Fires at the Al Qayyarah oil field, Nineveh Governorate, between 18 July and 14 December, 2016

This map illustrates satellite-detected fires and smoke plumes at oil wells south of Mosul, and also east of Baiji, Iraq. The Mosul fires began with an initial fire at one or two wells on 8 May 2016, lasting less than one day, and intermittently burned in June. The current fire complex began on 3 July with daily fire detections occurring until about 12 July, when the fires greatly increased in number and continued to burn to the present at that scale. The fires east of Baiji have been active since early January 2016. The frequency of smoke plumes (in days) is symbolized in shades of red and yellow, and was calculated using daily MODIS satellite images collected between 18 July and 14 December, 2016. Note that as the plume dissipates then areas of thinner smoke are not detected in this process. The inset on the top right corner shows the thermal data from a Landsat image collected on 7 December, indicating the Mosul fires in white. The inset on the top left corner, from 6 December, shows the same area in false color, displaying the near infrared band in red. Additionally, precipitation data from NASA’s IMERG algorithm was included to evaluate instances of rainfall intersecting the smoke plume. This is a preliminary analysis and has not yet been validated in the field. Please send ground feedback to UNITAR - UNOSAT.

Legend
- Rain intersecting smoke plumes (mm)
  - < 5
  - 5 - 10
  - 10 - 14
- ● Settlements
- ○ Most affected settlements
- Highway/primary road
- Railway
- River

Smoke plume frequency (days)
- High: >123
- Low: 0

Map Scale for A3: 1:1,250,000

Analysis conducted with ArcGIS v10.4.1
Coordinate System: WGS 1984 UTM Zone 38N
Projection: Transverse Mercator
Datum: WGS 1984
Units: Meter

Satellite Data: MODIS
Imagery Dates: 18 July to 14 December, 2016
Resolution: 250 m
Copyright: NASA
Source: NASA

Precipitation Data: IMERG
Dates: 18 July to 14 December, 2016
Resolution: 0.1°
Copyright: NASA
Source: NASA

Road Data: OpenStreetmap

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 and related geographic information, research and analysis to UN humanitarian & development agencies & their implementing partners. This work by UNITAR-UNOSAT is licensed under a CC BY-NC 3.0