

ANNUAL REPORT 1999

**EMERGENCY PREVENTION SYSTEM**

**EMPRES**

For Transboundary Animal and Plant  
Pests and Diseases

DESERT LOCUST  
CENTRAL REGIONAL PROGRAMME



**Food and Agriculture Organization of the United Nations**

---

## **EMPRES Central Region, Report on Progress in 1999**

---

### **A Introduction**

The Desert Locust programme of EMPRES (Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases – Desert Locust component) was initiated in mid 1994 to strengthen the emergency prevention capacity in locust-affected countries with the aim of minimising the risks of Desert Locust plagues. It was designed as a collaborative programme in which affected countries, regional organizations, donors, and FAO, participate in the development of improved preventive control strategies. Preparatory activities started 1995 in the Central Region, comprising nine countries around the Red Sea (Djibouti, Egypt, Eritrea, Ethiopia, Oman, Saudi Arabia, Somalia, Sudan and Yemen), which is considered to be the origin of most Desert Locust outbreaks.

The **primary development objective** of the EMPRES Central Region Programme is stated as:

“To minimise the risk of Desert Locust plagues emanating from the Central Region of the Desert Locust distribution area through well-directed surveys and timely, environmentally sound interventions in order to mitigate food security concerns in the Central Region and beyond.”

The **purpose** of the Programme is defined as:

“To promote and catalyse the realisation of the regional self-sufficiency for averting locust plagues through strengthening existing national, regional, and international components of Desert Locust management systems.”

A full donor-assisted programme began in 1997 with the recruitment of the EMPRES team in duty stations at Asmara, Sana'a, Khartoum and Addis.

The EMPRES activities are focusing on five main areas:

#### **Early Detection**

Desert Locust survey and forecasting methodologies and systems are being strengthened and improved. Since timely action relies on efficient information networking, modern communication technology has been introduced in the affected countries.

#### **Early Reaction**

Technical assistance and advice is being provided to affected countries in order to increase their early intervention capacity, and to assure more effective and environmentally safer control operations

### **Research**

EMPRES provides the platform for joint national and international research programmes on improved Desert Locust control tactics and strategies. Initial topics being covered include biocontrol, population dynamics, survey methodology, barrier treatment, economic impact, and environmental impact. This involves, for example, field trials on insect growth regulators (IGR), botanical insecticides, and mycopesticides.

### **Campaign Planning and Contingency Arrangements**

Campaign planning procedures and contingency arrangements are being developed in close co-operation with Central Region countries. The aim is to improve preparedness for Desert Locust interventions so that the necessary resources can be mobilised early enough when critical situations arise.

### **Capacity Building**

Apart from improvements in technical and organizational areas, EMPRES concentrates on the development of human capacity through intensive international, regional, and national training programmes for different target groups and on relevant subject matters. Database and information management, training of national trainers and field staff, and training of scouts, farmers and nomads, are being addressed.

Following the approval of the EMPRES Programme by the FAO-Council in mid 1994 a number of donors provided support to FAO for the EMPRES Desert Locust Component, namely the Netherlands, USA (through USAID) and Germany/Switzerland (through GTZ). Other development agencies such as U.K., Belgium, Japan and Norway provided assistance bilaterally or to specific areas of the Programme. All in all, including FAO funds from the Regular Programme an amount of about US\$ 7 has been allocated to the first 4-years phase of the Programme (1997 – 2000). The funds cover staff salaries, operational expenses, equipment and contracts, research programmes, and training.

As at the end of 1999, there are six EMPRES staff operating from Khartoum, Sana'a, Hargeisa and Addis Ababa. The position of the EMPRES Coordinator based in Asmara is vacant.

## B. Status Report

### B.1. Achievements of Outputs

#### Output D1: EMPRES activities coordinated

**Indicator D1.1<sup>1</sup>:** Proper programme management (programme planning & monitoring) and regular coordination meetings with relevant stakeholders (EMPRES Liaison Officers, FAO Commission for Controlling the Desert Locust in the Central Region (CRC), Consultative Committee Meeting etc.) made standard procedures by end of 1997.

