

DAMAGED ASSESSMENT OVERVIEW FOR GAZA NORTH - UPDATE 4

Damage Analysis Worldview Satellite Imagery from 19-10-6 January 2009 & Quickbird 16 January 2009

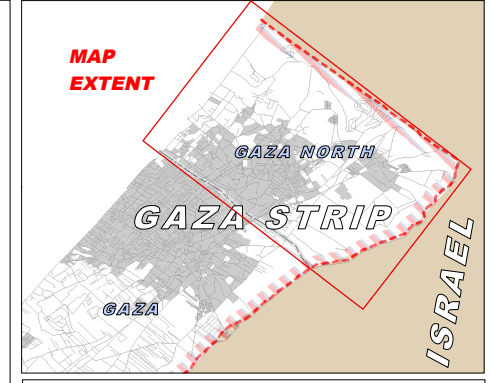
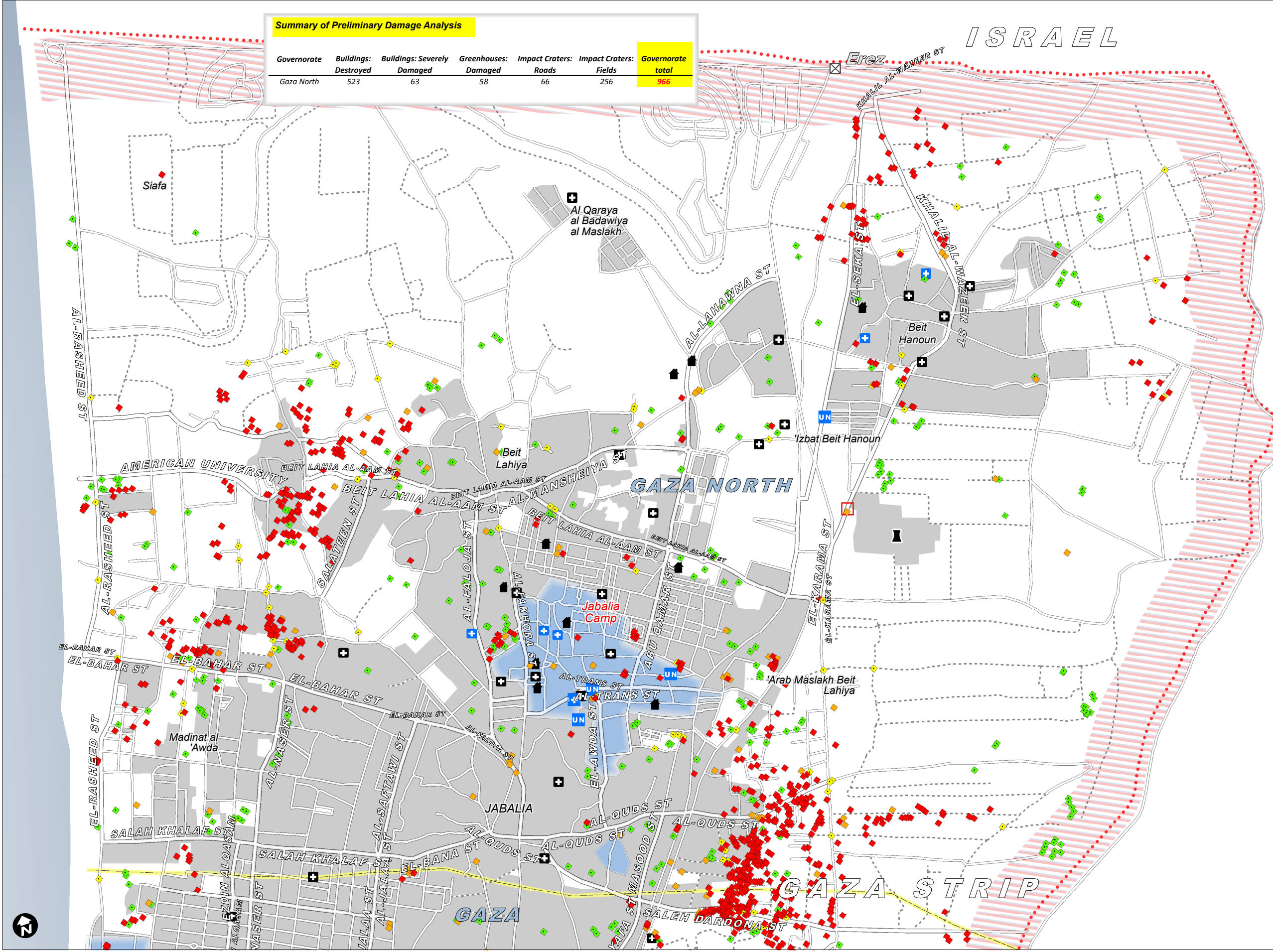
ANALYSIS DESCRIPTION: This map presents a satellite-based damage assessment for the Gaza North following the January ceasefires. Damages have been summarized by the type damage detected. Damages to buildings, infrastructure, roads and demolition areas have been identified by standard image interpretation methods with WorldView-1 satellite imagery acquired on 6, 10 and 19 January 2009, and QuickBird satellite imagery of 16 January 2009, at a reduced spatial resolution of 2 meters.

