Report of Monitoring, Early Warning and Assessment of Desert Locust

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Desert Locust Monitoring and Loss Assessment in Morocco, Algeria and Yemen (May 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 results showed that, in May 2026, desert locusts mainly distributed the central-southwestern regions of Morocco, localized northwestern and central areas of Algeria, and the southern inland areas of Yemen, affecting 88.3, 25.1, and 16.6 thousand hectares of vegetation, respectively. In Morocco, spring breeding entered its late stage. Previous wet conditions promoted sustained vegetation greening in central-southwestern areas, while more immature adult groups formed following hopper groups fledging. The affected area expanded slightly from April and extended eastward and southward along the Draa Valley and southern desert margins. Some locust populations may subsequently move east into suitable areas of western Algeria, while others may move south into Mauritania and Sahel summer breeding areas. In Algeria, localized locust populations were relatively dense in the northwest under the combined influence of influxes from Morocco and suitable vegetation conditions. Sporadic populations increased along the central-southern desert margins, indicating a shift from the northwest toward central-southern suitable patches. In Yemen, small oases and wadi habitats remained in the southern Gulf of Aden coastal plains and inland transition zones; together with the possible southward movement of sporadic adults from late spring breeding areas in inland Saudi Arabia, this

maintained low-density localized activity. Over the next two months, remaining hoppers in Morocco will continue fledging, and some adults may disperse into suitable areas of western Algeria under local wind conditions. As the seasonal rain belt in the Sahel moves gradually northward, localized summer breeding habitats may form; however, due to below-average rainfall in the northern Sahel, the development of a continuous suitable green belt remains uncertain. Some mature adults may move south from the southern margins of Morocco into Mauritania and Sahel countries. In central-southern Algeria, scattered rainfall and localized greening patches may still support short-distance dispersal and small-scale breeding. In Yemen and along the Red Sea coastal areas, rainfall and vegetation conditions are generally limited, and locust activity is expected to remain at low-density and sporadic levels. During this period, winter wheat, barley, and other cereals in Morocco and Algeria are mostly at the filling to maturation or pre-harvest stage, while some maize and fodder crops are entering the sowing and seedling emergence stage. In southern Yemen, sorghum, maize, millet, and other summer crops are at the sowing and seedling emergence stage, and pasture is also entering the recovery stage. Continued monitoring is recommended to prevent localized recurrent impacts on agropastoral production. The detailed results are as follows:

■ 1. Desert Locust Monitoring and Loss Assessment in Morocco

In May 2026, previous precipitation and vegetation greening continued in central-southwestern Morocco, providing suitable conditions for hopper feeding and fledging during the late stage of spring breeding. Hopper groups, hopper bands, and immature adult groups remained widespread, and adults were also observed along the Draa Valley and other southern margins. As available vegetation gradually became patchy and adults fledged and matured, some adults may disperse east into suitable areas of western Algeria, while other populations may move south along the southern desert margins toward summer breeding areas such as Mauritania. Therefore, close attention should be paid to the southward dispersal and invasion dynamics. Monitoring results showed that in May 2026, desert locusts affected 88.3 thousand hectares of vegetation in Morocco, including 11.7 thousand hectares of cropland, 18.5 thousand hectares of grassland, and 58.1 thousand hectares of shrubland (Figure 1), accounting for 0.15%, 0.27%, and 0.42% of the country's total cropland, grassland, and shrubland areas, respectively. Souss-Massa recorded the most extensive damage, with 43.5 thousand hectares of affected vegetation, followed by Béni Mellal-Khénifra with 27.2 thousand hectares. Drâa-Tafilalet, Marrakech-Safi, and Guelmim-Oued Noun were also affected, with 8.1, 7.7, and 1.8 thousand hectares, respectively.

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

■ 2. Desert Locust Monitoring and Loss Assessment in Algeria

In May 2026, previous precipitation and the maintenance of spring greening belts in northwestern Algeria, combined with the input of immature adults from Morocco, led to an increase in localized population density compared with the previous month. Scattered hoppers and small-scale adult activity were observed along the central and central-southern desert margins, possibly associated with adults gradually leaving northwestern areas during the late spring breeding period and moving southward along scattered oases and suitable vegetation patches. Overall, locust conditions remained low-density, localized, and sporadic. Monitoring results showed that in May 2026, desert locusts affected 25.1 thousand hectares of vegetation in Algeria, including 6.9 thousand hectares of cropland, 7.7 thousand hectares of grassland, and 10.5 thousand hectares of shrubland (Figure 2), accounting for 0.45‰, 0.61‰, and 0.40‰ of the country's total cropland, grassland, and shrubland areas, respectively. Sidi Bel Abbès recorded the most extensive damage, with 9.7 thousand hectares of affected vegetation, followed by Aïn Témouchent with 8.3 thousand hectares. Saïda, Tlemcen, and El Bayadh were also affected, with 3.9, 2.5, and 0.7 thousand hectares, respectively.

