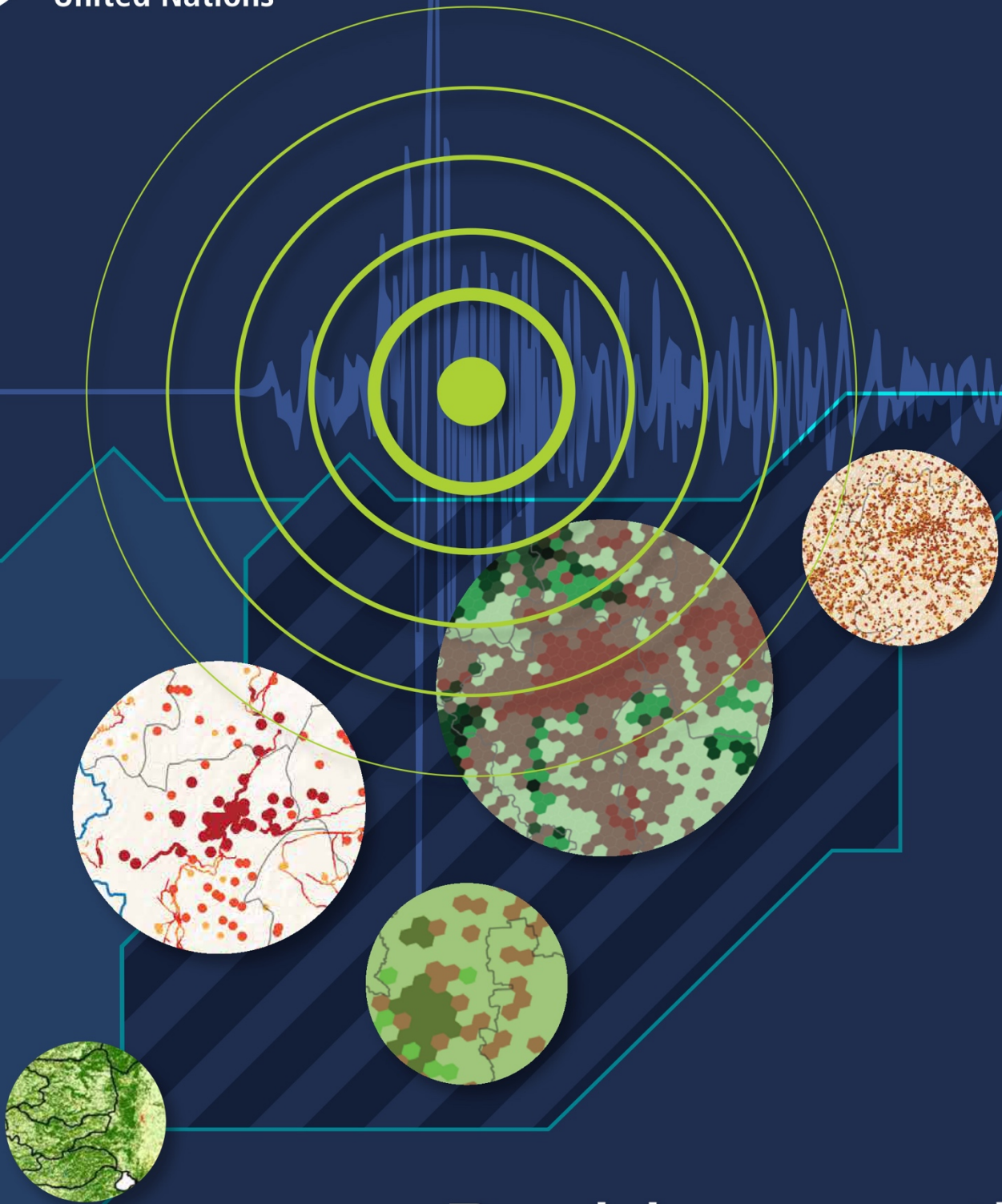




Food and Agriculture
Organization of the
United Nations



Rapid geospatial
assessment after
**Earthquake in the
Syrian Arab Republic** in 2023

Rapid geospatial assessment after Earthquake in **Syrian Arab Republic in 2023**

Impacts on infrastructure and farming community during the period February-March 2023

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Executive summary

On February 6, 2023, an earthquake of magnitude of 7.7 Richter scale struck near the northern and western Syrian Arab Republic, causing severe damage to infrastructure and the farming community and devastatingly impacting people, infrastructure, and the environment. A rapid geospatial impact assessment was conducted in the most impacted area in the Syrian Arab Republic. Available data and information along with satellite imagery and remote sensing techniques were used to assess geospatial indicators on impacts of the earthquake on the people, infrastructure, and cropland area.

Administrative boundary from different sources (like Global Administrative Areas–GADM) Humanitarian Data Exchange–HDX and Global Administrative Unit Layers–GAUL) were compared and HDX (GADM, HDX and GAUL) were compared, and HDX was chosen as it provided the most updated and better detailed administrative information. For a better visual representation, sub-district admin boundaries are disaggregated into a hexagon grid of area 10 km². Hexagons have a uniform area representation, allowing for easier analysis and providing good spatial correlation. A proxy land cover map for 2022 was prepared using satellite imagery from Sentinel 1 and the land cover legend from AIT, ICARDA, and WASWC (2004) at a spatial resolution of 10 m. A derived damage proxy map on infrastructures from the Earth observatory of Singapore and population data from Worldpop (2020) were obtained and used in the assessment. The proxy indicators on people's exposure to earthquakes, characterization of irrigated cropland into high, medium and low classes, and impact on irrigation infrastructures were assessed. The results are visualised over sub-district boundaries and hexagonal grids.

The results of the assessment showed that 942 262 people, or 7% of the area's total population, were possibly impacted. The districts with the highest number of impacted people are Elbistan, Battalgazi, Yesilyurt, Pozanti and Golbasi. Around 110 km² where built-up area was damaged was identified and mapped. The districts with more areas of built-up damage are Jebel Saman (28.6 km²), Al Ma'ra (15.7 km²), Menbij (14.5 km²), Al Bab (10.7 km²) and A'zaz (8.2 km²). Regarding exposed irrigated cropland, Afrin, Ain Al Arab, A'zaz, As-Salamiyeh and Al Ma'ra districts were most affected. The most impacted districts with irrigated infrastructures on wells are Tartous, Lattakia, As-Salamiyeh; on waterways are As-Suqaylabiyah, Jisr-Ash-Shugur, Tell Salhib; and on dams are Bahlolieh, Mzair'a and Safita.

Experience from this assessment allows identifying several recommendations. Field data collection would help cross-checking the results, proposing agronomic advice, and using maps and spatial results to develop response plans. In the future, assessing natural resources, irrigation infrastructure, crop, and agriculture, would benefit from improved spatial information. As for example, developing a national land cover reference system using very high-resolution satellite imagery, ground validation, and accuracy assessment would significantly improve our understanding of the status of natural resources, land, water, and vegetation in general.

The current assessment also highlights the relevance of a national geospatial database and monitoring platform for irrigated land.

Background

Earthquake impact assessment is a critical process that involves evaluating the potential consequences of an earthquake on the environment, infrastructure, and human life. It aims to provide decision-makers with information that can help them make informed decisions and take proactive measures to mitigate the impact of an earthquake (Lin *et al.*, 2011). Hazard identification and mapping involves identifying areas at risk of earthquakes and mapping out the potential impacts of an earthquake, such as ground shaking, liquefaction, and landslides. Earthquake impact assessment is critical to disaster risk reduction and can help communities and decision-makers to better prepare for and respond to earthquakes (Goda *et al.*, 2016).

On the 6th of February, a 7.8 degrees earthquake struck southern Turkey near Syria's northern border. The earthquake was centered about 33 km (20 miles) from Gaziantep. Aleppo, Latakia, Hama, Idleb and Tartous are the governorates most affected by the earthquake. In this regard, a rapid geospatial assessment has been conducted by The Food and Agriculture Organization of the United Nations (FAO) to determine the extent of the damage caused by the earthquake. The results aim to support the agricultural sector's current and future response programs.

The objectives of this rapid geospatial emergency impact assessment, considering the limited time and information available to conduct this assessment, are to (1) assess the damage extent and magnitude, (2) identify affected irrigation infrastructure, (3) assess the exposure of farmers to the earthquake and (4) provide the results in support to regional, national, and local response actors.

The results have been produced within a short time period with the objective to support an emergency response process using machine learning and artificial intelligence techniques that allowed integration of available datasets and complement the analysis. However, Unavailable data and information, and the limited time to conduct this assessment, may have limited the results.

Methodological approach

The following methodological approach was implemented to provide results for this rapid geospatial impact assessment.

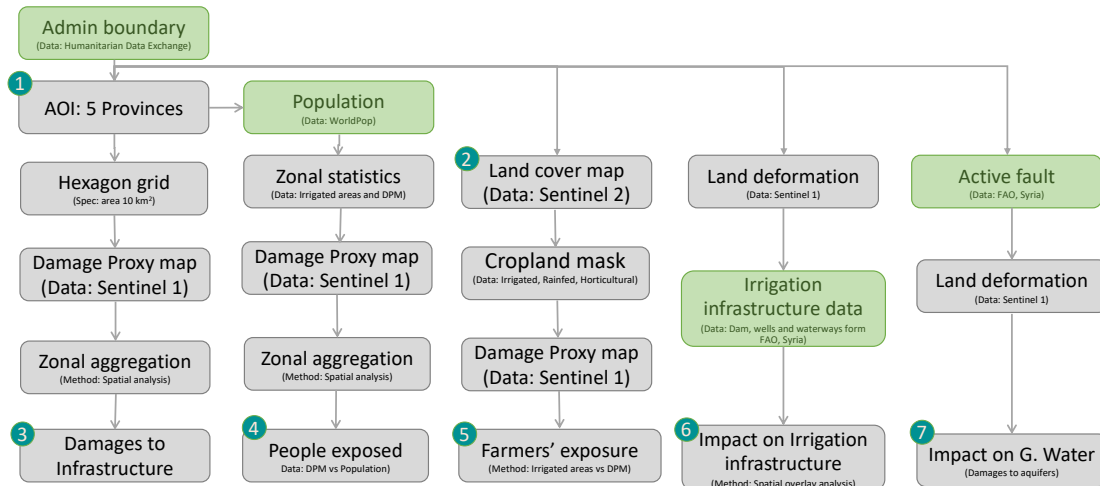


Figure 1 Methodological approach for the earthquake impact assessment in the Syrian Arab Republic. Grey boxes: data generated under this assessment. Green boxes: Input datasets. Green labels: different steps followed under this assessment.

Step 1: Selection of Area of Interest (AOI)

The selection of the AOIs was based on the damage proxy map (DPM) derived from Earth Observatory of Singapore - Remote Sensing (EOS-RS) to prioritize high-impact areas. Administrative boundary layers from Global Administrative Areas (GADM), Humanitarian Data Exchange (HDX) (UNOCHA, 2020), UNOCHA and Global Administrative Unit Layers (GAUL) were compared. HDX, UNOCHA was selected as the data source for the assessment because it provided updated and better detailed administrative information. Administrative boundaries at the provincial level defined the AOI. Statistics were prepared at district and sub-district levels.

Step 2: Preparation of proxy land cover map

Land cover legend for Syrian Arab Republic was derived from AIT, ICARDA, and WASWC (2004). A proxy land cover was prepared at the subnational level using Sentinel 2. A normalized difference vegetation index (NDVI) mask for 2022 delineated the cultivated area mask. The land cover dataset was prepared using 2022 satellite imageries (Sentinel 2), 700 training data, and a random forest (machine learning) model in SEPAL. The spatial resolution of the land cover data is 10 m. The time series profile of Normalized Difference Vegetation Index (NDVI) of 2022 is used to classify horticulture, irrigated and rainfed cropland areas. Land cover map consists of eight different classes (built-up areas, bare areas, forest, irrigated field crops, horticultural crops, rainfed field crops, grasses and shrubs, and waterbodies). To avoid misclassification from the machine learning model, the land cover map and the reference points were compared with the WaPOR land cover map (WaPOR, 2021) and irrigation map shared by the country office, and the post-processing of land cover was carried out.

Step 3: Derivation of Damage Proxy Maps (DPM)

DPM uses the so-called Coherence Change Detection (CCD) algorithm based on Sentinel-1 SAR data (Tay et al. 2020) to produce damage proxy maps at 30m pixel size. Data is only reliable over built-up areas by detecting severe damaged building. DPM was derived from synthetic aperture radar (SAR) images acquired by the Copernicus Sentinel-1 and ALOS 2 satellites considering the pre (13 Oct 2022 to 29 Jan 2023) and post-earthquake (10 Feb 2023) events. The data were masked using built-up areas from the land cover.

Step 4: Assessment of population exposure

Population exposure was estimated using the damage proxy map (DPM) and Worldpop population data (Worldpop, 2020) at the national level. The DPM layer was overlaid on the population layer to estimate the exposed population. The percentage of the population exposed is calculated using the area's total population being assessed. This methodology is commonly used in impact assessment and management to assess the potential impact of earthquake on a given population.

Step 5: Classification of hexagon grids by extent of Irrigated cropland

Irrigated cropland area is obtained from a land cover map. For a better visual representation, sub-district admin boundaries are disaggregated into a hexagon grid of area 10 km². Hexagons have a uniform area representation, allowing for easier analysis and providing good spatial correlation. Irrigated cropland areas are estimated by aggregating the area at the hexagonal level.

Step 6: Zonal statistics using damage proxy map and irrigated cropland

The hexagonal grids from irrigated cropland and the damage proxy map were combined with mapping the farmers exposure to the earthquake. Humanitarian Data Exchange (HDX) boundaries (HDX, 2020) were used to get the statistics at the sub-district levels.

Step 7: Preparation of deformation map

Land deformation map was prepared using multiple pre and post-event images from Sentinel-1 to estimate the horizontal displacement. This indicator helps identify areas with a potentially impacted aquifer system by earthquake damages. High displacement zones correspond to a higher impact on aquifer systems due to compaction and leakage. Based on the deformation map, the faults are classified as active and not active.

Step 8: Impact on irrigation infrastructure

The locations of irrigation infrastructure (dams, surface irrigation and drainage networks and related structures, pumping stations and wells, etc) and potentially damaged area derived from deformation map/ distance from active fault, were overlaid to stratify locations of irrigation infrastructure based on earthquake damage magnitude.

Humanitarian Data Exchange (HDX) boundaries (HDX, 2020) were used to extract the statistics at the sub-district levels.

Results

Result 1: Area of Interest (AOI)

The AOI selection aimed to prioritise the assessment areas where impacts from the earthquake were high. Considering this, the provinces of Tartous, Hama, Latakia, Idlib and Aleppo were chosen as they had a higher extent of impacted areas. For this purpose, the administrative boundaries from Global Administrative Areas (GADM), Humanitarian Data Exchange (HDX) (HDX, 2020) and Global Administrative Unit Layers (GAUL) are compared, and HDX was chosen as the data source for the assessment because it provided updated and better detailed administrative information.

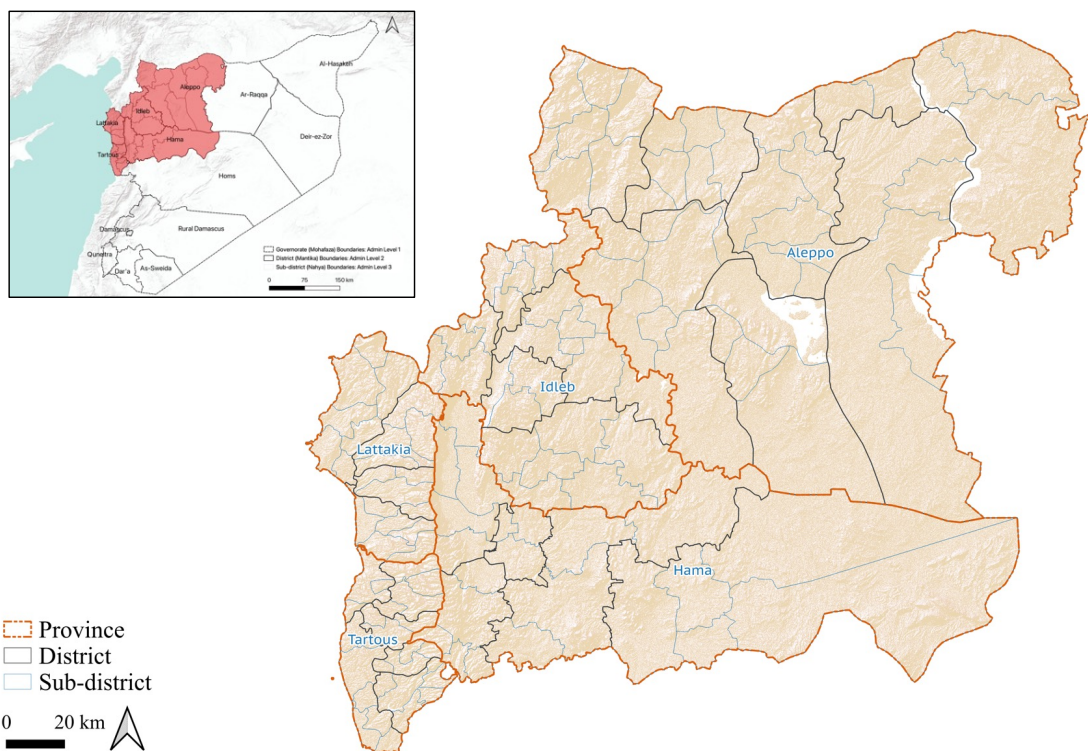


Figure 2 Area of interest at district level in Syrian Arab Republic (HDX, UNOCHA–2020).

Result 2: Proxy land cover

Land cover legend for Syrian Arab Republic was derived from AIT, ICARDA, and WASWC (2004) (De Pauw, 2004). The land cover was prepared using Sentinel 2 and training data from a high-resolution map (like Google and Bing). The land cover dataset was prepared using 2022 satellite imageries (Sentinel 2), around 700 training data, and a random forest model in SEPAL. The spatial resolution of the land cover data is 10 m. Time series profile of Normalized Difference Vegetation Index (NDVI) of 2022 are used to classify horticulture, irrigated and rainfed cropland area. Land cover map covers eight classes which include built-up areas, bare areas, forest, irrigated field crops, horticultural crops, rainfed field crops, grasses and shrubs, and waterbodies.

Land cover map at national and sub-national levels for specified AOI have been prepared. Zonal statistics were extracted based on the HDX administrative boundaries. The datasets at provincial, district and sub-district levels can be found in Annexes.

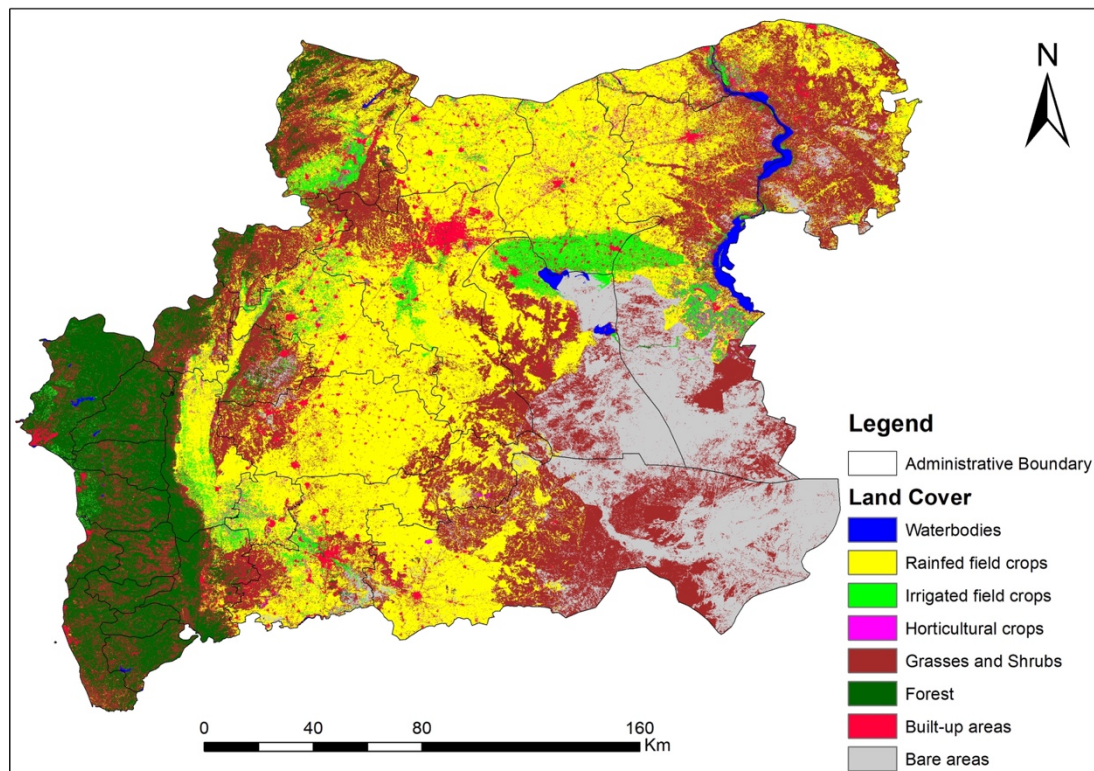


Figure 3 2022 land cover map in the area of interest.