**Indicator D1.2:** Up to 2 bilateral projects initiated annually and implemented in the Central Region starting from 1998.

Planned Activity	Status / Reasons for Deviation
1.1 Initiate and implement bilateral programmes	<ul style="list-style-type: none"> <li>• One Country Focus Programme (CF) for Eritrea was initiated in Nov. 1998. The implementation of the programme was delayed due to unforeseen reasons, and the current absences of the Liaison Officer at the Plant Protection Department (PPD). However, some of the planned equipment has been procured and handed over to the Ministry of Agriculture. In order to continue with the CF-Programme in 2000, the PPD is requested to nominate a deputy Liaison Officer. However, during the 2<sup>nd</sup> Consultative Committee Meeting further steps for implementation have been discussed with the delegate from Eritrea. It was agreed to re-send the so far elaborated planning documents to the MoA for further consideration by Dec. '99. Further field equipment for the CF-Programme has been ordered in Dec. '99.</li> <li>• A Country Focus programme planning workshop was held in Khartoum (Sudan) in June '99. The PPD and FAO HQ adopted the planning document. A first draft workplan for the implementation of the programme in has been developed by the PPD in Dec. '99. Already initial procurements of various equipment such as radio- and survey equipment and sprayers have been ordered in Dec. '99.</li> <li>• A second Country Focus Programme was initiated in September '99 in Sana'a, Yemen. The planning document has been submitted to the PPD for approval in Oct. 99. Endorsement by the PPD is still pending.</li> <li>• Following the Survey and Control Training Course in Ethiopia, May '99, survey and communication equipment has been procured and 2500 copies of a training manual (produced by USAID) were printed in Amharic. However, due to difficult administrative procedures, the radio equip-</li> </ul>

---

<sup>1</sup> As per findings from the joint workshop conducted in Ziway / Ethiopia, May '98. It should be noted that the indicators cover the whole EMPRES Programme and are not related to a specific period or phase.

ment could not be cleared from the customs until Dec. 99.

- 1.2 Coordinate EMPRES activities
- The EMPRES Coordinator resigned from his post in early October '99. The FAO HQ assigned the Senior Field Officer as Acting Coordinator to handle the Programme affairs until a new Coordinator is recruited.
  - The EMPRES Coordinator and/or Acting Coordinator participated in the DLCC-Meeting held in Rome, May '99 and the Executive Committee Meeting of the CRC in Amman, October '99. During both meetings it was strongly recommended to revive and to strengthen the cooperation between EMPRES and the CRC.
  - Following the recommendation of the 1<sup>st</sup> Consultative Committee Meeting, a mid-term Evaluation of Phase 1 of the EMPRES Programme was carried out by three consultants from 19<sup>th</sup> July to 20<sup>th</sup> August 1999. 6 countries of the Central Region were visited and the different partners as well as the staff interviewed. The mission findings were presented at the 2<sup>nd</sup> Consultative Committee meeting in Rome, November '99.
  - In November '99 the 7<sup>th</sup> Liaison Officers Meeting was conducted in Sana'a. The Meeting was organized in form of a participatory workshop, in which the achievements and obstacles of the Programme were reviewed and recommendations for a Workplan 2000 jointly formulated. Amongst others, it was recommended to invite interested Central Region researchers to the next meeting as observers. Furthermore, it was recommended to organize a planning workshop for the 2<sup>nd</sup> Phase of the EMPRES Programme in March 2000.
  - Under the "Cooperative Research Team" (CRT) approach five concepts, covering barrier treatment, biocontrol, environmental aspects, population dynamics and remote sensing, were drafted. However, none of the envisaged research teams became operational, which significantly delayed research efforts in the Region. The lack of progress of the CRT concept may be explained by: a) difficulties of the team members to coordinate their interests and resources; b) Liaison Officers not being fully involved in the discussion; c) cooperation with the CRC not properly established. During the 7<sup>th</sup> Liaison Officers Meeting, the CRT approach was considered as too ambitious and expensive and with too little likely participation of local research entities. It was recommended to support and foster in cooperation with the CRC local research bodies in the context of applied field investigations geared to the obvious requirements for improved survey/control operations (Outputs D4 and D5).
  - In November '99 the 2<sup>nd</sup>. Consultative Committee Meeting was held in Rome. Based on the findings of the 7<sup>th</sup> ELO-Meeting, EMPRES progress and the tentative workplan for

