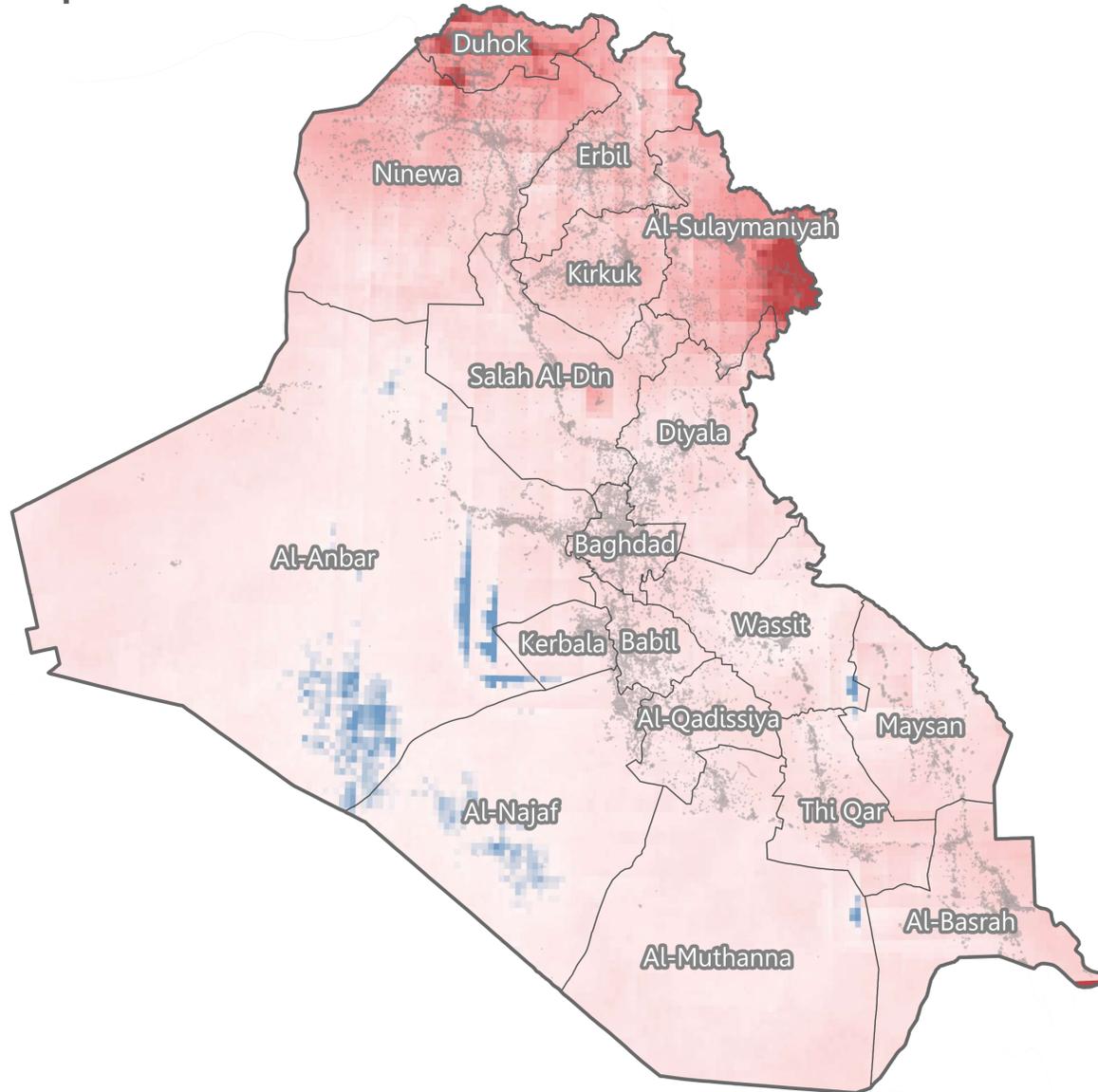
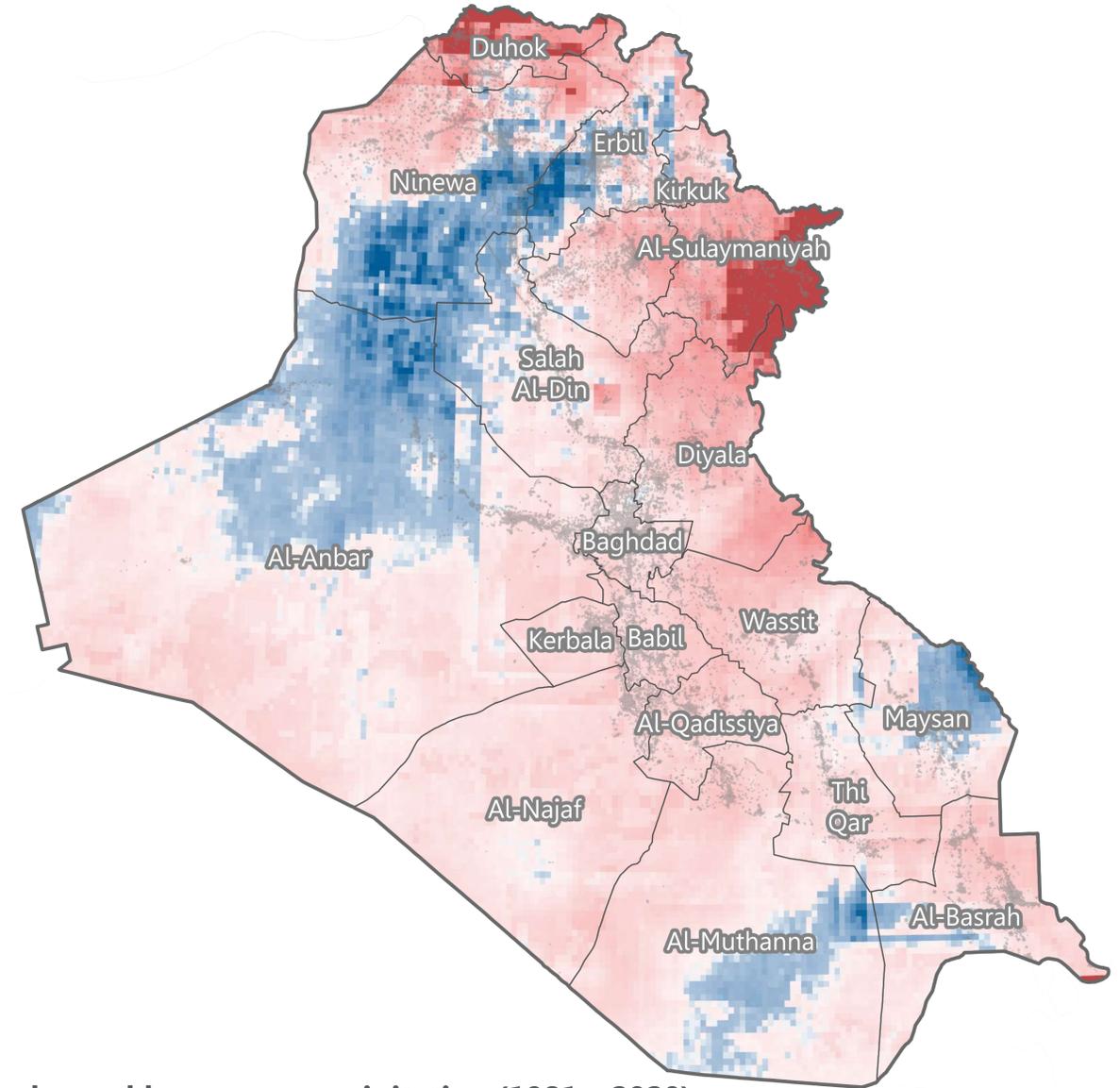