Result 3: Damage Proxy Map (DPM)

DPM uses the Coherence Change Detection (CCD) algorithm based on Sentinel-1 SAR data (Tay et al. 2020) to produce damage proxy maps at 30m pixel size. DPM is only reliable over built-up areas by detecting severe building collapse. DPM was derived from synthetic aperture radar (SAR) images acquired by the Copernicus Sentinel-1 and ALOS 2 satellites before (13 Oct 2022 to 29 Jan 2023) and after (10 Feb 2023) the event by EOS-RS Lab (Lauriane CHARDOT, 2023). The DPM on infrastructures for Syrian Arab Republic was obtained from the Earth observatory, Singapore. Population data (Worldpop-2020), land cover and derived damage proxy map (Earth observatory, Singapore) were combined to help identify areas with a potentially high number of affected people.

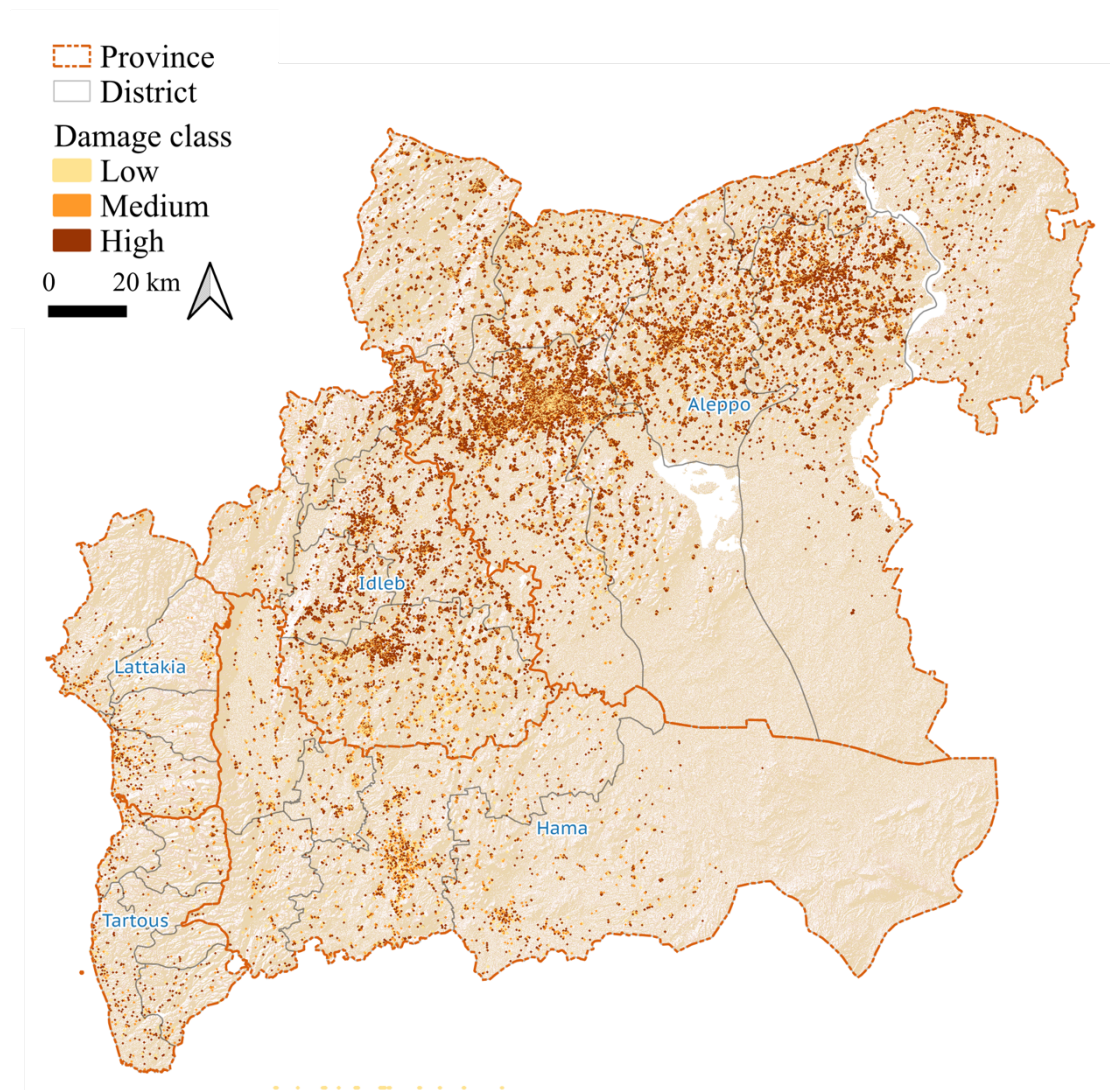


Figure 4 2023 damage proxy map in the area of interest for the rapid geospatial assessment of earthquake in Syrian Arab Republic.

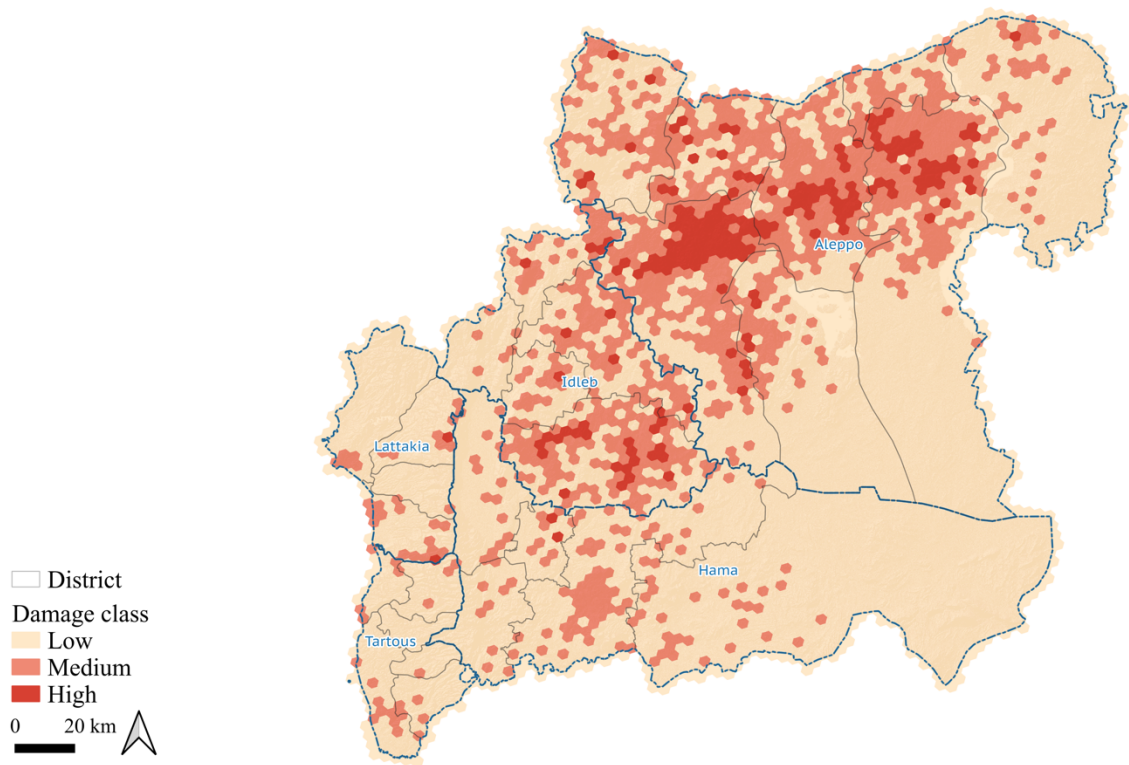


Figure 5 Aggregated proxy damage classes at hexagonal grid.

The results of DPM was cross-checked with coronatines of rural areas of Hama governorate, that was hit severely by the earthquake. These areas were reported damage in rural houses and animal sheds among others.

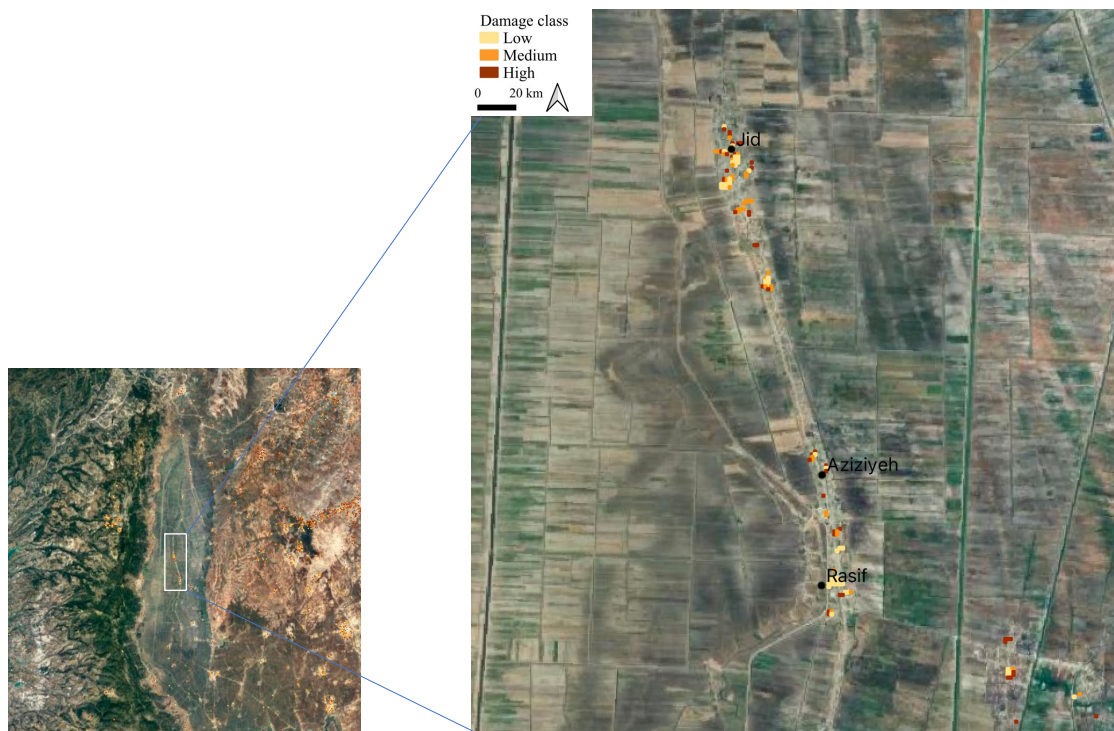


Figure 6 Cross-checking the results with three field impacted locations in Hama governorate.

Result 4: Exposure of people

A vulnerability assessment for the population exposed to earthquakes was conducted by combining the damage and the population density at administrative levels. The assumption is that the more people in the earthquake-impacted areas, the greater the exposure is. Population data (Worldpop-2020), land cover and derived damage proxy map (Earth observatory, Singapore) were combined to help identify areas with a potentially high number of affected people. The DPM layer was overlaid on the population layer to estimate the exposure of the population potentially affected.

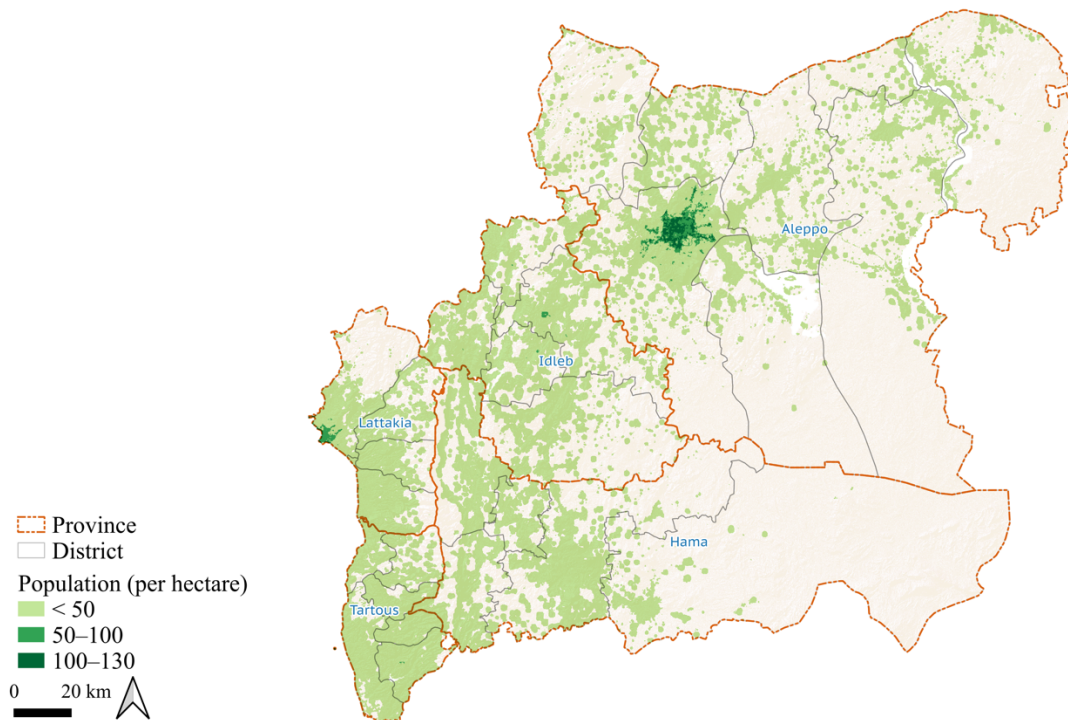


Figure 7 Population density map at district and sub-district administrative levels.

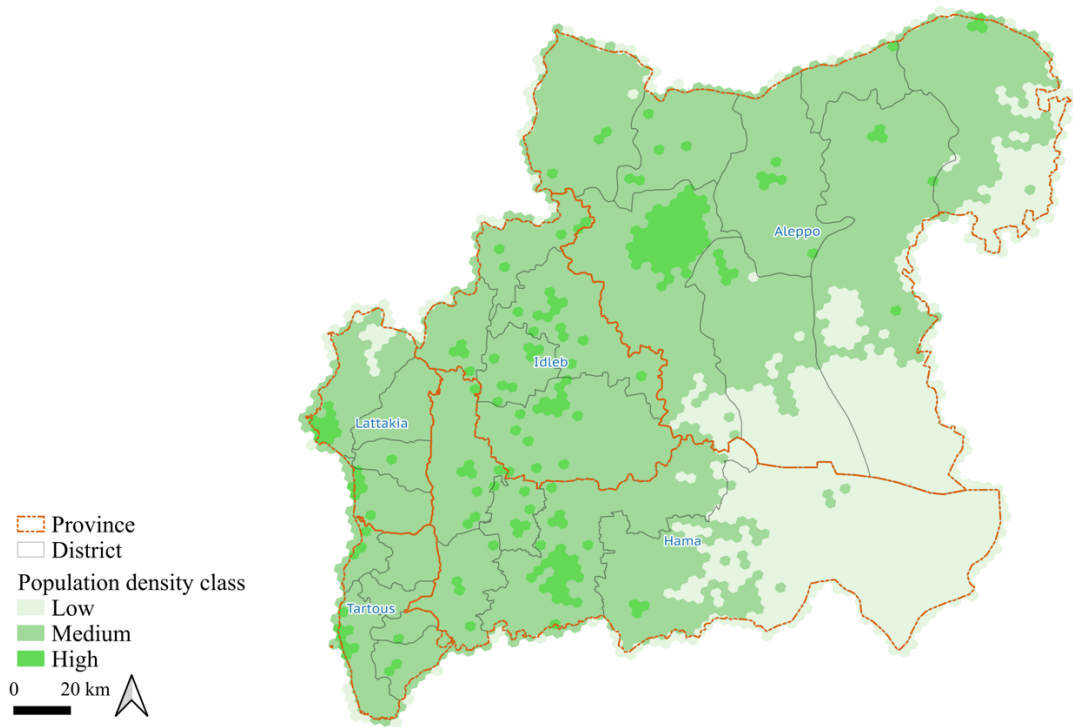


Figure 8 Categories of population density at 10 km² hexagonal level.