2000 were presented to the delegates from the donor community and the EMPRES Member Countries. The participants agreed to review the Programme Document as recommended by the Evaluation Mission and to organize a participatory Planning Workshop for Phase II of the Programme by March/April 2000.

**Output D2: Survey and early warning systems improved**

- Indicator D2.1:** At least 16 national master trainers in up to 8 EMPRES Member Countries are qualified to organize and to conduct national Survey & Control training courses on a regular basis by 2006. (same as I.D4.1)
- Indicator D2.2:** At least 80 % of all Survey and Information personnel under the Desert Locust Control Units in the Member Countries is regularly trained on improved survey methods, data assessment, regular reporting, forecasting and survey planning by 2006.
- Indicator D2.3:** Improved Survey guidelines are developed and introduced at the Locust Control Units as standard for all Survey procedures by 2006.
- Indicator D2.4** Survey and communication equipment is specified, procured and made available in at least 8 of the Member Countries by end of 2004.
- Indicator D2.5** Improved planning, reporting and communication schemes are introduced and implemented by at least 5 of the Locust Control Units by end 2004
- Indicator D2.6** Effective Desert Locust forecasting systems through improved cooperation with national and international meteorological agencies are in place in up to 5 of the Member Countries by 2006.

Planned Activity	Status / Reasons for Deviation
2.1 Improve training system <sup>2</sup>	Although many attempts have been undertaken to improve the technical skills of the Desert Locust personnel in the past through different training courses, it is not clear what impact these training activities have made. Training exercises followed mainly an external approach, and were not always geared to the actual target-groups. They also lacked follow-up and performance monitoring.
2.1.1 Develop training concept	For this reason, a training concept workshop was held in Addis Ababa in January '99. The aim of the workshop was to build up target group oriented and self-reliant training capacities at the Desert Locust Control Services. Amongst others, a training manual, based on the FAO Guidelines has been recommended. The training manual should serve as reference for national trainers and is proposed to be translated in vernacular

---

<sup>2</sup> Training on survey subjects cannot easily be handled separately from control topics. Therefore, training courses conducted under EMPRES will generally include both aspects.

languages such as Arabic, Tigrinya and Amharic.

- 2.1.2 Prepare improved survey training material and manual
- A first draft of the table of contents for the comprehensive training manual has been developed and submitted for comments to different interested parties. At present, ways and means for financing the preparation of the manual are being investigated.
- 2.1.3 Conduct Training Skills workshop
- To build up the capacity of national trainers, a Training Skills workshop was conducted in Sana'a in September '99. 14 national trainees from 7 countries and one regional organization (DLCO-EA) received a comprehensive training on participatory training course conduct and organization. However, it should be mentioned that this could be considered only as a first attempt to change the widely followed top-down approach. Furthermore, more attention should be given to involving younger personnel in ToT aspects.
- 2.2 Carry out training courses on survey (and control) aspects
- An unplanned survey and control training course was conducted in Sana'a in February '99 for 15 trainees under the participation of local trainers.
  - A special scouts training course was organized for 4 scouts in the winter breeding areas in Yemen in April '99. A survey training course was also held in Djibouti in October '99. During this course 14 trainees (5 from Somalia) have been trained on the principles of improved survey methods.
  - A national survey and control training course was conducted in Addis Ababa in May '99 for 14 PPD technicians located in locust-affected areas of Ethiopia. This training course was followed by local training courses conducted under the umbrella of the regional Agricultural Offices (Bahir Dar, Komblocha, and Harar) in October '99 for local PPD personnel under the guidance of national trainers. In total 72 plant protection technicians and extension agents were trained during this exercise.
  - An international survey and control training course planned to be conducted in Oman for October '99 in cooperation with NRI, had to be postponed and is expected to take place in January 2000.
- 2.3 Improve survey equipment
- Different GPS models have been tested on reliability, accuracy and handling. The "Garmin"-type has been recommended to the partner institutions as standard model.

