



Report of Monitoring, Early Warning and Assessment of Desert Locust

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Desert Locust Monitoring and Loss Assessment in Eritrea, Saudi Arabia and Yemen (September 2025)

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 September 2025, desert locusts were primarily distributed across the central–western interior of Eritrea, the western Red Sea coastal zone and the southern interior of Saudi Arabia, and the southern Gulf of Aden coast of Yemen, affecting 15.2, 16.8, and 17.9 thousand hectares of vegetation, respectively. Over the next two months, increased rainfall along the eastern Red Sea coast of Eritrea will lead to localized greening that can support small-scale breeding. In contrast, rainfall in the interior of Saudi Arabia and Yemen is expected to decrease, vegetation will continue to dry, and conditions will be less favorable for survival and reproduction; locusts will shift toward the Red Sea and Gulf of Aden coasts, with a slight increase along the coastal belts. As this period coincides with the main growing and harvest seasons for food crops in Eritrea and Saudi Arabia, and the major harvest season in Yemen, continued monitoring is essential to prevent recurrent losses in agricultural and pastoral production. The specific results are as follows:

■ 1. Desert Locust Monitoring and Loss Assessment in Eritrea

In September 2025, desert locusts in Eritrea were mainly distributed across the central–

western interior, where abundant rainfall and lush vegetation growth created favorable conditions for oviposition and reproduction, resulting in a further rise in their numbers. Monitoring results showed that, in September, desert locusts affected 15.2 thousand hectares of vegetation in Eritrea, including 4.8 thousand hectares of cropland, 6.0 thousand hectares of grassland, and 4.4 thousand hectares of shrubland (Figure 1), accounting for 1.10%, 0.12%, and 0.34% of the country's total cropland, grassland, and shrubland areas, respectively. Gash-Barka experienced the most extensive damage, with 6.6 thousand hectares of vegetation affected, followed by Anseba(5.8 thousand hectares) and Debub(2.8 thousand hectares).

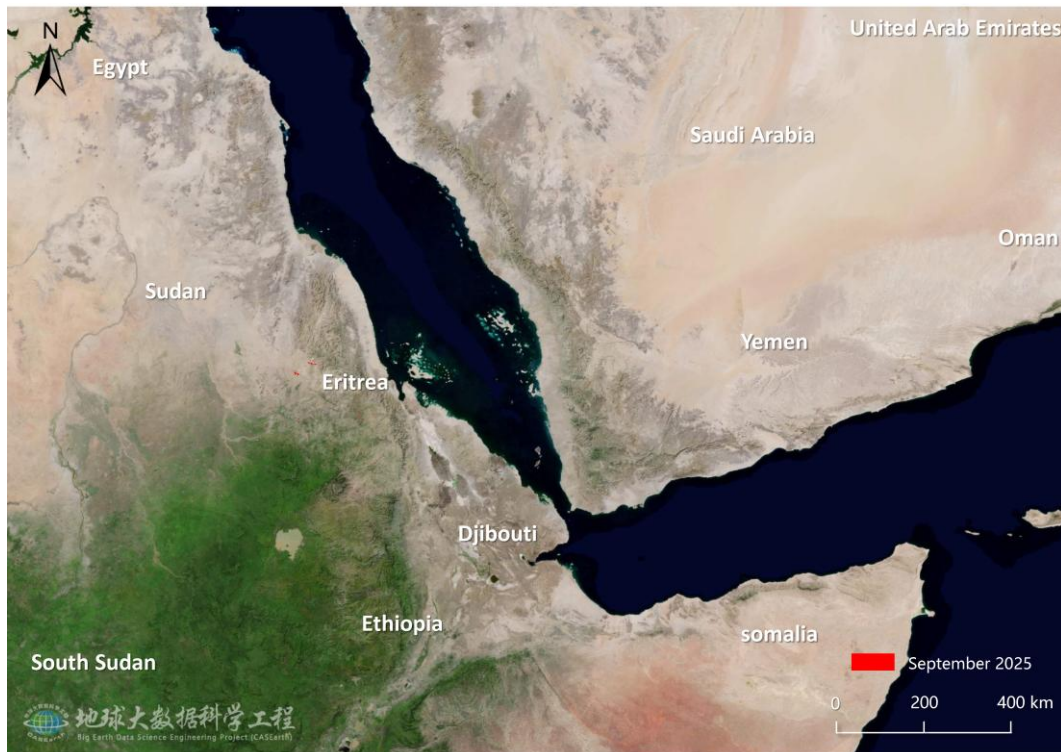


Fig. 1 Monitoring of Desert Locust damage in Eritrea (September 2025)

■ 2. Desert Locust Monitoring and Loss Assessment in Saudi Arabia

In September 2025, rainfall decreased across the central part of Saudi Arabia, while the western Red Sea coastal zone and the southern interior experienced several rainfall events and phase-wise greening, which supported oviposition and reproduction and led to a modest increase in numbers. Monitoring results showed that, in September, desert locusts affected 16.8 thousand hectares of vegetation in Saudi Arabia, including 4.5 thousand hectares of cropland, 5.5 thousand hectares of grassland, and 6.8 thousand hectares of shrubland (Figure 2), accounting for 2.05%, 0.28%, and 0.17% of the country's total cropland, grassland, and shrubland areas, respectively. Ar Riyadh experienced the most extensive damage of vegetation affected (9.9 thousand hectares), followed by Jizan (3.8 thousand hectares), Al Bahah (2.0 thousand hectares) and Makkah (1.1 thousand hectares).

