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Use of RS, GIS and mVAM for Locust Losses and Needs Assessment

- ✓ *1 km² swarm can eat the same food as 35,000 people in a day;*
- ✓ *dimension of a swarm can be as long as 2400 km²;*
- ✓ *one swarm can eat the same food as 84 million people in a day*

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Desert Locust Monitoring

Potential of Remote Sensing & GIS Technologies

Remote Sensing (RS)

- Sensors: MODIS, Sentinel, SPOT
- Precipitation (CHIRPS), Temperature
- Vegetation Indices (NDVI, SAVI, EVI)
- LU/LC
- Drone technology

Secondary Data

- Soil texture
- Soil moisture
- Habitat type

Geographical Information System (GIS)

- Multicriteria Analysis
- Hotspot analysis and identification
- Overlay analysis
- Trend analysis and forecasting
- Locust story mapping



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Locust Losses and Needs Assessment: Field data collection & mVAM

- Data collection from affected communities through:
 - Focus group discussions using a Community Level Questionnaire.
 - Key informants interview from the key concerned government line departments.
- Using online/offline survey tool including open sources such as Google Forms, KoBo, Open Data Kit (ODK).
- **mVAM systems:** mobile surveys conducted through live telephone interviews – also known as Computer Assisted Telephone Interviewing (CATI) via call centers.
- **Web surveys:** leveraging increasing number of internet users across the globe, data is collected through web surveys.



Desert Locust Situation, Surveillance and Response in Pakistan

- In Pakistan, **38%** of the country area breeding grounds for Desert Locust.
- Initial crop damages (wheat, oil seed crops, cotton, grazing field, fruits and vegetable) estimated **115,000** hectares.
- Overall **17 million** hectares have been surveyed and **0.95 million** hectares treated so far.
- WFP and FAO proactively engaged with M/o NFS&R and Department of Plant Protection, and have rolled-out **eLocust3m** for Desert Locust survey and control reporting.
- Procurement of equipment like survey devices, vehicle mounted ULV sprayers, vehicles and pesticides.
- FAO and WFP planning a joint ‘Damages and Needs Assessment’ in collaboration with the Government and Partners.
- Mobilizing financial recourse and programme design for response to the vulnerable communities.

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