**Output D3: Regional information exchange system linked to the FAO HQ**

**Indicator D3.1:** Necessary communication facilities are in place in all of the Locust Control Units and effectively being used for information exchange on Desert Locust issues with FAOHQ by end 1998

Planned Activity	Status / Reasons for Deviation
3.1 Enhance national information capacity	<ul style="list-style-type: none"> <li>• Address lists have been up-dated on a quarterly basis and made available to all relevant stakeholders.</li> <li>• Suggestions for modifying the EMPRES Web page have been submitted to FAOHQ in June '99.</li> <li>• Different bibliographical data banks from the Desert Locust Information Service at FAO HQ (DLIS), Wageningen Agricultural University and NRI on Desert Locust subjects have been made available for interested parties in May '99. All collected data banks are based on different software, which makes accessibility difficult. To harmonize the literature data banks, major outside expertise is required.</li> <li>• A locust library has been established at the Desert Locust Centre (DLC) in Yemen.</li> <li>• Apart from Djibouti and Somalia all of the Desert Locust Units of the Central Region have their own e-mail connections, which significantly improved communication between the EMPRES-staff, FAOHQ and the Liaison Officers. However, the electronic transfer of locust information to the DLIS at the FAOHQ still needs to be implemented in most countries.</li> </ul>
3.1.1 Install RAMSES data base	<ul style="list-style-type: none"> <li>• The introduction of the Desert Locust data management system (RAMSES) in cooperation with NRI has been finalized for Eritrea in February '99. Certain programme errors occurred, which hampered the Information Unit at the PPD to make appropriate use of the system. Furthermore, no training has yet been provided on the interpretation of satellite images.</li> <li>• An information visit at NRI, Wageningen Agricultural University and DLIS in regard to GIS has been conducted in May '99.</li> <li>• A special RAMSES version for Yemen has been developed by NRI and the introduction initiated, starting with a first qualification of 2 Information Officers of the Desert Locust Centre (DLC) on the system at NRI in August '99. It should be noted that one trained officer left the DLC soon after.</li> </ul>



3.1.2 Organize in-country computer training	Ad-hoc training courses on computer and standard software handling have been organized upon request in Eritrea and Yemen. Such training is planned for Djibouti and Sudan in December '99. MoA has conducted comprehensive computer training courses in Ethiopia during 1999. No further input from EMPRES was required.
3.1.3 Train information Officers in Eritrea and in Yemen	An NRI organized training course for the RAMSES database was conducted in Eritrea in February '99. 8 Information and Forecasting Officers from Eritrea, Yemen, Saudi Arabia, Sudan and DLCO-EA attended the course.

**Output 4: Early control capacity improved**

- Indicator D4.1:** At least 16 national master trainers in up to 8 EMPRES Member Countries are qualified to organize and to conduct national Survey & Control training courses on a regular basis by 2006. (same as I.D2.1)
- Indicator D4.2:** At least 80% of all control operators under the Locust Control Units of the Member countries are regularly trained on application techniques, impact assessment, new methodologies, safety and environmental aspects by 2006.
- Indicator D4.3:** Up to 3 economically sound and environmentally safe new locust control products / methods are recommended, registered and introduced as part of the national and regional Desert Locust control strategies in up to 5 of the Member Countries by 2006.
- Indicator D4.4** Up to 3 effective, economically sound and environmentally acceptable control approaches are jointly developed (EMPRES, CRC, national and international institutions) and adopted by the Locust Control Units in at least 5 of the Member Countries by 2006.

