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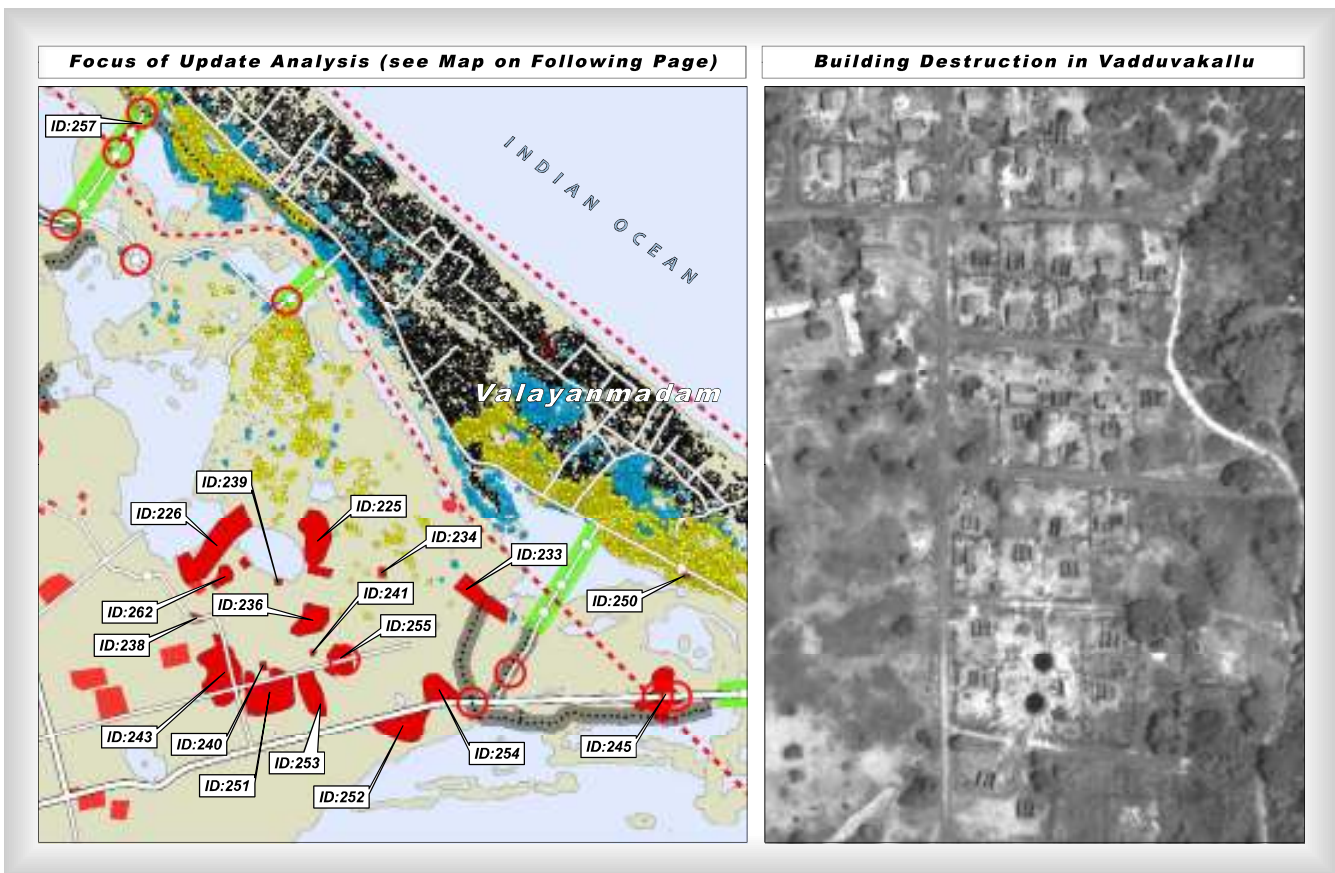
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Security Event



26 APRIL 2009 - UPDATE 6

# UPDATED ANALYSIS REPORT (19 APRIL 2009) SATELLITE-DETECTED DAMAGES AND IDP SHELTER MOVEMENT IN CSZ, MULATTIVU DISTRICT, SRI LANKA