Please note: Because of the reduced spatial resolution of this satellite imagery, the confidence level for damage identification within dense urban areas is significantly reduced. It is highly probable, therefore, that the damages currently identified in this map underestimate the actual level of damages present on the ground at the time of satellite image acquisition.



Security Event 26 February 2009
Version 1.0
UNOSAT-2009-00022

Summary of Preliminary Damage Analysis						
Governorate	Buildings: Destroyed	Buildings: Severely Damaged	Greenhouses: Damaged	Impact Craters: Roads	Impact Craters: Fields	Governorate total
Gaza North	523	63	58	66	256	966



Map Legend

LOCATION SITES

- Ministry of Health / Private / NGO
- UNRWA Office / Facility
- Bridge
- UNRWA Health Center
- UNRWA School
- Border Crossing Checkpoint

SATELLITE DAMAGE ASSESSMENT

- Building: Likely Destroyed
- Building: Likely Severely Damaged
- Impact Crater (Road)
- Impact Crater (Field)

ROAD TYPES

- Primary Road
- Secondary Road
- Unpaved / Track

ADMINISTRATIVE / ANALYSIS BORDERS

- Governorate Boundary
- 1950 Armistice Line
- International Boundary

LANDCOVER ZONES

- Security Zone
- Refugee Camp
- UNRWA HQ Compound
- Urban Areas

Map Scale for A3: 1:30'000

0 125 250 500 750 1000 1250 1500 Meters

Satellite Image (1) QuickBird-02
Resolution 2m (Reduced Resolution)
Imagery Dates 16 January 2009
Copyright Digital Globe (2008)
Satellite Image (2) WorldView-1
Resolution 2m (Reduced Resolution)
Imagery Copyright Digital Globe (2008)
Imagery Date 6 & 10 & 19 January 2009
Damage Analysis UNOSAT
GIS Data UNRWA, OCHA, UNOSAT
Projection UTM Zone 36 North - WGS84

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.

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DAMAGED ASSESSMENT OVERVIEW FOR GAZA - UPDATE 4

Damage Analysis Worldview Satellite Imagery from 19-10-6 January 2009 & Quickbird 16 January 2009

ANALYSIS DESCRIPTION: This map presents a satellite-based damage assessment for the Gaza following the January ceasefires. Damages have been summarized by the type damage detected. Damages to buildings, infrastructure, roads and demolition areas have been identified by standard image interpretation methods with WorldView-1 satellite imagery acquired on 6, 10 and 19 January 2009, and QuickBird satellite imagery of 16 January 2009, at a reduced spatial resolution of 2 meters.

