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**REPORT**  
**EMERGENCY PREVENTION SYSTEM**  
**FOR TRANSBOUNDARY ANIMAL AND PLANT PESTS AND DISEASES**  
**(EMPRES)**  
**(DESERT LOCUST COMPONENT)**

**12<sup>TH</sup> EMPRES LIAISON OFFICERS MEETING**

**HURGHADA, EGYPT**

**09 – 13 OCTOBER 2004**

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## I. OPENING

1. The 12th ELO Meeting began with Mr. Mohamed Abdel Rahman, EMPRES Liaison Officer (ELO) and Director General of the Department of Locust Affairs in the Ministry of Agriculture of Egypt, thanking H.E. the Undersecretary of State for Pest Control, Mr. Abdalla Mohamed Jah El Rasoul for officially opening the meeting. He welcomed the participants from the EMPRES/CR member countries to Hurghada, introduced those on the podium and invited H.E. the Undersecretary to present his opening speech.
2. H.E. Mr. El Rasoul welcomed the participants and expressed his pleasure to officially open the meeting. He mentioned that formerly he also was a member of the "locust family" and pointed out that the damage caused by the Desert Locust is estimated to be 20% higher than the damage caused by all other pests combined. For this reason, he said, FAO established the Commissions and initiated the EMPRES Programme to introduce preventive control strategies and early warning systems as the best approach for Desert Locust management. He added that locust invasions come in periods and that all countries are much concerned by the unpredictable nature of this pest. But good coordination and cooperation among affected countries as encouraged by the EMPRES/CR Programme contributed to the success of preventive control. In the past, lack of information and the absence of a functional forecasting system made successful preventive control very difficult. Therefore, he said, it is essential to give all support to the ongoing EMPRES activities, having in mind that prevention is better than curative measures, and commended all member countries, the EMPRES/CR Coordinator and the donors for their efforts. Finally, Mr. El Rasoul wished everyone a pleasant stay in Hurghada and declared the meeting open.
3. On behalf of the Director General of FAO, the EMPRES/CR Coordinator, Mr. Christian Pantenius welcomed the participants to the 12<sup>th</sup> ELO meeting and expressed his thanks to the Government of Egypt for hosting this meeting. He stated that in contrast to the Western Region, the EMPRES Central Region countries could benefit from a relatively calm period during the past years to develop and build up their preventive control capacities. This capacity has successfully been demonstrated during the recent months. However, he appealed to the participants to stay vigilant and prepared for the possibility of new outbreaks during the coming winter season or even an invasion during the next summer. He reminded the participants that the current Desert Locust upsurge in Northwest and West Africa clearly demonstrated the importance of a functional early warning system, close interaction between the affected countries and EMPRES, the Commission and DLIS, and keeping the national authorities well informed. Finally, he wished everyone successful deliberations during the meeting.
4. The draft agenda for the meeting was presented by the EMPRES/CR Coordinator and was adopted without changes. The Coordinator introduced the representative from Eritrea, Mr. Kidane Ghebrekidan and the new EMPRES Liaison Officers, Mr. Solomon Admasu from Ethiopia and Mr. Haissama Ali from Djibouti. He also welcomed Dr. Abdurahman Abdullahi from the Desert Locust Control Organization for Eastern Africa (DLCO-EA) who attended the meeting on behalf of the Director.
5. Mr. Abdurahman Abdulahi (DLCO-EA), Mr. Munir Butrous (CRC Secretary) and Mr. Christian Pantenius (EMPRES/CR Coordinator) were elected as the drafting committee.

## II. THE FINANCIAL SITUATION OF EMPRES/CR

6. The EMPRES/CR Coordinator, Mr. Pantenius gave an overview of the financial situation of the EMPRES/CR Programme. He summarized the major contributions to the Programme in the first year of Phase III, namely FAO, CRC, The Netherlands, DLCC, Switzerland and the United States of America. The total contribution to the Programme in 2004 was USD 1,100,000, and the total expenditure until September amounted to USD 841,264 leaving a balance of USD 258,736.
7. Generally, the Coordinator pointed out that the financial situation of EMPRES/CR programme was better than expected after the Netherlands' funds were finally released in July 2004. Due to

the delayed release of the funds, a comparatively high unspent amount was still available under this project which could probably be carried over to 2005 provided the agreement from the donor is given. The Coordinator also reviewed the estimated funds available for the year 2005 with USD 1,068,000 and approximately USD 800,000 in 2006. He indicated that FAO is currently negotiating with new donors to the Programme but the final decisions were still to be awaited. As the EMPRES/CR Programme is coming to its end by 2006, he highlighted that the Central Region countries should endeavor to maintain normative activities such as surveys and training of staff from their own resources by the end of 2006 with some help from the Commission. To secure this support from the Commission, all member countries should pay their contributions regularly. Finally he mentioned that not all countries have fully utilized their allocated budget for 2004 and therefore should make appropriate use of the unspent balance during the remaining months of 2004.

8. After the presentation, various other financial points were discussed in particular bilateral support from the Kingdom of Saudi Arabia, worth USD 2 million to Sudan. This contribution was considered as a substantial example of regional solidarity. Also the support of FAO to Sudan, Eritrea and Yemen through a TCP project was mentioned as a good preemptive effort to enhance the countries control capacities in view of the anticipated locust threat from Northwest Africa.

### **III. EXPERIENCE OF SETTING UP ELOCUST IN YEMEN**

9. A presentation on the experience gained by introducing the eLocust technology in Yemen was given by the EMPRES/CR NPO, Mr. Fuad Bahakim. In his presentation he explained the advantages of using the eLocust system for wireless field data transfer during locust surveys, and described the different hard- and soft-ware components of the system. He summarized the major difficulties faced during installation and operation as:
  - Problems to correctly adjust the base and mobile radios antennas,
  - Missing XTM registration number of the Psion palm-top computers,
  - Missing system files,
  - Lack of skilled personnel for maintaining Codan HF radios.
10. After intensive discussions, a number of recommendations were made such as: The registration number should be provided together with the "Psion" computer before distribution to the countries. Also, a regional competency on operating wireless data transfer should be built up in order to become more independent from external support.

### **IV. IMPROVING MANAGERIAL COMPETENCIES OF DESERT LOCUST CONTROL**

11. Mr. Tamer El Fouly, FAO Consultant, presented a tentative outline on improving the managerial competencies of the Locust Control Units. He pointed out that most attention was given so far to technical and human capacity development, but less attention to organizational aspects and management know-how. But such tools and skills are equally important in particular when planning for events which are difficult to predict such as Desert Locust outbreaks. He suggested addressing the topic in three phases: First a concept paper outlining the approach in detail, followed by one regional workshop with the participation of the key countries, FAO staff and other regional and international organizations, and several national seminars in selected countries. He described the main subjects which will be addressed in the approach such as planning tools, resources management, monitoring and evaluation of field activities, and human capacity management. Finally, he encouraged the participants to provide him with ideas and suggestions to contribute to this initiative.

## V. MEMBER COUNTRY ACHIEVEMENTS AND PROGRESS

12. In the following, each ELO presented a country report on the progress made in introducing improved Desert Locust management components into the national programmes. Most of the reports were prepared in accordance to the standard format developed by EMPRES/CR.

### Djibouti

13. The newly appointed ELO from Djibouti highlighted the climatic and rainfall situation in Djibouti in the period of September 2003 to September 2004. Although exceptionally heavy rainfall caused floods and damage in many parts of the country no locusts were reported. He reported that field activities were very limited during the recent months because of the transition and taking over of responsibilities from the previous ELO in July 2004. After his presentation, certain issues were raised with regard to EMPRES/CR inventories and handing over protocols of equipment from his predecessor and he was requested to report to the Programme Coordinator on this issue. He was also asked to actively address, together with DLCO-EA, the still pending installation of the HF radio station in Obok.

### DLCO-EA

14. On behalf of the Director of DLCO-EA, the Senior Research Officer presented the activities carried out by the Organization. The Organization is closely following the Desert Locust situation in the Northwest Africa, the Arabian Peninsula and the member countries. Four spray aircraft have been prepared to provide aerial assistance at any time. So far one aircraft has been positioned in Sudan and another in Ethiopia. Two others are kept on standby in Nairobi to be deployed to Eritrea whenever needed. A project proposal to the donor community has been prepared to strengthen the capacity of DLCO-EA air and ground support units and to rehabilitate the bases in Sudan, Eritrea, Ethiopia, Djibouti and Somalia. He also reported on the DGPS workshop conducted in April 2004 in collaboration with EMPRES/CR and CRC to demonstrate the advantages of this technology for more effective aerial control operations. Finally, he informed the meeting that the DLCO-EA Council of Ministers approved the Memorandum of Understanding between DLCO-EA and CRC, which had been drafted with the assistance of EMPRES/CR in 2003.
15. Participants recommended that the draft of the training curricula on the aerial survey and control should be sent to CRC and EMPRES/CR for comments before finalization and that DLCO-EA monthly SITREP should be circulated to all member countries. It was also requested to keep the Commission and EMPRES/CR regularly informed of the status of the DLCO-EA air fleet as originally agreed.

### Egypt

16. The ELO from Egypt reported on the climatic developments, the locust situation and the activities conducted during the reporting period. He briefed the meeting that small scale breeding occurred along the Sudanese border, Sh. El-Owainat and Touthka by the end of October 2003 until March 2004 which had been successfully controlled by the national control teams. The ELO summarized a number of activities that are believed to have improved the Desert Locust control capacity in the country. Amongst others, more reliable internet connections at the head office have been installed, and one national training course for 21 newly appointed officers conducted. The RAMSES data base had been installed and training of the information officer and his assistant on its use provided with the support from EMPRES/CR. He also informed the participants that although aerial control for crop protection purposes is currently prohibited in Egypt, it could still be carried out in the desert areas against the Desert Locust with the support of the army.

### Eritrea

17. The representative from Eritrea gave an overview of the ecological conditions and the locust activities in the country. He reported that the previous winter rains were extraordinarily heavy causing floods and damage in some parts of the lowlands. The following summer rains, however, were below average. During the winter season, surveys have regularly been conducted and about 5,000 ha of hopper bands infested areas treated by DLCO-EA aircraft using 3,440 L of ULV pesticides. He also mentioned that 31 plant protection technicians were trained on Desert

Locust biology, survey and control aspects, as well as 28 locally trained farmers. The ELO mentioned that with support from EMPRES/CR, the Information Officer from Yemen provided backstopping and training on RAMSES to the two Information Officers in Asmara. He described the limited control capacity of the country to face a major outbreak or locust invasion, and listed various requirements to fill these gaps, but indicated also that 15,000 L of ULV insecticide and 4 vehicle-mounted sprayers have recently been received from FAO.