Planned Activity	Status / Reasons for Deviation
4.1 Improve training system	(same as 2.1)
4.2 Carry out training courses on improved locust control techniques	(same as 2.2)
4.2.1 Conduct master training in Eritrea	It was planned to train national master-trainers under the Country Focus programme in Eritrea. Unfortunately, the course has had to be postponed due to the prevailing security situation.

4.2.4 Organize DGPS demonstration in Saudi Arabia	The DGPS demonstration in Saudi Arabia is still pending, due to unexpected problems from the equipment provider.
4.2.5 Conduct control performance assessment in Sudan	The baseline survey in Sudan is still in progress due to the absence of locusts. A questionnaire on present control practices has been developed and distributed. So far 6 DL-Units returned the completed questionnaire.
4.3 Introduce control monitoring mechanisms	A control monitoring form has been developed and distributed for comments. In most cases the current form was perceived as not practicable under field conditions. It was recommended to review the form and to make it more user-friendly.
4.4 Improve safe handling of pesticides	<ul style="list-style-type: none"> <li>• Most of the safety aspects of pesticide application are covered in the training programmes for field staff.</li> <li>• In order to monitor possible exposures of workers to pesticides, a blood-testing programme has been initiated in Sudan as a pilot study. A local expert has been assigned to conduct a survey, once control operations are taking place. Additional solvents and indicator chemicals needed to be purchased and have been ordered in December '99.</li> <li>• A consultant from the LOCUSTOX project in Senegal was hired to evaluate the capacity for residue analysis in the Central Region. For this purpose the laboratory facilities in Yemen, Ethiopia, DLCO-EA and Egypt were investigated in July '99. At present the best facilities are in place in Ethiopia and in Egypt. The possibility of using these facilities for EMPRES activities still needs to be investigated.</li> </ul>
4.5 Introduce new control methods and tactics	As mentioned under 1.2., some delays were experienced in developing a suitable approach for stimulating research under EMPRES.
4.5.1 Create awareness for the introduction of biocontrol products	<ul style="list-style-type: none"> <li>• A biocontrol awareness workshop has been carried out in Cairo in April '99 in order to develop a common understanding on the introduction of biocontrol agents in the Central Region. Participants from 5 countries and collaborating research institutes and projects discussed, formulated, and adopted a framework for using biological agents, in particular, mycopesticides, in the Central Region. The report was published in October '99.</li> <li>• The MoA in Ethiopia organized a national workshop assisted by the Virginia Polytechnic Institute and DLCO-EA in July '99. The purpose of the workshop was to discuss the legal framework for the introduction of biocontrol products and approaches to Ethiopia. The draft legal text of relevant national regulations has been submitted to the Council of Ministers for promulgation.</li> <li>• The introduction of liquid fermenter technology for the pro-</li> </ul>

4.5.2 Initiate research programmes	<p>duction of microbial pesticides has been initiated in Ethiopia under the German Public-Private-Partnership project in cooperation with GTZ and BBA (Germany) in November '99.</p> <ul style="list-style-type: none"> <li>• A draft concept paper on the overall research approach in the Central Region has been prepared in July '99 and potential local partners have been identified.</li> <li>• The initiated contacts to local research entities in Egypt, Sudan and Yemen were further reinforced. As a result, three research proposals have been submitted for consideration in 2000. The research proposals comprise: Testing of mycopesticides and IGRs (Sudan), impact on non-target organisms (Yemen, Egypt).</li> </ul>
4.5.3 Purchase standard equipment for field trials for Sudan, Yemen, Eritrea	Basic field equipment has been purchased for Eritrea, Sudan, and Yemen in August '99.
4.5.4 Organize field trials on Neem products	Planned field trials on Neem and Metarhizium products were postponed due to absence of locust infestations.