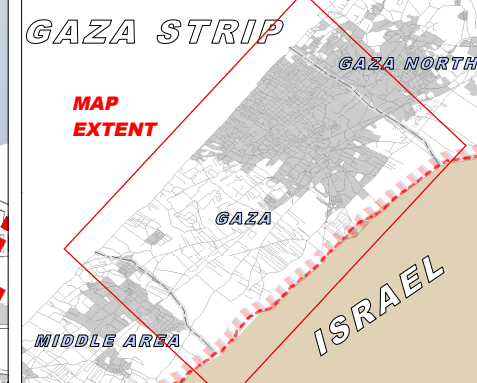
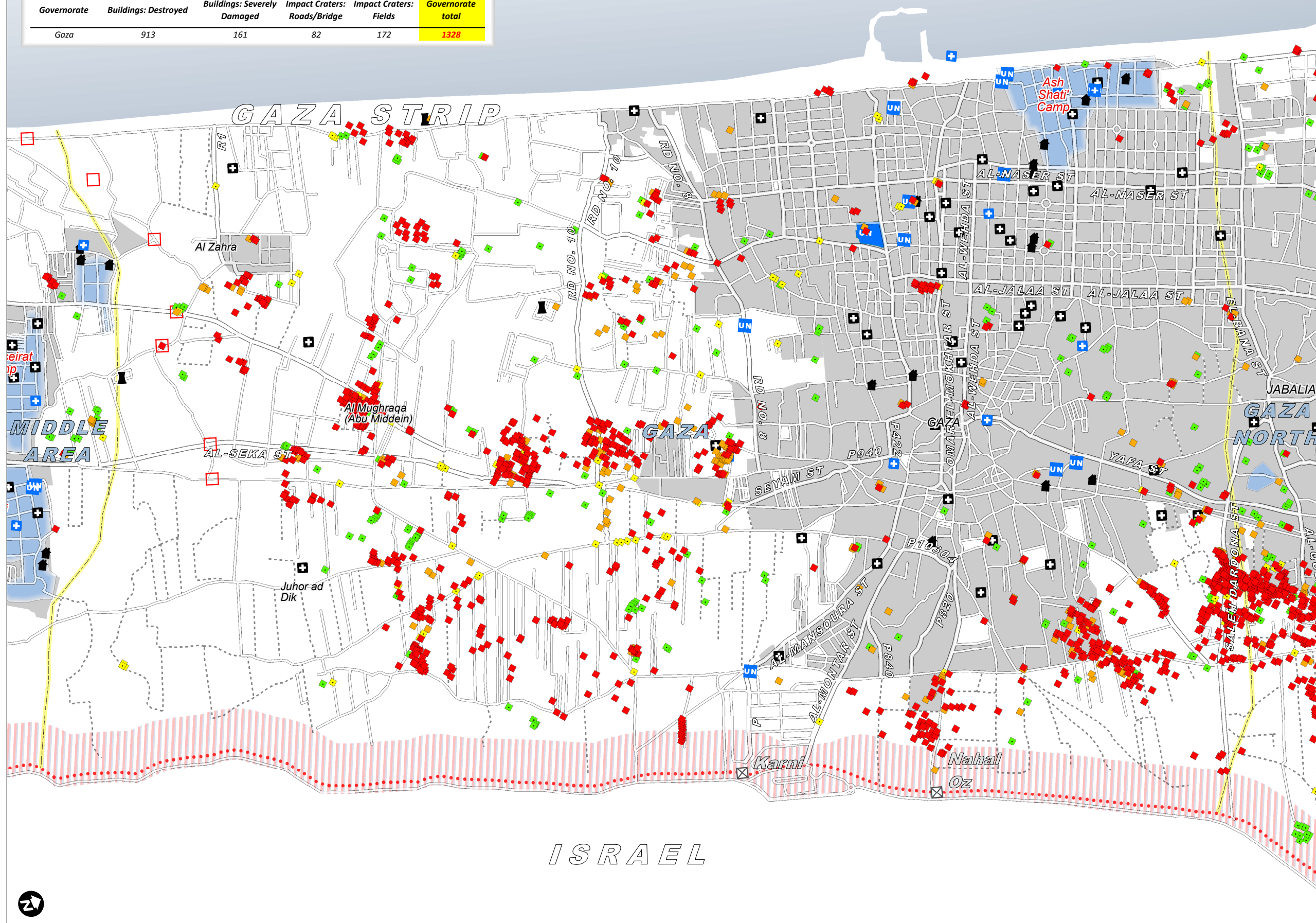
Please note: Because of the reduced spatial resolution of this satellite imagery, the confidence level for damage identification within dense urban areas is significantly reduced. It is highly probable, therefore, that the damages currently identified in this map underestimate the actual level of damages present on the ground at the time of satellite image acquisition.