SATELLITE IMAGERY DATES: 19 APRIL, 29-6 MARCH, 19-5 FEB. 2009

SATELLITE DATA : WORLDVIEW, QUICKBIRD & IKONOS

RESOLUTION : 0.5, 0.6 & 1.0 METERS

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SOURCE : US DEPT. OF STATE (HIU)

ANALYSIS : UNOSAT

REPORT DATE : 26 APRIL 2009

**PLEASE NOTE:** The following analysis is based on satellite imagery acquired on the morning of 19 April 2009 and thus does not reflect the dramatic changes on the ground following the reported SLA ground offensive into the CSZ and resulting IDP outflow on Monday-Tuesday 20-21 April 2009. UNITAR/UNOSAT will provide updated analysis as new satellite imagery is acquired.

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. UNOSAT is a program of the United Nations Institute for Training and Research (UNITAR), providing satellite imagery & related geographic information, research and analysis to UN humanitarian & development agencies & their implementing partners.

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## Assessment by UNITAR/UNOSAT - 26 April 2009

**PLEASE NOTE: The following analysis is based on satellite imagery acquired on the morning of 19 April 2009 and thus does not reflect the dramatic changes on the ground following the reported SLA ground offensive into the CSZ and resulting IDP outflow on Monday-Tuesday 20-21 April 2009. UNITAR/UNOSAT will provide updated analysis as new satellite imagery is acquired.**

### DAMAGE ASSESSMENT SUMMARY:

UPDATE: Within the northern and southern sections of the Civilian Safe Zone (CSZ), there are new indications of building destruction and damages resulting from shelling and possible air strikes. This analysis was conducted with a time series of very high resolution satellite imagery from 5 February to 19 April 2009. The following assessment is made with a high degree of confidence with the understanding that it has not yet been independently validated in the field. The figures on building damages represent minimum estimates. Actual damages are likely to be greater.

An additional 5 permanent buildings within the CSZ have been destroyed between 29 March & 19 April bringing the total estimate within the CSZ to approximately 60 main buildings destroyed. This count does not include potential damages to or destruction of IDP tent shelters. Because of their small size, portability and dense spacing, it is not possible to identify damages to IDP structures from mortar shells at an acceptable level of confidence.

Outside the CSZ, immediately to the west and south there are continuing indications of sustained shelling and possible air strikes, with the major concentration of newly detected building destruction and hundreds of impact craters located in the eastern sections of PTK especially centered on the main road leading east into the CSZ. Building destruction continues south of the CSZ in the town of Vellamullivaikal and Mulattivu. The remaining transport roads connecting the CSZ to the mainland were blocked by the construction of multiple trenches, security fences and earthen berms. A main bridge leading to the CSZ (TZ2) was also closed by roadblocks and serious damages.

### Damages Inside CSZ:

1. **Putumattalan:** Three permanent buildings have been destroyed between 29 March and 19 April, bringing the total for the northern section of the CSZ to six destroyed since 15 March. There are potentially large amounts of moderate to severe damages to the remaining permanent buildings in this area.
2. **Valayanmadam:** 1 additional permanent building has been destroyed, and further south there is a cluster of likely impact craters within an area previously densely populated with IDP shelters.

### Damages Outside CSZ:

3. **Puthukkudiyiruppu (PTK):** The major concentration of newly detected building destruction and hundreds of impact craters is located in the eastern sections of PTK especially centered on the main route leading east into the CSZ. This route is now nonfunctional because of a series of road blocks, impact craters and trenches erected along the main road.
4. **Vadduvakallu:** Building destruction continues in Vadduvakallu: 40 buildings destroyed between 29 March -19 April 2009 and a total of 148 building destroyed since 5 February 2009. A significant number of buildings were destroyed before 5 February 2009. A complete damage assessment is in progress by UNITAR/UNOSAT.
5. **Mulattivu:** Building destruction also continues in Mulattivu with a small number of new destruction between 29 March & 19 April. A complete damage assessment is in progress by UNITAR/UNOSAT.
6. **West of Putumattalan:** Bridge closed by multiple roadblocks and road damages (29 March -19 April) (TZ2) transport into CSZ impossible.