**Output 5: Desert Locust management methods and strategies improved**

- Indicator D5.1:** The management and planning capacities of the Heads of the Locust Control Units in up to 8 of the Member Countries is enhanced and proper planning and monitoring instruments are applied by 2006.<sup>3</sup>
- Indicator D5.2:** Up to 8 national and 1 regional Desert Locust control strategy(-ies), comprising different scenarios, survey and control tactics developed and used as reference for improved locust management in the Member Countries by 2008.

Planned Activity	Status / Reasons for Deviation
5.1 Develop procedures for DL population assessment	<ul style="list-style-type: none"> <li>• A draft protocol for improved estimates of DL populations is being developed in cooperation with the Wageningen Agricultural University in November '99.</li> <li>• The research capacities in Sudan and Yemen have been assessed in April '99.</li> <li>• Field observation trials with local partners for DL population assessment have been initiated in October in Sudan and Yemen. The PhD student from the University of Wageningen joined the team in December '99, in order to make necessary amendments on the sampling procedures.</li> </ul>

---

<sup>3</sup> During the 7<sup>th</sup> ELO-Meeting in Sana'a it was recommended to accommodate this indicator under Output D6.

- A field trip to Sudan has been undertaken in presence of two WAU representatives during Nov. 99. It was understood that standard assessment procedures do not exist and that further investigation was seen as necessary.
- 5.2 Develop improved control efficacy assessment methods
  - Procedures for improved assessment of control efficacy are being drafted in cooperation with the Wageningen Agricultural University in Nov. '99. Relevant partners in Yemen and Sudan have been identified.
- 5.3. Assess socio-economic impact of DL infestations
  - General ToRs for socio-economic assessment studies have been drafted and cooperation with the PPDs in Yemen and Sudan, the Universities of Khartoum and Hanover has been initiated.
  - The University of Hanover has developed draft guidelines on socio-economic studies. The guidelines have to be streamlined before they can be used as reference.
- 5.4 Develop criteria for the justification of early intervention
  - Information on past investments / contributions to Desert Locust control has been collected from different donors. The data are still incomplete.
  - Divers base-line information has been collected for further justification of early intervention such as agricultural production and meteorological data from Yemen and Sudan, and data on treated areas from all Central Region countries from 1988 – 1998. The data are being analyzed with regard to intervention threshold development.
  - An NRI consultant developed a control-simulation for the Desert Locust upsurges between 1992-94. The draft report has been submitted.
- 5.5 Develop guidelines for national and regional strategies
  - Data on the national control capacities in the Central Region have been collected and analyzed.
  - The collection of information on planning steps, control tactics, decision making procedures etc. to assess the current locust control approaches of the DL-Units of the Central Region in the light of improved strategies has started in March '99.
  - A glossary on different Desert Locust terminologies has been drafted and submitted to the CRC for adoption. However some of the terminologies have still to be reviewed.
- 5.6 Improve on management capacities of the national DL control Units through training and appropriate planning tools
  - Campaign simulation studies, developed by WAU/GTZ for more rational campaign planning procedures have been introduced at the PPD in Ethiopia in April '99. Due to the positive reaction, it was agreed with PPD Yemen to organize a regional training course on campaign simulation in Sana'a during Nov./Dec. '99. For various reasons the PPD Yemen withdrew from the original agreement at short notice, which made it impossible for other interested parties

form the Region to attend the course. However, the course was conducted in Dec. '99 for 4 local trainees only.