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Summary of Preliminary Damage Analysis

Governorate	Buildings: Destroyed	Buildings: Severely Damaged	Impact Craters: Roads/Bridge	Impact Craters: Fields	Governorate total
Gaza	913	161	82	172	1328



Map Legend

LOCATION SITES

- Ministry of Health / Private / NGO (Black cross symbol)
- UNRWA Office / Facility (Blue UN symbol)
- UNRWA Health Center (Blue cross symbol)
- UNRWA School (Black house symbol)
- Border Crossing Checkpoint (Black square with X symbol)
- Bridge (Red square symbol)

SATELLITE DAMAGE ASSESSMENT

- Building: Likely Destroyed (Red square)
- Building: Likely Severely Damaged (Orange square)
- Impact Crater (Road) (Yellow circle)
- Impact Crater (Field) (Green circle)

ROAD TYPES

- Primary Road (Thick grey line)
- Secondary Road (Thin grey line)
- Unpaved / Track (Dashed grey line)

ADMINISTRATIVE / ANALYSIS BORDERS

- Governorate Boundary (Dotted yellow line)
- 1950 Armistice Line (Dotted red line)
- International Boundary (Dashed yellow line)

LANDCOVER ZONES

- Security Zone (Red hatched area)
- Refugee Camp (Blue hatched area)
- UNRWA HQ Compound (Blue square)
- Urban Areas (Grey area)

Map Scale for A3: 1:38'000

0 125 250 500 750 1'000 1'250 1'500 1750 Meters

Satellite Image (1) QuickBird-02
Resolution 2m (Reduced Resolution)
Imagery Dates 16 January 2009
Copyright Digital Globe (2008)
Satellite Image (2) WorldView-1
Resolution 2 m (Reduced Resolution)
Imagery Copyright Digital Globe (2008)
Imagery Date 6 & 10 & 19 January 2009
Damage Analysis UNOSAT
GIS Data UNRWA, OCHA, UNOSAT
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DAMAGED ASSESSMENT OVERVIEW FOR MIDDLE AREA- UPDATE 4

Damage Analysis Worldview Satellite Imagery from 19-10 January 2009 & Quickbird 16 January 2009

ANALYSIS DESCRIPTION: This map presents a satellite-based damage assessment for the Middle Area following the January ceasefires. Damages have been summarized by the type damage detected. Damages to buildings, infrastructure, roads and demolition areas have been identified by standard image interpretation methods with WorldView-1 satellite imagery acquired on 10 and 19 January 2009, and QuickBird satellite imagery of 16 January 2009, at a reduced spatial resolution of 2 meters.

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Security Event 26 February 2009

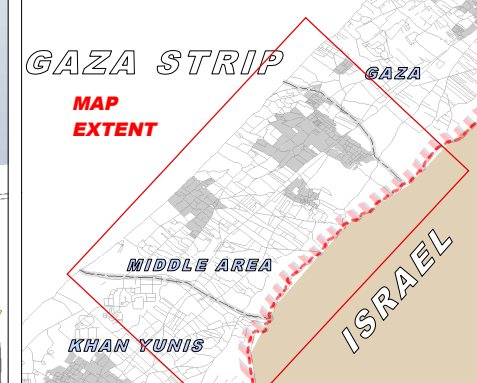
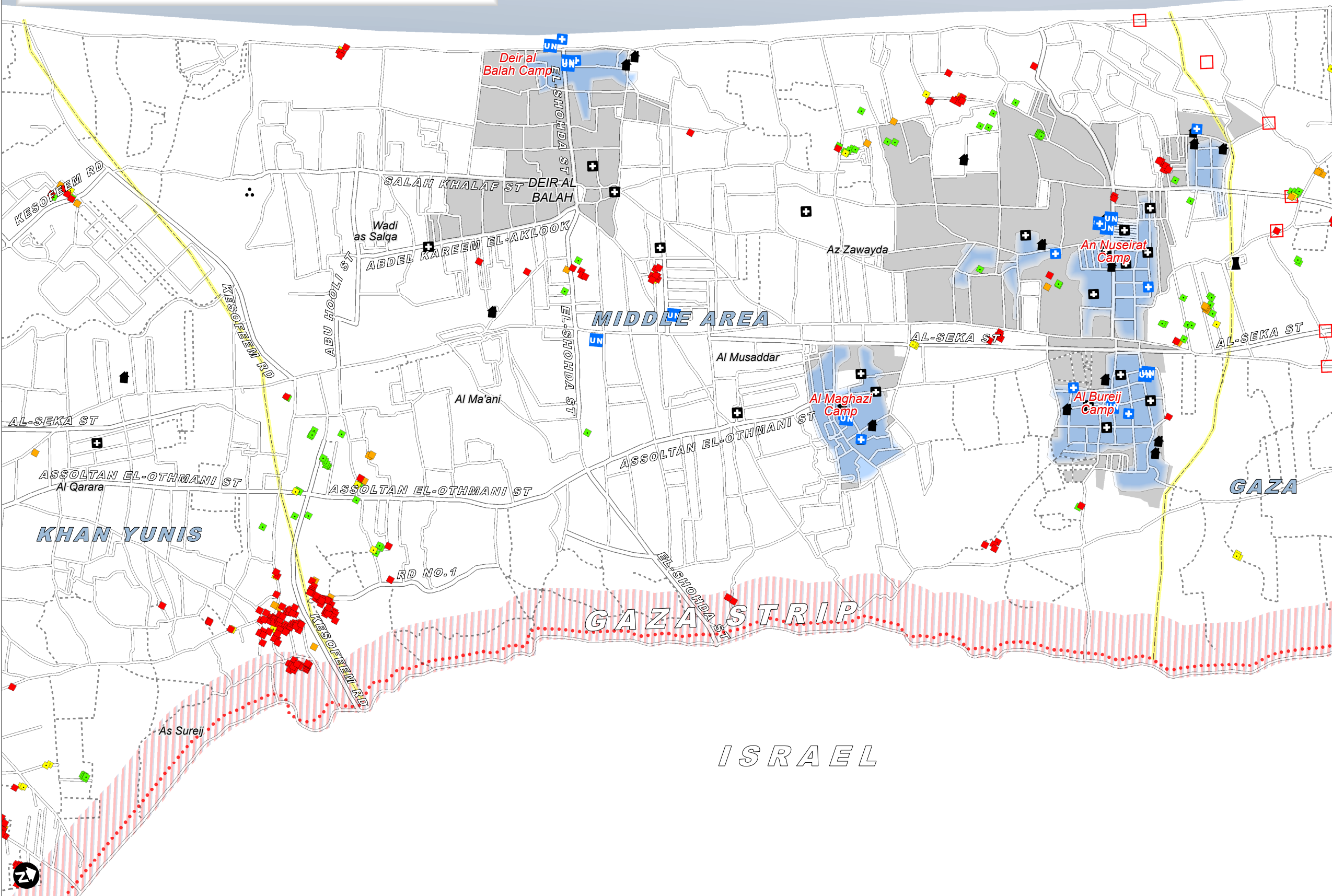
Version 1.0