### IDP (SHELTER) MOVEMENT SUMMARY:

Over five thousand of IDP shelters were relocated within the CSZ during April under pressure from increased shelling and military operations along the western sections of the CSZ. The approximate area of IDP settlement has further shifted eastward towards the coastline and south into the areas of heavy shelling between the villages of Karaiyamullivaikal and Vellamullivaikal.

1. The northern IDP shelter limit has remained stable between 29 March -19 April, however the density of IDPs here has sharply decreased. The southern IDP shelter limit has remained relatively stable between 29 March & 19 April, however the density of IDPs situated in the heavy shelling and damage zone between Karaiyamullivaikal and Vellamullivaikal has increased sharply.
  2. Over 5,500 IDP shelters moved from western side of the CSZ (29 March -19 April) likely in response to escalating military activity and shelling. This estimate has been severely limited by cloud cover, and thus is potentially larger by two to four thousand shelters.
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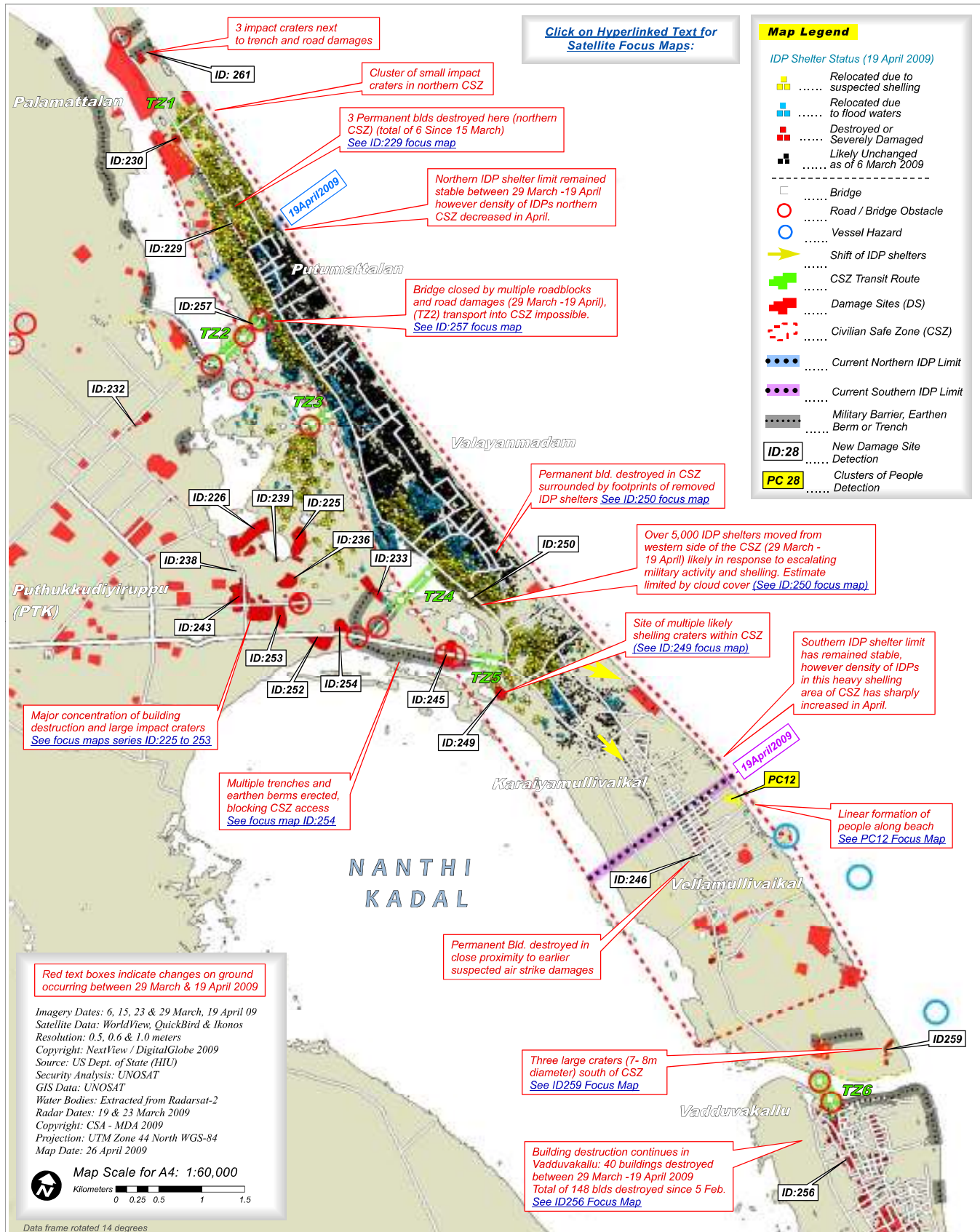