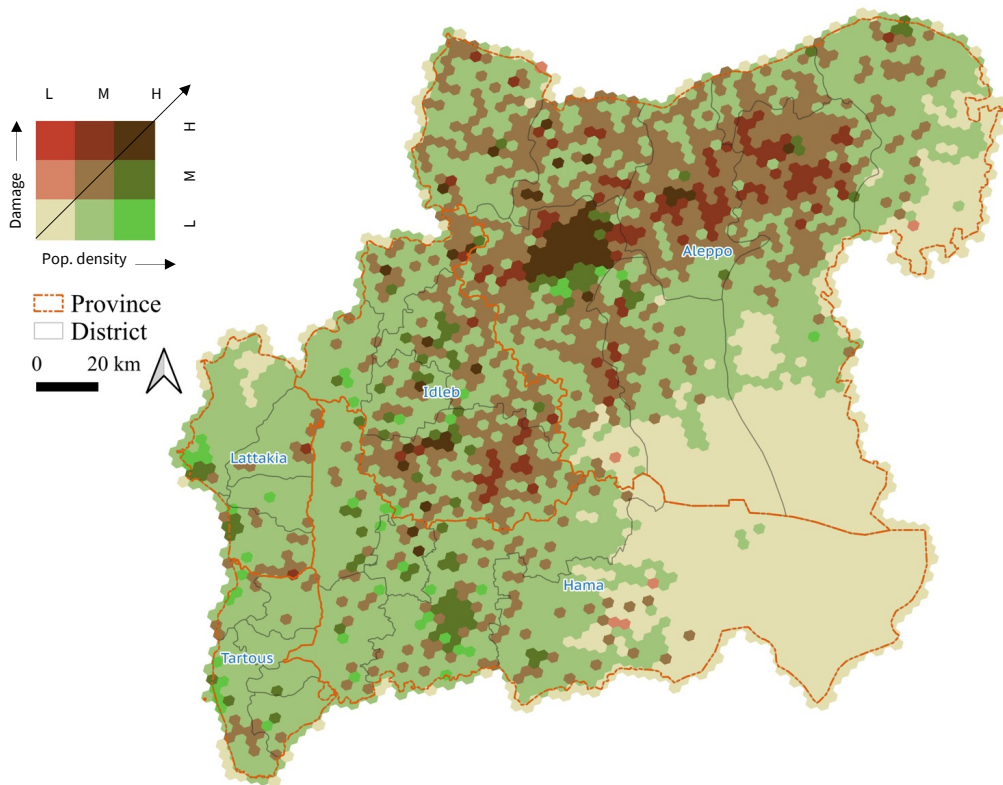
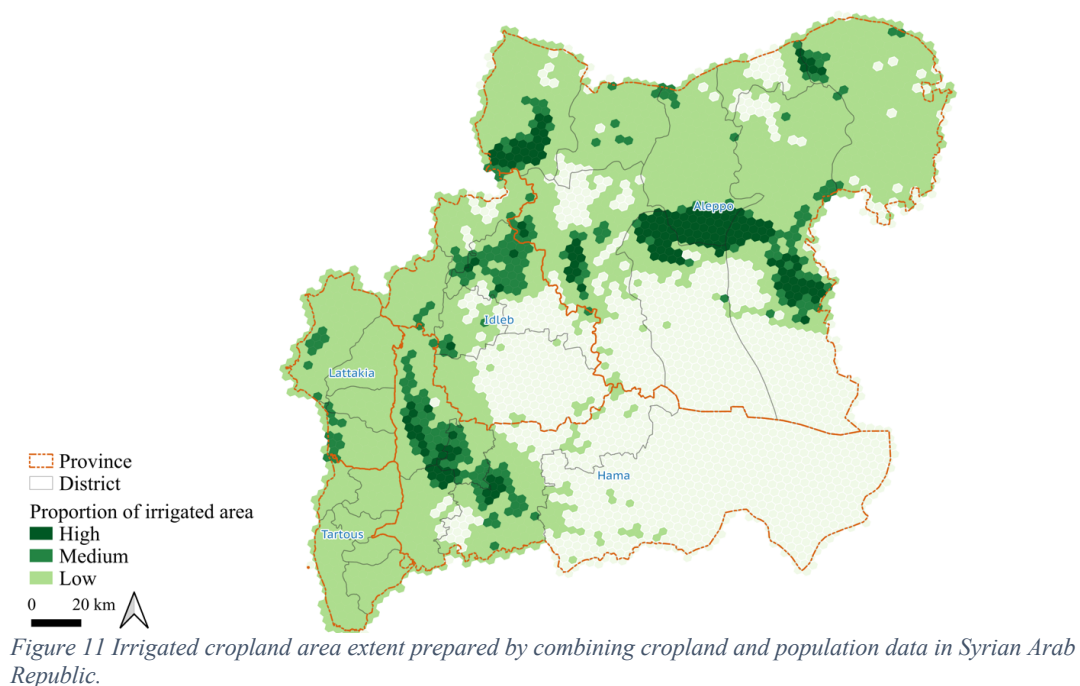
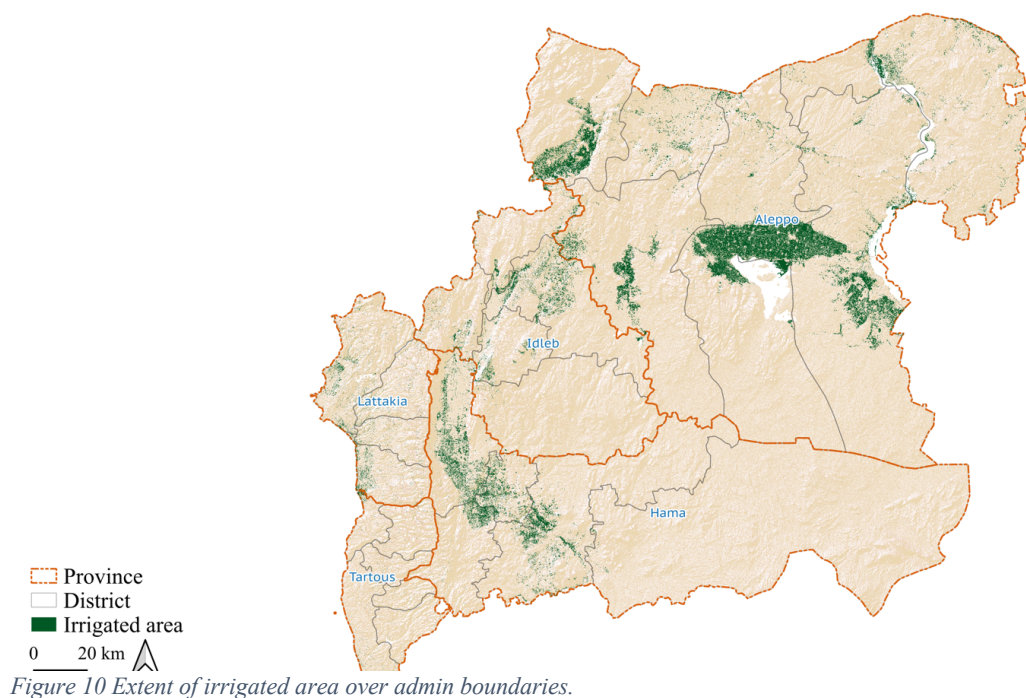


Figure 9 Potential exposure of people to earthquake prepared by combining population density and damages to infrastructures (2023).

Result 5: Irrigated cropland

Irrigated cropland area is obtained from a land cover map. For a better visual representation, sub-district boundaries are disaggregated into a hexagon grid of area 10 km². As, hexagons have a uniform area representation, allowing for easier analysis and providing good spatial correlation, irrigated cropland areas are estimated and visualized aggregating the area at the hexagonal level. Extent of irrigated areas was compared with WaPOR land cover map and irrigation map received from country office.



Result 6: Impact on irrigated cropland

Proxy indicator of exposure of agricultural sector was prepared by combining irrigated cropland from land cover and derived damage proxy map (Earth observatory, Singapore). The proxy indicator helps identify areas with a potentially higher degree of farmers' exposure to earthquake damage.

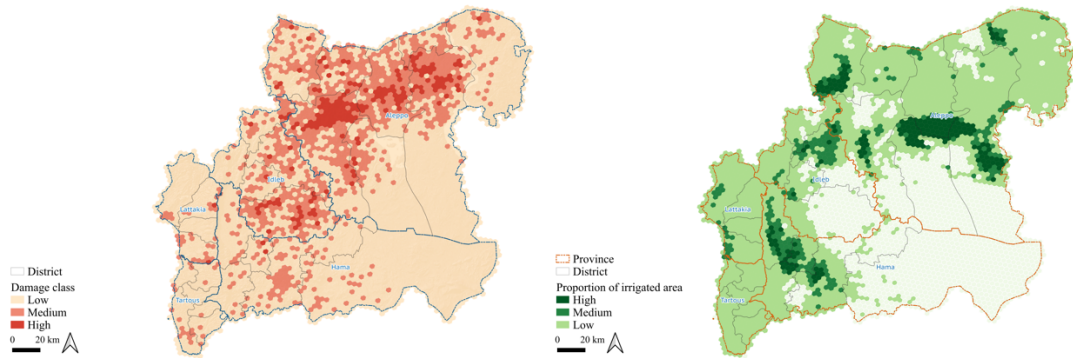


Figure 12 Hexagons grids of DPM and irrigated areas.

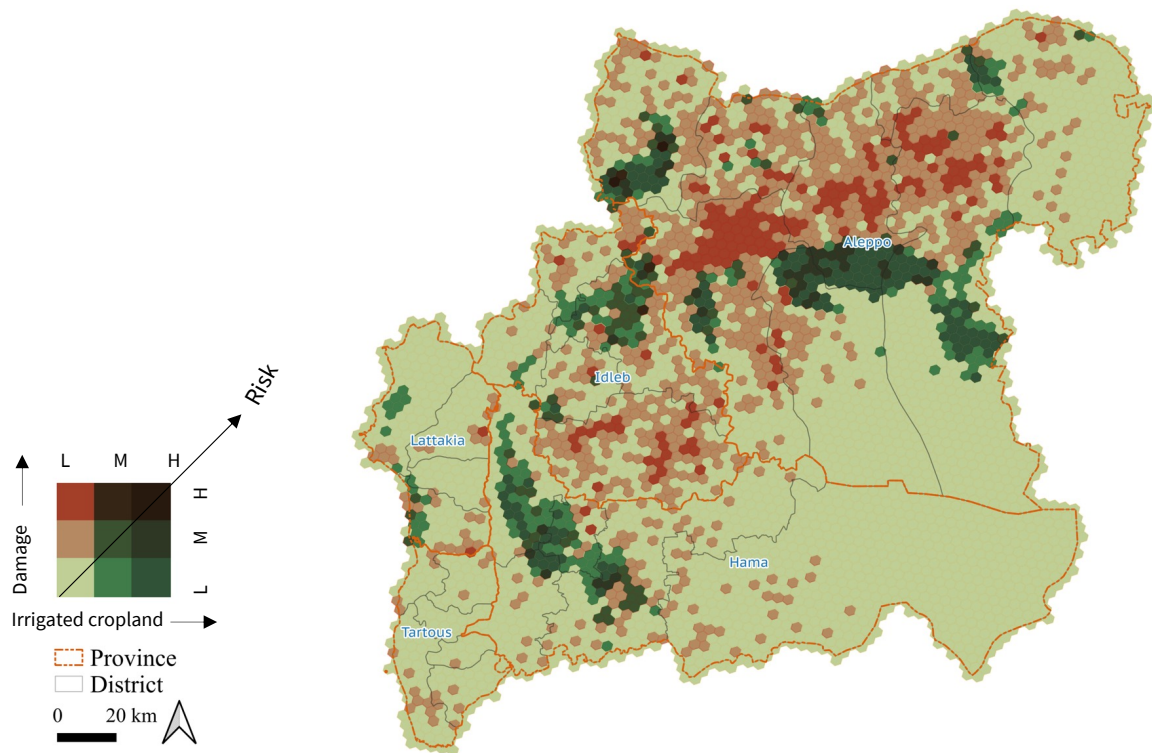


Figure 13 Farmers' exposure to earthquake prepared by combining the extent of irrigation and damages to infrastructures (2023).

Result 7: Land deformation

A land deformation map was prepared using multiple pre- and post-earthquake sentinel 1 time series images to estimate the horizontal displacement. This indicator helps identify areas with a potentially impacted aquifer system to earthquake damages. High displacement zones correspond to higher impact on aquifer systems due to compaction and leakage.

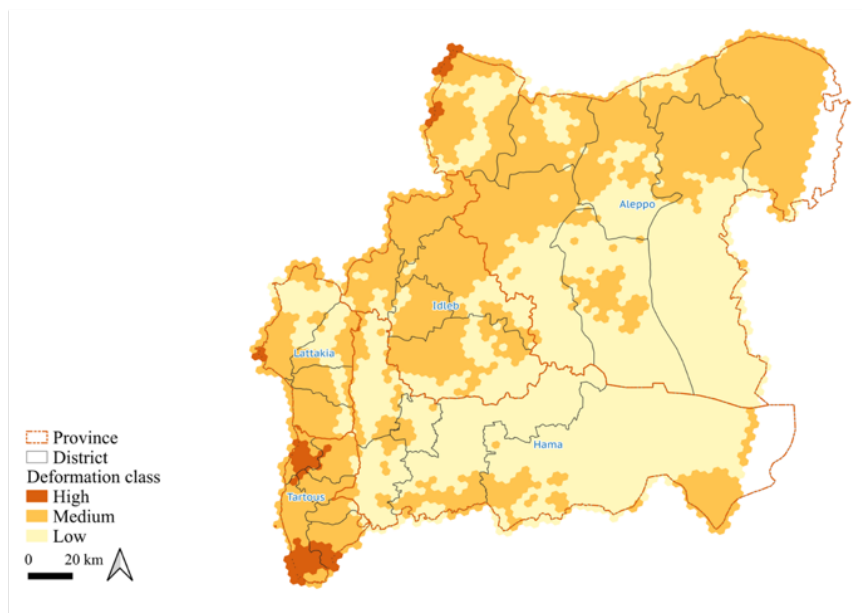
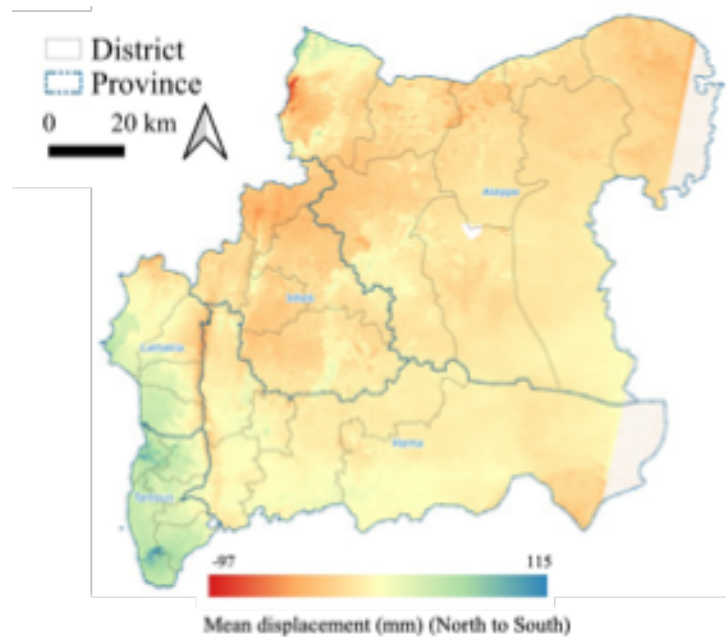
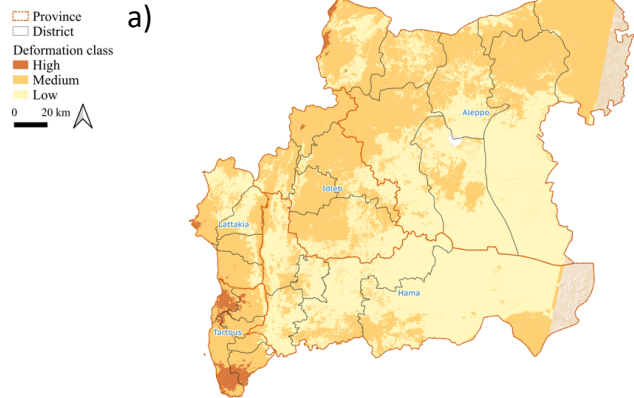


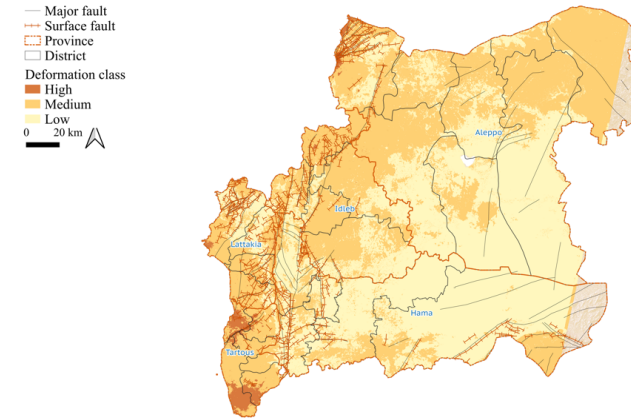
Figure 14 land deformation map a) Admin level b) Hexagons.

At this stage this map shows some apparent anomalies to be investigated, including the high apparent deformation in Tartous which may be due to local factors or some possible introduced error in the methodology of estimation of deformation.

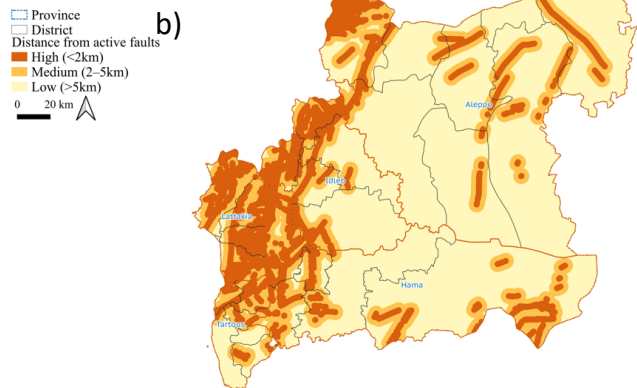
Step 1: Classification of deformation map



Step 2: Identification of active fault



Step 3: Distance from active faults



Step 4: Potentially damage areas by deformation map (a) and distance from active fault (b)

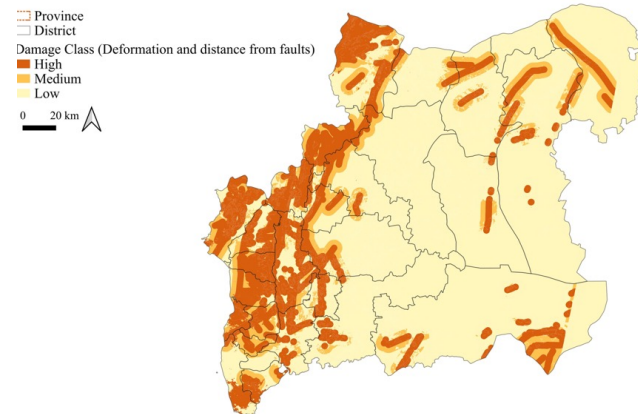


Figure 15 Potentially damage areas from land deformation and distance from active faults.

Result 8: Exposure of on irrigation infrastructure

To identify the impact on irrigation infrastructure, deformation maps were classified into different severity classes. The detailed steps are as follows:

- Step 1: Land deformations map was classified into three classes of severity (high, medium and low) based on the magnitude of deformation
- Step 2: Active faults were identified by overlaying the layer of tectonic faults over reclassified land deformation map. All the faults falling into high and medium land deformation classed were classified as active faults.
- Step 3: Active faults were classified into three classes based on the distance to active fault. All the areas falling around the 2 km are classified as high, 2-5 km as medium and > 5km as less susceptible to damage.
- Step 4: The results of land deformation and distance of faults were merged to identify potentially damaged areas.

The locations of irrigation infrastructure (dams, waterways and wells) and potentially damaged areas derived from deformation map/ distance from the active fault, were overlaid on the irrigation infrastructure based on earthquake damage magnitude. The proxy indicator helps identify irrigation facilities likely to be impacted by the earthquake.

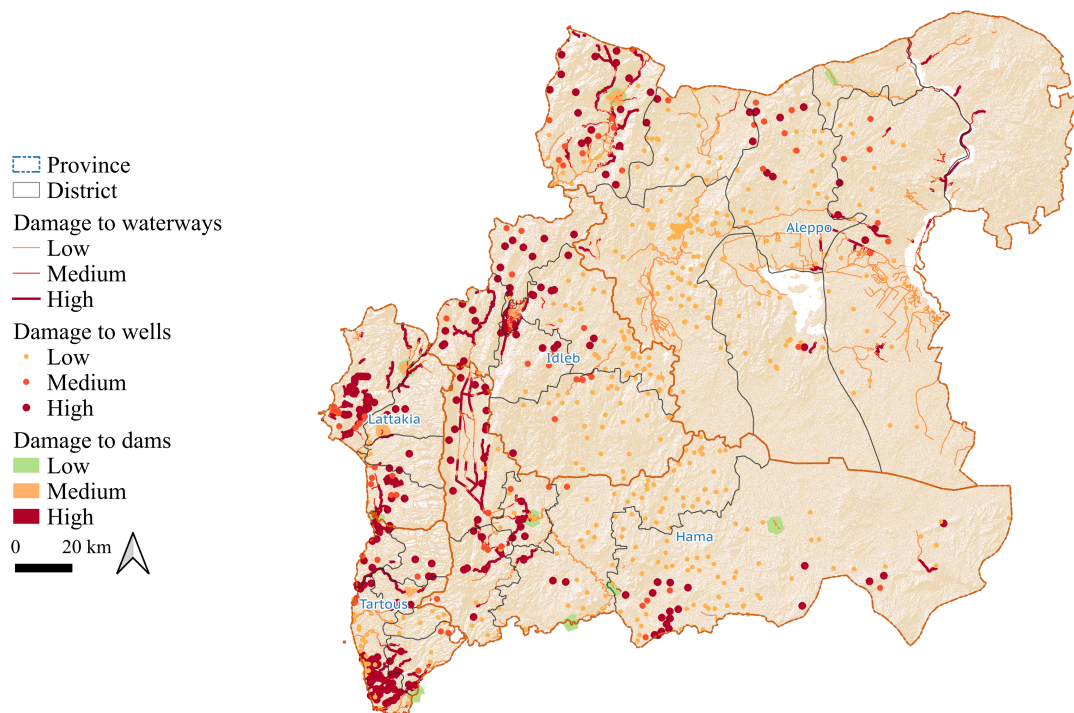


Figure 16 Impact on Irrigation infrastructure prepared using potential damage areas from land deformation and distance from active faults.