#### Ethiopia

18. The new ELO from Ethiopia reviewed ecological conditions over the past 12 months. The country received normal rainfall in most parts of the locust areas but no locusts were found during surveys. He reported that field information from the Agricultural Bureaus had been regularly received and all concerned central departments are kept informed of the ecological and locust developments. With regard to intra-regional cooperation, the former ELO assisted Egypt to install RAMSES and training of two information officers. He also stated that three participants from Ethiopia attended the DGPS demonstration organized by DLCO-EA at Lake Zeway, Ethiopia, and that 34 district plant protection officers were trained in locust biology and survey.
19. The ELO was asked to undertake all efforts in maintaining the national information exchange and early warning system that had been established by his predecessor and EMPRES/CR. He was also urged by the participants to seek support from his government to appoint an Information Officer in order to keep the Locust Information Office in Addis Ababa as active as before.

#### Oman

20. The ELO from Oman reported that only low to moderate rains were received in the interior of the country. Hence vegetation remained dry and consequently no locusts were detected. He informed the participants that the Government supported the Locust Control Unit with four new vehicles, a number of protective equipment, 20 GPS sets and 5,000 L of ULV insecticides. He further mentioned that ten locust officers have been trained in cooperation with CRC and EMPRES on various Desert Locust subjects. In addition, a long-term on-the-job training was provided by FAO-DLIS to the Information Officer. Also, one locust control officer and one army pilot benefited from the DGPS demonstration in Ethiopia. As a result of the demonstration, the Government of Oman expressed the intention to purchase one DGPS for locust control.

#### Saudi Arabia

21. The ELO from Saudi Arabia reported below average rainfall during the summer season 2003. But in October 2003 rainfall improved to an extent that the situation became very favourable for Desert Locust breeding. Immediately conducted surveys along the Red Sea coast revealed the presence of locusts in 4 localities in Gazan area. Soon after, more than 60 swarms invaded the country in the areas of Madina, Jeddah and Umlog. Intensive ground and aerial control operations succeeded in preventing the swarms from moving eastwards into the spring breeding areas, where it would have been very difficult to prevent the Desert Locust from further breeding. The control operations were undertaken by 34 teams and 4 aircraft (2 fixed wing and 2 helicopters). In total about 164,000 ha were treated using 166,605 L of ULV pesticides; and the total cost of campaign was reported to amount to USD 3.2 million. In the following summer season 2004, rainfall was again generally below average and the locust situation remained calm. But by early October 2004 up to 65 mm rainfall was reported in Yanbou and the ecological situation started to improve again for breeding. Surveys have been ordered to monitor the present developments.
22. Due to the heavy involvement of the Agricultural Department staff in the control operations, the training courses could not be conducted as planned. But the two national master trainers joined a training programme in Yemen as co-trainers. The ELO also stated that a Country Focus Programme planning workshop had been conducted in April 2004 supported by EMPRES/CR and the Commission. Recommendations have been made to strengthen the structure of the Locust Centre by giving more support to the Information Office and to improve its interaction with the Agricultural Departments. During the discussion that followed, the meeting requested the ELO to investigate the use of Fipronil for barrier treatment, as Fipronil is being used for locust control in country.

#### Northern Somalia

23. According to the EMPRES Link Person (ELP), 11 surveys and one joint survey along the border to Djibouti were carried out during the past twelve months. In general, the locust situation remained calm throughout the whole period. Only some few mature and immature solitary locusts had been observed. The ELP informed the meeting of the progress made on establishing a locust information network. 22 private radio operators had been selected and briefed, who are linked to the Ministry of Agriculture in Hargeisa and regularly report on the locust and rainfall situation.

#### Sudan

24. The ELO from Sudan gave an overview of the outbreak campaign 2003-2004. The total area infested was estimated at about 32,000 ha of which about 11,000 ha were treated using 6,500 L of EC and ULV formulations as well as 2,300 kg of dust insecticides. He summarized the ecological conditions during the summer season 2004. Light to moderate rains were received in Kas-sala, Kordofan, Khartoum and White Nile states which resulted in patchy green vegetations. According to the ELO, surveys revealed the presence of different stages of the Desert Locust in Kordofan, while other areas were found free of locust infestations.

25. In view of the dangerous Desert Locust developments in Northwest Africa, the National Desert Locust Steering Committee had been re-activated early 2004 and a national action plan drafted to handle the current and the predicted Desert Locust situation. As a result, the government released USD 4.5 million for locust control. An additional USD 2.3 million were made available through bilateral and various international assistance for the procurement of insecticides, avgas, sprayers, etc. Also with regard to the unclear situation in North Darfur, efforts have been made in collaboration with humanitarian aid organizations operating there to obtain information on the presence of locusts and the rainfall developments. In addition to that, the control capacities in Chad have been supported by providing various control materials, and a mission from the Locust Centre has been sent to Chad by early October to join the national forces and to obtain first-hand information of the situation.

26. He further informed the participants of the Ministerial decree issued in early 2004 to establish an autonomous Locust Control Centre (LCC). This change is expected to raise the efficiency of coordinating control operations in the country. Under the new set-up, 43 surveys have been conducted using 12 survey and control teams. The FAO spray monitoring form is now being used by the survey and control teams to record data on the control efficiency. He also mentioned that a national monthly Desert Locust Bulletin has been developed and is being distributed to important collaborators and the national authorities since May 2004. In collaboration with EMPRES/CR and ICIPE, the LCC succeeded to register the bio-control product "Green Muscle" for locust and grasshopper control. With regard to training activities, the ELO reported that:

- Two diploma students enrolled for this term at the University of Khartoum.
- 34 Locust officers and technicians were trained in 2 national Survey and Control training courses.
- 4 locust officers and 8 LCC staff received refresher training.

27. The meeting congratulated the ELO from Sudan for the good achievements and recommended that FAO should address a special acknowledgement to the Minister of Agriculture.

#### Yemen:

28. The ELO from Yemen informed the participants that low to heavy rainfall occurred during the winter and spring seasons 2003/2004 in Tihamah, Aden Gulf and Arabian Sea coastal plains but only few locusts were detected. During the summer season 2004, low to moderate rains were reported but no locusts found. Unexpected heavy rainfall in the winter breeding areas by mid September 2004 created favourable breeding conditions along the Red Sea coastal areas. Immediately mobilized surveys and control teams revealed the presence of solitary, transient and gregarious adults and hoppers in the northern part of the Tihamah plain covering an area of around 37,800 ha. Control operations started in these areas in early October. In total 16 surveys in addition to one joint border survey between Yemen and Saudi Arabia in early 2004 were conducted. He informed the meeting that a monthly DL Bulletin had been produced and distributed to all concerned authorities since January 2004.

29. On training aspects, the ELO confirmed that 2 diploma students graduated this year and another enrolled recently at the University of Khartoum. He also referred to the training of 14 local information sources on data collection and transmission, and training of 14 locust officers on recommended ground control methods. The ELO mentioned also other training aspects by pointing out the participation of the national Information Officer in the DGPS demonstration at Lake Zeway, Ethiopia and the training provided to two Information Officers on RAMSES in Eritrea.

## **VI. ASSESSMENT OF DESERT LOCUST REPORTING**

30. The FAO Locust Information and Forecasting Officer, Mr. Keith Cressman, presented an assessment of locust reports received from the national Locust Control Units by the Desert Locust Information Service (DLIS) for the period October 2003 – September 2004. He mentioned that a total of 230 reports were received from the Central Region during this period. The assessment covered the standard criteria such as quality, timeliness and frequency. In general the analysis revealed that continued improvements had been made for the second continuous year by all EMPRES/CR countries. He assessed a few short-comings of reporting in each of the countries and pointed out suggestions for further improvement in some cases. With regard to the quality of the reports, he mentioned that there is still room for improvement particularly in Saudi Arabia and Ethiopia. Better timeliness is obviously needed in Eritrea, and the frequency of reporting could be better in Djibouti, Eritrea and Oman. In conclusion he emphasized the importance of maintaining a high quality reporting routine in particular in an emergency period.

## **VII. DESERT LOCUST SITUATION IN CENTRAL AND WESTERN REGIONS**

31. The FAO Locust Information and Forecasting Officer gave an additional presentation on the recent Desert Locust developments. He reported that by the end of the summer season 2003, simultaneous outbreaks took place in Mauritania, Mali, Niger and Sudan. Unusual heavy and widespread rainfall from Dakar to the Atlas Mountains, in particular on 21 and 22 of October 2003, created favourable conditions for triggering an outbreak in the Western Sahara. This outbreak rapidly developed into an upsurge covering Northwest Africa from Mauritania to Libya. Since October 2003 about 7 million ha were treated by air and ground operations in the Western Region. Although a similar outbreak developed in the Central Region, the LCUs in Sudan, Egypt, Saudi Arabia and Eritrea succeeded to contain the infestations with less than 200,000 ha treated. So far, assistance of about USD 71 million were provided by FAO and the donor community or are in the pipeline to help the affected countries in their control operations. However, it should be noticed that in some cases it took nine months before the assistance materialized.
32. He further presented a forecast for the period of October 2004 – May 2005 and mentioned that swarms are expected to move from the Sahel to Northwest Africa. But some swarms might even move from Senegal to Gambia, Guinea Bissau and possibly to Guinea, and mentioned that the countries had been alerted of this probability already six weeks ago. The meeting was informed of the potential risk of receiving swarms in the Central Region by June and July 2005. He mentioned that swarms from Chad could enter through North Darfur into Sudan, and from Libya into northwest Egypt by crossing the Western Desert reaching the Nile Valley. The FAO Information Officer therefore advised the Central Region countries to follow the locust developments carefully, and in particular Yemen and Saudi Arabia should watch the currently improving conditions in the Tihamah very closely.



**VIII. LESSONS LEARNT FROM 2003 OUTBREAK AND 2004 UPSURGE**

33. In his third presentation, the FAO Forecasting Officer addressed some lessons learnt from the 2003/2004 experience in relation to campaign organization, resources and information management, and the roles of FAO and countries in these aspects. He highlighted the importance of a streamlined hierarchy for effective coordination of the control operations, and the need for rapid interaction with FAO HQ preferably by telephone rather than by email. With regard to making assistance available to the countries, the examples showed that 2-4 weeks for delivery of pesticides by air should be expected, 4 weeks for providing spray aircraft, and 1-9 months until donor support becomes effective.
34. In order for the countries to play a more effective role in the international efforts of controlling the Desert Locust he mentioned that it is essential to keep record and track of their resources by keeping their inventories regularly up-to-date and FAO informed. They should mobilize additional capacities i.e. survey teams as soon as possible and pre-position their resources at strategic places. The information provided on the locust situation should not only be as accurate as possible but should also be published on the Internet supported by photos in order to keep the authorities and the press continuously up-to-date.
35. As far as FAO's role is concerned he mentioned that it is generally responsible for providing early warnings, making appeals to donors, to coordinate and to monitor the donors' assistance. But it also can give support to a certain extent by mobilizing its own resources and assist the countries in organizing and monitoring the campaigns.
36. With regarding to developing the preventive control capacities, he mentioned that the opportunity should be taken to carry out large-scale trials on new technologies and approaches. Development projects and programmes such as EMPRES should not stop implementation of their activities because of the emergency situation but should continue as much as possible in their efforts.