# UPDATE 6: OVERVIEW OF CSZ DAMAGES AND IDP MOVEMENT

## 19 APRIL 2009 - MULATTIVU DISTRICT, SRI LANKA



SATELLITE IMAGERY: 19 APRIL & 6- 29 MARCH 2009 - MAP PRODUCED : 26 APRIL 2009



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# ID: 250 - IDP SHELTER REMOVAL AND BUILDING DESTRUCTION IN CSZ .. Page 1

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19 April 2009

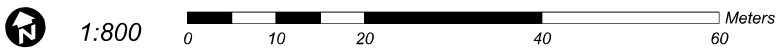
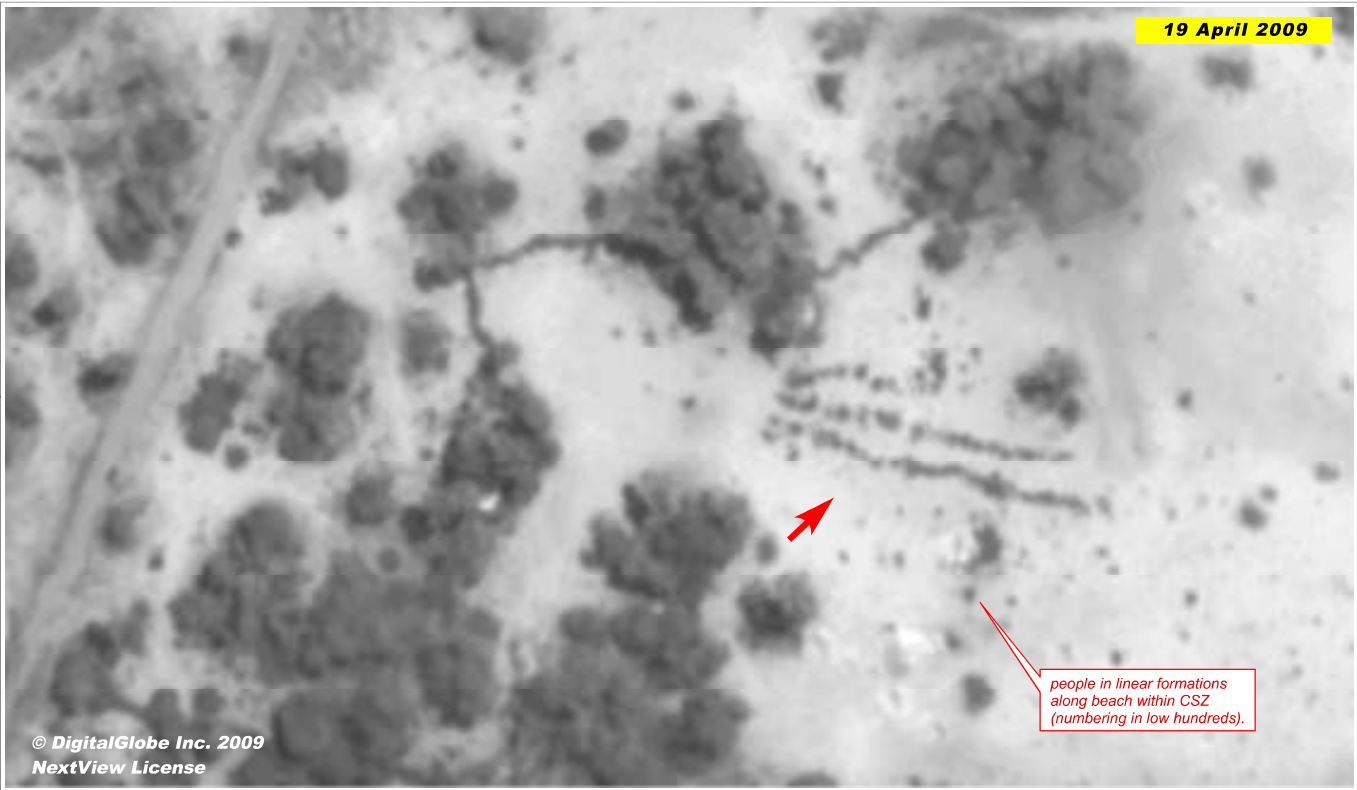