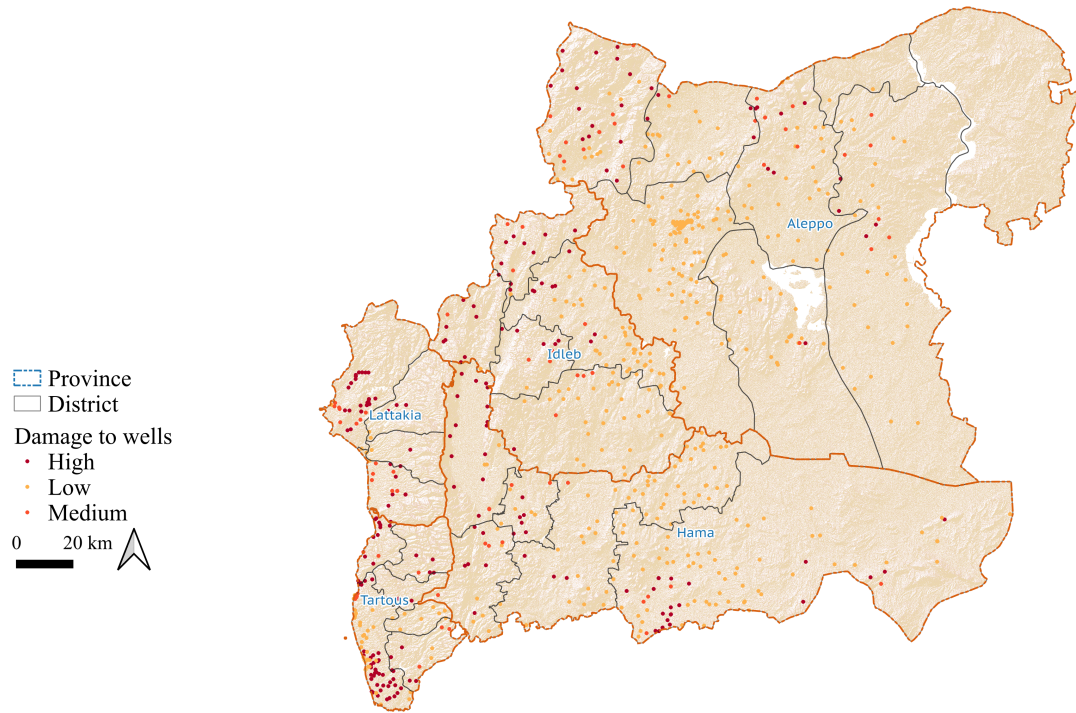


Figure 17 Location of potential impacted groundwater wells.

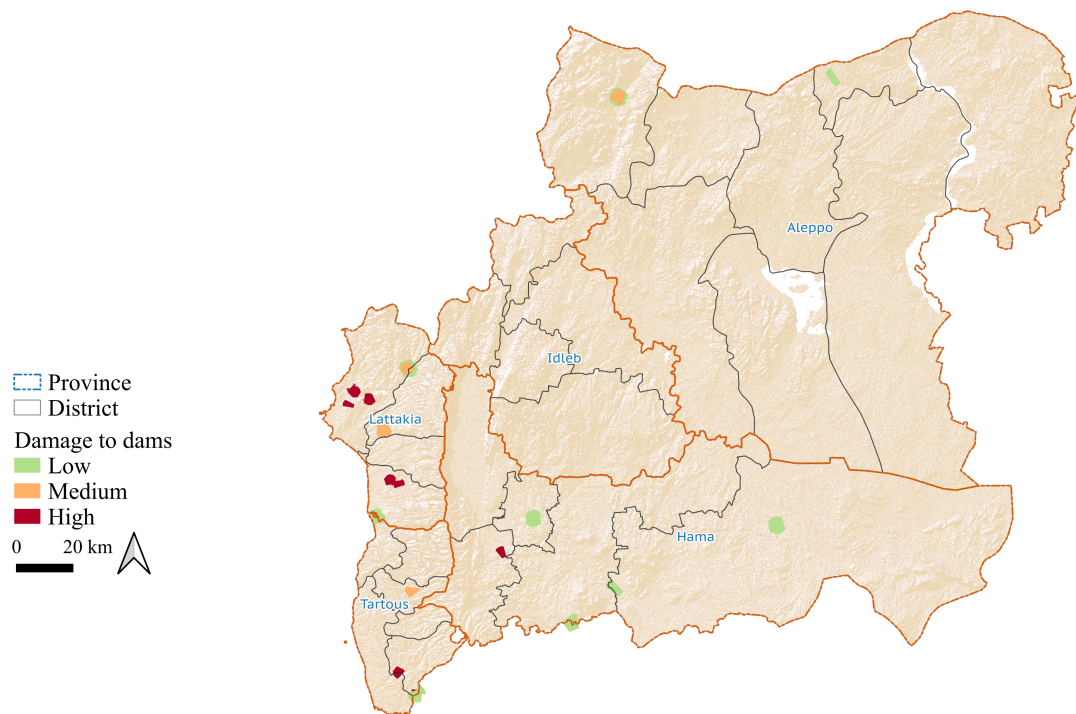


Figure 18 Location of dams and **possibility** of damage given deformation and other maps.

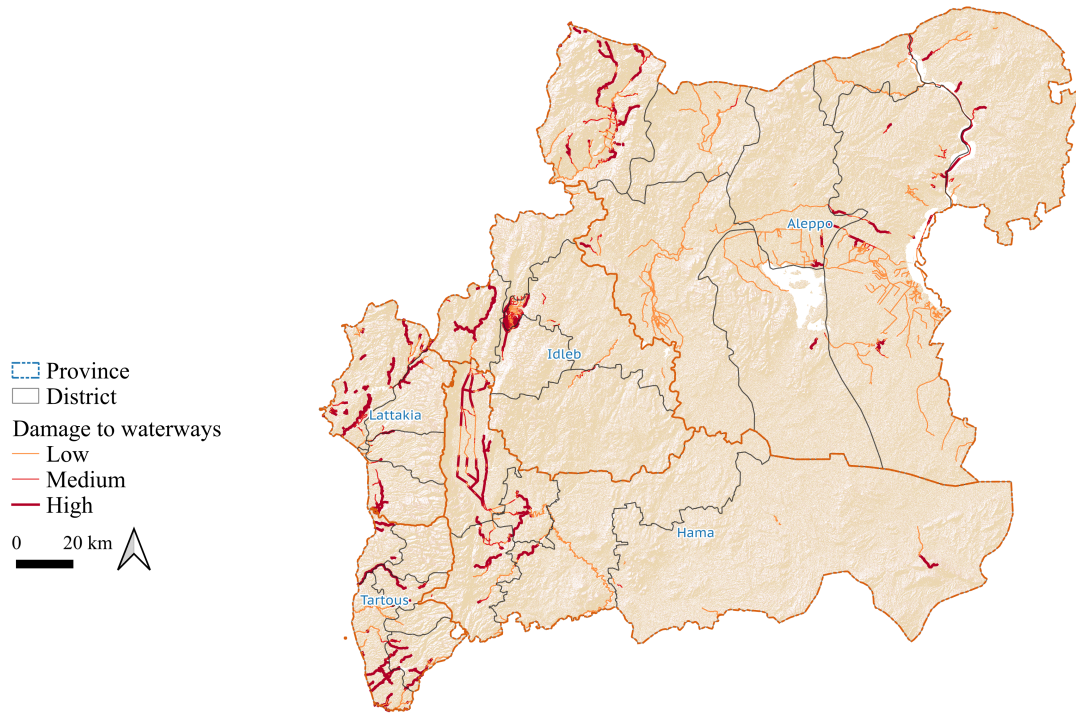


Figure 19 Location of potential impacted waterways.

Conclusion & Recommendations

The assessment highlighted that 942 262 people were potentially impacted, which is 7% of the total population of the affected area. The districts with a greater number of impacted people are Elbistan, Battalgazi, Yesilyurt, Pozanti and Golbasi. Around 110 km² of the built-up area was damaged, and the districts with more areas of built-up damage are Jebel Saman (28.6 km²), Al Ma'ra (15.7 km²), Menbij (14.5 km²), Al Bab (10.7 km²) and A'zaz (8.2 km²). Regarding exposed irrigated cropland, Afrin, Ain Al Arab, A'zaz, As-Salamiyeh and Al Ma'ra districts were most affected. The most impacted districts with irrigated infrastructures on wells are Tartous, Lattakia, As-Salamiyeh; on waterways are As-Suqaylabiyah, Jisr-Ash-Shugur, Tell Salhib; and on dams are Bahlolieh, Mzair'a and Safita.

It is important to highlight that the results of the current geospatial assessment might not align with national assessment for several reasons, such as the unavailability of satellite images within a particular time frame, discrepancies in the definitions of terminologies, methodologies, datasets, the spatial and temporal resolution of datasets or imageries. Nevertheless, combining geospatial technologies, field data, and national databases can aid in creating efficient and sustainable agricultural monitoring and planning strategies, as well as conducting speedy emergency impact assessments in the future.

As such, it is strongly advised that a comprehensive evaluation of all accessible information and datasets be conducted for effective methodological formulation. Additionally, there should be increased interaction between field/ground data for validation and accuracy assessment of remote sensing data and an enhancement of national technical capabilities in evaluating the vulnerability of affected areas, crops, and populations to support national recovery efforts. It is also necessary to generate consistent annual statistics that are frequently updated while establishing crop types and calendars at the smallest administrative level for integration with geospatial emergency response measures. Finally, innovative, cost-effective geospatial technologies must be utilized promptly for damage assessment purposes within a set timeframe.

At the same time, there is the need to link this type of analysis with operational research questions to make the best use of the power of geospatial analysis. In the early days of a response to a natural disaster such as an earthquake, for FAO, these questions are typically:

- How many people have been affected in rural areas – through immediate damage to their farms, houses, animal sheds, etc?
- What is the extent of damage to agriculture-related community infrastructure – including irrigation canals, dams and equipment; market infrastructure (markets, rural roads, bridges, processing centres, cold chain facilities, etc).

From these two questions – combined with a deep local understanding of the farming system - can be derived estimates of likely disruption to agricultural production.

It is worth noting that in order to answer the second set of questions, it is helpful to have base level maps of the location of assets, and a geographical representation of the food system in question.

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Annex I – Results at sub-district level

Table 1 Total land area, potentially affected built-up areas at sub- district level.

Source of administrative units: HDX, UNOCHA 2020, admin level 2

| ID | Provinces | Districts | Sub-districts | Land area (km2) | Damage proxy class (km2) | | |
|----|-----------|-------------|--------------------|-----------------|--------------------------|------|--------|
| | | | | | High | Low | Medium |
| 1 | Aleppo | Jebel Saman | Jebel Saman | 663.87 | 2.5 | 4.05 | 9.97 |
| 2 | Aleppo | Jebel Saman | Atareb | 308.26 | 0.31 | 0.58 | 1.94 |
| 3 | Aleppo | Jebel Saman | Tall Ed-daman | 1146.75 | 0.71 | 0.9 | 1.87 |
| 4 | Aleppo | Jebel Saman | Haritan | 232.73 | 0.4 | 0.72 | 2.27 |
| 5 | Aleppo | Jebel Saman | Daret Azza | 227.5 | 0.05 | 0.18 | 0.79 |
| 6 | Aleppo | Jebel Saman | Zarbah | 354.8 | 0.08 | 0.19 | 0.7 |
| 7 | Aleppo | Jebel Saman | Hadher | 131.33 | 0.04 | 0.08 | 0.28 |
| 8 | Aleppo | Al Bab | Al Bab | 489.12 | 0.49 | 0.93 | 3.34 |
| 9 | Aleppo | Al Bab | Tadaf | 321.11 | 0.54 | 0.9 | 2.62 |
| 10 | Aleppo | Al Bab | Dayr Hafir | 112.17 | 0.01 | 0.02 | 0.08 |
| 11 | Aleppo | Al Bab | Ar-Ra'ee | 352.17 | 0.15 | 0.29 | 0.84 |
| 12 | Aleppo | Al Bab | Eastern Kwaïres | 218.56 | 0.05 | 0.14 | 0.49 |
| 13 | Aleppo | Al Bab | Rasm Haram El-Imam | 203.49 | 0.08 | 0.19 | 0.66 |
| 14 | Aleppo | Al Bab | A'rima | 317.24 | 0.37 | 0.59 | 1.77 |
| 15 | Aleppo | Afrin | Afrin | 427.76 | 0.21 | 0.3 | 0.76 |
| 16 | Aleppo | Afrin | Bulbul | 203.39 | 0.07 | 0.12 | 0.35 |
| 17 | Aleppo | Afrin | Jandairis | 319.51 | 0.36 | 0.4 | 0.67 |
| 18 | Aleppo | Afrin | Raju | 283.19 | 0.1 | 0.16 | 0.48 |
| 19 | Aleppo | Afrin | Sharan | 305.19 | 0.2 | 0.38 | 0.8 |
| 20 | Aleppo | Afrin | Sheikh El-Hadid | 93.55 | 0.06 | 0.07 | 0.14 |
| 21 | Aleppo | Afrin | Ma'btali | 208.55 | 0.04 | 0.07 | 0.23 |
| 22 | Aleppo | A'zaz | A'zaz | 180.11 | 0.25 | 0.41 | 0.93 |
| 23 | Aleppo | A'zaz | Aghtrin | 341.7 | 0.24 | 0.47 | 1.37 |
| 24 | Aleppo | A'zaz | Tall Refaat | 204.51 | 0.09 | 0.24 | 0.61 |
| 25 | Aleppo | A'zaz | Mare' | 191.39 | 0.16 | 0.32 | 0.86 |
| 26 | Aleppo | A'zaz | Nabul | 174.78 | 0.11 | 0.21 | 0.68 |
| 27 | Aleppo | A'zaz | Suran | 167.29 | 0.35 | 0.51 | 0.91 |
| 28 | Aleppo | Menbij | Menbij | 1219.18 | 1.18 | 2.16 | 7.19 |
| 29 | Aleppo | Menbij | Abu Qalqal | 394.13 | 0.47 | 0.67 | 2.2 |
| 30 | Aleppo | Menbij | Al-Khafsa | 3061.68 | 0.18 | 0.3 | 1.21 |
| 31 | Aleppo | Menbij | Maskana | 505.96 | 0.01 | 0.03 | 0.15 |
| 32 | Aleppo | Ain Al Arab | Ain al Arab | 745.06 | 0.19 | 0.29 | 0.97 |
| 33 | Aleppo | Ain Al Arab | Lower Shyookh | 318.65 | 0.06 | 0.07 | 0.26 |
| 34 | Aleppo | Ain Al Arab | Sarin | 2002.1 | 0.08 | 0.14 | 0.59 |
| 35 | Aleppo | As-Safira | As-Safira | 846.09 | 0.17 | 0.32 | 0.91 |
| 36 | Aleppo | As-Safira | Khanaser | 1603.31 | 0.05 | 0.06 | 0.17 |

| | | | | | | | |
|----|----------|-----------------|-----------------|---------|------|------|------|
| 37 | Aleppo | As-Safira | Banan | 140.02 | 0.16 | 0.29 | 0.69 |
| 38 | Aleppo | As-Safira | Hajeb | 260.08 | 0.18 | 0.27 | 0.51 |
| 39 | Aleppo | Jarablus | Jarablus | 316.34 | 0.13 | 0.18 | 0.7 |
| 40 | Aleppo | Jarablus | Ghandorah | 290.81 | 0.08 | 0.12 | 0.61 |
| 41 | Hama | Hama | Hama | 870.17 | 0.37 | 0.62 | 0.74 |
| 42 | Hama | Hama | Suran | 469.19 | 0.35 | 0.51 | 0.91 |
| 43 | Hama | Hama | Harbanifse | 310.56 | 0.05 | 0.08 | 0.08 |
| 44 | Hama | Hama | Hamra | 903.82 | 0.11 | 0.15 | 0.15 |
| 45 | Hama | As-Suqaylabiyah | As-Suqaylabiyah | 224.69 | 0.04 | 0.06 | 0.08 |
| 46 | Hama | As-Suqaylabiyah | Tell Salhib | 202.95 | 0.04 | 0.07 | 0.06 |
| 47 | Hama | As-Suqaylabiyah | Ziyara | 208.89 | 0.02 | 0.05 | 0.09 |
| 48 | Hama | As-Suqaylabiyah | Shat-ha | 186.71 | 0 | 0 | 0.02 |
| 49 | Hama | As-Suqaylabiyah | Madiq Castle | 286.87 | 0.08 | 0.1 | 0.12 |
| 50 | Hama | As-Salamiyeh | As-Salamiyeh | 862.62 | 0.15 | 0.28 | 0.33 |
| 51 | Hama | As-Salamiyeh | Eastern Bari | 240.78 | 0.02 | 0.06 | 0.05 |
| 52 | Hama | As-Salamiyeh | As-Saan | 1937.23 | 0.03 | 0.04 | 0.05 |
| 53 | Hama | As-Salamiyeh | Saboura | 463.12 | 0.02 | 0.05 | 0.07 |
| 54 | Hama | As-Salamiyeh | Oqeirbat | 2687.1 | 0.05 | 0.1 | 0.12 |
| 55 | Hama | Masyaf | Masyaf | 409.25 | 0.03 | 0.07 | 0.05 |
| 56 | Hama | Masyaf | Jeb Ramleh | 160.99 | 0.02 | 0.04 | 0.04 |
| 57 | Hama | Masyaf | Oj | 87.62 | 0.01 | 0.02 | 0.03 |
| 58 | Hama | Masyaf | Ein Halaqim | 69.71 | 0.01 | 0.01 | 0.01 |
| 59 | Hama | Masyaf | Wadi El-oyoun | 76.99 | 0 | 0 | 0.01 |
| 60 | Hama | Muhradah | Muhradah | 226.07 | 0.05 | 0.08 | 0.12 |
| 61 | Hama | Muhradah | Kafr Zeita | 146.47 | 0.12 | 0.17 | 0.16 |
| 62 | Hama | Muhradah | Karnaz | 62.32 | 0.01 | 0 | 0.02 |
| 63 | Lattakia | Lattakia | Lattakia | 114.97 | 0.06 | 0.05 | 0.08 |
| 64 | Lattakia | Lattakia | Bahlolieh | 99.49 | 0 | 0.01 | 0.01 |
| 65 | Lattakia | Lattakia | Rabee'a | 212.24 | 0 | 0 | 0 |
| 66 | Lattakia | Lattakia | Ein El-Bayda | 135.29 | 0.01 | 0.01 | 0.02 |
| 67 | Lattakia | Lattakia | Qastal Maaf | 246.03 | 0 | 0 | 0.01 |
| 68 | Lattakia | Lattakia | Kasab | 98.85 | 0.01 | 0.01 | 0.01 |
| 69 | Lattakia | Lattakia | Hanadi | 66.29 | 0.01 | 0.03 | 0.04 |
| 70 | Lattakia | Jablah | Jablah | 91.61 | 0.05 | 0.08 | 0.13 |
| 71 | Lattakia | Jablah | Ein Elsharqiyeh | 67.26 | 0 | 0.01 | 0.03 |
| 72 | Lattakia | Jablah | Qteibiyeh | 108.03 | 0.02 | 0.02 | 0.03 |
| 73 | Lattakia | Jablah | Ein Shaqaq | 62.42 | 0.01 | 0.02 | 0.03 |
| 74 | Lattakia | Jablah | Dalyeh | 93.41 | 0.17 | 0.14 | 0.09 |
| 75 | Lattakia | Jablah | Beit Yashout | 63.26 | 0.02 | 0.02 | 0.02 |
| 76 | Lattakia | Al-Haffa | Al-Haffa | 115.21 | 0 | 0.01 | 0.02 |
| 77 | Lattakia | Al-Haffa | Salanfa | 140.3 | 0.2 | 0.15 | 0.11 |
| 78 | Lattakia | Al-Haffa | Ein Et-teeneh | 54.13 | 0 | 0 | 0 |
| 79 | Lattakia | Al-Haffa | Kansaba | 169.55 | 0.01 | 0.01 | 0.01 |
| 80 | Lattakia | Al-Haffa | Mzair'a | 91.12 | 0.01 | 0.01 | 0.01 |