Total precipitation deficit of 2021



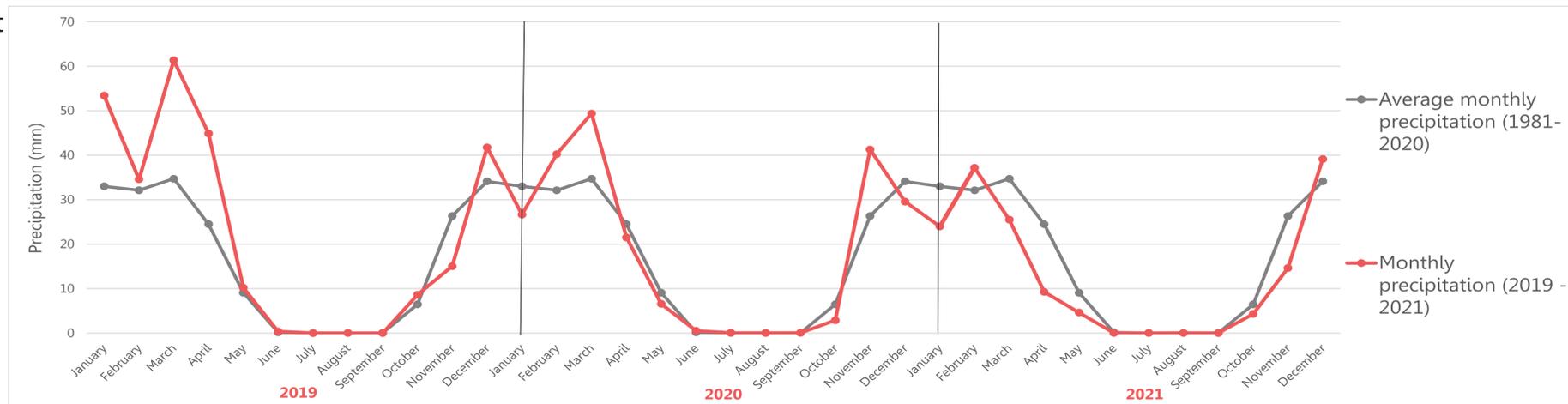
Precipitation deficit of October to December 2021



Comparison of monthly precipitation (2019 – 2021) with the historical monthly average precipitation (1981 – 2020)

Daily average precipitation deficit (mm)

- Surplus
- High deficit
- Governorate boundaries
- Populated areas



Methodology

The precipitation deficit was calculated by using satellite precipitation data (Climate Hazards Group InfraRed Precipitation with Station data), processed in Google Earth Engine for the period between 1981 – 2021. To calculate the precipitation deficit, initially, the historical average (1981 to 2020) and last year average (2021) were calculated, and then the current year average was subtracted from the historical average. While calculating the deficit for the last quarter, only October to December data was considered to make the historical average and last year (2021) average comparable. Finally, it should be noted that the map is not illustrating the normalized value as a percentage change; instead, it shows the absolute/actual value. Presenting normalized values may highlight additional areas of concern.

Data sources
Precipitation data: [Climate Hazards Group InfraRed Precipitation with Station data \(CHIRPS\)](#)
Population Data: [World Population \(2020\)](#)
Administrative boundaries: OCHA
File Name: REACH_IRQ_MAP_Iraq Precipitation Change 2021_A1
For analysis script contact: Iraq@reach-initiative.org

Note: Data, designations and boundaries contained on this map are not warranted to be error-free and do not imply acceptance by REACH partners, associates or donors mentioned on this map.