UNOSAT-2009-00022

Summary of Preliminary Damage Analysis

Governorate	Buildings: Destroyed	Buildings: Severely Damaged	Impact Craters: Roads	Impact Craters: Fields	Governorate total
Middle Area	88	16	13	59	176



Map Legend

- LOCATION SITES**
- Ministry of Health / Private / NGO (Black cross icon)
 - UNRWA Office / Facility (Blue UN icon)
 - UNRWA Health Center (Blue cross icon)
 - UNRWA School (Black house icon)
 - UNRWA Health Center (Blue cross icon)
 - UNRWA School (Black house icon)
 - Border Crossing Checkpoint (Black square with X icon)
 - Bridge (Red square icon)
- SATELLITE DAMAGE ASSESSMENT**
- Building: Likely Destroyed (Red square icon)
 - Building: Likely Severely Damaged (Orange square icon)
 - Impact Crater (Road) (Yellow square icon)
 - Impact Crater (Field) (Green square icon)
- ROAD TYPES**
- Primary Road (Thick grey line)
 - Secondary Road (Thin grey line)
 - Unpaved / Track (Dashed grey line)
- ADMINISTRATIVE / ANALYSIS BORDERS**
- Governorate Boundary (Dotted line)
 - 1950 Armistice Line (Red dotted line)
 - International Boundary (Yellow dashed line)
- LANDCOVER ZONES**
- Security Zone (Red hatched area)
 - Refugee Camp (Blue hatched area)
 - UNRWA HQ Compound (Blue solid area)
 - Urban Areas (Grey solid area)

Map Scale for A3: 1:38'000

0 125 250 500 750 1'000 1'250 1'500 1'750 Meters

Satellite Image (1) QuickBird-02
 Resolution 2m (Reduced Resolution)
 Imagery Dates 16 January 2009
 Copyright Digital Globe (2008)
 Satellite Image (2) WorldView-1
 Resolution 2 m (Reduced Resolution)
 Imagery Copyright Digital Globe (2008)
 Imagery Date 10 & 19 January 2009
 Damage Analysis UNOSAT
 GIS Data UNRWA, OCHA, UNOSAT
 Projection UTM Zone 36 North - WGS84

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DAMAGED ASSESSMENT OVERVIEW FOR KHAN YUNIS - UPDATE 4

Damage Analysis Worldview Satellite Imagery from 10-19 January 2009 & Quickbird 21 January 2009

ANALYSIS DESCRIPTION: This map presents a satellite-based damage assessment for the Khan Yunis following the January ceasefires. Damages have been summarized by the type damage detected. Damages to buildings, infrastructure, roads have been identified by standard image interpretation methods with WorldView-1 satellite imagery acquired on 10-19 January 2009, and QuickBird satellite imagery of 21 January 2009, at a reduced spatial resolution of 2 meters.