**IX. EMPRES ACTIVITIES, ACHIEVEMENTS AND OBSTACLES IN THE PERIOD OF OCTOBER 2003 – SEPTEMBER 2004**

37. The participants reviewed the activities carried out since the last ELO meeting in October 2003 by using the card method. The assessment of the progress and achievements was done jointly and recommendations were made to carry forward some unfinished activities to the EMPRES/CR 2005 work plan. The participants found that the progress was generally satisfactory. Only a few activities had not been initiated or completed on time due to funding shortages during the first half of 2004 and other constraints. Further details are reported in Annex 3. The opportunity was taken during this exercise to distribute complete Master Trainers' Training Kits to each of the participants to be used during the national survey & control training courses.

**X. PLANNING FOR YEAR 2005**

38. Based on Phase III implementation document and the recommendations that evolved from the joint review of the EMPRES/CR progress the components for the year 2005 work plan were developed by two groups using the participatory card method. The findings are presented in Annex 4.

**XI. ADOPTION OF THE MEETING THE REPORT**

39. The draft minutes of the meeting were discussed and adopted by the participants after minor changes.

**XII. CLOSING**

40. The EMPRES/CR Coordinator thanked the Government of Egypt for the excellent support provided to the meeting which allowed the participants to fully concentrate on the topics, and hence contributed to the success of the meeting. He also thanked the ELOs for their active involvement and their contributions to the findings. He pointed out that the work plan, which will be prepared based on the findings of the meeting for year 2005, is an important reference for everybody participating in the EMPRES/CR Programme: FAO, the donors, the regional organizations and the member countries. He therefore asked the ELOs to refer in future more often and actively to the joint work plan to fulfill the Programme's objectives. By referring to the current Desert Locust upsurge he again appealed to the ELOs to stay vigilant and not to slow down in their efforts to get prepared for a possible invasion during next summer. He also advised the ELOs to closely monitor during the coming months the conditions on both sides of the Red Sea, in particular in the Tihamah area, and to intervene as early as possible in case of further gregarization of the Desert Locust population in order to successfully prevent a possible outbreak for the second time.
41. On behalf of his Government, the ELO from Yemen invited the EMPRES/CR to hold the next meeting in Aden. The participants welcomed this invitation and tentatively agreed to hold the next meeting after Ramadan in 2005. As an alternative venue the ELO from Oman invited the participants to Muscat.

**XIII. RECOMMENDATIONS**

42. The recommendations given during the discussion were reflected in the work plan for the year 2005. The immediate recommendations are as follows:
  - The performance of the LCC in Sudan during the past 12 months was very encouraging. The participants recommended that AGPP/EMPRES should send an acknowledgement to the government of Sudan.
  - The meeting appreciated the bilateral support from Saudi Arabia to Sudan and recommended that such bilateral assistance should be strengthened further, and this should officially be acknowledged by AGPP/EMPRES.
  - All member countries are requested to provide suggestions and ideas on improving managerial competencies on Desert Locust control to the FAO consultant.
  - Every effort should be made to install the communication radio at Obok in Djibouti.
  - The meeting recognizes the re-structuring process that has been going on in Eritrea, and recommended that the Ministry of Agriculture should speed up the appointment of an ELO due to the importance of the country in the regional context of Desert Locust management.
  - With regard to the current Desert Locust development in Tihamah, the Locust Control Centers in Yemen and Saudi Arabia, as well as all member countries in the Central Region, should closely watch the situation and keep all concerned parties informed.
  - The participants expressed their gratitude and appreciation to all institutions involved in the preparation, production of the training manual kit, particularly EMPRES/CR, CRC, DLIS and NRI.

**Annex 1:** List of Participants

Name	Address	Contacts (Tel., Fax, E-mail)
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**Annex 2:** Meeting Agenda

- 09/11** Welcome and opening addresses (*Mr. Abdella Mohamed Jah El-Rasoul, Undersecretary of State for Pest Control; Pantenius, EMPRES/CR Coordinator*)  
 Registration, introduction, presentation of the objectives and procedures of the meeting, introduction of new colleagues (*Pantenius*)  
 Adoption of the agenda; selection of secretariat (*Pantenius*)  
 Financial situation of the EMPRES/CR Programme (*Pantenius*)  
 Practising eLocust; experiences made in Yemen (*Bahakim*)  
 Using managerial tools for better Desert Locust management (*El-Fouly*)  
 Presentation of country reports on progress (*ELOs*)
- 10/10** Presentation of country reports on progress (*ELOs*)  
 Invitation for dinner by the Ministry of Agriculture and Land Reclamation  
 Presentation of EMPRES/CR activities, achievements and obstacles during 2004 (*Pantenius*)  
 Evening: Invitation for dinner by the Ministry of Agriculture and Land Reclamation.
- 11/10** Presentation of EMPRES/CR activities, achievements and obstacles during 2004 cont. (*Pantenius*)  
 Assessment of the Desert Locust reports during 2004 (*Cressman*)  
 Outlook of the Desert Locust situation and the expected consequences for the Central Region (*Cressman*)  
 Experiences and considerations on contingency arrangements under the current upsurge situation (*Cressman*)
- 12/10** Planning for 2005 (*all*)  
 Evening: Invitation for dinner by FAO.
- 13/10** Planning for 2005 cont. (*all*)  
 Write-up of Minutes of Meeting (*Secretariat*)  
 Presentation and adoption of Minutes of Meeting (*Pantenius*)  
 Closure

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**Daily schedule:** 8:30-17:00  
**First day**, beginning at 9:00  
**Last day**, ending at 16:00  
**Breaks:** 10:00-10:30, 12:30-13:30, 15:30-16:00

**Annex 3:** Evaluation of the EMPRES/CR activities in 2004

**Purpose Phase III:** Improved preventive Desert Locust control management approaches reinforced on sustainable basis

**Indicator Purpose Phase III:** At least 6 countries adopted and applied at least 3 improved preventive control components as part of the national Desert Locust management system by 2006

**Result 1:** EMPRES/CR Desert Locust management components gradually taken over by the CRC and the participating countries

**Indicator 1:** Improved preventive Desert Locust management component taken over by 2 countries by 2004, 3 more by 2005, 2 more by 2006

Activity	Milestone	Remark	Achievement	Deviation	Recommendation 2005
1.1 Support member countries to develop sustainable national training programmes, with reduced technical and financial support from EMPRES.	1.1.1 At least one training course carried out in each member country.	<ul style="list-style-type: none"> <li>• Countries contribute to cost of own national training.</li> <li>• Support by CRC and EMPRES subject to prior training needs assessment.</li> <li>• On request by the countries and prior need assessment.</li> </ul>	<p>9 training courses conducted in 6 countries; one additional planned in YEM for Nov. 2004,</p> <p>YEM: 2 courses (26-31/03 and 05-10/06), 28 trainees,</p> <p>ETH: 1 course (3-7/05), 34 trainees,</p> <p>SUD: 2 courses (22-29/05 and 03-09/07), 34 trainees,</p> <p>ERI: 2 courses (17-28/05 and ?), total 59 trainees,</p> <p>OMA: 1 course (on 17-21/07 and 29/07-04/08), 10 trainees,</p> <p>EGY: 1 course, (07-17/08), 21 trainees,</p> <p>2 Master-trainers from SAU participated in the 2<sup>nd</sup> S&amp;C training course in YEM.</p>	<p>No training courses conducted in DJI, SAU and SOM.</p> <p>Information (reports) received from ERI not adequate.</p> <p>Not all countries based their training courses on prior need assessments.</p>	<p>More training efforts of staff from the Agricultural Offices in SAU should be made!</p> <p>The countries should use the recommended standards when reporting on training courses.</p> <p>Training of PP staff in SUD and ERI should be intensified during the next months.</p> <p>Base training courses on actual training needs.</p> <p>Make use of Master Trainers' Training Kit for national training courses.</p>
	1.1.2 Six additional students for Diploma course at University of Khartoum supported in 2004.	Provided the availability of funds.	<p>6 students (YEM 2, SAU 1, EGY 1, SUD 1, ETH 1) finished 2003-2004 term,</p> <p>6 students (OMA 1, SYR 1, JOR 1, YEM 1, SUD 2) have been enrolled for term 2004/2005).</p>	<p>The uncertainty of maintaining the Diploma Course persists due to tight funding situation.</p> <p>The Diploma Course is not integrated in the syllabus of the University of Khartoum.</p>	University of Khartoum, FAO, CRC and the member countries should undertake efforts in making the Diploma Course more sustainable.

Activity	Milestone	Remark	Achievement	Deviation	Recommendation 2005
	1.1.3 One consultancy to improve sustainability of the Diploma course conducted by October 2004.			Due to shortage of funds this consultancy has not been conducted.  Also finding a suitable consultant delayed the process, but contacts to a potential consultant have been made.	Assess the Diploma Course by 2005.
	1.1.4 Up to 35 Master-trainers' Training Kits assembled and distributed to the CRC and EMPRES member countries by August 2004.		35 Master-trainers' Training Kits have been assembled by September 2004.  A total of 18 kits distributed to the EMPRES/CR member countries by October 2004.	The procurement process of various equipments for the training kit took longer than expected.	The training kits should be used in the preparation and conducting national survey and control training course.
	1.1.5 Transparencies of the Training Manual translated into Arabic and printed by August 2004.		The transparencies have been translated and enough copies printed.		
	1.1.6 Up to 4 countries supported with training material by December 2004 (upon request).			No request from the countries received.	
	1.1.7 In at least 2 countries DL training standards are being introduced into the extension service, agric. schools, etc. by December 2004.	Verifiable efforts should be undertaken by the member countries to integrate locust S&C subjects into the national training schemes (agric. schools, extension services etc.) following the recognized training standards	<b>Sudan:</b>  Desert Locust biology, survey and control topics have become subjects for students at the University of Sudan for Polytechnic Sciences, Faculty of Agriculture. A referring Memorandum of Understanding will be signed between the University and PPD.		EGY, SAU, ETH, ERI should report on the progress made of how to integrate Desert Locust training subjects into the agricultural education and training system in the next meeting 2005.
			<b>Yemen:</b>  FAO Desert Locust Guidelines have been distributed to the universities and training institutes.		Further integration of the training manual should be discussed between DLCMC and the training institutes.

