

# **Annex E.2.11**

## **Public**



# VILLAGE DAMAGE SUMMARY: TKVIAVI, GORI DISTRICT, GEORGIA

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

Fire & Armed Conflict 10 October 2008



Version 1.0

UNOSAT-2008-000194



## Analysis Description

This map presents a satellite-based damage assessment for the affected village of Tkviavi, Gori District, Georgia following the armed conflict between Georgia and Russian military forces, August 2008. Damaged buildings have been identified with WorldView-1 & Formosat-2 satellite imagery recorded on 19 August 2008. Previous UNOSAT QuickBird imagery in Google Earth was also used.

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

Buildings not marked in this map were identified as having no visible damage. This does not mean the buildings are undamaged, only that none were identified with the available satellite imagery. Satellite-based assessments can generally identify only a low percentage of buildings with structural damage.

The estimated total number of affected buildings for the selected village is approximately 25. Of this total 19 buildings have likely been destroyed and 6 buildings have likely been severely damaged. An important underlying finding of this satellite damage analysis is the observed heavy concentration of damages within densely defined residential areas.

Please note this is an initial damage assessment and has not yet been independently validated at the ground. Please send any additions or corrections to: UNOSAT.

## Map Legend

- Approximate South Ossetia Boundary
- SATELLITE DAMAGE ASSESSMENT**
- Building:
  - Building Likely Destroyed
  - Building Likely Severely Damaged
  - Building on the ground not imaged

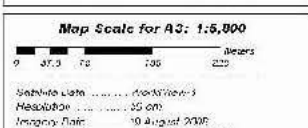
## SATELLITE IMAGE REFERENCE



Damaged Buildings & Factory Area



River & Functional Bridge



ROAD ROAD & Damaged Area

## Map Scale for A3: 1:5,000

0 31.3 62.5 125 250 Meters

Satellite Data: ... GeoEye-1  
 Resolution: ... 1.5 m  
 Imagery Date: ... 10 August 2008  
 Copyright: ... DigitalGlobe (2008)  
 Source: ... U.S. Department of State, HSI  
 Access Policy: ... NextView "EULA" - 2009  
 Additional Imagery: ... Formosat-2 (2m panchromatic)  
 Imagery Copyright: ... NSI 2009  
 Imagery Date: ... 19 August 2008  
 GIS Data: ... UNOSAT  
 Damage Analysis: ... UNOSAT  
 Producer: ... UNOSAT  
 Editor: ... UNOSAT

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