Please note: Because of the reduced spatial resolution of this satellite imagery, the confidence level for damage identification within dense urban areas is significantly reduced. It is highly probable, therefore, that the damages currently identified in this map underestimate the actual level of damages present on the ground at the time of satellite image acquisition.

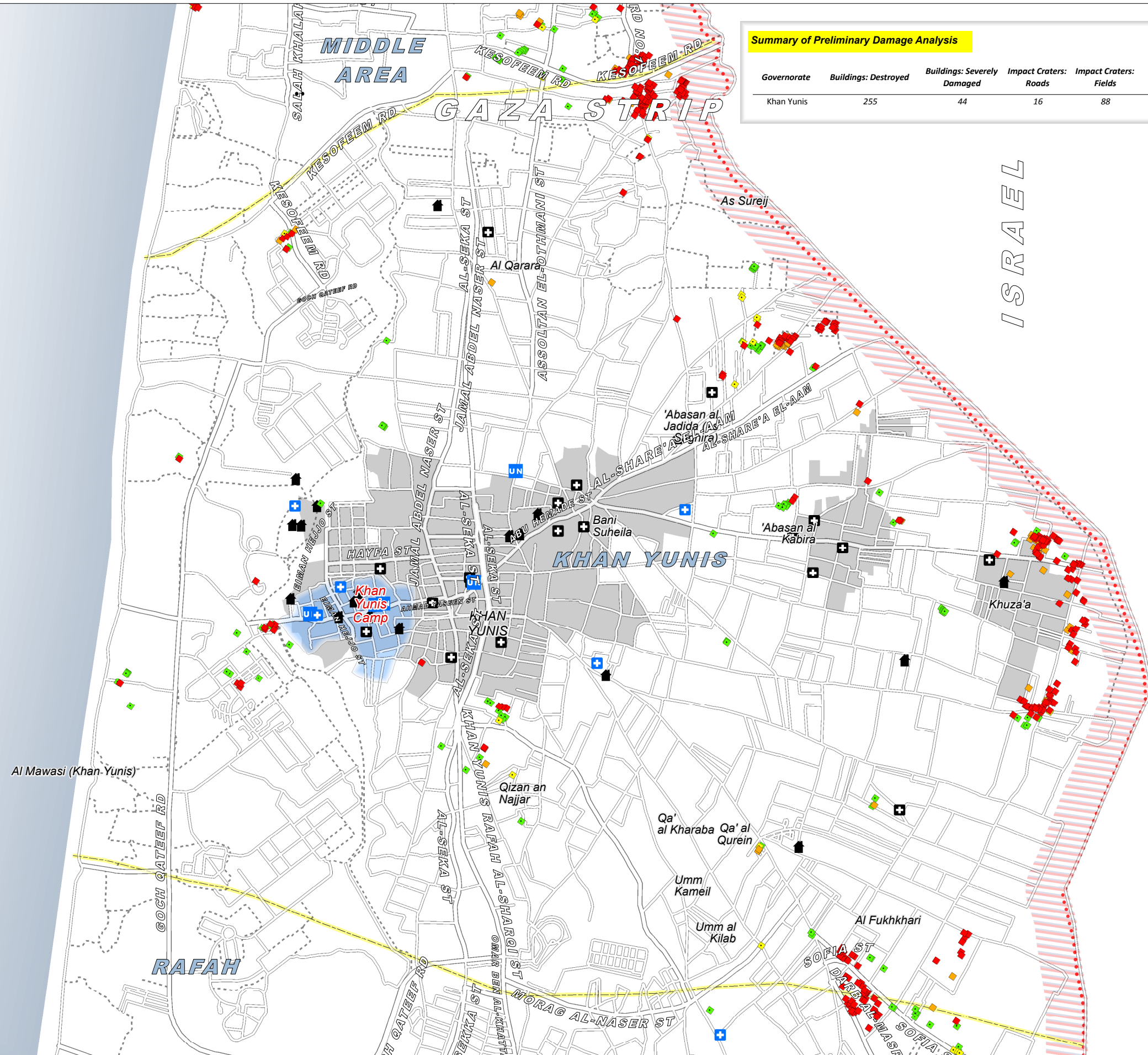


Security Event 26 February 2009

Version 1.0



UNOSAT-2009-00022



Summary of Preliminary Damage Analysis

Governorate	Buildings: Destroyed	Buildings: Severely Damaged	Impact Craters: Roads	Impact Craters: Fields	Governorate total
Khan Yunis	255	44	16	88	403