Activity	Milestone	Remark	Achievement	Deviation	Recommendation 2005
1.2 Support the national Locust Control Units in improved management and administrative procedures and methods.	1.2 The management of at least 4 LCUs is using appropriate planning, monitoring, inventory and staff management methods by August 2006.		Encouraging progress has been observed in YEM, SAU and SUD		
	1.2.1 Consultancy paper on appropriate management procedure ready by August 2004.		ToR for consultancy prepared and consultant contracted.  Concept paper expected by December 2004 latest.		The consultant should be provided with feedback form the countries.
	1.2.2 Up to 2 visits supported by December 2004. ( <i>exchange of experience between Locust Managers</i> ).			No exchange visits conducted during the reporting period because of the preoccupying locust situation.	A visit to Mauritania for managers of selected locust control units should be arranged for 2005.
	1.2.3 Check lists ( <i>on good practices in survey and control practices</i> ) prepared and approved by AGPP by June 2004.		Check Lists on survey and control practices prepared in English and Arabic and distributed to all member countries in May 2004.		The Check Lists and the SOPs should now be actively used by the LCUs.
1.3 Support member countries in initiating bilateral projects on selected Desert Locust management components.	1.3 LCUs in up to 4 countries are supported bilaterally by donors by 2006.		<Long-term target>:  A guide to apply for bilateral donor assistance has been prepared and distributed to YEM, ERI and SUD.		Guidelines for drafting project proposals should be distributed to all EMPRES member countries.
	1.3.1 Contacts to potential donors initiated in up to 3 countries by December 2004.		SUD is benefiting from substantial bilateral assistance from SAU.  Additional support is expected from IFAD and UNDP to SUD	From other countries no bilateral interaction with donor agencies observed.	The possibilities of soliciting bilateral donor assistance should actively be followed by SUD, YEM, and ERI
1.4 Prepare a Monitoring and Evaluation system in collaboration with the CRC.	1.4 The CRC is in the position to organize annual meetings similar to the ELO Meetings from 2004 onwards.				The milestone should be reformulated.



Activity	Milestone	Remark	Achievement	Deviation	Recommendation 2005
1.5 Give support to Country Focus Programmes.	1.5 CFP support provided to up to 4 countries.	<ul style="list-style-type: none"> <li>• With support from CRC and Saudi Arabia.</li> <li>• New ELO in Eritrea should be appointed by March 2004.</li> </ul>	Special support has been given to ERI, SUD, SAU, SOM, and ETH.	The nomination of an ELO in Eritrea is still pending.	
	1.5.1 CFP for Locust Centre in Saudi Arabia prepared by mid 2004 with emphasis on improved survey operations and development of an early warning system.		A CF planning workshop has been conducted in SAU to improve the operational aspects and the cooperation with Agricultural Offices. A concept paper has been prepared in April 2004 and translated into Arabic for further reference.		The jointly developed recommendations should be followed and implemented by the management of the Centre.
	1.5.2 Relevant private radio operators in northern Somalia are in the position to collect rainfall and locust information from travellers and nomads and transmit them to the MoA in time by mid 2004.		Contacts to 22 private radio operators have been established and some training provided.	No information has been received re the operation of the network i.e. frequency of contacts, quality of the information etc.	Closely monitor the performance of the information network and keep EMPRES and CRC informed.
	1.5.3 DLMCC in Yemen conducts at least 2 training courses for DL officers and other information sources (scouts).		2 training courses conducted (March and June 2004), total 28 trainees, A 3 <sup>rd</sup> training course planned for Nov. 2004.		The good approach practised in YEM ( <i>need assessment &gt; training &gt; performance assessment &gt; retraining &gt; etc</i> ) should be maintained and also followed by the other LCUs.
	1.5.4 The LCU of the PPD Sudan obtained full autonomy for locust control operation by August 2004.		By a ministerial decree dated from 20 March 2004, the Locust Control <u>Section</u> gained more autonomy and was promoted to a <u>Central Institution of Desert Locust Research and Control</u> .		The authority regarding the summer campaign needs to be clarified urgently.  Additional qualified staff is needed in order to cope with the new responsibilities and tasks.
	1.5.5 The CPD in Ethiopia established a contingency planning steering committee by October 2004.			No information has been received re the establishment of a Contingency Planning Steering Committee from ETH.	After the reorganization of the MoA, care should be taken to sustain the structures of improved DL management ( <i>notably the information system, cooperation with the regions and the training approach!</i> ) which had been established in the past

Activity	Milestone	Remark	Achievement	Deviation	Recommendation 2005
	1.5.6 A concept developed to re-establish a national locust information system in Eritrea ready by August 2004.		<p>Several proposals have been made to the MoA on the re-establishment of an efficient locust information system, involving the Zobas and Sub-Zobas.</p> <p>A Task Force has been created to coordinate locust survey operations, information transfer and control activities with the Zobas and Sub-Zobas.</p>	<p>In general, the feedback from ERI is not sufficient. In case reports are being received, they remain indecisive in important parts.</p> <p>The new structure and the division of responsibilities for locust control in ERI does not facilitate smooth collaboration with the Programme</p>	<p>Appoint as soon as possible a suitable ELO (vacant since August 2001!).</p> <p>The MoA should provide the Head of the Locust Unit with reliable email and telephone connections.</p>
	1.5.7 Adherence to join the CRC obtained from Eritrea by December 2004.		The Ministry of Foreign Affairs responded positively to the invitation to join the CRC ( <i>verbal communication 21/09/04</i> ).		CRC should follow up this issue.
	1.5.8 At least 1 self-reflection workshop in each of the key member countries conducted per year.		One self reflection workshop conducted in Sudan in June 2004.	The minutes of the self reflection workshop had not been reported to EMPRES.	EGY, ERI and YEM should follow the SUD example.

**Result 2:** Implementation of improved early warning systems supported**Indicator 2:** Improved early warning systems (routine survey, functional national information offices etc.) are operational in at least 6 Locust Control Units by 2006

Activity	Milestone	Remark	Achievement	Deviation	Recommendation 2005
2.1 Make routine use of the RAMSES locust database and the interpretation of results.	2.1 RAMSES outputs are routinely being used for planning of survey operations by the member countries by end of 2006.	ELOs will establish a communication system among member countries and DLIS.	<p>&lt;Long-term target&gt;</p> <p>Most countries using RAMSES (EGY, SUD, ERI, ETH, SAU, YEM, OMA) are preparing their survey operations according to RAMSES outputs.</p> <p>The ELO from ETH provided RAMSES training for Information Officers (IOs) in EGY in March/April 2004.</p> <p>The IO from YEM provided RAMSES refresher training to IOs in ERI in June/July 2004.</p> <p>In some cases it could be observed that RAMSES data outputs are being shared between countries.</p>	SAU still faces difficulties in operating RAMSES.	<p>SAU should more actively address the persisting difficulties in order find a more sustainable solutions to it.</p> <p>The IO from YEM should assist SAU in resolving the technical problems.</p>
	2.1.1 RAMSES outputs (maps) are an integral part of all locust situation reports distributed to national authorities.	<ul style="list-style-type: none"> <li>• Relevant only for LCUs that operating RAMSES.</li> <li>• CRC and DLIS should be provided with copies of the locust reports.</li> </ul>	<p>Monthly national locust situation reports (bulletins) are being produced by EGY (3), ERI (3), SUD (5), SAU (2), YEM (8). All reports contained RAMSES maps.</p> <p>CRC and EMPRES receive copies and provide continuous feedback on improvements.</p>	SAU stopped producing reports since July.	<p>Since the national reports have proven their importance in keeping government officials informed, they should be regularly produced and distributed to all important stakeholders and neighbour countries,</p> <p>The recommendations from CRC/EMPRES for drafting national Desert Locust bulletins should be followed.</p>
	2.1.2 All LCUs with RAMSES (EGY, ERI, ETH, OMA, SAU, SDN, YEM) input data sets comprising a minimum of 3 years by December 2004.	DLCO-EA should make historical data available to member countries on request.	<p><b>ETH:</b> data sets from 1963-67, 1970-86, 1989 – to date,</p> <p><b>EGY:</b> data sets from June 2000– to date,</p> <p><b>SUD:</b> data sets from 1999– to date,</p> <p><b>OMA:</b> data sets from 1990-1993 (on-going),</p> <p><b>YEM:</b> data sets from 1997 – to date.</p>	Besides ETH (in 1999) none of the other countries approached DLCO-EA to be provided with historical locust data.	

Activity	Milestone	Remark	Achievement	Deviation	Recommendation 2005
2.1.3 The member countries provide feedback to DLIS on the usefulness of RAMSES and obstacles faced.			In most cases DLIS and EMPRES are being informed in case of any technical difficulties faced.		
2.2 Facilitate the interpretation of remote sensing satellite images and their use in directing survey operations.	2.2 Remote sensing satellite imageries are routinely being used to direct survey teams by end of 2006.		<long-term target> Most countries started to make use of satellite vegetation maps for directing surveys (SUD, YEM, ERI, ETH and EGY) and gave positive feedback.		Training should be provided to the IOs on the interpretation of NDVI maps.
	2.2.1 (a) Satellite image analysis made available by DLIS to survey officers every 10 days.  2.2.1 (b) ELOs provide DLIS with a brief ground verification of SPOT satellite images at the same time with the survey reports.	FAO ensures the long-term availability of technical capacity in using satellite images.	After some interruption early 2004 due to change of staff in the Locust Group, DLIS started to provide 10 days NDVI maps since September 2004.		2.2.1. (b) No ground verification activity observed.  For ground verification of vegetation cover and further calibration of satellite imageries the "vegetation form" should be filled during surveys and returned to DLIS (available on FAO webpage).
	2.2.2 The LCU's in Djibouti, Ethiopia, Egypt, Saudi Arabia and Sudan received at least one training opportunity each on remote sensing interpretation by December 2004.			Due to staff changes re the remote sensing expert at the HQ, DLIS could not provide this training opportunity.	The newly appointed remote sensing expert should provide backstopping on the interpretation of satellite images.
	2.2.3 At least one <i>ground truthing</i> report on form Eritrea and Sudan received by DLIS by October 2004.		One ground truthing carried out in Sudan 07/04.	No ground truthing survey carried out in SUD.	(see 2.2.1 (b))
2.3 Support joint cross border survey.	Up to 5 joint cross border surveys carried out by December 2004. - Yemen-Saudi Arabia (1/2004), - Egypt-Sudan (1/2004), - Djibouti-Somalia (2/2004), - Libya-Egypt (2/2004) - Ethiopia-Somalia (4/2004)	Subject to suitable conditions	YEM-SAU: 10-20 January 2004, DJI-SOM: 14-18 February 2004	SUD-EGY: Postponed, LIB-EGY: Affected by the DL situation, ETH-SOM: Affected by the change of ELO in ETH.	SUD-EGY: conduct joint survey during winter season 2004/2005, SOM-ETH: conduct joint survey in case of possible DL activities in SOM.

