

EarthRanger

Platform and services for managing Desert Locust aerial operations

Desert Locust survey and control operations undertaken by aircraft require substantial logistics and have a large volume of information to manage. This requires a systematic approach that relies on geospatial technologies and information technologies (IT).

The Desert Locust field actions generate a vast amount of data on a daily basis, including areas sprayed, pesticide used, hours for field operations, area surveyed, movement of equipment, pesticide stock balances, and so on. It is vital that this data are made available at the end of each day to the Locust officers and decision makers stationed in the control basis as well as to the relevant national authorities in the Ministry of Agriculture, the FAO country office, and the Desert Locust Information Service (DLIS), NSPMD at FAO headquarters. The data are used to make important daily decisions for Desert Locust control in the affected country and contribute to the analysis and forecasts undertaken by the National Locust Centre and DLIS. Therefore, data must be in a format compatible with currently used FAO tools including SWARMS GIS, RAMSES GIS, eL3, eL3m, and eL3g.

The EarthRanger platform and software were developed by Vulcan, based in Seattle, WA (USA). Vulcan, founded by philanthropists Jody Allen and the late Paul G. Allen, co-founder of Microsoft, works to make and leave the world a better place. EarthRanger is part of Vulcan's philanthropic portfolio. Since 2017, EarthRanger has helped protected area managers make informed, conservation-related operational decisions. It is also used by ecologists and biologists to study wildlife and habits, and to advocate for their protection.

Vulcan collaborates with FAO DLIS to customize the EarthRanger software, originally used for wildlife management, for managing Desert Locust aerial surveys and control operations. The software has been enhanced to ensure ingestion of eLocust3m and eLocust3g data as well as exporting manually entered data in a compatible format for inclusion in the RAMSES GIS.

EarthRanger is operated by 51 Degrees, a Kenyan limited company established in 2012 that provides a wide range of services in the environmental, operational and logistics sector, specialising in management oversight of protected wildlife areas and data collection. 51 Degrees works closely alongside the Government of Kenya, Ministry of Agriculture, Northern Rangelands Trust, and Lewa Wildlife Conservancy. They are based in Lewa, Kenya. Under an FAO contract, 51 Degrees provides services to manage all aerial assets engaged in Desert Locust monitoring and control operations in Kenya, Somalia and Ethiopia using EarthRanger software.

<https://earthranger.com>

<https://vulcan.com>