Fires at the Al Qayyarah oil field, Nineveh Governorate, between 18 July 2016 and 7 January 2017

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 until gradual reductions in detected fires occurred starting in November 2016. 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 2016 and 7 January 2017. 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 infrared data from a Landsat image collected on 23 December 2016, indicating the Mosul fires in white. The inset on the top left corner, from 1 January 2017, shows the same area in real color. 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 - 40
- Settlements
- Most affected settlements
- Highway/primary road
- Railway
- River

Smoke plume frequency (days)
High: 139
Low: 2

Map Scale for A3: 1:125,000
Resolution: 250 m
Date: 18 July 2016 to 7 January 2017

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

Satellite Data: MODIS
Imagery Dates: 18 July 2016 to 7 January 2017
Resolution: 250 m
Copyright NASA
Source: NASA

Precipitation Data (IMERG)
Dates: 18 July 2016 to 7 January 2017
Resolution: 0.1°
Copyright NASA
Source: NASA

Road Data: OpenStreetMap

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