Activity	Milestone	Remark	Achievement	Deviation	Recommendation 2005
2.4 Support development of survey practices and technologies through solicited research projects.	At least 2 applied research proposals on improved survey matters are submitted to the CRC by May 2004 for support. (see also 4.3.1).		One MSc scholarship sponsored by CRC to provide most accurate estimates on DL infestation present in the survey site.	No referring project ideas received from SUD, YEM, ETH, SAU as planned.	
2.5 Up-date national locust information systems.	2.5 DLIS is linked up to at least 8 of the Locust Information Offices and is receiving field information regularly and without delay.		Most CR countries provide DL information to DLIS ( <i>details ref.: reporting assessment 2004 – K.C.</i> ).		
	2.5.1 SOP for HF radio communication produced and distributed to the member countries by mid 2004.		Draft SOP for radio communication prepared and technically cleared.	Printing delayed by 3 months.	
	2.5.2 The HF radio installed at Obock station in Djibouti and is functional by mid 2004.			The installation of the base station is still pending.	The new ELO in DJI should actively tackle the issue to install the HF radio in Obock as soon as possible.
	2.5.3 Report on national information system in Djibouti prepared by the ELO and submitted to EMPRES and CRC by June 2004.			The previous ELO in DJI resigned in March 2004, a new ELO was appointed in July 2004. Due to the changes no report on information system received.	The EMPRES-NPO should look into the status of the DL information system in DJI and should work out feasible recommendations for improvement by mid 2005.
	2.5.4 The current status of information system in Oman described and suggestions for improvements made by August 2004.			No report on information system received from OMA.	The ELO-OMA should assess the national Locust Information System in collaboration with the EMPRES-NPO and should work out recommendations for improvement by mid 2005.
	2.5.5 The current status of information system in Eritrea analyzed and suggestions for improvements made by August 2004.		Several proposals have been made to the MoA to improve the early warning system in ERI.	A planned visit of the IOs from ERI to YEM did not yet materialize due to changes of responsibilities at the MoA.  Equally, the actual functioning of the DL information system under the new conditions is not well known.	The MoA-ERI should appoint a new ELO as soon as possible.

Activity	Milestone	Remark	Achievement	Deviation	Recommendation 2005
2.6 Support introduction of eLocust.	2.6 At least 6 member countries make use of the eLocust system by mid 2006.		<p>&lt;Long-term target&gt;</p> <p>The full eLocust system (comprising HF radio, modem, GPS, palm-top PC and eLocust software) has been introduced in YEM and SUD in 2003. OMA +SAU received two palm-top PCs incl. eLocust.</p> <p>In YEM the eLocust system is operational after having solved some difficulties.</p>	No feedback on the use of eLocust received from OMA.	
	2.6.1 eLocust system in Sudan operational by September 2004.			In SUD the system is not working due to various reasons.	The Locust Centre in SUD should find solutions for the persisting difficulties with eLocust in collaboration with YEM
	2.6.2 Up to 2 additional mobile HF radios incl. modems are available in Yemen for survey teams by December 2004.		YEM and SUD received two additional HF mobile radio stations each for the use of eLocust under TCP/INT/3003 in Sept. 2004.		
	2.6.3 At least 4 additional countries make use of eLocust as primary data entry tool during their survey operations (Egypt, Eritrea, Ethiopia, Oman, Saudi Arabia) by December 2004.		SAU has been provided with information on the specifications and requirements for the eLocust system.		<p>The milestone was too ambitious and should be reviewed.</p> <p>SAU should look into the possibilities to introduce eLocust. Technical support will be provided by EMPRES.</p>
2.7 Support survey teams.	2.7 All survey teams of the member countries are fully equipped and operational by mid 2006.		<p>&lt;long-term target&gt;</p> <p>Most countries seem to be sufficiently equipped with survey material.</p>	No country addressed any need to EMPRES/CR or CRC during the past months	In case of need of any additional survey material, the countries should actively approach EMPRES and CRC (see also 2.7.2).

Activity	Milestone	Remark	Achievement	Deviation	Recommendation 2005
	2.7.1 Identification field cards produced and distributed to member countries by August 2004.		Locust & Grasshopper index cards prepared and printed.  Draft vegetation index cards prepared.	Some errors have been discovered in the Locust & Grasshopper index cards after printing – some pages need to be redone. Delay by 3 months.  Because of the errors in the above, the vegetation index cards have been returned to the author for thorough cross checking and revision.	The index cards should be made available to the countries by mid 2005 latest.
	2.7.2 Reserve stock with survey material established at CRC office by June 2004.	Material will be made available to the countries upon request.	A reserve stock of survey equipment has been established at CRC in Cairo (Sept. 2004).		
2.8 Prepare national survey plans.	2.8 All LCUs prepare regular survey plans based on RAMSES and satellite images by mid 2006.		Survey plans are regularly being produced by the Locust Control Units of EGY, SUD, YEM, ERI.		The new ELO in ETH should maintain the previously excellent survey planning system.

**Result 3:** Campaign evaluation measures and contingency planning mechanisms in place.

**Indicator 3.1:** National contingency planning mechanisms adopted and the operationally assessed as satisfactory for 2 countries by 2004, 3 more by 2005, and 2 more by 2006

**Indicator 3.2:** Regional contingency planning mechanisms adopted by the CRC and operationally assessed and satisfactory by 2005

Activity	Milestone	Remark	Achievement	Deviation	Recommendation 2005
3.1 Encourage the concerned countries to create national locust management committees (Steering Committees).	3.1 All key countries established Steering Committees by mid 2006.				
	3.1.1 At least 3 steering committees operational in Yemen, Sudan and Eritrea by December 2004.		<p>SUD established a national steering committee and is meeting regularly to discuss the locust situation and making decisions on support needed.</p> <p>YEM: A request has been submitted to high level authorities of the government to establish a special DL steering committee independent from the national Disaster Management Committee.</p> <p>ETH: Discussions on constituting a national DL steering committee are in process. ToR for the committee have been prepared.</p>		The ELO of SUD should provide YEM with ToR of the Sudanese committee.
	3.1.2 Capacity information spread sheet updated half yearly and sent to the CRC Secretary.		<p><b>Status:</b></p> <p>EGY: one (06/04),  SAU: one (22/03),  SUD: three (14/09, 17/08, 14/04),  ETH: two (26/07, 20/05)  ERI: 0  OMN: one (16/06),  YEM: two (13/09, 04/04),  DJI: 0  SOM: 0  DLCO: two (08/04, 26/07).</p>		<p>Not all countries are keeping the CRC updated on the available resources as agreed. This is particularly crucial in the case of the key countries! <b>More pro-active attitude in this matter is essential.</b></p> <p>DCLO-EA should stick to the original agreement to send status reports on the aircraft fleet quarterly to CRC.</p>



Activity	Milestone	Remark	Achievement	Deviation	Recommendation 2005
3.2 Prepare guidelines for national contingency planning mechanisms.	3.2 Guidelines ready by December 2005.		Consultant contracted, first draft guidelines for contingency planning received for comments (04/09/04).		
	3.2.1 DLCTG organized in Mauritania by June 2004.		Inter-regional Contingency Planning Workshop/Meeting was organized by AGPP under the umbrella of DLCC Technical Group in Nouakchott (02-07/05/04).  5 participants from the CR attended the meeting (2 from SUD, 1 SAU, CRC-Secretary and EMPRES/CR Coord.).  As an important result of the meeting, ECLO (Emergency Centre for Locust Operations) has been re-established at FAO in August 2004.		
	3.2.2 First draft paper of the Contingency Planning Guidelines ready and submitted to AGPP by October 2004.		(see 3.2)		
	3.2.3 Preventive control workshop conducted in Cairo by December 2004.			The selected consultant for organizing the workshop has been given an assignment by AGPP to help in the current locust situation.	Look into the possibilities of organizing the workshop on preventive control by 2005 depending on the DL situation.
3.3 Support the national entities in developing national contingency planning mechanisms.	3.3 All key countries prepare contingency plans by mid 2006.		<Long term target> Most relevant key countries are preparing contingency plans (SUD, YEM, ERI).	Contingency plans are being prepared by SUD, YEM and ERI ( <i>no evidence received!</i> ).  Based on regional action plans to prevent emergencies in the CR, referring national action plans have been prepared for the summer season 2004 in SUD, SAU, YEM and ERI and also for the winter season 2004/2005.	

Activity	Milestone	Remark	Achievement	Deviation	Recommendation 2005
	3.3.1 Standard for national locust situation bulletins drafted and circulated to member countries by March 2004.		Guidelines have been prepared by CRC and EMPRES and distributed to the countries in March 2004.		
	3.3.2 At least 4 member countries are preparing national locust bulletins according to standards by October 2004.	Bulletins are prepared according to standards and circulated to all relevant parties.	5 countries started producing national bulletins / newsletters (EGY = 4, ERI = 3, SAU = 2, SUD = 4, YEM = 7), also DLCO-EA = 5.  In some cases the national bulletins / newsletters have proven their value in keeping important parties informed.	Not all countries are following the agreed standards as provided by CRC and EMPRES/CR.	The key countries should make efforts during 2005 and beyond to improve the quality of the national bulletins and to distribute them to all relevant internal and external parties.  EMPRES/CR and CRC should set up a web page.  OMA should follow suit and should start producing monthly DL bulletins.  ERI should follow the standard provided by CRC and EMPRES/CR.
	3.3.3 CD ROM on contingency planning spread sheets finalized and distributed to all LCUs by September 2004.		All EMPRES member countries received one CD.	Not all computer simulations on the CD will work on Windows XP. (no solution likely).	In particular the key countries should make appropriate use of the provided spread sheets to assess sufficiency of the available recourses in case of a predicted outbreak, upsurge or plague situation.
3.4 Assist the CRC in developing regional contingency planning mechanisms in accordance with those of countries and FAO.		Subject of 2005 work plan as a result of accomplishment of activity 3.2.	CRC/EMPRES organized two Ad hoc Emergency Meetings with the key countries:  March 2004 > Preparation of Summer Campaign.  September 2004 > Preparation of Winter Campaign.  Based on the discussion, regional action plans have been prepared as a framework for a more detailed national action plans.		

