Overview:
Unprecedented breeding of desert locust was observed during 2018 in remote and inaccessible areas near Yemen/Oman/Saudi Arabia which was fueled by heavy rains. This generated numerous desert locust swarms which swept through South West (SW) Iran in late January and February 2019. Additional swarms arriving from unusually good spring breeding in North East (NE) Saudi Arabia during March, 2019 further spurred the increase in locust population in Iran. For the most part, desert locusts breed in South East (SE) Iran each spring (March–May), however, this year breeding started a month earlier which contributed to the spread of locusts in Iran. Despite Iran’s massive control campaign some un-controlled and un-detected locust swarms migrated to Balochistan-Pakistan during March 2019. Unfortunately, in Balochistan climatic conditions were favourable for locust multiplication due to rainfall.

Towards the end of May and early June 2019, locust presence was reported in Nara Desert in Sindh, in Khairpur area as well as in Cholistan desert and in Rahim Yar Khan District. This locust outbreak became serious, as these locations were close to the main agriculture production areas of the country. However, the situation remained stable during July to October 2019 because of control measures adopted by federal and provincial Governments. To meet this challenging situation FAO headquarters/Pakistan offices extended required coordination, forecasting and information as well as some emergency support to the Department of Plant Protection during this period to strengthen logistical as well as technical capacity in managing the Desert Locust spread in the country. Training programmes were held in Sindh, Punjab and Balochistan provinces for technical capacity building of concerned professionals of Department of Plant Protection, Provincial Agriculture Departments and representatives of the private sector/pesticide companies in subjects including:

- Desert Locust biology and life cycle
- Survey, management/control techniques
- Coping strategies.

In addition, FAO Pakistan organized seminars/field days for awareness creation among the farming communities about spread and control of desert locust were organized at Yazman, District Bahawalpur, Punjab and Noshki district, Baluchistan

Desert Locust Situation: an Alarming Threat

Unusual Longer Presence of Desert Locust in Summer Breeding Areas:

It was expected that during November 2019 the situation would become calm. However, it turned more serious again, as desert locust started migration from India into Thar (Sindh Province), Cholistan (Punjab Province) deserts, and some rainfall made the condition conducive for formation of desert locust swarms. At the advent of winter (November 2019), it was thought that Desert Locust spread will taper off but contrary to past patterns a third generation breeding took place. This resulted in development of hoppers and adults across India as well Thar, Nara, Cholistan deserts. This situation not only resulted in longer survival but also led to Desert Locust swarms and bands formation which continued migration into Balochistan areas. However, during this time increased movement of Desert Locust from India was observed in the shape of large swarm/groups towards Tharparker, Nara and Cholistan deserts in Pakistan. This migration from across Indian border towards Nara and Tharparker deserts of Sindh was because of low temperature, drying of vegetation and end of breeding season. The locust swarms thus began to move further towards southern and interior parts of Baluchistan.

Current Scenario:
At present – due to cold weather – the situation has become relatively calm in most parts of Sindh and Balochistan, however, Desert Locust swarms are still present in areas close to Cholistan and Thal deserts while similar presence has been noticed in Badin area of Sindh province as well as in D. I. Khan and Tank areas of Khyber Pakhtunkhwa province. This need proactive control operation and Government institutions are aware of this new emergence and committed to counter this threat. It has been observed that low temperatures and dried vegetation would cause immature locust swarms and groups leaving summer monsoon breeding areas of Sindh and Punjab and migrating towards interior and costal area of Baluchistan. The rains and vegetation in the area would enable the locust to sustain in Balochistan area and become source of winter- spring breeding. Therefore, without losing any time, all the resources should be pooled for timely control operation for a) existing locust elimination at the earliest and b) putting in place an action plan for management of desert locust in Balochistan and possible arrival of locust during March onwards from Iran side.
The area covered by operations to date is at Annex A.

**FAO Support**

FAO considers the current Desert Locust situation as the worst in 25 years with three primary areas of concern in order of importance:

(i) Horn of Africa,
(ii) Southwest Asia and 
(iii) Red Sea area.

It has been highlighted that this situation represents an unprecedented threat to food security and livelihoods, particularly in the Horn of Africa. In view of this alarming situation a Locust Emergency Level 3 has been declared within FAO to coordinate and ensure support to countries. To coordinate out that under these conditions FAO considers support is urgently needed for the monitoring and control of the Desert Locust, as well as providing livelihood and food security support to the most vulnerable, while all possible support control options are explored.

The details of FAO Pakistan support to counter the challenge of desert locust in Pakistan as follows;

**a)** Provided to DPP 12 GPS equipment for effective surveys through eLocust3 system.

**b)** FAO also provided technical inputs to DPP including;
- Advisory Note (Preparation and Implementation of Desert Locust Control Campaigns)
- Standard Operating Procedures (SOP) for Desert Locust Ground Surveys
- Standard Operating Procedures (SOP) for Desert Locust Ground Control
- Standard Operating Procedures (SOP) for Desert Locust Aerial Survey and Control

**c)** FAO is also in touch with regional countries and facilitated last year’s joint locust survey by Pakistan and Iran during April 2019; the activity was halted due to security concerns in the past. FAO, under the Commission for Controlling the Desert Locust in South West Asia (SWAC), is providing necessary technical support and connectivity to the regional countries.

