Report of Monitoring, Early Warning and Assessment of Desert Locust

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Desert Locust Monitoring and Loss Assessment in Morocco, Algeria and Mauritania (July 2026)

Integrated with multi-source Earth Observation data, e.g. meteorological data, field data, and remote sensing data (such as MODIS in the US, etc), and self-developed models and algorithms for Desert Locust monitoring and forecasting, the research team constructed the 'Vegetation pests and diseases monitoring and forecasting system', which could regularly release thematical maps and reports on Desert Locust.

The remote sensing monitoring showed that, in July 2026, desert locusts mainly affected localized areas in central-southern and southwestern Morocco, northwestern and central Algeria, and southern Mauritania, affecting 85.6, 27.0, and 15.6 thousand hectares of vegetation, respectively. This month, the affected vegetation areas in Morocco and Algeria both declined from June, while the center of locust activity showed a transition from the spring breeding areas of Northwest Africa toward the summer breeding areas of the Sahel. Spring breeding in Morocco had entered its final stage; earlier hopper groups had largely fledged, and gregarious, transiens, and solitarious populations all decreased markedly. As temperatures rose, vegetation declined, and large-scale control operations were implemented in June, available food resources and habitat patches for adults continued to contract. Some individuals temporarily concentrated in the remaining green patches, and a small number of mature adults may migrate eastward or southward under favorable winds; however, the capacity of the original breeding areas to continue replenishing new populations weakened substantially. In Algeria, activity was mainly localized and involved solitarious adults and a few hoppers. With the end of spring breeding, drying vegetation, and fragmentation of suitable habitats, both population density and the extent of damage declined

overall. Influxes from nearby source populations and residual green vegetation in oases and shrub patches could still support localized resting and feeding, resulting in relative concentrations in a few areas, but conditions were not sufficient for broad continuous dispersal or gregarization. In southern Mauritania, the number of solitarious adults and the area of affected grassland increased, possibly because localized rainfall associated with the northward shift of the seasonal rain belt improved soil moisture and vegetation greening, while adults migrating southward from northern areas also have replenished local populations. Suitable patches remained constrained by the uneven spatial and temporal distribution of rainfall, and locust conditions were still dominated by low-density, scattered occurrences. If wet conditions persist, adult maturation, oviposition, and egg hatching may receive sustained environmental support, and summer breeding may gradually become established. Over the next two months, spring breeding in Morocco and Algeria is expected to largely end. Residual solitarious populations may remain in localized green patches, while some adults may disperse southward along desert margins. Because of high temperatures and drying vegetation, locust activity in both countries is likely to continue declining overall, with only small-scale breeding persisting locally. As the Intertropical Convergence Zone and seasonal rain belt periodically shift northward, Mauritania and surrounding Sahel areas will gradually develop conditions suitable for summer breeding. Continued rainfall may increase the moisture content of sandy soils, promote vegetation greening, and favor adult oviposition. If incoming source populations overlap with local populations, egg and hopper survival may increase, raising the risk of localized population growth. During this period, winter wheat and barley in Morocco are at the end of harvest; wheat and barley in Algeria are in the main harvest period, with harvesting already completed in some areas; in southern Mauritania, rainfed crops such as sorghum, maize, and millet range from sowing and emergence to the seedling stage, irrigated rice ranges from sowing to early tillering, and natural pasture continues to green up with the rainy season. Continued monitoring is needed to guard against impacts of growing summer-breeding populations on food crops and livestock production. The detailed results are as follows:

■ 1. Desert Locust Monitoring and Loss Assessment in Morocco

In July 2026, spring breeding in Morocco entered its final stage, and the affected vegetation area declined markedly from June. After earlier hopper groups completed fledging, adults gradually left the original breeding areas as they matured reproductively and inland vegetation dried. Intensive control operations in June also reduced the initial population base, jointly contributing to contraction of the affected area. Remaining populations mainly relied on residual green patches for resting and feeding, and small adult groups could still form where local densities increased. Remaining adults may continue to migrate southward toward Mauritania and summer breeding areas in the Sahel; however, declining food resources and soil moisture significantly weakened the ecological conditions for continued breeding and large-scale aggregation. Monitoring results showed that in July 2026, desert locusts affected 85.6 thousand hectares of vegetation in Morocco, including 9.6 thousand hectares of cropland, 19.5 thousand hectares of grassland, and 56.5 thousand hectares of shrubland (Figure 1), accounting for 0.13%, 0.28%, and 0.41% of the country's total cropland, grassland, and

shrubland areas, respectively. Béni Mellal-Khénifra recorded the most extensive damage, with 28.2 thousand hectares of affected vegetation, followed by Marrakech-Safi with 26.6 thousand hectares. Souss-Massa, Drâa-Tafilalet, and Guelmim-Oued Noun were also affected, with 19.1, 7.5, and 4.2 thousand hectares, respectively.

Fig. 1 Monitoring of Desert Locust damage in Morocco (July 2026)

■ 2. Desert Locust Monitoring and Loss Assessment in Algeria

In July 2026, locust activity in Algeria remained dominated by solitarious adults. Scattered solitarious adults were active locally in western, central, and southern areas, and where earlier breeding occurred in the northwest, a few hoppers may still appear; overall, locust conditions remained low-density, localized, and sporadic. After spring breeding ended, drying vegetation and high temperatures accelerated the contraction of suitable habitats. The spatial isolation of food patches reduced the likelihood of continuous breeding and group formation. The arrival of residual adults from eastern Morocco, together with the presence of localized oasis and shrub patches could prolong local resting and feeding. Meanwhile, remote sensing identified vegetation anomalies or potentially affected patches in areas such as Sidi Bel Abbès, and scattered adults may subsequently disperse southward along desert margins toward summer breeding areas. Monitoring results showed that in July 2026, desert locusts affected 27.0 thousand hectares of vegetation in Algeria, including 6.7 thousand hectares of cropland, 7.8 thousand hectares of grassland, and 12.5 thousand hectares of shrubland (Figure 2), accounting for 0.44‰, 0.62‰, and 0.48‰ of the country's total cropland, grassland, and shrubland areas, respectively. Sidi Bel Abbès recorded the most extensive damage, with 15.1 thousand hectares of affected vegetation, followed by Tlemcen with 4.5 thousand hectares. Saïda, Aïn Témouchent, and Ghardaïa were also affected, with 3.7, 2.1, and 1.6 thousand hectares, respectively.

