentage of affected buildings
Kvemo Achabeti	233	88	33	112	121	51.9%
Tamarasheni	361	136	47	178	183	50.7%
Kekhvi	348	110	44	194	154	44.3%
Kurta	332	123	21	188	144	43.4%
Zemo Achabeti	185	56	21	108	77	41.6%
Kemerti	314	71	25	218	96	30.6%
Dzartsemi	216	25	8	183	33	15.3%
Tskhinvali	4211	175	55	3981	230	5.5%
Kheiti	222	10	2	210	12	5.4%

* 1) The total count estimate for those buildings with 'no visible damage' does not imply no damages, only that none were visually identified with the available satellite imagery. Satellite-derived damage assessments can generally identify only a low percentage of buildings with limited damages. 2) The estimated total building count for each village is based on a best effort to assign village membership to buildings with available village data, however this may not directly match data of local officials. Thus these village estimates are preliminary and may be subject to change.