**Output 6: Rapid deployment plans and contingency arrangements in place**

**Indicator D6.1:** Contingency arrangements, comprising principles of preparedness, pre-positioning of all necessary resources developed and adopted in up to 8 of the Locust Control Units by 2006

Planned Activity	Status / Reasons for Deviation
6.1 Develop contingency planning guidelines	A first draft of guidelines for contingency planning has been submitted for comments in July '99. A second has been prepared in Dec. '99 and distributed for comments. A common understanding of the scope of contingency planning has not yet been achieved. It was recommended to submit the subject to the DLCC Technical Group for final decision.
6.2 Organize contingency planning workshops	Two contingency planning workshops have been conducted in Ethiopia and Yemen in April '99 and Oct. '99. The planned workshops in Eritrea, Egypt and Saudi Arabia have been cancelled, since sufficient background information on the perception of contingency planning has been received from the previous exercises in Sudan ('98), Ethiopia and Yemen. However, on request from Egypt it is planned to conduct an additional workshop early in 2000.

## C. Staff status and Equipment

### C.1 Staff situation

Programme Coordinator (Asmara)	Vacant since 12 <sup>th</sup> October '99
Senior Field Officer (Addis Ababa)	Post and contract terminates in June 2000, since October '99 Acting Coordinator
Senior Expert for strategy development (Sana'a)	Post planned until June 2002, current contract until 21 July 2000
National Professional Officer for Control (Khartoum)	Post planned until 2006, current contract until 15 October 2000
National Professional Officer for Survey (Sana'a)	Post planned until June 2002, current contract until 4 November 2000
Associated Professional Officer (Sana'a)	Exceptional extension for 3 <sup>rd</sup> year (until February 2000) was granted by donor (Germany). No further extension is possible.
UN Volunteer (Hargeisa, Somalia)	Contract expires in December '99. Planned to be extended until 2000. In view of funding constraints feasibility of turning survey operations over to nationals will be investigated during 2000.

### C.2 EMPRES equipment procured up to December 1999

Djibouti:	<ul style="list-style-type: none"> <li>◆ 1 Toyota Pick up</li> <li>◆ 1 Desk-top computer incl. accessories</li> <li>◆ 1 fax machine</li> <li>◆ 4 Garmin GPS</li> <li>◆ 5 Windspeed meter</li> <li>◆ 3 ULVAmast sprayers</li> </ul>
DLCO-EA	<ul style="list-style-type: none"> <li>◆ 1 Desk-top computer incl. accessories</li> </ul>
Egypt:	<ul style="list-style-type: none"> <li>◆ 1 TOYOTA Landcruiser Stationwagon</li> <li>◆ 1 Desk top computer incl. accessories</li> </ul>
Eritrea:	<ul style="list-style-type: none"> <li>◆ 1 TOYOTA Landcruiser stationwagon</li> <li>◆ 2 TOYOTA Landcruiser pick up</li> <li>◆ 1 fax machine</li> <li>◆ 1 typewriter</li> <li>◆ 3 computers incl. accessories</li> <li>◆ 1 heavy duty photocopier</li> <li>◆ 1 video camera</li> <li>◆ 2 test-mate OP kits</li> <li>◆ Various field equipment</li> <li>◆ 1 Motorola mobile radio</li> <li>◆ 5 HF station radio</li> <li>◆ 13 Micron ULVAmast sprayers</li> </ul>

- ◆ 205 SOLO motorized sprayer
- ◆ 200 SOLO manual knapsack sprayers
- ◆ 20 Solo-Port 423
- ◆ 100 micron ULVA sprayer
- ◆ 120 solo motorized sprayer
- ◆ 2 generators
- ◆ 9540 I Dursban
  
- Ethiopia:
  - ◆ 2 Hi Lux TOYOTA pick ups
  - ◆ 1 TOYOTA, Prado Landcruiser
  - ◆ 2 Lap-top computer incl. accessories
  - ◆ 2 Desk-top computers incl. accessories
  - ◆ 1 fax machine
  - ◆ 1 light photocopier
  - ◆ Various field equipment (GPS, etc.)
  - ◆ 4 base HF radios
  - ◆ 1 mobile HF radio
  - ◆ 2500 Locust Manuals in Amharic
  