| | | | | | | | |
|-----|----------|-----------------|--------------------|--------|------|------|------|
| 81 | Lattakia | Al-Qardaha | Al-Qardaha | 171.18 | 0.01 | 0.01 | 0.02 |
| 82 | Lattakia | Al-Qardaha | Harf Elmseitra | 54.94 | 0 | 0 | 0 |
| 83 | Lattakia | Al-Qardaha | Fakhura | 70.06 | 0 | 0.01 | 0.02 |
| 84 | Lattakia | Al-Qardaha | Jobet Berghal | 65.07 | 0 | 0 | 0 |
| 85 | Idleb | Idleb | Idleb | 252.19 | 0.07 | 0.14 | 0.57 |
| 86 | Idleb | Idleb | Abul Thohur | 327.71 | 0.18 | 0.32 | 1.02 |
| 87 | Idleb | Idleb | Bennsh | 100.32 | 0.02 | 0.03 | 0.16 |
| 88 | Idleb | Idleb | Saraqab | 378.38 | 0.1 | 0.22 | 0.98 |
| 89 | Idleb | Idleb | Teftnaz | 98.92 | 0.05 | 0.1 | 0.3 |
| 90 | Idleb | Idleb | Maaret Tamsrin | 235.11 | 0.02 | 0.07 | 0.32 |
| 91 | Idleb | Idleb | Sarmin | 44.58 | 0.01 | 0.01 | 0.08 |
| 92 | Idleb | Al Ma'ra | Ma'arrat An Nu'man | 409.28 | 0.25 | 0.57 | 2.08 |
| 93 | Idleb | Al Ma'ra | Khan Shaykun | 203.05 | 0.15 | 0.23 | 0.21 |
| 94 | Idleb | Al Ma'ra | Sanjar | 590.03 | 0.51 | 0.78 | 1.84 |
| 95 | Idleb | Al Ma'ra | Kafr Nobol | 273.3 | 0.29 | 0.46 | 0.82 |
| 96 | Idleb | Al Ma'ra | Tamanaah | 369.67 | 0.79 | 0.72 | 0.5 |
| 97 | Idleb | Al Ma'ra | Heish | 183.94 | 0.12 | 0.15 | 0.17 |
| 98 | Idleb | Harim | Harim | 45.81 | 0.04 | 0.06 | 0.1 |
| 99 | Idleb | Harim | Dana | 214.69 | 0.11 | 0.24 | 0.91 |
| 100 | Idleb | Harim | Salqin | 131.28 | 0.13 | 0.1 | 0.18 |
| 101 | Idleb | Harim | Kafr Takharim | 92.5 | 0.02 | 0.03 | 0.08 |
| 102 | Idleb | Harim | Qourqeena | 122.36 | 0 | 0.02 | 0.1 |
| 103 | Idleb | Harim | Armanaz | 130.11 | 0.02 | 0.04 | 0.11 |
| 104 | Idleb | Jisr-Ash-Shugur | Jisr-Ash-Shugur | 259.83 | 0.02 | 0.04 | 0.09 |
| 105 | Idleb | Jisr-Ash-Shugur | Badama | 113.5 | 0 | 0 | 0.01 |
| 106 | Idleb | Jisr-Ash-Shugur | Darkosh | 118.08 | 0.02 | 0.02 | 0.02 |
| 107 | Idleb | Jisr-Ash-Shugur | Janudiyeh | 119.89 | 0.02 | 0.03 | 0.03 |
| 108 | Idleb | Ariha | Ariha | 274.99 | 0.06 | 0.13 | 0.55 |
| 109 | Idleb | Ariha | Ehsem | 204.3 | 0.02 | 0.08 | 0.41 |
| 110 | Idleb | Ariha | Mhambal | 124.22 | 0.01 | 0.03 | 0.11 |
| 111 | Tartous | Tartous | Tartous | 181.1 | 0.04 | 0.04 | 0.06 |
| 112 | Tartous | Tartous | Arwad | 0.23 | 0 | 0 | 0 |
| 113 | Tartous | Tartous | Hameidiyyeh | 69.81 | 0.01 | 0.01 | 0.02 |
| 114 | Tartous | Tartous | Kherbet Elma'aza | 55.65 | 0 | 0.01 | 0.02 |
| 115 | Tartous | Tartous | Soda Khawabi | 107.28 | 0 | 0.01 | 0.01 |
| 116 | Tartous | Tartous | Kareemeh | 55.38 | 0 | 0 | 0.01 |
| 117 | Tartous | Tartous | Safsafa | 67.85 | 0 | 0.01 | 0.03 |
| 118 | Tartous | Banyas | Banyas | 153.2 | 0.03 | 0.05 | 0.09 |
| 119 | Tartous | Banyas | Rawda | 31.22 | 0 | 0 | 0.02 |
| 120 | Tartous | Banyas | Taleen | 28.06 | 0 | 0 | 0 |
| 121 | Tartous | Safita | Safita | 125.58 | 0 | 0.02 | 0.05 |
| 122 | Tartous | Safita | Mashta Elhiu | 52.02 | 0 | 0.01 | 0 |
| 123 | Tartous | Safita | Bariqiyeh | 38.35 | 0 | 0 | 0 |
| 124 | Tartous | Safita | Sibbeh | 20.42 | 0 | 0 | 0 |

| | | | | | | | |
|-----|---------|-------------|-----------------------|--------|------|------|------|
| 125 | Tartous | Safita | Sisniyyeh | 72.48 | 0 | 0.02 | 0.03 |
| 126 | Tartous | Safita | Ras El-Khashufeh | 47.21 | 0 | 0 | 0.01 |
| 127 | Tartous | Dreikish | Dreikish | 84.35 | 0 | 0 | 0 |
| 128 | Tartous | Dreikish | Jneinet Raslan | 38.75 | 0 | 0 | 0 |
| 129 | Tartous | Dreikish | Hamin | 27.22 | 0 | 0 | 0 |
| 130 | Tartous | Dreikish | Dweir Raslan | 35.71 | 0 | 0 | 0 |
| 131 | Tartous | Sheikh Badr | Sheikh Badr | 102.75 | 0 | 0 | 0.01 |
| 132 | Tartous | Sheikh Badr | Baramanet Elmashayekh | 65.04 | 0 | 0 | 0 |
| 133 | Tartous | Sheikh Badr | Qumseyyeh | 46.75 | 0 | 0 | 0 |
| 134 | Tartous | Qadmous | Anaza | 101.35 | 0.02 | 0.03 | 0.03 |
| 135 | Tartous | Qadmous | Qadmous | 136.52 | 0.01 | 0.01 | 0.02 |
| 136 | Tartous | Qadmous | Hamam Wasil | 45.26 | 0 | 0 | 0 |
| 137 | Tartous | Qadmous | Tawahin | 86.22 | 0.02 | 0.04 | 0.05 |

Table 2 Total land area, areas of land cover classes at district level.

Source of administrative units: HDX, UNOCHA 2020, admin level 2

| ID | Provinces | Districts | Sub-districts | Land cover classes (km2) | | | | | | | |
|----|-----------|-------------|--------------------|--------------------------|----------|---------|--------------------|---------------------|---------------|------------------|-------------|
| | | | | Builtup | Bareland | Forest | Irrigated cropland | Horticultural crops | Rainfed crops | Grass and shrubs | Waterbodies |
| 1 | Aleppo | Jebel Saman | Jebel Saman | 6.36 | 0.00 | 70.57 | 188.05 | 3.00 | 12.67 | 8.12 | 375.10 |
| 2 | Aleppo | Jebel Saman | Atareb | 5.20 | 0.00 | 58.22 | 38.45 | 0.91 | 22.90 | 0.18 | 182.40 |
| 3 | Aleppo | Jebel Saman | Tall Ed-daman | 0.43 | 0.00 | 348.86 | 16.42 | 18.84 | 2.92 | 1.97 | 757.31 |
| 4 | Aleppo | Jebel Saman | Haritan | 2.12 | 0.00 | 26.65 | 31.47 | 0.85 | 1.20 | 0.30 | 170.14 |
| 5 | Aleppo | Jebel Saman | Daret Azza | 0.00 | 0.00 | 177.32 | 0.26 | 0.63 | 0.94 | 0.95 | 47.41 |
| 6 | Aleppo | Jebel Saman | Zarbah | 0.21 | 0.00 | 3.14 | 22.22 | 0.08 | 40.18 | 3.18 | 285.79 |
| 7 | Aleppo | Jebel Saman | Hadher | 0.00 | 0.00 | 2.89 | 8.70 | 0.08 | 25.35 | 1.30 | 93.00 |
| 8 | Aleppo | Al Bab | Al Bab | 21.75 | 0.00 | 3.19 | 36.07 | 2.26 | 6.16 | 0.00 | 419.69 |
| 9 | Aleppo | Al Bab | Tadaf | 6.79 | 0.00 | 6.16 | 17.14 | 0.75 | 1.83 | 0.00 | 288.45 |
| 10 | Aleppo | Al Bab | Dayr Hafir | 0.00 | 0.37 | 0.12 | 16.58 | 1.57 | 78.44 | 0.00 | 15.10 |
| 11 | Aleppo | Al Bab | Ar-Ra'ee | 11.13 | 0.00 | 1.60 | 10.54 | 0.31 | 13.00 | 2.73 | 312.85 |
| 12 | Aleppo | Al Bab | Eastern Kwaieres | 0.00 | 5.80 | 1.01 | 26.56 | 1.62 | 122.57 | 0.00 | 61.00 |
| 13 | Aleppo | Al Bab | Rasm Haram El-Imam | 0.60 | 0.00 | 7.18 | 18.09 | 1.41 | 47.37 | 0.00 | 128.83 |
| 14 | Aleppo | Al Bab | A'rima | 14.55 | 0.00 | 1.69 | 14.05 | 1.05 | 8.01 | 0.00 | 277.89 |
| 15 | Aleppo | Afrin | Afrin | 15.74 | 0.02 | 147.45 | 41.65 | 0.24 | 77.46 | 7.77 | 137.42 |
| 16 | Aleppo | Afrin | Bulbul | 0.00 | 0.00 | 90.95 | 0.00 | 0.02 | 0.10 | 38.44 | 73.88 |
| 17 | Aleppo | Afrin | Jandairis | 1.32 | 0.01 | 109.46 | 18.71 | 0.04 | 78.68 | 22.73 | 88.55 |
| 18 | Aleppo | Afrin | Raju | 0.00 | 0.00 | 133.18 | 0.05 | 0.01 | 0.68 | 104.31 | 44.95 |
| 19 | Aleppo | Afrin | Sharan | 1.81 | 5.34 | 98.13 | 4.55 | 0.11 | 3.43 | 22.08 | 169.75 |
| 20 | Aleppo | Afrin | Sheikh El-Hadid | 0.00 | 0.00 | 63.01 | 0.00 | 0.02 | 0.18 | 22.86 | 7.48 |
| 21 | Aleppo | Afrin | Ma'btali | 0.00 | 0.00 | 109.20 | 0.10 | 0.01 | 5.58 | 22.71 | 70.96 |
| 22 | Aleppo | A'zaz | A'zaz | 2.86 | 0.00 | 1.08 | 18.76 | 0.20 | 4.77 | 2.18 | 150.27 |
| 23 | Aleppo | A'zaz | Aghtrin | 6.30 | 0.00 | 1.37 | 15.85 | 0.77 | 12.37 | 0.00 | 305.03 |
| 24 | Aleppo | A'zaz | Tall Refaat | 1.09 | 0.00 | 0.16 | 10.40 | 0.02 | 6.56 | 0.05 | 186.21 |
| 25 | Aleppo | A'zaz | Mare' | 5.65 | 0.00 | 0.45 | 11.46 | 0.34 | 11.74 | 0.00 | 161.75 |
| 26 | Aleppo | A'zaz | Nabul | 0.16 | 0.00 | 69.45 | 10.35 | 0.57 | 0.33 | 0.22 | 93.70 |
| 27 | Aleppo | A'zaz | Suran | 12.04 | 0.00 | 33.88 | 35.33 | 0.39 | 22.00 | 0.75 | 532.09 |
| 28 | Aleppo | Menbij | Menbij | 29.86 | 18.18 | 254.67 | 87.22 | 35.86 | 16.72 | 4.49 | 772.20 |
| 29 | Aleppo | Menbij | Abu Qalqal | 2.49 | 16.15 | 244.50 | 19.84 | 12.59 | 4.33 | 0.41 | 93.81 |
| 30 | Aleppo | Menbij | Al-Khafsa | 40.41 | 41.60 | 827.47 | 68.32 | 1498.14 | 209.76 | 2.65 | 373.32 |
| 31 | Aleppo | Menbij | Maskana | 63.03 | 83.71 | 98.09 | 23.48 | 16.22 | 107.43 | 0.00 | 114.00 |
| 32 | Aleppo | Ain Al Arab | Ain al Arab | 10.31 | 0.00 | 262.00 | 33.13 | 1.60 | 18.06 | 0.00 | 419.95 |
| 33 | Aleppo | Ain Al Arab | Lower Shyookh | 14.67 | 8.59 | 110.87 | 41.11 | 0.83 | 33.95 | 0.00 | 108.64 |
| 34 | Aleppo | Ain Al Arab | Sarin | 6.01 | 69.34 | 1160.53 | 74.01 | 186.48 | 27.71 | 3.39 | 474.61 |
| 35 | Aleppo | As-Safira | As-Safira | 2.15 | 52.26 | 121.73 | 53.21 | 248.68 | 175.22 | 0.22 | 192.62 |
| 36 | Aleppo | As-Safira | Khanaser | 0.22 | 0.01 | 541.51 | 8.72 | 908.75 | 1.42 | 0.71 | 141.97 |

| | | | | | | | | | | | |
|----|----------|-----------------|-----------------|-------|------|---------|--------|---------|-------|--------|--------|
| 37 | Aleppo | As-Safira | Banan | 0.33 | 0.00 | 29.02 | 3.75 | 0.11 | 0.26 | 0.12 | 106.43 |
| 38 | Aleppo | As-Safira | Hajeb | 0.17 | 0.00 | 127.68 | 3.40 | 0.08 | 0.00 | 0.10 | 128.66 |
| 39 | Aleppo | Jarablus | Jarablus | 8.40 | 4.37 | 91.55 | 21.48 | 12.51 | 13.07 | 2.21 | 162.75 |
| 40 | Aleppo | Jarablus | Ghandorah | 16.32 | 0.93 | 1.53 | 14.33 | 4.58 | 2.39 | 11.68 | 239.06 |
| 41 | Hama | Hama | Hama | 14.51 | 0.27 | 208.07 | 110.04 | 54.49 | 72.65 | 11.70 | 398.43 |
| 42 | Hama | Hama | Suran | 12.04 | 0.00 | 33.88 | 35.33 | 0.39 | 22.00 | 0.75 | 532.09 |
| 43 | Hama | Hama | Harbanifse | 7.24 | 1.84 | 60.69 | 37.84 | 8.94 | 6.59 | 9.37 | 178.04 |
| 44 | Hama | Hama | Hamra | 4.34 | 0.00 | 372.25 | 9.74 | 68.38 | 0.03 | 1.32 | 447.76 |
| 45 | Hama | As-Suqaylabiyah | As-Suqaylabiyah | 5.68 | 0.00 | 33.35 | 4.48 | 0.00 | 42.66 | 48.99 | 89.52 |
| 46 | Hama | As-Suqaylabiyah | Tell Salhib | 7.92 | 0.00 | 23.60 | 1.16 | 0.01 | 25.66 | 95.21 | 49.40 |
| 47 | Hama | As-Suqaylabiyah | Ziyara | 14.50 | 0.13 | 27.15 | 0.00 | 0.00 | 10.74 | 17.72 | 138.65 |
| 48 | Hama | As-Suqaylabiyah | Shat-ha | 0.49 | 0.00 | 35.06 | 0.00 | 0.00 | 23.05 | 57.70 | 70.41 |
| 49 | Hama | As-Suqaylabiyah | Madiq Castle | 1.26 | 0.28 | 62.48 | 0.98 | 0.00 | 25.53 | 0.01 | 196.34 |
| 50 | Hama | As-Salamiyeh | As-Salamiyeh | 8.58 | 0.00 | 81.11 | 58.89 | 41.94 | 2.42 | 4.49 | 665.19 |
| 51 | Hama | As-Salamiyeh | Eastern Bari | 6.01 | 0.00 | 37.50 | 4.11 | 2.89 | 0.01 | 1.58 | 188.69 |
| 52 | Hama | As-Salamiyeh | As-Saan | 0.38 | 0.00 | 970.90 | 9.99 | 747.53 | 0.00 | 0.32 | 208.12 |
| 53 | Hama | As-Salamiyeh | Saboura | 4.71 | 0.00 | 145.01 | 9.14 | 21.92 | 0.00 | 0.89 | 281.45 |
| 54 | Hama | As-Salamiyeh | Oqeirbat | 0.44 | 0.00 | 1029.53 | 5.31 | 1571.62 | 0.00 | 0.16 | 80.00 |
| 55 | Hama | Masyaf | Masyaf | 0.00 | 0.00 | 174.30 | 31.49 | 0.01 | 0.70 | 169.15 | 33.60 |
| 56 | Hama | Masyaf | Jeb Ramleh | 4.09 | 0.00 | 39.93 | 9.59 | 0.01 | 32.46 | 31.33 | 43.57 |
| 57 | Hama | Masyaf | Oj | 0.00 | 0.00 | 28.39 | 3.90 | 0.00 | 0.11 | 43.66 | 11.56 |
| 58 | Hama | Masyaf | Ein Halaqim | 0.00 | 0.00 | 25.11 | 0.52 | 0.00 | 0.19 | 41.52 | 2.36 |
| 59 | Hama | Masyaf | Wadi El-oyoun | 0.00 | 0.00 | 23.40 | 0.00 | 0.00 | 0.72 | 52.63 | 0.25 |
| 60 | Hama | Muhradah | Muhradah | 17.27 | 0.01 | 12.79 | 13.99 | 0.04 | 41.74 | 0.26 | 139.97 |
| 61 | Hama | Muhradah | Kafr Zeita | 4.85 | 0.00 | 6.82 | 1.88 | 0.01 | 3.62 | 0.00 | 129.30 |
| 62 | Hama | Muhradah | Karnaz | 6.82 | 0.00 | 0.32 | 0.49 | 0.00 | 12.85 | 0.00 | 41.84 |
| 63 | Lattakia | Lattakia | Lattakia | 0.00 | 1.23 | 14.59 | 29.27 | 0.00 | 5.45 | 64.25 | 0.17 |
| 64 | Lattakia | Lattakia | Bahlolieh | 0.00 | 6.18 | 14.28 | 0.05 | 0.00 | 3.64 | 75.34 | 0.01 |
| 65 | Lattakia | Lattakia | Rabee'a | 0.00 | 0.01 | 25.39 | 0.00 | 0.00 | 2.28 | 184.55 | 0.01 |
| 66 | Lattakia | Lattakia | Ein El-Bayda | 0.00 | 1.60 | 28.17 | 1.21 | 0.00 | 10.31 | 93.88 | 0.12 |
| 67 | Lattakia | Lattakia | Qastal Maaf | 0.00 | 1.86 | 54.21 | 2.34 | 0.00 | 7.73 | 179.85 | 0.03 |
| 68 | Lattakia | Lattakia | Kasab | 0.00 | 0.01 | 8.43 | 0.00 | 0.00 | 1.41 | 88.90 | 0.09 |
| 69 | Lattakia | Lattakia | Hanadi | 0.00 | 0.00 | 5.57 | 3.40 | 0.00 | 5.38 | 51.90 | 0.05 |
| 70 | Lattakia | Jablah | Jablah | 0.00 | 0.00 | 9.91 | 7.04 | 0.00 | 12.32 | 62.17 | 0.16 |
| 71 | Lattakia | Jablah | Ein Elsharqiyeh | 0.00 | 0.49 | 25.81 | 0.00 | 0.00 | 1.12 | 39.66 | 0.17 |
| 72 | Lattakia | Jablah | Qteilbiyyeh | 0.00 | 0.04 | 31.58 | 0.08 | 0.00 | 4.18 | 72.01 | 0.14 |
| 73 | Lattakia | Jablah | Ein Shaqaq | 0.00 | 0.22 | 21.26 | 0.36 | 0.00 | 3.16 | 37.40 | 0.01 |
| 74 | Lattakia | Jablah | Dalyeh | 0.00 | 0.00 | 26.34 | 0.00 | 0.00 | 1.02 | 65.96 | 0.09 |
| 75 | Lattakia | Jablah | Beit Yashout | 0.00 | 0.00 | 19.95 | 0.00 | 0.00 | 0.97 | 42.28 | 0.06 |
| 76 | Lattakia | Al-Haffa | Al-Haffa | 0.00 | 0.00 | 15.89 | 0.00 | 0.00 | 3.71 | 95.54 | 0.07 |
| 77 | Lattakia | Al-Haffa | Salanfa | 0.00 | 0.00 | 36.24 | 0.00 | 0.00 | 2.23 | 101.55 | 0.28 |