**d)** Technical Capacity Building Trainings (4)
- National Desert Locust Master Trainers Workshop at Bahawalpur on 5-9 November 2018. This capacity building effort had significant contribution towards Department of Plant Protection professional in Desert Locust survey and control area.
- Two days training programme on Locust biology, life cycle, survey and control strategies was held on 18-19 July 2019 at Sukkur and had 35 participants from Department of Plant Protection, Provincial Agriculture Departments Sindh and Punjab as well as representatives of private sector pesticides companies.
- A second Training on Desert Locust Survey, Control and Strategy was organized on 23-24 August, 2019 at Bahawalpur and had 35 participants from Department of Plant Protection, Provincial Agriculture Departments Balochistan and some representatives of private sector pesticides companies.
- Third Training on Desert Locust Survey, Control and Strategy was organized on 11-12 October 2019 at Quetta and had 40 participants from Department of Plant Protection, Provincial Agriculture Departments Punjab and Balochistan, Cholistan Development Authority, representatives of private sector pesticides companies and some Livestock Department professionals.

**e)** Awareness Creation Seminars (Two):
- Desert Locust Spread and Control Awareness Seminars for the Farming Communities in collaboration with Department of Plant protection and provincial Agriculture Department.
- A Seminar on Desert Locust Spread and Control awareness was organized on 26 August 2019 in Yazman/Cholistan desert; district Bahawalpur. This seminar was chaired by Provincial Agriculture Minister Malik Noman Ahmad Langrial and attended by over 400 farmers and other stakeholders.
- Second Seminar on Desert Locust Spread and Control awareness was organized on 14 October 2019 in Nushki, Balochistan. Director General, Department of Agriculture, Balochistan and Deputy Commissioner Nushki and over 200 farmers and other stakeholders attended this event.

**f)** Logistic Support to Department of Plant Protection

The following items were provided to Department of Plant Protection to strengthen logistic capacity to counter Desert Locust Challenge: (for a value of about PKR 7.4 millions)

- Aviation fuel for Aircraft to the tune of 20 drums
- For field vehicles 30,000 liters of fuel (HSD)
For Land Rover Defenders 40 tyres
For Hilux double cabin 52 tyres
For land rovers and double cabins 18 batteries

Forecast:
As we move in the year 2020 the conditions do not look any better. As per FAO forecasts “the remaining swarms along the Indo-Pakistan border will migrate to southwest Pakistan and southern Iran and slowly mature and breed”. In view of recent rains in southeast Iran would result in conducive ecological conditions for several months of breeding that is expected to cause a significant increase in locust by spring. It means the situation will be serious in areas of Balochistan and need effective survey and control arrangements.

In the most recent forecast, current locust situation has been underscored as extremely alarming and represents an unprecedented threat to food security and livelihoods in horn of Africa. In addition, important locust situations continue to develop along both sides of the Red Sea, in Oman and in southern Iran.

Declaration of National Emergency and Approval of National Action Plan
The Government in a recent move has declared national emergency against Desert Locust on January 31, 2020. This decision was taken in a meeting held under the chairmanship of Prime Minister Pakistan, attended by Federal Ministers and senior representative of provincial Governments. For effective and timely control of Desert Locust Government also approved a national action plan to effectively handle this crises. Under this initiative besides involving the officials concerned at provincial and district level, different task have been given to the NDMA, provincial disaster management authorities and federal and provincial departments to deal with the threat.

Next Steps:
1. FAO Representation Pakistan will build on the positive progress made to date in handling Desert Locust challenge in Pakistan. It would streamline support mechanism/resources in order to meet its commitments to the affected population and the Government’s expectations. Concerted efforts, as done last year in close collaboration with Ministry of National Food Security and Research to mobilize development partners resources will continue.
2. FAO will hire services of National Coordinator to support Ministry of National Food Security and Research and Provinces to effectively control the imminent spread of Desert Locust in the country
3. FAO will continue to support Ministry of National Food Security and Research by providing technical assistance, equipment and operational expenses.
4. FAO will continue to monitor the situation in collaboration with DPP and encourage to put in place coping mechanism especially a crash control programme in Baluchistan Province to curtail and successfully control Desert Locust in Baluchistan area.

Map Showing Control Targets Up to 02-02-2020
### Month Wise Control Operation 2019-20

(Treated Area in ha)

<table>
<thead>
<tr>
<th>Month</th>
<th>Balochistan</th>
<th>Sindh</th>
<th>Punjab</th>
<th>KPK</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>Mar, 2019</td>
<td>345</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>345</td>
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<tr>
<td>Apr, 2019</td>
<td>540</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>540</td>
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<tr>
<td>May, 2019</td>
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<td>-</td>
<td>-</td>
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<tr>
<td>June, 2019</td>
<td>6,610</td>
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<td>July, 2019</td>
<td>560</td>
<td>5,000</td>
<td>2,470</td>
<td>-</td>
<td>8,030</td>
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<tr>
<td>Aug., 2019</td>
<td>75</td>
<td>8,095</td>
<td>8,390</td>
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<td>Sept., 2019</td>
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<td>9,990</td>
<td>21,145</td>
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<td>Oct., 2019</td>
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<td>16,730</td>
<td>12,970</td>
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<td>8,335</td>
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<td>30,470</td>
<td>31,630</td>
<td>95</td>
<td>62,195</td>
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<tr>
<td>Feb., 2020</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>160</td>
<td>160</td>
</tr>
<tr>
<td><strong>Total Treated Area</strong></td>
<td><strong>12,315</strong></td>
<td><strong>194,180</strong></td>
<td><strong>95,535</strong></td>
<td><strong>255</strong></td>
<td><strong>302,285</strong></td>
</tr>
</tbody>
</table>

Area Surveyed: 965,480 ha (Balochistan: 132,900ha, Sindh: 485,640ha, Punjab 346,240ha and KP 700ha)

**Source:** Department of Plant Protection (DPP)