- Somalia:
  - ◆ Various field equipment
  
- Saudi Arabia:
  - ◆ 2 mobile HF radios
  - ◆ 5 base HF radios
  - ◆ Various field equipment
  
- Sudan:
  - ◆ 1 TOYOTA Landcruiser station wagon
  - ◆ 2 TOYOTA Landcruiser pick-up (1 pick-up hijacked in Nov. 1999)
  - ◆ 2 Fax machines
  - ◆ 3 Desk top computers incl. accessories
  - ◆ 1 Lap top computer
  - ◆ 1 Generator
  - ◆ 1 Heavy duty photo copy machine
  - ◆ Various field equipment
  - ◆ 5 HF Base radios
  - ◆ 10 HF mobile radios
  - ◆ 5 HF base radios
  - ◆ 20 portable VHF radios
  - ◆ 1 Test mate kit
  - ◆ 16 ULVAmast sprayers
  
- Yemen:
  - ◆ 1 TOYOTA Landcruiser station wagon
  - ◆ 1 TOYOTA Landcruiser pick-up
  - ◆ 3 computers incl. accessories
  - ◆ 1 heavy duty photocopier
  - ◆ 4 HF radios
  - ◆ 1 Test-mate OP kit

## D. General Assessment

Conclusion whether the programme purpose can be achieved  
Recommendations on necessary steps to be taken  
Future action required

Despite a number of obstacles faced during 1999, the EMPRES Programme was able to implement nearly all of the planned activities. The results obtained have been promising in terms of achieving the programme goal. This was mainly due the strong commitment of the EMPRES-team (FAO staff and Liaison Officers) as well as the adoption and implementation of the EMPRES concept by the member countries.

The obstacles included the restriction and interruption of EMPRES activities caused by the security situation in several member countries and delays of field trials because of the absence of Desert Locust infestations. In addition the EMPRES Evaluation Mission identified weaknesses in planning and coordination but concluded that "... a more systematic approach to better prevention and control of DL upsurges ... through Contingency Planning, Country Focus Programmes, and research ... on a modest scale (is anticipated) to move to a stage where results can be expected." The Mission considered the present phase as a Pilot Phase, during which approaches were tested, collaborators tried out, institutional links developed and the concept refined.

Several recommendations of the Mission regarding EMPRES workplanning, reporting, roles of the Liaison Officers, relationship to the CRC etc. have been addressed immediately. EMPRES participated in the Executive Committee Meeting of the CRC as observer. During that meeting an improved framework of cooperation was discussed, which was further developed during the 7<sup>th</sup> Liaison Officers meeting in Sana'a. As a first concrete step, the Commission and EMPRES developed a joint workplan for the year 2000. In particular, close collaboration has started in areas such as research and training. The planning elements for 2000 were developed jointly with the Liaison Officers in a participatory workshop and the role of the Liaison Officers was further defined and clarified. Specific activities have been incorporated into the workplan for 2000 which would further enhance the cooperation between the different partners, including the Commission and the Liaison Officers. A new reporting system was introduced, which refers to the EMPRES Programme document as well as the workplan. It is anticipated that the new reporting format will facilitate the monitoring of progress of the programme.

During the coming year it is expected that research activities and socio-economic studies will start to produce concrete results. The Country Focus programmes will be continued in Eritrea, Sudan and Yemen under the leadership and direct involvement of the PPDs in these countries. It is also anticipated that the planning and information systems will be further strengthened and that the databases will be further developed and expanded. This will facilitate more targeted survey and preventive control operations. Finally, during the Liaison Officers Meeting it was suggested to conduct a planning workshop in March 2000 to develop the conceptual framework and an implementation document for the 2<sup>nd</sup> Phase of the Programme. In view of the experience gained during the first EMPRES Phase it is expected that the implementation document for the 2<sup>nd</sup> Phase would identify clearer and more appropriate targets, approaches and operations.