| | | | | | | | | | | | |
|-----|----------|-----------------|--------------------|-------|------|--------|-------|-------|-------|--------|--------|
| 78 | Lattakia | Al-Haffa | Ein Et-teeneh | 0.00 | 0.00 | 13.81 | 0.00 | 0.00 | 1.09 | 39.24 | 0.01 |
| 79 | Lattakia | Al-Haffa | Kansaba | 0.00 | 0.01 | 37.33 | 0.00 | 0.00 | 2.39 | 129.38 | 0.44 |
| 80 | Lattakia | Al-Haffa | Mzair'a | 0.00 | 1.75 | 14.37 | 0.00 | 0.00 | 2.72 | 72.26 | 0.01 |
| 81 | Lattakia | Al-Qardaha | Al-Qardaha | 0.00 | 0.36 | 37.67 | 0.10 | 0.00 | 4.00 | 128.91 | 0.13 |
| 82 | Lattakia | Al-Qardaha | Harf Elmseitra | 0.00 | 0.00 | 9.74 | 0.00 | 0.00 | 1.13 | 44.04 | 0.01 |
| 83 | Lattakia | Al-Qardaha | Fakhura | 0.00 | 0.00 | 21.80 | 0.00 | 0.00 | 2.98 | 45.27 | 0.01 |
| 84 | Lattakia | Al-Qardaha | Jobet Berghal | 0.00 | 0.00 | 9.71 | 0.00 | 0.00 | 1.04 | 54.30 | 0.02 |
| 85 | Idleb | Idleb | Idleb | 4.47 | 0.00 | 51.42 | 19.33 | 0.09 | 20.61 | 14.27 | 142.00 |
| 86 | Idleb | Idleb | Abul Thohur | 0.78 | 0.00 | 19.55 | 7.31 | 0.49 | 2.52 | 0.49 | 296.57 |
| 87 | Idleb | Idleb | Bennsh | 2.39 | 0.00 | 0.08 | 6.73 | 0.01 | 17.44 | 0.00 | 73.66 |
| 88 | Idleb | Idleb | Saraqab | 3.48 | 0.00 | 9.94 | 24.70 | 0.23 | 2.23 | 0.83 | 336.97 |
| 89 | Idleb | Idleb | Teftnaz | 1.06 | 0.00 | 0.12 | 5.04 | 0.01 | 6.31 | 0.00 | 86.38 |
| 90 | Idleb | Idleb | Maaret Tamsrin | 5.14 | 0.00 | 35.23 | 19.18 | 0.42 | 29.85 | 5.91 | 139.38 |
| 91 | Idleb | Idleb | Sarmin | 2.23 | 0.00 | 0.04 | 3.31 | 0.00 | 9.71 | 0.00 | 29.28 |
| 92 | Idleb | Al Ma'ra | Ma'arrat An Nu'man | 0.32 | 0.00 | 52.48 | 46.87 | 7.19 | 0.00 | 0.47 | 301.94 |
| 93 | Idleb | Al Ma'ra | Khan Shaykun | 1.45 | 0.00 | 33.07 | 8.82 | 0.03 | 0.73 | 0.29 | 158.66 |
| 94 | Idleb | Al Ma'ra | Sanjar | 0.61 | 0.00 | 59.62 | 19.42 | 0.58 | 0.01 | 0.37 | 509.42 |
| 95 | Idleb | Al Ma'ra | Kafr Nobol | 0.99 | 0.00 | 158.69 | 25.28 | 11.58 | 2.41 | 6.46 | 67.89 |
| 96 | Idleb | Al Ma'ra | Tamanaah | 0.79 | 0.00 | 25.32 | 7.71 | 0.33 | 0.02 | 0.19 | 335.32 |
| 97 | Idleb | Al Ma'ra | Heish | 0.00 | 0.00 | 43.26 | 20.55 | 0.50 | 0.10 | 0.47 | 119.07 |
| 98 | Idleb | Harim | Harim | 0.00 | 0.00 | 23.59 | 0.00 | 0.01 | 0.21 | 17.87 | 4.13 |
| 99 | Idleb | Harim | Dana | 0.04 | 0.00 | 114.05 | 16.82 | 1.85 | 10.07 | 4.70 | 67.16 |
| 100 | Idleb | Harim | Salqin | 0.00 | 0.00 | 64.08 | 0.00 | 0.01 | 2.13 | 59.95 | 5.11 |
| 101 | Idleb | Harim | Kafr Takharim | 0.00 | 0.00 | 70.20 | 0.00 | 0.03 | 0.00 | 12.04 | 10.22 |
| 102 | Idleb | Harim | Qourqeena | 0.12 | 0.00 | 94.97 | 0.00 | 0.04 | 0.10 | 5.00 | 22.12 |
| 103 | Idleb | Harim | Armanaz | 3.40 | 0.00 | 63.10 | 0.00 | 0.02 | 11.56 | 13.46 | 38.56 |
| 104 | Idleb | Jisr-Ash-Shugur | Jisr-Ash-Shugur | 11.90 | 0.00 | 101.78 | 0.00 | 0.03 | 11.11 | 41.78 | 93.22 |
| 105 | Idleb | Jisr-Ash-Shugur | Badama | 0.00 | 0.00 | 59.95 | 0.00 | 0.00 | 3.03 | 49.70 | 0.81 |
| 106 | Idleb | Jisr-Ash-Shugur | Darkosh | 0.94 | 0.07 | 67.95 | 0.00 | 0.00 | 0.81 | 31.63 | 16.67 |
| 107 | Idleb | Jisr-Ash-Shugur | Janudiyeh | 0.00 | 0.00 | 43.53 | 0.00 | 0.01 | 1.06 | 69.69 | 5.59 |
| 108 | Idleb | Ariha | Ariha | 0.02 | 0.00 | 144.05 | 16.69 | 21.63 | 5.99 | 24.80 | 61.82 |
| 109 | Idleb | Ariha | Ehsem | 0.00 | 0.00 | 107.24 | 9.12 | 25.03 | 10.08 | 30.90 | 21.93 |
| 110 | Idleb | Ariha | Mhambal | 3.64 | 0.00 | 43.11 | 0.00 | 0.00 | 7.21 | 9.10 | 61.16 |
| 111 | Tartous | Tartous | Tartous | 0.00 | 0.00 | 51.61 | 13.64 | 0.01 | 0.91 | 113.54 | 1.39 |
| 112 | Tartous | Tartous | Hameidiyyeh | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| 113 | Tartous | Tartous | Kherbet Elma'aza | 0.00 | 0.00 | 44.89 | 1.63 | 0.00 | 1.83 | 18.68 | 2.78 |
| 114 | Tartous | Tartous | Soda Khawabi | 0.00 | 0.00 | 12.55 | 4.73 | 0.02 | 0.30 | 37.76 | 0.29 |
| 115 | Tartous | Tartous | Kareemeh | 0.00 | 0.00 | 29.07 | 3.44 | 0.01 | 0.66 | 73.76 | 0.32 |
| 116 | Tartous | Tartous | Safsafa | 0.00 | 0.00 | 29.40 | 0.00 | 0.00 | 1.00 | 23.45 | 1.53 |
| 117 | Tartous | Banyas | Banyas | 0.00 | 0.47 | 22.57 | 3.70 | 0.00 | 0.78 | 39.36 | 0.96 |

| | | | | | | | | | | | |
|-----|---------|-------------|-----------------------|------|------|-------|-------|------|------|-------|------|
| 118 | Tartous | Banyas | Rawda | 0.00 | 0.01 | 34.90 | 14.79 | 0.02 | 3.76 | 99.02 | 0.70 |
| 119 | Tartous | Banyas | Taleen | 0.00 | 0.01 | 3.43 | 3.97 | 0.00 | 0.09 | 23.61 | 0.11 |
| 120 | Tartous | Safita | Safita | 0.00 | 0.00 | 13.28 | 0.00 | 0.00 | 0.22 | 14.53 | 0.03 |
| 121 | Tartous | Safita | Mashta Elhiu | 0.00 | 2.60 | 30.90 | 6.53 | 0.00 | 0.34 | 84.96 | 0.25 |
| 122 | Tartous | Safita | Bariqiyeh | 0.00 | 0.00 | 16.07 | 0.00 | 0.00 | 0.36 | 35.53 | 0.06 |
| 123 | Tartous | Safita | Sibbeh | 0.00 | 0.00 | 11.67 | 0.00 | 0.00 | 0.18 | 26.46 | 0.04 |
| 124 | Tartous | Safita | Sisniyyeh | 0.00 | 0.00 | 5.49 | 0.00 | 0.00 | 0.10 | 14.83 | 0.00 |
| 125 | Tartous | Safita | Ras El-Khashufeh | 0.00 | 0.76 | 24.93 | 0.00 | 0.00 | 0.17 | 45.46 | 1.15 |
| 126 | Tartous | Dreikish | Dreikish | 0.00 | 0.00 | 19.16 | 0.27 | 0.00 | 0.13 | 27.41 | 0.24 |
| 127 | Tartous | Dreikish | Jneinet Raslan | 0.00 | 0.00 | 21.23 | 0.00 | 0.00 | 0.59 | 62.47 | 0.06 |
| 128 | Tartous | Dreikish | Hamin | 0.00 | 0.10 | 7.95 | 0.00 | 0.00 | 0.32 | 30.35 | 0.02 |
| 129 | Tartous | Dreikish | Dweir Raslan | 0.00 | 0.00 | 7.24 | 0.00 | 0.00 | 0.18 | 19.78 | 0.02 |
| 130 | Tartous | Sheikh Badr | Sheikh Badr | 0.00 | 0.00 | 7.74 | 0.00 | 0.00 | 0.24 | 27.71 | 0.02 |
| 131 | Tartous | Sheikh Badr | Baramanet Elmashayekh | 0.00 | 0.00 | 31.61 | 0.00 | 0.00 | 0.85 | 70.17 | 0.12 |
| 132 | Tartous | Sheikh Badr | Qumseyyeh | 0.00 | 0.01 | 20.27 | 0.00 | 0.00 | 0.34 | 44.39 | 0.04 |
| 133 | Tartous | Qadmous | Anaza | 0.00 | 0.00 | 17.94 | 0.00 | 0.00 | 0.34 | 28.24 | 0.24 |
| 134 | Tartous | Qadmous | Qadmous | 0.00 | 0.00 | 25.56 | 0.00 | 0.00 | 1.14 | 74.57 | 0.08 |
| 135 | Tartous | Qadmous | Hamam Wasil | 0.00 | 0.00 | 55.10 | 0.00 | 0.00 | 0.80 | 80.09 | 0.53 |
| 136 | Tartous | Qadmous | Tawahin | 0.00 | 0.00 | 11.93 | 0.00 | 0.00 | 0.33 | 32.91 | 0.10 |
| 137 | Tartous | Tartous | Arwad | 0.00 | 0.00 | 43.57 | 0.00 | 0.00 | 0.51 | 41.18 | 0.96 |

Table 3 Total population and number of people potentially affected at the district level.

Source of administrative units: HDX, UNOCHA 2020, admin level 2 and worldpop (2020)

| ID | Provinces | Districts | Number of people | | |
|----|-----------------|-----------|------------------|--------|--------------|
| | | | Affected | Total | Affected (%) |
| 1 | A'zaz | Aleppo | 82693 | 331093 | 24.98% |
| 2 | Afrin | Aleppo | 50935 | 225892 | 22.55% |
| 3 | Ain Al Arab | Aleppo | 15958 | 252516 | 6.32% |
| 4 | Al-Haffa | Lattakia | 3766 | 96858 | 3.89% |
| 5 | Al-Qardaha | Lattakia | 388 | 89417 | 0.43% |
| 6 | Al Bab | Aleppo | 70962 | 384502 | 18.46% |
| 7 | Al Ma'ra | Idleb | 80551 | 485159 | 16.60% |
| 8 | Ariha | Idleb | 16369 | 229053 | 7.15% |
| 9 | As-Safira | Aleppo | 20801 | 235811 | 8.82% |
| 10 | As-Salamiyeh | Hama | 6211 | 236228 | 2.63% |
| 11 | As-Suqaylabiyah | Hama | 11583 | 300504 | 3.85% |
| 12 | Banyas | Tartous | 1985 | 103529 | 1.92% |
| 13 | Dreikish | Tartous | 232 | 71622 | 0.32% |
| 14 | Hama | Hama | 42988 | 821091 | 5.24% |
| 15 | Harim | Idleb | 32234 | 226525 | 14.23% |
| 16 | Idleb | Idleb | 59256 | 499460 | 11.86% |

| | | | | | |
|----|-----------------|----------|---------|---------|--------|
| 17 | Jablah | Lattakia | 8160 | 201366 | 4.05% |
| 18 | Jarablus | Aleppo | 4276 | 77153 | 5.54% |
| 19 | Jebel Saman | Aleppo | 1495140 | 3297775 | 45.34% |
| 20 | Jisr-Ash-Shugur | Idleb | 4109 | 195138 | 2.11% |
| 21 | Lattakia | Lattakia | 16496 | 508055 | 3.25% |
| 22 | Masyaf | Hama | 3425 | 216790 | 1.58% |
| 23 | Menbij | Aleppo | 43650 | 538731 | 8.10% |
| 24 | Muhradah | Hama | 14098 | 182590 | 7.72% |
| 25 | Qadmous | Tartous | 668 | 69856 | 0.96% |
| 26 | Safita | Tartous | 998 | 153515 | 0.65% |
| 27 | Sheikh Badr | Tartous | 78 | 62004 | 0.13% |
| 28 | Tartous | Tartous | 3843 | 266489 | 1.44% |

Table 4 Area of hexagons(km2) combining extent of irrigated areas and damage classes at sub-district level.