MAP EXTENT

Map Legend

LOCATION SITES

- Ministry of Health / Private / NGO
- UNRWA Office / Facility
- UNRWA Health Center
- UNRWA School
- Border Crossing Checkpoint
- UNRWA Compound
- UNRWA HQ
- Urban Areas

SATELLITE DAMAGE ASSESSMENT

- Building: Likely Destroyed
- Building: Likely Severely Damaged
- Impact Crater (Road)
- Impact Crater (Field)

ROAD TYPES

- Primary Road
- Secondary Road
- Unpaved / Track

ADMINISTRATIVE / ANALYSIS BORDERS

- Governorate Boundary
- 1950 Armistice Line
- International Boundary

LANDCOVER ZONES

- Security Zone
- Refugee Camp
- UNRWA Compound
- Urban Areas

Map Scale for A3: 1:50'000

0 250 500 1'000 1'500 2'000 2'500 Meters

Satellite Image (1) QuickBird-02
 Resolution 2m (Reduced Resolution)
 Imagery Dates 21 January 2009
 Copyright Digital Globe (2008)
 Satellite Image (2) WorldView-1
 Resolution 2m (Reduced Resolution)
 Imagery Copyright Digital Globe (2008)
 Imagery Date 10 & 19 January 2009
 Damage Analysis UNOSAT
 GIS Data UNRWA, OCHA, UNOSAT
 Projection UTM Zone 36 North - WGS84

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DAMAGED ASSESSMENT OVERVIEW FOR RAFAH - UPDATE 4

Damage Analysis with QuickBird Satellite Imagery Recorded 21 January 2009

ANALYSIS DESCRIPTION: This map presents a satellite-based damage assessment for the Rafah following the January ceasefires. Damages have been summarized by the type damage detected. Damages to buildings, infrastructure, roads have been identified by standard image interpretation methods with WorldView-1 satellite imagery acquired on 10 and 19 January 2009, and QuickBird satellite imagery of 21 January 2009, at a reduced spatial resolution of 2 meters.