Activity	Milestone	Remark	Achievement	Deviation	Recommendation 2005
3.5 Assess the "operationality" of the contingency planning mechanisms.		Subject of 2005 work plan as a result of accomplishment of activity 3.2	The first experience with this approach (3.4) was positive:  The predictions made were sensible, and facilitated early reaction by the countries to the predicted situations. Additional resources could be mobilized in time.		Continue following this approach.
3.6 Develop guidelines for campaign evaluation.	3.6 Guideline for campaign evaluation ready by July 2005.		< Subject of WP 2005 >		It might not be possible to prepare "pass-par-touts" guidelines for campaign evaluation for all possible situations. A different more practical approach should be discussed.
	3.6.1 Consultancy report issued to AGPP by October 2004.				Lack of funds > postponed to 2005. See above.
3.7 Develop mechanisms to collect data on the extent of infestations, crop damage etc. during control campaign.	3.7 Mechanisms for routine evaluation of the campaign efficacy defined and put in place by mid 2006.		<Long-term target>  As a first step, the spray monitoring form has been recommended to be applied during ALL control operations by ALL countries.	There are still difficulties existing in many of the countries to actively practice and use the spray monitoring form.	More efforts should be made to routinely use the spray monitoring form!  Hard copies of the filled forms should be passed to CRC.
	3.7.1 Advance preparations for an expert mission to evaluate campaign efficiency completed by April 2004.	Provided the locust situation allows.	TOR for the expert mission have been prepared and approved (July 2004) and potential experts contacted.	So far the DL situation in the CR did not allow launching of the mission.  Difficulties to keep the experts on stand-by for an uncertain event.	What are the experiences made by WR, where have many of the campaigns been conducted during the past months? WR-AGPP should share these experiences with CR.
	3.7.2 Data input format for campaign evaluation prepared by October 2004.	Make use of the RAMSES data base.	Data from spray monitoring forms can now be introduced into the new RAMSES version.		Hard copies of the spray monitoring form should be sent to EMPRES/CR and CRC.

Activity	Milestone	Remark	Achievement	Deviation	Recommendation 2005
	3.7.3 At least 3 member countries make routine use of the spray monitoring forms and enter the data into RAMSES data base by December 2004.		<i>Subject of control operations being conducted!!!</i> Practised by SUD, EGY, YEM.		
	3.7.4 Spray monitoring form compatible to RAMSES incorporated into eLocust system by September 2004.			Spray monitoring form not yet incorporated into the eLocust system.	The data should be entered into RAMSES by using the hard copy.  The countries should be comfortable using the survey form first.
3.8 Evaluate economic advantage of preventive control.	3.8 The relative economic advantage of preventive DL control known and acknowledged by mid 2006.				
	3.8.1 Draft study ready by December 2004.			No progress made in this matter:  The emergency situation in WR deviated attention from this topic.	The relative economic advantage of preventive control could be investigated based on the recent experiences made in WR and CR.
3.9 Assist member countries in developing simulated outbreak control campaigns in the field.	3.9 At least 4 member countries conduct regular mock survey and control exercises also during recession periods by mid 2006.		<Long-term target>  Small scale simulated survey and control exercises are a routine part of the S&C training courses practiced by the countries.		Wide large scale mock exercises are considered to be much too expensive and will not find the support from the governments. However, small and medium term mock survey and control exercises should be conducted in particular during recession periods.
	3.9.1 Simulated survey and control exercises are organized by the ELOs and carried out in at least 3 countries by October 2004.	Supported by EMPRES/CR and CRC with up to USD 3,000 upon request		No request received from the countries.	Some of the key-countries should undertake more efforts in conducting simulated campaigns.  Guidelines should be prepared by EMPRES/CR on simulated <b>outbreak control campaigns</b> .

**Result 4:** Alternative control technologies supported**Indicator 4:** At least one bio pesticide against the Desert Locust registered in at least 3 countries and ready for operational use by 2006

Activity	Milestone	Remark	Achievement	Deviation	Recommendation 2005
4.1 Participate with member countries and other collaborators in harmonizing bio pesticide regulations.	4.1 At least 1 bio-pesticide registered in at least 3 member countries by 2006.		<Long-term target> SUD registered Green Muscle by 16 Aug 2004!		YEM and EGY should follow this example soon.
	4.1.1 In at least 1 country, registration bio-control trials on grasshoppers are accepted also for registration of bio-control products for locust control by mid 2005.	This might eliminate the need for separate registration trials on locusts, which are more difficult to carry out and are more costly	One trial with GM on grasshoppers supported in ETH (finished in June 2004).		The trials should be repeated in ETH under more suitable conditions and with better trial design.
	4.1.2 At least 1 additional registration trial supported by December 2004.			No according request from the countries received.	
4.2 Support large-scale operational trials and small-scale demonstrations of the use and efficacy of bio pesticides and other novel technologies.	4.2 At least 1 seminar on novel technologies carried out by December 2004 / early 2005.				
	4.2.1 DGPS demonstration organized by DLCO-EA in Ethiopia by April 2004.	<ul style="list-style-type: none"> <li>ELOs in Sudan and Saudi Arabia to liaise with the interested companies and to participate in the demonstration.</li> <li>Key officers from locust units from countries likely to use aerial spraying should be invited to the demonstration</li> </ul>	<p>DLCO-EA successfully organized a DGPS demonstration at Lake Zeway, ETH, from 20-23 April 2004.</p> <p>Official and private participants from ETH, SUD, SAU, OMN, YEM.</p> <p>As a result of the demonstration, EMPRES/CR requested procurement of 4 additional DGPS devices in order to strengthen the aerial intervention capacity of DLCO-EA. The equipment has been ordered in Sept. 2004.</p> <p>OMA air force (responsible for aerial control) is planning to purchase one DGPS equipment.</p>		

Activity	Milestone	Remark	Achievement	Deviation	Recommendation 2005
	4.2.2 PAN could demonstrate its effects on gregarious hopper bands by December 2004.	<u>Expected effects</u> : breaking gregarious behaviour, enhancing the effects of metarhizium products, reducing chemical pesticide application rates.	<p>Trials under natural conditions in 2 areas have been carried out at the Red Sea coast (Sudan) during winter/spring 2004:</p> <ul style="list-style-type: none"> <li>- Aeit and Salasir, infested by marching hoppers.</li> <li>- In 3 Wadis on non-marching hopper groups under bushes</li> </ul> <p>Two sets of trials have been conducted:</p> <ul style="list-style-type: none"> <li>- Pesticide (Marshal, Carbosulfan, ULV) at diff. dosages with and without PAN,</li> <li>- Green Muscle at different dosages with and without PAN.</li> </ul> <p>PAN showed promising results:</p> <ul style="list-style-type: none"> <li>- Mixed with pesticide: equal mortality by 60 % reduced application rate,</li> <li>- Mixed with GM: equal mortality by 50 % reduced application rate.</li> </ul>		
	4.2.3 One additional bio-pesticide demonstration supported by early 2005.	Subject to the availability of funds.	EMPRES/CR is discussing with ICIPE the possibilities of conducting a demonstration on the effects of PAN.	Shortage of funds.	Both, ICIPE and EMPRES/CR should look into the possibilities to obtain donor support, and should share the costs.

Activity	Milestone	Remark	Achievement	Deviation	Recommendation 2005
4.3 Support solicited research projects.	4.3 Up to 5 research projects successfully implemented and finalized by end of 2006.		<p><b>Summary (Phase I – III):</b></p> <p>Total 12 studies (6 completed, 5 on process, 1 in preparation).</p>	<p>The research projects are not always following the scientific minimum standards;</p> <p>The ELOs do not follow the implementation of the projects in all cases as necessary.</p>	<p>The research proposals need to be better prepared (<i>following the CRC-EMPRES/CR guidelines</i>) and the studies themselves should have better standards.</p>
	4.3.1 At least 2 additional research projects on improved locust control technologies supported by CRC and EMPRES by December 2004 (see also 2.4).	<ul style="list-style-type: none"> <li>• Subject to the quality and topic of the research proposal;</li> <li>• LCUs should provide support in kind to appropriate research projects</li> </ul>	<p>1 study on eco-toxicological aspects of PAN in the pipeline (since March 2004),</p> <p>1 MSc study on eco-toxicological aspects of PAN since June 2004 (ongoing),</p> <p>1 MSc study on survey methods since Sept. 2004 (ongoing),</p> <p>1 project on GM efficiency since Aug. 2003 (ongoing),</p> <p>1 project on GM efficiency, Feb 2003 – June 2004,</p> <p>1 MSc study on effect of herbal quality on DL distribution, since January 2003 (ongoing),</p> <p>1 project on impact of environmental factors and control operations on DL population in SAU, since July 2002 (ongoing),</p> <p>1 MSc study on survey methodologies, May 2002 – Dec. 2002,</p> <p>1 MSc study on control technologies, May 2002 – Dec. 2002,</p> <p>1 MSc study on DL population comparison in different recession periods, Oct. 1999 - May 2001,</p> <p>1 PhD study on population dynamics, Sept. 2000 – April 2002,</p> <p>1 project on effects of GM on honey bees, Sept. 2000 – Oct. 2004.</p>		

**Annex 4:** Key elements for the EMPRES/CR work plan in 2005<sup>1</sup>**Result 1:** EMPRES/CR Desert Locust management components gradually taken over by the CRC and the participating countries.**Indicator 1.1:** Improved preventive Desert Locust management component taken over by 2 countries by 2004, 3 more by 2005, 2 more by 2006.

Activities	Milestone	Responsibility	Timeframe	Remarks
1.1 Support member countries to develop sustainable national training programmes, with reduced technical and financial support of EMPRES.	In at least 4 countries technical subjects of Desert Locust survey and control are incorporated into the agricultural training schemes by July 2006.	ELOs, EMPRES/CR		
1.1.1 Organize regular survey and control training courses.	At least one training course (national or local) carried out in each member country by October 2005.	ELOs, National Master Trainers	November 2004 - October 2005	Training need assessment should be carried out before the training is given.  The standard Master Trainers Training Kit should be used in all courses.  National training courses should be conducted under the responsibility of ELOs.  The Locust Centre in SAU should organize training course for staff from the Agricultural Departments.
1.1.2 Support the LCUs with training materials.	Up to four countries provided with additional training material by October 2005.	EMPRES/CR, CRC	November 2004 - October 2005	On justified request by the countries.
1.1.3 Support DL management Diploma Course at the University of Khartoum.	6 additional students for diploma enrolled at the University of Khartoum by September 2005.	EMPRES/CR, CRC, ELOs, FAO	April – August 2005	On the condition of prior evaluation of the Diploma Course with positive results.  Provided the availability of enough funds.
1.1.3.1 Evaluate the Diploma Course.	Consultancy report available to AGPP by May 2005.	EMPRES/CR, CRC	January – May 2005	
1.1.4 Incorporate technical Desert Locust management subjects into the national teaching programmes.	In up to 4 countries (SUD, YEM, ERI and ETH) Desert Locust survey and control subjects are part of the curriculum of agricultural secondary schools by October 2005.	ELOs	January - October 2005	Provide EMPRES/CR and CRC with copy of the agreement with the agricultural secondary schools.