Source of administrative units: HDX, UNOCHA 2020, admin level 3

| Irrigated cropland class | | | | High | | | Low | | | Medium | | |
|--------------------------|--------------|-------------|-----------------|------------------------|--------|------|-------|--------|------|--------|--------|------|
| Damage classes | | | | Low | Medium | High | Low | Medium | High | Low | Medium | High |
| ID | Governorates | Districts | Sub-districts | Area of Hexagons (km2) | | | | | | | | |
| 14 | Aleppo | A'zaz | A'rima | 0 | 0 | 0 | 250 | 1620 | 590 | 0 | 50 | 10 |
| 22 | Aleppo | A'zaz | A'zaz | 0 | 0 | 0 | 510 | 530 | 330 | 0 | 0 | 0 |
| 29 | Aleppo | A'zaz | Abu Qalqal | 0 | 0 | 0 | 880 | 1130 | 800 | 0 | 0 | 0 |
| 15 | Aleppo | A'zaz | Afrin | 600 | 240 | 50 | 910 | 1180 | 0 | 160 | 130 | 20 |
| 23 | Aleppo | A'zaz | Aghtrin | 0 | 0 | 0 | 730 | 1480 | 250 | 50 | 60 | 30 |
| 32 | Aleppo | A'zaz | Ain al Arab | 0 | 0 | 0 | 3870 | 1190 | 140 | 100 | 20 | 0 |
| 8 | Aleppo | Afrin | Al Bab | 0 | 0 | 0 | 410 | 2340 | 960 | 0 | 0 | 0 |
| 30 | Aleppo | Afrin | Al-Khafsa | 1640 | 290 | 0 | 15710 | 1590 | 120 | 1300 | 240 | 0 |
| 11 | Aleppo | Afrin | Ar-Ra'ee | 0 | 0 | 0 | 1170 | 1250 | 50 | 200 | 100 | 40 |
| 35 | Aleppo | Afrin | As-Safira | 1260 | 680 | 60 | 2910 | 740 | 110 | 150 | 80 | 10 |
| 2 | Aleppo | Afrin | Atareb | 60 | 50 | 20 | 250 | 950 | 550 | 190 | 240 | 50 |
| 37 | Aleppo | Afrin | Banan | 0 | 0 | 0 | 250 | 710 | 190 | 0 | 0 | 0 |
| 16 | Aleppo | Afrin | Bulbul | 0 | 0 | 0 | 1190 | 340 | 70 | 0 | 0 | 0 |
| 5 | Aleppo | Ain Al Arab | Daret Azza | 0 | 0 | 0 | 700 | 980 | 70 | 0 | 0 | 0 |
| 10 | Aleppo | Ain Al Arab | Dayr Hafir | 860 | 70 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | Aleppo | Ain Al Arab | Eastern Kwaires | 630 | 560 | 0 | 140 | 270 | 0 | 20 | 70 | 0 |
| 40 | Aleppo | Al Bab | Ghandorah | 0 | 0 | 0 | 880 | 1240 | 70 | 0 | 0 | 0 |
| 7 | Aleppo | Al Bab | Hadher | 180 | 160 | 0 | 260 | 230 | 0 | 100 | 90 | 0 |
| 38 | Aleppo | Al Bab | Hajeb | 0 | 0 | 0 | 980 | 870 | 100 | 0 | 0 | 0 |
| 4 | Aleppo | Al Bab | Haritan | 20 | 60 | 20 | 120 | 920 | 900 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|----|----------|-----------------|--------------------|------|-----|-----|-------|------|------|------|-----|----|
| 17 | Aleppo | Al Bab | Jandairis | 630 | 150 | 110 | 750 | 260 | 0 | 340 | 110 | 30 |
| 39 | Aleppo | Al Bab | Jarablus | 100 | 60 | 0 | 1080 | 1070 | 0 | 50 | 70 | 0 |
| 1 | Aleppo | Al Bab | Jebel Saman | 0 | 0 | 0 | 290 | 1570 | 2570 | 120 | 220 | 50 |
| 36 | Idleb | Al Ma'ra | Khanaser | 0 | 0 | 0 | 10580 | 490 | 0 | 40 | 0 | 0 |
| 33 | Idleb | Al Ma'ra | Lower Shyookh | 270 | 30 | 0 | 1240 | 410 | 0 | 380 | 90 | 0 |
| 21 | Idleb | Al Ma'ra | Ma'btali | 0 | 0 | 0 | 760 | 630 | 0 | 130 | 80 | 0 |
| 25 | Idleb | Al Ma'ra | Mare' | 0 | 0 | 0 | 450 | 630 | 280 | 80 | 70 | 30 |
| 31 | Idleb | Al Ma'ra | Maskana | 1080 | 40 | 0 | 1380 | 180 | 0 | 1060 | 40 | 0 |
| 28 | Idleb | Al Ma'ra | Menbij | 0 | 0 | 0 | 1550 | 5000 | 1890 | 40 | 90 | 30 |
| 26 | Lattakia | Al-Haffa | Nabul | 0 | 0 | 0 | 360 | 820 | 140 | 0 | 0 | 0 |
| 18 | Lattakia | Al-Haffa | Raju | 0 | 0 | 0 | 1350 | 880 | 0 | 0 | 0 | 0 |
| 13 | Lattakia | Al-Haffa | Rasm Haram El-Imam | 330 | 230 | 0 | 200 | 670 | 70 | 70 | 160 | 10 |
| 34 | Lattakia | Al-Haffa | Sarin | 0 | 0 | 0 | 12780 | 1090 | 0 | 180 | 40 | 0 |
| 19 | Lattakia | Al-Haffa | Sharan | 10 | 20 | 0 | 1270 | 810 | 70 | 70 | 30 | 0 |
| 20 | Lattakia | Al-Qardaha | Sheikh El-Hadid | 0 | 0 | 0 | 530 | 270 | 0 | 0 | 0 | 0 |
| 27 | Lattakia | Al-Qardaha | Suran | 110 | 0 | 0 | 2580 | 1750 | 200 | 250 | 70 | 0 |
| 9 | Lattakia | Al-Qardaha | Tadaf | 0 | 0 | 0 | 270 | 1190 | 860 | 0 | 10 | 10 |
| 3 | Lattakia | Al-Qardaha | Tall Ed-daman | 20 | 0 | 0 | 4950 | 2810 | 370 | 90 | 0 | 0 |
| 24 | Idleb | Ariha | Tall Refaat | 0 | 0 | 0 | 630 | 690 | 140 | 60 | 10 | 10 |
| 6 | Idleb | Ariha | Zarbah | 250 | 190 | 0 | 1000 | 990 | 20 | 120 | 130 | 10 |
| 52 | Idleb | Ariha | As-Saan | 0 | 0 | 0 | 13290 | 110 | 0 | 0 | 0 | 0 |
| 50 | Aleppo | As-Safira | As-Salamiyeh | 0 | 0 | 0 | 5030 | 1210 | 0 | 20 | 10 | 0 |
| 45 | Aleppo | As-Safira | As-Suqaylabiyah | 460 | 10 | 0 | 550 | 30 | 0 | 620 | 70 | 0 |
| 51 | Aleppo | As-Safira | Eastern Bari | 0 | 0 | 0 | 1700 | 160 | 0 | 0 | 0 | 0 |
| 58 | Aleppo | As-Safira | Ein Halaqim | 0 | 0 | 0 | 610 | 70 | 0 | 0 | 0 | 0 |
| 41 | Hama | As-Salamiyeh | Hama | 250 | 200 | 0 | 3390 | 1500 | 0 | 610 | 640 | 0 |
| 44 | Hama | As-Salamiyeh | Hamra | 0 | 0 | 0 | 6120 | 660 | 0 | 0 | 0 | 0 |
| 43 | Hama | As-Salamiyeh | Harbanifse | 0 | 0 | 0 | 1920 | 440 | 0 | 70 | 50 | 0 |
| 56 | Hama | As-Salamiyeh | Jeb Ramleh | 400 | 80 | 0 | 470 | 160 | 0 | 100 | 20 | 0 |
| 61 | Hama | As-Salamiyeh | Kafr Zeita | 0 | 0 | 0 | 660 | 200 | 140 | 100 | 50 | 0 |
| 62 | Hama | As-Suqaylabiyah | Karnaz | 170 | 20 | 0 | 80 | 10 | 0 | 330 | 30 | 0 |
| 49 | Hama | As-Suqaylabiyah | Madiq Castle | 120 | 40 | 0 | 1230 | 220 | 0 | 580 | 130 | 0 |
| 55 | Hama | As-Suqaylabiyah | Masyaf | 0 | 0 | 0 | 2710 | 290 | 0 | 0 | 0 | 0 |
| 60 | Hama | As-Suqaylabiyah | Muhradah | 390 | 50 | 0 | 320 | 100 | 0 | 730 | 150 | 0 |
| 57 | Hama | As-Suqaylabiyah | Oj | 0 | 0 | 0 | 570 | 200 | 0 | 0 | 0 | 0 |
| 54 | Tartous | Banyas | Oqirbat | 0 | 0 | 0 | 18080 | 380 | 0 | 0 | 0 | 0 |
| 53 | Tartous | Banyas | Saboura | 0 | 0 | 0 | 3020 | 390 | 0 | 0 | 0 | 0 |
| 48 | Tartous | Banyas | Shat-ha | 90 | 0 | 0 | 720 | 100 | 20 | 510 | 80 | 0 |
| 46 | Tartous | Dreikish | Tell Salhib | 280 | 120 | 0 | 730 | 120 | 0 | 290 | 100 | 0 |
| 59 | Tartous | Dreikish | Wadi El-oyoun | 0 | 0 | 0 | 710 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|-----|----------|-----------------|--------------------|----|----|---|------|------|-----|-----|-----|----|
| 47 | Tartous | Dreikish | Ziyara | 0 | 0 | 0 | 1260 | 300 | 0 | 220 | 20 | 0 |
| 86 | Tartous | Dreikish | Abul Thohur | 0 | 0 | 0 | 1200 | 1200 | 130 | 30 | 10 | 0 |
| 108 | Hama | Hama | Ariha | 0 | 0 | 0 | 1400 | 680 | 60 | 90 | 20 | 10 |
| 103 | Hama | Hama | Armanaz | 40 | 0 | 0 | 510 | 150 | 0 | 360 | 20 | 0 |
| 105 | Hama | Hama | Badama | 0 | 0 | 0 | 970 | 30 | 0 | 0 | 0 | 0 |
| 87 | Idleb | Harim | Bennsh | 20 | 20 | 0 | 70 | 110 | 10 | 200 | 480 | 20 |
| 99 | Idleb | Harim | Dana | 0 | 0 | 0 | 510 | 810 | 170 | 70 | 110 | 20 |
| 106 | Idleb | Harim | Darkosh | 0 | 0 | 0 | 950 | 120 | 0 | 0 | 0 | 0 |
| 109 | Idleb | Harim | Ehsem | 30 | 40 | 0 | 810 | 470 | 0 | 100 | 120 | 0 |
| 98 | Idleb | Harim | Harim | 0 | 0 | 0 | 390 | 80 | 70 | 0 | 0 | 0 |
| 97 | Idleb | Harim | Heish | 0 | 0 | 0 | 780 | 650 | 0 | 0 | 0 | 0 |
| 85 | Idleb | Idleb | Idleb | 90 | 40 | 0 | 660 | 460 | 40 | 390 | 220 | 30 |
| 107 | Idleb | Idleb | Janudiyeh | 0 | 0 | 0 | 870 | 130 | 0 | 0 | 0 | 0 |
| 104 | Idleb | Idleb | Jisr-Ash-Shugur | 0 | 0 | 0 | 1540 | 130 | 0 | 230 | 30 | 0 |
| 95 | Idleb | Idleb | Kafr Nobol | 0 | 0 | 0 | 530 | 1100 | 280 | 10 | 50 | 0 |
| 101 | Idleb | Idleb | Kafr Takharim | 0 | 0 | 0 | 410 | 350 | 20 | 0 | 0 | 0 |
| 93 | Idleb | Idleb | Khan Shaykun | 0 | 0 | 0 | 1060 | 550 | 70 | 0 | 0 | 0 |
| 92 | Idleb | Idleb | Ma'arrat An Nu'man | 0 | 0 | 0 | 1180 | 1480 | 350 | 0 | 0 | 0 |
| 90 | Lattakia | Jablah | Maaret Tamsrin | 90 | 20 | 0 | 410 | 340 | 0 | 580 | 370 | 0 |
| 110 | Lattakia | Jablah | Mhambal | 0 | 0 | 0 | 730 | 270 | 0 | 80 | 70 | 0 |
| 102 | Lattakia | Jablah | Qourqeena | 0 | 0 | 0 | 810 | 250 | 20 | 0 | 0 | 0 |
| 100 | Lattakia | Jablah | Salqin | 0 | 0 | 0 | 740 | 260 | 60 | 0 | 0 | 0 |
| 94 | Lattakia | Jablah | Sanjar | 0 | 0 | 0 | 1610 | 2120 | 660 | 0 | 0 | 0 |
| 88 | Lattakia | Jablah | Saraqab | 0 | 0 | 0 | 1500 | 1190 | 70 | 50 | 60 | 0 |
| 91 | Aleppo | Jarablus | Sarmin | 20 | 20 | 0 | 20 | 20 | 0 | 210 | 170 | 0 |
| 96 | Aleppo | Jarablus | Tamanaah | 0 | 0 | 0 | 1270 | 1180 | 390 | 0 | 0 | 0 |
| 89 | Aleppo | Jebel Saman | Teftnaz | 0 | 0 | 0 | 170 | 300 | 30 | 70 | 170 | 30 |
| 76 | Aleppo | Jebel Saman | Al-Haffa | 0 | 0 | 0 | 880 | 90 | 0 | 0 | 0 | 0 |
| 81 | Aleppo | Jebel Saman | Al-Qardaha | 0 | 0 | 0 | 1310 | 40 | 0 | 60 | 0 | 0 |
| 64 | Aleppo | Jebel Saman | Bahlolieh | 0 | 0 | 0 | 980 | 0 | 0 | 0 | 0 | 0 |
| 75 | Aleppo | Jebel Saman | Beit Yashout | 0 | 0 | 0 | 470 | 160 | 0 | 0 | 0 | 0 |
| 74 | Aleppo | Jebel Saman | Dalyeh | 0 | 0 | 0 | 500 | 330 | 40 | 0 | 0 | 0 |
| 66 | Aleppo | Jebel Saman | Ein El-Bayda | 0 | 0 | 0 | 870 | 0 | 0 | 300 | 0 | 0 |
| 71 | Idleb | Jisr-Ash-Shugur | Ein Elsharqiyeh | 0 | 0 | 0 | 620 | 50 | 0 | 0 | 0 | 0 |
| 78 | Idleb | Jisr-Ash-Shugur | Ein Et-teeneh | 0 | 0 | 0 | 580 | 20 | 0 | 0 | 0 | 0 |
| 73 | Idleb | Jisr-Ash-Shugur | Ein Shaqaq | 0 | 0 | 0 | 290 | 130 | 0 | 60 | 60 | 0 |
| 83 | Idleb | Jisr-Ash-Shugur | Fakhura | 0 | 0 | 0 | 610 | 0 | 0 | 60 | 0 | 0 |
| 69 | Lattakia | Lattakia | Hanadi | 0 | 0 | 0 | 350 | 130 | 0 | 80 | 10 | 0 |
| 82 | Lattakia | Lattakia | Harf Elmseitra | 0 | 0 | 0 | 360 | 40 | 0 | 0 | 0 | 0 |
| 70 | Lattakia | Lattakia | Jablah | 0 | 0 | 0 | 230 | 140 | 0 | 260 | 140 | 0 |

| | | | | | | | | | | | | |
|-----|----------|-------------|-----------------------|---|---|---|------|-----|----|-----|----|---|
| 84 | Lattakia | Lattakia | Jobet Berghal | 0 | 0 | 0 | 580 | 0 | 0 | 0 | 0 | 0 |
| 79 | Lattakia | Lattakia | Kansaba | 0 | 0 | 0 | 1260 | 120 | 0 | 0 | 0 | 0 |
| 68 | Lattakia | Lattakia | Kasab | 0 | 0 | 0 | 840 | 0 | 0 | 0 | 0 | 0 |
| 63 | Lattakia | Lattakia | Lattakia | 0 | 0 | 0 | 690 | 230 | 0 | 70 | 0 | 0 |
| 80 | Hama | Masyaf | Mzair'a | 0 | 0 | 0 | 770 | 100 | 0 | 0 | 0 | 0 |
| 67 | Hama | Masyaf | Qastal Maaf | 0 | 0 | 0 | 1760 | 0 | 0 | 160 | 0 | 0 |
| 72 | Hama | Masyaf | Qteibiyeh | 0 | 0 | 0 | 500 | 220 | 0 | 130 | 20 | 0 |
| 65 | Hama | Masyaf | Rabee'a | 0 | 0 | 0 | 1570 | 0 | 0 | 0 | 0 | 0 |
| 77 | Hama | Masyaf | Salanfa | 0 | 0 | 0 | 760 | 250 | 60 | 0 | 0 | 0 |
| 133 | Aleppo | Menbij | Anaza | 0 | 0 | 0 | 580 | 220 | 40 | 0 | 0 | 0 |
| 137 | Aleppo | Menbij | Arwad | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 |
| 117 | Aleppo | Menbij | Banyas | 0 | 0 | 0 | 1110 | 200 | 0 | 90 | 20 | 0 |
| 131 | Aleppo | Menbij | Baramanet Elmashayekh | 0 | 0 | 0 | 510 | 0 | 0 | 0 | 0 | 0 |
| 122 | Hama | Muhradah | Bariqiyeh | 0 | 0 | 0 | 390 | 0 | 0 | 0 | 0 | 0 |
| 126 | Hama | Muhradah | Dreikish | 0 | 0 | 0 | 590 | 60 | 0 | 0 | 0 | 0 |
| 129 | Hama | Muhradah | Dweir Raslan | 0 | 0 | 0 | 370 | 0 | 0 | 0 | 0 | 0 |
| 135 | Tartous | Qadmous | Hamam Wasil | 0 | 0 | 0 | 440 | 10 | 0 | 0 | 0 | 0 |
| 112 | Tartous | Qadmous | Hameidiyyeh | 0 | 0 | 0 | 620 | 110 | 0 | 0 | 0 | 0 |
| 128 | Tartous | Qadmous | Hamin | 0 | 0 | 0 | 290 | 0 | 0 | 0 | 0 | 0 |
| 127 | Tartous | Qadmous | Jneinet Raslan | 0 | 0 | 0 | 390 | 0 | 0 | 0 | 0 | 0 |
| 115 | Tartous | Safita | Kareemeh | 0 | 0 | 0 | 420 | 40 | 0 | 0 | 0 | 0 |
| 113 | Tartous | Safita | Kherbet Elma'aza | 0 | 0 | 0 | 330 | 220 | 0 | 0 | 0 | 0 |
| 121 | Tartous | Safita | Mashta Elhiu | 0 | 0 | 0 | 450 | 0 | 0 | 0 | 0 | 0 |
| 134 | Tartous | Safita | Qadmous | 0 | 0 | 0 | 1040 | 70 | 0 | 0 | 0 | 0 |
| 132 | Tartous | Safita | Qumseyyeh | 0 | 0 | 0 | 430 | 0 | 0 | 0 | 0 | 0 |
| 125 | Tartous | Safita | Ras El-Khashufeh | 0 | 0 | 0 | 470 | 20 | 0 | 0 | 0 | 0 |
| 118 | Tartous | Sheikh Badr | Rawda | 0 | 0 | 0 | 270 | 90 | 0 | 0 | 0 | 0 |
| 120 | Tartous | Sheikh Badr | Safita | 0 | 0 | 0 | 770 | 240 | 0 | 0 | 0 | 0 |
| 116 | Tartous | Sheikh Badr | Safsafa | 0 | 0 | 0 | 370 | 230 | 0 | 0 | 0 | 0 |
| 130 | Tartous | Tartous | Sheikh Badr | 0 | 0 | 0 | 910 | 0 | 0 | 0 | 0 | 0 |
| 123 | Tartous | Tartous | Sibbeh | 0 | 0 | 0 | 270 | 0 | 0 | 0 | 0 | 0 |
| 124 | Tartous | Tartous | Sisniyyeh | 0 | 0 | 0 | 530 | 120 | 0 | 0 | 0 | 0 |
| 114 | Tartous | Tartous | Soda Khawabi | 0 | 0 | 0 | 870 | 10 | 0 | 0 | 0 | 0 |
| 119 | Tartous | Tartous | Taleen | 0 | 0 | 0 | 310 | 0 | 0 | 0 | 0 | 0 |
| 111 | Tartous | Tartous | Tartous | 0 | 0 | 0 | 1270 | 120 | 0 | 0 | 0 | 0 |
| 136 | Tartous | Tartous | Tawahin | 0 | 0 | 0 | 710 | 40 | 0 | 0 | 0 | 0 |

Table 5 Area under deformation class at sub-district level.

Source of administrative units: HDX, UNOCHA 2020, admin level 3

| ID | Governorates | Districts | Sub-districts | Deformation class (km2) | | |
|----|--------------|-------------|--------------------|-------------------------|------------|------------|
| | | | | High | Low | Medium |
| 1 | Aleppo | Jebel Saman | Jebel Saman | 6.77 | 535400.57 | 128522.68 |
| 2 | Aleppo | Jebel Saman | Atareb | 690.69 | 304100.37 | 3467.00 |
| 3 | Aleppo | Jebel Saman | Tall Ed-daman | 0.00 | 125028.60 | 1021728.23 |
| 4 | Aleppo | Jebel Saman | Haritan | 0.00 | 196088.50 | 36593.08 |
| 5 | Aleppo | Jebel Saman | Daret Azza | 27.09 | 226993.54 | 426.60 |
| 6 | Aleppo | Jebel Saman | Zarbah | 27.09 | 190617.15 | 164160.98 |
| 7 | Aleppo | Jebel Saman | Hadher | 33.86 | 34554.86 | 96757.67 |
| 8 | Aleppo | Al Bab | Al Bab | 568.80 | 342467.58 | 146162.39 |
| 9 | Aleppo | Al Bab | Tadaf | 0.00 | 147882.34 | 173194.13 |
| 10 | Aleppo | Al Bab | Dayr Hafir | 0.00 | 3290.94 | 108892.16 |
| 11 | Aleppo | Al Bab | Ar-Ra'ee | 771.95 | 297410.15 | 53853.58 |
| 12 | Aleppo | Al Bab | Eastern Kwaives | 0.00 | 19129.43 | 191409.41 |
| 13 | Aleppo | Al Bab | Rasm Haram El-Imam | 0.00 | 46872.18 | 156624.32 |
| 14 | Aleppo | Al Bab | A'rima | 94.80 | 207640.65 | 109427.11 |
| 15 | Aleppo | Afrin | Afrin | 135.43 | 289704.21 | 137833.47 |
| 16 | Aleppo | Afrin | Bulbul | 744.86 | 119753.62 | 82733.94 |
| 17 | Aleppo | Afrin | Jandairis | 1225.64 | 215630.99 | 102405.08 |
| 18 | Aleppo | Afrin | Raju | 47400.36 | 171954.95 | 63482.62 |
| 19 | Aleppo | Afrin | Sharan | 0.00 | 160355.41 | 144706.52 |
| 20 | Aleppo | Afrin | Sheikh El-Hadid | 18702.83 | 65933.90 | 8816.47 |
| 21 | Aleppo | Afrin | Ma'btali | 47.40 | 155317.43 | 53264.46 |
| 22 | Aleppo | A'zaz | A'zaz | 94.80 | 139194.53 | 40730.45 |
| 23 | Aleppo | A'zaz | Aghtrin | 399.52 | 250219.71 | 91035.77 |
| 24 | Aleppo | A'zaz | Tall Refaat | 237.00 | 154545.48 | 49655.26 |
| 25 | Aleppo | A'zaz | Mare' | 13.54 | 113727.00 | 77628.24 |
| 26 | Aleppo | A'zaz | Nabul | 0.00 | 172537.30 | 2281.99 |
| 27 | Aleppo | A'zaz | Suran | 6.77 | 64572.83 | 102540.51 |
| 28 | Aleppo | Menbij | Menbij | 0.00 | 1126157.99 | 93046.90 |
| 29 | Aleppo | Menbij | Abu Qalqal | 0.00 | 337260.31 | 56853.34 |
| 30 | Aleppo | Menbij | Al-Khafsa | 0.00 | 167302.94 | 2864877.56 |
| 31 | Aleppo | Menbij | Maskana | 0.00 | 15493.15 | 489896.23 |
| 32 | Aleppo | Ain Al Arab | Ain al Arab | 47.40 | 661404.26 | 6866.28 |
| 33 | Aleppo | Ain Al Arab | Lower Shyookh | 0.00 | 294437.47 | 24167.41 |
| 34 | Aleppo | Ain Al Arab | Sarin | 0.00 | 1248579.57 | 95755.49 |
| 35 | Aleppo | As-Safira | As-Safira | 0.00 | 196846.91 | 613834.62 |
| 36 | Aleppo | As-Safira | Khanaser | 0.00 | 289914.12 | 1313287.82 |
| 37 | Aleppo | As-Safira | Banan | 0.00 | 41515.94 | 98497.94 |
| 38 | Aleppo | As-Safira | Hajeb | 0.00 | 161574.27 | 98525.03 |
| 39 | Aleppo | Jarablus | Jarablus | 0.00 | 273649.03 | 42423.32 |