29 March 2009



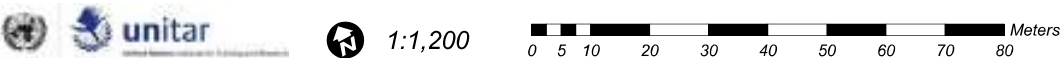
**ID: PC12 - CONCENTRATION OF PEOPLE IN CSZ ..**  
**Page 2**

DMS: 091900.49N 0804705.62E



**ID: 249 - SUSPECTED SHELLING IMPACT CRATERS WITHIN CSZ ..** Page 2

DMS: 091921.00N 0804531.47E



# ID: 229 - 6 BUILDINGS DESTROYED IN NORTHERN CSZ AND TRENCH FORMATION .. Page 3

DMS: 092151.06N 0804317.65E



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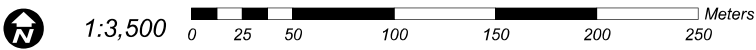
# ID: 257 - BRIDGE CLOSED BY MULTIPLE ROADBLOCKS AND ROAD DAMAGES ..

DMS: 092109.43N 0804326.50E



**ID: 254 - AREA OF MULTIPLE IMPACT CRATERS,  
ROAD DAMAGES AND TRENCH FORMATIONS ..  
Page 4**

DMS: 091932.44N 0804433.90E



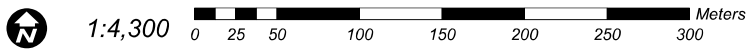
**ID: 233 - CLUSTER OF IMPACT CRATERS AND LARGE TRENCH / EARTHEN BERM  
FORMATION ON WESTERN EDGE OF CSZ .. Page 4**