<sup>1</sup> Based on the recommendations made by the Phase III planning workshop



Activities	Milestone	Responsibility	Timeframe	Remarks
1.1.5. Incorporate a budget-line for training into the national budget for locust control.	In up to 3 countries (SUD, EGY and SAU) a minimum of one national and local survey and control training course for 16 trainees per year are covered by the national budget by October 2005.	ELOs	January - October 2005	ERI, YEM, OMA and ETH agree to consider national funds for training in 2006.
1.1.6 Provide training opportunity on aerial control.	Training programme for aerial application prepared and announced by DLCO-EA to all countries in the Central Region by May 2005.	DLCO-EA	November 2004 – May 2005	The draft training curriculum should be submitted to CRC and EMPRES/CR for comments before announcing the course officially.
1.2 Support the national Locust Control Units in management and administrative procedures and methods.	The management of at least 4 LCUs is using appropriate planning, monitoring, inventory and staff management methods by August 2006.	EMPRES/CR, ELOs	On-going	
1.2.1 Make use of managerial instruments.	Up to 4 countries (EGY, SUD, SAU and YEM) make regular use of action planning, activity monitoring and up-dating of the inventories by June 2005.	ELOs	November 2004 – June 2005	CRC and EMPRES should be provided with copies of the action plans and inventory lists.
1.2.2 Prepare concept paper on the use of adapted managerial instruments in Desert Locust control.	Concept paper ready and submitted to AGPP by December 2004.	EMPRES/CR	November – December 2004	
1.2.3 Conduct regional workshop on appropriate management approaches in Desert Locust control.	One regional workshop conducted in Cairo by June 2005.	EMPRES/CR	April – June 2005	Target audience: management of Locust Control Centres.
1.2.4 Support visits to well managed Locust Control Centres.	Up to 3 locust control managers visit MAU for exchange of managerial experience by October 2005.	EMPRES/CR, CRC	March – September 2005	Provided the Locust Control Centre in MAU accepts.
1.3 Support member countries in initiating bilateral projects on selected desert locust management components.	LCUs in up to 4 countries are supported bilaterally by donors by 2006.	EMPRES/CR, ELOs	On-going	
1.3.1 Distribute revised guidelines.	Revised guidelines for drafting project proposals distributed to all member countries by March 2005.	EMPRES/CR	January – March 2005	
1.3.2 Prepare project proposals.	Up to 3 countries (SUD, YEM and ERI) prepared project proposal by using the guidelines and submitted to selected national donor agencies by September 2005.	ELOs	April – September 2005	The draft project proposal should be sent to EMPRES/CR and CRC before submitting to donors.

Activities	Milestone	Responsibility	Timeframe	Remarks
1.4 Prepare a Monitoring and Evaluation system in collaboration with the CRC.	An M&E system to follow up the process of integrating improved components of Desert Locust management into the national programmes beyond 2006 defined by February 2006 and adapted by the Commission by December 2006.	EMPRES/CR, CRC	On-going	
1.5 Give support to Country Focus Programmes (CFPs)	CFP support provided to up to 4 countries by 2005.	ELOs, EMPRES/CR	November 2004 – October 2005	
1.5.1 Improve technical skills of survey and control personnel in Saudi Arabia.	At least 2 national survey & control training courses organized by the Centre for personnel of the Agricultural Departments by October 2005.	ELO, EMPRES/CR	January – October 2005	Refer also to remark 1.1.1
1.5.2 Improve survey operations in Saudi Arabia.	Draft survey plan prepared and submitted to CRC and EMPRES/CR prior to the implementation of winter/spring campaign 2005.	ELO, EMPRES/CR	November – December 2004	
1.5.3 Improve the operability of the national Locust Control Centre in Saudi Arabia.	The RAMSES system at the Information Office is fully operational by June 2005.	ELO, EMPRES/CR	November 2004 – June 2005	
1.5.4 Improve national locust information system in northern Somalia.	The performance of the private radio network and the quality of information transmitted is known to CRC and EMPRES by June 2005.	ELP	November 2004 – October 2005	
1.5.5 Improve the mechanisms of early preparedness in Yemen.	An independent DL steering committee established by June 2005.	ELO, MoA YEM	January – June 2005	Independent from National Disaster Prevention Steering Committee
1.5.6 Re-establish early warning system in Eritrea.	Locust early warning system established and functional by October 2005.	MoA ERI, EMPRES/CR	November 2004 – October 2005	Subject of nomination of ELO in ERI
1.5.7 Encourage Eritrea to join the CRC.	Adherence to join the CRC officially obtained from ERI by October 2005.	MoA ERI, CRC	November 2004 – October 2005	Secretary of the Commission to follow up the process

**Result 2:** Implementation of improved early warning systems supported

**Indicator 2.1:** Improved early warning systems (routine survey, functional national information offices etc.) are operational in at least 6 Locust Control Units by 2006

Activities	Milestone	Responsibility	Timeframe	Remarks
2.1 Make routine use of the RAMSES locust database, including the interpretation of results.	RAMSES outputs are routinely being used for planning of survey operations by the member countries by end of 2006.	ELOs	On going	ELOs will establish communication system among member countries and DLIS.
2.1.1 Support Saudi Arabia in making routine use of RAMSES.	SAU attaches RAMSES maps to their survey reports by June 2005.	EMPRES/CR, ELO SAU	November 2004 – June 2005	Back-stopping will be provided by IO YEM, by November 2004.
2.1.2 Provide backstopping to Eritrea, Ethiopia and Oman in case of difficulties operating RAMSES.		ELOs, EMPRES/CR	continuous	Upon request from the countries.
2.1.3 Improve the capabilities of the Locust Information Officers in RAMSES data interpretation.	One regional workshop on RAMSES data interpretation organized for 7 IOs in Cairo by end of 2005.	EMPRES/CR, DLIS	Suitable date to be identified in EMPRES/CR workplan 2005	
2.1.4 Incorporate RAMSES maps in national DL bulletins.	RAMSES maps are integral part of the monthly national DL bulletins in EGY, ERI, ETH, SAU, SUD and YEM by October 2005.	ELOs, IOs	continuous	
2.1.5 Include rainfall data and forecast into monthly national DL bulletins.	All countries preparing national bulletins include a chapter on rainfall situation by February 2005.	ELOs		IOs keep regular contact with national meteorological authorities.
2.2 Facilitate the interpretation of remote sensing satellite images and their use in directing survey operations.	Remote sensing satellite imageries are routinely being used to direct survey teams by end of 2006.	ELOs, IOs, EMPRES/CR, DLIS	continuous	
2.2.1 Contribute to the calibration of remote sensing satellite maps.	At least 3 countries with RAMSES (SUD, YEM, EGY) provided DLIS with completed vegetation forms for at least 1 survey every month by October 2005..	ELOs	November 2004 – October 2005	ELOs provide survey teams with digital cameras.
2.2.2 Provide training on interpretation of satellite maps.	One regional workshop on SPOT satellite imagery interpretation organized for 7 IOs in Cairo by end of 2005.	EMPRES/CR, DLIS	Suitable date to be identified in EMPRES/CR workplan 2005	Refer to 2.1.3. The two regional workshops will be conducted in the same period.

Activities	Milestone	Responsibility	Timeframe	Remarks
2.3 Support joint cross border surveys.	Up to 3 joint cross border surveys carried out by December 2005.	ELOs, EMPRES/CR, CRC	On-going	
2.3.1 Organize and conduct joint cross border surveys between EGY and SUD, YEM and SAU.	1 survey by December 2004 – January 2005.	ELOs	November 2004 – February 2005	Recurrent activity funded by national resources with some support from CRC and EMPRES/CR.
2.3.2 Support joint cross border survey between DJI and SOM.	1 survey conducted by December 2005.	ELOs, EMPRES/CR	To be defined by ELO DJI and ELP SOM	Possible joint surveys between SOM–ETH depending on DL situation in northern Somalia.
2.4 Support development of survey practices and technologies through solicited research projects.	At least 2 referring research topics supported by 2006.	CRC, EMPRES/CR	On-going	See 4.3
2.5 Update national locust information systems.	DLIS is linked up to at least 8 of the Locust Information Offices and is receiving field information regularly and without delay by 2006.	EMPRES/CR, DLIS	On-going	Regularly check for new technologies.
2.5.1 Prepare EMPRES/CR - CRC webpage.	Webpage for the Central Region prepared and on the Internet by March 2005.	EMPRES/CR, CRC	November 2004 – March 2005	Webpage should also include national information and reports.
2.5.2 Strengthen national Information Units.	At least 1 additional IO in each of the Information Units of the key countries is trained on receiving, processing and forwarding locust and rainfall information by December 2005.	ELOs (SAU, ERI, EGY, SUD, YEM, ETH), assisted by EMPRES/CR	November 2004 – December 2005	
2.5.3 Improve national locust information systems.	National information systems in OMA, DJI and ERI clarified and functional by June 2005.	EMPRES/CR, ELOs	November 2004 – June 2005	
2.6 Support introduction of eLocust.	Up to 4 member countries make use of the eLocust system by mid 2006.	EMPRES/CR, ELOs	On-going	
2.6.1 Assist Sudan in setting up eLocust system.	eLocust system in SUD operational by May 2005.	EMPRES/CR, ELO-SUD	November 2004 – May 2005	DLIS provides XTM registration numbers and one additional Psion.

