

Annex E.2.4

Public

**Corrected Version of
ICC-01/15-4-AnxE.2.4**

VILLAGE DAMAGE SUMMARY: EREDVI, BERULA & ARGVITSI, SOUTH OSSETIA, GEORGIA

Damage Assessment with Ikonos & WorldView-1 Satellite Imagery Recorded on 10 & 19 August 2008

This map presents a satellite-based damage assessment for the affected villages of Eredvi, Berula & Argvitsi, South Ossetia, Georgia following the armed conflict between Georgian and Russian military forces in August 2008. Damaged buildings have been identified with Ikonos & WorldView-1 satellite imagery acquired on 10 & 19 August 2008. Building damages have been classified by their date of detection as well as by the degree of damage. An estimated 94% of buildings were likely damaged or destroyed between the dates of 10 and 19 August 2008. The satellite-detected active fire data recorded daily supports this date estimate, suggesting further that most building damages likely occurred on 12-13 August (please see the fire map inset). Additional fire-related damages may also have occurred on 22 August, however this is not reflected in the damage figures presented in this map. Affected buildings were classified either as destroyed or severely damaged by standard image interpretation methods. Destroyed buildings have been defined 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. Buildings not marked in the 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 limited damages. This is an initial damage assessment and has not yet been independently validated on the ground. Please send additions/corrections to UNOSAT.

Fire & Armed Conflict 16 October 2008



Version 1.0

UNOSAT-2008-000201

Damage Summary for Villages of Eredvi, Berula & Argvitsi (10-19 August 2008)

Total estimate of affected buildings is 294.
Affected building sub-totals by degree:
- 222 buildings have likely been destroyed &
- 72 buildings have likely been severely damaged.
Destroyed building sub-totals by date:
(12 destroyed before 10 Aug 08 (08:22 GMT)
(210 destroyed between 10 Aug 08 & 19 Aug 08)

Damaged building sub-totals by date:
(5 damaged before 10 Aug 08 (08:22 GMT)
(67 damaged between 10 Aug 08 & 19 Aug 08)
There are an additional 13 suspected impact craters likely caused by artillery. Of this total, 9 occurred before 10 Aug 08 (08:22 GMT) & 4 between 10 Aug 08 & 19 Aug 08.