DMS: 091949.00N 0804436.33E



**ID: 225, 234, 239 - AREA OF MULTIPLE IMPACT CRATERS OUTSIDE CSZ .. Page 5**

DMS: 091959.05N 0804410.68E



**ID: 226, 237, 262 - AREA OF MULTIPLE IMPACT CRATERS OUTSIDE CSZ .. Page 5**

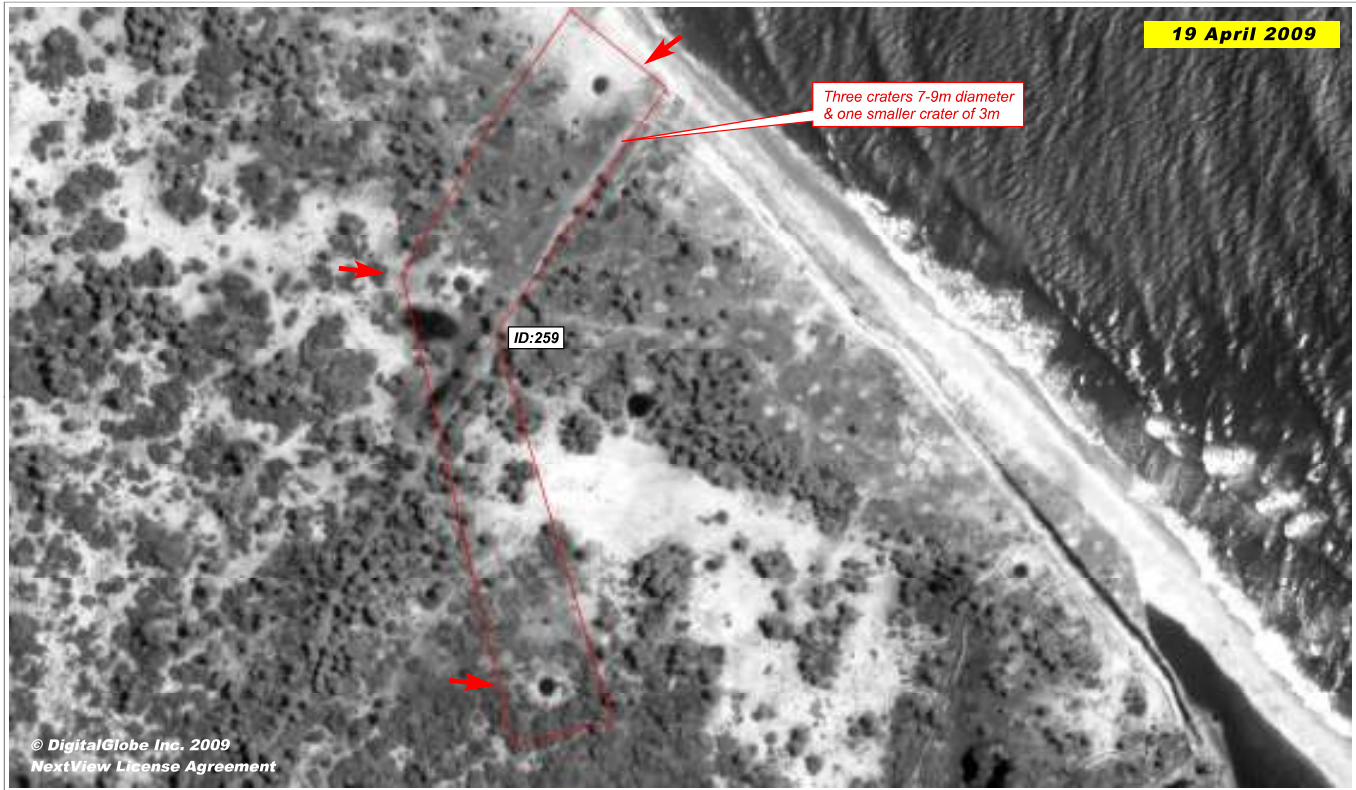
DMS: 091957.62N 0804346.36E





**ID: 259- MULTIPLE IMPACT CRATERS IMMEDIATELY SOUTH OF THE CSZ .. Page 6**

DMS: 091739.93N 0804826.36E



1:3,000 0 25 50 100 150 200 Meters

**ID: 256 - BUILDING DESTRUCTION CONTINUES IN VADDUVAKALLU SOUTH OF CSZ**

DMS: 091709.70N 0804810.02E



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## UNITAR/UNOSAT satellite solutions

### The UNITAR advantage

Since its establishment in 1965, UNITAR has built a unique set of expertise, experience, knowledge and capacities to design and implement a variety of research and training activities. In keeping with its mandate to “enhance the effectiveness of the United Nations in achieving the major objectives of the Organization” the Institute contributes with concrete actions to developing the capacities of Member States in the fields of economic and social development, diplomacy, and peace and security

### Reaching out to beneficiaries

UNITAR programmes provide training to approximately 80,000 professionals every year in some 200 different types of training activities, applying both face-to-face and distance-learning methodologies. Technology and satellite applications are gaining an important place in these activities as a growing number of UN and national entities adopt satellite derived geographic information methodologies in which UNOSAT, the Operational Satellite Applications Programme of UNITAR, excels since 2001

### A challenging mission

UNITAR mission is to deliver innovative training and conduct research on knowledge systems to develop the capacity of beneficiaries. Building on our experience, we optimize expertise, information and knowledge-sharing to achieve this mission. The specific mission of UNOSAT is to develop applied solutions and use training to make the UN system and member states benefit from space technology in the areas of human security and humanitarian relief, disaster prevention and territorial planning, and all other relevant areas

### UNOSAT: setting a new paradigm in satellite applications

Since 2001, UNOSAT has delivered satellite solutions to relief and development organisations within and outside the UN system and member states to help make a difference in the life of communities exposed to poverty, hazards, and conflict or affected by humanitarian and other crises. Our skills are focused on satellite derived geographic information and data analysis. Our work record includes over one thousand analyses since 2000, and 150 activations during humanitarian crises since 2003. UNOSAT is also a specialised training force with capacity to train national experts *in situ* or at headquarters in Geneva.

For information and contacts: [Unosat@unitar.org](mailto:Unosat@unitar.org) or [www.unitar.org/research](http://www.unitar.org/research)