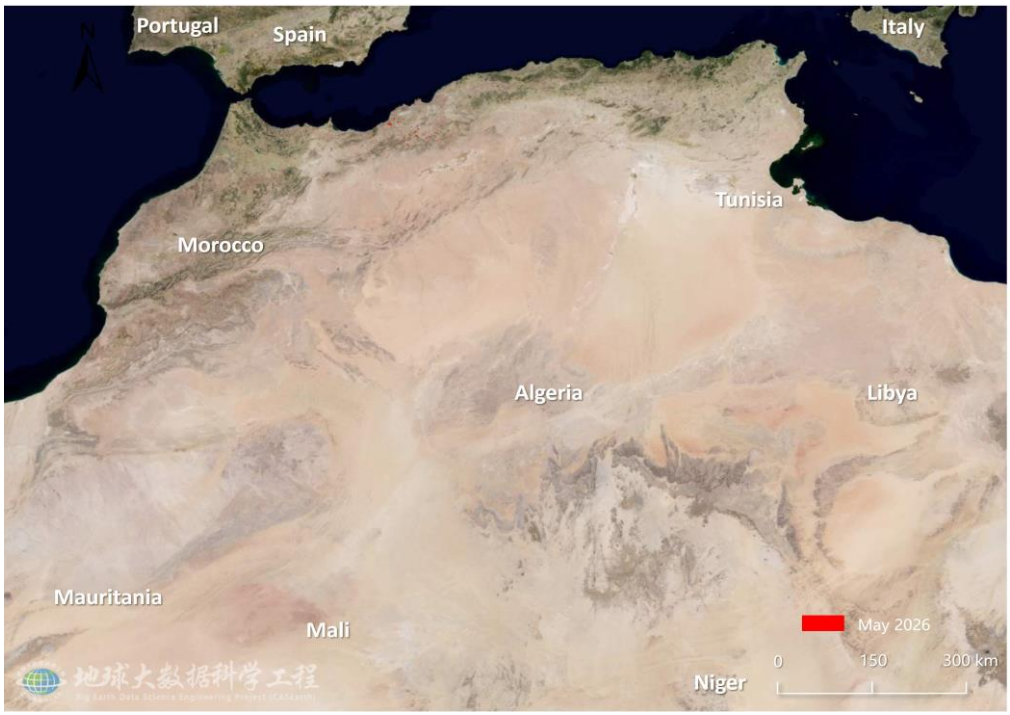

Fig. 2 Monitoring of Desert Locust damage in Algeria (May 2026)

■ 3. Desert Locust Monitoring and Loss Assessment in Yemen

In May 2026, rainfall remained limited across Yemen, and most inland areas were dry. Only the southern Gulf of Aden coastal plains, adjacent lowland areas, and inland transitional zones retained localized suitable habitats in oases and wadis. Under the influence of persistent source populations in the southern traditional breeding areas, together with the possible southward wind-assisted dispersal of sporadic adults from the late spring breeding areas in inland Saudi Arabia, desert locust activity remained concentrated in these areas. Overall, constrained by limited moisture and vegetation conditions, locust conditions in Yemen remained low-density and localized, without evident expansion or intensification. Monitoring results showed that, in May 2026, desert locusts affected 16.6 thousand hectares of vegetation in Yemen, including 3.2 thousand hectares of cropland, 4.8 thousand hectares of grassland, and 8.6 thousand hectares of shrubland (Figure 3), accounting for 0.65%, 0.12%, and 0.16% of the country's total cropland, grassland, and shrubland areas, respectively. Ad-Dāli recorded the most extensive damage, with 5.3 thousand hectares of affected vegetation, followed by Ta'izz with 4.2 thousand hectares. Lahij, Al-Hudaydah, and Abyān were also affected, with 3.8, 2.7, and 0.6 thousand hectares, respectively.

Fig. 3 Monitoring of Desert Locust damage in Saudi Arabia (May 2026)

The analysis indicates that, over the next two months, remaining hoppers in Morocco will continue to fledge, and some adults may disperse into suitable areas of western Algeria under local wind conditions. As the seasonal rain belt in the Sahel moves gradually northward, localized summer breeding habitats may form; however, due to below-average rainfall in the northern Sahel, the establishment of a continuous suitable green belt remains uncertain. Some mature adults may move south from the southern margins of Morocco into Mauritania and Sahel countries. In central-southern Algeria, scattered rainfall and localized greening patches may still support short-distance dispersal and small-scale breeding. In Yemen and along the Red Sea coastal areas, rainfall and vegetation conditions are generally limited, and locust activity is expected to remain at low-density and sporadic levels. Continuous monitoring of desert locust dynamics in Morocco, Algeria and Yemen is recommended to prevent recurrent impacts on food crop growth and agropastoral production.

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