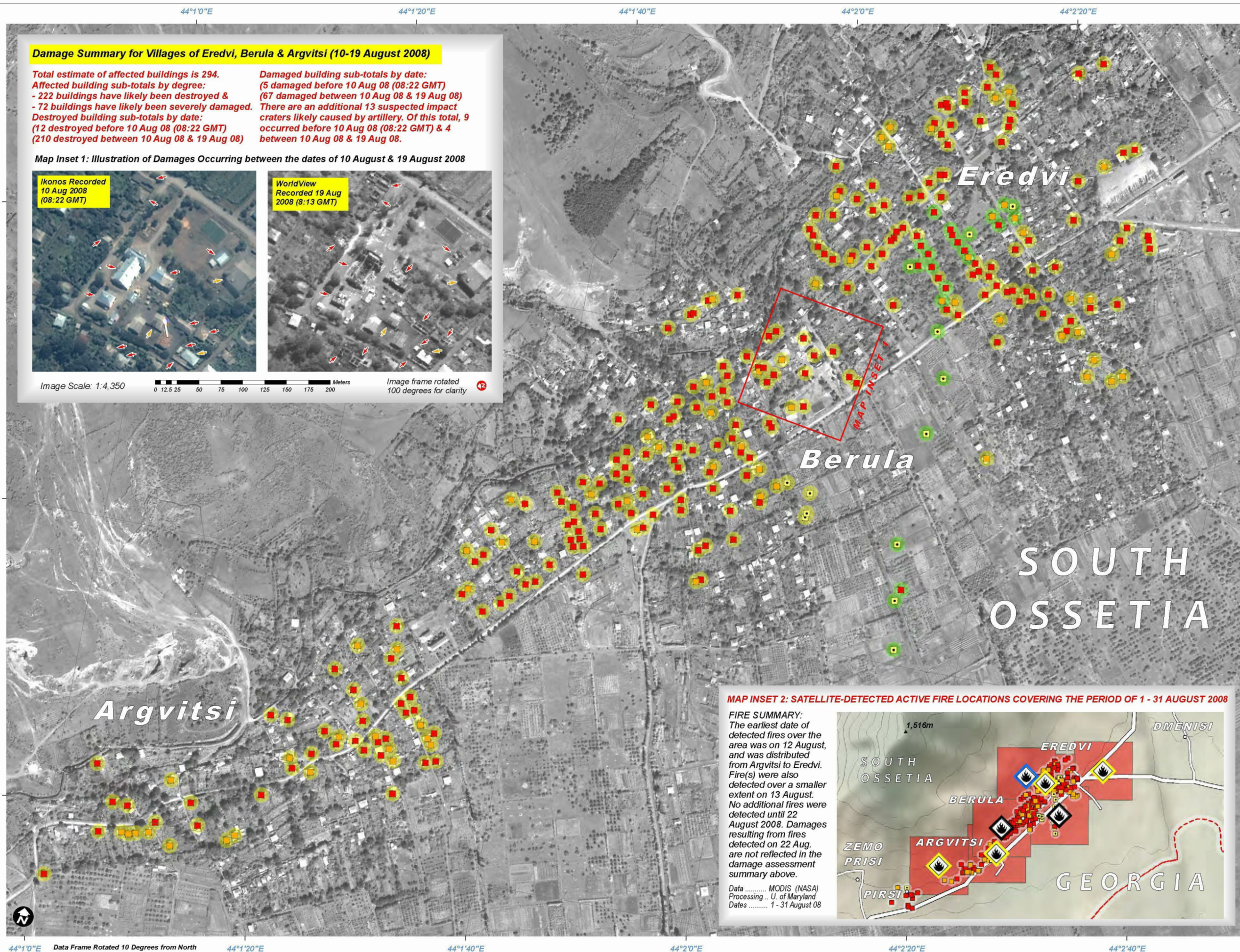
Map Inset 1: Illustration of Damages Occurring between the dates of 10 August & 19 August 2008



Image Scale: 1:4,350

0 12.5 25 50 75 100 125 150 175 200 Meters

Image frame rotated 100 degrees for clarity



MAP INSET 2: SATELLITE-DETECTED ACTIVE FIRE LOCATIONS COVERING THE PERIOD OF 1 - 31 AUGUST 2008

FIRE SUMMARY:
The earliest date of detected fires over the area was on 12 August, and was distributed from Argvitsi to Eredvi. Fire(s) were also detected over a smaller extent on 13 August. No additional fires were detected until 22 August 2008. Damages resulting from fires detected on 22 Aug. are not reflected in the damage assessment summary above.

Data MODIS (NASA)
Processing .. U. of Maryland
Dates 1 - 31 August 08



Map Legend

..... Approximate South Ossetia Boundary

SATELLITE DAMAGE ASSESSMENT

Building: Likely Destroyed Damage Site Detected in Satellite Image of 10 August 08
Building: Likely Severely Damaged Damage Site Detected in Satellite Image of 19 August 08
Impact Crater (Field / Road)

ACTIVE FIRES BY LOCATION & DATE

..... 13 Aug 2008
..... 12 Aug 2008 22 Aug 2008
Active Fire Detected within 1km2 Satellite Pixel Area

SATELLITE IMAGE REFERENCE



Map Scale for A3: 1:8,000

0 37.5 75 150 225 300 375 Meters
Satellite Image (1) WorldView-1
Resolution 50 cm
Imagery Date 19 August 2008 (8:13 GMT)
Copyright Digital Globe (2008)
Source U.S. Department of State - HIU
Access Rules NextView "EULA" - 2008
Satellite Image (2) Ikonos (1m)
Imagery Copyright GeoEye 2008
Imagery Date 10 August 2008 (08:22 GMT)
GIS Data USGS, UNEP, UNOSAT
Damage Analysis UNOSAT
Projection Pulkovo 1995 GK Zone 8N
Datum Pulkovo 1995

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