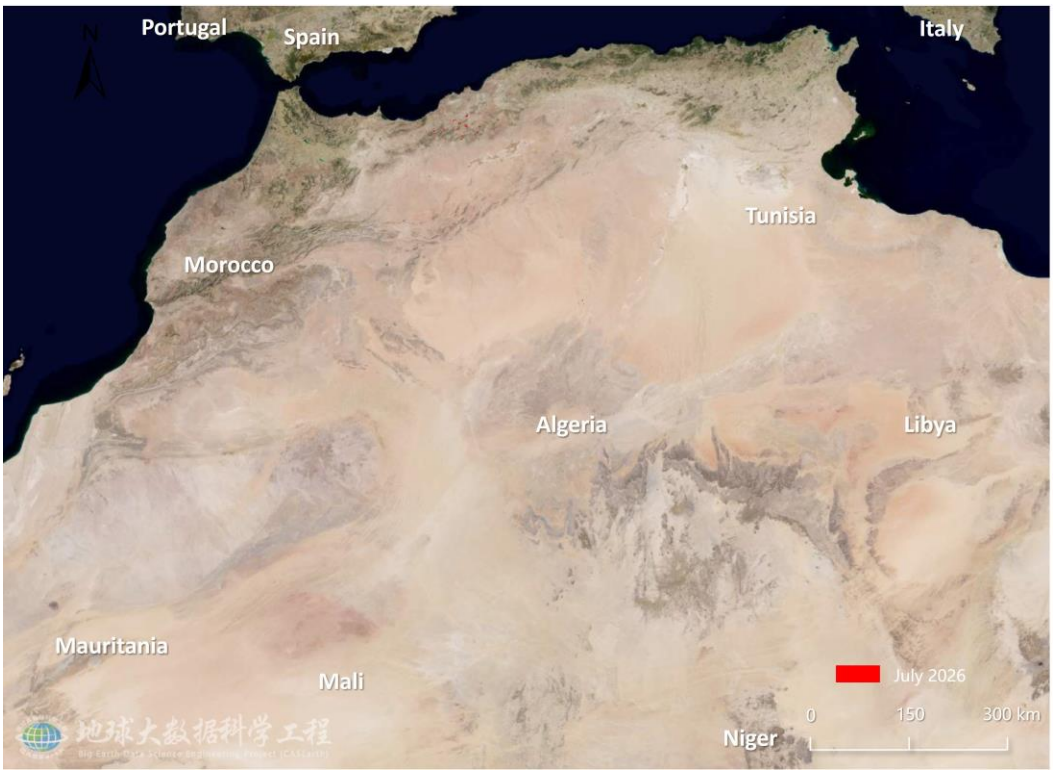

Fig. 2 Monitoring of Desert Locust damage in Algeria (July 2026)

3. Desert Locust Monitoring and Loss Assessment in Mauritania

In July 2026, FAO ground surveys indicated increases in solitarious adults in Adrar, Tagant, Gorgol, and other areas; remotely sensed areas of potentially affected vegetation were mainly distributed in the south and southeast, and the affected vegetation area increased from June. Intermittent rainfall associated with the northward shift of the seasonal rain belt increased near-surface soil moisture and promoted pasture greening, creating favorable conditions for adult resting, feeding, and sexual maturation. At the same time, southward-moving source populations from neighboring areas may have supplemented local populations. Because rainfall remained uneven, suitable habitats were patchily distributed, and locust conditions at this stage remained low-density, localized, and sporadic. However, in patches that remain continuously moist and green, conditions for adult oviposition, egg hatching, and hopper survival will improve simultaneously; the risk of population increase therefore warrants close attention once summer breeding begins. Monitoring results showed that in July 2026, desert locusts affected 15.6 thousand hectares of vegetation in Mauritania, including 0.1 thousand hectares of cropland, 15.2 thousand hectares of grassland, and 0.3 thousand hectares of shrubland (Figure 3), accounting for 0.01%, 0.14%, and 0.06% of the country's total cropland, grassland, and shrubland areas, respectively. Hodh el Gharbi recorded the most extensive damage, with 5.5 thousand hectares of affected vegetation, followed by Assaba with 4.5 thousand hectares. Guidimaka and Gorgol were also affected, with 3.6 and 2.0 thousand hectares, respectively.

Fig. 3 Monitoring of Desert Locust damage in Mauritania (July 2026)

The analysis indicates that, over the next two months, spring breeding in Morocco and Algeria is expected to largely end. Residual solitarious populations may remain in localized green patches, while some adults may disperse southward along desert margins. Because of high temperatures and drying vegetation, locust activity in both countries is likely to continue declining overall, with only small-scale breeding persisting locally. As the Intertropical Convergence Zone and seasonal rain belt periodically shift northward, Mauritania and the surrounding Sahel will gradually develop conditions suitable for summer breeding. Continued rainfall may increase moisture in sandy soils, promote vegetation greening, and favor adult oviposition. If incoming source populations overlap with local populations, egg and hopper survival may increase, and the risk of localized population growth may rise. Continuous monitoring of desert locust dynamics in Morocco, Algeria, and Mauritania is recommended to prevent recurrent locust activity from adversely affecting food crops and agropastoral production.

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