Activities	Milestone	Responsibility	Timeframe	Remarks
2.6.2 Support Egypt in introducing eLocust system.	eLocust system (2 mobile and 1 station) installed by June 2005.	EMPRES/CR, DLIS	November 2004 – June 2005	
2.6.3 Provide training on the use of eLocust in Egypt.	eLocust system in Egypt operational by October 2005.	EMPRES/CR, ELO-EGY	May – October 2005	
2.6.4 Introduce eLocust system in Saudi Arabia.	Required HF radio stations procured and available for installation at the Locust Centre by September 2005.	ELO-SAU	November 2004 – September 2005	ELO SAU has been informed by EMPRES/CR of the technical specifications and cost.
2.6.5 Develop regional capacity in eLocust support.	At least 1 regional eLocust expertise built up by June 2005.	EMPRES/CR	January – June 2005	
2.6.6 Investigate suitable alternatives to eLocust.	DLIS provides and presents the potential alternatives by October 2005.	DLIS	November 2004 – October 2005	Findings to be presented in the 13 ELO Meeting.
2.7 Support survey teams.	All survey teams of the member countries are fully equipped and operational by mid 2006.	EMPRES/CR, CRC, ELOs	On-going	
2.7.1 Investigate the local availability, cost, scales, etc. of maps.	ELOs report their findings to EMPRES/CR by June 2005.	ELOs, EMPRES/CR	January – June 2005	Appropriate scale: 1:100,000 – 1: 250,000.
2.7.2 Take stock of the available survey material and request CRC/EMPRES for replenishment in case of need.		ELOs	On-going	ELOs should send their requests to EMPRES/CR and CRC.
2.7.3 Produce and distribute identification index field cards.	Grasshopper-locust and vegetation index cards distributed to member countries by June 2005.	EMPRES/CR	November 2004 – June 2005	
2.8 Prepare national survey plans.	All LCUs prepare regular survey plans based on RAMSES and satellite images (if applicable) by mid 2006.	ELOs	On-going	<i>Countries with RAMSES:</i> EGY, ERI, ETH, OMA, SAU, SUD, YEM.
2.8.1 Follow up the use and implementation of survey plans.	At least in 80% of all cases rational survey plans developed and implemented by the LCUs by October 2005.	EMPRES/CR	On-going	

**Result 3:** Campaign evaluation measures and contingency planning mechanisms in place

**Indicator 3.1:** National contingency planning mechanisms adopted and operationally assessed and satisfactory for 2 countries by 2004, 3 more by 2005, and 2 more by 2006

**Indicator 3.2:** Regional contingency planning mechanisms adopted by the CRC and operationally assessed and satisfactory by 2005

Activities	Milestone	Responsibility	Timeframe	Remarks
3.1 Encourage the concerned countries to create national locust management committees (DL Steering Committees).	All key countries established steering committees by mid 2006.	EMPRES/CR, CRC	On-going	DL steering committees are not applicable for SAU and OMA. LCUs have high financial autonomy in case of emergencies.
3.1.1 Distribute the Terms of Reference to of the DL Steering Committee to other interested countries in the CR.	ToR of DL Steering Committee in Sudan circulated to all relevant countries by December 2004.	ELO Sudan	November – December 2004	
3.1.2 Establish DL Steering Committees in Eritrea, Ethiopia, Yemen and Egypt.	CRC, EMPRES/CR and AGPP are informed of the status, constitution and ToRs of the DL Steering Committee in EGY and ETH by December 2004, and ERI and YEM by March 2005.	ELOs	November – December 2004, January – March 2005	
3.1.3 Provide AGPP with information of the available locust control resources in the Central Region.	All EMPRES/CR member countries up-date their staff and material inventories regularly and pass the standard capacity spread sheet to CRC on at least half-yearly basis ( <b>in emergency situations as often as possible!</b> ).	ELOs, EMPRES/CR	On-going	<i>Exception northern Somalia. Including DLCO-EA (status report on airfleet)</i>
3.2 Prepare guidelines for national contingency planning mechanisms.	Guidelines ready and approved by AGPP by June 2005,	AGPP, EMPRES/CR	November 2004 – June 2005	
3.2.1 Organize workshop on preventive control.	One regional preventive control workshop conducted in Cairo by December 2005.	EMPRES/CR	May – December 2005	Subject to the DL situation! It might not be possible to organize this workshop if a critical DL situation persists in 2005.
3.3 Support the national entities in developing national contingency planning mechanisms.	All key countries have components of advanced preparedness in place by mid 2006.	ELOs, EMPRES/CRC	On-going	<b>Components are:</b> Close follow up of inventories, national steering committee, national DL bulletins, national action plans, functional Information Office, etc.
3.3.1 Distribute final version of contingency planning guidelines.	All member countries received contingency planning guidelines by October 2005	AGPP	June – October 2005	(ref.: 3.2)

Activities	Milestone	Responsibility	Timeframe	Remarks
3.3.2 Prepare regional action plans.	Regional action plans developed and prepared in consultation with the affected countries and DLIS for winter- and summer seasons by March and September and submitted to AGPP.	EMPRES/CR, CRC	March 2005, September 2005	
3.3.3. Prepare national action (contingency) plans.	All key countries prepare national action plans based on predicted DL developments and distribute them to the local authorities and donor representatives, and CRC by April (summer campaign), October (winter campaign).	ELOs	April 2005, October 2005	Copies of the action plans should be sent to CRC and EMPRES.  Internal circulation could be done through the referring FAO Representations.
3.3.4 Prepare national DL bulletins.	Good quantity DL bulletins, following the defined standards, are prepared on a monthly basis by the LCUs of EGY, SUD, SAU, YEM, ERI and OMA, and distributed to all relevant local authorities, donor representatives, CRC and AGPP.	ELOs	monthly	
3.4 Assist the CRC in developing regional contingency planning mechanisms in accordance with those of countries and FAO.	The Commission is in a position to initiate suitable pre-emptive actions in cooperation with the affected countries and AGPP by October 2006.	EMPRES/CR, CRC	On-going	
3.4.1 Organize ad hoc emergency prevention meetings.	In case of critical DL developments at least 2 meetings are being conducted with the immediately affected countries to agree upon suitable mechanisms and timely actions to prevent an emergency.	EMPRES/CR, CRC	March 2005, September 2005	(See also 3.3.2 and 3.3.3), the choice of the venue will be decided upon the actual developments – next the front.
3.5 Asses the "operationality" of the contingency planning mechanisms.	The instruments applied in the Central Region proved their suitability by March 2006 and are recommended as standard procedures to be followed routinely by CRC.	EMPRES/CR, CRC	On-going	
3.6 Develop guidelines for campaign evaluation.	<p><b>Important remark:</b></p> <p>"Guidelines", in the sense of an "easy-to-use" standard reference for evaluating a campaign, covering comprehensively all possible situations during a campaign and assessing the decision making processes, the performance of the survey and control teams, the environmental impact, spray efficacy, crop damage / losses etc. will most likely never be complete and are not applicable. The specific aspects of campaign evaluation demand a holistic and pragmatic team approach, which is flexible enough to be adapted to every situation. <b>A regional team of experts should be formed, which could be recruited on an ad-hoc basis in case of an appropriate situation soon after the campaign (see 3.7).</b></p>			
3.7 Develop mechanisms to collect data on the extent of infestation, crop damage etc. during control campaign.	Mechanism for routine evaluation of the campaign efficiency defined and put in place by mid 2006.	EMPRES/CR, CRC	On-going	
3.7.1 Make regular use of the FAO Spray Monitoring form.	All LCUs conducting control operations are routinely using the FAO Spray Monitoring forms and enter the records into RAMSES.	ELOs, CRC	On-going	<b>Hard copies should be sent regularly to CRC.</b>

Activities	Milestone	Responsibility	Timeframe	Remarks
3.7.2 Establish regional teams for campaign efficiency assessment.	2 regional teams for control efficiency and crop damage assessment and environmental/ human health impact defined by September 2005.	EMPRES/CR, CRC	November 2004 – September 2005	
3.8 Evaluate the comparative economic advantage of preventive control vs. emergency control.	The relative economic advantage of preventive DL control known and acknowledged by mid 2006.	EMPRES/CR	On-going	
3.8.1 Identify suitable consultant.	ToR prepared and consultant identified (preferably from the Region) and contracted by June 2005.	EMPRES/CR	November 2004 - June 2005	
3.8.2 Conduct economic study.	Final report ready and submitted to AGPP by December 2006.	EMPRES/CR, consultant	July – August 2005	
3.9 Assist member countries in developing simulated control campaigns in the field.	At least two member countries conduct simulated outbreak campaign exercise during the recession period by mid 2006.	ELOs	On-going	Supported by EMPRES/CR and CRC with USD 3,000 on request.
3.9.1 Prepare guidance for conducting simulated outbreak campaigns.	References ready and distributed to member countries by May 2005.	EMPRES/CR	January – May 2005	
3.9.2 Conduct simulated outbreak campaigns.	Up to 2 countries (YEM, SUD) conducted outbreak mock exercises by October 2005.	ELOs (SUD, YEM)	January – September 2005	



**Result4:** Alternative control technologies supported

**Indicator 4.1:** At least one bio-pesticide against the Desert Locust registered in at least 3 countries and ready for operational use by 2006

Activities	Milestone	Responsibility	Timeframe	Remarks
4.1 Participate with member countries and other FAO collaborators to harmonize bio-pesticide regulations.	At least 1 bio-pesticide registered in at least 3 member countries by 2006.	EMPRES	On-going	
4.1.1 Support for registration of bio-control products.	In up to 3 additional countries (EGY, ETH and YEM) take significant steps towards registration of GM by October 2005.	ELOs, EMPRES/CR	November 2004 – October 2005	Agency required in Yemen
4.1.2 Assist in registration of Green Muscle in Ethiopia.	Trial report submitted to the registrar by March 2006.	DLCO-EA, ELO, EMPRES/CR	March 2005 – March 2006	In collaboration with DLCO-EA
4.1.3 Support harmonization of bio-pesticide registration in the Central Region.	DLCO-EA prepared and submitted documentation on recommended requirements for bio-pesticide registration by October 2005.	DLCO-EA		The requirements should be in accordance with the FAO standards.
4.2 Support large-scale operational trials and small-scale demonstrations of the use and efficacy of bio-pesticides and other new technologies.	At least 1 demonstration on the effects of GM supported (in YEM) by December 2005.	ELO-YEM, EMPRES/CR		Provided that locust situation allows support trials re bio-pesticides, IGRs, barrier treatment.
4.2.1 Support field-testing of semio-chemicals (PAN)	ICIPE could prove the effects of PAN and document the results in a comprehensive scientific report submitted to FAO AGPP by December 2005.	ICIPE, EMPRES/CR	November 2004 – December 2005	
4.2.2 Participate in demonstration of the effects of semio-chemicals.	Up to nine participants from the member countries and FAO participated in a field demonstration of PAN and approved the potential of PAN for preventive control.	ICIPE, EMPRES/CR	To be defined with ICIPE	
4.3 Support solicited research projects.	At least 5 research projects successfully implemented and finalized by end of 2006.	ELOs, EMPRES/CR, CRC	On-going	