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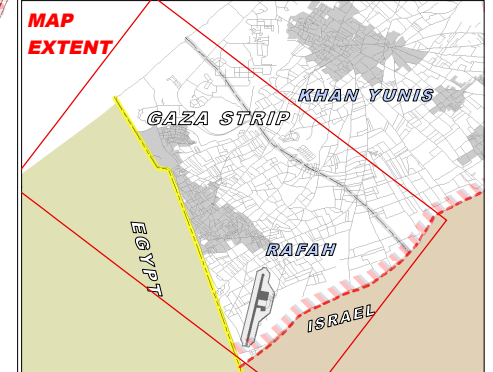
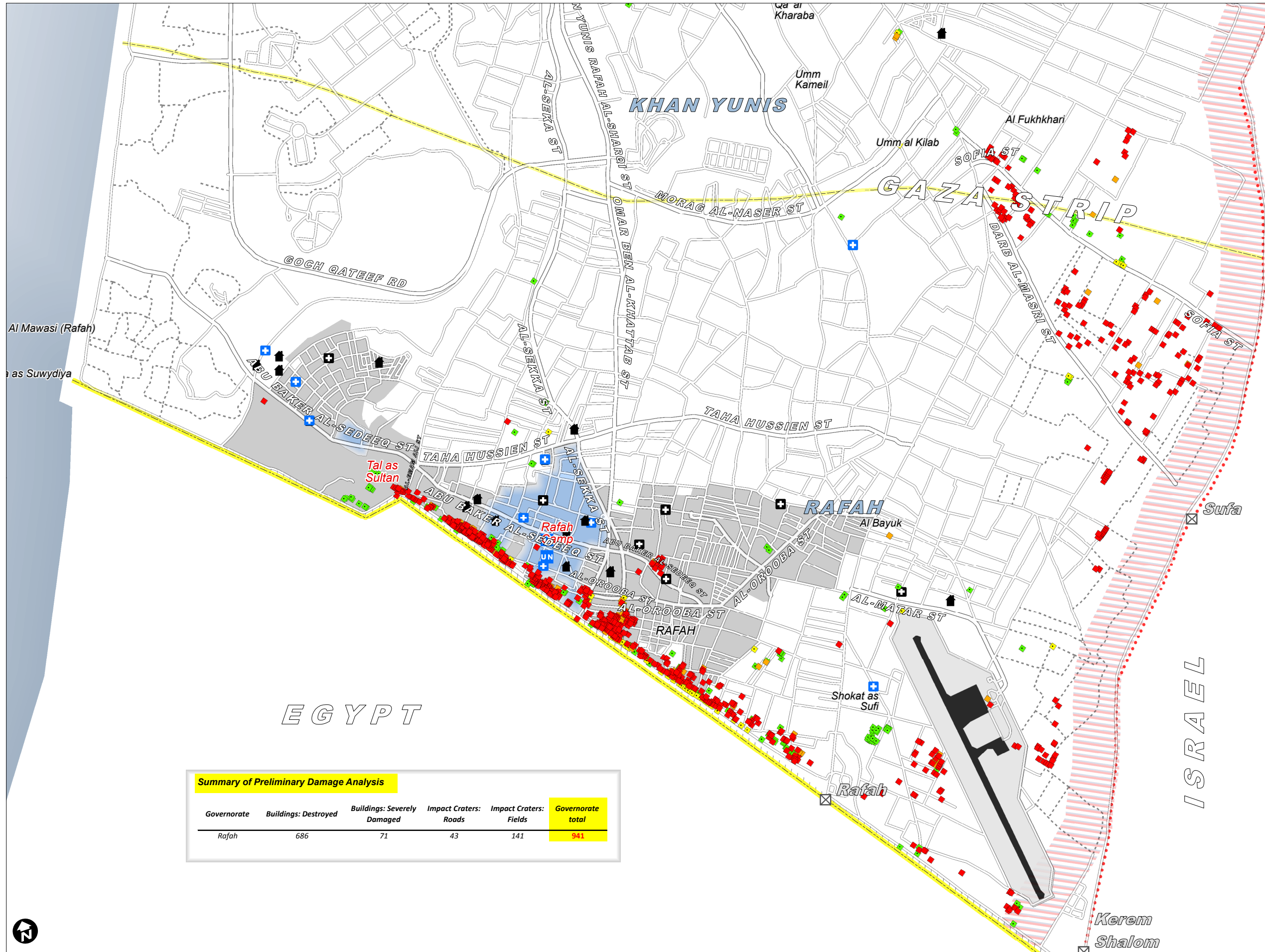


Security Event 26 February 2009

Version 1.0



UNOSAT-2009-00022



Map Legend

LOCATION SITES

- Ministry of Health / Private / NGO
- UNRWA Office / Facility
- UNRWA Health Center
- UNRWA School
- Border Crossing Checkpoint

SATELLITE DAMAGE ASSESSMENT

- Building: Likely Destroyed
- Building: Likely Severely Damaged
- Impact Crater (Road)
- Impact Crater (Field)

ROAD TYPES

- Primary Road
- Secondary Road
- Unpaved / Track

ADMINISTRATIVE / ANALYSIS BORDERS

- Governorate Boundary
- 1950 Armistice Line
- International Boundary

LANDCOVER ZONES

- Security Zone
- Refugee Camp
- UNRWA HQ Compound
- Urban Areas

Map Scale for A3: 1:40'000

0 250 500 1'000 1'500 2'000 Meters

Satellite Image (1) QuickBird-02
 Resolution 2m (Reduced Resolution)
 Imagery Dates 21 January 2009
 Copyright Digital Globe (2008)
 Satellite Image (2) WorldView-1
 Resolution 2m (Reduced Resolution)
 Imagery Copyright Digital Globe (2008)
 Imagery Date 10 & 19 January 2009
 Damage Analysis UNOSAT
 GIS Data UNRWA, OCHA, UNOSAT
 Projection UTM Zone 36 North - WGS84

Summary of Preliminary Damage Analysis

Governorate	Buildings: Destroyed	Buildings: Severely Damaged	Impact Craters: Roads	Impact Craters: Fields	Governorate total
Rafah	686	71	43	141	941

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