| | | | | | | |
|----|----------|-----------------|-----------------|----------|-----------|------------|
| 40 | Aleppo | Jarablus | Ghandorah | 13.54 | 181306.36 | 109433.88 |
| 41 | Hama | Hama | Hama | 27.09 | 259550.81 | 610333.76 |
| 42 | Hama | Hama | Suran | 6.77 | 42267.58 | 426948.56 |
| 43 | Hama | Hama | Harbanifse | 20.31 | 150834.71 | 159204.26 |
| 44 | Hama | Hama | Hamra | 0.00 | 4956.72 | 898839.42 |
| 45 | Hama | As-Suqaylabiyah | As-Suqaylabiyah | 6.77 | 73192.92 | 151505.08 |
| 46 | Hama | As-Suqaylabiyah | Tell Salhib | 0.00 | 115128.69 | 87771.92 |
| 47 | Hama | As-Suqaylabiyah | Ziyara | 6.77 | 82354.73 | 126416.75 |
| 48 | Hama | As-Suqaylabiyah | Shat-ha | 2823.71 | 84474.21 | 99513.66 |
| 49 | Hama | As-Suqaylabiyah | Madiq Castle | 13.54 | 84968.53 | 201803.63 |
| 50 | Hama | As-Salamiyeh | As-Salamiyeh | 0.00 | 370995.82 | 490999.98 |
| 51 | Hama | As-Salamiyeh | Eastern Bari | 0.00 | 82693.31 | 157856.73 |
| 52 | Hama | As-Salamiyeh | As-Saan | 0.00 | 16454.70 | 1874040.82 |
| 53 | Hama | As-Salamiyeh | Saboura | 0.00 | 53460.83 | 409654.20 |
| 54 | Hama | As-Salamiyeh | Oqeirbat | 0.00 | 521383.61 | 1504771.72 |
| 55 | Hama | Masyaf | Masyaf | 0.00 | 90338.31 | 318977.31 |
| 56 | Hama | Masyaf | Jeb Ramleh | 0.00 | 70037.41 | 90880.03 |
| 57 | Hama | Masyaf | Oj | 0.00 | 7753.34 | 79720.63 |
| 58 | Hama | Masyaf | Ein Halaqim | 0.00 | 5572.93 | 63895.68 |
| 59 | Hama | Masyaf | Wadi El-oyoun | 0.00 | 37649.43 | 39342.30 |
| 60 | Hama | Muhradah | Muhradah | 74.49 | 68554.46 | 157531.70 |
| 61 | Hama | Muhradah | Kafr Zeita | 121.89 | 25271.16 | 121046.97 |
| 62 | Hama | Muhradah | Karnaz | 0.00 | 11552.14 | 50772.55 |
| 63 | Lattakia | Lattakia | Lattakia | 19298.72 | 93967.82 | 291.17 |
| 64 | Lattakia | Lattakia | Bahlolieh | 325.03 | 40798.16 | 58471.73 |
| 65 | Lattakia | Lattakia | Rabee'a | 0.00 | 52864.94 | 159258.43 |
| 66 | Lattakia | Lattakia | Ein El-Bayda | 182.83 | 103332.78 | 31744.70 |
| 67 | Lattakia | Lattakia | Qastal Maaf | 0.00 | 62907.04 | 181624.62 |
| 68 | Lattakia | Lattakia | Kasab | 920.92 | 87033.83 | 10746.34 |
| 69 | Lattakia | Lattakia | Hanadi | 0.00 | 66184.44 | 40.63 |
| 70 | Lattakia | Jablah | Jablah | 507.86 | 90886.80 | 0.00 |
| 71 | Lattakia | Jablah | Ein Elsharqiyeh | 318.26 | 66015.15 | 954.78 |
| 72 | Lattakia | Jablah | Qteibliyyeh | 1239.18 | 101876.91 | 4787.44 |
| 73 | Lattakia | Jablah | Ein Shaqaq | 74.49 | 62345.01 | 0.00 |
| 74 | Lattakia | Jablah | Dalyeh | 0.00 | 45077.74 | 48388.99 |
| 75 | Lattakia | Jablah | Beit Yashout | 0.00 | 43770.84 | 19508.63 |
| 76 | Lattakia | Al-Haffa | Al-Haffa | 0.00 | 42348.83 | 72840.81 |
| 77 | Lattakia | Al-Haffa | Salanfa | 6927.22 | 94631.43 | 38746.41 |
| 78 | Lattakia | Al-Haffa | Ein Et-teeneh | 27.09 | 22264.62 | 31778.55 |
| 79 | Lattakia | Al-Haffa | Kansaba | 33.86 | 66137.04 | 103305.69 |
| 80 | Lattakia | Al-Haffa | Mzair'a | 0.00 | 65967.75 | 25230.53 |
| 81 | Lattakia | Al-Qardaha | Al-Qardaha | 176.06 | 147421.88 | 23503.81 |

| | | | | | | |
|-----|----------|-----------------|--------------------|----------|-----------|-----------|
| 82 | Lattakia | Al-Qardaha | Harf Elmseitra | 6.77 | 40804.94 | 14077.91 |
| 83 | Lattakia | Al-Qardaha | Fakhura | 13.54 | 69610.81 | 385.97 |
| 84 | Lattakia | Al-Qardaha | Jobet Berghal | 209.92 | 34013.14 | 30891.49 |
| 85 | Idleb | Idleb | Idleb | 47.40 | 200334.22 | 51707.02 |
| 86 | Idleb | Idleb | Abul Thohur | 0.00 | 127012.64 | 200659.25 |
| 87 | Idleb | Idleb | Bennsh | 33.86 | 97055.62 | 3141.97 |
| 88 | Idleb | Idleb | Saraqab | 27.09 | 209712.72 | 168731.73 |
| 89 | Idleb | Idleb | Teftnaz | 379.20 | 97834.34 | 697.46 |
| 90 | Idleb | Idleb | Maaret Tamsrin | 528.18 | 233081.10 | 1428.78 |
| 91 | Idleb | Idleb | Sarmin | 216.69 | 40879.42 | 3548.26 |
| 92 | Idleb | Al Ma'ra | Ma'arrat An Nu'man | 0.00 | 280860.66 | 128366.94 |
| 93 | Idleb | Al Ma'ra | Khan Shaykun | 0.00 | 50102.18 | 152967.72 |
| 94 | Idleb | Al Ma'ra | Sanjar | 0.00 | 211243.08 | 378810.11 |
| 95 | Idleb | Al Ma'ra | Kafir Nobol | 13.54 | 257011.51 | 16305.72 |
| 96 | Idleb | Al Ma'ra | Tamanaah | 0.00 | 116537.16 | 253151.76 |
| 97 | Idleb | Al Ma'ra | Heish | 6.77 | 165163.16 | 18723.14 |
| 98 | Idleb | Harim | Harim | 338.57 | 45037.11 | 291.17 |
| 99 | Idleb | Harim | Dana | 169.29 | 213037.52 | 1408.47 |
| 100 | Idleb | Harim | Salqin | 2376.79 | 127737.19 | 927.69 |
| 101 | Idleb | Harim | Kafir Takharim | 4557.21 | 87968.29 | 27.09 |
| 102 | Idleb | Harim | Qourqeena | 352.12 | 121812.15 | 20.31 |
| 103 | Idleb | Harim | Armanaz | 6.77 | 114289.03 | 15811.40 |
| 104 | Idleb | Jisr-Ash-Shugur | Jisr-Ash-Shugur | 0.00 | 172063.29 | 87880.26 |
| 105 | Idleb | Jisr-Ash-Shugur | Badama | 0.00 | 62439.81 | 50853.81 |
| 106 | Idleb | Jisr-Ash-Shugur | Darkosh | 291.17 | 103888.04 | 13779.96 |
| 107 | Idleb | Jisr-Ash-Shugur | Janudiyeh | 0.00 | 97103.02 | 22711.54 |
| 108 | Idleb | Ariha | Ariha | 0.00 | 261941.14 | 13089.27 |
| 109 | Idleb | Ariha | Ehsem | 0.00 | 204254.91 | 6.77 |
| 110 | Idleb | Ariha | Mhambal | 0.00 | 57909.69 | 66299.56 |
| 111 | Tartous | Tartous | Tartous | 2850.79 | 178096.68 | 0.00 |
| 112 | Tartous | Tartous | Hameidiyyeh | 57462.78 | 12100.63 | 0.00 |
| 113 | Tartous | Tartous | Kherbet Elma'aza | 25765.48 | 29862.22 | 0.00 |
| 114 | Tartous | Tartous | Soda Khawabi | 16346.35 | 90825.85 | 0.00 |
| 115 | Tartous | Tartous | Kareemeh | 12134.49 | 42992.12 | 40.63 |
| 116 | Tartous | Tartous | Safsafa | 67599.68 | 189.60 | 0.00 |
| 117 | Tartous | Banyas | Banyas | 90311.22 | 62683.59 | 0.00 |
| 118 | Tartous | Banyas | Rawda | 8687.81 | 22481.31 | 0.00 |
| 119 | Tartous | Banyas | Taleen | 19793.03 | 8274.75 | 0.00 |
| 120 | Tartous | Safita | Safita | 44014.62 | 81555.70 | 13.54 |
| 121 | Tartous | Safita | Mashta Elhiu | 0.00 | 38015.09 | 13820.59 |
| 122 | Tartous | Safita | Bariqiyeh | 507.86 | 37710.37 | 6.77 |

| | | | | | | |
|-----|---------|-------------|-----------------------|----------|-----------|----------|
| 123 | Tartous | Safita | Sibbeh | 0.00 | 13028.33 | 7421.54 |
| 124 | Tartous | Safita | Sisniyyeh | 46648.72 | 25677.45 | 0.00 |
| 125 | Tartous | Safita | Ras El-Khashufeh | 318.26 | 46838.32 | 0.00 |
| 126 | Tartous | Dreikish | Dreikish | 6.77 | 81406.73 | 2952.37 |
| 127 | Tartous | Dreikish | Jneinet Raslan | 0.00 | 37304.08 | 1415.24 |
| 128 | Tartous | Dreikish | Hamin | 0.00 | 27221.35 | 0.00 |
| 129 | Tartous | Dreikish | Dweir Raslan | 0.00 | 20307.67 | 15418.66 |
| 130 | Tartous | Sheikh Badr | Sheikh Badr | 3040.39 | 99689.72 | 6.77 |
| 131 | Tartous | Sheikh Badr | Baramanet Elmashayekh | 162.52 | 59155.65 | 5762.53 |
| 132 | Tartous | Sheikh Badr | Qumseyyeh | 14314.91 | 32428.62 | 0.00 |
| 133 | Tartous | Qadmous | Anaza | 9358.18 | 76361.97 | 15689.52 |
| 134 | Tartous | Qadmous | Qadmous | 13705.47 | 108709.33 | 14050.82 |
| 135 | Tartous | Qadmous | Hamam Wasil | 6798.57 | 38475.55 | 0.00 |
| 136 | Tartous | Qadmous | Tawahin | 223.46 | 68127.86 | 17876.71 |
| 137 | Tartous | Tartous | Arwad | 0.00 | 94.80 | 0.00 |

Table 6 Number of wells under DPM classes at district level.

Source of administrative units: HDX, UNOCHA 2020, admin level 2

| District/ DPM | Number of wells | | | | |
|-----------------|-----------------|-----------------|--------|-----------------|-----|
| | High | | Medium | | Low |
| A'zaz | 4 | A'zaz | 2 | A'zaz | 18 |
| Afrin | 17 | Afrin | 11 | Afrin | 14 |
| Al Bab | 7 | Al Bab | 7 | Al Bab | 27 |
| Al Ma'ra | 1 | Al Ma'ra | 5 | Al Ma'ra | 30 |
| Al-Haffa | 3 | Al-Haffa | 1 | Al-Haffa | 2 |
| Al-Qardaha | 1 | Al-Qardaha | | Al-Qardaha | 1 |
| Ariha | 5 | Ariha | 3 | Ariha | 1 |
| As-Safira | 1 | As-Safira | 1 | As-Safira | 24 |
| As-Salamiyeh | 21 | As-Salamiyeh | 5 | As-Salamiyeh | 62 |
| As-Suqaylabiyah | 15 | As-Suqaylabiyah | 2 | As-Suqaylabiyah | 3 |
| Banyas | 12 | Banyas | 2 | Banyas | |
| Dreikish | | Dreikish | | Dreikish | 6 |
| Hama | 3 | Hama | 1 | Hama | 52 |
| Harim | 10 | Harim | 3 | Harim | 1 |
| Idleb | 9 | Idleb | 1 | Idleb | 42 |
| Jablah | 9 | Jablah | 7 | Jablah | 3 |
| Jarablus | | Jarablus | | Jarablus | 3 |
| Jebel Saman | | Jebel Saman | | Jebel Saman | 108 |
| Jisr-Ash-Shugur | 8 | Jisr-Ash-Shugur | 1 | Jisr-Ash-Shugur | 1 |
| Lattakia | 25 | Lattakia | 8 | Lattakia | 2 |

| | | | | | |
|-------------|----|-------------|---|-------------|----|
| Masyaf | 6 | Masyaf | 4 | Masyaf | 7 |
| Menbij | 3 | Menbij | 6 | Menbij | 26 |
| Muhradah | 6 | Muhradah | 2 | Muhradah | 6 |
| Qadmous | 4 | Qadmous | 1 | Qadmous | |
| Safita | 5 | Safita | 3 | Safita | 3 |
| Sheikh Badr | 2 | Sheikh Badr | | Sheikh Badr | |
| Tartous | 44 | Tartous | 4 | Tartous | 34 |
| | | | | | |

Table 7 Affected area of dam (km2) under DPM classes at district level.

Source of administrative units: HDX, UNOCHA 2020, admin level 2

| District/ DPM | Affected area of dam (km2) | | |
|-----------------------|----------------------------|-----------|------------|
| | High | Medium | Low |
| As-Saan | | | 30142.07 |
| As-Salamiyeh | | | 16316.182 |
| Bahlolieh | 71299.929 | | |
| Banyas | 12546.162 | | 101.73 |
| Baramanet Elmashayekh | | 11776.631 | |
| Ein El-Bayda | 12055.258 | | |
| Ein Shaqaq | 32211.601 | | |
| Ghandorah | | | 13312.911 |
| Hama | | | 23339.31 |
| Jeb Ramleh | 34014.276 | | |
| Kansaba | | | 424.618 |
| Lattakia | 5993.955 | | |
| Muhradah | | | 12250.995 |
| Mzair'a | 44966.604 | 80938.469 | |
| Qteibliyyeh | 727.023 | | 299.788 |
| Rabee'a | | 4582.531 | 110017.643 |
| Safita | 43514.379 | | |
| Safsafa | 14898.988 | | |
| Sharan | | 15929.359 | 70611.55 |
| Sisniyyeh | 2972.934 | | 19206.851 |

Table 8 Affected length of waterways under DPM classes at district level.

Source of administrative units: HDX, UNOCHA 2020, admin level 2

| District/ DPM | Waterways length in m | | |
|-----------------------|-----------------------|-----------|------------|
| | High | Medium | Low |
| A'zaz | | | 7073.313 |
| Abu Qalqal | 24604.719 | 4924.233 | 14450.104 |
| Abul Thohur | | | 7742.99 |
| Afrin | 45382.059 | 29560.829 | 74602.039 |
| Aghtrin | | 4702.581 | 58679.053 |
| Ain al Arab | | | 33783.057 |
| Al Bab | | | 47866.119 |
| Al-Khafsa | 35329.576 | 17796.8 | 510956.829 |
| Al-Qardaha | 383.095 | 3925.813 | |
| Ariha | | 1209.098 | 1216.492 |
| Armanaz | 12842.534 | 5303.61 | 6289.652 |
| As-Saan | | | 5799.811 |
| As-Safira | | | 119199.57 |
| As-Salamiyeh | | 2322.845 | 3396.068 |
| As-Suqaylabiyah | 98908.786 | 12581.296 | 53561.176 |
| Atareb | 3778.295 | 8178.349 | 20028.95 |
| Badama | 9875.324 | | 498.777 |
| Bahlolieh | 46136.078 | 13168.201 | 3943.419 |
| Banyas | 46815.084 | | 32.447 |
| Baramanet Elmashayekh | 2104.695 | 3109.984 | |
| Bariqiyeh | 1302.165 | 41.961 | 12762.167 |
| Bulbul | 38388.436 | | 8978.678 |
| Dana | | | 7390.838 |
| Darkosh | 31949.69 | | 124.755 |
| Dayr Hafir | 11434.383 | | 58508.147 |
| Dreikish | | | 14663.026 |
| Eastern Bari | | | 9763.564 |
| Eastern Kwaives | | | 144945.072 |
| Ein El-Bayda | 18457.266 | 538.359 | |
| Ein Shaqaq | | 8443.352 | |
| Fakhura | 4911.082 | 6111.201 | 14643.751 |
| Ghandorah | | | 64590.293 |
| Hadher | | | 83185.403 |
| Hama | 12806.623 | 298.975 | 142976.484 |
| Hamam Wasil | 16249.857 | | |
| Hameidiyyeh | 21671.343 | | 10562.025 |

| | | | |
|--------------------|-----------|-----------|------------|
| Hamin | | | 14663.026 |
| Hanadi | 22486.832 | 6623.244 | 11054.97 |
| Harbanifse | | | 40331.526 |
| Haritan | | | 64209.874 |
| Idleb | 68450.535 | 31242.305 | 65369.125 |
| Jablah | 17377.639 | 14354.016 | 15789.748 |
| Jandairis | 5280.579 | 12025.202 | 85505.32 |
| Janudiyeh | 19219.208 | 1545.789 | 591.133 |
| Jarablus | | 33435.553 | 93963.314 |
| Jeb Ramleh | 28332.665 | 12209.851 | 21807.748 |
| Jebel Saman | | | 102500.694 |
| Jisr-Ash-Shugur | 80998.829 | 9012.995 | 36220.322 |
| Kafr Zeita | 6990.775 | | 13365.721 |
| Kansaba | 21153.158 | 2774.602 | 11762.465 |
| Kareemeh | 8623.195 | | 25618.408 |
| Karnaz | 3553.13 | 4163.84 | 9709.129 |
| Khanaser | 4509.744 | 548.051 | 19305.945 |
| Kherbet Elma'aza | 9194.327 | 5581.564 | |
| Lattakia | 30440.173 | 5518.014 | 2015.164 |
| Lower Shyookh | 4594.812 | 37537.544 | 47681.302 |
| Ma'arrat An Nu'man | | 7024.967 | 28127.312 |
| Ma'btali | 23614.356 | 15340.301 | 31189.671 |
| Maaret Tamsrin | | 4573.454 | |
| Madiq Castle | 58012.891 | 7382.777 | 41683.689 |
| Mare' | | | 70507.007 |
| Maskana | | 1528.585 | 236156.213 |
| Masyaf | 14921.673 | 6501.35 | 34586.387 |
| Menbij | 14694.914 | 38646.174 | 134061.391 |
| Mhambal | 39341.242 | 6372.811 | 9391.346 |
| Muhradah | 29146.473 | 5160.963 | 120924.553 |
| Mzair'a | 4911.082 | 7688.035 | 8523.046 |
| Oj | | | 6178.492 |
| Oqeirbat | 10325.522 | | 13094.89 |
| Qadmous | | 3109.984 | |
| Qastal Maaf | 6969.258 | | 10741.256 |
| Qteibliyyeh | 25738.025 | 3518.753 | 209.198 |
| Qumseyyeh | 30549.473 | | |
| Rabee'a | 53851.004 | 4556.989 | 32467.999 |
| Raju | 5378.052 | 76.353 | 286.836 |
| Ras El-Khashufeh | 15804.687 | 9359.344 | |
| Rasm Haram El-Imam | 7654.218 | 9579.414 | 108391.882 |

| | | | |
|-----------------|-----------|-----------|------------|
| Rawda | 14299.616 | | |
| Safita | 32165.723 | 360.605 | |
| Safsafa | 39308.875 | | 78.589 |
| Salqin | | 170.584 | 1795.628 |
| Saraqab | | 7024.967 | 28127.312 |
| Sarin | 32436.954 | 38967.353 | 63472.96 |
| Sharan | 52996.624 | 26788.039 | 34071.217 |
| Shat-ha | 52624.268 | 13727.551 | 55033.109 |
| Sheikh Badr | 19736.87 | 5283.808 | |
| Sheikh El-Hadid | | | 15788.112 |
| Sisniyyeh | 19991.633 | | 15633.438 |
| Soda Khawabi | 14378.828 | | 21716.511 |
| Suran | | | 121468.512 |
| Tadaf | | | 48991.099 |
| Tall Ed-daman | | | 63276.87 |
| Tartous | 8981.545 | 9082.735 | 56968.986 |
| Tell Salhib | 78090.254 | 14928.745 | 52087.124 |
| Wadi El-oyoun | | 736.44 | |
| Zarbah | | | 169409 |
| Ziyara | 76583.812 | 15395.119 | 85212.487 |

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