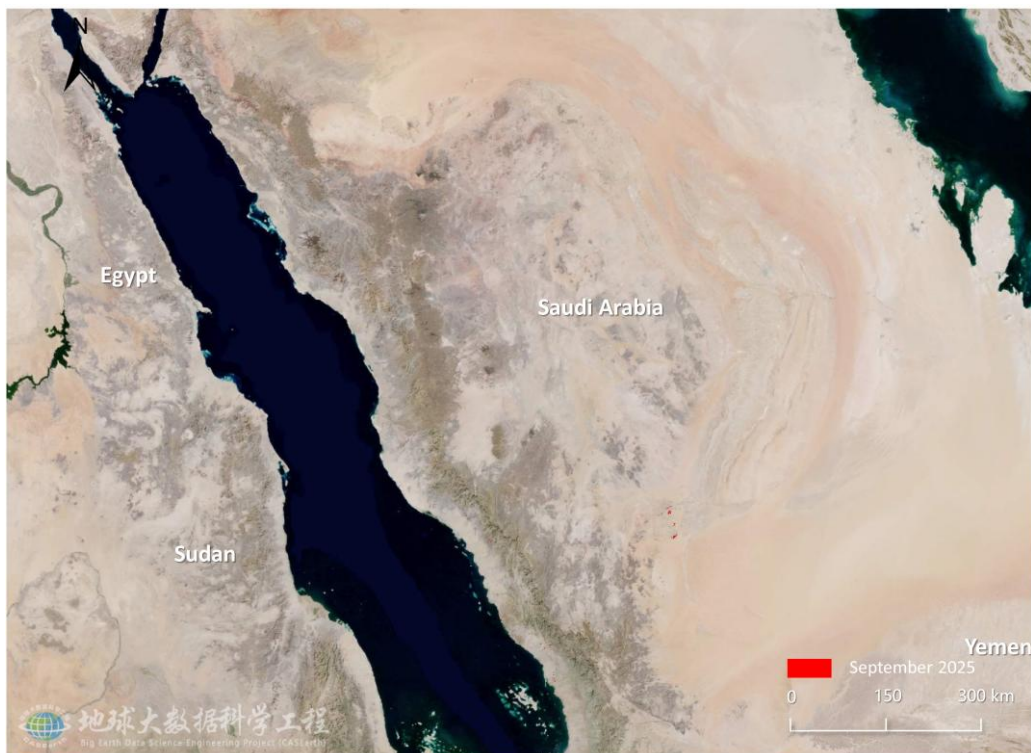


Fig. 2 Monitoring of Desert Locust damage in Saudi Arabia (September 2025)

■ 3. Desert Locust Monitoring and Loss Assessment in Yemen

In September 2025, desert locusts in Yemen were mainly distributed along the southern coast of Gulf of Aden, where comparatively abundant rainfall and improved vegetation created favorable conditions for reproduction, forming a continuous coastal belt for suitable habitat. Monitoring results showed that, in September, desert locusts affected 17.9 thousand hectares of vegetation in Yemen, including 4.7 thousand hectares of cropland, 2.3 thousand hectares of grassland, and 10.9 thousand hectares of shrubland (Figure 3), accounting for 0.95%, 0.06%, and 0.20% of the country's total cropland, grassland, and shrubland areas, respectively. Ta'izz experienced the most extensive damage, with 5.6 thousand hectares of vegetation affected, followed by Lahij (5.3 thousand hectares), Ad-Dāli (4.6 thousand hectares) and Abyān (2.4 thousand hectares).



Fig. 3 Monitoring of Desert Locust damage in Yemen (September 2025)

The analysis indicates that, over the next two months, conditions in the interior of Saudi Arabia and Yemen will continue to dry, and locust activity will contract toward the Red Sea and Gulf of Aden coasts, with minor increases expected along the coastal belts. In Eritrea, localized greening along the eastern Red Sea coast will sustain small-scale breeding and short-distance spread; overall density is expected to remain low. Continuous monitoring of desert locust dynamics in Eritrea, Saudi Arabia and Yemen is essential to prevent repeated losses in crop growth and agricultural production.

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This report was released by Professor Wenjiang Huang's and Associate Professor Yingying Dong's research team in Aerospace Information Research Institute, Chinese Academy of Sciences.

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